

**European Community's Poverty Reduction
Effectiveness Programme (EC-PREP) research project:**

**Streamlining poverty-environment linkages in the
European Community's development assistance**

EP/R05/15

A project carried out by World Wide Fund for Nature (WWF)

WWF-European Policy Office, Brussels

WWF-Macroeconomic Policy Office, Washington D.C.

Final report

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This research project is one of 23 projects funded by EC-PREP, a programme of research sponsored by the UK Department for International Development. All EC-PREP research studies relate to one or more of the six focal areas of EC's development policy in the context of their link to poverty eradication. EC-PREP produces findings and policy recommendations which aim to contribute to improving the effectiveness of the EC's development assistance. For more information about EC-PREP and any of the other research studies produced under the programme, please visit the website www.ec-prep.org.

Abstract

Although the EC is committed through numerous EC policies and multilateral agreements to mainstream the environment in its development assistance, this research indicates that based on its assessment of two CSPs (i.e., Rwanda and Tanzania) and a Brussels-level institutional/policy evaluation there is:

- 1) insufficient emphasis on environment-poverty considerations in EC country programming;
- 2) few specific guidelines to fully integrate the environment as a cross cutting issue in EC country strategies (especially regarding the six focal areas of EC development assistance); and
- 3) ambiguity regarding whether environmental integration is mandatory in country programming;
- 4) poor articulation on who is responsible to integrate the environmental issues in CSPs; and
- 5) growing awareness on the need to improve environment-poverty integration in CSP programming (as well as in national strategies upon which CSPs heavily rely).

According to results of this study in part due to poor environment-poverty integration, CSP investment in the evaluated countries is currently associated with various environment/livelihood concerns including wetland degradation, water contamination, and displacement of people. This report calls on the need to improve environment-poverty streamlining in early stages of country/CSP programming towards more sufficiently prioritizing (and financing) environmental and related activities. Various entry points to strengthen environment-poverty integration in the CSP process are identified. These notably include practical suggestions on: developing useable guidelines to integrate the environment-poverty dimension in focal areas of EC development cooperation (macro support, transport, rural development, etc.); integrating poverty-environment linkages at the core of CSP/country programming; developing clear strategic institutional procedures to improve accountability of environment mainstreaming in country programming; and prioritizing support towards developing strong environmental management in partner ACP countries.

European Community's Poverty Reduction Effectiveness Programme (EC-PREP) research project: Streamlining poverty-environment linkages in the European Community's development assistance

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Final report¹

I. Introduction

A. Background and problem statement

The European Community's Development Policy's (2000) principle aim is to "refocus its activities to combat poverty" where the "environment...will play an important role supporting the main objective", while the Contonou Agreement (2000) similarly states that activities "...shall be centered on the objective of reducing and eventually eradicating poverty consistent with the objectives of sustainable development..." Despite these commitments, a recent review by the ACP-EU joint assembly – adopted October 2003 - on the "Sustainable management and conservation of natural resources in ACP countries in the context of the 9th European Development Fund aid Programming" indicates that EC development assistance inadequately addresses environmental issues, especially with regard to the critical role that natural resource assets play in alleviating poverty. This study similarly indicates that in the evaluated countries environment-poverty linkages have been insufficiently mainstreamed in country programming.

This research provides to the European Commission and its partner developing countries recommendations to address poverty-environmental weaknesses in current Country Strategy

¹ The introduction to this final report was written by Mathilde Snel (mathildesnel@hotmail.com), a consultant contracted by WWF. This work has been financed under an award granted to the World Wide Fund for Nature (WWF) by the European Community's Poverty Reduction Effectiveness Program (EC-PREP's), a program jointly defined by the EC and DFID and funded through DFID.

Papers (CSPs) and to improve environmental streamlining in EC development strategies through its six focus areas. This research has done so by evaluating the effects of development strategies on local poverty-environment dynamics through: reviewing CSPs on anticipated environmental impacts of EC thematic aid sectors in various countries; conducting multi-level evaluations to determine structural impediments and strategic intervention areas to address poverty-environment weaknesses; and identifying institutional and policy opportunities to strengthen environmental integration in future CSP design.

B. Objectives

The overall objective of this research is to enhance the impact of the EC's development assistance on poverty through increased attention to the role of the environment in the livelihoods of the rural poor in its country development strategies. This research provides to the EC and partner developing countries recommendations to address poverty-environmental weaknesses in current Country Strategy Papers (CSPs) and to improve environmental streamlining in EC development strategies through its six focus areas. More specifically, the objectives of this research are:

- Objective 1: To evaluate the anticipated environmental impacts of proposed EC CSP sector investment areas in select countries and propose strategic interventions that are needed to address the envisioned environmental problems. This assessment will emphasize linkages between natural resource assets and rural poverty and will identify structural impediments, be they economic or institutional, operating at local to meso to macro levels that encourage environmental mismanagement and keep rural areas locked in poverty.
- Objective 2: To evaluate current aid programming processes used to develop and revise CSPs, specifically with regard to environmental integration in the EC focus areas, and identify long term policy and institutional opportunities to improve poverty-environmental streamlining to enhance future effectiveness of EC development assistance. This activity will build upon current EC efforts to improve environmental integration (e.g., EC manual development).

Key hypotheses of this research are:

Hypothesis 1: The role of natural resource wealth, especially their contribution to rural livelihoods, have been inadequately addressed in EC development programmes. An evaluation of poverty-environment impacts and ways to address these shortcomings is needed.

Hypothesis 2: Long term national to local level institutional and policy changes are needed to help ensure that country development strategies better integrate poverty-environment concerns.

C. Methodology

The study relies on a series of overlapping research activities that are focused on identifying environment-poverty concerns associated with current EC investment and the structural impediments (e.g., institutional, economic, etc.) shaping these concerns.

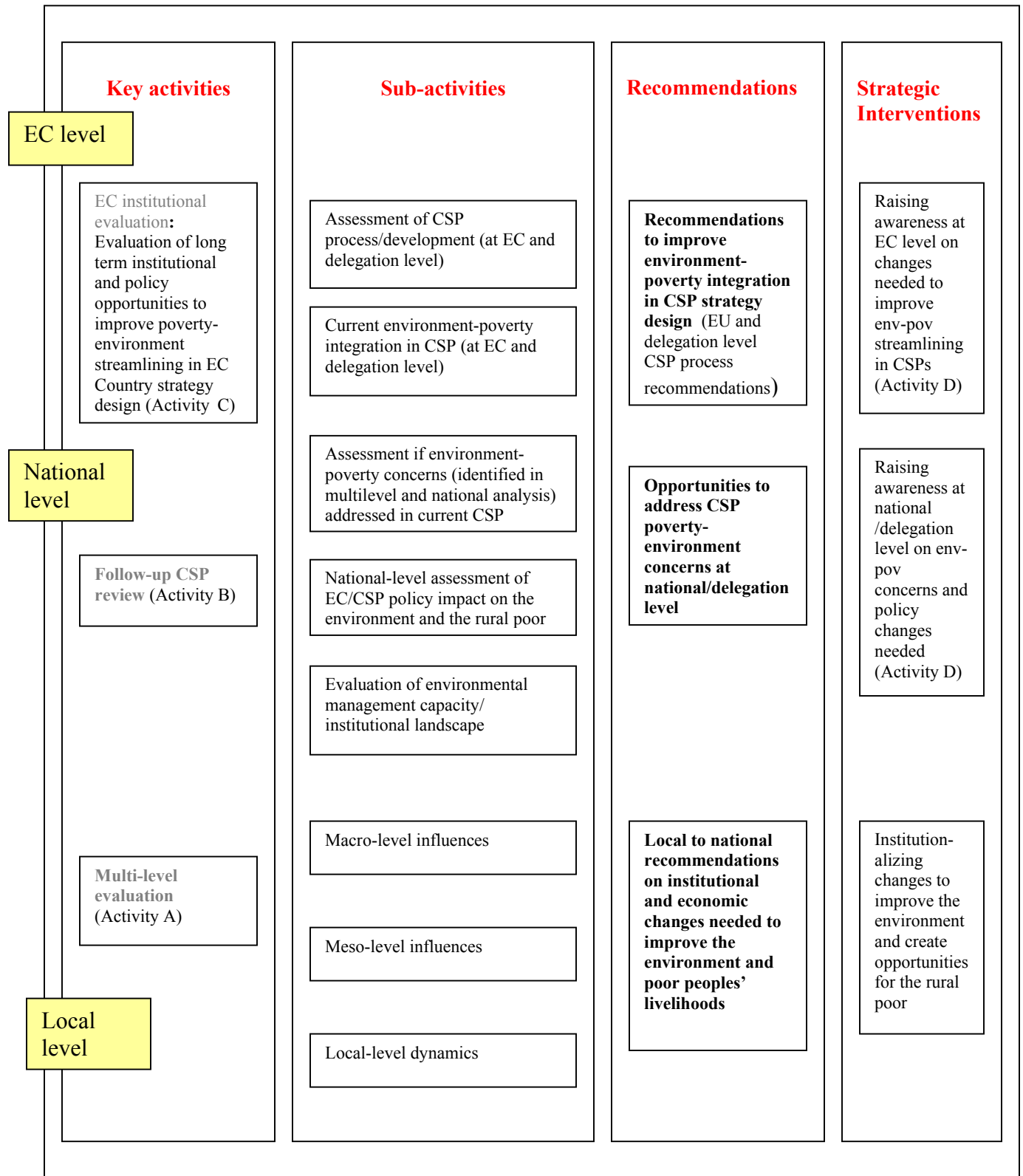
- *Multi-level analysis* were conducted to gain a detailed understanding of the environmental consequences and specific strategic interventions needed to address poverty-environmental concerns. The multi-level evaluations used a bottom-up analysis that identified from especially the local perspective environment-poverty issues associated with CSP funding and the structural impediments operating at local to national levels that reinforce rural poverty and environmental degradation. This analysis was conducted for defined geographic areas within select countries (see below) and relied on

- interviews and document reviews. The multi-level analysis was carried out by small, multidisciplinary teams of researchers with oversight and management from WWF in-country offices and WWF-MPO.
- *Follow-up CSP reviews* were conducted to further assess environment-poverty concerns associated with EC support (from the national perspective) and to identify if the Country Strategies addressed the poverty-environment concerns and required interventions as highlighted in the multi-level analysis. This review relied on a document review and interviews with country delegation staff and national stakeholders. The review was conducted by WWF EPO in conjunction with local offices.
 - *Institutional evaluations* were carried out to identify long term institutional and policy opportunities to improve poverty-environmental streamlining in future CSP design. This assessment focused on evaluating the current CSP process particularly regarding environment-poverty integration. The institutional evaluations relied primarily on document reviews and interviews with staff involved in CSP development and revision. This activity built upon current EC environmental integration activities (e.g., manual development) and was conducted by WWF EPO.

The above evaluations were carried out for two countries: Rwanda and Tanzania. These countries were selected due to their high dependence on natural resources (in the case of Rwanda a dependence on agricultural resources and for Tanzania on mining, tourism, and other natural resources-based sectors), varied population densities (high in the case of Rwanda and sparse for Tanzania), on-going work in poverty-environment initiatives (e.g., UNEP/UNDP initiative), and general interest (e.g., DFID interest). Furthermore, the Brussels level institutional evaluation relied primarily on a thorough document review used to develop and revise CSPs. Based on the multi-level, national, and Brussels-level evaluations, strategic gaps and weaknesses were identified and recommendations drawn on measures needed to improve poverty-environmental integration in CSP/country programming. Results of the study were summarized and distributed to raise awareness on the need and opportunities to enhance poverty-environment integration in EC development assistance.

Figure 1 provides an overview of this study's methodology and links these to specific activities, sub-activities, recommendations and strategic interventions (Activities A – D refer to activities noted in WWF's proposal submitted to the EC-PREP].

Figure: Overview on methodology: Streamlining poverty-environment linkages in the European Community's development assistance



D. Key findings

National case studies: Tanzania and Rwanda (multilevel analysis, follow up CSP review, and institutional evaluation)

1. While the EC is funding various noteworthy environmental and related initiatives (e.g., under budget lines), this evaluation indicates that in the select countries current CSPs inadequately underscore environment-poverty concerns in country programming.
2. In part due to poor environment-poverty, according to this study CSP investment is associated with various environment/livelihood concerns ranging from wetland degradation, water contamination, and displacement (see also points 3 and 4 below)
3. Road development/rehabilitation – a sector heavily financed by the EC – is associated with long term environment-poverty concerns – albeit indirect – including in the case of Tanzania deforestation (linked to anticipated increases in charcoal export) and in the case of Rwanda displacement (associated with the widening of current roads).
4. Macroeconomic reforms - supported by the EC (through the “macro support” focal area) and other donors – have in the case of Tanzania resulted in unprecedented growth of numerous natural resources-based sectors including mining, tourism, and fishing. In the absence of a strong environmental management framework (although efforts are underway to strengthen environmental governance in Tanzania) such reforms have resulted in negative environment/livelihood consequences including water contamination, over-fishing, and conflicts over access to and control over resources.
5. While efforts are underway in Rwanda to improve environment-poverty integration in the next PRPS (CSPs heavily rely on national strategies), in part due to poor environmental integration in Rwanda’s current national strategy, PRSP initiatives – in part supported by the EC through the macro support focal area – may be associated with wetland degradation, water depletion, food insecurity, and other environment/livelihood concerns.
6. In Tanzania while the first PRPS poorly integrated environment-poverty issues, there have subsequently been significant developments in environmental mainstreaming in the succeeding national strategy. This is anticipated to improve substantially environmental performance of Tanzania’s CSP, particularly the macro support focal area that helps finance objectives of Tanzania’s national strategy.
7. The Tanzania and Rwanda CSP – as in many other CSPs - did not include a Country Environmental Profile (CEP) or request a Strategic Environmental Assessment (SEA). Ambiguity on the need to include CEPs is challenging the inclusion of environmental profiles in CSPs (see also points 9 and 10).
8. There is growing awareness at the delegation level that CSPs have insufficiently integrated environment-poverty linkages and an interest to improve the environmental performance of country programming.

Institutional evaluation (based on Brussels-level and country case studies)

9. While the EC Environmental Integration Manual describes a wide variety of environmental tools (e.g., impact assessment guidelines and environmental screening notes for projects), guidelines to fully integrate the environmental dimension in country strategies – especially regarding the six focal areas of EC development assistance – are few. Country programming

currently mainly rely on the development of CEPs (that provides a summary of environmental, social, and economic situation) and SEAs (a systematic process to evaluate the environmental impacts of proposed policies, plans, and programmes).

10. Although CEPs and SEAs can help highlight specific environment-poverty concerns in country programming, current environmental guidelines for CSPs were shown to insufficiently underscore environment-poverty linkages (that should stand central in EC development assistance) and poorly link to the six focal areas of EC development cooperation (namely macro economic support, transport, rural development, good governance, trade, and regional economic integration.).

11. Strategic requirements to integrate the environmental dimension in CSPs are unclear and vague. This includes ambiguity regarding whether environmental/conservation integration is mandatory in the country (regional) strategies and vague articulation on who is responsible/held accountable to mainstream environmental issues in CSPs.

12. It is contended that lax policy is a key reason why CSPs have scored poorly regarding environmental integration and have seldom used CEPs and/or requested SEAs. A review of 60 CSPs and 7 RSPs (Davalos, 2002), for example, similarly indicated that environmental mainstreaming has been very weak in EC development strategies: scoring 2.96 out of a possible 10 that would indicate excellent environmental integration. More specifically, out of 50 EC funded country strategies, only five included a CEP (i.e., Vietnam, Madagascar, Guinea Conakry, Dominica, St. Lucia, and St.Kitts & Nevis) (see also point 7).

E. Key recommendations

The following recommendations are based namely on the follow-up CSP and institutional evaluations although with overlap with the multilevel analysis.

CSP process

1. A strategic approach is needed to fully integrate the environment as a cross cutting issue in the CSP process. This entails developing a user-friendly set of CSP environmental integration guidelines/indicators that underscores poverty alleviation through sustainable development. The guidelines/indicators need to be explicitly linked to the Commission development cooperation's six focal areas (i.e., trade, regional economic integration, macro economic support, access to social services, transport, and rural development) and fundamentally build upon existing Commission environmental integration efforts (e.g., environmental integration manual and environmental helpdesk). Preliminary suggestions on types of guidelines and indicators have been provided in Appendix 4 and 5 of the Brussels-level institutional evaluation (see part III of this paper). Developing a final set of environmental integration guidelines/indicators will require an extensive dialogue-driven process and rely on the participation of Commission, donor agency, NGO, etc. staff.

2. Environmental integration in EC country strategies must be mandatory. Without explicitly requiring environmental integration, a continuation of poor environmental mainstreaming in EC country programming is inevitable. Existing guidelines, TORs, policies, procedures, etc. need to explicitly state that environmental issues must be fully integrated in CSPs. This will entail revising existing Commission guidelines (the 10th EDF programming procedures, environmental integration manual, etc.) as well as modifying policies (adding an environmental assessment requirement to Appendix IV of the Cotonou EU-ACP agreement, etc.).

3. Although there is substantial interest to improve environment-poverty mainstreaming, current environmental capacity at the delegation-level was noted to be insufficient. EC respondents indicated that environmental mainstreaming may be facilitated by employing an environmental advisor at the delegation level (as done by other donors such as the World Bank), improving awareness on environment-poverty linkages, and developing guidelines to mainstream environmental issues in CSP programming vs. solely in the CEP (see also point 1). It is recommended that needs assessments are conducted at the country delegation-level to evaluate and respond to delegation-level environmental related capacity constraints and needs. Such an assessment may highlight the need to strengthen TORs, recruit staff with environment and development backgrounds, and raise awareness on environment-poverty linkages.

4. Improving the selection/identification of CSP performance indicators – that are heavily relied upon during CSP reviews – provides a key entry point to help facilitate environment-poverty integration in CSP design. It is recommended that EC environmental and related guidelines are strengthened to include suggestions on types of environmental performance indicators that country delegations may consider to use.

5. Lack of environmental baseline data will challenge the integration of environment-poverty linkages in CSPs, as well as in national strategies, programmes, and processes. It is vital that strengthening environmental management capacity includes supporting improvements in environment-poverty monitoring (data collection, analysis, etc.) (see also point 1).

Macro support

6. As donors seek to increase budget support – towards improving harmonization with national strategies and processes – environmental performance (including of EC funds) increasingly depends on in-country environmental management capacity. The EC, as well as other donors, must prioritize supporting the long term development of environmental capacity in partner countries particularly those that are highly dependent on natural resources. This may entail EC (and other donor) programme/project assistance to: improve environment-poverty integration in national strategies and policies (e.g., PRSP); raise awareness on poverty-environment linkages; and increase institutional capacity to address environment-poverty concerns (e.g., through improved environmental monitoring). (see also points 5 and 20).

7. Prior to funding budget support, it is vital that the EC – ideally in collaboration with other donors – evaluate how/if national strategies – upon which CSPs heavily rely – have mainstreamed environment-poverty issues. A Strategic Environmental Assessment – an overarching assessment that helps identify potential environmental (and social) impacts and alternative options – may be useful. Supporting environmental management capacity at national to local levels is instrumental towards strengthening environmental integration in future national strategies, programmes, processes, etc. (see also point above).

8. While integrating environment-poverty linkages in national strategies/PRSPs is in no doubt a fundamental first step towards addressing environmental/livelihood challenges, this must be followed up with appropriate investment - by the government and donors - in the environmental, natural resources, and related sectors (see also point 6).

9. Priority by the EC and partner countries must be given to support benefit sharing and similar schemes (e.g., in tourism, mining, and other natural resources-based sectors) towards helping ensure that local communities benefit from and help manage natural resources.

10. It is recommended that the EC support initiatives to investigate how national to local economies (see point 10 above) are benefiting from foreign investment towards seeking ways to more equitably distribute natural resources-based earnings.

11. Sufficient support – including by the EC – is vital towards helping ensure that environmental standards and guidelines (as well as revenue sharing schemes) are not only developed, but furthermore implemented (in the tourism, mining, and other natural-resources based sectors) (see also point 6).

Transport

12. Although the EC requires that EIAs are developed for all large scale development projects and infrastructure, it has supported initiatives in countries where EIAs are not mandatory. Until recently, for example, Rwanda did not require EIAs. More specifically EIAs were not required for the development or rehabilitation of roads – a sector that has been heavily supported by the EC. It is recommended that the EC take an active involvement in supporting the development of EIA legislation and guidelines and their implementation.

13. Gaining access to EIAs (e.g., on roads development) in Tanzania and Rwanda was problematic due to poor archiving. Adequate resources need to be allocated to make sure that EIAs/SIAs are properly archived, retrievable, and publicly accessible at EC- and national-level. Posting environmental assessments on the internet, such as done by the World Bank, is encouraged.

14. While EIAs are currently required by the EC for projects that are anticipated to have environmental impacts, SIAs are not yet required. Evaluating environmental as well as *social* impacts of road development and/or rehabilitation – heavily supported by the EC – is crucial. In Rwanda and Tanzania, for example, the rehabilitation of a primary road will likely entail the displacement of people. Verifying that appropriate national capacity exists to provide fair and timely compensation for those required to resettle is imperative.

Rural development

15. Although environment-poverty issues may be addressed (albeit indirectly) through support of decentralization processes – as being funded by the EC in Rwanda through the rural development focal area – this may not be assumed. As noted for Rwanda, preliminary assessments indicate that current district development plans, upon which Rwanda's decentralization process heavily relies, do not underscore environmental and agricultural concerns. Rather the development plans highlight the need for infrastructure development (such as schools, hospitals, and roads). While this may reflect current village/community needs, this may also indicate a general lack of awareness: it may be more evident for villagers to request for schools than to ask for soil restoration/environmental techniques about which little is known. It will be essential that where the EC finances decentralization, environmental management capacity is sufficiently supported to help facilitate environmental integration in the decentralization process. More specifically, it is recommended that the EU take a lead in supporting evaluations to identify entry points to strengthen environmental mainstreaming in decentralization (as conducted by this initiative's multilevel analysis and national assessment for Rwanda) (see Rwanda multilevel and national analyses in Part II).

16. Although current efforts in Rwanda to modernize agriculture – a key objective in the current PRPS and supported by the EC through “macro support” – are oriented towards increasing crop productivity and in turn food security, such efforts may concurrently have the opposite (and unintended) effect of degrading the environment and in turn peoples' livelihoods. For example,

the regionalization of crops coupled with the promotion of export cash crops, may encourage the production of cash crops over staple food crops (that are used to meet domestic food supplies). Due consideration – including by the EC – needs to be made that the promotion of cash crops do not compromise domestic food needs.

17. Increased cultivation of cash crops, as being promoted by the PRPS and financed by the EC through “macro support, may place an increasing strain on already depleting water resources as private companies may spend higher revenues on irrigation facilities. Support – including by the EC – to promote the adoption of water saving and environmental-friendly technologies is vital.

18. A major crop targeted for expansion in Rwanda in the PRPS is rice. If wetlands are converted for rice production, EIAs – as recently required in Rwanda – will need to thoroughly evaluate the environmental as well as social and economic impacts associated with such wetland conversion. It is recommended that the EC provide sufficient support in partner countries to implement such EIAs/SIAs. In instances where EIAs/SIAs are not yet required, it is recommended that support is provided to develop such guidelines (see also point 12).

Good governance

20. The sustainable development of natural resources-based sectors - such as agriculture, tourism, and mining - fundamentally depend on the development of a strong environmental management regulatory framework. The good governance focal area provides an excellent opportunity with which the EC can support good *environmental* governance (see also point 6).

Key limitations/Challenges

- Due to time constraints the multilevel and national evaluations were conducted for only two countries: Tanzania and Rwanda. Although the selected countries proved to be excellent case studies - indicating varying natural resources dependencies (agrarian vs. mineral/tourism dependencies) and contexts (dense vs. sparse population) – the evaluations were restricted to evaluating four (vs. six) EC development assistance focal areas: namely macro support, transportation, rural development, and good governance. It is recommended that in the future other country and regional case studies are selected to in more detail evaluate other focal areas (i.e., trade and regional co-operation).

- Tanzania and Rwanda were partly selected due to current on-going work on improving environment-poverty integration in the national strategies of these countries (e.g., PRPSs). This initiative is being supported by UNEP/UNDP and is being conducted for six countries: Kenya, Mali, Mauritania, Mozambique, Rwanda, Tanzania, and Uganda. Findings of this study may in turn falsely imply that many ACP nations are already in the process of improving (or have improved) environment-poverty mainstreaming in national strategies.

II. National Case studies

II. 1 Analytical framework of EC Country Strategy Papers

- Rwanda

**Poverty-environment analytical framework in
EC Country Strategy Papers: Rwanda evaluation (2002 – 2007)**

Activity 1.1 – 1.4

- Tanzania

**Poverty-environment analytical framework in
EC Country Strategy Papers
Tanzania (2000) [and Madagascar (2001)]**

**- Poverty-environment analytical framework in
EC Country Strategy Papers:
Tanzania CSP Update (2004)**

Activity 1.1 – 1.4

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**Poverty-environment analytical framework in
EC Country Strategy Papers:
Rwanda evaluation (2002 – 2007)¹
Activity 1.1 – 1.4**

July 2004

1. Background and methodology

This report reviews environment-poverty concerns of EC funded initiatives proposed in the Rwanda Country Strategy Paper (CSP) for 2002 - 2007. The study uses a previously developed methodology that was recently used to assess environment-poverty concerns for the EC funded Tanzania and Madagascar CSPs (Snel, 2004). This study may be considered an addendum to this previous evaluation.

As with Snel (2004), this evaluation uses a two-tiered approach to assess environment-poverty weaknesses and to identify possible response strategies and interventions.

- 1) The first tier uses a qualitative assessment to evaluate whether key environment-poverty links and environmental considerations were acknowledged in the CSP.
- 2) The second tier evaluates environment-poverty weaknesses – that have been identified based on the above review - in more detail.

A recent award granted to the World Wide Fund for Nature (WWF) by the European Community's Poverty Reduction Effectiveness Program (EC-PREP's) - composed of a steering committee with DFID and EC officials - will provide funds to conduct this environment-poverty evaluation of the Rwanda CSP in greater depth. The follow up detailed assessment – involving in-country fieldwork - will be conducted 2004 and 2005. Results of this follow up research will be available December 2005. This current evaluation is considered a preliminary evaluation upon which the subsequent assessment will be based.

¹ This report was written by Mathilde Snel (mathildesnel@hotmail.com), a consultant contracted by WWF. This report is based on a methodology previously developed to evaluate "Environmental mainstreaming in EC Country Strategy Papers: An evaluation of the Tanzania (2000) and Madagascar (2001) Country Strategies" (Snel, 2004). Overall supervision was given by Hervé Lefeuvre (WWF-EPO, Hlefeuvre@wwfepo.org), Dawn Montanye (Dawn.Montanye@WWFUS.ORG), David Reed (WWF-MPO, Reedd@wwfus.org), and Jenny Springer (WWF-MPO, jenny.springer@wwfus.org).

2. Overview of paper

This paper is divided into the following sections:

- a background discussion of the Rwanda CSP (Section 3);
- an evaluation of environment-poverty integration in the Rwanda CSP (Tier 1 evaluation) (Section 4);
- identification of environment-poverty weaknesses in the Rwanda CSP (Tier 2) (Section 5);
- case studies/descriptions of the environment-poverty gaps of the Rwanda CSP (Section 6);
- response strategies and opportunities to address the environment-poverty concerns (Section 7).

Recommendations on response strategies have been developed to be of relevance to WWF – specifically to WWF’s Eastern Africa Regional Programme Office (EARPO) responsible for Rwanda – as well as to the EC Rwanda country delegation, and other Rwandan stakeholders (e.g., government agencies, private institutions, and other NGOs). It is recommended that WWF seek alignment with initiatives in Rwanda’s focal ecoregions to address the environment-poverty concerns: for Rwanda, **the Albertine Rift Montane Forests, East African Moorlands, and Rift Valley Lakes ecosystems**.

3. Review of the Rwanda CSP

Over the period 2002 – 2007 the EC is allocating under the 9th European Development Fund (EDF) a total amount of 186 million Euro to the Government of Rwanda. An amount of 124 million Euro (Envelope A) is being allocated to support the following three core areas:

- *Rural Development*: 62 million Euro (50% of Envelope A budget);
- *Macro support*: 50 million Euro (40%); and
- *Good governance/institutional support*: 12 million Euro (10%).

Initiatives under the *rural development* core area are as follows.

- Support for a community development program that emphasizes modernization of the agricultural sector (e.g., increased fertilizer use, dissemination of seeds, provision of credit, etc.) (25 million Euro).
- Development of a transportation network to improve rural access especially in northwest Rwanda. This emphasizes the rehabilitation of a primary road between Ruhengeri and Gisenyi (25 million Euro) (Aubry, personal communication, 2004)².
- Implementation of water and sanitation programs, with an emphasis on northwest and central provinces (e.g., Ruhengeri and Gitarama) (10 million Euro).
- Dissemination of information on current land reform (1 million Euro).
- Development of an agriculture information system to support food security (1 million Euro).

Macro support promotes the current Structural Adjustment Program (SAP III) (50 million Euro) and funds in particular current macro economic reforms for Rwanda. Seventy percent of the *macro support* budget is being used to support macro economic reform initiatives described in Rwanda’s Poverty Reduction Growth Facility (e.g., privatisation), while the remaining 30% of

² During the Mid Term Review there was discussion of possibly transferring the rehabilitation of these roads under the administration of a “transport” core area (Pillet, personal communication, 2004).

the macro support budget is being used to support non-targeted health and educational programs³ (Thiollier, personal communication, 2004).

EC funding for *good governance* in Rwanda is under the 9th EDF: supporting institutions (including support for democratisation and reconciliation initiatives) (6 million Euro); integrating and mobilizing vulnerable groups in urban districts (3 million Euro); supporting civil society participation and programs (2 million Euro); and promoting regional integration efforts (e.g., improving regional and domestic trade) (1 million Euro).

In addition to the above Envelope A funding, an amount of 62 million Euro (under Envelope B) is being allocated to cover unforeseen expenses. Such unforeseen expenses include emergency assistance, debt relief, and export stabilization. The current Mid Term Review of the Rwanda CSP is considering to shift Envelope B funding to support Envelope A activities. This funding reallocation will likely emphasize rural development and macro support initiatives under Envelope A (Krissler, personal communication, 2004).

4. Environmental-poverty integration in the Rwanda CSP (Tier 1)

This section provides an overview of the extent to which environment-poverty issues have been mentioned and integrated in the Rwanda CSP. This evaluation is structured about key environment-poverty questions previously identified in the methodology of Snel (2004):

1. Were environment-poverty linkages mentioned in the CSP? Does the CSP acknowledge that:
 - i. Poor people disproportionately depend on natural resources for their livelihood (livelihood dependence on environmental resources)?
 - ii. People living in poverty are more likely to be disempowered through poorly defined land rights, inadequate access to information, and legal rights (access to environmental resources, justice, and information)?
 - iii. Poor people are more likely to be exposed to deteriorating environmental conditions (health and environmental quality)?
 - iv. People living in poverty are at higher risk to be exposed to – and have fewer means to cope with – natural and man-made disasters (vulnerability to environmental disasters)?
2. Are environmental-poverty issues integrated in the discussion of the relevant core areas, e.g.,
 - i. Rural development?
 - ii. Macro support (e.g., privatisation of mining, tourism, etc.)?
 - iii. Good governance?
 - iv. Etc.
3. How were environmental issues integrated in the CSP?
 - i. Was a Country Environmental Profile (CEP)⁴ developed for the CSP?
 - ii. Was a Strategic Environmental Assessment (SEA)⁵ requested or developed?

³ The macro economic reform initiatives will use IMF benchmarks, while the health and education programs will rely on performance based indicators (e.g., primary school and health indicators).

⁴ A CEP is a brief overview of country conditions (physical, economic, social, etc.); summary of the state of the environment; overview of the environmental policies, legislative, and institutional frameworks; and recommended priority actions (Davalos, 2002).

iii. Other?

4.1. Rwanda CSP: environment-poverty integration

4.1.a. Livelihood dependence on environmental resources

The CSP does indicate that “Poverty in Rwanda is tightly linked to... interdependent questions, namely of land, demography, environmental degradation, poor management of public affairs, and insufficient growth” (République Rwandaise et Communauté Européenne, 2003, p. 8)⁵. Furthermore, the CSP indicates that the civil war of 1994 led to “loss of ...livestock”, decline of agricultural productivity, deterioration of trade, the “progressive deterioration of the environment” and made “living conditions of the population, already precarious [worsen]” (République Rwandaise et Communauté Européenne, 2003, p. 3).

4.1.b. Access to environmental resources, justice, and information

The CSP highlights – as does the Rwanda PRSP – **the importance of land as an asset to rural populations**: “Land is the most important productive asset owned by most Rwandese households” (Government of Rwanda, 2002, p. 41). In many instances, following the civil war the only asset many poor rural families had was land, albeit small parcels: livestock, crops, and other material assets were usually damaged, vandalized, or stolen during the war.

The importance of land has made land reforms a particularly important, albeit controversial, issue in Rwanda. A Land Policy and Land Law are currently in draft. The draft land policy and law attempt to resolve land disputes by – among other things – requiring land registration (based on a reformed cadastral system), imposing a land tax, and allowing transfer of title deeds (with prior consent of all family members). Furthermore, under the draft Land Law, land that has been undeveloped for more than three years reverts to the State’s private domain (Government of Rwanda, 2002).

While the current land reforms are in principle oriented towards improving land management, the possibility of transferring title deeds coupled with Rwanda’s current emphasis on privatisation may open up areas to rapid exploitation and significantly restrict access of land and natural resources by especially the rural poor. **There is no discussion in the CSP on how the current land reforms coupled with privatisation** -including that of natural resource assets such as crops and minerals - **will affect the environment and poor people’s future access to land and natural resources**.

Concerning access to information and justice, the Rwanda CSP does highlight - in light of the 1994 genocide in Rwanda - **the need to support democratisation, national reconciliation, and decentralization initiatives**. EC funds are in part being used to address the backlog of individuals involved in the genocide - an estimated 107,000 people are in prison on suspicion of genocide-related crimes – and to promote information dissemination, such as on current land reforms.

4.1.c. Health and environmental quality

By mentioning that “integrated water resources management [is a] strategy to reduce poverty”, **the CSP suggests that water degradation affects in particular poor people. Specific mention**

⁵ A SEA is an overarching assessment that at the programming level integrates environment and development issues, provides information on alternative options, and identifies potential environmental impacts of proposed policies and plans (Davalos, 2002).

⁶ All subsequent quotes from the Rwandan CSP have been translated from the original French version.

of the degradation of other natural resources – such as of land due to increased fertilizer use – and its impact on the rural poor is however not discussed.

4.1.d. Vulnerability to natural and human-induced disasters

Given Rwanda's recent history of civil war and the 1994 genocide – that resulted in the deaths of more than 1 million people and the displacement of more than 40% of the population - **special attention is given throughout the Rwanda CSP on the need to address conflict resolution, reconciliation, justice, and democratization.** The CSP indicates that, “The genocide exacerbated [poverty incidence]... climbing to 70%” (République Rwandaise et Communauté Européenne, 2003, p. 9); prior to the war in 1993 poverty incidence stood at 53%. The CSP furthermore indicates that conflict has led to the appearance of “new vulnerable groups”, namely widowed women, wives of prisoners, and child-headed households (République Rwandaise et Communauté Européenne, 2003, p. 8).

While the CSP makes clear links between the impacts of conflict on people's livelihoods, specific impacts of the war on the environment are not articulated. The civil war's impact, such as on forest encroachment and increased poaching, are not explicitly mentioned in the Rwanda CSP.

Although the CSP makes little reference to natural disasters, **the CSP generally indicates that especially poor segments of society's are vulnerable to natural disasters such as drought.** EC funds, under the “Rural Development” core area, are being used to develop an agricultural information system to among other things help monitor agricultural productivity and improve food security.

4.2. Environmental/poverty integration in the core areas

This section specifically evaluates the extent to which each core area – in the case of the Rwanda CSP rural development, macro support, and good governance – integrates and acknowledges environment/poverty concerns.

4.2.a. Rural development: Rwanda CSP

EC funds in the “rural development” core area are being used to support increased agricultural production, improved market access, raised awareness on land reform, and provision of potable water and sanitation.

Increased agricultural production

Despite aiming to increase fertilizer use by almost eight-fold between 2001 and 2005, the Rwanda CSP does not mention the possible environmental and human health consequences of such intensive input use. Although fertilizer use in Rwanda is currently limited and unlikely to cause environmental problems in the near future (Delaunay-Belleville, personal communication, 2004), intensive future fertilizer may pose environmental threats if unsustainably used over a long period of time. Such threats include ground and surface water contamination, algae growth, fish population decline, and human health consequences (see also Section 6.1.a). Owing to the rural poor's dependence on natural resources, such environmental risks are likely to bear greater negative consequences on the poor people's livelihoods.

Improved market access

The CSP does not mention possible environment impacts due to improved market access – namely through the proposed rehabilitation of a primary road between Ruhengeri and Gisenyi. Although improved market access can be an important means to alleviate poverty,

opening up rural areas – especially in countries with weak environmental regulatory frameworks - may have significant environmental impacts and in turn harm especially the livelihoods of poor people. Environmental impacts due to improved access may include increased forest encroachment, land clearing for agriculture, and rapid (and often uncontrolled) extraction of natural resources.

Land reform

While the CSP does mention that land reforms will be critical towards securing people's rights, **there is no discussion on how the contentious land reforms - coupled with current privatisation in Rwanda - could restrict the rural poor's access to land and natural resources** (see Section 6.3.b. for more detail on Rwanda's land reforms). The CSP does, however, mention that the 1994 Rwanda civil war led to significant movements of people who were displaced from their land: approximately 40% of the population were displaced during the conflict.

Water access and sanitation

The CSP does mention that improving water access and sanitation - a key goal of the Rural Development core area - **are needed to improve water quality and in turn poor people's living conditions.** Under the Rwanda CSP 10, million Euro will be allocated towards the implementation of water and sanitation programs, particular in the Ruhengeri and Gitarama provinces (République Rwandaise et Communauté Européenne, 2003).

4.2.b. Macro support: Rwanda CSP

As previously mentioned the Government of Rwanda will use EC funds under the macro support core area to promote macro economic reforms and improve education and health services. While various initiatives under the macro support core area are specifically geared towards alleviating poverty - such as by improving health and education facilities - **the environmental implications of various macro support initiatives that support the privatisation of the agricultural, mining, tourism, and other potential growth sectors are not discussed.** In many other countries with poor environmental regulatory frameworks, rapid privatisation has significantly deteriorated natural resources upon which poor people's livelihoods significantly depend (Reed, 2001). **In Rwanda rapid expansion of the coffee, tea and pyrethrum, tourism, and mining sectors could pose significant environmental threats, in turn damaging livelihood of especially the rural poor.** As discussed in detail in Section 6.2, **expansion of the mining sector alone is already attributable for forest degradation, water pollution, and erosion in Rwanda.**

4.2.c. Good governance: Rwanda CSP

While the CSP generally notes of the need to “reinforce institutional capacity in the environmental sector” (République Rwandaise et Communauté Européenne, 2003, p. 24), **the CSP in its discussion of the good governance core area does not specifically indicate the need to strengthen good environmental governance in Rwanda.** Furthermore, although the CSP mentions the need “to stop the illegal exploitation of natural resources in the Democratic Republic of Congo” (République Rwandaise et Communauté Européenne, 2003, p. 8) - where Rwanda troops were stationed in the late 1990s and early 2000s and withdrawn in 2002 - **no specific reference is made on the need to improve transparency to deter similar future illicit exploitation of natural resources.**

4.3. Other (CEP, SEA, etc.)

4.3.a. Country Environmental Profile (CEP)

The Rwanda CSP does not include a Country Environmental Profile (CEP) (see footnote #4 on a definition of a CEP). A CEP was, however, included in hindsight in the 2003 Joint Annual Report (Krissler, communication, 2004).

4.3.b. Strategic Environmental Assessment (SEA)

No Strategic Environmental Assessments (SEA) were included or requested in the Rwanda CSP (see footnote #5 for an explanation on SEA). In the Rwanda CSP, SEAs would likely have been useful to assess environment/livelihood impacts due to road rehabilitation (e.g., of the Ruhengeri-Gisenyi primary road) and privatisation of industries (e.g., in the mining, agriculture, and tourism sectors).

4.3.c. Other

General reference is made throughout the Rwandan CSP e.g., on the need to “systematically integrate environmental impacts” (République Rwandaise et Communauté Européenné, 2003, p. 24) and to develop environmental, conservation, and land policies (e.g., the National plan for the Environment, the Action Plan for Biodiversity Conservation, and Land Law). Nonetheless, as indicated above, no SEAs were requested at programming level in the Rwanda CSP.

5. Environment-poverty weaknesses in the Rwanda CSP (Tier 2)

In this section - the Tier 2 evaluation - environment-poverty weaknesses have been identified based on the above review and evaluated in more detail to identify possible intervention strategies to address the environment-poverty concerns. The assessment specifically evaluates how EC investment in the relevant core area (e.g., rural development, macro support, etc.) is affecting (or anticipated to affect):

- The quality of environmental resources upon which poor peoples heavily depend (e.g., income streams from natural resources, revenue sharing, etc.);
- Poor people's access to land and natural resources, information, and justice (e.g., their rights to use and own land);
- Their health – particularly if environmental quality is deteriorating or anticipated to deteriorate (e.g., water and air degradation); and
- Their means to cope to environmental disasters (e.g., to floods, droughts, famine, conflicts, etc.).

Based on the above review, various questions have been identified highlighting environment-poverty weaknesses for each EC funded core area described in the Rwanda CSP. **It should be emphasized that the below indicated questions are specifically interesting in quering on environmental/livelihood challenges. This is not to say that the Rwanda CSP is not supporting various initiatives that are promoting poor people's livelihoods and the environment.** As previously noted, the EC is funding, for example, various initiatives - including to improve water access and sanitation - that are explicitly geared towards ameliorating the environment and poor people's livelihoods.

- Rural development
 - *Environmental consequences*: How is modernization of agriculture – including a proposed eight-fold increased use in fertilizers – anticipated to affect the environment? How will this impact forests, fish, fresh water, biodiversity, etc.? How is the rehabilitation of a primary road between Ruhengeri and Gisenyi (60km) envisioned to impact the environment?

- *Livelihood consequences*: How is modernization of the agricultural sector and road rehabilitation envisioned to impact poor people's lives? Their income generation, employment opportunities, market access, health, access to resources and land, etc.?
- *Response strategies*: What interventions are needed to deal with the anticipated environment/livelihood concerns?
- Macro support
 - *Environmental consequences*: How is growth (current or anticipated) in the following sectors impacting/anticipated to impact the environment – forests, fresh water, fish, etc?
 - Agriculture (e.g., coffee, tea, pyrethrum⁷, rice, maize, potatoes, soya, and beans)
 - Livestock
 - Mining (e.g., of coltan⁸, gold, and sapphires)
 - Tourism
 - Other?
 - *Livelihood consequences*: How will growth of the above sectors impact poor people's livelihoods? Their access to resources and land, employment opportunities, human health, etc.? Who are currently benefiting (or anticipated to benefit) from growth in these sectors?
 - *Response strategies*: What interventions are needed to help ensure that poor people benefit from growth in the above noted sectors?
- Good governance
 - *Environmental consequences*: To what extent has Rwanda developed a regulatory environmental management framework?
 - *Livelihood consequences*: How will land reforms (the new Land Policy and Land Law) affect poor people's rights and access to land and natural resources?
 - *Response strategies*: What interventions are needed to improve good *environmental* governance in Rwanda?

6. Case studies/description of environment-poverty weaknesses of the Rwanda CSP

Various documents concerning the above noted environment-poverty weaknesses have been used in the subsequent review. These documents were solicited from staff (e.g., at the Rwanda EC country delegation and WWF EARPO - see Annex 1 for a list of individuals contacted) and downloaded off the web. Due to time constraints, follow up with EC and WWF staff was kept to a minimum. It is recommended that additional information is solicited from various individuals when this research is conducted in more detail with EC-PREP funding (see asterices next to names of individuals in Annex 1 for which further follow-up is needed). While many of the subsequent case studies do not always specifically refer to EC funded initiatives, they do indicate how EC funding for similar projects may lead to comparable environment/livelihood concerns.

6.1. Rural development, environment, and livelihoods

6.1.a. Modernizing the agricultural sector

As previously mentioned, the Rwanda CSP and PRSP emphasize modernizing agriculture, including extensively increasing fertilizer use. While fertilizer use – currently low - does not pose

⁷ Pyrethrum comes from dried chrysanthemum flowers which when refined can be used to produce natural and environmental friendly insecticides (Kayigamba, 2001). Pyrethrum provides highly effective protection against mosquitoes and in turn against such diseases as Malaria and Yellow Fever.

⁸ Coltan, also referred to as colombo-tantalite, is an expensive metal that is used in mobile phones (The Guardian, 2004). Tantalum oxide – a heat resistant powder that can hold high electric charges - is extracted from coltan (Knight Ridder Newspapers, 2003).

an environmental threat in Rwanda, its rapid and unsustainable use may entail future environment risks that in turn threaten livelihoods. If poorly regulated intensive input use can lead to agro-chemical leeching in ground and surface water, deteriorate biodiversity in surrounding rivers and lakes, and increase occurrence of disease.

Areas considered to be especially vulnerable to the consequences of extensive fertilizer use in Rwanda - should its use be rapid and unsustainable - **are namely, although not exclusively, concentrated in the northwest.** More specifically, such areas include:

- regions where tea and coffee are grown - for the most part scattered throughout the country (although coffee plantations are particularly found in the Gitarama, Kibuye, and Butare provinces);
- regions with high pyrethrum potential - currently geographically concentrated in Ruhengeri and Gisenyi; and
- areas where other agricultural crops such as potatoes, fruits and vegetables are cultivated - grown primarily in Ruhengeri, Gisenyi, and Kigali-Ngali (Government of Rwanda, 2002; Delaunay-Belleville, personal communication, 2004).

Of the above noted crops, the crops most likely to benefit from fertilizer use, and in turn at highest risk to its intensive use, are Rwanda's main export crops - tea and coffee – in addition to pyrethrum (Delaunay-Belleville, personal communication, 2004)⁹. Regulatory frameworks need to be developed and/or strengthened to ensure that fertilizer use, especially in coffee, tea, and pyrethrum plantations, is kept to sustainable levels.

6.1.b. Road development

EC funds will be used to rehabilitate the Ruhengeri and Gisenyi primary road in northwest Rwanda, a road previously developed in the 1980's. This road is currently in very poor condition, in which stretches are dirt road and inaccessible during the rainy season. Road works will likely entail rehabilitating the entire road to bituminous/gravel status and may (or may not) entail widening the road (Aubry, personal communication, 2004).

The EC will conduct a study in a couple of months concerning the technical and economic feasibility of the Ruhengeri-Gisenyi road rehabilitation. This study is anticipated to include a short section on environmental impacts. The study will also include a section on the feasibility of rehabilitating the Kigali and Gisenyi road: road rehabilitation that may be funded under a future EDF (Aubry, personal communication, 2004).

While improving market access can be an important means to alleviate poverty, opening up rural areas – especially in countries with weak environmental regulatory frameworks – can have negative environmental consequences. **Considering that** Rwanda's environmental regulatory framework is still evolving and that **the Ruhengeri-Gisenyi road rehabilitation will improve access to an area with high agricultural and tourism potential, environmental impacts may be anticipated.**

As previously indicated (see Section 6.1.a. above) northwest Rwanda is known for its high agricultural potential: this in large part due to the region's highly fertile volcanic highland soils. Improved access to this area will, especially in one of the Africa's most densely populated countries, likely increase land clearing for agriculture, forest encroachment, and extraction of natural resources - especially of forest resources that continue to be used as the primary source of

⁹ Note that coffee and tea account for respectively 49% and 44% of Rwanda's export earnings (MINITERE, 2003b).

energy in Rwanda (MINITERE, 2003). Furthermore, increased cultivation in this area of high relief and precipitation pose significant erosion risks: "...soil degradation affects a big part of [Rwanda], particularly fragile ecosystems of mountain regions in the North and in the West" (MINITERE, 2003b, p. 38). Erosion in Rwanda is already responsible for washing away annually an estimated 557 tons/ha (MINITERE, 2003b).

In addition to agricultural potential, northwest Rwanda also has high tourism potential. The Volcanoes national park - located in northwest Rwanda - is known for one of the world's few remaining mountain gorilla populations (see also Section 6.2.b). In addition Gisenyi, situated on the eastern shore of Lake Kivu, is a lakeside resort town that already attracts wealthier Rwandans, expatriates, and travellers. While tourism can generate much needed foreign income, rapid and poorly regulated growth has the potential to carry various negative environmental/livelihood consequences including soil compaction, water degradation and depletion, changes in species populations and composition, and introduction of invasive species.

In addition to environment/livelihood implications for Rwanda, the rehabilitation of the Ruhengeri-Gisenyi road - located close to the border of the Democratic Republic of Congo (DRC) - is furthermore envisioned to improve market access for DRC exports (Aubry, personal communication, 2004). Such improved access may lead to further expansion of natural resources-based industries based out of the DRC and its contentious re-export in Rwanda (see Section 6.2.c. on past accusations of Rwanda's involvement in the illicit re-export of DRC natural resources).

6.2. Macro support, environment, and livelihoods

The majority of EC funds for the macro support core area will go towards supporting Rwanda's macro economic reforms: as already noted 70% will be allocated to promote reforms articulated in Rwanda's Poverty Reduction Growth Facility, while the remaining 30% will be used for education and health initiatives. Privatisation, a principle economic reform in Rwanda, is envisioned to lead to growth in the agricultural, mining, tourism, and livestock sectors. Growth in other industries - such textile, sugar, and fruit juice industries - is also anticipated.

6.2.a. Agricultural growth

Agricultural growth stands central to Rwanda's economic reforms. Growth of coffee and tea plantations as well as other agricultural markets (e.g., pyrethrum, rice, maize, sorghum, potatoes, beans, and bananas) is actively being promoted through privatisation. Already numerous coffee factories in Rwanda have been sold (i.e., Gikondo, Nkora, and Masaka) and tea factories are being privatised: Sorwathé has already been privatised while the Mata, Kitabi, Gisakura, and Shagasha tea factories will be privatised in 2004 (Privatisation Program, 2004). In addition various agribusinesses - such as tanneries, diaries, and pyrethrum, maize, sugar factories - have been sold (Privatisation Program, 2004).

Privatised plantations and companies, that typically have larger revenues, tend to spend greater amounts of money on increased input use. **Between 2000 and 2001 alone increased private sector activity in the coffee and tea industries prompted a threefold increase in fertilizer use** (Government of Rwanda, 2002). As previously mentioned, while fertilizer use is currently not problematic in Rwanda (Delaunay-Belleville, personal communication, 2004), continued intensive use of fertilizers over long periods of time may pose future threats to Rwanda's environment and in turn people's livelihoods (see previous Section 6.1.a). Leaching of agro-chemicals in surface and ground water may be of particular concern, especially upon considering that wetlands and aquatic lands in Rwanda represent approximately 15% of national territory, 9% of which is lakes and rivers and 6% marshes (MINITERE, 2003).

Competition from large plantations and commercial farms – who may become monopoly buyers - may furthermore jeopardize livelihoods of especially the rural poor that depend on agriculture as their main source of income: 90% of the Rwandan population is currently employed in the agriculture sector (Government of Rwanda, 2002). To address this issue the Rwanda government is in the coffee and tea sectors developing a voluntary framework of cooperation between smallholder farmers and the tea and coffee factories to ensure that tea and coffee are not only grown on the large plantations but also bought from smallholder farmers. The extent to which such measures are protecting smallholder farmers needs to be further explored. Furthermore, there have been various fair trade initiatives to support smallholder Rwandan coffee farmers. A recent initiative funded by the USAID and other donors, for example, resulted in increasing smallholder coffee farmer revenue by almost threefold¹⁰ (BBC, 2003).

6.2.b. Growth in the tourism sector

Prior to 1994, tourism was a major foreign currency earner in Rwanda. Since the 1994 civil war, however, tourism numbers have dwindled: while the number of visitors to Rwanda peaked in 1984 at 39,000, tourism numbers fell to 16,000 visitors in 2001 (Environmental News Network, 2003). The Rwandan government is working on a new tourism strategy that aims to almost double tourism since peak levels in 1984 to 70,000 annual visitors by 2010. The new tourism strategy emphasizes two types of tourism.

- 1) Nature-based tourism that will be centred around visiting Rwanda's primates: namely Rwanda's mountain gorillas in the Volcanoes National Park¹¹ and other unique primates such as the black and white colobus monkeys and eastern chimpanzees (e.g., in the Nyungwe forest¹²).
- 2) Historic tourism that will be focused on Rwanda's recent past and pre-colonial history (Environmental News Network, 2003).

While tourism can provide an important source of foreign income, its development must be coupled with effective regulatory framework that minimizes environmental damage (WWF news, 2004). **Rwanda fortunately has various success stories that it can point to regarding its tourism policies and initiatives. Current policies in Rwanda, for example, strictly restrict the number of visitors that may visit mountain gorilla's:** 11,000 visitors per year - 8 visitors a day - can get permits to see Rwanda's mountain gorillas (Kalpers, personal communication, 2004; New York Times, 2004). Visitors are in addition required to keep a minimum of 7 metres distance from the gorillas to minimize disease transmission (IGCP,). The International Gorilla Conservation Programme (IGCP) – an initiative set up by WWF, African Wildlife Foundation (AWF), and Fauna and Flora International (FFI)¹³ – has been a front runner in effective protection of mountain gorilla populations in Rwanda and neighbouring Uganda and the DRC¹⁴ (WWF Eastern Africa Programme, 2004). Despite the challenges of political turmoil, staff shortages, and refugee influxes, mountain gorilla populations have been maintained. **Mountain gorilla populations have even recently been shown to have increased during the past 15 years from 624 in 1989 to approximately 700 today** (WWF news, 2004).

¹⁰ Significantly declining world prices for coffee has threatened the livelihoods of many of Rwanda's smallholder coffee farmers.

¹¹ The Volcanoes National Park is located in the Vigunga Mountains range of northwest Rwanda.

¹² The Nyungwe forest is located in southern Rwanda.

¹³ The IGCP is currently focusing its efforts on the Virunga Volcanoes and the Bwindi Impenetrable forests (WWF Eastern Africa Program, 2004).

¹⁴ Mountain gorilla populations in the DRC are found in the Virunga National Park, while in Uganda in the Bwindi Impenetrable and Mgahinga national parks.

Efforts to manage other areas with tourism potential in Rwanda have, however, not always been as successful. In the Akagera National Park, for example, thousands of animals have been lost due to heavy poaching during Rwanda's war in 1994. Buffalo numbers have decreased twenty-fold from 10,000 in 1990 to 491 in 2002 and impala populations have dwindled by fifteen-fold from 30,000 in 1990 to 1,890 in 2002. Two-thirds of the park, about 666 square miles, was furthermore gazetted to resettle land-seeking Tutsi refugees that returned in 1997 after living years in exile in the DRC, Tanzania, and Uganda. The settlers currently use the land to graze livestock near, and often inside, the unfenced park (Courier Journal, 2004). A lodge in the park was recently privatised in the hopes of reviving tourism in this area.

6.2.c. Increased extraction of minerals

Rwanda is striving towards diversifying its exports, including the export (and re-export) of minerals such as cassiterite, wolfram, colombo-tantalite (coltan), gold, and sapphires. The mining sector in Rwanda is being promoted through privatisation and liberalization, including through tariff reductions and export tax removals. **Most mining in Rwanda is small scale**, sufficient deposits have yet to be located to support large-scale commercial operations (Government of Rwanda, 2002; Privatisation Secretariat). Nonetheless the search for minerals and development of small scale mining industries has already led to environmental concerns. **The search for gold and more recently for coltan – particularly in the Nyungwe forest – has led to the degradation of forests and protected areas. Mining industries in Rutongo and Gatumba have polluted the Nyabarongo and Nyabugogo rivers** with sediments and clay (MINITERE, 2003). In addition **quarries for brick making and the exploitation of lime, sand, and stones** - especially where pits have been left open - **has increased erosion** throughout Rwanda (MINITERE, 2003c).

In addition to growing concerns of an expanding mining industry – albeit currently small - in Rwanda, **Rwanda's alleged involvement in the extraction of natural resources in neighbouring DRC has been cause for concern.** While Rwandan soldiers formerly pulled out of the DRC in 2002, the Rwanda army was implicated in exploiting DRC's natural resources, in particular coltan and diamonds, in the late 1990s and early 2000s. In 1999, an estimated 60% of DRC's coltan - resulting in earnings of US\$250 million every 18 months - was according to a report by the United Nations (2002) mined under the surveillance of the Rwandan government. Furthermore, in 2000 it was alleged that the Rwandan forces were involved in monthly diamond sales - mined in eastern DRC - of an estimated value of US\$2million. **Rapid and unregulated mining of coltan has had devastating impacts on the environment in the DRC, particularly on two DRC World Heritage sites, the Kahuzi-Biega National Park and Okapi Wildlife Reserve** (IUCN, 2001). In the Kahuzi-Biega National Park alone, populations of eastern lowland gorillas have declined eight-fold from 8000 before the war to 1000 in 2003, while the poaching of elephants for ivory resulted in the dramatic decline of elephant families in which only 2 out of 250 elephant families remained in 2000 (IUCN, 2001; Knight Ridder Newspapers, 2003).

There is continued concern that regional incentive to re-export minerals from DRC via Rwanda, Burundi, and Uganda, in addition to Rwanda's influence in DRC public utilities (e.g., various bosses of DRC public utilities are Rwandan) will continue to play a role in unregulated exploitation of DRC minerals (The Guardian, 2004). Further research needs to be conducted on the extent of re-exporting of DRC minerals in Rwanda and on opportunities to curtail (or make legitimate) such re-export.

6.2.d. Expansion of the livestock sector

Structural reforms in Rwanda are aiming to increase livestock levels through – among other things - privatisation and liberalization of the livestock industry (Government of Rwanda, 2002).

There is noticeable rapid development of ranching in eastern Rwanda - such as in Umutara province which has more than 30% of the country's livestock - **and in the former forest of Gishwati** in northern Rwanda (MINITERE, 2003; MINITERE, 2003b). Furthermore, considerable livestock potential is envisioned in Gisenyi and Ruhengeri (Government of Rwanda, 2002).

Pastoral areas are often victim to overgrazing, bush fires, treading, soil degradation, and erosion (MINITERE, 2003b). Such environmental threats in particular affect the rural poor whose health and livelihoods are directly affected by deteriorating quality of soils, water, and other natural resources.

6.2.e. Growth in other sectors/industries

Structural reforms in Rwanda are promoting growth in a large array of other industries, including in textiles and sugar. Although these industries are currently few and small/medium sized, environmental threats have already been documented. **Industrial dumping of effluents** with no prior treatment **has been observed at the Kabuye sugar factory and about various textile and iron factories in Rwanda** (MINITERE, 2003). **The dumping of these untreated effluents and by-products is jeopardizing in particular wetlands:** most small industries in Rwanda are found in or near wetlands.

6.3. Good governance/institutional support

6.3.a. Environmental management regulatory framework: Good environmental governance
Rwanda's environmental management framework is, as in many other developing countries, **evolving and poorly regulated**. While Rwanda has various new environmental policies - including a National Environmental Plan (adopted in 1991), National Forestry Plan (1986 –1997), and Agricultural Development Policy (1997) - **various existing laws are old, unknown, and/or poorly enforced**: “In Rwanda, the legal framework suffers from lack and/or non application of regulations governing environment” (MINITERE, 2003b, p. 48) and “In Rwanda, the current institutional framework for environmental protection and management shows a certain number of weaknesses [in] its effectiveness and efficiency” (MINETERE, 2003c).

6.3.b. Land reform

The Rwandan government is in the process of finalizing a new Land Policy and Land Law. The policy emphasizes decentralization, grouped settlement and urbanization, and improved land use planning and management. The new land policies highlights in particular the need for land registration, property rights, land use and planning, and land information systems (Lindoro, personal communication, 2004; Pillet, personal communication, 2004).

Upon considering that Rwanda is one of Africa's most densely populated countries in Africa - in which approximately 260 persons live per square kilometre - land reform is understandably a contentious issue. Land shortage has already necessitated the settlement of people on land unsuitable for cultivation, e.g. where crops are planted on marginal land with slopes of up to more than 80%. **The implications of Rwanda's current land reform coupled with privatisation trends** (of industries and land) on **especially the rural poor needs to be evaluated in more detail**.

7. Response strategies to address the environment-poverty concerns of the Rwanda CSP

The following section describes response strategies that the WWF Eastern Africa Regional Programme Office (EARPO), the EC Rwanda country delegation, and other stakeholders (Rwandan government agencies, private institutions, and other NGOs) may consider in

addressing the above noted environment/livelihood concerns of the Rwanda CSP (see previous Section 6). It is recommended that collaborative approaches and synergies are sought wherever possible¹⁵. More specifically, it is recommended that WWF seek alignment with initiatives in Rwanda's focal ecoregions: namely the Albertine Rift Mountain Forests, East African Moolands, and Rift Valley Lakes ecoregions. More general recommendations directed to the Commission's headquarters – such as to EuropeAid and the Development DG - have not been mentioned below. These were previously described in detail by Snel (2004) and have been summarized in Annex 2.

7.1. WWF Regional Programme Office (EARPO), the EC, and other stakeholders

- Agriculture
 - **Synergies need to be developed with current agricultural and/or related initiatives to address possible future extensive fertilizer use in Rwanda.** This includes strengthening continued agricultural research and the promotion of environmental friendly agricultural methods - particularly concerning (organic) input use and agro-forestry methods. Owing to high agricultural potential in northwest Rwanda, coupled with the anticipated improved market access in this region (see also below under “Transport”), **special attention needs to be given to developing/strengthening initiatives in northwest Rwanda.** More specifically, regions where tea and coffee are grown (for the most part scattered throughout the country); regions with high pyrethrum potential (currently geographically concentrated in Ruhengeri and Gisenyi); and areas where other agricultural crops are cultivated (primarily in Ruhengeri, Gisenyi, and Kigali-Ngali) need to be prioritized.
- Transport
 - WWF, the EC Rwanda country delegation, and other stakeholders will need to seek collaborative approaches and synergies with existing programs to address environmental/livelihood concerns due to improved road access in northwest Rwanda – anticipated as a result of the EC funded road rehabilitation between Ruhengeri and Gisenyi. **Particular attention needs to be given to spill-over effects of the road rehabilitation on the growth of the agricultural and tourism sectors.** While such growth can help alleviate poverty, given Rwanda's poor environmental regulatory framework negative environmental impacts are envisioned. Such environmental concerns may include forest encroachment (e.g., possibly in the Volcanoes national park and other protected areas), soil degradation (due to land clearance for agriculture), and possible rapid and unsustainable expansion of tourism (e.g., about Lake Kivu).
 - Improved road access in northwest Rwanda will in addition have regional implications by likely improving the flow of goods – including of natural resources – between the DRC and Rwanda. Considering allegations of the illegal exploitation of DRC natural resources and its re-export in among other countries Rwanda (see Section 6.2.c.), efforts needed to be developed/strengthened to monitor such (illicit) regional trade. **Synergies are needed to, among other things, strengthen institutional structures - especially at border controls and in eastern DRC where mineral extraction takes place** (see also recommendations under “Mining”)
- Tourism

¹⁵ Such as with the existing WWF and Fauna and Flora International (WWF) International Gorilla Conservation Programme (IGCP), WWF's EARPO Eastern Africa Corporate Club (WWF Eastern Africa Programme, 2004), and a recently proposed WWF project under DGIS consideration on “Integrated Watershed Management in the Kagera Basin and the Forests of the Congo-Nile Divide: Conflict reduction through integrated natural resource management” (Wamukoya, personal communication, 2004).

- **The success of tourism in Rwanda will largely depend on the continued development and enforcement of community-based ecotourism policies.** It is recommended that best practices used by the IGCP are drawn upon. Such best practices include incorporating local community concerns; supporting benefit sharing in the management of protected areas; strengthening institutions/park authorities; and emphasizing regional cooperation. Due to envisioned improvements in road access in northwest Rwanda, **efforts need to in particular be oriented towards monitoring tourism growth** in northwest Rwanda: more specifically **in and about the Volcanoes National Park and Lake Kivu**. Furthermore, initiatives need to be developed and/or strengthened in areas where political instability and poor management have already jeopardized Rwanda's tourism potential, such as in the Akagera National Park in eastern Rwanda.
- Mining
 - While environment threats concerning the search for and extraction of mineral resources is currently small, **mining works and its expansion need to be monitored.** This includes monitoring mining industries **in Rutongo and Gatumba** (that have already polluted the Nyabarongo and Nyabugogo rivers), **gold and coltan mining explorations in the Nyungwe forest** (that has lead to forest degradation), **and** mining at **numerous quarries** found throughout Rwanda (that are increasing erosion). Regulatory frameworks need to be developed and strengthened to ensure that mining operations comply to environmental and labour standards.
 - In addition to addressing environmental concerns of Rwanda's mining sector, additional **initiatives are needed to deal with regional allegations concerning the re-export of DRC minerals via Rwanda, Burundi, and Uganda.** Synergies are needed to improve regional efforts to track certifiable mineral resources – including of coltan and diamonds from especially DRC's World Heritage Sites (see Section 6.2.c. for more detail). Furthermore, support is needed to strengthen regional and national institutions to protect areas from illicit mineral exploitation, awareness needs to be raised to companies and consumers on the importance of buying certified minerals (synergies may be sought with WWF's Eastern Africa Corporate Club), and alternative income generating activities need to be built for the thousands of poor people in eastern DRC who currently depend on mining for their livelihood (e.g., through the creation of community based conservation reserves and revenue sharing).
- Livestock
 - Initiatives need to be developed and/or strengthened to monitor environmental threats from growth in the livestock sector. **Monitoring of growth in the livestock sector is especially important in eastern Rwanda, in the former forest of Gishwati, and in the Gisenyi and Ruhengeri provinces** (see also Section 6.2.d.).
- Other industries (e.g., textiles and sugar)
 - A strong regulatory framework is needed to ensure that industries in the above and other sectors – e.g., textile and sugar - are held accountable to environmental damages. This in particular entails **monitoring factories**, many of which are currently **located in or near wetlands, that dump untreated effluents and by-products.**
- Macro support:
 - **WWF EARPO, the EC Rwanda country delegation, and other stakeholders need to keep careful track of growth sectors in Rwanda** – such as those described above – currently being promoted through privatisation and liberalization (see more detailed recommendations under “Good *environmental* governance” below). As previously emphasized, growth of these sectors can in countries with poor environmental regulation have significant negative consequences on the environment

and in turn on poor people's livelihood who significantly depend on natural resources.

- Good *environmental* governance
 - WWF EARPO, as well as the EC Rwanda country delegation, government agencies, private institutions, donors, and other NGOs **need to seek collaborative approaches to strengthen good environmental governance in Rwanda**. This will include:
 - **Strengthening monitoring** of environment/livelihood impacts **in the** above noted **growth sectors**: such as in agriculture, tourism, mining, and livestock. This in particular entails strengthening institutional capacity of Rwanda's environmental and related institutions and the development of an integrated monitoring program.
 - **Improving transparency – including fiscal transparency** – to help flag rapid, unsustainable, and illegal extraction of natural resources will be vital. Such improved transparency will not only help deal with environmental concerns in Rwanda, but will in addition help address regional concerns such as the re-export of DRC natural resources via Rwanda, Burundi, and Uganda. Synergies will need to be sought, including with existing anti-corruption initiatives.
 - A **detailed assessment on how land reforms are impacting the rural poor's access to and rights over natural resources and land is needed**. Based on results of such an evaluation, recommendations on land reform revisions could be made to help ensure that the rural poor concerns are adequately accounted for.
 - Population growth in Rwanda continues to exert enormous pressure on the environment. Synergies are needed to **strengthen population control initiatives** in this densely populated country.

8. Concluding remarks

Various lessons learned and best practices have been drawn concerning environment/livelihood impacts of initiatives supported by the EC in the Rwanda CSP.

8.1. Lessons learned

- A poor environmental management framework in Rwanda is threatening sustainable development in Rwanda. **Various case studies documented in this assessment indicate that expansion of mining and industrial activities – being promoted by various donors including the EC - has already led to soil and water degradation that is in turn negatively impacting the livelihoods of especially the rural poor**. Synergies are needed between WWF, other NGOs, and national agencies to strengthen good environmental governance in Rwanda.
- **Collaborative approaches and synergies are needed to address environment/livelihood concerns particularly in northwest Rwanda** where EC funded road rehabilitation will improve market access and likely jeopardize an already fragile environment. High relief and precipitation, coupled with this region's high agricultural and tourist potential, puts this area at high risk to forest encroachment and further erosion and soil degradation.

8.2. Best practices

- Various tourism initiatives in Rwanda have been successful. The IGCP has in particular been successful in promoting and maintaining mountain gorilla populations in not only Rwanda, but in addition in neighbouring Uganda and the DRC. Despite the challenges of political turmoil, staff shortages, and refugee influxes, mountain gorilla populations have been maintained and recently have even been shown to have increased. **Best practices**

used by the IGCP include developing and strengthening ecotourism policies (limiting tourist numbers that are allowed to view gorillas); **incorporating local community concerns; supporting benefit sharing in the management of protected areas; strengthening institutions/park authorities; and emphasizing regional cooperation.**

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Annex 2: Response strategies directed to EC headquarters

[For further detail refer to Snel (2004).]

- While the EC requires the development of EIAs for all its projects that have an environmental impact, this may be dangerously bypassed in instances where the EC transfers its funds directly into national treasuries, as is commonly the case for EC funding under “macro support”. While the EC is not alone in supporting unregulated growth, **the EC (and other donors and agencies) must be held accountable for environmental and social impacts in all initiatives it funds**, irrespective of whether funds are transferred into a national treasury or to a specific project.
- The lack of an effective environmental management framework is seriously threatening sustainable development in many developing countries. **Good environmental governance is fundamental towards facilitating sustainable development**. The EC needs to emphasize supporting the development of strong environmental management regulatory frameworks in developing countries, particularly in its “good governance” core area. The use of the EC Rural Policy (2000) – that focuses on empowering rural communities, consolidating democracy, and promoting sustainable natural resource management – could be a useful policy framework to mainstream such sustainable development and good environmental governance.
- **EC funding in countries with a poorly developed environmental regulatory framework has entailed significant environmental degradation and consequently deteriorated livelihoods of especially the rural poor**. In Tanzania for example, EC (and other donor) financing to macro support and transport is, for example, prompting unregulated growth in the mining, tourism, and fishing sectors – documented to have resulted in significant increases in deforestation, biodiversity loss, water degradation, disease incidence, and displacement.
- While due credit is given to the EC for requiring EIAs for all its initiatives that have anticipated environmental impacts, as indicated by the evaluation of the EIA for the Mwanza road project¹⁶ quality of the EIAs is lacking. **The development of high quality EIAs** includes comprehensive analysis of direct and indirect environmental and social impacts.
- Although developing high quality EIAs at the project level is crucial, **flagging initiatives with potential environmental consequences should ideally be done early on when the CSP is developed**. There are currently efforts underway to require CEP inclusion for all CSPs in the Mid Term Review. While CEP inclusion is important, guidelines need to furthermore be developed to ensure that CSPs integrate in their discussion of each of the core areas environmental concerns and environmental/poverty linkages.
- Gaining access to EIAs was cumbersome: no central archive exists of the EIAs. Since the EC country delegations are currently responsible to maintain EIAs under all EC funded initiatives (e.g., under the 9th EDF), it is recommended that EC country delegations **develop an EIA archive and provide open access to the EIAs**. Such public access would not only help inform the public on environmental considerations of EC funded projects, but may also facilitate accountability and provide incentive for the production of better quality EIAs. The World Bank, for example, includes EIAs for its projects on its website: similar transparency by EC funded initiatives is recommended.

¹⁶ Note that this refers to the Tanzania CSP evaluation conducted in Snel (2004). Refer to Snel (2004) for further details.

**Environmental mainstreaming in
EC Country Strategy Papers:
An evaluation of the
Tanzania (2000) and Madagascar (2001)
Country Strategies and opportunities
to address environment-poverty concerns**

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Executive summary

A recent review by the ACP-EU joint assembly indicates that the EC has inadequately mainstreamed environmental issues in its development assistance, particularly regarding the central role that the environment and access to environmental goods and services play in poverty alleviation. Understanding the critical role that natural resources play in sustaining the rural poor is fundamental to reducing poverty. The rural poor depend on natural resources for their food, water, energy, housing, and medicine. **Neglect of the environmental impacts of development assistance may significantly undermine environmental and natural resources conditions that provide a foundation for the livelihoods and survival of especially the rural poor.**

This study evaluates the scope and degree to which the environment has been integrated in select EC funded Country Strategies, identifies environment-poverty weaknesses, and articulates opportunities to address the environment-poverty concerns. Two Country Strategies have been evaluated: Tanzania and Madagascar. These countries were selected due to their significant dependence on natural resources, representative EC core areas and WWF focal ecoregions, availability of CSP, and synergies with other programs (e.g., PRSP). For each Country Strategy three core areas were evaluated: for Tanzania environment-poverty concerns of EC financing in the transport, macro support, and good governance core areas were assessed, while for Madagascar environment-poverty weaknesses in rural development, transport, and macro support were evaluated.

This study confirms that environment mainstreaming in EC Country Strategies is poor. Specific environment-poverty weaknesses identified by this study for the Tanzania CSP include poor integration of environmental and social concerns in transport initiatives, especially in EC financing of road development and rehabilitation in the Lake Victoria area; unregulated expansion of mining, tourism, and fishing (funded by the EC through “macro support”); and insufficient support to environmental management. While fewer environment-poverty concerns were identified for Madagascar – in large part due to Madagascar’s evolving and improving regulatory framework – this study documents poorly regulated expansion of various growth sectors including in mining and textiles.

This study indicates that **EC funding in countries with poorly developed environmental regulatory frameworks is associated with various negative environmental/livelihood impacts.** In Tanzania, for example, EC (and other donor) financing in the macro support and transport core areas – that is promoting unregulated growth in the mining, tourism, fishing, and other sectors – is resulting in significant deforestation, biodiversity loss, water degradation, disease incidence in surrounding local villages, and displacement of (mostly poor) rural communities. EC funding in especially the macro support core area, where funds are typically transferred directly to national treasuries, is shown to dangerously bypass environmental regulations. Since macro funds typically abide to national (vs. EC) environmental policies, EC funds are in several instances being used to support sectoral expansion (e.g., in tourism and mining) that has not (or minimally) conformed to environmental standards, labour laws, and other regulations.

There are numerous opportunities to improve environmental mainstreaming in EC Country Strategies and to address environment-poverty concerns. This study identifies various response strategies at both WWF and EC levels. At the WWF level, it is recommended that the WWF Tanzania program use collaborative approaches to address environmental/

livelihood concerns in especially the Lake Victoria area – where improved road access and growth in the mining, tourism, and fishing sectors are developing unsustainably. Collaborative approaches, involving WWF and other NGOs, the EC, government, and private agencies, are needed to strengthen good *environmental* governance in Tanzania. In Madagascar, the WWF Programme Office, the EC and other agencies are recommended to seek synergies to in particular strengthen environmental monitoring of various growth sectors including in mining and textile industries. At the EC level improvements in environment-poverty mainstreaming will require – among other things – follow-up on environment/poverty integration in Country Strategies, improvements in EIA quality control of EC financed projects, and improved financing of environmental regulatory frameworks, especially in countries where economies and people’s livelihoods significantly depend on natural resources.

Environmental mainstreaming in EC Country Strategy Papers: An evaluation of the Tanzania (2000) and Madagascar (2001) Country Strategies and opportunities to address environment-poverty concerns¹

1. Introduction

Despite the reordering of priorities of the international development community to focus on poverty alleviation, comparatively little attention has been given to the central role that the environment and access to environmental goods and services play in poverty alleviation, particularly of the rural poor. A recent review by the ACP-EU joint assembly – adopted October 2003 – on the “Sustainable management and conservation of natural resources in ACP countries in the context of the 9th European Development Fund aid Programming” indicates that European Commission (EC) development assistance inadequately addresses environmental issues, especially with regard to the critical role that natural resource assets play in alleviating poverty. This paper’s evaluation further confirms that environment-poverty integration in EC funded Country Strategy Papers – specifically for Tanzania and Madagascar – has been poor.

Understanding the central role that the environment plays in sustaining the rural poor is fundamental to effective poverty alleviation. The rural poor, while pursuing multiple livelihood strategies, depend on the environment for their food, water, housing and medicines, and their survival depends on the maintenance of stable, productive ecological systems.

This study will explore in detail the scope and degree to which select EC Country Strategy interventions have addressed the role of natural resource wealth in dealing with poverty alleviation. This study focuses on a review in two countries on the anticipated environmental impacts associated with EC development strategies and specific interventions needed to address environment-poverty concerns. Criteria for country selection includes representation of EC focal areas and WWF Ecoregions, availability of CSPs, high natural resources dependence, and synergies with similar programs (e.g., PRSPs). The countries for which CSPs have been evaluated are Tanzania and Madagascar.

This paper develops and uses an analytical framework to assess if EC Country Strategies have integrated key environment-poverty linkages. Key environment-poverty linkages about which the evaluation is structured highlight that poor people depend on natural resources for their livelihoods, rely on access and rights to land and natural resources, are more likely to be affected by the health consequences of deteriorating environments, and are at greater risk to environmental disasters. This assessment is used to identify various environment-poverty weaknesses and – through the use of case studies and document reviews – identifies types of interventions that may be used to address the environment/poverty concerns. The interventions are envisioned to inform WWF Programs on opportunities to better focus WWF advocacy and resource mobilisation when designing development programs in the context of the 9th European Development Fund (EDF). More specifically, recommendations on interventions are anticipated to inform especially the WWF Tanzania and Madagascar Programmes on future WWF investment. The paper’s

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conclusions will furthermore inform the EC on changes that are needed to enhance its impact on poverty and the environment. **This study then not only evaluates the extent to which environment-poverty issues have been integrated in select EC funded Country Strategies, but furthermore looks at identifying constructive ways to address environment-poverty gaps.**

2. Background

The European Community's Development Policy's (2000) principle aim is to "refocus its activities to combat poverty" where the "environment...will play an important role supporting the main objective", while the Contonou Agreement (2000) similarly states that activities "...shall be centred on the objective of reducing and eventually eradicating poverty consistent with the objectives of sustainable development..." **A vast array of other European Community (EC) policies and declarations and Multilateral Environmental Agreements (MEAs) explicitly further commit the EC to systematically integrate environment in all its strategic plans and programmes** (EC, 2003). Such policies and declarations include:

- the Commission's communication on "Integrating Environment and Sustainable Development into Economic and Development Cooperation Policy" (October 1999);
- the EC strategy on "Integrating the environment into economic and development co-operation (April 2001), etc.);
- the Rio Declaration on Environment and Development, Millennium Development goals; and
- the adopted Plan of Implementation at the World Summit on Sustainable Development.

The EC Development Policy Declaration (November 2000) indicates that the environment should be considered as a cross-cutting issue in EC funded Country Strategy Papers (CSPs) and needs to be integrated into the six core areas identified by the Development Co-operation: transport; macro support (linked to social sector programmes); good governance; rural development and food security; trade; and regional integration and cooperation.

Despite legal commitments and increased recognition of environment-poverty linkages, environment-policy issues have seldom been recognized in EC funded CSPs. A recent study on environment mainstreaming of 60 EC funded CSPs indicates that environmental integration in CSPs is very weak: scoring on average 2.96 out of a total of 10 (where 10 indicates excellent integration). Criteria that were used in this study included:

- Inclusion of Country Environmental Profiles (CEP)²: only 6 of the 60 countries included CEPs;
- Inclusion of a Strategic Environmental Assessment (SEA)³: only 3 of the 60 countries mentioned a SEA and one requested a SEA;
- Analysis of environmental issues in the CSP; and
- Inclusion of poverty-environment indicators (Davalos, 2002).

As highlighted by this study, neglect of the environmental impacts of trade, macro-economic support, transport, and other EC core areas – while improving aggregate economic performance – may undermine the environmental and natural resource conditions that provide a foundation for the livelihoods of the rural poor. Rapid over-harvesting, habitat alterations, water contamination,

² A CEP includes a brief overview of the country (physical, economic, social, etc. conditions); summary of the state of the environment; overview of the environmental policy, legislative, and institutional framework; and recommended priority actions (Davalos, 2002).

³ A SEA is an overarching assessment at programming level that integrates environment and development issues, provides information on alternative options, and identifies potential environmental impacts of proposed policies and plans (Davalos, 2002).

and other environmental degradation deteriorate the quality and quantity of food, water, medicinal, and other environmental resources upon which especially the rural poor rely and threaten natural resources upon which other species depend.

3. Objectives

This paper's principle objective is:

- to inform World Wide Fund for Nature (WWF) programs – particularly the Tanzania and Madagascar programme offices – on current poverty-environment weaknesses of EC Country Strategies;
- to influence the future development of WWF programs – in the context of the Cotonou 9th EDF (2002-2007) – to respond to such weaknesses; and
- to inform the EC on changes required to improve its strategic approach, particularly regarding the mainstreaming of environment-poverty issues in CSPs.

Objectives of this study are more specifically to:

- develop an analytical framework to evaluate EC Country Strategies on their integration of environment-poverty issues,
- evaluate environment-poverty integration in a number of CSPs,
- assess anticipated environment-poverty impacts of select EC Country Strategies;
- provide recommendations to WWF programs, relevant to its Ecoregions, on desirable areas of intervention needed to address the anticipated environment-poverty weaknesses; and
- as far as possible identify institutional weaknesses of the EC/CSP approach resulting in the environment-poverty gaps.

4. Methodology

This study responds to the above objectives by evaluating in detail in two countries:

- environment/poverty integration in the EC Country Strategies;
- anticipated environment-poverty weaknesses associated the CSPs; and
- interventions needed to address the anticipated environment/poverty concerns.

The evaluation builds upon previous work conducted on the linkages between the environment and poverty (DFID et al., 2002; Bojo and Reddy, 2002; Bojo and Reddy, 2003) and on assessments of environmental integration in PRPSs and CSPs (WWF MPO, 2003; Davalos, 2002; FERN, 2002). This study is framed about key environment-poverty linkages: namely that:

- poor people – especially the rural poor – depend on natural resources for their livelihoods;
- rely on rights to and access of land and natural resources;
- are more likely to suffer the health consequences of deteriorating environments; and
- have fewer means to cope to natural and man-made disasters.

This study's evaluation is conducted for Tanzania and Madagascar. These countries were selected due to their significant dependence on natural resources, availability of the CSP, relevance to the WWF program (e.g., ability of the WWF country programs to follow-up on recommendations made), and representative EC core areas (especially those that are highly funded – namely transport, structural adjustment, governance, and rural development)⁴. In each of the two countries, three core areas were assessed:

⁴ An assessment of 63 ACP countries indicates that 29.9% of 9th EDF program funds were allocated to transport, 22.1% to macro support, 7.9% to governance, and 7.7% to rural development (WWF EPO, 2003).

- for Tanzania environment-poverty concerns of EC financing in the transport, macro support, and good governance core areas were assessed,
- while for Madagascar environment-poverty weaknesses in rural development, transport, and macro support were evaluated.

This study uses a two-tiered approach to evaluate environment-poverty weaknesses and to identify possible response strategies and interventions.

4.1. Tier 1

Under Tier 1 a qualitative assessment is conducted to assess whether the CSP acknowledges key environment-poverty linkages and integrates environmental considerations in its discussion of the core areas. Based on this CSP review, a number of poverty-environment weaknesses are identified. This study's Tier 1 evaluation relies primarily on a desk review of the CSPs and relevant documents (e.g., the PRSP and interim PRPS).

The following specific questions have been used in the Tier 1 evaluation:

1. Were environment-poverty linkages mentioned in the CSP? Does the CSP acknowledge that:
 - i. Poor people disproportionately depend on natural resources for their livelihood (livelihood dependence on environmental resources)?
 - ii. People living in poverty are more likely to be disempowered through poorly defined land rights, inadequate access to information, and legal rights (access to environmental resources, justice, and information)?
 - iii. Poor people are more likely to be exposed to deteriorating environmental conditions (health and environmental quality)?
 - iv. People living in poverty are at higher risk to be exposed to – and have fewer means to cope with – natural and man-made disasters (vulnerability to environmental disasters)?
2. Are environmental-poverty issues integrated in the discussion of the core areas, e.g. for,
 - i. Transport/road development?
 - ii. Macro support (e.g., privatisation of mining, tourism, etc.)?
 - iii. Good governance?
 - iv. Rural development and food security?
 - v. Etc.
3. How were environmental issues integrated in the CSP?
 - i. Was a Country Environmental Profile (CEP) developed for the CSP (see footnote #1)?
 - ii. Was a Strategic Environmental Assessment (SEA) requested (see footnote #2)? Developed?
 - iii. Other?

4.2. Tier 2

In Tier 2 environment-poverty weaknesses are evaluated in more detail and case studies are used to identify possible intervention strategies to address the environment-poverty concerns. More specifically, the assessment evaluates how EC investment in the relevant core area (e.g., transport, macro support, etc.) is affecting (or anticipated to affect):

- The quality of environmental resources upon which poor peoples heavily depend (e.g., income streams from natural resources, revenue sharing, etc.);
- Poor people's access to land and natural resources, information, and justice (e.g., their rights to use and own land);

- Their health – particularly if environmental quality is deteriorating or anticipated to deteriorate (e.g., water and air degradation); and
- Their means to cope to environmental disasters (e.g., to floods, droughts, famine, conflicts, etc.).

This assessment highlights the various underlying causes and driving forces of environmental degradation ranging from global policies, to regional and national land tenure and property rights arrangements. Based on this evaluation, response strategies are identified to deal with the environment-poverty concerns. Such response strategies may include:

- Strengthening community-based natural resource management;
- Improving local to national environmental monitoring; and
- Strengthening a regulatory environmental management framework.

Recommendations on response strategies have been developed to be of relevance to WWF programs – specifically to the WWF Tanzania and Madagascar programme offices – and to the WWF’s focal ecoregions: for Tanzania the Eastern African coast forest and Eastern African marine ecosystems and for Madagascar the dry forest ecoregion (southern of Madagascar) and humid forest ecoregion (eastern coast). EC institutional/policy opportunities to address the environment/poverty concerns have also been identified.

The Tier 2 assessment heavily relies on a document review (e.g., case studies) and interviews (e.g., with staff at the EC directorates and country delegations, WWF country programs, and government agencies). A list of individuals contacted for the Tier 2 evaluation has been included in Annex 1.

This paper is subsequently divided into six sections: background discussion of the Tanzania and Madagascar CSP (Section 5); evaluation on environment-poverty integration in the Tanzania and Madagascar CSPs (Section 6); identification of environment-poverty weaknesses in the Tanzania and Madagascar CSPs (Section 7); case studies/description of the environment-poverty weaknesses (Section 8); response strategies to address the environment-poverty gaps (Section 9), and concluding remarks (Section 10).

5. Review of the Tanzania and Madagascar CSPs

5.1. Tanzania CSP: Review

Under the 9th EDF an amount of 290 Million Euros (Envelope A) has been allocated to Tanzania to support the following four core areas (listed in the order of funding magnitude):

- Transport: 116 Million Euro (40% of Envelope A funding);
- Macro Support: 98.6 Million Euro (34%);
- Education: 43.5 Million Euro (15%); and
- Governance: 31.9 Million Euro (10%).

An additional 65 Million Euro was provided under a second envelope (Envelope B) to cover unforeseen expenses such as emergency assistance and debt relief initiatives (United Republic of Tanzania and EC, 2000)

Specific details on the three core areas of the Tanzanian CSP that are evaluated by this study – transport, macro support, and governance (see the Methodology) – have been included in Annex 2.

5.2. Madagascar CSP: Review

Madagascar obtained 267 Million Euro under the 9th EDF (Envelope A) which is being allocated to support the following core areas:

- Transport: 135 Million Euro (51% of Envelope A funding);
- Macro support: originally 60 Million Euro (22%), currently estimated at 70 Million Euro;
- Rural development and food security: originally 60 Million Euro (22%), currently 32 Million Euro; and
- Good governance: 12 Million Euro (4%).

A remaining 60 Million Euro was secured for non-focal assistance, such as for emergency aid funds, debt relief, and economic stabilization (Envelope B).

Details on the three core areas of the Madagascar CSP that are evaluated by this study – transport, macro support, and rural development (see Methodology) – have been included in Annex 3.

6. Environment-poverty integration in the Tanzania and Madagascar CSPs (Tier 1)

This section provides an overview of the extent to which environment-poverty issues are mentioned and integrated in the Tanzania and Madagascar CSPs. This evaluation is structured about the Tier 1 questions as identified in the methodology (see Section 4.1).

6.1. Tanzania CSP: environment-poverty integration

6.1.a. Environment-poverty linkages mentioned (Tanzania CSP)

Despite the fact that the Tanzania CSP emphasises poverty alleviation and that Tanzania's economy is highly dependent on natural resources (see Annex 4 for a summary of statistics), **the CSP makes little to almost no mention of key environment-poverty linkages.**

Livelihood dependence on environmental resources: Tanzania CSP

There is no explicit reference to the fundamental importance of natural resources to people living in poverty in the Tanzania CSP, although the CSP does indicate that “Tanzania possesses considerable assets and vast resources, including large reserves of cultivable areas, mineral resources, a unique stock of natural assets and an abundant wildlife” (United Republic of Tanzania and EC, 2000, p. 6). **Nowhere in the Tanzania CSP is it mentioned that if natural resources are degraded, so too will the well-being of especially the rural poor.** The CSP does, however, state that if mining, tourism, and other service sectors grow, “the direct impact on poverty reduction may not be significant, as these sectors are capital-intensive” (United Republic of Tanzania and EC, 2000, p. 12). No reference is made to the opportunities of developing e.g., community based management so that local populations *can* benefit from growth in these sectors.

Access to environmental resources, justice, and information: Tanzania CSP

While general reference is made to the importance of land and resources rights, **no explicit reference is made in the Tanzania CSP to poor peoples dependence on natural resources access and land rights.** Initiatives to improve justice and information – considered as key conditions to facilitate access and rights to natural resources and land – are however highlighted. “Good governance” is a core area in the Tanzania CSP that – among other initiatives – will entail strengthening district level government and local community participation (see Annex 2 under “Good governance”). The Tanzania CSP did make various efforts to promote participation of non state actors in the CSP process itself. Concerns were, however, voiced by local community that participation was insufficient: EC funding under “good governance” may in fact be used to support a program to help strengthen non-state actors participation in the CSP process (see Annex 2 under “Good governance”) (Paris-Ketting, personal communication, 2003).

Health and environmental quality: Tanzania CSP

Despite an emphasis in the Tanzanian CSP to stimulate economic growth – such as in the mining sector – the CSP does not describe any potential health threats that growth in such sectors may have. Furthermore, the CSP does not indicate that people living in poverty are at greater risk to being exposed to the health consequences of environmental deterioration. The need for clean water is, however, noted: “Water supply remains vital in Tanzania. Less than 50% of the rural population has access to clean water” (United Republic of Tanzania and EU, 2000, p. 13). Two projects, funded under the previous 8th EDF, are mentioned: the Mwanza sewerage and Iringa water supply projects.

Vulnerability to environmental disasters: Tanzania CSP

While Tanzania’s rural population is highly dependent on agriculture and have suffered the consequences of numerous natural disasters (e.g., drought), the CSP provides surprisingly little information on the rural poor’s vulnerability to environmental disasters. There is, however, reference to the refugee problem prompted by longstanding conflicts in neighbouring countries, namely of Burundi, Rwanda, and the Democratic Republic of Congo. Owing in large part to the fact that Tanzania hosts one of the largest refugee populations in Africa, Tanzania benefits from one of ECHO’s (European Commission’s Humanitarian Aid Office) second largest programme of emergency relief.

6.1.b. Environment/poverty integration in core areas: Tanzania CSP

Although the Tanzania CSP explicitly states that “... sustainable management of the environment and natural resources is a crosscutting issue to be incorporated into all areas of co-operation” (United Republic of Tanzania and EU, 2000, p. 21) **there is remarkably vague integration of environmental issues in the discussion of most of the core areas** (e.g., in transport, macro support, and good governance).

Transport/road development: Tanzania CSP

The CSP states that “Environmental considerations will be consistently addressed throughout the [transport] programme” (United Republic of Tanzania and EU, 2000, p. 21) and furthermore mentions that environmental impact assessments on road development and rehabilitation will be conducted. While specific road initiatives are identified in the CSP – such as the development and rehabilitation of the Central and Lake Circuit corridors (see Annex 2) – reference is not made to the potential environmental/livelihood consequences of these developments. Considering that the road development will improve market and service access and that mining, fishing, tourism, and agriculture activities are concentrated in the Lake Victoria region, spill over environmental impacts are anticipated. These may include increased spread of HIV/AIDS and displacement of people. While negative environmental impacts due to road development/rehabilitation are not noted in the CSP, positive impacts of road development are mentioned in the CSP, namely improvement in market and services access.

Macro support: Tanzania CSP

As described in detail in Annex 2, macro support under the 9th EDF will go towards supporting Tanzania PRSP objectives, namely to fund the priority sectors identified in the PRSP (United Republic of Tanzania, 2000) (i.e., education, health, agriculture, roads, judiciary, and HIV/AIDs) and to maintain macro-economic and structural reforms. EC money will be channeled into a single treasure account and the Government of Tanzania will determine how exactly the money will be allocated: this makes differentiating what the EC supports vs. other donors impossible.

While the PRSP includes several important initiatives – many of which emphasize poverty alleviation (e.g., improvements in the health and education sectors) and in some instances

environmental improvements (e.g., provision of clean water) – PRSP **macro economic and structural reforms have been documented to be associated with various negative environmental/livelihood impacts**. Growth of such sectors as mining, tourism, fishing, and forestry, as well as the expansion of exports (e.g., of coffee, tea, sisal, cloves, and other cash crops), has in countries with poor environmental regulatory frameworks been documented to lead to unsustainable extraction, increased pollution, higher incidence of disease, displacement of local communities, and other negative environment/livelihood impacts (Reed, 2001).

While the Tanzania CSP notes that, “Uncontrolled tourism could ... jeopardize Tanzania’s natural resource endowment in environmental sensitive areas” (United Republic of Tanzania and EC, 2000, p. 13), the Tanzania CSP does not refer to the environmental/livelihood consequences of other growth sectors such as mining and fishing.

Good governance: Tanzania CSP

Despite legislative EC requirements to integrate environment as a cross-sectoral issue in all the core areas, no reference is made to strengthening good *environmental* governance in the Tanzania CSP. While in no doubt many of the good governance initiatives that are currently being supported in the Tanzania CSP (e.g., decentralization and others – see Annex 2) will help facilitate – albeit indirectly – improved natural resources management, good governance should also include specific efforts to improve environmental management, currently considered to be weak in Tanzania (Reed, 2001).

6.1.c. Other (CEP, SEA): Tanzania CSP

Country Environmental Profile (CEP) Tanzania CSP

As with many other EC Country Strategies, the Tanzanian CSP does not include a Country Environmental Profile (CEP). As previously mentioned, a recent study on environment mainstreaming of 60 EC funded CSPs indicated that only one in ten CSPs included a CEP (Davalos, 2002). Guidelines for the upcoming Mid Term Review (2003) are however requiring that all Country Strategies include a CEP (Le Grand, personal communication, 2003).

Strategic Environmental Assessment (SEA): Tanzania CSP

No Strategic Environmental Assessment (SEA) was requested or developed for the Tanzania CSP. As previously mentioned, a recent study by the EC indicated that of 60 CSPs only one country integrated the SEA while another two countries casually mentioned SEA (Davalos, 2002). The Mid Term Review (2003) does not make explicit reference for the need of CSP to request/follow up on SEAs (Le Grand, personal communication, 2003).

Other: Tanzania CSP

Rather than emphasizing environmental integration in the core areas, the Tanzanian CSP highlights that environmental activities are considered under “other budget lines”. The EC has under “other budget lines” supported various natural resources and tourism initiatives in Tanzania, namely community conservation and sustainable management of national parks and game reserves: amounting to approximately 25 Million Euros during the past decades. While these initiatives have provided much needed support for environmental management, spending on the environment under the “other budget lines” when compared to CSP spending is very low. More importantly, **consideration of environmental issues under only “other budget lines” has meant that environmental issues have been side-lined and in their entirety not integrated in various Country Strategies**. Considering the importance of natural resource wealth to such countries as Tanzania and Madagascar, such low prioritization of the environment is unwarranted.

6.2. Madagascar CSP: environment-poverty integration

The following section provides an overview of the extent to which environment-poverty issues have been integrated in the Madagascar CSP.

6.2.a. Environment-poverty linkages mentioned: Madagascar CSP

While ample reference is made to the importance of natural resource wealth in the Madagascar CSP (see Annex 5 for a summary of statistics), little mention is made in the Madagascar CSP on key environment-poverty linkages.

Livelihood dependence on environmental resources: Madagascar CSP

The Country Environmental Profile – attached as an appendix – does note that a large portion of the Madagascar population – implicitly the poor – relies on natural resources for their food, timber, drinking sources, energy, and “immediate needs” (République de Madagascar et Communauté Européenné, 2001, p. 11). Furthermore, ample reference is made in the Madagascar CSP on Madagascar’s vast natural resource wealth and rapid growth of various sectors that rely on natural resources (e.g., fishing activities). The CSP mentions that while the growth sectors have been attributable to substantial job creation, people living in poverty have not yet sufficiently benefited.

Access to environmental resources, justice, and information: Madagascar CSP

Land and property rights are primarily discussed in the Madagascar CSP with regard to supporting the development of the private sector: “...the land question will have to be taken into account because it constitutes an obstacle to the development of the private sector and the revival of agricultural sector” (République de Madagascar et Communauté Européenné, 2001, p. 11)⁵. **No specific mention is, however, made to the importance of addressing natural resources and land access and rights issues for the poorest segments of society.** Support to good governance in the Madagascar CSP, although obtaining less funding, is however envisioned to help improve poor people’s access to justice and information – conditions that are conducive to improving environmental management.

Health and environmental quality: Madagascar CSP

While the Madagascar CSP does not specifically state that people living in poverty are more vulnerable to the health consequences of degrading environmental resources, the CSP does note that “76% of Madagascans do not have access [to drinking water]” particularly affecting “90% of the poorest quintile of the population” (République de Madagascar et Communauté Européenné, 2001, p. 9). Environmental consequences of growth sectors such as mining and tourism – noted to have significant impacts on human health – are however not discussed in the Madagascar CSP or its attached CEP.

Vulnerability to environmental disasters: Madagascar CSP

A core area of the Madagascar CSP is to support rural development and food security initiatives. **A part of the rural development strategy will be to target areas with high poverty and high occurrence of natural disasters** (e.g., drought and cyclones). Implicit then is a recognition that the poorest segments are at greater risk to – and have fewer means to cope with – environmental disasters.

⁵ All quotes from the Madagascar CSP have been translated from the original French version.

6.2.b. Environment/poverty integration in core areas: Madagascar CSP

Despite the Madagascar CSP committing itself to "...Article 20..., to integrate in all fields of co-operation ... questions of gender, environment, institutional development, and capacity building" (République de Madagascar et Communauté Européenné, p. 3), environment mainstreaming in the Madagascar CSP core areas – as indicated in the below evaluation – needs strengthening.

Transport/road development: Madagascar CSP

The Madagascar CSP acknowledges that environmental impacts were in the past inappropriately integrated in the transport sector and indicates that "all recent road programs [supported by the] EU will take into account [systematic environmental impact assessments to] ensure better integration of socio-environmental concerns" (République de Madagascar et Communauté Européenné, 2001, p. 13).

Macro support (e.g., privatisation of mining, tourism, etc.): Madagascar CSP

Emphasis in the Madagascar CSP is placed on continued privatisation in which economic benefits are highlighted and environmental consequences glossed over, "The government is committed to concluding the [macro-economic stabilization and structural reform] programs, whose objective is in particular ...the development of the private sector and thus favourable growth" (République de Madagascar et Communauté Européenné, 2001, p. 1). Growth sectors are envisioned to include tourism, fishing and aquaculture, mines, manufacturing industries (e.g., textiles), and agriculture sectors: the textile industry alone is envisioned to increase tenfold (!).

Although Madagascar plans to in the second phase of its Environmental Programme integrate environmental considerations into its macro economic and sectoral management programs, little to no mention is made in the current CSP on the environmental/livelihood impacts of the above indicated growth sectors. Considering that nine out of ten jobs directly depend on natural resources (Republic of Madagascar, 2003), environmental impacts due to growth in mining, fishing, textile, and other sectors are anticipated to be substantial.

Rural development and food security: Madagascar CSP

The Madagascar CSP recognizes that all rural development investments need to ensure "[limited] pressure on natural resources" (République de Madagascar et Communauté Européenné, 2001, p. 14).

6.2.c. Other (CEP, SEA): Madagascar CSP

Country Environmental Profile (CEP): Madagascar CSP

Madagascar is one of the few countries that *did* attach a CEP to the appendix of its CSP.

Strategic Environmental Assessment (SEA): Madagascar CSP

Despite including a CEP, a SEA was not requested or developed.

Other: Madagascar CSP

Environmental initiatives under "other budget lines" are mentioned, namely the "environment and tropical forest" support. Funding for these initiatives are much lower however when compared to spending of the CSP core areas.

7. Environment-poverty weaknesses in the Tanzania and Madagascar CSPs (Tier 1)

Based on the above CSP review the following questions relating to environment-poverty weaknesses were identified for respectively the Tanzania and Madagascar CSPs.

7.1. Tanzania CSP: environment-poverty weaknesses

- Transport:
 - *Environmental consequences*: How has the environment been impacted by the development of especially the EC funded Central and Lake Circuit corridors/ the Mwanza and Mwanza Regional Border-Nxega/Isaka roads (e.g., biodiversity loss)? Was an Environmental Impact Assessment (EIA) conducted?
 - *Livelihood consequences*: How have livelihoods of especially the poor been affected by the development of these and other roads – e.g., Improved market access? Displacement? Health impacts (spread of HIV/AIDS?) employment? Access to natural resources?
 - *Response strategies*: What interventions are needed to deal with current/anticipated environment-poverty concerns?
- Macro Support:
 - *Environmental consequences*: How has (anticipated) growth in the following sectors impacted (envisioned to impact) the environment (e.g., forests, fresh water, fisheries, etc.):
 - Mining;
 - Tourism;
 - Fishing;
 - Agriculture (e.g., expansion of coffee, tea, cotton and other cash crop exports); and
 - Other growth sectors?
 - *Livelihood consequences*: How has (anticipated) growth in the above sectors affected (envisioned to affect) livelihoods, especially of the rural poor: e.g., Changed quality and access to natural resources and land? Health consequences? Employment? Have rural communities benefited in the past from growth in the mining and tourism sectors: e.g., through revenue sharing? Who have traditionally benefited from these growth sectors?
 - *Response strategies*: What interventions are needed to deal with the environment-poverty concerns?
- Good governance:
 - What is the extent to which Tanzania has *developed a regulatory environmental management framework*:
 - What have the effects of public service reforms been on the development of an environmental management regulatory framework (e.g., to monitor environmental changes and sustainable development)?

7.2. Madagascar CSP: environment– poverty weaknesses

Based on a similar review, the following set of questions were identified as environment-poverty weaknesses in the Madagascar CSP.

- Transport:
 - *Environmental consequences*: How is road development and rehabilitation in Madagascar – especially in the South – impacting (anticipated to impact) the environment: e.g., Affecting forests, fish, fresh water, etc.? Impacting wildlife corridors/biodiversity?
 - *Livelihoods consequences*: How is road development/rehabilitation impacting (anticipated to impact) peoples livelihoods, especially of the rural poor: e.g., Improving market access? Causing displacement? Impacting health?
 - *Response strategies*: What interventions are needed to deal with the anticipated environment-poverty concerns?
- Macro Support:
 - *Environmental consequences*: How is current (anticipated) growth in the following sectors impacting (anticipated to impact) the environment (e.g., forests, fresh water, fisheries, etc.):
 - Mining
 - Tourism
 - Shrimp
 - Textile
 - Forestry
 - Agriculture (e.g., expansion of vanilla, coffee, and other cash crop exports); and
 - Other growth sectors (?)
 - *Livelihood consequences*: How has growth in the above sectors affected (envisioned to affect) people’s livelihoods, especially of the rural poor: e.g., Changed quality and their access to natural resources and land? Their health? Employment opportunities? Have rural communities benefited in the past from growth in the mining and tourism sectors? Who have benefited from the growth sectors?
 - *Response strategies*: What interventions are needed to help ensure that the rural poor benefit from the above noted growth sectors?
- Rural development and food security:
 - *Environment/livelihood consequences*: What initiatives are being developed under the rural development and food security core area? What are anticipated environmental/livelihood impacts?
 - *Response strategies*: What interventions are needed?
 -

8. Case studies/description of environment-poverty weaknesses (Tier 2)

Various staff – e.g., at EC headquarters, the EC country delegations, WWF programmes, and government agencies – were contacted and asked to provide information and case studies based on the above noted poverty-environment weaknesses (see Appendix 1 for a list of individuals contacted). Furthermore, numerous documents, articles, etc. were downloaded off the web.

While many of the subsequent case studies may not always specifically refer to EC funded initiatives, they do indicate how EC funding of similar projects may potentially lead to similar environment/livelihood concerns. Environment-poverty case studies for Tanzania and

Madagascar have been respectively discussed. In the next section (Section 9) response strategies to address the environment-poverty weaknesses will be identified.

8.1. Tanzania: case studies/description of environment-poverty weaknesses

8.1.a. Transport, environment, and livelihoods: Tanzania

As indicated in Annex 2, the EC will fund the continued development of the Central and Lake Circuit corridors and more specifically the development and rehabilitation of the Mwanza and Mwanza Regional Border-Nzega/Isaka roads. Furthermore, the EC has since the 1990s heavily funded Tanzania's Integrated Road Project (IRP): this has included development and rehabilitation of the Mwanza Shinyanga border-Tinde, Nzega-Isaka, Wazo Hill-Bagamoyo, Mwanza-Nyanguge, Dodoma-Morogoro, Dar es Salaam port access, and Kigoma-Nyakanasi roads.

The EC requires that EIAs are conducted on all projects that may have an environmental impact, including in the transport sector (EC, 2001). An EIA was, for example, included in the financing proposal (for 8th EDF support) for the Mwanza Regional Border-Nzega/Isaka road (EC, 2000).

Considering the magnitude of the project at 105 Million Euro, this EIA is remarkably short and limited in scope: the EIA consists of a one page environmental assessment included in the appendix. The EIA emphasizes that environmental impacts are “rated as low” since the road concerns an “existing road” that “does not touch any protected or particular environmentally sensitive areas” (EC, 2000, p. 8). The EIA limits its discussion to short-term “road-side” and construction impacts – e.g., filling and drainage of borrow pits after completion of project, development of road embankments, handling of wastes from the road work camp, informing contract workers on HIV/AIDs, reducing pollution and mitigating accidents during construction works, and prohibiting poaching by road workers.

The environmental/livelihood impacts of the Mwanza Regional Border-Nzega/Isaka road may be assumed to be much higher upon considering that the “existing road” entails paving one of the “still unpaved and frequently impassable links in the Central Corridor”. Furthermore, the road project has “as its objective to improve the condition for trade and economic growth and cohesion in East Africa and within Tanzania”: the mining, fishing, and agriculture sectors are vibrant sectors around the Lake Victoria area (EC, 2000, p. 2). The EIA does not include a discussion of long-term environmental/livelihood impacts due to anticipated increases in the fishing, mining, and tourism sectors around the Lake Victoria area. Furthermore, the EIA does not mention or propose strategies to address potential long-term increase spread of HIV/AIDs in local communities. **Junction sleep-over towns such as Isaka and Tinde – that have grown as a consequence of the EC funded road development – have already been documented to show a proliferation of bars, guest houses, and prostitution and are being targeted by task forces working against the spread of HIV/AIDs and Sexually Transmitted Diseases (STDs)** (Jambiya, personal communication, 2003).

Aside from the EC funded Mwanza road mentioned above, the EC funded Wazo Hill-Bagamoyo has been documented to have substantial negative environmental/livelihood impacts. Rapid increase in tourism in this area, coupled with Tanzania's poor environmental regulatory framework, has led to the clearing of mangrove areas (to make way for large hotels and for their construction), dumping of untreated effluent by hotels, and displacement of local communities (Wood et al., 2000) (see also under “Tourism: Case studies (Tanzania)” in the next section).

8.1.b. Macro Support, environment, and livelihoods: Tanzania

The EC, as well as other donors, will continue to finance macro support in Tanzania to further facilitate – among other sectors – growth in the mining, tourism, fishing, and agribusiness sectors. While economic growth is a powerful means to reduce poverty, such growth – especially in an economy that heavily relies on natural resources – must be sustainably managed. Unfortunately, as highlighted in the below case studies **the absence of a strong environmental management regulatory framework in Tanzania, has meant that economic growth has often been oriented towards short term gains at the expense of long term sustainability**. Although this evaluation assesses environment/poverty concerns of key growth sectors in Tanzania, it is recommended that other growth sectors (e.g., forestry and water) are in the future also evaluated.

Mining: Case studies (Tanzania)

Continued privatisation and liberalization – a key objective of Tanzania’s PRSP and supported by numerous donors including the EC – has helped make the mining sector one of the most dynamic and rapidly growing sectors in Tanzania. The sector currently contributes to 2.3% of the GDP, is an important foreign exchange earner, and grew 27% in 1999 – a major increase from the previous year’s 17%. Mining of especially gold has boomed. Other mineral resources in Tanzania include diamonds, gemstones, coal, limestone, and salt (OECD, 2002).

While the mining sector has employed thousands of poor workers in Tanzania (an estimated one million people) and has stimulated local economies (through the creation of mid and large sized industries), growth in the mining sector has come at significant social and environmental cost (National Environmental Research Institute, 2001; Reed, 2001). **Smuggling of gold and semi-precious stones, evasion of taxes, rent seeking behaviour, lack of enforcement of Tanzania’s mining acts, lack of institutional capacity, and in general a lack of an enforceable regulatory framework has marred the sustainable expansion of the Tanzanian mining sector** (Reed, 2001).

Attractive financial incentives in Tanzania’s mining sector (e.g., five year tax holidays and repatriation of profits) have in particular benefited mid and large sized mining operators at the expense of small poor miners. **A poorly regulated framework in Tanzania has allowed mid sized operators to get away with offering poor working conditions to small miners**, including NOT granting contractual stability and fixed prices for minerals. In addition, uncertainties on authority to address land issues – where mining permits have often been given by regional authorities located far from local communities – has furthermore prevented the resolution of numerous land conflicts between local villages and mid/large sized mines (Reed, 2001).

Aside from numerous social costs, unregulated mining growth in Tanzania has been associated with significant environmental degradation. Senior scientists and geologists at a conference on mining concerns in East Africa recently stated that the “haphazard mineral exploration [is] an ‘environmental time bomb’” (The Nation, 2002). Studies of the Mererani mine in Arusha, Geita mine in Mwanza, and Umba mine in Tanga indicate that mining has lead to significant water contamination, loss of biodiversity, and deforestation. Miners and local communities have in turn been confronted with mercury, graphite, and kerosene poisoning in water supplies, increased disease incidence, large scale land clearance (caused by sometimes thousands of migrant miners), and degradation of agricultural fields (Reed, 2001). The opening of the Geita mine in 2000 – located in the Lake Victoria Basin catchment area and East Africa’s biggest gold producer – has been associated with similar environment/livelihood concerns. It is expected that contamination by sodium cyanide at the Geita mine – used to extract gold from ore – will have dire consequences on the Lake Victoria watershed. **Such contamination will poison fish and lead to serious health consequences for local fishermen and communities. If toxic elements are**

found in the fish, fish exports may furthermore be suspended, in turn threatening a key source of income for local fishing communities (Wildnet Africa News Archive, 2000).

Tourism: Case studies (Tanzania)

Continued privatisation and liberalization – promoted by donors including the EC – has resulted in substantial growth of Tanzania’s tourism sector. Tourism accounted for about 38% of Tanzania’s share in total exports in 1998 and tourism earning rose from US\$27 million in 1986 to US\$570 million in 1998 (!) (Reed, 2001).

While economic growth in Tanzania’s tourism sector has been welcomed as a significant economic achievement, such growth has again been insufficiently regulated and has come at a significant social and environmental cost. In Tanzania’s national parks and reserves, **local communities are suffering at the expense of large gains made primarily by (often foreign) tourism investors and entrepreneurs**. Tanzania’s integrated Tourism Development Master Plan and formally adopted National Tourism plan have stimulated foreign investment – by providing special benefits to overseas operators (e.g., tax holidays and exceptions) – but have failed to provide benefits to local communities: these plans have NOT facilitated local employment opportunities or community based revenue sharing.

In addition to side stepping local communities, tourism expansion in Tanzania has been associated with significant environmental degradation. In Zanzibar and Bagamoyo, the **tourist hotel construction (and its expansion) has lead to the clearing of large tracts of mangrove areas that in turn has resulted in coastal erosion, excessive water pollution, and negative impacts on fisheries**. In addition dumping of untreated effluent by hotels into rivers and the ocean has increased water related illnesses in surrounding communities (Wood et al., 2000). Due to Tanzania’s uncertain land ownership and a dual system of land tenure⁶, hotel construction and expansion have furthermore caused small farmers and fishermen to lose access to valuable farming and fishing areas (Reed, 2001).

Poorly developed EIAs – that *are* required in Tanzania in the tourism sector – have not effectively flagged social and environmental impacts. **The EIAs developed for the construction of four big hotels in the Serengeti National Park were**, for example, **criticized for being ad hoc and “shoddy”**: the EIA studies for construction of the Serengeti Serena Lodge National Park and the Ngorongoro Conservation Area were developed under very short notice in which “... severe time constraints were imposed on the EIA team in order to minimise delays in the implementation of the project” (Mwalyosi and Hughes, 1998, p. 59). Hussein Sosovele (personal communication, 2003) similarly indicates his concern regarding EIAs in Tanzania: “EIA in the decision making process and enforcement of mitigation measures is weak in Tanzania” and “[EIAs] are usually done in order to secure funds but not as effective tools for decision making and environmental management”.

Fishing: Case studies (Tanzania)

The fishing sector in Tanzania is growing substantially although again at a high environmental and social price. The well documented Rufiji Delta Prawn Farming Project in southern Tanzania indicates the many environmental/livelihood consequences that growth in the fishing sector may have if it is poorly regulated. Despite the fact that the delta is the largest mangrove forest in East Africa, accounts for 80% of all wild-shrimp catches in Tanzania, and is home to about 41,000 small farmers and fishermen, the multimillion dollar private prawn farming project was accepted

⁶ The current land tenure regime – i.e., the National Land Policy of 1995 and Land Acts of 1999 – in theory gives priority to local communities but continues to allow all land to be vested under the President.

in 1997 (WRM, 2001). **Development of the prawn farm – that intended to develop 20,000 hectares of shrimp farms – resulted in a ripple effect of environmental and social impacts.**

Large tracts of mangrove forests were deforested to make ways for the prawn farms resulting in deforestation, loss of biodiversity, and displacement of local communities. The absence of water treatment facilities on the farm contaminated water and in turn increased disease incidence of neighbouring communities. Social tensions, between those who supported and didn't support the development of the prawn farm, furthermore escalated (Wood et al., 2000).

Lack of enforcement, poor monitoring, and low penalties has similarly resulted in unsustainable fishing elsewhere. In Bagamoyo, for example, records show that only six fishermen were arrested in 1999 in connection with dynamite fishing and that only two received a fine of US\$3.50: Tanzania's Fishing Act, however, stipulates that individuals arrested for dynamite fishing *should* be penalized US\$757 or imprisoned for a minimum of three years (!) (Wood et al., 2000).

Agriculture/Export growth: coffee, tea, and cotton (Tanzania)

Continued privatization and liberalization, as well as EC "Everything but Arms" initiative – that gives duty and quota free access to Tanzania's products in the EC – is expected to increase Tanzania's exports of especially cash crops such as coffee, tea, and cotton⁷. Cotton, in particular, is an environmentally demanding crop that requires high fertilizer application to maintain soil fertility (Goreux and Macrae, 2003). Should there be significant growth in the production of these and other cash crops, environmental friendly methods need to be encouraged: e.g., the application of organic fertilizers, eco-culture, agro-forestry, etc.

8.1.c. Good environmental governance: Tanzania

Despite EC requirements to integrate environment as a cross-sectoral issue in all the core areas, no reference is made to strengthening good *environmental* governance in the Tanzania CSP. As indicated in Annex 2, the EC is considering to support – under the "good governance" core area – Tanzania's public service reforms. While these reforms have been noted to have improved government efficiency in many sectors, they threaten to further decrease environmental management capacity in Tanzania. **The public service reforms have already entailed the trimming down of the public payroll from 470,000 to 270,000 government employees: this has contributed to a lack of staff and funds to enforce environmental standards in Tanzania.** The public service reforms have trickled down to the district and local levels where staff and funding have similarly been reduced. In the Bagamoyo's district forestry department, for example, insufficient facilities and funds has lead to its inability to enforce rules and monitor illegal harvesting in the surrounding mangrove forests (Wood et al., 2000).

⁷ To date there has been little expansion of these cash crops – largely attributable to low (and falling) international prices. Efforts were also made under the 8th EDF to expand exports of these cash crops but due to decreasing global markets to no avail. EC STABEX funds were used to compensate farmers for losses. The decrease in exports of these cash crops has lead to periodic abandonment of coffee and other cash crop fields (Koehler-Raue, personal communication, 2003).

8.2. Madagascar: case studies/description of environment-poverty weaknesses

Based on a thorough document review and numerous interviews, environment-poverty weaknesses of the Madagascar CSP (identified in Section 7) are subsequently described in detail.

8.2.a. Transport, environment, and livelihoods: Madagascar

As indicated in Annex 3, the EC will primarily be funding the rehabilitation and maintenance of roads in especially southern Madagascar. The road rehabilitation is envisioned to open local and regional markets and to facilitate production in especially the South.

In addition to the EC EIA requirements, the Government of Madagascar has since the development of its National Environmental Action Plan (NEAP) – adopted in 1991 – required EIAs for all initiatives that entail environmental impacts. Furthermore, quality controls on EIAs have been conducted in Madagascar: such as by the WWF Madagascar Program on the recent development and rehabilitation of roads supported under the 9th EDF (WWF Madagascar Policy Office, 2003).

EIAs are gaining sufficient clout in Madagascar. The recent EIA on development of the RN45, for example, resulted in the adoption of measures to minimize environmental impacts: the road was adjusted so that it would not traverse through a zone of significant biodiversity in the Ranomafana National Park. While the EIA discusses direct environmental impacts of the road development (e.g., road kill), it does not mention indirect impacts, e.g., due to increases in exports, tourism, and mining prompted by the road development. The CSP emphasizes that rural livelihoods will benefit from the improved road and market access. The indirect impacts on livelihoods of the expansion of mining, tourism, and other sectors – prompted by the improved road access – are not discussed. Although such sector expansion will likely provide local employment, health consequences, land disputes, and other negative livelihood impacts are anticipated (see also the next Section 8.2.b.).

8.2.b. Macro support, environment, and livelihoods: Madagascar

Macro economic and structural reforms – in part financed by the EC – are largely attributable to Madagascar’s rapid expansion in the mining, tourism, fishing, textiles, and agriculture sectors (see Annex 3). While economic growth is critical to Madagascar’s economy, considering the country’s dependence on natural resources (see Annex 5) such growth must be sustainable. Although Madagascar’s environmental regulatory framework is stronger compared to other developing countries (e.g., Tanzania), unregulated growth in some sectors – as documented in the below case studies – have had significant negative environment/livelihood impacts.

Mining: Case studies (Madagascar)

Madagascar’s economic reforms – promoted by donors such as the EC – have stimulated the development of large scale mining operations. This has included the mining of sapphires and limonite (Republic of Madagascar, 2003). Mining in Madagascar has been associated with serious environmental damage and livelihood consequences. The mining of sapphires has led to deforestation, destabilization of soil (thousands of holes are typically created), population surges in once small villages (e.g., the Ambondromifehy village grew from 100 to 20,000 inhabitants), increased spread of water related disease in neighbouring (often poor) communities, corruption, and increased use of child labour (BBC, 2003; WWF Madagascar Programme Office, 2000). Furthermore, **the recently approved mining of limonite in southern Madagascar will entail dredging of over 6,000 hectares of soil and transform a major saline water source into a freshwater source** (WRM, 2003). It is anticipated that the mine will result in the deforestation of large tracks of land; losses of seawater shrimps, crabs, eels, marine turtles, and other species; and pollute water – the extraction of limonite requires treatment by sulphuric acid to obtain titanium.

Such changes will decrease the quality and quantity of food, water, medicinal, and other natural resource sources and in turn negatively impact surrounding communities.

Tourism: Case studies (Madagascar)

Madagascar's economic and structural reforms have also facilitated the expansion of tourism, albeit slower than expected at an annual growth of 10% during the last decade (Republic of Madagascar, 2003). **Tourism development in Madagascar has emphasized transferring protected area management (and its benefits) to local communities. Park management has as a consequence improved significantly** – various parks have shown a serious decline in the number and seriousness of illegal activities and living conditions of local communities have improved substantially.

Community based park management has been facilitated through the adoption of Madagascar's National Environmental Action Plan (1991) that requires the development of new environmental management institutions and broader management strategies (Randrianandianina et al.). More specifically, the NEAP has encouraged the development of partnerships which includes the transfer of management to conservation and development NGOs of 17 of Madagascar's 47 protected areas. In 1993 Madagascar's National Park Service furthermore adopted a policy that transferred 50% of protected area gate fees to community-managed projects. In some instances – particularly at some of the most popular protected areas – communities have benefited from high park revenue: in some parks as high as US\$10,000 per year. Community managed projects have ranged from supporting entrepreneurial projects – such as bee-keeping project, farm development, and local (small scale) hotels and restaurants – to financing the development of village grain stores, schools, and health centres. The projects have as a secondary effect stimulated money circulation and employment within and about the local communities (Randrianandianina et al.).

Fishing: Case studies (Madagascar)

Madagascar's fishing sector has been growing in large part due to economic reforms and structural adjustments, promoted by among other donors the EC. Between 1999 and 2000 export revenue from fisheries, for example, increased by 19.3%, while government revenue from the fishing sector increased by 29.5% (Republic of Madagascar, 2003). Environmental concerns and **signs of over-fishing are becoming common**: catch rates in 1999, for example, decreased by 20% compared to previous years.

Shrimp farming in particular has caused substantial environmental and livelihood deterioration. Shrimp has become one of Madagascar's main fish exports and has entailed the clearance of substantial areas of mangrove forests during the last decade. Such massive land clearance has resulted in biodiversity loss and in turn decreased small fishermen catch and income. In many instances small farmers and fishermen have, in the wake of expanding prawn industries, faced limited access to valuable fishing grounds and have been displaced, e.g., in the Baly Bay region in western Madagascar (WRM, 2001b).

Textile: Case studies (Madagascar)

As in many other developing countries, Madagascar's economic reforms have entailed the development of free trade zones to increase foreign exchange earnings – again promoted by various donors including the EC. In Madagascar, 162 firms have since 1989 been set up in these zones, employing approximately 72,000 people. The doubling in value of Madagascar's exports during the last decade is in particularly attributable to new types of goods being produced in the free trade zones (Republic of Madagascar, 2003).

Textile industries have in particular flourished in the free trade zones. Clothing items alone have accounted for almost 40% of all Malagasy exports (!) (Republic of Madagascar, 2003). Considering that the textile industry typically entails the use of chemicals for processing, dumping of industrial effluents and resulting health consequences – to especially workers and neighbouring local communities – is a concern. The occupational hazards of those working in the textile and other industries (in the free trade zones) is also a major concern. Owing to a lack of regulations and/or limited (or no) enforcement of labour laws, workers in many free trade zones confront numerous occupational hazards ranging from poor ventilation, to failed provision of medical care and protective equipment, and poor training on hazard prevention. A recent report by the International Confederation of Free Trade Unions (ICFTU, 2003) states that **Madagascar has “blatantly violated its labour laws” in the free trade zones.**

Export growth: Cash crops (Madagascar)

Agriculture currently forms the basis of the Madagascar economy contributing between 28% and 66% of the GDP and employing between 76% and 86% of the population. Although most agriculture in Madagascar is small scale and for subsistence (e.g., rice growing), such cash crops as vanilla and coffee have traditionally contributed substantial amounts to the national economy. It is anticipated that Madagascar’s economic reforms as well as the EC’s “Everything but Arms” initiative – that will give duty and quota free access to all products exported to the EC – will prompt an increase in the production of vanilla, coffee, cashew nuts, peppers, and other cash crops. Such a production increase, if insufficiently regulated, has the potential to lead to environmental degradation, such as through ground water pollution caused by the increased use of fertilizers and pesticides. As widely documented, the use of greater amounts of nutrients may in turn lead to numerous environmental/livelihood consequences including decline in oxygen concentrations in rivers, death of fish, loss of water clarity, deterioration of coral health, destruction of mangrove ecosystems, increased disease incidence, displacement of poor communities, etc.

8.2.c. Rural development, food security, environment, and livelihoods: case studies in Madagascar

As indicated in Annex 3, a total of 18 Million Euro will be distributed to 180 communes in Madagascar (100,000 Euro to *each* commune) under the EC funded “rural development and food security” core area. Participatory approaches will be used in which communes themselves determine which rural development and food security initiatives to support: these may range from promoting agricultural production, to requesting improvements in extension services and irrigation. Another 14 Million Euro will be used to fund inter-community/watershed rural development and food security initiatives.

Although specific initiatives have yet to be determined for both the commune and inter-community rural development initiatives, environmental/livelihood concerns will need to be assessed should environmental impacts be expected (see next section under “Response strategies”).

9. Response strategies: addressing the environment-poverty concerns of the Tanzania and Madagascar CSPs

This study based on the above review furthermore identified interventions needed to address the environment-poverty gaps of the Tanzania and Madagascar CSPs. These are respectively discussed in the next section. The response strategies are described to be of specific relevance to the WWF country programs and the EC.

9.1. Tanzania: response strategies to address the environment-poverty concerns of the Tanzania CSP

9.1.a. WWF Tanzania Programme Office: response strategies

- Transport: Synergies with existing WWF Tanzania and other programs – around especially the Lake Victoria area – need to be built to help address environmental/livelihood impacts of road development/rehabilitation around the Central and Lake Circuit corridors. Specific attention should also be given to associated environmental impacts due to sectoral growth (e.g., in mining, fishing, and exports) prompted by the improved (road) access. Alignment with Tanzania's focal ecoregions is needed (see also Section 8.1.b).
- Mining:
 - **Revisions are needed in the mining policy to support small-scale miners.** This includes providing credit opportunities and incentives similar to those currently given to mid and large mining operations.
 - Local communities and small scale miners need to be involved in and work collaboratively with regional authorities to allocate mining plots to mid and large scale investors.
 - Mid and large scale mining companies need to be held accountable for environmental damage incurred. Follow-up is essential to ensure that mining companies comply with environmental impact assessments, standards, and other regulations.
- Tourism: **Standards need to be developed and enforced to involve local communities in tourism activities.** This includes ensuring that tour operators will involve local communities in tourism-related employment opportunities and revenue sharing.
- Fishing: **Policies that allow large scale commercial fishing,** including the development of large prawn farms, need to be reassessed. Improvements in monitoring and follow up on over-harvesting and over-fishing are also needed.
- Macro support: **The WWF Tanzania program needs to keep careful track of growth sectors** promoted through macro support, such as in mining, tourism, fishing, and agriculture. Synergies with existing WWF and other programs and projects (e.g., NGO, governmental, and private agencies) are required to address the environment-poverty concerns.

9.1.b. EC and WWF: response strategies

- While growth in the mining, fishing, and other sectors are key to economic development, long-term benefits from growth in these sectors will only be realized if extraction is sustainable. As noted in this study's evaluation, the lack of a transparent and effective environmental regulatory framework in Tanzania has restricted sustainable development of its growth sectors (e.g., mining, tourism, and fishing) and roads. WWF, as well as the EC, governmental agencies, private institutions, donors, and other NGOs need to seek collaborative approaches to strengthen Tanzania's environmental management regulatory framework. This will require – among other things – supporting:
 - Revision of land tenure and use rights: Uncertain land ownership and a dual system of land tenure in Tanzania currently makes it difficult for local

community to control use of land, especially in instances where large-scale tourism, mining, and other enterprises are seeking to expand their activities.

Land tenure and use rights need to be revised in Tanzania to fundamentally protect the rights of local communities.

- EIA requirement and follow up: **EIAs need to be required for all activities entailing environmental impacts in Tanzania.** Current EIA legislation in Tanzania is piecemeal and requires EIA development for some (e.g., mining and tourism) although not all activities. Where EIAs are required, follow up on EIA quality and their enforcement is needed to ensure that appropriate measures are being taken to minimize environmental and social impacts.
- Community based environmental management initiatives: **Strengthening of community involvement in natural resource management and development of community revenue sharing schemes are essential.**
- Environmental monitoring: Local community organizations – that may serve as watchdogs over government and corporate behavior – will in particular need to be supported. Capacities at relevant sectoral national and district agencies will also need to be increased: e.g., at fishing, agricultural, mining, statistics, etc. agencies.
- Environmental policy and enforcement: There is a need to **ensure that district offices have sufficient capacity and funds to enforce policies** and have access to (and use) current policies. Many district offices have been documented to use outdated copies of laws.
- Polluter pay principle: **A polluters pay principle needs to be institutionalized so that enterprises are held accountable to environmental damages** implemented during (and after) their operation.
- Agricultural research: Research in and use of environmental friendly agricultural techniques needs to be continually promoted: e.g., the use of organic fertilizers, agro-forestry, etc.
- Anti corruption: **Continued strengthening of anti corruption policies and enforcement is vital.**

9.1.c. EC: response strategies for Tanzania

- Despite EC policies requiring that all strategic plans and programmes incorporate environmental concerns (see also above), **EC funding to macro support activities – that often entails the transfer of EC funds directly into national treasuries – is dangerously bypassing EC environmental requirements.** For example, since Tanzania does not require the development of EIAs for all sectors, the EC is financing initiatives that have not incorporated environmental and social concerns. EC funding should only be given to those countries in which EIAs are required and effectively implemented and monitored.
- While due credit is given to the EC for requiring EIAs for all its initiatives that have anticipated environmental impacts, as indicated by the evaluation of the EIA for the Mwanza road project (see Section 8.1) quality of the EIAs is lacking. **The development of high quality EIAs** includes comprehensive analysis of direct and indirect environmental and social impacts. A quality support group within Europe Aid's Evaluation Unit has recently been deployed to integrate environmental guidelines at the project level (Barbedo, personal communication, 2003). This group could be held accountable to ensure that EIAs for EC funded initiatives are conducted and of high quality.
- Although developing high quality EIAs at the project level is crucial, **flagging initiatives with potential environmental consequences should ideally be done early on when the**

CSP is developed. There are currently efforts underway to require CEP inclusion for all CSPs in the Mid Term Review (Le Grand, personal communication, 2003). While CEP inclusion is important, guidelines need to furthermore be developed to ensure that CSPs integrate in their discussion of each of the core areas environmental concerns and environmental/poverty linkages.

- Gaining access to EIAs was cumbersome: no central archive exists of the EIAs (Bousquet, personal communication, 2003). Since the EC country delegations are currently responsible to maintain EIAs under all EC funded initiatives (e.g., under the 9th EDF), it is recommended that EC country delegations **develop an EIA archive and provide open access to the EIAs**. Such public access would not only help inform the public on environmental considerations of EC funded projects, but may also facilitate accountability and provide incentive for the production of better quality EIAs. The World Bank, for example, includes EIAs for its projects on its website: similar transparency by EC funded initiatives is recommended.

9.2. Madagascar: response strategies to address the environment-poverty concerns of the Madagascar CSP

Based on this study's review, the following response strategies were identified to help address the environment-poverty weaknesses of the Madagascar CSP.

9.2.a. WWF Madagascar Programme Office: response strategy

- Transport: The WWF Madagascar Programme Office should **keep careful track of environment/poverty concerns regarding road development and rehabilitation, especially in the southern part of the country** where road development is currently being emphasized. Specific attention should be placed on associated environmental impacts due to sectoral growth (e.g., in mining, fishing, and exports) prompted by the improved (road) access. Synergies with WWF programs and other programs will need to be sought in addressing the environment/poverty concerns.
- Macro support: It is recommended that the WWF Madagascar Program **keep careful track of continued growth in the mining, textile, fishing, and agricultural sectors**. Furthermore expansion in the forest, water, and other growth sectors should also be tracked. Alignment with WWF's biodiversity conservation visions, particularly in the Dry Forest and Humid Forest Ecoregion Programmes – and WWF Madagascar's priority ecoregions is needed.

9.2.b. EC and WWF: response strategy

- Success in Madagascar's tourism sector is attributable to a strong regulatory framework. Support needs to be provided to further strengthen Madagascar's environmental management regulatory framework in other sectors (e.g., mining, textiles, fishing, and agriculture). This includes strengthening:
 - Community based environmental management;
 - Environmental policy and enforcement;
 - EIA quality control; and
 - Land tenure and use rights that fundamentally protect the rights of local communities.
- While the EC has financed improvements in monitoring of the fishing sector in Madagascar⁸, it is recommended that similar support is given to monitor other growth

⁸ A fishing agreement between Madagascar and the EC has, for example, allowed Madagascar to monitor – using a satellite monitoring system – tuna fishing by EC fishing vessels and other illegal fishing (AFROL, 2001). Furthermore,

sectors in Madagascar such as mining, textiles, agricultural expansion. The WWF Madagascar Programme Office and the EC need to seek collaborative approaches and partnerships – e.g., with the government agencies, donors, NGOs, local communities agencies – to **strengthen environmental monitoring in Madagascar**. Environmental monitoring developments in Madagascar will need to be reviewed (e.g., in the fishing, mining, tourism, and other sectors), best practices assembled (e.g., based on existing environmental monitoring programs), and an integrated monitoring program developed. Best practices to which Madagascar may ascribe includes strengthening environmental data collection, archiving, and analysis capacities at relevant sectoral agencies (e.g., national and province level departments and ministries of mining, industry, fishing, and agricultural sectors), developing a decentralized system (possibly entailing working through the current network of environmental cells), and emphasizing local communities involvement in decentralized environmental monitoring activities.

- The EC Madagascar delegation has asked NGOs (including WWF), the private sector, and civil society to be involved in the *implementation* of the EC funded programmes, including in its rural development initiatives. It will be important that those involved in project implementation account for environment/livelihood impacts of these initiatives. Mark Fenn of the WWF Madagascar Programme Office however expresses his concerns: “Unfortunately ...many of the NGOs and private sector organizations that will be contracted to implement EC programmes will be much less concerned, or will forget about, the environmental impact assessment and monitoring” (Fenn, personal communication, 2003). **Quality control and other follow up mechanisms need to be developed to help ensure that EIAs are developed and that projects are being monitored routinely**. It is anticipated that strengthening environmental monitoring capacities, especially at local levels, may facilitate transparent environmental monitoring of initiatives (see above recommendation).
- WWF’s Madagascar Programme and the EC need to continue to promote the use of sustainable agricultural methods and technologies in especially the context of EC funded commune and inter-community rural development and food security initiatives.

10. Concluding remarks

Based on this study’s review, various key lessons learned and best practices have been drawn. For more specific recommendations – particularly for the WWF Tanzania and Madagascar programme offices – refer to the previous section (Section 9).

10.1. Lessons learned

10.1.a. Environment-poverty integration

- This study, as have other reports (Davalos, 2002), indicates that environment-poverty integration in the EC Country Strategies is poor. Although numerous EC policies and declarations commit EC programmes to systematically integrate environmental issues, **there is remarkably vague integration of environmental issues and limited discussion of environment-poverty linkages in both the Tanzania and Madagascar CSPs**.
- **The EC needs to improve environmental integration at both the programming and project level**. This includes, mainstreaming environmental considerations (and impacts) in the discussion of the core areas in the CSP, requiring a CEP (this is currently being requested in the CSP Mid Term Review), requiring a SEA for all projects with

the EC has been funding control/policing programs carried out by the Ministry of Fisheries (Fenn, personal communication, 2003).

anticipated environmental impacts, and developing procedures to check on the quality of environmental integration in the CSPs and of project-level EIAs.

- Rather than integrating environmental concerns in the Tanzania and Madagascar CSPs, these CSPs highlight that environmental activities are considered under “other budget lines”. While in no doubt these activities have provided much needed support for the environment, environmental issues have as a result been side-lined under “other budget line” and not mainstreamed in many Country Strategies. In countries where economies and people’s livelihoods highly depend on natural resources, such **low prioritization of the environment is unwarranted.**

10.1.b. Response strategies: WWF Tanzania and Madagascar programme offices

- **Synergies between WWF programme offices and EC country delegations should ideally be established early on** so that potential negative environment/livelihood consequences may be detected and minimized at an early stage. This includes not only WWF involvement in the implementation and evaluation of EC funded programs and projects, but furthermore entails WWF input in EC program/project identification and funding allocations (e.g., during CSP development).
- WWF programme offices need to keep careful track of EC funded initiatives (i.e., transport, macro support, rural development, and good governance initiatives) and of possible associated environmental/livelihood impacts.
- WWF programs need to seek collaborative approaches to strengthen national environmental management regulatory framework. This will require – among other things – strengthening community based environmental management, environmental monitoring, and policy enforcement.

10.1.c. Response strategies: WWF Tanzania Programme Office

- The lack of an effective environmental management framework is seriously threatening sustainable development in Tanzania. Various case studies indicate that growth sectors – facilitated in part by EC funding to macro support – are associated with serious environmental degradation and livelihood concerns, including biodiversity loss, water contamination, increased disease incidence, displacement of local communities, and decreased access to natural resources and land.
- **Synergies with existing WWF Tanzania and other programs – especially around the Lake Victoria area – need to be built** to help address potential environmental/livelihood impacts of road development/rehabilitation (i.e., around the Central and Lake Circuit corridors) and increased growth prompted by the improved road access (e.g., in the fishing, mining, and tourism sectors).
- **Alignment with WWF Tanzania programmes and its priority ecoregions need to be emphasized** in addressing environment/poverty concerns.

10.1.d. Response strategies: WWF Madagascar Programme Office

- **Alignment with WWF’s biodiversity conservation visions**, particularly in the Dry Forest, Humid Forest Ecoregion Programmes and WWF’s priority ecoregions, **needs to be emphasized** in addressing environment/poverty weaknesses.
- The WWF Madagascar Programme Office needs to seek collaborative approaches and partnerships to strengthen environmental monitoring in Madagascar, such as of the mining, textile, fishing, and agricultural sectors. Environmental monitoring developments in Madagascar will need to be reviewed, best practices assembled, and an integrated monitoring program developed.

10.1.e. Response strategies (EC)

- The lack of an effective environmental management framework is seriously threatening sustainable development in many developing countries. **Good environmental governance is fundamental towards facilitating sustainable development**. The EC needs to emphasize supporting the development of strong environmental management regulatory frameworks in developing countries, particularly in its “good governance” core area. The use of the EC Rural Policy (2000) – that focuses on empowering rural communities, consolidating democracy, and promoting sustainable natural resource management – could be a useful policy framework to mainstream such sustainable development and good environmental governance.
- While the EC requires the development of EIAs for all its projects that have an environmental impact, this may be dangerously bypassed in instances where the EC transfers its funds directly into national treasuries, as is commonly the case for EC funding under “macro support”. While the EC is not alone in supporting unregulated growth, **the EC (and other donors and agencies) must be held accountable for environmental and social impacts in all initiatives it funds**, irrespective of whether funds are transferred into a national treasury or to a specific project.
- **EC funding in countries with a poorly developed environmental regulatory framework has entailed significant environmental degradation and consequently deteriorated livelihoods of especially the rural poor**. In Tanzania for example, EC (and other donor) financing to macro support and transport is, for example, prompting unregulated growth in the mining, tourism, and fishing sectors – documented to have resulted in significant increases in deforestation, biodiversity loss, water degradation, disease incidence, and displacement.
- **Gaining access to EIAs is cumbersome**. Since the EC country delegations are currently responsible to maintain EIAs (e.g., under the 9th EDF), these delegations are encouraged to develop EIA archives.
- **The EC needs to strengthen its institutional procedures to ensure the development of high quality EIAs**.

10.2. Best practices

- The EC Madagascar delegation has already asked WWF Madagascar to plan and evaluate its investments. Furthermore, this EC country delegation is encouraging NGOs, the private sector, and civil society to *implement* EC funded programmes and projects in Madagascar. Similar **synergies and partnerships between the EC country delegations and WWF programme offices** (as well as with other NGO, government, and private agencies) are highly encouraged.
- Madagascar plans to in the second phase of its Environmental Programme **integrate environmental considerations into its macro economic and sectoral management programs**. Such early detection of potential negative environment/livelihoods impacts is highly recommended in other countries as well.
- The development of a **strong environmental management framework in Madagascar’s tourism sector** – that has entailed the transferring of protected area management (and benefits) to local communities – has been a big success. Emphasis on community based resource management, revenue sharing, decentralization, and partnership building has been attributable to improved park management and improved living conditions of surrounding local communities. Economic growth *can* lead to win-win situations so long as such growth is coupled with strong regulatory management.

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Annex 2: Tanzania CSP: Allocation of EC funds to the transport, macro support, and governance core areas

Transport: Tanzania CSP (116 Million Euro)

The EC is one of the main donors funding the roads sector in Tanzania. The EC currently accounts for 36% of total funding for the road sector in Tanzania. The 9th EDF funds will be used to continue to support the development and maintenance of the main road networks (as defined by the government). More specifically, the Tanzania CSP will:

- Support backlog maintenance of rural roads (30 Million Euro);
- Support backlog maintenance of paved roads (30 Million Euro);
- Contribute to the road maintenance fund – TANROADS⁹ (30 Million Euro); and
- Possibly finance the rehabilitation of the harbor road in Zanzibar (26 Million Euro): this has not yet been determined (Ingelbrecht, personal communication, 2003).

Road maintenance will support in particular high priority corridors that have previously benefited from earlier EC support. A likely focus is the development and rehabilitation of the Central and Lake Circuit corridors/ the Dar es Salam-Mwanza and Mwanza Region Border-Nzega/Isaka roads.

The EC has traditionally taken the lead among donors to fund road development in Tanzania and there are intentions to continue to do so: “Transport has been at the center of EC assistance to Tanzania since the start of co-operation in 1975” (United Republic of Tanzania and EC, 2000). Under the 8th and 7th EDFs, substantial support to transport was allocated to Tanzania to – among other things – pave the Mwanza Shinyanga border-Tinde road and the Nzega-Isaka road (169km); rehabilitate the Wazo Hill-Bagamoyo road (43km); reconstruct the Mwanza-Nyangunge road (35km), and maintain the Dodoma-Morogoro, Dar es Salaam port access, and Kigoma-Nyakanasi roads.

Macro support: Tanzania CSP (98.6 Million Euro)

EC funding for macro support will be in line with the PRSP objectives and will support macroeconomic reforms and structural adjustments implemented since the mid 1990s. The bulk of macro support (94.6 Million Euro) will be used to contribute to the Poverty Reduction Budget Facility (PRBSII) to which various donors (except for the World Bank and IMF) contribute¹⁰. Since the EC funds are transferred into the national treasury, tracking EC (vs. other donor) funding is not possible. EC funds will be disbursed on an annual basis for 3 years under this program to:

- Support the priority sectors identified in the PRSP: education, health, agriculture, roads, judiciary, and HIV/AIDs prevention;
- Maintain macro-economic stability and support to on-going macroeconomic and structural reforms:
 - Continue privatization: growth sectors have been confined to the mining, tourism, and services sectors (United Republic of Tanzania, 2000, p. 11);
 - Continue liberalizing of foreign trade; and
 - Continue stabilization objectives (e.g., to maintain domestic inflation, etc.) (United Republic of Tanzania, 2000).

⁹ TANROADS is a semi-autonomous road agency in charge of implementing road development, rehabilitation, and maintenance using private contractors and consultants. EC and other donor funds will likely be allocated to TANROADS “basket fund”.

¹⁰ 30% of the overall PRSP budget is supported by donors, while the remaining 70% is supported by domestic revenue.

Full details are provided on the PRSP objectives and macroeconomic reforms in the Tanzania PRSP and Tanzania's Interim PRSP (Annex III).

An additional amount of 4 Million Euro will be allocated by the EC for Public Finance Management to support strengthened capacity in accounting, procurement and internal auditing and to improve production of economic statistics.

Governance: Tanzania CSP (31.9 Million Euro)

Approximately 17 Million Euro will be allocated by the EC to support a Capacity Building and Participatory Development programme. This programme will build capacity at local government level in 7 districts including of district-level administrators, key district agencies, and local councils wards. Additional EC funding was requested by the Ministry of Finance to support the Local Governance Reform Programme and the Public Service Reform. The EC country delegation is considering to allocate 5 Million Euro to either of the two programs. Another 1.5 Million Euro is being allocated to micro projects. It has not yet been decided what to do with the remaining 8.4 million Euro under "good governance". A candidate project may be a non-state actors project that plans to evaluate how non-state actors participated in developing the Tanzania CSP and how participation may in the future be strengthened (Paris-Ketting, personal communication, 2003).

Annex 3: Madagascar CSP: Allocation of EC funds to the transport, macro support, and rural development core areas.

Transport: Madagascar CSP (116 Million Euro)

EC funding will be used to rehabilitate and maintain roads, particularly in southern Madagascar. More specifically, 9th EDF funds are being used for the development of the RN45 and for maintenance and reinforcement of the RNP2, RNP7, RNS12, and RNS25. This includes the development and rehabilitation of 1770 kilometres of national roads in the South (Thieulin, personal communication, 2003) and completion of roads previously funded under the 8th EDF. Road development and rehabilitation in especially the South – noted to have the poorest districts of Madagascar – is envisioned to open local and regional markets (e.g., exports) and facilitate production (e.g., by lowering costs). In addition 9th EDF funds will be allocated to the Roads Maintenance Fund (FER). As with Tanzania, the EC has strongly supported the transport sector in Madagascar under previous EDFs (République de Madagascar et Communauté Européenne, 2001).

Macro support: Madagascar CSP (originally 60 Million Euro, currently estimated at 70 Million Euro)

Due to the recent 2002 political crisis that paralysed the country for six months, 70 Million Euro were recently used to support an emergency budget support fund. The emergency budget support funds were used to pay outstanding government payments (e.g., for private sector development), to support local and parliamentary elections, for emergency road repair (e.g., of bridges); and to finance other poverty related expenditures. The emergency budget support fund was financed by the 9th EDF macro support budget (55 Million Euro) and remaining 8th EDF funds (15 Million Euro).

The Government of Madagascar recently prepared a new 3 year macro support program that is soliciting an additional 70 Million Euro of funding. The plan proposes to support the PRPS objectives (66.5 Million Euro), to namely:

- Support priority sectors identified in the PRSP: governance, economic development, and human/material security and social welfare (e.g., health, education, and water and sanitation).
- Continue to support macro economic reforms and structural adjustment programs implemented since the mid 1980's, including:
 - Privatisation: growth sectors include mining, textile industry, tourism, and fishing;
 - Liberalization: e.g., elimination of import restrictions and export taxes and development of free trade zones;
 - Government reforms: e.g., public sector reforms and local government reforms. (Republic of Madagascar, 2003)

EC funding to support the PRSP is transferred to the national treasury where the Government of Madagascar determines how exactly the money will be used. PRSP performance is monitored (annually) through a set of performance indicators. A remaining 3.5 Million Euro has been requested to support capacity building initiatives.

At a total revised cost of 70 Million Euro, macro support activities will be funded by: 5 Million Euro that remain in the 9th EDF macro support budget and 28 Million Euros that will be used from the 9th EDF rural development budget. The remaining 35 Million Euro will be solicited during the Mid-Term Review of the Madagascar CSP (Cornelis, personal communication, 2003).

Rural development and food security: Madagascar CSP (originally 60Million Euro, currently 32Million Euro)

Priorities for rural development and food security were refined after the 2002 political crisis. An amount of 18Million Euro will be allocated to 180 communes in the South, in which each commune will receive 100,000 Euro. Participatory approaches will be used so that communes themselves determine which rural development and food security initiatives to support: e.g., initiatives to improve agricultural production, extension services, irrigation, etc. The remaining 14Million Euro will likely be used to support inter-community/watershed initiatives. Inter-community initiatives still need to be determined: these may entail food security provision, improvements in extension services, improvements in water provision, and rural road development.

As noted in the previous section, due to the political crisis the original rural development budget was adjusted to 32Million Euro (since 28Million Euro was allocated to finance macro support – see above). It has been proposed that the 32Million Euro be used to support a three year rural development/food security program. 28Million Euro will be solicited during the Mid Term Review to support the 2nd phase of the rural development initiative (Bolly, personal communication, 2003).

Annex 4: Tanzania statistics – natural resources dependence and poverty

Source: United Republic of Tanzania, PRSP, 2000 (unless otherwise indicated)

Natural resource dependence of Tanzania's economy: statistics

Agriculture:

- The agricultural sector generates 60% of the country's GDP (United Republic of Tanzania and EC, 2000).
- Almost 61% of the rural population is engaged in subsistence agriculture (United Republic of Tanzania and EC, 2000).
- 80% of Tanzania's population relies on employment in the agricultural sector.

Tourism:

- Tourism accounts for 12% of Tanzania's total exports in 1990. Its share increased substantially to 38% in 1998 (Reed, 2001).
- Tourism earning rose from US\$27 million in 1986 to US\$570 million in 1998 (Reed, 2001).

Mining

- The mining sector contributed to 2.3% of Tanzania's GDP.
- Mineral exports are an important earner of foreign exchange, and grew 27% in 1999, a major increase from the previous year's 17% (OECD, 2002).
- Mines in Tanzania have been estimated to employ one million workers. In gold mining alone an estimated 350,000 people have been employed (National Environmental Research Institute, 2001; Reed, 2001).

Poverty in Tanzania: statistics

- Poverty incidence for Tanzania is estimated at 48%. More specifically in rural areas poverty incidence is estimated at 57%.
- Tanzania is one of the poorest countries in the world with a per capita GNP of \$270. Its Human Development Index has since 1992 declined from 126 to 156 (United Republic of Tanzania and EC, 2000).
- Poverty rates decreased during 1983-1991, but have subsequently risen during 1993-1998.
- Poverty in Tanzania is worse in rural (vs. urban) areas where incomes are lower and poverty more widespread.
- Less than 50% of the rural population in Tanzania has access to clean water.
- In 1999, infant mortality was estimated at 99 per 1,000 live births.
- The number of HIV/AIDs orphans is estimated at 680,000.

Annex 5: Madagascar statistics – natural resources dependence and poverty

Source: Republic of Madagascar, PRSP, 2003 (unless otherwise indicated)

Natural resource dependence of Madagascar's economy: statistics

Income:

- At least 50% of income in the Madagascar economy is directly dependent on natural resources.
- Nine out of ten jobs directly depend on natural resources.

Tourism:

- During the last decade, tourism has increased by 10% every year.
- Of 4.5% economic growth in Madagascar in the years 1999 and 2000, 13% was attributable due to expansion of the tourism sector.

Biodiversity:

- While Madagascar constitutes about 3% of the surface area of the African continent, it is home to 25% of all African plant varieties (République de Madagascar et Communauté Européenné, 2001).
- 80% of Madagascar's 100,000 vegetable species are endemic (Madagascar and EC, 2001).

Fishing:

- Between 1999 and 2000, export revenue from fisheries increased by 19.3% and government revenue increased by 29.5%.
- Of 4.5% economic growth in Madagascar in the years 1999 and 2000, 20% was attributable due to growth in the fishing sector.

Agriculture:

- While agriculture contributes substantially to Madagascar's GDP (e.g., 15.3% in 2001) its significance has been decreasing for several decades (e.g., in 1999, weight of agriculture in the GDP was 17.5%).
- 85% of the rural poor are involved in agricultural activities.
- Nearly 70% of the country's production is dominated by the growing of rice.

Forestry:

- The forestry sector has seen sustained growth, representing 9.8% of Madagascar's annual growth between 1997 and 2000.
- About 100,000 hectares of forests disappear annually. It is estimated that at such deforestation rates, forest cover will disappear in 25 years in Madagascar.
- Forest exports have increased 61% from 1995 to 1999 (République de Madagascar et Communauté Européenné, 2001).
- Deforestation loss and soil erosion in Madagascar have been estimated to represent an economic loss of between 5% to 15% of its GDP (République de Madagascar et Communauté Européenné, 2001).

Water

- 76% of Madagascans do not have access to drinking water, affecting especially 90% of the poorest quintile of the population (République de Madagascar et Communauté Européenné, 2001).

Poverty in Madagascar: statistics

- Incidence of poverty in 2001 was estimated at 69%.
- Slight improvement in poverty levels have occurred in Madagascar's urban areas.
- Poverty levels in rural areas are worse in Madagascar.

**European Community's Poverty Reduction
Effectiveness Programme (EC-PREP) research project:
Streamlining poverty-environment linkages in the European
Community's development assistance**

EP/R05/15

**Poverty-environment analytical framework in
EC Country Strategy Papers:
Tanzania CSP Update¹
Activity 1.1 – 1.4**

June 2004

Overview

The Tanzanian Country Strategy Paper (CSP) recently underwent a Mid Term Review (MTR). While conclusions have been drafted, these will not be finalized until October/November 2004² (Koehler-Raue, personal communication, 2004).

Few significant changes have been proposed in the draft MTR conclusions for the Tanzania CSP (Koehler-Raue, personal communication, 2004; Latif, personal communication, 2004; Woringer, personal communication, 2004). Transport, macro support, and good governance will remain the three key focal areas that will receive 9th European Development Funding (EDF) (see details in the “Proposed core area revisions” section).

As indicated in the previous Tanzania CSP evaluation (Snel, 2004), the Tanzanian CSP (for 2001 – 2007) - as with many other EC Country Strategies - did not include a Country Environmental Profile (CEP). Guidelines for the Mid Term Review (2003), however, required that all Country Strategies include a CEP (Le Grand, personal communication, 2003). While not yet formalized, a CEP was drafted for Tanzania (Latif, personal communication, 2004) (see details below under “Country Environmental Profile”).

¹ This report was written by Mathilde Snel (mathildesnel@hotmail.com), a consultant contracted by WWF. This report builds upon a previous evaluation conducted on poverty-environment mainstreaming in the Tanzania Country Strategy Paper (Snel, 2004). Overall supervision was given by Hervé Lefeuvre (WWF-EPO, Hlefeuvre@wwfepo.org), Dawn Montanye (Dawn.Montanye@WWFUS.ORG), David Reed (WWF-MPO, Reedd@wwfus.org), and Jenny Springer (WWF-MPO, jenny.springer@wwfus.org).

² The draft MTR is still an internal document. Once finalized the MTR conclusions may be available to the public.

Country Environmental Profile

The draft CEP describes a number of future environmental needs in which the EC could orient future efforts. These include:

- continued support to improve environmental policies (e.g., Tanzania's Environment and Natural Resources Policy Framework and the Environmental Management Act);
- development of a National Natural Resource Management Strategy that articulates a strategy to link the range of natural resources that Tanzania's population depend upon;
- review and update of the National Environmental Policy (published in 1997) to integrate key aspects of new policies, strategies, and legislation;
- support the development of a mechanism to regularly and effectively monitor and report on Tanzania's natural resources;
- develop local government environmental and poverty strategies (e.g., within district development plans);
- support work to resolve current land tenure uncertainties (e.g., between farmers and agropastoralists) and implement a nation-wide land tenure programme;
- review environmental impacts of the mineral and energy sectors, sectors that are rapidly becoming key pillars to Tanzania's economy;
- review agriculture and livestock taxes and levies;
- promote environmental integration in the subsequent Poverty Reduction Strategy (being developed in 2004);
- strengthen environmental accounting; and
- review private sector capacity to implement environmental management.

The draft CEP acknowledges that there are clear linkages between environmental degradation and poverty and emphasizes that Tanzania's natural resources provide a principle source of income generation. Key environmental issues in Tanzania are summarized in the draft CEP as: water shortages (drought); land degradation; urbanization (poor waste management and water supply leading to cholera and typhoid outbreaks); and coastal zone deterioration (e.g., due to an expanding tourism industry and illegal activities such as dynamite fishing and mangrove harvesting).

Proposed core area revisions: draft MTR conclusions

Macro support: Due to good performance, EC funding for *macro support* will be extended and will continue to support PRSP priority sectors.

Good governance: *Good governance* initiatives will continue to focus on a Capacity Building and Participatory Development programme. In addition, the draft MTR conclusions propose to support a Local Governance Reform Programme: prior to the MTR, funding had not yet been secured for this programme.

Transport: EC funding for *transport* will continue to emphasize road maintenance although the EC is moving towards sectoral support that will emphasize building national capacities to maintain roads versus supporting the development or rehabilitation of specific roads. This will be done by, for example, providing funds directly to the Road

Fund and Tan Roads' budget. The following EC funds are envisioned to be used to support the transportation core area in Tanzania:

- 30 million Euro for rehabilitation of paved/trunk roads;
- 30 million Euro for maintenance of regional/rural roads;
- 30 million Euro for direct support to the Roads Fund; and
- 5 million Euro for institutional strengthening (Woringer, personal communication, 2004).

Research implications

The proposed changes in the transport core areas of the Tanzania CSP do have implications for conclusions drawn in the recent environment-poverty evaluation conducted for the Tanzania CSP (Snel 2004). In particular it may not be assumed that EC funds will go towards the continued development and/or rehabilitation of the Central and Lake Circuit corridors, more specifically to the Mwanza and Mwanza Regional Border-Nzega/Isaka roads. The government may or may not prioritise the maintenance (or development) of these roads once EC funds are, for example, allocated in the Road Fund and Tan Roads' budgets. While it may then not be assumed that market access about the Lake Victoria area will improve, the Lake Victoria region does remain a "hot spot" area for potential negative environmental impacts due to its concentration of mining, fishing, tourism, and agricultural activities. As indicated in Snel (2004) many of these sectors are undergoing rapid and unregulated growth that has been prompted by privatization and liberalization – key objectives of Tanzania's PRSP and supported by numerous donors including the EC. The opening of the Geita mine in 2000 – located in the Lake Victoria Basin catchment area and East Africa's biggest gold producer – has, for example, already been associated with various negative environmental/livelihood impacts ranging from water contamination, loss of biodiversity (especially of fish), and human health consequences.

It is recommended that once the MTR draft conclusions have been finalized, that additional reference is made to the final MTR/CSP revisions in further refining priorities for environment-poverty research being funded by the European Community's Poverty Reduction Effectiveness Program (EC-PREP) on "Streamlining poverty-environment linkages in the European Community's development assistance."

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II.2 Poverty Multi-level analysis and Institutional evaluation follow up

Rwanda: Poverty Multi-level analysis

Rwanda: Follow-up and Institutional evaluation

Tanzania: Multi-level evaluation

Tanzania: Follow-up and Institutional evaluation

European Community's Poverty Reduction Effectiveness Programme
(EC-PREP) Research Project:

Streamlining Poverty-Environment Linkages in the European Community's Development Assistance

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Multi-level Poverty-Environment Analysis
Activity 4

Report and Recommendations – RWANDA



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World Wildlife Fund – Macroeconomics Program Office
Rwanda Environment Management Authority



REPUBLIC OF RWANDA



Kigali, Rwanda
May 30, 2005

Nº 041/DG/05

RWANDA ENVIRONMENT MANAGEMENT AUTHORITY (REMA)

Dear Madam/Sir;

The Rwanda Environment Management Authority is pleased to release this report along with the World Wildlife Fund for Nature. This document reports the findings from an intensive study of poverty-environment linkages within southeast Rwanda. These linkages create a cycle of impact: human activities impact the environment, and environmental degradation impacts socioeconomic wellbeing. We believe that similar linkages affect the rural poor throughout Rwanda, especially due to high pressure and dependence on limited natural resources.

If Rwanda is to meet the objectives outlined in the Vision 2020, Poverty Reduction Strategy Paper, and Millennium Development Goals, we must be conscious of and mitigate the environmental impacts of development projects. We hope that this report will serve as a tool for integration of poverty-environment linkages into all development projects in Rwanda. As outlined in the Environmental Law, it is the obligation of all institutions and organizations in Rwanda to manage the environment in a sustainable way. It is only through true collaboration that together we can achieve development while limiting environmental impacts, saving our precious natural resources for the next generation of Rwandans.

Sincerely,

A handwritten signature in black ink, appearing to read 'Dr. Rose Mukankomeje'.

Dr. Rose MUKANKOMEJE
Director General, REMA



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Executive Summary

This study is part of a larger review of the European Community's 9th European Development Fund (EDF) within African, Caribbean, and Pacific countries to evaluate the extent to which poverty-environment linkages are recognized and integrated into development financing. The Cotonou Agreement of 2000 identified three horizontal or "cross-cutting" themes for the success of development and poverty reduction:

- (i) Gender equality;
- (ii) Environmental sustainability; and
- (iii) Institutional development and capacity building.

Mainstreaming of environmental issues is not always tangible; most economic development comes at the expense of some natural resource. This study strives to come up with tangible recommendations to the European Community (EC) in Rwanda to mainstream environmental considerations into their support for rural development. Specifically this study examined the planned support of to the Government of Rwanda for the Decentralized Programme for Rural Poverty Reduction (DPRPR), a four-year, 32 million Euro project to give support to decentralized levels of government: cellule, sector and district level, and to the national level. Funds for the national level will support the Common Development Fund (CDF) within the Government of Rwanda (GoR), an institution within the Ministry of Local Government, which disseminates national funds directly to districts for project or budget support. Support for the CDF is pledged to the southeastern Kigali-Ngali and Kibungo Provinces.

Methods

Kibungo Province was selected as a study site for this project; three sectors within three districts were subsequently selected and visited. The approach used a multilevel analysis of economic, social, institutional issues set in the national policy context. At the local level, consultants conducted focus groups with community members in each of the nine sectors selected. During these focus groups, poverty-environment linkages specific to Kibungo were identified. Interviews were also conducted with authorities at the sector, district, province and national level to identify how environment mainstreaming is being addressed through the decentralized system.

Poverty-Environment Linkages

Rural livelihoods in Kibungo Province, and Rwanda in general, are intimately tied to the environment. More than 95% of the population in Kibungo relies on subsistence agriculture; all economic activities can be linked to land, forests, water resources (lakes and wetlands), and subsoil. Especially in the post-war and genocide period, the impact of human pressure on the natural environment has resulted in the scarcity and degradation of resources:

- (i) the drastic reduction of household land parcels and the loss of the fertility of arable land;

- (ii) the quasi-disappearance of forest resources and the lack of reforestation; and
- (iii) increased drought, drainage of lakes and exploitation of wetlands, and the beginning of a desertification process in some semi-arid zones of this province.

The post-colonial history of Rwanda has been punctuated by periodic emigration and immigration of people. The need to resettle people in villages and *imidugudu* (resettlements) has had evident impacts on the environment. In addition to the clearing of natural areas like Gishwati Forest and Akagera National Park, these impacts include (i) uncontrolled cutting of trees for construction and soaring demand for charcoal and other forest products; and (ii) remoteness of the communal agricultural lands has led to increased production costs due to time spent traveling on foot to fields, theft of crops and destruction of crops by animals.

Unless environmental sustainability is integrated into appropriate policies, programmes and projects, vulnerable communities in Kibungo Province and elsewhere are likely to suffer far-reaching consequences as a result of environmental degradation. Some of the consequences may relate to (i) food insecurity due to poor soils; (ii) vulnerability to natural disasters especially landslides, floods and drought; and (iii) social insecurity due to conflicts over the limited resources.

Opportunities and Constraints to Mainstream Poverty-Environment Linkages

The current political framework of the EC and the GoR provide many opportunities to mainstream poverty-environment linkages:

- (i) Review of African, Caribbean, and Pacific (ACP) Cotonou Agreement;
- (ii) Review of the Rwanda Poverty Reduction Strategy Paper (PRSP);
- (iii) Implementation of Millennium Development Goals (MDGs);
- (iv) Development Partners Co-ordination Group; and
- (v) Common Development Fund.

There are also constraints to mainstreaming poverty-environment linkages:

- (i) Lack of understanding of linkages by decision-makers and communities;
- (ii) Inadequate capacity in valuation of natural resources; and
- (iii) Lack of poverty-environment indicators.

General Recommendations

The general recommendations for the GoR and its donor community are to implement a system of environmental integration. It is important to ensure the mainstreaming of poverty-environment linkages into the PRSP II and sectoral policies, plans, programs, and projects. In addition, support to the CDF is recommended, specifically to develop environmental guidelines to CDF project screening of projects and to build the capacity of implementing entities: decentralized entities, non-governmental organizations (NGOs), community-based organizations, and institutions.

The development of environmental and poverty-environment indicators are recommended to enhance impact monitoring for development objectives. It is also recommended that a formal GoR- Environmental Donor Group be established to enhance mobilization and coordination of donor support for the environmental sector. Additionally, the Rwanda Environment Management Authority (REMA) needs to be strengthened with the development of a strategic plan, environmental impact assessment (EIA) guidelines, and environmental quality standards. These guidelines and standards in turn will provide needed information for the CDF and local authorities in project assessment.

Decentralization is now considered to be crucial for effective public policy, democracy, and natural resource management. For decentralization to succeed, it is imperative that technical expertise is built to provide technical support to project development and to monitor the environmental impact of projects. Also, to achieve the bottom-up approach as espoused under CDF (mobilization and empowering of communities to take ownership of the rural development initiatives), it is important that capacities of community organizations and institutions are strengthened.

Specific Recommendations for the EC Rwanda Delegation

The results from this study encourage the EC to mainstream environment into budget support for Rwanda. The GoR encourages budget support by donors to ensure that the national priorities identified in the PRSP are implemented. Through this support the EC, through the Country Strategy Paper (CSP), could apportion at least a certain percentage of the budget support for projects and activities that contribute to the improvement of the environment. This will ensure that all projects whether under rural development, macro support, or good governance/institutional support mainstream environmental considerations in all their activities. It is also recommended that the EC and other development partners consider direct support to REMA and decentralized entities for enhanced environmental law compliance and enforcement. Because of the unprecedented demand and expectations on these institutions, it is important that they are supported financially and technically to ensure good environmental management. This may not be achieved with the limited grants from the GoR through the national budget.

It is recommended that a Strategic Environmental Assessment (SEA) be completed for the 9th EDF with a view of integrating environmental considerations into the 10th EDF. Supplementary to the SEA, an elaborate environmental impact monitoring program should be established. It is also recommended, through the CDF, that special attention be given to the transfer and adoption of environmentally sound technologies that will help to mitigate environmental impacts such as pollution, raw material wastage, and waste production.

Résumé

Cette étude fait partie de la révision globale du 9^e Fond Européen de Développement (EDF) constitué par la Communauté Européenne pour financer les projets dans les pays en Afrique, des Caraïbes et Pacifiques. Elle analyse à quel point les considérations environnement-pauvreté sont reconnues et intégrées dans le financement des projets de développement. L'Accord de Cotonou signé en 2000 a identifié trois thèmes parallèles qui peuvent contribuer à la promotion du développement et à la réduction de la pauvreté :

- (i) Égalité du genre
- (ii) Durabilité de l'environnement
- (iii) Appui institutionnel et renforcement des capacités

L'intégration des considérations environnementales dans la réduction de la pauvreté n'est pas toujours tangible ; le progrès économique dépend souvent des ressources naturelles. Cette étude vise à soumettre des recommandations tangibles à la Représentation de la Communauté Européenne (EC) au Rwanda afin d'intégrer les considérations environnementales dans les programmes de développement rural. Concrètement, cette étude examine le projet de financement octroyé à l'Etat Rwandais à travers son Programme Décentralisé pour la Réduction de la Pauvreté en Milieu Rural (DPRPR). Ce financement de 32 millions d'Euros est destinés à appuyer les projets de développement dans les unités décentralisées : cellule, secteur, district et nation. Au niveau national, les ressources financières seront utilisées pour appuyer les Fonds Commun de Développement (CDF) au sein du Ministère de l'Administration Locale, créés par le Gouvernement Rwandais (GoR). Ces CDF sont distribués directement aux districts pour financer les projets ou les budgets. L'appui aux CDF est octroyé pour financer les interventions étant prévues dans les provinces du Sud-Est, à savoir Kigali-Ngali et Kibungo.

Méthodologie

La province de Kibungo a été choisie comme site pilote de ce projet. Ainsi, trois-neuf secteurs dans chacun des 3 districts ont été choisis et visités. L'approche adoptée consiste en une analyse à plusieurs niveaux des aspects économiques, sociaux et institutionnels perçus dans le cadre de la politique nationale. Au niveau local, les consultants ont organisé des discussions en groupes avec la population locale dans chacune des neuf secteurs choisis. Au cours de ces échanges en groupes, les considérations pauvreté-environnement de la province de Kibungo ont été identifiées. Les interviews avec les autorités au niveau des secteurs, des districts, des provinces et au niveau national ont été organisés afin d'examiner comment les considérations environnementales sont abordées dans les unités décentralisées.

Les considérations pauvreté-environnement

Les conditions de vie de la population rurale dans la province de Kibungo comme ailleurs au Rwanda dépendent de l'environnement. Plus de 95% de la population de la province de Kibungo dépend de l'agriculture pour la survie; toutes les activités socio-économiques dépendent des ressources du sol, de la forêt, de l'eau (les lacs et les marais) et du sous-sol. Dans la période de l'après guerre et génocide surtout, l'impact de la pression humaine sur l'environnement a occasionné la dégradation des ressources naturelles:

- (i) la réduction des dimensions des lopins des terres appartenant aux familles et la perte de la fertilité des terres arables;
- (ii) la quasi-disparition des ressources des forêts et l'absence des activités de reboisement; et
- (iii) une augmentation progressive de la sécheresse, le drainage des lacs et l'exploitation des marais, le début d'un processus de désertification dans certaines régions semi-arides de cette province.

L'histoire du Rwanda après la période coloniale a été marquée par des émigrations et immigrations périodiques des personnes. La nécessité d'installer les gens dans les villages et les sites *imidugudu* a eu des impacts incontestables sur l'environnement. En plus du défrichage des forêts naturelles comme Gishwati et le Parc National Akagera, ces impacts incluent (i) la coupe incontrôlée des arbres pour la construction et le besoin toujours croissant ressenti par la population d'obtenir la braise et autres ressources de la forêt ; et (ii) la distance qui sépare les champs des villages est longue et a occasionné la hausse des prix car les gens doivent marcher pendant des heures, sans oublier le vol des récoltes et les animaux qui détruisent les récoltes.

Si les politiques, les programmes et les projets n'intègrent pas les considérations environnementales, les communautés vulnérables de la province de Kibungo et d'ailleurs risquent de souffrir de graves conséquences suite à la dégradation environnementale. Ces conséquences peuvent être liées à (i) l'insécurité alimentaire due aux sols pauvres ; (ii) la vulnérabilité face aux calamités naturelles surtout les éboulements, les inondations et la sécheresse; et (iii) l'insécurité sociale causée par les conflits suscités par le manque de ressources.

Opportunités et contraintes pour intégrer les considérations Pauvreté-Environnement

Le cadre politique actuel de la EC et du GoR offrent plusieurs opportunités d'intégrer les considérations pauvreté-environnement:

- (i) Révision de l'Accord des pays de l'Afrique, Caraïbes et Pacifiques signé à Cotonou;
- (ii) Révision du Document de Stratégie de Réduction de la Pauvreté du Rwanda (PRSP);
- (iii) Les Objectifs de Développement du Millénium (MDGs);

- (iv) Groupe de coordination des partenaires en développement; et
- (v) Fonds Commun de Développement (CDF).

Mais, cette nécessité d'intégrer les considérations environnementales dans les programmes de réduction de la pauvreté se heurte aussi à certaines contraintes dont:

- (i) Les décideurs et les communautés locales ne comprennent pas la pertinence des ces considérations;
- (ii) L'insuffisance de compétence en matière d'évaluation d'impact environnementale; et
- (iii) Le manque d'indicateurs pauvreté-environnement.

Recommandations Générales

Les recommandations générales pour GoR et ses bailleurs visent à mettre en œuvre un système d'intégration environnementale. Il est important d'intégrer les considérations pauvreté-environnement dans PRSP II ainsi que dans les politiques, les plans, les programmes et les projets sectoriels. Par ailleurs, l'appui aux CDF est recommandé, concrètement pour développer les orientations environnementales à l'intentions des projets des CDF et pour renforcer les capacités des organes chargés de les mettre en application: les unités décentralisées, les organisations non gouvernementales (NGOs, les associations des membres des communautés locales, et les institutions.

Il faut développer les indicateurs environnementaux et de la pauvreté-environnement pour renforcer le contrôle de l'impact en se référant aux objectifs de développement. Il faut créer aussi un groupe avec des représentants du GoR et des bailleurs qui collaborent pour la protection de l'environnement. Ce groupe visera à renforcer la mobilisation et la coordination des activités que les bailleurs financent pour protéger l'environnement. De plus, il faut renforcer Rwanda Environment Management Authority (REMA) en lui dotant d'un plan stratégique, des orientations pour l'évaluation de l'impact sur l'environnement (EIA), et des normes pour juger de la qualité de l'environnement. Ces orientations et ces normes fourniront à leur tour les données nécessaires que les CDF et les autorités locales auront besoin dans leur évaluation du projet.

Désormais, la décentralisation est considérée comme une chose essentielle l'ordre public, la démocratie, et la gestion des ressources naturelles. Pour que la décentralisation puisse réussir, il faut renforcer l'expertise des techniciens qui appuieront le projet de développement et contrôler l'impact que les projets auront sur l'environnement. Par ailleurs, pour réaliser l'approche verticale adoptée par les CDF (mobilisation et renforcement des capacités des communautés qui sont appelées à assumer la responsabilité des interventions qui visent le développement rural), il faut renforcer les capacités des associations et institutions créées par les communautés locales.

Recommandations destinées à la Représentation de l'EC au Rwanda

Les résultats de cette étude encouragent l'EC à intégrer l'environnement dans son programme d'appui au Rwanda. GoR encourage l'appui des bailleurs dans la mesure où les priorités de l'Etat mentionnés dans PRSP peuvent être mises en application. A travers le Document de Stratégie de Coopération et Programme Indicatif pour le Rwanda (Country Strategy Paper, CSP), l'EC peut considérer comment répartir un certain pourcentage du budget pour financer les projets et les activités qui contribuent à la protection de l'environnement. Cet appui garantira si toutes les activités des projets du développement rural, de l'appui macro, de la bonne gouvernance ou de l'appui institutionnel tiennent compte des considérations environnementales. On recommande également que l'EC et d'autres partenaires oeuvrant dans le domaine du développement fournissent leur appui direct à REMA et aux entités décentralisées pour la mise en application de la loi sur la protection de l'environnement. En tenant compte des demandes et des attentes de ces institutions, une aide financière et technique s'avère nécessaire pour une bonne gestion de l'environnement. Ceci ne peut pas être réalisé avec les maigres subsides du GoR octroyé par le budget national.

Nous recommandons qu'une évaluation stratégique de l'environnemental (SEA) soit faite pour les 9^e EDF en vue d'intégrer des considérations environnementales dans le 10^e EDF. En plus de le SEA, il faut mettre en place un programme de contrôle de l'impact sur l'environnement. Nous recommandons également qu'à travers les CDF, une particulière attention soit accordée au transfert et à l'adoption des technologies qui sont compatibles avec l'environnement, elles contribueront à atténuer l'impact sur l'environnement des facteurs tels que la pollution, les déchets des matières premières et la production des déchets.

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List of Abbreviations

ACP	African Caribbean and Pacific
ANP	Akagera National Park
CDC	Community Development Committee
CDF	Common Development Fund
CDP	Community Development Plan (Plan de Développement Communautaire)
CEPEX	Central Public Investments and External Finance Bureau
CSP	Country Strategy Paper
DED	German Development Service
DEMP	Decentralization and Environmental Management Program
DFID	Department for International Development
DPCG	Development Partners Co-ordination Group
DPRPR	Decentralized Programme for Rural Poverty Reduction
EC	European Community
EDF	European Development Fund
EIA	Environmental Impact Assessment
FAO	Food and Agriculture Organization
GDP	Gross Domestic Product
GIS	Geographic Information Systems
GoR	Government of Rwanda
GTZ	German Technical Cooperation
HARPP	Harmonization & Alignment in Rwanda of Projects and Programmes
ISAR	Institute Superior de Agricultural Recherche
LWF	Lutheran World Federation
M&E	Monitoring & Evaluation
MDGs	Millennium Development Goals
MINAGRI	Ministry of Agriculture and Livestock
MINALOC	Ministry of Local Government, Community Development & Social Affairs
MINECOFIN	Ministry of Finance and Economic Planning
MINICOM	Ministry of Commerce, Industry, Investment Promotion, Tourism, and Cooperatives
MINITERE	Ministry of Lands, Environment, Forestry, Water, and Mines
MIS	Management Information System
MPO	Macroeconomics Program Office
MTEF	Medium Term Expenditure Framework
NGO	Non Governmental Organization
ORTPN	Office Rwandaise du Tourisme et des Parcs Nationaux
PEAMR	Projet d'eau et Assainissement en Milieu Rural
PER	Public Expenditure Review
PMU	Project Management Unit
PRS	Poverty Reduction Strategy
PRSP	Poverty Reduction Strategy Paper
RBS	Rwanda Bureau of Standards
REMA	Rwandan Environmental Management Authority
RNE	Royal Netherlands Embassy
RNIS	Rwandan National Institute for Statistics
SEA	Strategic Environmental Assessment
SEAGA	Socio-Economic and Gender Analysis Programme
SIDA	Swedish International Development Cooperation Agency
SOPEM	Societe des Pêcheries de Mutara
UNDP	United Nations Development Programme
USAID	United States Agency for International Development
UWSS	Urban Water Supply and Sanitation
WWF	World Wildlife Fund for Nature

1.0 Introduction

1.1 Background

Rwanda is a small country in the Great Lakes Region of Africa, covering 26,338 km² for a population of 8,128,553 inhabitants (National Census Service 2002). The country's relief consists of a chain of mountains along the Albertine Rift whose altitude varies between 2500 and 3000 m and constitutes the Congo-Nile Divide, a central valley ranging in altitude from 1500 m to 2000 m, the low plains of the Southwest (Bugarama) at 900 m of altitude and the savannas of the East with minimum relief of 1100 to 1500 m of altitude). The country is covered by an extensive network of rivers, wetlands, and lakes situated astride two river basins (Congo and Nile Rivers).

The climate of Rwanda is moderate continental tropical, without drastic variations of temperatures (averaging 16°C to 24°C), varying by altitude and successive dry and rainy seasons. Vegetation varies according to the relief and the distribution of precipitation. Diverse species exists among the dense forest of the western mountain chain and the semi-arid savanna of the East. Likewise, Rwanda supports a diversity of agricultural crops.

Since the 1960s, the human environment in Rwanda has been punctuated with violence, immigration, and emigration. For example, during and after the genocide of 1994, an estimated 2 million people fled to neighboring Zaire (now the Democratic Republic of Congo) and Tanzania. The war (1990-1994) and genocide (1994), has left a permanent mark on the country. Over the last 10 years, Rwandans (some refugees since the 1960s) have returned to their home country bringing with them different cultures and languages; today's Rwanda is a mosaic of people with vastly different family histories. Currently, Rwanda is transitioning from a period of recovery and reconstruction after the war and genocide to a period of development and growth. Although reconciliation remains as a priority for the people and the GoR, Rwanda now looks for opportunities for industrial growth, social development, and poverty reduction.

Rwanda's economy has experienced high population growth in recent years, however economic transformation has lagged behind. The Rwanda Poverty Reduction Strategy Paper (PRSP) identifies both external factors and policies have contributed to this. Through out the 1980's agricultural productivity *per capita* and crop yields declined steadily and economic policy did little to encourage agricultural transformation. In addition the country suffered a substantial terms of trade shock when international coffee prices fell. As a result per capita income dropped sharply during the 1980's and early 1990's.

During the Mid 1990's the genocide and continued insecurity within Rwanda created extreme social and economic upheaval further contributing to declining per capita income, as households were unable to engage in their normal economic activities. Structurally this poses several macroeconomic problems such as (i) low agricultural

productivity; (ii) low human resource development; (iii) limited employment opportunities and an oversupply of unskilled workers relative to their demand; (iv) high population density and growth; (v) environmental degradation and declining soil fertility, poor water management and deforestation; and (vi) high cost of fuel and other transport costs on account of Rwanda's land locked position.

1.2 The State of the Environment in Rwanda

Rwanda's stock of environmental resources primarily lies in the land, wetlands, forests, and water. In most cases, environmental degradation in Rwanda has occurred not by massive exploitation of resources, but by the cumulative effects of subsistence exploitation by an ever-increasing population. Of the 26,338 km² of land in Rwanda, only 52% of it is suitable for agricultural production (MINITERE 2003env). The average size of a family plot is 0.76 ha, because of the high population density (322 people/km²; National Census Service 2002) on land that is only partially arable. The pressure put on land, and subsequent degradation of soils is already a troubling situation. As a consequence, the limited amount of available land has forced farmers to reduce periods of fallow and also to move to marginal agricultural lands on steep slopes and the increased agricultural activities within wetland areas. Cultivation of steep slopes has led to the deterioration of soil fertility as a result of increased soil erosion. The Ministry of Agriculture and Livestock (MINAGRI) estimates that Rwanda loses the capacity to feed 40,000 people each year due to soil erosion that takes each year an estimated 945,200 tonnes of organic matter, 41,210 tonnes of Nitrogen, 280 tonnes of phosphorus, and 3 tonnes of potash (MINITERE 2003for).

Overexploitation of natural resources, especially forests, was an inescapable consequence of the GoR's effort to resettle returning Rwandan refugees after the genocide of 1994. Because land area is limited, resettlement some times very urgent, and the existing vulnerable social situation in Rwanda, the GoR was forced to resettle people into formerly uninhabited natural areas like the former forest of Gishwati and Akagera National Park. Resettlement not only led to the deforestation and conversion of natural areas, but accelerated deforestation outside of the reserves and parks as well. As a consequence, the forests in Rwanda are under intense pressure for conversion as well as a source of forests products such as fuelwood to meet the increasing demand. It is estimated that in 2002, the country lacked 6,719 m³ of wood to fulfill the needs of the country (MINITERE 2003for). The gap between supply and demand continues to increase while afforestation and reforestation efforts cannot match the rate of exploitation. This explains the reduction of forests cover of the total land area in the country from 26% in 1993 to the current estimate of less than 18% (MINITERE 2003for). Unless urgent and pragmatic steps are taken to stem increase the forest cover, Rwanda may be destined to serious desertification with far-reaching consequences on its economic sustainability and social and environmental security.

Rwanda's reservoirs of water in wetlands and lakes cover approximately 14.9% of the surface area (6.3% for wetlands; 8.6% for lakes and rivers) (MINITERE 2003env). Most of these bodies of water are within the Lake Victoria watershed; water that subsequently

ends up in the Nile River. The majority of wetlands have been drained to create arable land for agricultural production and human settlement. This has interfered with the ecosystem goods and services ordinarily derived from wetlands. As a consequence, vulnerable groups, especially the rural poor, who have been pushed into these fragile ecosystems are increasingly exposed to frequent natural disasters such as devastating landslides and floods. For example, floods have been of common occurrence in Byumba, Ruhengeri, and Gisenyi provinces and massive landslides have occurred in Nyamutera (1989), Gishwati (2001), and Bweyeye (2002) (MINITERE 2003for). Erratic and inadequate rainfall manifests itself in form of drought is now frequently experienced with devastating effects on subsistence agricultural production.

It is evident that environmental degradation and environmental insecurity continue to increase forcing vulnerable communities to move to marginal areas with devastating long term consequences on their livelihoods. This is well illustrated by the recently concluded mapping and spatial analysis of poverty-environment indicators undertaken under GoR/UNDP collaboration. Under the study, four major clusters were identified (Table 1).

Table 1. *Poverty-environment clusters, or zones, as identified by the GoR/UNDP project for poverty-environment indicators and policy options for Rwanda.*

Poverty-Environment Cluster	Major Poverty-Environment Issues
Ruhengeri, Gisenyi, Byumba, Kibuye, and Busozo within Cyangugu	<ul style="list-style-type: none"> – Deforestation, soil erosion – Landslides (and volcanic eruptions) – Safe drinking water – Population pressure – Small household land units
Gitarama, Gikondo, Butare, Kigali-Ngali	<ul style="list-style-type: none"> – Soil erosion and land degradation – Population pressure – Small household land units
Umutara, Kibungo, Bugesera	<ul style="list-style-type: none"> – Drought – Water scarcity – Decline in pastures – Overstocking – Wildlife-human conflict
Kigali City	<ul style="list-style-type: none"> – Unemployment – Sanitation – Water pollution
<i>Source: GoR/UNDP Poverty-environment indicators and policy options for Rwanda, 2005</i>	

1.3 European Community Development Support

1.3.1 The 9th EC Development Fund (9th EDF)

The European Community currently lists its areas of development throughout the world as pertaining to (i) sustainable economic and social development of developing countries, and particularly the most underprivileged among them; (ii) harmonious and progressive integration of developing countries into the world economy; and (iii) fight against poverty in developing countries.

The Cotonou Agreement (2000) set the broad agendas and approaches for EC development programs in 77 African, Caribbean, and Pacific (ACP) countries, including Rwanda. The agreement, signed by all parties in June 2000, is built on five pillars to ensure sustainable growth. These are:

- (i) A comprehensive political dimension;
- (ii) Participatory approaches – Democratic space;
- (iii) A strengthened focus on poverty reduction integrating environmental sustainability;
- (iv) A new framework for economic and trade cooperation; and
- (v) A reform of financial cooperation.

The agreement strengthened programs of poverty reduction to explicitly have the goal of poverty eradication. In the area of development and poverty reduction, the EC recognize the importance of environment sustainability in development by including it as one of the three horizontal or “cross-cutting” themes. The other two horizontal themes include gender equality and institutional development and capacity building. Realization of the horizontal environmental sustainability theme has proved difficult, as stated by the ACP-EC joint assembly in their report “Sustainable management and conservation of natural resources in ACP countries in the context of the 9th EDF Aid Programming” of 2003. The report recommends EC development programs to further consider environmental aspects under the purview of poverty reduction.

1.3.2 EC Development Support in Rwanda

The European Community has a long history of supporting foreign development, and has been a major supporter of GoR initiatives in Rwanda since 1994, initially offering 114 million Euros to support humanitarian and rehabilitation efforts. The European Community, through the 8th EDF, supported the 2002 national census, good governance, judicial, and infrastructural reforms.

The European Community in Rwanda has now moved into the 9th EDF focusing largely on rural development and macro-economic support. The 9th EDF for Rwanda includes two envelopes of funding. The first envelope, “Envelope A,” provides 124 million Euros for rural development and macro-economic support. Included in the projects for rural development is a project entitled “Decentralized Programme for Rural Poverty

Reduction (DPRPR)". This project aims to give financial support directly to communities to initiate and implement their own community development projects. The total budget of the program is 36.5 million Euros to finance the project over 4 years. Ten million Euros will be used to finance a countrywide support program directly to the 9,176 cellules, the most local level of government (*Ubudehe*). Most of the remaining budget will go to support sector and district development priorities within the impoverished southeastern region of Rwanda in Kigali-Ngali and Kibungo Provinces. The Common Development Fund (CDF), a funding facility established under the Ministry of Local Government, Good Governance, Community Development, and Social Affairs (MINALOC), will receive funds to distribute to each district directly for project or budget support. In addition to the monetary support to the cellules, sectors, and districts, the DPRPR will provide a Project Management Unit (PMU) to assist MINALOC with the implementation of the program, with the local authorities taking the lead in subsequent programs.

The purpose of this study, therefore, is to evaluate and determine the extent to which poverty–environment considerations are being addressed in the implementation of EC Development Programme especially DPRPR in Kibungo Province. The outcome of the study and lessons learned will inform the recommendations to EC Rwanda Delegation and Brussels on how to mainstream environmental sustainability in the current programme as well as the subsequent development assistance (i.e., 10th EDF).

1.4 Objectives of the Study

1.4.1 Overall Objective

The overall objective of this research is to enhance the impact of the EC's development assistance on poverty through increased attention to the role of the environment in the livelihoods of the rural poor in its country development strategies. This research seeks to provide to the EC and Rwanda recommendations to address poverty-environmental weaknesses in current Country Strategy Paper (CSP) and to improve environmental streamlining in EC development strategies through its six focus areas.

1.4.2 Specific Objectives of the Study

The specific objectives for this case study are to:

- 1) Identify economic, social, and policy opportunities/constraints to the integration of environment into the promotion, selection, and implementation of poverty-reduction projects funded by the European Community through the CDF.
- 2) Discuss the opportunities/constraints/interventions in the current political context of the decentralization and poverty-reduction strategies of the EC and the Government of Rwanda.
- 3) Make recommendations for interventions to mainstreaming environment into poverty-reduction projects funded by the European Community.

2.0 Methodology and Approaches

2.1 Site selection and description

2.1.1 Site selection

In order to identify the study area, it was necessary to establish criteria that will ensure objectivity. Thus, site selection of the study area was based on the following criteria:

- (i) Area with on-going or proposed EC projects;
- (ii) Diversity of environmental features:
 - (a) Environmental issues,
 - (b) Topography and environmental features; and
- (iii) Diversity of other features:
 - (a) Level of impoverishment;
 - (b) Proximity to major road;
 - (c) Level of production of cash crops.

2.1.2 Description of study area

2.1.2.1 Kibungo Province

The Province of Kibungo (Figure 1) is largely characterized by (i) semi-arid savanna vegetation; (ii) a climate with periods of prolonged drought with erratic and insufficient rain; and (iii) a hydric network composed of several lakes and the Akagera River.



Figure 1. Kibungo Province is located in southeast Rwanda and borders Tanzania to the east and Burundi to the south.

Kibungo province is experiencing over-grazing, desertification, soil erosion, and reduction of water availability and quality. There are many vulnerable wetlands and lakes throughout Kibungo, which are important part of the Akagera basin. In addition, Akagera National Park (ANP) partially extends into Kibungo. Prior to 1997, large portions of Kibungo were formerly within ANP, and have under the Resettlement Programme for settling returning refugees been settled. In 1997 the area of ANP was reduced to 1,081 km², a reduction to approximately one-third the original size of ANP. It was the 1993 'Arusha Accord' that had identified ANP as a potential area to resettle refugees as it was identified that it was necessary for returning Rwandan refugees would be resettled into open, unsettled areas of Rwanda. The genocide made the resettlement even more urgent. This creates a greater challenge of balancing the conservation and development in the area.

The EC funded DPRPR program will focus on the two provinces of Kigali-Ngali and Kibungo. Kibungo Province was chosen as a case study for this research because of the diversity of environmental issues facing the province.

2.1.2.2 Districts

Using the same criteria for the selection of Kibungo Province, the research team selected three districts within Kibungo Province as a focus for the study. The districts selected are Cyarubare, Rusumo, and Mirenge each of which have their unique characteristics as described in Table 2.

Table 2. Reasons for selecting Cyarubare, Rusumo, and Mirenge Districts

District	Reason for Selection
Cyarubare	Borders Akagera National Park Issues of drought
Rusumo	Presence of major trans-boundary road Many wetlands along border with Burundi Presence of large banana plantations Current land conflicts
Mirenge	Extensive lake and marshland habitats Pressure from returning refugees from Burundi

Within each district, three administrative sectors will be visited. Selection of sectors within each district was made with help of administrators at the district level; based on the same criteria listed above. The sectors selected are as shown in Table 3.

Table 3. *List of sectors in each of the three chosen districts in Kibungo. The sectors in bold-italics were selected for study.*

Cyarubare	Rusumo	Mirenge
Bisenga	Gahara	Gatare
Cyabajwa	Gashongora	Gituza
Gishanda	Gatore	Kabirizi
<i>Murama</i>	Kibara	Kagashi
Kabare II	<i>Kigarama</i>	Karembo
<i>Rwinkwavu</i>	Kigina	Kibare
Shyanda	<i>Kirehe</i>	Zaza
Ndego I	Mwaza	Kukabuye
<i>Ndego II</i>	<i>Nyamugali</i>	Kirambo
		<i>Mbuye</i>
		Mabuga
		Murwa
		Ngoma
		<i>Nyange</i>
		Nshiri
		Rubago
		Rukumberi
		<i>Ruyema</i>
		Sangaza
		Shori
		Shywa

2.2 Methods and Approaches

2.2.1 Methods

2.2.1.1 WWF-MPO methodology on Multi-level Poverty-Environment Analyses

Multi-level poverty-environment analyses was undertaken to gain a more detailed understanding of structural impediments that reinforce (or anticipated to reinforce) rural poverty and environmental degradation in the study area. Assessment of poverty-environment dynamics was done at the local level linking to meso and macro levels (Reed 2004).

2.2.1.2 FAO's Handbook for the Socio-Economic and Gender Analysis Program (SEAGA)

The SEAGA Handbooks of the Food and Agriculture Organization (FAO) of the United Nations provides a framework for analyses at macro-meso-micro levels (FAO 2001a,b,c). It is people-centered with emphasis on understanding how development policies and programmes are likely to affect the economic activities and social relationships among different group of people in local communities. However, the focus is on the need to identify women's and men's needs and priorities in a participatory manner in order to promote equitable, efficient and sustainable development.

2.2.2 Approaches

2.2.2.1 Assessments and Review of Documents

At the local level, the consultancy team examined specific linkages between poverty and environment. They determined the impacts of environmental degradation in terms of household and community economic and social consequences with specific reference to impacts likely to arise with the implementation of EC supported activities in the area.

2.2.2.2 Questionnaires and Focused Group Interviews

The consultancy team conducted focus groups/interviews at all relevant levels: micro (community), meso (sector, district, and province), and national level. At the community level, the consultancy team conducted focus groups and used a questionnaire to guide the discussions. The focus groups consisted of approximately 20-30 people including men, women, and youth. The focus groups began at approximately 10:00 am. The first 30 minutes was used to make introductions, to explain the exercise, and to discuss why their responses are important. The next 15 minutes consisted of encouraging a general discussion before beginning the questionnaires. During this time period the people were getting comfortable with the team and comfortable as a group. Then questionnaires were used as a basis for discussion (Annex 3). One member of the team took notes concerning the responses. Total time of focus groups was about 2.5 hours.



Figure 2. Community focus group in Sector Ndego II, Cyarubare District.

Policy and institutional questions were asked to separate groups of men and women (the same group was broken into two groups toward the end of the session). The two groups were asked the same questions to see if men and women respond differently as

to how they interact with decision makers and if they feel their issues are being adequately taken into consideration.



Figure 3. *Glenn and Christine facilitate a group of women in Ruyema Sector of Mirenge District.*

Sector, district, province, and national level questionnaires were asked in an interview format to relevant government representatives or members of organizations or institutions. Methods also included review and analysis of relevant project documents, national laws, and national policies.

3.0 Results and Discussion

3.1 Local level

3.1.1 Key Environmental and Natural Resources and Uses

3.1.1.1 Key Environmental and Natural Resources

Kibungo Province in general, and more importantly the nine administrative sectors covered by this study, the following environment and natural resources were identified to be of critical importance to the local people. These are:

- Land;
- Forests;
- Water resources; and
- Subsoils.

3.1.1.2 Uses of Environmental and Natural Resources

Environment and natural resources form the resource base upon which the majority of the rural poor in Rwanda, who account for more than 90% of the population, depend on for their livelihood. As a consequence, environmental degradation would expose them to increased poverty and vulnerability to natural disasters especially land slides, floods and drought. In order to appreciate how communities use and relate to these natural resources, a brief analysis on this relationship is necessary.

(1) Land: Agricultural crop production and livestock rearing

Agriculture and livestock production is the mainstay activity of the rural people in Kibungo Province. Much of the agricultural activity is subsistence farming with very little or no fertilizer used. The main food crops planted are banana, beans, cassava, pineapple and rice. Increasingly wetlands are being used for rice production by associations and cooperatives. Much of the food crop produced is for domestic consumption with the surplus being sold as a source of income. In addition to food crops very few households have their land under cash crop such as coffee. Because of the poor agricultural practices, land productivity is generally low with increasing land degradation due to poor farming practices and soil erosion. In addition to agricultural production, the inhabitants of Cyarubare, Rusumo and Mirenge also keep livestock especially cattle and goats to supplement their income. Incidentally, the majority of them keep traditional livestock with very few of them practicing improved livestock production practices such as zero grazing. Because of the high number of livestock and the semi-arid, arid nature of the area, keeping of livestock has had negative impact on the environment especially due to overgrazing and soil erosion. The photo below shows goats kept in zero grazing enclosures by a farmer in sector of Nyange, Mirenge District.



Figure 4. Goat pasture in Cyarubare.

(2) *Water Resources: Fishing and transportation in lakes*

Kibungo province has a large share of wetlands and lakes in Rwanda. These wetlands and lakes, especially Lakes Ihema and Nasho (Cyarubare District) and Mugesera and Sake (Mirenge District) are essential for the livelihoods of the local inhabitants. For example, besides being the main water sources for domestic and other uses, they provide an important fishery resource for subsistence and commercial fishing. The people living around the lake fish using dugout canoes. The most common harvested species are *Tilapia*, *Orochromys*, and *Clarias*. Regulation of the fishery resource is done by cooperatives authorized the respective local authorities and the relevant ministry. Unfortunately, the cooperatives are not all inclusive. For example, the local community living around Lake Ihema is marginalized as they lack appropriate fishing gear and cannot afford to buy the fish. All the fish caught is ferried to Kigali by the cooperative where it fetches more profit. Similarly, the ferry transport on Lake Mugesera has stopped operating thus affecting negatively the lives of the inhabitants, as they cannot transport their goods for trade.

(3) *Forests: Construction and energy for cooking*

The majority of Rwandans rely on land and forest resources for the construction of their houses. In Kibungo Province, especially in the districts along the borders of Tanzania and Burundi, resettlements for internally displaced people in the 1960s and for returning refugees after 1994 genocide, the exploitation of any existing forest resources has been massive and unregulated. Resettlements have given to increased pressure on forest resources. These include:

- use of poles and timber for construction and furniture, including for public utilities such as schools and hospitals;

- conversion of forest areas for human settlement and agricultural production; and
- fuelwood (firewood and charcoal) as a source of energy for domestic purposes and as sources of income.

(4) *Mines and Minerals: Exploitation of mines and quarries*

Mining is a limited economic activity in Kibungo Province. Mining is done in:

- *Cyarubare District*: cassitérite, sand, and gravel in Rwinkwavu;
- *Rusumo District*: wolfram in Nyarusange, gravel and quarry stone in Rwanteru, clay in Cyunuzi, Rwikubo and Kigabiro; and
- *Mirenge District*: Kaolin in Mbuye, coltan in Zaza, stones in Sholi and Karemba, sand and gravel in Zaza, Nshili and Rubago.

However, the exploitation of the mines and quarries are allowed only to accepted societies or cooperatives. It is the case of several SME that exploit cassitérite in Rwinkwavu and AMEKI COLOR that extract kaolin on a big scale kaolin in the former mines of REDEMI in the Sector of Mbuye (Mirenge District). These two activities in Rwinkwavu and in Mbuye employ some people in these localities with positive impact on the incomes of the local people. However, the negative impact arises due to displacement through granting of concessions over land to societies or cooperatives.

3.1.2 Poverty-environment linkages

In Kibungo Province, natural resources form the resource base upon which rural development occurs. Communities visited are very conscious of this and express it thus: *"the natural resources that constitute our natural environment are the only sources of means for us to fight against our poverty."* For example, in the three districts of Cyarubare, Rusumo and Mirenge, citizens practice subsistence agricultural production for their socioeconomic needs, although there are also few plantations for high value crops such as coffee as is the case in Nshili.

Thus, the interaction of the poverty-environment dynamic with the different actors in Kibungo Province can be schematized as follows:

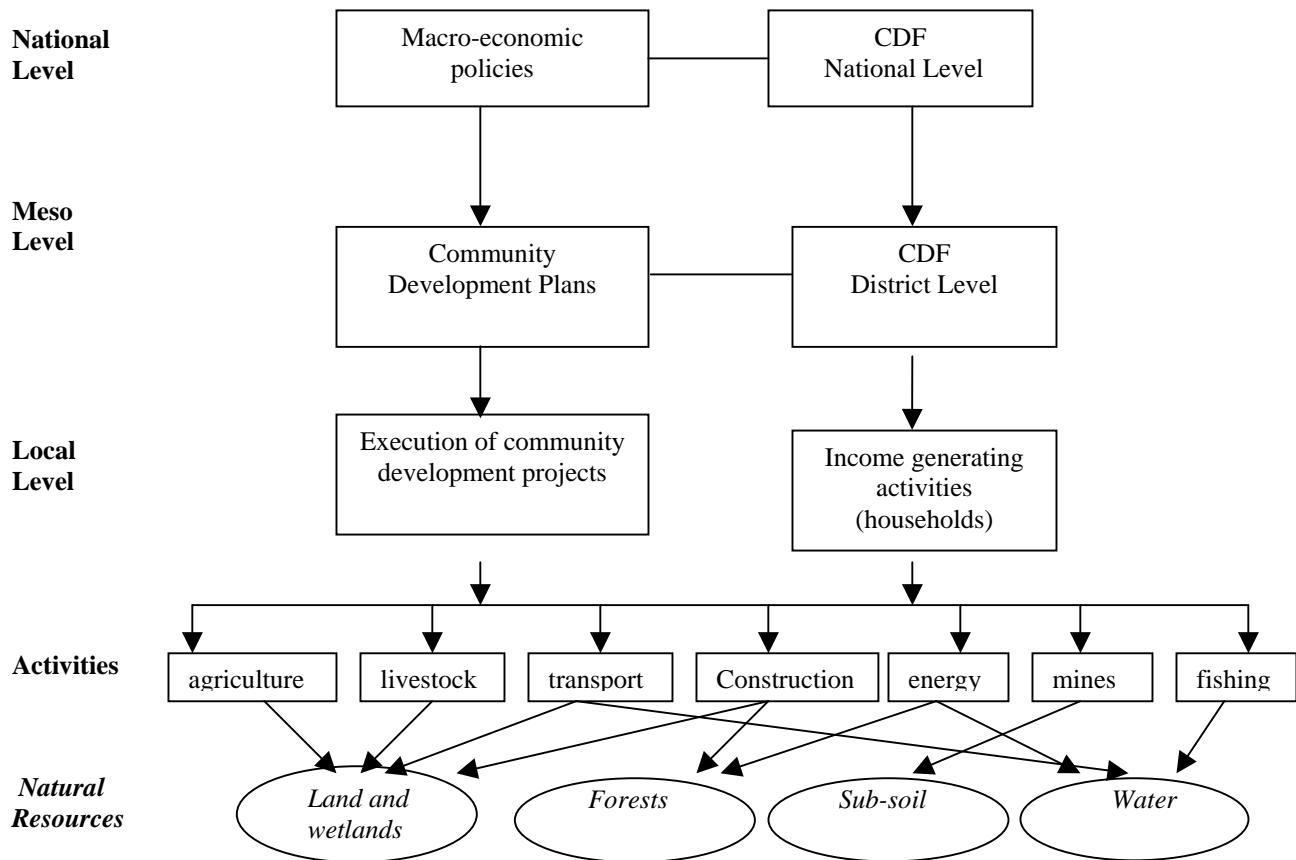


Figure 5. *Diagram of poverty-environment interactions at three levels.*

There is no doubt that if Rwanda hopes to reduce poverty among its people it must address the question of effective management of the limited environment and natural resources. This is premised on the fact that the majority of her people depend upon these resources for their livelihood. To illustrate this point the table below (Table 4) shows the quantitative data that reflect the state of relationship between poverty and environment through two main socioeconomic factors, namely, (i) population pressure; and (ii) strong dependence of the natural resources. These factors are generally interdependent and the demographic, economic, and social phenomena have some interactions with natural resources. A number of lessons arise from this situation: (a) the environmental issues are intimately and greatly bound to the socioeconomic reality of the life of poor families in farming communities; and (b) their means of subsistence comes from the primary exploitation of natural resources, especially hillsides and reclamation of wetlands and forest areas. Table 4 illustrates the poverty-environment relationships.

Table 4. *Principal socio-economic characteristics of the poverty-environment dynamic.*

	Cyarubare	Rusumo	Mirenge	KIBUNGO
1) Demographic pressure:				
Total population	72,892	157,338	144,944	702,248
Total land area (km ²)	406	535	391	2,977
Population density (people/km ²)	180	294	371	236
Annual population growth	Nd	Nd	Nd	4.6%
Percentage of people in cities or <i>imidugudus</i> (grouped housing)	95%	97%	96%	91.8%
2) Agricultural-Pastoral Pressure:				
Exploitable family plot (ha)	1	0.5	0.6	1
Proportion of population agriculturalists or pastoralists	98 %	95%	97%	Nd
Total area of wetlands (ha)	211	670	1,262	Nd
Number of heads of cattle	4,560	10,157	3,596	60,296
Number of goats	8,992	8,479	11,188	117,872
3) Pressure on forest resource :				
Area of woodlands (ha)	Nd	507	596	3,585
Percentage of surface area in woodlands	Nd	0.8%	1.5%	Nd
Homes constructed of tree poles (external walls)				85.5%
Utilization of fuelwood for cooking	99%	97%	95%	96%
4) Indicators of water access:				
Annual rainfall				900 mm
Percentage of population with access to tap water	Nd	32%	15%	28%
<i>Source : Compilation of data from Community Development Plans from the three districts and the Strategic Plan for the Province of Kibungo.</i>				

The impact of human pressure on the natural environment is, especially in this post-war and genocide period, catastrophic, resulting in scarcity and degradation of resources that are considered “the source of life.” One can especially mention (i) the drastic reduction of household land parcels and the loss of the fertility of arable land; (ii) the quasi-disappearance of forest resources and the lack of reforestation; and (iii) increased drought, drainage of lakes and non-managed wetlands, and the beginning of a desertification process in some semi-arid zones of this province.

Unless the situation is addressed and environmental sustainability of these areas through appropriate policies, programmes and projects, in the long term, the vulnerable communities are likely to suffer far-reaching consequences as a result of environmental degradation. Some of the consequences may relate to (i) food insecurity due to poor soils; (ii) vulnerability to natural disasters especially landslides, floods and drought; and (iii) social insecurity due to conflicts over the limited resources among others.

Integration of poverty-environment aspects in the communal projects of development and other local actions is of critical importance and priority if the communities are to continue eking their livelihood presently and in the future. It is evident that the EC Community Support Programme which is based on the 6 national priorities as outlined in the PRSP 1, which does not adequately address poverty environment dynamics, fails to mainstream poverty –environment considerations. With Rwanda striving to achieve sustainable development which is founded on sound principles especially economic viability, ecologically rational and socially acceptable, it is imperative that the EC Programme Support incorporates these values in the implementation of DPRPR.

3.1.3 Impact Manifestations

3.1.3.1 Environmental impacts

Human activities to meet their social and economic demands are causing negative impacts on the environment and natural resources in the three districts of Cyarubare, Rusumo and Mirenge the focus of this study. This is exacerbated by the increasing population (due to resettlement and population growth) pressure the limited natural resources. This is best illustrated by the table below (Table 5).

Table 5. *Indicators of environmental impacts.*

Natural resources	Type of activity	Indicators of impact
1. Land and Wetlands	<ul style="list-style-type: none"> – agriculture – livestock – home construction – construction 	<ul style="list-style-type: none"> – loss of biological diversity – drying up of wetlands – erosion – land degradation – loss of fertility
2. Water	<ul style="list-style-type: none"> – capture of potable water – fishing – transport of goods and people on lakes 	<ul style="list-style-type: none"> – erosion of lake shores – depletion of lake resources – water pollution
3. Forests	<ul style="list-style-type: none"> – home construction – fuelwood – tourism (park) 	<ul style="list-style-type: none"> – massive deforestation and effects of drought – depletion of biological diversity
4 .Subsoils	<ul style="list-style-type: none"> – exploitation of mines and quarries 	<ul style="list-style-type: none"> – erosion – soil degradation

(1) *The reduction and deterioration of agro-pastoral land:* The fluctuation in rainfall patterns, poor subsistence agricultural production systems, reduction in parcel size due to increasing population pressure, as well as overgrazing are the major factors that have contributed to the degradation of agro-pastoral lands. Agro-pastoral land degradation was clearly evident on a hill in Rusumo District (Cell Rowed I - Nyamugali sector): one area was currently in full regeneration of tall herbaceous plants and

seedlings of eucalyptus on 40 ha and protected from human or livestock presence. It was completely denuded after one year when livestock were allowed to overgraze it. The lesson drawn is that raising of livestock in enclosures constitutes one of the major solutions to environmental problems related to overgrazing.



Figure 6. Protected pasture (left) and unprotected pasture (right).

(2) *Massive deforestation:* Only about 1% of the surface area of the districts is covered with woodlots. The galley forests which previously covered the valleys in Kibungo Province have practically disappeared due to conversion of forest lands for human settlement and agriculture. Charcoal burning has exacerbated the problem (Kibungo Province 2004). As a consequence, Kibungo Province is most affected by deforestation in comparison with other provinces of the country. Indeed, national resettlement programs were especially concentrated in this province: 91.8% of the population in Kibungo Province lives in grouped settlements, which is much higher than the national average percentage of 18.8%. The reclamation of the forests for human settlement, agricultural land and construction materials accounts for the devastation of forestry resources in the province. The almost disappearance of the galley forests "udushyamba tw'imihaga n'imikenke" of the east of the country (present provinces of Kibungo and Umutara) that started at the time of the 1970s and 1980s reached its highest peak of deforestation of about 83% in 2003. Table 6 below illustrates the trend of deforestation over the years.

Table 6. Rate of deforestation of gallery forests in Kibungo and Umutara Provinces (outside of Akagera National Park).

Year	1970	1980	1990	1996	1999	2000	2003
Area (ha)	150.000	90.000	55.000	30.000	25.000	25.000	25.000
Annual Variation	-	- 40%	- 39%	- 45%	- 17%	0%	0%
Cumulative variation	-	- 40%	- 63%	- 80%	- 83%	- 83%	- 83%

Source : Information provided by the Directorate of Forestry

(3) *Insufficient rain and reclamation of wetlands:* Long periods of drought are observed in this part of the country occurring over the past 5 years. Insufficient rain due

to deforestation and reclamation of wetlands (Cyohoha Nord completely, Matongo in progress) have worsened the situation in this area. This is further exacerbated by year-round, intensive agriculture and overgrazing, which have accelerated environmental degradation. Table 7 shows the rainfall patterns between 1970 -1993. No records are available between 1994 to date.

Table 7. *Measured precipitation at the Rwinkwavu weather station over time.*

Year	1971-1980	1981-1990	1991	1992	1993
Average (mm)	74.8	72	61	41	38
Variation (%)	-	3.7	15.3	32.8	7.3

Source : Rwandan Meteorological Service

3.1.3.2 Economic impacts

The majority of the Rwandan population live in rural areas and practice subsistence agriculture. Because of the increased pressure on the environment and natural resources due to many factors, including resettlement and population growth, there is considerable evidence of environmental degradation. Poverty levels are likely to remain high in these areas as a consequence. The economic impact of the deterioration of the environment and the ever-increasing deficit of natural resources was well articulated by a group of elders in Rwinkwavu Sector as:

“This formerly prosperous region attracted us from several surrounding regions about thirty years ago. Now, the only means we have is to emigrate from this former banana growing region: the natural resources that helped us live have dried up (land and minerals, forests, rainwater, etc..) and we run the risk to find ourselves in an urbanized setting without the possibility to exercise some agro-pastoral activities as in the past.”

This is further elaborated below.

(1) *Land*: More than 95% of the population in this province live from agricultural activity and rearing of livestock on parcels of land that do not exceed 1 ha. This is because the area is densely populated, averaging 236 people per km². The older people of the Sector Nyamugali (Rusumo District) explain the present small size of agricultural parcels while comparing to the past: the domestic agricultural exploitation was about 3 ha during the 1970s, “the extent of the parcel depended on your ability to work on the land”; it was reduced to about 2 ha in the beginning of the 1980s “many sold a piece of their parcels to newcomers”; it was further reduced to 1 ha since 1997 “*haje isaranganya*”, which is Kinyarwanda for the forced partitioning and sharing of land to allow for resettlement of returning refugees. This is best captured in the Strategic Plan of the Province of Kibungo which highlights the adaptive strategies undertaken by the local population. In the Plan it is stated that *in 1990, about 69% of the available land was under cultivation as compared to 84% in 2000*. As a consequence less and less land is now available for pasture and for provision of ecosystem services such as forests and wetlands. Bearing in mind that this area receives less rain, it then follows

that increased agricultural production in place of pasture, forests and wetlands has increased the rate of environmental degradation with negative impacts on the incomes of the rural poor. In order to diversify their incomes, the inhabitants have had to shift to other activities. For example, rearing of goats has become an important activity among the people living in the Sector of Murama of Cyarubare District to supplement the meager income generated from agricultural production. In the Sector of Kirehe in Rusumo District, some people are adopting zero grazing (1 to 2 heads of cattle) as additional source of income. Thus, it can be concluded that cultivation of small parcels, increased soil erosion and destruction of ecosystems that provide ecosystem services especially forests and wetlands has had negative impacts the livelihoods of the inhabitants of Kibungo Province and the national economy at large.

(2) *Forests:* Deforestation has also impacted negatively the livelihoods of the people of Kibungo Province as it has led to scarcity and unavailability of forest-related construction materials and fuelwood. For example, about 99% of the people in Cyarubare District depend on fuelwood as their source energy for cooking. Due to the unavailability of this resource within close proximity, the inhabitants of the Murama Sector now walk more than 10 kilometers to look for firewood for domestic use. On the average, the price for a bundle of firewood (about ten pieces of cleft wood) costs about 200 FRw (0.35 USD). This is equivalent to one day's wage. The collapse of the brick making industry is also a consequence of the unavailability of fuelwood to use in the kilns. This has adversely affected the income of the people living especially in the Rusumo and Mirenge Districts, notwithstanding its implication on the construction industry at the national level.

(3) *Water:* The frequent prolonged periods of drought in this region have a very negative impact on agricultural activity and the satisfaction of basic water needs of the people. Only 15% of the population of Mirenge District has access to tap water, generally from public taps (District of Mirenge 2004). The socioeconomic costs associated with this are enormous. These manifest themselves in the form of (a) much important time dedicated to the search of water instead of cultivating the fields (three hours for only one jerrican of water in several sectors of Rusumo District); (b) absenteeism of children in school; (c) price to purchase one 25-liter jerrican of water (50 to 100 FRw or 0.08 to 0.13 USD) in several small centers of the districts of Rusumo and Mirenge); and (d) increased water-borne diseases and associated health costs to the household and the country at large.

3.1.3.3 Social impacts

The small size of parcels of land available for settlement as well as for agricultural production prompted the GoR to introduce *imidugudu* resettlement system. *Imidugudu* type of settlement enables communities to settle in one place and leave much of the land for communal use. The houses are constructed together and land plots are given to each family in communal agricultural lands that many times exist separate from the houses. It enhances equitable distribution of basic infrastructures such as schools, hospitals, markets, drinking water, etc. Furthermore, due to the insecurity following the

war and genocide, the regrouping of communities into *imidugudu* improves security and protection of vulnerable groups.

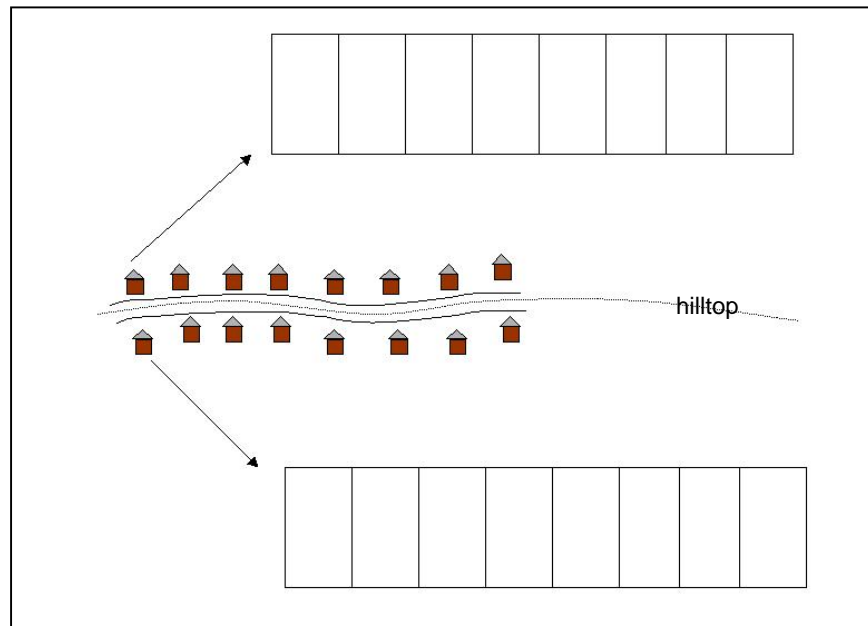


Figure 7. Diagram of an *imidugudu* found in Murama Sector of Cyarubare District

But the resettlement of the population in villages and *imidugudu* has had evident impact on the environment. These include (i) uncontrolled cutting of trees for construction of villages with far reaching consequences on the resources and soaring demand for charcoal and other uses; and (ii) remoteness of the communal agricultural lands has led to increased production costs due to man hours covered before reaching the fields, theft of crops and destruction of crops by animals.

More specifically, the following social impacts were observed during the study.

(1) **Land degradation:** The main social impacts relate to increased pressure on land manifesting itself in increased poverty levels and the deterioration of the social wellbeing of households and communities. These changes have occurred in various stages. The stages are (i) reclamation of virgin and fertile lands by the initial occupants; (ii) successive migrations of the populations from the overcrowded regions (Gisenyi, Ruhengeri, Butare mainly) in the years 1975-1980 increased the population now demanding a share of the land; and (iii) resettlement of refugees from neighboring countries following the war and genocide of 1994. Their return to Rwanda for the first wave in 1994 and in 1996 for the second wave caused a social phenomenon of fundamental importance to the environment – the sharing of land and the construction of many *imidugudu*.

The land not only has deteriorated following this pressure, but also it has been progressively sub-divided and reduced in size following the increase of the population. According to the census of 2002, the density of the population in the three districts of

Cyarubare, Rusumo and Mirenge was 165, 247 and 243 people per km² and with population growth of about 4.6% in Kibungo Province (National Census Service 2002). This portends serious problems. The small area of arable land in relation to the population has resulted in a reduction of the parcel size per household now averaging 1 ha as compared to an average of previous 3 ha per household in 1990. This has contributed to further impoverishment of the rural poor and vulnerable groups.

(2) *Deforestation*: Deforestation as a result of forest conversions for resettlement and unsustainable use of forest resources account for the environmental degradation experienced in the area. This has led to scarcity of resources with far-reaching consequences on livelihoods. Some of the social impacts manifest themselves in the form of (i) scarce and unaffordable fuelwood; (ii) loss of income from forest products; and (iii) increased amount of time dedicated to gathering twigs or other plants as substitution for firewood, at the expense of agricultural and other income activities. The marginalize groups, especially women and children, are the most affected, depriving them an opportunity to engage in incoming generating activities and regular attendance at school, respectively. Table 8 shows household division of labor.

Table 8. Household division of labor. Activities in italics are occasionally done.

Men	Women	Children	
		Boys	Girls
Construction	Cultivation	Livestock grazing	Cooking
Livestock grazing	Cooking	Collecting water	Cleaning
<i>Cultivation</i>	Cleaning	Gathering firewood	Collecting water
	Collecting water		Gathering firewood
	Gathering firewood		

To cope up with the issue of scarcity of fuelwood, a number of households are reducing fuelwood consumption by (i) adopting the use of the "improved stoves" that consume distinctly less quantity of wood (Figure 8); and (ii) use various plants or remnants of plants such as the dry banana leaves and papyrus from the wetlands.



Figure 8. Home-made improved cooking stove in Nyamugali Sector in Rusumo District.

(3) *Water, wetlands, and lakes:* The problem of water is acute in this region because of the insufficient rainfall, frequent droughts and degradation and reclamation of wetlands and other water sources. The local communities interviewed view the problem as worsening in recent years due to massive deforestation. These effects have put a big strain on the local people as they have to adapt to harsh conditions of the area. Some of the social impacts may be seen in (i) high cost of clean drinkable water. For example, on average a 25-liter jerrican costs between 50 – 100 FRw; (ii) women and children cover long distances by foot, in excess of 10 km, in search of clean water. This leaves them with little time to attend to other chores and school, respectively; and (iii) water-borne related diseases associated with degraded water sources with high health costs to the family and the country at large. To cope up with the situation the communities have developed various strategies. The most common is harvesting and storage of rainwater. For example, in Kirehe a young man demonstrated how a constructed a reservoir that holds up to 2 m³ of water. In addition, in order to assist women and children, some men now use bicycles (if available) to carry jerricans of water.



Figure 9. Home-made water reservoir in Kirehe Sector in Rusumo District.

In addition to water scarcity, degradation of water bodies especially wetlands and lakes have contributed to loss of biodiversity and their habitats. This has increased human-wildlife conflicts. For example, some wetlands and lakes in Matongo, Mirenge District has caused the animals that use these habitats to be displaced, and as a consequence animals such as wild pigs invade and destroy crops. Such stray animals besides causing crop destruction may also cause human injury or even death. Furthermore, loss of wetlands and lakes has also impacted negatively the people of sector Ndego II by high prices for fish products. Fish that is caught in Lake Ihema is so expensive that the merchants do not sell the fish to the local communities; they prefer to sell them in Kigali where they fetch higher prices.

3.1.4 Natural Resources Management and Governance

3.1.4.1 Access and control of natural resources

The ownership of natural resources in Rwanda is vested in the state. It is the state that permits the use and control of such resources by individuals or groups. With the exception of land, environmental resources such as wetlands and lakes are held in common by the state. Use of the resource is allocated according to locally defined practices. Generally, local authorities and community associations and/or cooperatives control the use and management of natural resources at the local level. For example, management of a lake fishery is granted to a fishing association. Only members of the association will be allowed to fish in a given lake subject to fulfilling requirements relating to guidelines and regulations on net mesh size, for example. Regarding wetlands, individuals or groups may seek permission from local government to develop a piece of wetland into rice paddies or farm plots. Such permission is often granted by local government without due consideration of environmental aspects.

Under this arrangement, it is largely men who make the decisions. Yet, women and children are the main users of natural resources but are not consulted or involved in the decision-making processes. However, this was variable among the different sectors visited depending on the strength of the local women's representative and on the acceptance of women's issues by the local authorities. Through focus group discussions with women revealed a different set of priorities from the mixed groups in that they emphasized the environmental issues of a domestic concern alongside more general livelihood constraints. Table 9 below illustrates control of natural resources by different groups.

Table 9. Household control of resources. Resources in italics are occasionally controlled.

Men	Women	Children	
		Boys	Girls
Land	<i>Crops</i>		
Trees	-	-	-
Livestock			
Cash Crops	-	-	-
Money			

3.1.4.2 Community Organizations and Institutions

The basic government administrative subdivision is the cell (approximately 100 households). This group is organized into a cumulative grouping called a sector. Many activities focused on the exploitation of natural resources are organized through community-based associations or cooperatives at the cell or sector level. For example:

- *Wetlands* - the resource belongs to the state, and permission to use the wetlands is only given to local associations, not to individuals. These associations may be informal or formal.

- *Mining and fisheries* - As with wetlands permission to exploit may only be obtained by an association. Unlike wetlands the associations must be legal entities.
- *Afforestation* - In many places, groups (especially youth) are formed around tree nursery projects. These trees are ultimately destined for planting on public lands, private plots or public land allocated to the association to manage.

It is a policy at the national and local level to encourage the formation of community groups in order that they may more efficiently access technical support and finances.

3.1.4.3 Natural Resource Conflict Management

(1) *Sources of conflict:* There are a number of conflicts that arise as a result of control and use of natural resources. Among those highlighted by the various stakeholders during the interviews include:

- *Resettlement:* The redistribution of land after the war and genocide of 1994 was also a source of inter-community conflict due to the fact that people did not or could not resettle on their former property. Also, the “equitable distribution” of land among the entire population provoked some unhappiness among the former occupants who had vast properties (more than 1 ha). Up to now, the conflict is underlying and risks manifesting someday, even if the populations tend to ignore it now.
- *Land subdivision:* The land is the main resource of subsistence of the populations. Parcel size continuously reduces as parents continue to parcel out their land among their children. Until when will this system be possible? This agonizing question summarizes the problems over land resources and explains the origin of conflicts within families over the division of land: between the parents and the children on one hand, and between the children themselves on the other hand.
- *Control of resources:* Men have control over family land. Conflict arises when the man desires to sell the land, sometimes resulting in serious arguments between spouses when the woman does not wish to sell the property. In legal marriages, a wife has an equal right to the land owned by her husband. However, because many couples have not gone through official marriages with the state, it is mainly the women and children who endure the negative effects of this phenomenon in poor communities in Rwanda. Some quarrels are borne from the lack of property rights and/or access to income generated from the sale of a domestic parcel of land.
- *Family/marriage disputes:* It was common in this area for men to marry more than one wife when they move to neighboring regions looking for resources or work. This was the source of conflicts within families; specifically among women and/or their children. In addition, it is not uncommon for young girls (less than 16 years old) to be married to older men, or also married women who are coveted again by other men in the absence of their husbands. This kind of conflict is very frequent in the Kigarama Sector in the District of Rusumo, where one also

notices a strong emigration of men to neighboring Tanzania. The division of labor, in the sector of Mbuye (proximity of Burundi) for example, is not equitable and women cultivate the land in a large proportion to men. In the same sector of Mbuye, the rate of polygamy was higher than in other places visited. Some of these problems are indirectly due to consequences of the genocide because of the existence of many widows.

- *Multiple use conflicts:* Conflict exists between agriculturalists and pastoralists who allow livestock to graze close to or within agricultural fields.
- *Encroachment:* Illegal harvesting of trees in public woodlots (public property of the district).
- *Access to water and other resources:* The lack of drinking water remains one of the major problems in the three districts and the efforts of finding water sometimes generates social conflicts. The rush and fights that occur in the long waiting lines of public water sources sometimes result in physical conflict. For example, a pregnant woman received a blow that led to an abortion in the Sector of Kirehe in the District of Rusumo.

(2) *Mechanisms for conflict management:* At every cellule level there are elected committees that have the authority to reconcile conflicts among individuals before the matter is taken to the jurisdiction of the district. These committees aim to reduce the caseloads that are taken before the courts. The different levels (cells and sectors) have entities that have been put in place to mediate conflict within communities. These committees (men & women) are chosen by the population and charged with mediating minor conflicts (division of land, livestock and pets that destroy a neighbor's crops, men who sell their property without the agreement of their wives, men who abandon their homes, parents who do not send their children to school, and petty thefts). Thus, these committees handle the disputes within their cells or sectors. Traditionally in Rwandan culture when there was litigation between the members of a community, the business was first decided on by the older community members who gave their advice and sometimes even levied penalties to punish the guilty parties. These reconciliation committees at the differential levels have a very important advisory role in mediating conflict that doesn't require formal legal training.

Table 10. *Social aspects linked to natural resources.*

Natural Resource	Indicator of Impact	Social Impacts	Social Conflicts	Strategies of Adaptation
Land	Division of parcels into extremely small sizes and land degradation	<ul style="list-style-type: none"> – Increasing poverty and reduction of social well-being 	<ul style="list-style-type: none"> – problems of inheritance – problems of division of land – problems of redistribution of land – sell of land without spousal approval – conflict between agriculturalists and pastoralists 	<ul style="list-style-type: none"> – emigration to other areas or neighboring countries – utilization of vegetative wastes as fertilize the land – guarding of goats within enclosures
Forests	Massive deforestation and degradation of woodlots	<ul style="list-style-type: none"> – great need for firewood – great need for construction materials 	<ul style="list-style-type: none"> – thieves, or poachers of community forests 	<ul style="list-style-type: none"> – use of improved cooking stoves – utilization of vegetable wastes (papyrus, etc..) – board planks in lieu of tree trunks for the construction of homes

Water	Endemic drought or low water flows from water sources	<ul style="list-style-type: none"> – Elevated cost of water – Important amounts of time spent in search of water (long distances....) – Diseases linked to unclean drinking water 	<ul style="list-style-type: none"> – Fights over public sources of tap water 	<ul style="list-style-type: none"> – capture of rainwater from roofs
Wetlands	Degradation of cultivated wetlands	<ul style="list-style-type: none"> – predatory animals in the lakes in the process of succession to wetlands – difficult access to agriculture in non-managed, or converted wetlands 	<ul style="list-style-type: none"> – discontent among populations without access to agriculture in wetlands 	

3.1.5 EC Supported Interventions/Activities

3.1.5.1 Proposed Activities

Under the EC 9th EDF support to the GoR, there are four focal areas. These are:

- Rural Development: 62 million Euro (50% of Envelope A Budget);
- Macro support: 50 million Euro (40% of Envelope A budget);
- Good Governance/Institutional support: 12 million Euro (10% of Envelope A budget); and
- Additional supplementary support: 62 million Euro (Envelope B).

The following interventions/activities are targeted to be realized with the EC support:

- (i) Modernization of the agricultural sector through increased fertilizer use, dissemination of improved seed and provision of credit;
- (ii) Infrastructure development especially the road network;
- (iii) Macro-economic reforms; and
- (iv) Good Governance/institutional support.

3.1.5.2 Impacts that may occur at the local level

(1) Modernization of Agricultural Sector

- *Increased agricultural production for export and increased food insecurity:* Promotion of cash crops over food crops raises a concern over the increased vulnerability of households to food insecurity. This is an area that is facing frequent droughts. As efforts are put in place to increase agricultural production especially coffee, it is imperative that due consideration be made to ensure corresponding increased production of indigenous food crops to increase food security in the area.
- *Increased environmental degradation and environmental insecurity:* Since emphasis is being placed on increased agricultural production through increased fertilizer use, there is likelihood that both groundwater and surface water will be polluted by agricultural runoff. In addition to fertilizers other sources of pollution may arise from the use of insecticides and herbicides especially in coffee production. This will lead to degradation of river and lake ecosystems creating or exacerbating health problems. The poor are often the first people to suffer the ill effects of pollution because they abstract their water from such water systems especially rivers and lakes. In view of this, the challenge is how to manage agricultural and industrial pollution likely to arise as a result of the investment in agro-industry production.
- *Increased environment/natural resource-related conflict:* Environmental conflict which is already an issue at the local level especially between pastoralists versus farmers, wetland use etc is likely to be increased. The intensification of use of the area for increased agricultural production unless planned through a participatory framework involving all the interested and affected parties may increase resource use conflicts. It is

important that efforts to define appropriate management regimes are supported. Also, it is necessary to establish and support dialogue and management rules between different resource users.

- *Exposure of the rural poor to environmental disasters:* Resource mismanagement and environmental degradation which is likely to occur with these efforts directed towards intensification of agricultural production can exacerbate the frequency and impact of droughts, floods and other natural hazards. With deliberate efforts being made to reclaim wetlands for increased agricultural production, this is likely to increase the vulnerability of the rural poor in Kibungo Province to environmental disasters (“shocks”) as well as to more gradual processes of environmental degradation (“stresses”) as the area is ecologically fragile. Natural disasters are a risk factor, which affect the pace of economic growth and destroy the assets of the poorest segments of the population in affected areas, reducing them to a state of dependency. Natural disasters seriously affect the living conditions of affected populations, and constitute an obstacle to a definite break with certain degrees and patterns of poverty. Therefore, measures aimed at preventing occurrence of such environmental disasters are of the utmost importance.

(2) Infrastructure Development

- *Road Network Construction:* Part of the support is to be directed to infrastructure development especially the road network. Construction of roads if not planned well may contribute to serious environmental degradation especially as a result of soil erosion. Because the current planning has not incorporated environmental considerations, there is a likelihood that the infrastructure construction may generate some environmental impacts which need to be mitigated.

(3) Macro-economic reforms

- *Lack of integration of poverty-environment issues in macroeconomic reforms:* Since the CSP does not have a strong emphasis on the integration of poverty-environment in macro-economic reforms this is likely to undermine the efforts directed at mainstreaming environment in Poverty Reduction Strategy (PRS) and development planning processes. For example, there is lack of poverty-environment indicators to tracking environmental performance upon implementation of the proposed macroeconomic reforms. Furthermore, there is no linkage established between the existing efforts such as those associated with livelihood surveys and poverty-environment dynamics and yet natural resources are the primary source of livelihood of the people of Kibungo Province.
- *Incentives:* Current macro-economic reforms are fundamentally built upon premises of economic growth. Therefore, such reforms do not adequately address environmental issues. For example, economic incentives being set to attract domestic and foreign direct investment are generally skewed against environmental sustainability as they do not make special emphasis on the question of access to environmentally

sound and locally appropriate technology. It is through such qualification as to the type of technologies that the agro-industry will be able to rid itself of obsolete technologies that pollute the environment.

(4) Good Governance and Institutional Support

- *Improving Environmental Governance:* To improve environmental governance in Rwanda, it is imperative that poverty-environment issues need to be integrated into development planning and resource allocation processes. This is necessary in order to forge a broad-based and more coordinated response to poverty-environment challenges, to achieve synergy between diverse interventions across many sectors and levels of action and to ensure that adequate resources are being allocated and effectively targeted.
- *Enhanced District-Level Environmental Planning:* With the decentralization and devolution in Rwanda, planning and implementation is to be done at provincial, district and local levels. Decentralization and local empowerment is not a guarantee for environmental stewardship. While greater local government control may make decision-making more responsive and accountable, this is by no means guaranteed. Local governments can also manage local resources and their development priorities may contribute to environmental degradation. In addition, there is weak environmental management capacity.
- *Inclusion of vulnerable groups especially women and youth:* It is generally assumed that the local community institutions are democratic and all inclusive. The study established that women and youth are still generally marginalized in the decision-making processes, despite efforts for inclusion. Thus, due to the social constraints at the local level it is unlikely that they will be able to effectively participate in identification of priorities and their implementation simply because development assistance has been decentralized to the local level.

3.2 Meso level (Sector>District>Province>National)

3.2.1 Decentralization

3.2.1.1 Conceptual Framework

Decentralization (MINALOC 2001) involves two processes, de-concentration and devolution. De-concentration is the transfer of administration and organization away from central government and into local government units. Devolution is the development of real decision-making and legal power to local government units i.e. to be able to pass by laws about local issues. A significant challenge to effective decentralization is the building of capacity at local government levels (district and below). By capacity building, we mean the development of appropriate structures (organizations) and processes (institutions) for implementation of plans and monitoring of progress as well as the development of human resources (technical capability) to carry out the work

competently. Environmental management is thus a responsibility that needs to be integrated into the decentralized network of government.

3.2.1.2 Organizational Framework and Governance

- *Organizational framework:* The general structural provision within the decentralized framework of government for environmental management is well conceived in a theoretical sense at all levels. The province government has an environmental officer responsible for the coordination and management of province level initiatives. At the District, Sector and Cellule levels persons are identified with specific mandates to look after local level issues to do with the environment (Figure 3).

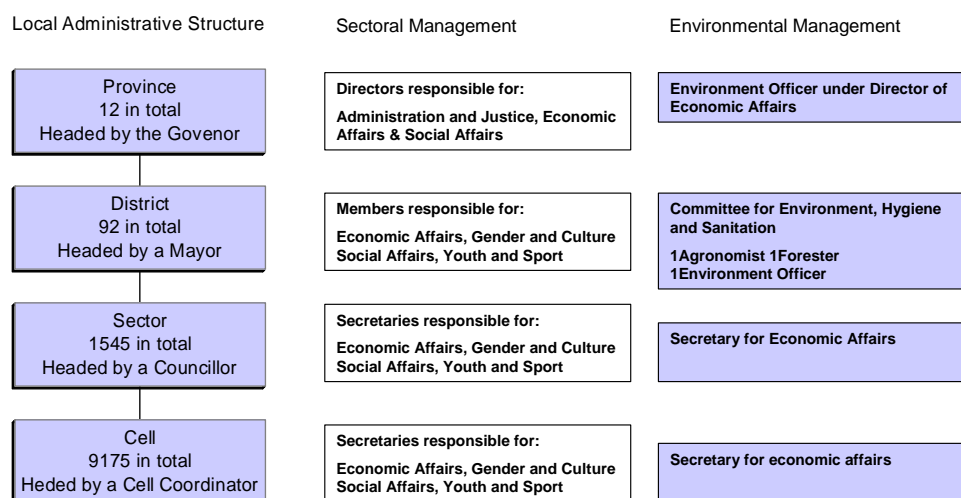


Figure 10. Local administration structure and management.

Although it is expected that every district and province will establish an Environment, Sanitation and Hygiene Committee to address such issues, it was not possible to determine the efficacy of such committee as some of the respondents suggested that environmental issues were being dealt generally. Nonetheless, in one of the districts visited, capacity building for such committee had not been done and therefore even if established would not have the capacity to address effectively the emerging environmental issues.

At the sector and cell levels, there are executive committees that reflect the district level structure and organization. An important management issue is that sector (apart from the executive secretary) and cell leaders do not receive a salary for the work that they do. At the district level, the Community Development Committee's (CDC) role is to use the needs articulated by the sector and cell CDCs to develop the district or community development plan, coordinate the implementation of sector level plans and monitor the implementation of projects by the community and to monitor and evaluate the use of development funds.

At the cell level the CDC is responsible for defining the needs of the local population and prioritizing them. In addition, they are responsible for mobilizing local people in the development of the cell and work on other information and training activities. Importantly, they are responsible for overseeing the use of the cell funds (*Ubudehe*) and report on project implementation to the sector level committee.

- *Mainstreaming of environment:* Environmental policy within the local government administrative structure is subsumed under the banner of 'economic affairs'. As such executive decisions regarding the enforcement and management of environmental regulations at each level are left up to economic affairs personnel with technical advice largely from non-environmental specialists such as agronomists and foresters. The table below sets out the scaling for different posts with responsibilities towards the environment at district and province level.
- *Technical strength and capacity.* In general at district and province levels, insufficient human resources were available to enforce environmental regulations or for the implementation of environmental projects and programs. At the province and district levels there was little human capacity to ensure the strategic management of environmental issues. It was noted that as well as insufficient scaling of personnel there was an uneven deployment of human personnel resources. Districts relied on sector and cellule administrations to implement environmental legislation, such as that of controlling indiscriminate use of trees or agricultural conversion of wetlands. It was further noted that technical advice at the local level on agricultural, forestry and environmental matters was principally obtained from within the decentralized government structure i.e. district agriculture officers. In the case of coffee OCIR-Café was the main source of both advice and agricultural inputs.

Table 11. *Environmental human resources at district and province levels in Kibungo.*

Post	Administrative Level/Location	Theoretical scaling	Actual Personnel
District			
District Agronomist	Cyarubare	1	0.3*
	Rusumo	1	1
	Mirenge	1	2
District Forester	Cyarubare	1	0.3*
	Rusumo	1	1
	Mirenge	1	1
Province			
Province Environment Officer	Kibungo	1	1
Police Forestry Officers	Kibungo	3	3

*Shared among 3 districts

Given the low number of available technicians, community access to technical information is poor. This said technicians do their best to liaise with groups and association representatives in the hope that their information and advice can then be

further distributed to association members. Clearly there are inadequate human resources to really mainstream environmental issues into wider development practice in the local government network.

Box 1. Strengthening of provincial and district capacities to handle environmental matters.

It is worthy noting that there are proposals for each district to have an environment officer as part of the structure of the Rwanda Environment Management Authority (REMA). This would obviously significantly increase the capacity to mainstream environment in development. Although the terms of reference for the district environment officers have not yet been developed, it is envisaged that they will take the lead role in monitoring environmental change; strengthen mainstreaming of environment in district plans, programmes and projects; undertake public education and awareness; and environmental law enforcement at the district level.

- *Role of Non-State Actors, especially associations/cooperatives and NGOs:*

(1) *Role of Associations and Cooperatives:* It was noted that in all sectors associations and cooperatives formed an important contact point for individuals. However the extent to which associations were operational was not investigated. A report on farmer associations in Rwanda (Bingen and Munyankusi 2002) showed that across the country support to farmer associations is not evenly distributed across or within provinces and that they rely on non-governmental organization (NGO) programs and donor projects for support. However associations did look to the district agronomists to answer technical questions and to resolve conflicts. However the agronomists were unable to help with accessing inputs or with market access and credit.

(2) *Role of NGOs:* Across all districts, a number of non-government organizations were seen to be operating. Local communities were positive about the impacts of such projects. It was clear from the community responses that although the NGO interventions were welcome they were not enough to meet the real needs of the local population. Local government at all levels also welcomed the interventions of NGO as they brought invaluable support in bringing the needs of the population in line with the objectives in the district or community development plans. The GTZ decentralization support project in Kibungo provided specific support in the development of Community Development Plans throughout Kibungo Province. In addition, NGOs in general brought valuable technical and managerial expertise in community project management to complement that of the local government. The following table represents the NGOs that the surveyed local communities listed as operating in their sectors. It is not a definitive list of NGO present in the districts.

Table 12. NGOs listed by local communities as operating in their sectors.

District	NGO	Activity
Cyarubare	Lutheran World Federation	Water supply and tree nurseries
	World Food Program	Food Security,
	Project pour la Promotion Petit et Moyene Enterprise Rurale	Artesian handicrafts,
	International Rescue Committee	Rural Housing
Rusumo	Association Rwandaise du Bien Etre Familial	Family Planning
	Lutheran World Federation/	Water supply and tree nurseries
	World Food Program	Food Security, food for work
Mirenge	ACCORD	Agricultural projects and training for women
	Caritas	Food Security
	Urugero	Micro finance, savings and credit

- *Participatory planning and decision-making:* Relations between all levels of local government were observed in general to be very positive. The system of participatory development planning involving local communities to elaborate their needs and combining these priorities in to the district development plans worked. Across all communities, local people felt that the authorities listened to their needs and had a good idea about what needed to be done to improve their livelihoods. Local community priorities /concerns were primarily with drought, access to domestic water (proximity and quality), degradation in soil quality and soil erosion as well as poor housing, hygiene and sanitation. Discussions with district officials also showed a high level of understanding about the immediate needs of the population and the district plans reflect these priorities. Decision-making on environmental issues and their incorporation into sectoral plans is limited. This is especially of concern as environmental management comes under the control of the economic affairs department and tends to be marginalized. In theory, cross-sectoral environmental issues should be addressed by the district environment, sanitation and hygiene committee, however it seems like this committee has not been operationalized in any of the districts that were visited.

- *Public environmental awareness:* The people are clearly aware of the importance of their environment in supporting their livelihoods. What they lack are techniques to reduce the impact and alternatives where appropriate. All groups interviewed demonstrated an intimate awareness of the economic and social costs from environmental degradation. With the enactment of the new environmental law

(MINITERE 2003env.bill), the Ministry of Land, Environment, Forestry, Water, and Mines (MINITERE) is now on an educational campaign to publicize the law and its implications down to the cellule level of government.

3.2.1.3 Community Development Plans and Projects

- *Funding of Community Development Plans and Projects:* The Common Development Fund is an important national structure to help finance the decentralized network of government in a coordinated manner and displays the government commitment to the decentralization process. However, balancing sectoral financial needs at the national level led to a 50% cut in the proposed budget for CDF in the year 2004-2005. This level of financing seems once again to be just sufficient to provide for local government overhead costs with little spare money for projects to address the people's needs.
- *Capacity:* Assuming that finances for projects are available there are two questions that need to be addressed. What is the capacity to facilitate the implementation of projects and what is the capability of the local population to manage them? As was demonstrated earlier with only one agronomist and one forester per district, there are perhaps not enough trained human resources in the districts to manage the implementation of development projects efficiently and effectively. Cell and sector level officials indicated that whilst they were eager to receive funds for local development projects they needed more training in project management and good technical support to ensure effective implementation. It will take time to ensure that sufficient trained personnel at cell and sector levels are available to implement projects.

What is the capability of the local population to manage projects or who should receive training to manage local projects? This is problematic as often the general population will not be sufficiently literate to properly manage accounts and complete necessary documentation. Local elected leaders are often so because they have the required level of literacy to be a candidate. Thus there will be a natural tendency to look towards these individuals for project leadership and management. A weakness of training local government leaders is that they may not continue to be such from one election period to another, so some system of ensuring that they remain available to project completion should be investigated. In addition there was concern at province and district levels that once sector and cell level representatives received training they often used their new skills to move and find work elsewhere, thus the investment in human resource development did not yield local-level benefits. This is further exacerbated by the fact that cell level representatives receive no remuneration for their work and at sector level. It is perhaps not reasonable to expect local level project management to take their responsibilities seriously without some form of compensation for their efforts.

- *Fund Disbursement:* A clear issue at all levels of local government and for the communities was that despite processes being in place to listen to the needs of local people, little action was being taken to ameliorate the problems. At all levels local leadership stated that there was little or no money to do the work that needed to be

done. Discussions at the district level revealed that across all districts budgets over the last two years had been just sufficient to merely finance the operating costs of the administration as well as the capital costs of setting up district and sector administrative infrastructure (office space and recruiting human resources). Clearly this was an important phase in setting up the decentralized network of government, but at the same time there are urgent needs of the population to be addressed; the next phase is obviously geared towards meeting this demand.

- *Mainstreaming of environment in Community Development Plans:* Within the decentralization policy that guides economic development and the reduction of poverty, each district elaborates their own Community Development Plans (CDP) according to a participative approach by their citizens. Within Kibungo, the GTZ Project for Decentralization Support has provided technical and financial assistance to all districts within Kibungo; all districts within Kibungo approved their CDPs in 2004. The CDPs contain a list of proposed community projects to assist with important socioeconomic needs of the districts (Table 13). It is obvious that the execution of these projects may affect the natural environment in the area around the project. Although each project contains a discussion of potential environmental impacts, there is a lack of extensive environmental impact assessment for these projects, with most projects noting that "some activities of the project can harm the environment, measures will be taken for the protection of the environment."

Table 13. *Number of projects, by category, in the Community Development Plans for Cyarubare, Rusumo, and Mirenge.*

Type de projects	Cyarubare	Rusumo	Mirenge
Construction of socio-economic infrastructures	42	25	98
Construction or rehabilitation of roads	9	8	9
Adduction of water	4	4	2
Conversion or wetlands	4	1	5
Increased use of improved breeds of cattle	3	0	0
Increased use of small livestock	0	0	1
Promotion of cash crops	1	0	0
Transformation of food crops	0	0	4
Improved cooking stoves	0	1	0
Other (diverse projects without environmental assessments)	3	16	56
Total	66	55	175

Source : Compilation of data from the CDPs of Cyarubare, Rusumo, and Mirenge Districts.

The analysis of the project proposals identified in the CDPs of the three districts allows us to regroup them in four categories according to the magnitude of potential environmental impacts, as described in the project documents.

Table 14. *Types of proposed projects and their potential impacts on the environment.*

Types of Projects	Potential Environmental Impact
1. Increased use of improved breeds of cattle	Positive impact: Forage plants and shrubs planted for enclosures. Organic fertilizers for agricultural land.
2. Construction or rehabilitation of roads	Activities can harm the environment along the road during the period of construction. Indirect effects because of increased market access could also exist.
3. Processing plants for agricultural goods (pineapples, palm oil, etc ...)	Negative impact: Concentration of organic wastes in processing and some processing consumes large amounts of fuelwood.
4. Construction and equipping of schools, sector offices, and houses for the homeless, etc...	Very negative impact: Projects consume large amounts of wood for construction and fabrication of furniture.

As indicated in Table 14, there are potentially negative environmental impacts from CDP proposed projects. Unfortunately, these impacts may not be mitigated effectively as environment has not been integrated during the project design stage. In addition, guidelines as to how to integrate environment in CDF projects have not been developed. This illustrates how poorly environmental considerations are considered at the district level. A key issue is for the EC/CDF will ensure that environment is mainstreamed at the project design stage and to facilitate a framework for assessing the approved projects with a view of integrating mitigation measures that would reduce the negative impact on the environment.

3.2.2 Consequences of EC Support at the Meso Level

(1) *Operationalization of decentralization:* The EC support to CDF will contribute to the operationalization of the decentralization process where participatory planning and decision-making for all matters relating to rural development. Although the process at the moment has not lived up to expectations, it is anticipated that as more projects are identified and implemented, the strengths, shortcomings and innovative approaches of the programme will manifest themselves which information will be useful in informing subsequent EDFs.

(2) *Improved technical and organizational support:* Decentralization presupposes that the relevant government ministries will decentralize their technical capacities to the local government level where action is expected. Unfortunately, evaluation of the current technical staff establishment and capacities in Kibungo Province portrays a picture of inadequate capacities both in terms of numbers and technical expertise. It is

therefore hoped that the EC support will strengthen the technical and organizational support at the decentralized level.

(3) *Clear guidelines on environmental screening of CDF supported projects:* The EC requires that all projects to be supported under CDF are screened for environmental suitability. Already, the CDF will not fund projects without adequate attention to environmental issues. In order to truly mainstream environment, the project management unit working with such institutions such as REMA to develop clear and specific guidelines on environmental screening for CDF supported projects to guide in the design, implementation and monitoring of the projects.

3.3 Macro level

3.3.1 Macro-economic policies

3.3.1.1 Vision 2020

The protection and management of the environment are among the pillars of Vision 2020. GoR envisages that by 2020, it would have built a nation in which pressures on natural resources, particularly land, water, biomass and biodiversity has significantly been reduced and the process of environmental degradation and pollution would have been reversed. By 2020, key indicators should show that the percentage of households involved in primary agriculture should be reduced to less than 50%; the rate of diseases related to environmental degradation should be reduced by 60%; and the dependence of wood in national energy balance should have been reduced to 50%.

3.3.1.2 Poverty Reduction Strategy Paper (PRSP)

- *As a tool for national priority setting and resource allocation:* Rwanda has initiated policy and budgetary processes at a national level, which have a bearing on the future management and financing of development activities, including those that relate to environment. At a national level, Rwanda has made progress down the path to integrated and participatory budgetary planning through the PRSP 1 (MINECOFIN 2002). Similarly through Public Expenditure Review (PER) it is possible to establish the level of disbursement of funds. GoR has commenced preparations for PRSP II.

- *Ensures cross-sectoral synergies:* The PRSP provides the inter-ministerial platform for policy coordination across all sectors. As such, it is the fundamental tool to mainstream environmental issues in other sector policies. Currently, the Ministry of Finance and Economic Planning (MINECOFIN) oversees the coordination of PRSP M&E system. This is done in conjunction with its stakeholders by issuing guidelines and preparing consolidated reports on macroeconomic and growth policies, annual budget execution and annual PRS implementation progress report. The Department of Statistics within MINECOFIN is equally responsible for the co-ordination of surveys and the standardization of data from different sources. The statistics department is being reformed into the Rwandan National Institute for Statistics (RNIS) and the legislation

governing its activities is now with Parliament. In the planning area, sector strategy processes were strengthened, and performance reviews were reinforced and extended to all sectors, thus improving the linkages between the planning and budgeting processes with the public services delivery and utilization. Training and capacity building in planning units both at central government and local levels received attention in 2003 and will continue. In the area of public finance management, the cash management committee was set up to speed up the cash planning based budget execution. The monitoring of project implementation has continued to be strengthened by the Central Public Investments and External Finance Bureau (CEPEX).

- *Elaborate mechanisms for generation of information:* improving the environment to reduce poverty requires local understanding of how environmental conditions relate to poverty and the ability to identify and set priorities and evaluate their effectiveness and impact. This, in turn, requires appropriate indicators and monitoring systems. Available environmental data tend to focus on environmental change without determining poverty effects, while poverty-monitoring systems ignore environmental concerns. A key challenge will be to address the interface between PRS information needs, information needed for sector strategy formulation and implementation, and monitoring of district development plans. To achieve this, government is planning to develop and strengthen the Management Information System linking the policy level to the service provider agencies in key sectors as it was successfully done in education and health. MINECOFIN and MINALOC have developed a district PRS monitoring framework that will help local government to manage a reliable database covering the implementation of poverty related priority programs. To supplement information produced through MINECOFIN and the sector ministries' administrative systems, a wide range of studies are regularly conducted in the area of tracking public funds from the central level to frontline service providers as well as the assessment of performances of those agencies in producing services accessible to the population. The citizen report card technique is being developed in Rwanda to measure the level of satisfaction and public services users' perceptions. This will feed into the policy design and implementation process. However in addition to such qualitative measures there is need for quantitative social, economic and environmental data on indicators of policy success. At present little elaboration of the indicators and mechanisms are available.

- *Clearly defined mechanisms for monitoring impacts:* Indicators are needed that measure how environmental conditions affect the livelihoods, health and vulnerability of the poor and these need to be integrated into national poverty monitoring systems and assessment. Some work has already been done in this area. For example, in the guidelines for the development of sector strategies, a comprehensive sectoral Monitoring and Evaluation (M&E) system is considered a crucial element. Two main elements underpin this; firstly, more results-oriented sector strategies through improved use of the Medium Term Expenditure Framework (MTEF) and secondly, the development of a Management Information System (MIS). The education & health sectors are ahead in this, but other priority PRS sectors such as agriculture and infrastructure will be actively supported to come up with sound M&E systems. The MIS of different sectors will be developed and strengthened for collecting and managing

sectoral indicators from which a list of indicators can be chosen to monitor poverty indicators deemed crucial for the PRS process.

3.3.1.3 Community Development Policy and Decentralization

(1) *Decentralization policy framework:* The community development policy sets out the aims and objectives of decentralized government in Rwanda. The main objective of this policy is to set out the structure of decentralized government to support the participation of local communities in their own development focused on poverty reduction. Ensuring people's participation in planning and management of development is the policy's central element. This is supported through the establishment of decentralized government units to support community development actions. To this end the CDF was established to strengthen the PRS and empowerment of the population by providing them, through the decentralized local government structure, with financial support to implement development projects. The specific challenge for the environment sector is how to ensure that environmental concerns and environmental laws are addressed through the decentralized network and that sufficient finance and human resources are available to address key issues.

(2) *Common Development Fund:* This is a critical structural financial instrument through which to central government funds are channeled to the decentralized network of government (CDF 2004). Every year, a fund is established by central government and strictly apportioned to each district according to an established formula based on demographic and geographical parameters thus each district has a known amount of money that they may apply for. Unfortunately in the current budget year the fund was dramatically reduced (by 50%) due to central government financial constraints caused by the current energy crisis.

- *Screening of projects to be funded:* Districts are required to submit project proposals for evaluation by a central government committee to evaluate the appropriateness of the proposed actions according to the established district development plans as per the criteria. Once a project is approved, the districts are then responsible for implementation according to specified CDF project management guidelines, including the tendering of contracts for construction and other services. Once work plans and contracts have been established, approved finances are disbursed to the districts from CDF for implementation. In the future, CDF wishes to move towards a budget support approach to financing the districts, where by district will submit broad development plans and budgets for financing. In 2005, the CDF will give budget support to over 20 districts, including the Districts of Rusumo and Mirenge which were included in this study. In the case of budget support, finances can be disbursed in quarterly tranches against agreed outputs.

- *Project management and implementation:* The ability of districts to manage the process has been variable to date, with some districts managing the process and project implementation well and others failing, mainly due to poor human capacity in project management. Typically failings have been in the management of the tender

process and contracted work. In several cases, work had been paid for in advance and to date had not been completed by the specified time or remains unfinished. This has been an important lesson for CDF management and in the future much more emphasis will be placed on financial control with disbursements against project activities happening against agreed outputs. As for budget support, those districts that have a good record to date will be the first to benefit from the approach, whilst other districts with a poor record in project and financial management will continue with project support until their capacity has been developed.

- *Mainstreaming of environment in CDF projects:* Although environment has not currently been mainstreamed in CDF, there is an opportunity to have environmental issues mainstreamed. For example, at the moment CDF requires that at least 5% of finance must be spent on projects that directly address environmental issues. This is a positive step towards mainstreaming environmental issues in CDF funded projects. In addition, CDF has introduced environmental screening for all proposed projects as a way of ensuring that environmental considerations are considered at the project design stage. For this to be effective, REMA must develop the relevant environmental management tools such as the Environmental Impact Assessment (EIA) Guidelines and Procedures to provide a framework for environmental screening. In addition, capacity building of the various actors in EIA is of critical importance.

3.3.2 Environment and Sectoral Policies

3.3.2.1 Environmental Policy

- *Formulation and implementation of environmental related policies:* The Ministry of Lands, Environment, Forestry, Water, and Mines (MINITERE) is the principal government body responsible for the development of environmental policies and for overseeing their implementation. The environment sector has undergone many organizational and political changes since 1996 (MINITERE, 2003 env). In general, several environment-related policies and laws have recently been reviewed to address emerging environmental issues. Table 15 provides a synopsis of some of the policies and laws which have been recently passed.

Table 15. *Progress of environmental laws, policies, strategic plans, and budgets.*

Ministry sub sector	Bill	Policy	Strategic Plan	Budget
Lands	New Law Passed	Written and elaborated	Proposed	Pending Strategic Plan
Water	Review needed	Written and elaborated	Proposed	Pending Strategic Plan
Forests	New law Passed	Written and elaborated	Proposed	Pending Strategic Plan
Environment	New Law Passed	Written and elaborated	Proposed	Pending Strategic Plan
Mines	Review Needed	Written and elaborated	Proposed	Pending Strategic Plan

- *Establishment of Rwanda Environment Management Authority (REMA):* The strategic importance of environmental issues is gaining much more appreciation at the national level. This has been demonstrated by the enactment, by Parliament and Senate, of the Environmental Law (MINITERE, 2003env. bill.) and the establishment of the REMA. This instrument provides a legal and institutional framework for environmental management in Rwanda. For example, under the new environmental law, all projects before implementation must undergo an EIA (MINITERE 2003env.bill, Article 72). The law further establishes the National Fund for Environment, an innovative way of raising resources for investment in the protection and management of the environment. The challenge is to mainstream environment in all other sectoral policies, laws, plans, programmes and projects. In addition there are distinct organizational challenges to effective implementation, which will require substantial financial and human resources. UNDP through the Decentralization and Environmental Management Project (DEMP) is providing support to the strengthening of REMA.
- *Accession to international conventions/treaties/agreements:* GoR has acceded to several international conventions dealing with the protection and management of the environment. These include:
 - Convention on Biological Diversity (1995).
 - United Nations (UN) Convention on Climatic Change (1998).
 - UN Convention on Desertification (1998).
 - Vienna Convention for the Protection of the Ozone Layer (2001).
 - Stockholm convention on persistent organic pollutants (2002).
 - RAMSAR convention on Wetlands (2003).
 - Convention on the Conservation of Migratory Wild Animals (2003).
 - Convention on the Control of Transboundary Movement of Hazardous Chemicals and Pesticides in International Trade (2003).
 - Basel Convention on Control of Transboundary Movements of Hazardous Wastes and their Disposal.
 - Kyoto protocol on the UN convention on climate change.

3.3.2.2 Land Policy

- *The quest for Land Law Reforms:* Apart from a few scattered land regulations, most of which date back to the colonial period, Rwanda has never had a proper land policy nor has it ever had a land law, a situation that has enhanced land degradation and insecurity. Some of the issues that have catalyzed the need for land law reforms are (1) strong pressure on the already spatially limited land resources by a rapidly growing population; (2) domination of the agricultural sector which lacks any specialization in terms of human resources and equipment, and lack of alternative concrete and realistic options that would reduce the pressure on land resource; (3) land tenure system dominated by customary law which favors land fragmentation, a practice which reduces further the size of the family farms which are already below the threshold of the average surface area that is economically viable; (4) considerable number of landless persons who have to be resettled at all costs; (5) scattered farming plots that

are difficult to manage due to the scattered mode of human settlement; (6) lack of a reliable land registration system that would guarantee the security of land tenure; (7) weak and inadequate existing methods of land-use planning and land improvement (outline of land potential, land use and land development; reliable methods of soil and water conservation); (8) disorderly and fraudulent land transactions, necessitating the establishment of regulations that would enable the authorities to give to the land a recognized market value which brings considerable profit to the Treasury; and (9) unplanned use and conversion of wetlands.

- *Framework of the National Land Policy:* Because of the aforementioned urgent needs, the Government of Rwanda has promulgated a national land policy. The purpose of the national land policy (MINITERE 2003land) is to guarantee a safe and stable form of land tenure, and bring about a rational and planned use of land while ensuring sound land management and an efficient land administration. One area that requires attention is the rights of women over land, especially those who are part of the polygamous households, female-headed families and single mothers.
- *Framework for implementing the new National Land Policy:* The implementation of the policy statements and strategic options of this policy will be based on the major policies contained in Rwanda's National Development Strategy by 2020, which ranks land policy among the country's vital and key policies. However, a mid-term evaluation will be carried out after ten years so as to bring in the necessary readjustments. This policy will serve also as a useful reference for the elaboration of various three-year sectoral policies, the implementation of which takes into account the Medium Term Expenditure Framework. It is important to note that the implementation of this policy will not be the prerogative of the Ministry of Lands, Environment, Forests, Water and Mines only since its multi-sectoral character calls also for a multi-sectoral intervention and coordination. Similarly, for the implementation of this policy to be really effective, certain issues need to be considered. These include (i) formulation of a master plan; (ii) establishment of Land Registry with appropriate Geographical Information System (GIS) capability; and (iii) clearly defined cross-sectoral linkages with REMA and other key sectors such as MINAGRI among others.
- *Added value to environmental protection and management:* Such a land policy will bring environmental benefits through security of tenure and the ability of households to obtain credit and make investments against their land holdings, secure in the knowledge that their land cannot be appropriated from them. At a macro level this may not be so much of a concern as the land market will allow for more optimal allocation of resources for economic development, but the meso and micro level social and economic consequences are far from clear. Importantly it is not known how the poorest of the poor will respond to an emerging land market and the concern is that they may sell their land holdings for short-term gain becoming landless.

3.3.2.3 Forest Policy

Rwanda has a forest policy and legislation that was promulgated in 1998. Despite the existence of the law, deforestation has continued unabated. This is because of a number of factors. In this regard, the forestry issues are intricate in that the high density of the population and its poverty are the major direct factors that cause forest degradation and causes land scarcity for afforestation (MINITERE 2003for). The dependence of Rwanda on woody biomass for domestic fuel is a critical factor as demand outweighs supply and the overall forest capital reduces. In addition many institutional and organizational constraints are identified in the policy detailed below.

- *Forestry personnel are insufficient at all levels* – few provinces have forest officers such that in 1999 there were only 46 forest officers out of a scaling of 146. Many posts are vacant or occupied by agronomists. There are no higher learning institutes in Rwanda that offer the necessary training.
- *The forest law of 1988 has not been effectively enforced* – the weakness has contributed significantly to the depletion and deterioration of forest resources. The law needs to be updated to cope with the present situation.
- *International Donors in the forest sector are rare* – Out of the many donors that were assisting with forest management before 1994 only two (DED and the Netherlands Cooperation) are currently working in a limited way at the national level. The low level of donor interest in forestry is likely due to the low priority of forestry in national development plans prior to 2000.
- *The Rwandan population lack incentives to plant trees* – communal activities such as *umuganda* have yet to recover their intensity. In fact the ability of poor rural households to engage in communal labor activities without compensation may be waning as increasingly few private benefits from communal activities are being experienced.

3.3.2.4 Water Policy

- *Policy framework:* The water sector policy aims at increasing access to and supply of this vital public utility. It has two main objectives: (1) development of the provision of potable water; and (2) management and development of hydrological infrastructure. Since 2003, progress has been made in undertaking the desired reforms in the water sector. Some of the priority areas identified water resource protection, water and sanitation, including the sanitation code, the establishment of a geographic information and management system for the sector (GIS) and studies and works on drinking water in various districts (MINITERE 2003water). However, the water supply system still requires extensive up-grading and rehabilitation in the cities and must be extended in the rural areas to be consistent with the Government's long-term objective of increasing the current servicing rate of 54% in drinking water and 8% in sanitation to 85% in 2015 for drinking water and sanitation. Private firms will be contracted to ensure the long term sustainability of the rural water supply systems while strengthening the decentralization of water sources management. The Urban Water Supply and Sanitation (UWSS) program will increase urban coverage from 73% to 78% and reduce leakage

from 43% to 23% by 2007. Another program aimed at increasing sanitation and hygiene education in schools and at home will also be undertaken.

- *Progress towards Integrated Water Resources Management:* In the past one year, a number of actions have been taken by the GoR to review the water related policies and legislation with a view of making it appropriate in promoting integrated resources management. The actions include (1) updated draft of the law on water resource protection, water and sanitation policy and the sanitation code; (2) establishment of an information and management system for the sector (GIS); (3) study of rural drinking water adductions in 3 pilot districts (Ngarama, Save and Nyamasheke) within the Projet d'eau et Assainissement en Milieu Rural (PEAMR); (4) studies and starting of works of rural drinking water adductions (Districts Gasabo and Buliza) in the framework of the project 8 ex-communes around Kigali; (5) study of Rehabilitation and extension study of the Bugesera-Karenge rural drinking water adductions; (6) survey of rehabilitation and extension of Butare rural drinking water adductions; (7) monitoring of the exploitation of the Bugesera-South rural drinking water adductions Humure (Byumba:) drinking water adductions project was achieved; (8) rehabilitation and construction of 3 boreholes in Nkombo and launching of the construction of 20 others (9) rural drinking water adductions works in Bwisige (actual district of Rebero) Byumba for 6000 persons; and (10) establishment of a drinking water adduction and sanitation program in rural areas with as target, to pass from the present servicing rate of 54% in drinking water and 8% in sanitation to 85% in 2015 for drinking water and sanitation. A launching phase has been funded by the African Development Bank.

- *Survey on the rational and sustainable development of wetlands and valleys:* A survey on the rational and sustainable development of wetlands and valleys in Rwanda was carried out in 2003 and a detailed plan for the development of 6,000 ha is in progress while work on another plan for 1,550 ha will be initiated soon. The finalization of these surveys is planned for the end of 2004 and the execution of the work is planned for the beginning of 2005. Valley dams and floodwater harvesting will be initiated, especially in the *imidugudu*, in order to improve the use of this substantial water source that often goes to waste.

- *Constraints:* Major constraints for the implementation of policy include (i) insufficient financial resources; (ii) insufficient human resources in quantity and quality; (iii) weakness of the legal and institutional framework; (iv) lack of sufficient knowledge of the real situation of the sector; (v) intervention by the private sector still minimal; and (vi) decentralization not yet well established.

3.3.2.5 Mines and Minerals policy

- *Policy framework:* Policy towards mines and minerals is geared towards their economic exploitation and holds lower in its priorities the need for environmental and welfare considerations. However as with other sub sectors it suffers as a result of poor investment and resources for the exploitation of minerals. Essentially in all mining operations to control for environmental concerns it will be necessary to have in place a

relevant regulatory framework and system of enforcement which at the present time will need to be developed.

- *Mineral exploitation:* The mining sector in Rwanda is currently focused on the exploitation of cassitérite (tin ore), wolfram (tungsten) and coltan (mobile phone chips) and materials for the construction industry (MINTERE 2003mines). Major policy instruments to promote the development in this area include tariff reductions and export tax removal. The industry within Rwanda is generally small scale, but not without its impact on the environment. In Nyungwe Forest the search for coltan has led to the degradation of the forest reserve. However this has less to do with policies towards mining and more to do with enforcement of regulations governing activities in protected areas. Quarrying has increased throughout Rwanda especially for brick making, lime, and stones for construction and road building. This is indicative of the fact that in 2003-2004 the 7.1% industrial growth in 2003 was led almost solely by the construction sector. However the brick making has slowed as a result of forest and environmental policies regarding the use of trees for fuel for industrial resources only coming from approved sources.

3.3.2.6 Agricultural policy

- *Contribution of Agriculture to National GDP:* Agriculture is perhaps the single most influential activity on the environment and the most important economic activity at the micro and macro level (MINAGRI draft). In 2004, approximately 45% of gross domestic product (GDP) and approximately 60% of foreign export (principally coffee and tea) revenue came from the agriculture sector. The PRS emphasizes the importance of increasing agricultural productivity and raising rural incomes. In 2003, the agricultural production declined, registering a growth rate of negative 1% against 15% in 2002. Unfavorable climatic conditions that caused total food crop production to decrease by 4.5% in 2003 (This does not compare favorably with a 31.5% food crop production growth in 2002) are blamed for this situation. Production of four out of the top five more consumed food crops decreased (ranked by importance sweet potatoes, beans, bananas and cassava with the exception of Irish potatoes), thereby possibly increasing the vulnerability of Rwandan poor households. Despite the sector being the country's most important, the budget allocated to this sector has been decreasing in percent of GDP and the GoR is committed to increase allocations for this sector over the medium-term.
- *Policy framework:* An agricultural policy document has already been produced and the sectoral strategy is under elaboration but has not yet been finalized. It is crucial for the success of the entire PRS that attention is paid to the integration of the agricultural transformation and rural development strategies under the lead of MINAGRI. However, the shortage of human resources in the MINAGRI and the lack of reliable statistics remains a major challenge. In 2003, a technical diagnosis of data production of the present information and agricultural statistics system revealed several deficiencies of which: the rarity and lack of relevant data produced in relation to the needs; the uncertain reliability of some data; the irregularity and discontinuity of the

series; the limited accessibility and distribution of the existing data for users; and the quasi-total dependence of the production of statistical data on donor funding. The main agricultural policy objectives are:

- (1) The transformation and modernization of agriculture through the professionalization and specialization of the sector;
- (2) The development of commodity chains by the selection of a few priority;
- (3) The promotion of competitiveness of agricultural products by the promotion of export crops and their regionalization in order to reduce production costs and optimize the comparative advantage; and
- (4) The development of entrepreneurship through partnership with the private sector and encouraging it to be part of the process of agricultural transformation.

- *Policy implementation:* Implementing agricultural policy is going to mainly dependent on research extension and marketing services. Among the main obstacles identified to the development of priority crops and the proper use of modern inputs are related to the inadequacy of research and extension services. The link between research and technology transfer is currently inadequate. The human pressure on land is the principle drive behind the degradation of environmental resources, especially where agricultural outputs are declining per unit area, promoting extensification. Agricultural policy needs to be able to swiftly change agricultural practices to promote intensification and good soil and water management practices in order to alleviate poverty that will in turn have the most influential impact on the integrity of the environment.

- *Building technical capacities and environmental mainstreaming:* It is important that capacities are built among the agricultural staff to be able to look agriculture from sustainable agriculture perspective. This approach will ensure that environmental issues are factored in the agricultural decisions. In this regard, the role of the Institute Superior de Agriculture Recherche (ISAR), the institute responsible for adaptive research is appreciated. That notwithstanding, there is currently no adequate extension services system. The major extension strategy has consisted of addressing the most crucial needs of training in the sector. Major interventions by the end of 2003 included, 450 technicians trained as trainers on animal husbandry, rice production, production techniques and crop conservation, formation of association, small project management and project funding. Forty radio broadcasts and 8 video productions on agricultural techniques were produced. For organic and inorganic fertilizers, 550 demonstration plots were established in 8 provinces and about 10 farmers' committees were also established. In tandem with MINITERE, Rwanda's MINAGRI has elaborated a strategy aimed at curbing soil erosion and boosting the soil fertility, as a means of reversing poor soil conservation practices that have contributed to an estimated yearly loss of 945,200 tons of organic matter (MINAGRI/UNDP 1999).

- *Cross-sectoral linkages:* The implementation of the agricultural strategy is hampered by the lack of a clear link between the decentralized services and the central services of the MINAGRI (means are limited at the central and decentralized level) as

well as the operators in the sector. An effective working relationship must be reinforced between extension agents, NGOs, farmers associations, the private sector and local authorities.

3.3.2.7 Other Enabling Sectoral Policies

(1) *Standards:* The Rwandan Bureau of Standards (RBS) is the sole standards authority in Rwanda and was established in 2002. RBS has autonomous administrative and management status (parastatal) and is supervised by the Ministry of Commerce, Industry, Investment Promotion, Tourism, and Cooperatives (MINICOM). It is governed by a board of directors composed of representatives from government, higher institutions of learning, the private sector and consumer protection associations. A representative from MINTERE is listed on its board's roll of members. RBS is mandated with the task of promoting the standardization, quality assurance, metrology and testing as a pre requisite for ensuring consumer safety and satisfaction as well as competitiveness of industry. As such it is also responsible for monitoring the standards of imported goods and will have a critical role to play in quality assurance and compliance of chemical inputs (agricultural fertilizers, pesticides etc.). It has a role to conduct inspection and monitoring at the major points of entry into the country of imported goods and can also perform testing of products on a public or private basis. Currently it is primarily focused on consumer goods, but can envisage a role in testing samples of soil and water for inorganic and organic pollutants as well as heavy metals. As with many other government departments it faces severe financial and technical constraints in the implementation of its duties in recent times.

(2) *Office Rwandaise du Tourisme et des Parcs Nationaux (ORTPN)*

- *Mandate:* ORTPN is mandated with the conservation of biodiversity within the protected areas of Rwanda and with the development of tourism both nationally and internationally. As with RBS, it is a parastatal and has recently (2003) completed a restructuring exercise. Tourism is cited as one of the main economic sectors that the Government is trying to develop as a means of attracting foreign currency and, in addition, in November 2004, Rwanda sought further to promote itself as a tourist destination by having a stands at international tourism expositions in Europe. The results of these and private sector efforts are promising, since the sector has developed beyond expectations, achieving better results than targeted in the tourism development strategy.

- *Integrated conservation:* Perhaps a major lesson is that integrated conservation-development projects have good potential to be effective if they can lead to the avoidance of open-access conditions, and to the specification of property rights. This does not preclude the preservation of a core area, or specified species and resources. What it does provide is a social contract by which the local communities of resource users have certain rights and responsibilities. Conservation-development is a trade-off, but a trade-off that can have net positive value for overall management. This is because the community of users with specified rights can help enforce rules that avoid open-access conditions, not because the users necessarily believe in conservation, but because avoiding open-access is also in their best interest. The challenge is how to

make CDF finances that are available to fund development projects can easily be targeted towards community conservation initiatives within the framework of the district development plans. The ORTPN has the capacity that could help bolster local districts capacity in this area.

4.0 Opportunities to Mainstream Poverty-Environment Linkages within the Current Political Framework

4.1 Opportunities for Mainstreaming Poverty-Environment

4.1.1 Review of ACP Cotonou Agreement

ACP/Cotonou Agreement is due to lapse in 2008. Already, negotiations on the scope of the next agreement are underway. Using the current agreement which under Article 32 recognizes the centrality of environment and expects environment and natural resources to be mainstreamed into all aspects of development cooperation, lessons from the implementation could inform the negotiations to ensure that environment is not only identified as one of the cross-cutting areas of financial assistance but a specific percentage of the EC Development Aid is committed to environment or environment enhancement programmes.

4.1.2 Review of PRSP 1 and Formulation of PRSP II

The PRSP is an important tool by which poverty-environment linkages can be mainstreamed into national plans for development. Recognition that a healthy environment underpins all efforts in Rwanda to alleviate poverty and develop the economy must be included in it; thus the significance of the environment must be elaborated in national development plans. Critically the importance of the environment sector must be reflected in the national budget. Increasingly multilateral and bilateral donors are coordinating their assistance with national government plans through 'sector-wide approach'. Unless the environment sector is illustrated as a priority issue in the national budget it will be difficult to secure donor financing. The UNDP, UNEP working with government, development partners, private sector and civil society are spearheading the PRS review process.

4.1.3 Implementation of Millennium Development Goals

The GoR is committed to implementing the Millennium Development Goals (MDGs) as demonstrated by the institutional changes aimed at increasing her effectiveness in meeting these goals. To meet the MDGs, the GoR and the UN agencies especially the UNDP and UNEP are supporting the diverse local processes, through which the needs and priorities of the poor are identified and addressed, and through which poverty is reduced and natural resource management is improved. It is important to note that this process is now being linked to the poverty-environment initiative to enhance synergies and coordination.

4.1.4 Development Partners Co-ordination Group (DPCG)

The GoR has encouraged coordination of development partners to ensure consistency and to avoid duplication and wastage of resources. In this regard, the GoR considers

budget support as the most appropriate tool through which national priorities may be matched with the development partners' assistance. Thus, the GoR believes that clear budget support, when accompanied with accountable and transparent institutions, will deliver superior results compared to the traditional project approach. Further, the GoR encourages budget support donors to reduce and streamline conditionalities. For the past year there has been an increasing momentum towards supporting harmonization & alignment agenda in Rwanda. The main framework for harmonization is the Development Partners Co-ordination Group (DPCG) co-chaired by MINECOFIN and the UNDP. Two technical working groups: the Budget Support Working Group and Harmonization & Alignment in Rwanda of Projects & Programs (HARPP) have been set up. There is also GoR - donor sector cluster groups that have played some role in elaboration of sector strategies. These groups have worked with diverging degrees of efficiency and clear functional mechanisms will have to be designed to make them function more effectively.

The *budget support* framework signed in 2003 provides for donor harmonization and alignment to the national planning, budgeting and reporting mechanisms. A secretariat was set up within government in 2004 to push ahead with reforms. The work of HARPP is still in its infancy, but there is strong interest from the donor community to come up with some generally agreed principles governing project support, to make administrative procedures less time consuming for Government. The GoR together with its development partners are currently in the process of agreeing upon a framework for HARPP, which will be translated into a three-year action plan. Therefore, this Group provides an excellent opportunity to reach out to various development partners with a view of supporting the mainstreaming of environment in all their development assistance support.

4.1.5 Common Development Fund

The CDF fund and process is an important means of directly and indirectly addressing environment issues. Directly, CDF can provide funds at the local level to ameliorate specific environmental problems and indirectly through environmental screening will ensure that environmental issues are mainstreamed across sectors.

4.2 Constraints in mainstreaming poverty-environment

4.2.1 Lack of understanding of poverty-environment linkages

The poor largely depend directly on a wide range of natural resources and ecosystem services for their livelihoods. This is through a range of land use or natural resource management activities including agriculture, raising of livestock, forestry, fishing and gathering of wild foods. In addition to the direct use, the environment indirectly support the livelihoods especially ecosystem services. Ecosystems also provide critical life-supporting services such as cleansing, recycling and renewal of resources especially water. Unfortunately, information on the poverty-environment linkages has not been

developed and packaged in a manner that informs the planning and resource allocation processes.

4.2.2 Inadequate capacity in valuation of environment and natural resources and their contribution to national economic growth and poverty reduction

The GoR has the environment high on its agenda. Recent environmental disasters have highlighted the inextricable relationship between the national economy and the environment (Box 2). Given the impacts on the economy highlighted in by national government there is a need to seriously integrate environmental issues across all sectors.

Box 2. National economic impacts of environmental degradation.

Rwanda's has witnessed two major examples with immediate impacts on the economy from the disturbance of key environmental resources. The two cases in point are:

- 1. Forest Clearance at Gishwati Forest Reserve – 1996-1998*
- 2. Wetland drainage in Rugezi Swamp – 2003*

Forest Clearance and economic impacts in NW Rwanda

Gishwati forest was a large area of tropical mountain forest in north west Rwanda providing almost the entire catchment for the Sebeya River flowing into Lake Kivu to its west. A World Bank sponsored agricultural project saw approximately 180 km² converted to agriculture and livestock production in the 1980's and the remaining reserve was partially degazetted for resettlement post war during the mid 90's. However the resettlement was largely uncontrolled and although the nominal territory of the reserve is 40km² only 7km² of disturbed natural forest remains.

Impacts on the local economy range from reduced agricultural outputs due to soil erosion and loss of property and death of people and livestock due to a prevalence of flash flooding and landslides after the loss of forest. Siltation in the Sebeya river has also had dramatic effects on the volume and cost of power and potable water from Electrogaz and caused an increase in production costs at the Bralirwa brewery. Estimates from a GEF sponsored study (WCS 2004) indicate that annual financial losses to Electragz alone are in the region of \$350,000 per annum as a result of the marginal increases in the down time at plants for cleaning out sediment.

Wetland drainage and the national energy crisis

Rugezi Swamp is a tropical highland swamp, located in central northern Rwanda and runs north to south for approximately 40 km, between Ruhengeri and Byumba Provinces. It is a major part of the catchment for lake Bulera, into which Rugezi drains, and lake Ruhondo (into which lake Bulera drains) in northern Rwanda. The swamp acts a giant 'sponge' during the wet season and continues to release water slowly into Lake Bulera during the dry season, helping to maintain the dry season level of the lake.

A hydropower production plant is located in the channel between lakes Bulera and Ruhondo. In 2003 a local project was undertaken to drain Rugezi swamp to allow for agricultural production. The subsequent drainage system over a large part of Rugezi terminally disrupted the holding capacity of the swamp as a dry season reservoir for lake Bulera. As a result dry season flows into Lake Bulera dramatically reduced, which saw the level of the lake drop by 3-4 meters the following dry season. The off take of water to the fixed infrastructure of the power plant was greatly reduced causing the largest part of a massive drop in output caused by only intermittent production when water levels allow. This has been the major factor in the power deficit in Rwanda. To cope with the power shortage, Rwanda has had to import diesel generators and the price of electricity has more than doubled. This undoubtedly has had huge impacts on economic development in the service and industrial sector as businesses were initially crippled by lack of power and are now facing higher production costs because of the price increase.

Thus, to make rational choices when environmental and economic values are to be compared, it is essential that accounting systems and market prices reflect the relevant values. At the macro-economic level, this means that the traditional system of national accounting needs to be amended to better reflect environmental values.

4.2.3 Lack of appropriate environmental and poverty-environment indicators

There is need to establish appropriate and effective poverty-environment indicators and monitoring systems. Current environmental data tends to focus on environmental change without determining poverty effects, while poverty-monitoring systems ignore environmental concerns. Poverty-environment indicators are needed to measure how environmental conditions affect livelihoods, health and vulnerability of the poor, and these need to be integrated into national poverty monitoring systems and assessment.

5.0 Conclusions and Recommendations

5.1 Conclusion

Environment is an important cross-cutting issue in Rwanda, providing the resource base upon which the citizens derive their livelihood in addition to the environment's centrality in national economic growth.

5.2 General Recommendations

5.2.1 Mainstreaming of poverty-environment linkages in PRSP II and cross sectoral policies, plans, programmes and projects

(1) *National Priority setting and Resource Allocation - PRSP II:* The GoR is committed to poverty reduction and wealth creation. The first PRSP which was approved for implementation in 2002 is due for revision by the end of 2005. Four principles underpin the PRS implementation. These are (1) policy coherence; (2) prioritization; (3) learning process; and (4) partnership. In PRSP 1 little emphasis was put on mainstreaming of environment. This could be attributed to poor understanding of the poverty-environment linkages. But with increased knowledge about the centrality of environment and natural resources as a resource base of the majority of the rural people in Rwanda who account for about 90% calls for special consideration in ensuring that environment is mainstreamed in PRSP II. In this regard, the Task Force established under the GoR/UNEP/UNDP Poverty Environment Initiative need to be strengthened to provide the leadership and coordination of this process.

(2) *Cross-sectoral policies, plans, programmes and projects:* Quite often environment is regarded as a cross-cutting issue. Because of this ambiguity, environment is never given due consideration in many cross-sectoral policies, plans, programmes and projects. As a consequence, environment suffers. It is imperative that every effort is made to mainstream environmental considerations in cross-sectoral policies and initiatives. The PRS process and CDF provide a mechanism for integrating environmental considerations in macroeconomic policies, national plans and decentralized community development plans.

(3) *Common Development Fund:* There are deliberate efforts to decentralize and devolve authority and decision making to decentralized entities for effective delivery of service and to ensure that local communities are involved in decision-making processes on matters that affect them. In this regard, CDF is a framework that ensures that decentralized entities have the requisite resources (financial and human) for effective delivery. Because of the centrality of CDF in local development, it is imperative that environment is mainstreamed in CDF projects. It is worthy noting that plans are underway to improve CDF project screening with a view of incorporating environmental parameters as part of the criteria. To give effect to this proposal, it is imperative to consider (1) developing environmental guidelines to support the CDF project

management in screening the environmental soundness of a project; and (2) capacity building of decentralized entities, NGOs and community organizations and institutions.

5.2.2 Develop appropriate environmental and poverty-environment indicators to enhance impact monitoring

In order to measure progress towards attainment of the Millennium Development Goals especially Goal 1: reducing extreme poverty and Goal 7: environmental sustainability, development of appropriate poverty-environment indicators is of primary importance. It is acknowledged that the GoR has established development indicators, which currently inadequately integrate poverty-environment linkages. The UNEP/UNDP programme on mainstreaming environment currently in its implementation stage among other outputs will be developing poverty-environment indicators. It is worthy noting that MINECOFIN, MINITERE and REMA are key actors in this project.

5.2.3 Strengthen GoR - Donor Environment Coordination

- *Establish a formal GoR/Donor Environment Group:* It has been largely recognized that the environment is key to Rwanda's national economic growth and poverty reduction. Given the diverse array of development partners providing technical and financial support, mechanisms need to be developed to enhance the coordination of the various initiatives. It is therefore recommended that a GoR/Donor Environment Group be established to enhance mobilization and coordination of donor support for the environment sector. This will provide a framework for the relevant government ministries dealing with environment and the development partners working or with interest in the environment sector to work together in mainstreaming environment at various levels in a more coordinated way. Lessons could be learned from Kenya, Tanzania and Uganda where such groups have been established and are functional. Membership of such a Group could consist of (1) GoR representatives – MINITERE (Co-chair), MINECOFIN, MINAGRI, REMA (Secretary), ORTPN, Director of Forests etc; and (2) development partners such as UNDP, EC, DFID, RNE, USAID, SIDA etc, with the development partner contributing the most support to the environment sector to be the additional Co-Chair.

5.2.4 Strengthen REMA

- (1) *Support the development of REMA's Strategic Plan:* The new environmental legislation gives REMA mandate to regulate and enhance the protection and management of environment in Rwanda. For REMA to be effective, it requires to develop a strategic framework that will enhance building of synergies with other sectors and decentralized entities. In this regard, it is recommended that REMA be supported to develop a strategic plan that will (1) define the core business of REMA; (human resource needs and capacities); (2) Synergies with various actors from Government, NGOs, private sector, decentralized entities and the public outreach; and (3) Financial sustainability projections. Terms of reference for development of REMA's Strategic Plan are attached as Annex 6.

(2) *Support the development of Environmental Management Tools (especially EIA, Environmental Audit and SEA Guidelines and Procedures):* EIA, Environmental audits and Strategic Environmental Assessments (SEA) are important tools that will ensure that policies, plans, programmes and projects at whatever level integrate environmental considerations in their decision making processes while evaluating options or alternatives. With the enactment of the environmental legislation which makes it mandatory for all new projects to undergo EIA, on-going projects to undertake environmental auditing and policies, plans and programmes to be subjected to SEA, every effort must be made to support REMA to develop these environmental management tools and put in place a framework for EIA screening and licensing. Terms of reference for development of Environmental Impact Assessment/ Environmental Audit Guidelines and Procedures are attached as Annex 7.

(3) *Support the development of Environmental Quality Standards:* Environmental quality standards are critical in determining the threshold value of environmental impact. Thus, for REMA to implement the EIA, and for the polluter to pay a principle as well as an environmental audit, REMA will be obligated to establish benchmark environmental quality standards. For example, before an EIA study is undertaken, the proponent will need to be aware the threshold levels of various environmental parameters such as water quality, air quality, etc as a benchmark. Similarly, for one to be liable for an environmental offence such as pollution, a threshold level (allowable standard) must have been exceeded. REMA will need a consultant to help put in place a framework for a participatory formulation of environmental quality standards involving government institutions especially Rwanda Bureau of Standards, private sector and civil society. Terms of reference for development of Environmental Quality Standards are attached as Annex 8.

(4) *Establish an environmental data and information base:* It is important that REMA establishes a strong environmental data and information base that will enable REMA to prepare an annual state of environment report for Rwanda and to track environmental changes over the years. This information will be important in the efforts of mainstreaming environment in the subsequent PRS and other policy instruments.

(5) *Review the DEMP Project:* It was noted that MINITERE and UNDP have been looking for a suitable person to fill the position of a Senior Technical Advisor to provide support to REMA for a long time. It is recommended that as these efforts are continued, short term specific consultancies as outlined hereinabove (For example, development of a Strategic Plan, Development of EIA guidelines procedures and development of environmental quality standards) be commissioned to speed up the process of operationalizing REMA while the GoR goodwill is still very high. If this action is not immediately addressed, environmental issues are likely to be relegated because of operational difficulties. To backstop this process, it is hereby recommended that the GoR considers requesting UNEP, UNDP and World Wildlife Fund for Nature (WWF) to form a consortium to provide technical support to REMA and in overseeing the proposed short term targeted studies.

5.2.5 Strengthen Decentralization Framework

(1) *Capacity building of decentralized entities:* Decentralization is now considered to be crucial for effective public policy, democracy and natural resources management. It is through the decentralization framework that local communities will be empowered to participate effectively in the management and control of environment and natural resources. For decentralization to succeed, it is imperative that technical expertise is built at that level to provide technical support and to monitor the impact of the CDF interventions on the environment. This is premised on the finding that district and local level governments have inadequate capacity to carry out their mandate in environmental resource management at present.

(2) *Support the empowering of community organizations and institutions:* In order to achieve the bottom-up approach as espoused under CDF, mobilization and empowering of communities to take ownership of the rural development initiatives it is important that capacities of community organizations and institutions are strengthened. This will assist communities, NGOs and other community organizations to be able to participate effectively in participatory planning, project implantation and monitoring of policy impacts on environmental conservation and livelihoods envisioned under CDF.

5.3 Specific Recommendations in relation to EC Development Assistance

5.3.1 Budget Support

(1) *Mainstreaming Environment in Budget Support:* There is no doubt that the GoR encourages budget support by donors to ensure that the national priorities identified in the PRSP are implemented; it is important that environment is mainstreamed in such budget support. Given the importance of the environment as a resource base for people's livelihoods and economic growth, the EC, through the CSP, should apportion a specific percentage (suggested 40%) of their budget support to projects and activities that contribute to the improvement of the environment. This will ensure that all projects whether under rural development, macro support or good governance/institutional support mainstream environmental considerations in all their activities. This will be in line with the commitment made by the GoR and the EC pursuant to the Cotonou Agreement and the 9th EDF. Also, this requirement would catalyze the process of raising the profile of environmental considerations in national priorities.

(2) *Direct Support to REMA and Decentralized Entities for enhanced environmental law compliance and enforcement:* REMA and decentralized entities, being new institutions, require a lot of support to equip them with the requisite resources, technical and financial, to enable them to effectively deliver on environmental compliance. Because of this unprecedented demand and expectations, it is important that they are supported to put in place systems that will ensure their presence is felt. This may not be achieved with the limited grants from the GoR through the national budget. It is

therefore recommended that the EC and other development partners, in addition to the budget support, consider providing direct support to REMA and decentralized entities.

5.3.2 Revise the framework for implementation of Rural Development component

It is very clear that the current 9th EDF in defining the scope of support and the implementation framework did not integrate the environmental aspects that might arise from such investment. For example, one of the major areas of investment is increased agricultural production with indicators being increased fertilizer used. Whereas the intentions are laudable, unfortunately no provision has been put in place to mitigate any negative environmental impacts that may occur as a result of such an investment. It is appreciated that efforts are being made to introduce environmental screening as one of the requirements in evaluating each project. However, this may be coming too late as environmental considerations will be addressed as appendages instead of being at the heart of the investment. It is therefore recommended that a strategic environmental assessment be done on the 9th EDF with a view of integrating environmental considerations as well as in establishing an elaborate environmental impact monitoring programme. This will be surest way of mainstreaming environment bearing in mind the inadequacy of capacities in Rwanda to undertake and oversee environmental impact assessment and monitoring of impacts. Other areas which require re-formulation are investments in: (1) agro-industry especially improved coffee production; (2) infrastructural development especially roads must take into consideration the environmental consequences such as soil erosion etc; (3) Increased use of fertilizers and the impact on water resources and environmental quality in general; and (4) wise use of wetlands – the strategy appears to focus on increased drainage of wetlands for increased agricultural production, especially rice production.

5.3.3 Support the transfer and adoption of environmentally sound technologies

(1) *Transfer and adoption of environmentally sound technologies:* Current strategies for poverty alleviation, (PRSP and CSP), are fundamentally built upon premises of economic growth. As the economy grows, environmental performance is likely to deteriorate or improve depending on what variable is considered. Thus, environmental improvement is not a luxury preoccupation that can wait until growth has alleviated income poverty, nor can it be assumed that growth itself will take care of environmental problems over the longer term as incomes rise and more resources are available for environmental protection. To improve the environmental soundness of growth, internalization of environmental considerations by the private sector is therefore of paramount importance. For the private sector, which is targeted for wealth creation, the degree of technological innovation will determine whether this is complementary to, or in conflict with, sustainable development. It is therefore recommended that under CDF special attention be given to transfer and adoption of environmentally sound technologies to mitigate environmental degradation such as pollution, raw material resources wastage, and waste treatment.

(2) *Establishment of a Cleaner Production Centre*: In the pursuit to promote trade and investment *especially* the domestic investors and Foreign Direct Investment (FDI), the GoR with the support of UNEP is in the process of a cleaner production centre similar to those established in Kenya and Uganda. This initiative ought to be expedited to act as a clearinghouse for the transfer and adoption of environmentally sound technologies that may be required to spur rural development under CDF. Otherwise, the private sector is likely to see EIA requirements under the new environmental law as an impediment to investment. This could provide ammunition to the private sector actors to fight the implementation of the environmental law.

5.3.4 Civil Society

Whereas both the Cotonou Agreement and EDF recognize the role of civil society in the delivery of the EC support to social, environmental and rural economic infrastructure, prioritized by the people and provide skills and new technologies to income-generating activities, none of the NGOs working in Kibungo Province has focus or capacity on environment. In order to ensure that the PMU and CDF deliver based on people's priorities, it is imperative that deliberate effort is taken to strengthen the capacities of environmental NGOs, community-based organizations, and associations to participate effectively in the implementation of CDF at the grassroots level. It is further recognized that there are very few environmental NGOs in Rwanda, those working in other sectors such as improved agriculture, energy, health and sanitation could be supported to diversify as appropriate to provide technical support in environmental governance matters.

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Annex 1. Terms of References



TERMS OF REFERENCE FOR THE CARRYING OUT OF A STUDY ON STREAMLINING POVERTY-ENVIRONMENT LINKAGES IN THE EUROPEAN COMMUNITY'S DEVELOPMENT ASSISTANCE IN RWANDA



Coordinated through the Rwanda Environment Management Agency (REMA)

At the outset the Consultant shall:

1. Work as part of a 3-person team of social scientists, each one charged with researching and reporting on the economic, social and general issues pertaining to the study.
2. Conduct a comprehensive literature review on the study area and identify key contact / target groups.
3. Develop specific, appropriate research tools.
4. Identify specific tasks of each researcher.
5. Conduct reviews of policy on the subject area.

At the field level the Consultant shall:

6. Identify the study area with the input of REMA (geographical and thematic).
7. Visit district and regional offices and conduct field studies in the area.
8. Capture local level dynamics and make community visits/surveys.

For the National level research the consultant shall:

9. Interview relevant sectoral ministries; and any other relevant institutions.

For the final report the Consultant shall (one final report as a research team):

10. Present all the results and synthesis.
11. Identify interventions and make recommendations for EC CSP.
12. Hold an internal Seminar and present the results and recommendations.
13. Work on the comments/suggestions that emerge from the seminar comments and the reviewers' inputs and present the final joint report to REMA and WWF-MPO.

The Program of Work for the EC Poverty Reduction Effectiveness Program (PREP) Analytical and Intervention Exercise
Rwanda Research Team
March 14- May 31 2005

Phase I Background

7 Days (5 days Literature Review, 2 Days ID research tools)

- Compile baseline socioeconomic and environmental data.
- Identify target groups at local level.
- Identify research tools/guidelines/questions.
- Identify key contacts at local, meso, macro levels.
- Review policy frameworks in place.
- Review existing literature/publications.
- Get research clearance.

Phase II Field Work/ Local/Meso Level Assessment

16 Days (13 days in the field, 3 days interpretation of results)

- Grassroots level analysis
 - Capture local level dynamics (community, village government).
 - Visits to District and Regional offices.

Output I: Interpretation of results at field level

Phase III National Level Assessment

8 Days (5 days research/interviews, 3 days synthesis)

- Interviews and research with National offices, bringing local/meso level experience including identified obstacles/questions.
- Utilize government and EC contacts as needed (identified at the beginning of the consultancy by REMA).

Output II: Interpretation of results at national level

Phase IV Write first draft Analysis and Interventions/Recommendations

4 Days writing draft report

- Utilizing the previous two outputs, write a synthesis report of the analysis and interpret results.
- The 3-person research team will produce one final report and presentation of that report.
- Utilizing the *Tool Kit* formulate interventions/recommendations

Output: First draft report with interventions/recommendations

Phase V Outside Review and Final Drafting

4 Days (1 day attending seminar, 1 day responding to reviewers comments, 2 days to write final draft)

- 1 half-day seminar*
- Synthesis report to 2 outside reviewers (2 weeks to respond)
- Research team to address reviewers' comments (1 week to prepare final report).

Output: Final Report (one report prepared by the 3-person research team)

***Participants Include:**

Research Team

REMA (Rose Mukankomeje and Anna Behm Masozera)

WWF-EARPO George Wamukoya

EC representatives (to be identified)

Other government institutions (to be identified)

Background to the study

1.0 Introduction

The European Community's Development Policy's (2000) principle aim is to "refocus its activities to combat poverty" where the "environment...will play an important role supporting the main objective", while the Contonou Agreement (2000) similarly states that activities "...shall be centered on the objective of reducing and eventually eradicating poverty consistent with the objectives of sustainable development..." Despite these commitments, a recent review by the ACP-EU joint assembly – adopted October 2003 - on the "Sustainable management and conservation of natural resources in ACP countries in the context of the 9th European Development Fund aid Programming" indicates that EC development assistance inadequately addresses environmental issues, especially with regard to the critical role that natural resource assets play in alleviating poverty.

This research seeks to provide to the European Commission and its partner developing countries recommendations to address poverty-environment weaknesses in current Country Strategy Papers (CSPs) and to improve environmental streamlining in EC development strategies through its six focus areas. This research will do so by evaluating the effects of development strategies on local poverty-environment dynamics through: reviewing CSPs on anticipated environmental impacts of EC thematic aid sectors in various countries; conducting multi-level evaluations to determine structural impediments and strategic intervention areas to address poverty-environment weaknesses; and identifying institutional and policy opportunities to strengthen environmental integration in future CSP design.

EC Country Strategies will be reviewed and interviews conducted for 3 countries on the role of natural wealth in alleviating poverty, anticipated environmental impacts, and areas of possible intervention.

Candidate countries for evaluation include Tanzania, Madagascar, Kenya, Vietnam, and Papua New Guinea. To gain a detailed understanding of the environmental consequences and specific strategic interventions needed to address poverty-environmental concerns, multi-level evaluations will be conducted in 2 countries (of the above 3 mentioned countries). The multi-level evaluations will use a bottom-up analysis to identify the structural impediments operating at local to national levels that reinforce rural poverty and environmental degradation. Follow up reviews will also be conducted in these same countries to evaluate how poverty-environmental concerns - highlighted in the multi-level evaluations - are being addressed in the development strategies. This research will be structured about key poverty-environmental issues on how the proposed EC Country Strategies are anticipated to affect rural poor's livelihoods, their rights to land and resources, their health due to anticipated environmental deterioration, and their vulnerability to environmental disasters. The multi-level evaluations and CSP reviews will result in recommendations to address poverty-environmental weaknesses in EC development strategies.

This study will further identify institutional and policy-oriented changes needed to address poverty-environmental gaps. This activity will rely on document review and interviews with individuals involved in CSP development and their revision. The evaluation will be conducted at EC and country levels (for the same 2 countries in which the multi-level evaluations were conducted) and will build upon current EC environmental integration efforts. Results of this study will be summarized and distributed to raise awareness on the need and opportunities to enhance poverty-environment integration in EC development assistance.

2.0 Significance of the study

Within the specific field of poverty-environment analysis, most recent work has focused on ways that the poor at the local level interact with natural resources as part of their strategies to maintain livelihoods. While this new research has contributed significantly to better understanding the livelihood strategies of the rural poor, seldom are linkages made to specific policy and institutional factors at meso and macro levels.

Over the past 10 years, WWF has given considerable attention to developing and implementing an analytical approach that cuts across these multiple levels. The analytical approach begins at the local level and then works up through a chain of causal factors to link to meso and macro drivers.

This kind of "bottom up" analytical perspective is important for analysis of the poverty-environment impacts of EC Country Strategies by grounding this analysis in a concrete understanding of the real problems and impediments facing the rural poor. This study will use the results of the multi-level analysis specifically to evaluate likely environmental impacts of EC development programmes and will provide recommendations to EC and partner developing countries on ways to improve poverty-environmental performance. While a growing number of studies have assessed the poverty-environment impacts of non-EU development policies (e.g., of the World Bank), none have yet done so for EC development programmes. Even fewer studies have sought to translate the poverty-environment concerns into recommendations for policy and institutional changes to improve resource management and the livelihoods of the rural poor.

3.0 Objectives of the study.

Main objectives:

The overall objective of this research is to enhance the impact of the EC's development assistance on poverty through increased attention to the role of the environment in the livelihoods of the rural poor in its country development strategies. This research seeks to provide to the EC and partner developing countries recommendations to address poverty-environmental weaknesses in current Country Strategy Papers (CSPs) and to improve environmental streamlining in EC development strategies through its six focus areas. More specifically, the objectives of this research are:

- Objective 1: To evaluate the anticipated environmental impacts of proposed EC CSP sector investment areas in select countries and propose strategic interventions that are needed to address the envisioned environmental problems. This assessment will emphasize linkages between natural resource assets and rural poverty and will identify structural impediments, be they economic or institutional, operating at local to meso to macro levels that encourage environmental mismanagement and keep rural areas locked in poverty.
- Objective 2: To evaluate current aid programming processes used to develop and revise CSPs, specifically with regard to environmental integration in the EC focus areas, and identify long term policy and institutional opportunities to improve poverty-environment streamlining to enhance future effectiveness of EC development assistance. This activity will build upon current EC efforts to improve environmental integration (e.g., EC manual development).

How the objectives relate to the theme(s) of the EC-PREP:

The aim of the EC-PREP is to enhance the impact of the EC's development assistance on poverty through support to policy-oriented research, including cross-cutting research on environmental dimensions of poverty. This study seeks to inform the EC and developing countries on poverty-environment dynamics in selected study areas and their relationship to meso and macro policy and institutions in two countries, and will provide detailed recommendations on measures needed to address current poverty-environment problems as well as institutional opportunities to improve long term poverty-environment integration in future EC CSPs.

As noted above, a recent review by the ACP-EU joint assembly indicates that EC development assistance inadequately addresses environmental issues, especially with regard to the critical role that natural resource assets play in alleviating poverty. The research program that we are proposing will review selected country strategy papers for their anticipated poverty-environment impacts and link this to an analysis of major constraints to substantively improve the livelihoods and environmental conditions of the resource-dependent poor in specific rural areas. This program will:

- conduct a bottom-up analysis that links local, meso and macro institutions and economic changes
- draw on this analysis to inform a review of EC Country Strategy Papers, identifying gaps that need to be addressed to affect the problems of resource-dependent rural poor.
- provide recommendations to improve mainstreaming of poverty-environment considerations in the development of CSPs.

How the objectives relate to development work already undertaken in this area:

Despite the reordering of priorities of the international development community to focus on poverty alleviation, comparatively little attention has been given to the central role that the environment and access to environmental goods and services play in poverty alleviation, particularly of the rural poor. The Rural poor have an immediate survival dependence on natural resources from which they derive food, water, energy, housing, medicines, and clothing on an uninterrupted basis. They are more likely to be exposed to deteriorating environmental conditions (e.g., illness due to water pollution) and have fewer means to cope to the consequences of environmental deterioration and natural disasters. Despite considerable growing recognition of poverty-environment linkages, these linkages have seldom been recognized in many pro-poor development policies, including PRSPs. Where these linkages have been mentioned, they have failed to translate such concern into investment programs and policy initiatives to improve resource management and improve livelihoods for the rural poor.

Key hypotheses:

Key hypotheses of this research are:

Hypothesis 1: The roles of natural resource wealth, especially their contribution to rural livelihoods, have been inadequately addressed in EC development programmes. An evaluation of poverty-environment impacts and ways to address these shortcomings is needed.

Hypothesis 2: Long term national to local level institutional and policy changes are needed to help ensure that country development strategies better integrate poverty-environment concerns.

4.0 The study area

The geographical study area in Rwanda is Kibungo Province in southeastern Rwanda.

5.0 Methodology of the Study

A series of linked research activities will be completed by this study as described below:

- *CSP reviews* will be conducted to evaluate anticipated environmental impacts of EC country strategy investment in three countries. The reviews will rely on interviews with experts and staff of relevant local to national institutions and draw on documents such as EC development policies and papers that describe environmental and livelihood impacts of similar programs. This activity is currently being co-financed by WWF EPO and MPO (see Annex 2 under “CSP Reviews”) and will be conducted prior to the start of EC-PREP funding.
- *Multi-level analysis* will be conducted of local poverty-environment dynamics in defined geographical areas within two countries, and the policy and institutional factors shaping them at meso and macro levels. This analysis will be conducted by small, multidisciplinary teams of researchers with oversight and management from WWF in-country offices and WWF-MPO.
- *Follow-up CSP reviews* will be conducted to assess if the Country Strategies are addressing the poverty-environment concerns and required interventions as highlighted in the multi-level case study analyses. This review will be conducted by WWF EPO in conjunction with local offices.
- *Institutional evaluations* will be carried out to identify long term institutional and policy opportunities to improve poverty-environmental streamlining in future CSP design. The institutional evaluations will rely on document reviews and interviews with individuals - at country and EC level - involved in CSP development and revision. This activity will build upon current EC environmental integration activities (e.g., manual development) and will be conducted by WWF EPO.
- *Recommendations* will be drawn based on results from the multi-level analysis and CSP reviews on strategic gaps and weaknesses that need to be addressed in CSPs in relation to environmental dimensions of poverty. Recommendations will also be developed on measures to improve poverty-environmental integration in the process of developing CSPs.
- *Awareness building material* on the need and opportunities to address EC Country Strategy poverty-environment weaknesses will be developed by WWF EPO and MPO. Its distribution will be conducted by the WWF network and by local to national organizations with oversight from WWF EPO and MPO.

Methodology:

Owing to this study's emphasis on the importance of natural resources assets to the rural poor, this study is fundamentally structured around key **poverty-environment linkages**. These linkages are namely: that poor people's livelihoods are disproportionately dependent on natural resources; that especially the rural poor fundamentally rely on natural resources and land rights; that poor people are more likely to suffer health consequences from deteriorating environments; and that people living in poverty are more vulnerable to and have fewer means to cope with environmental disasters. This study's evaluations, including its CSP reviews and multi-level evaluations, are critically based on such poverty-environmental issues.

This study's methodology furthermore highlights **micro to macro linkages**, particularly higher-level policy and institutional factors shaping local poverty-environment dynamics. Finally, the methodology emphasizes long term approaches to address poverty-environmental weaknesses. This research will

provide recommendations on programs of action needed to address current poverty-environmental weaknesses and on long term institutional and policy changes needed to improve future poverty-environmental streamlining in EC aid programming.

Methodology for Objective 1:

CSP reviews and *multi level analyses* will be used to evaluate anticipated environmental impacts of current CSPs and to identify areas of strategic intervention. The *CSP reviews* will be structured around key poverty-environmental issues described above and conducted in three countries. Criteria for country selection include: representation of EU focal areas and WWF ecoregions; availability of CSPs, and synergies with similar programs. Candidate countries are Tanzania, Madagascar, Kenya, Papua New Guinea, and Vietnam.

Multi-level poverty-environment analyses will subsequently be undertaken to gain a more detailed understanding of structural impediments that are reinforcing (or anticipated to reinforce) rural poverty and environmental degradation in particular localities or subregions. The analysis will assess poverty-environment dynamics at the local level, establish the relationship of constraints to meso-level institutional arrangements, and make linkages to macro policies and institutions. Due to resource constraints, the *multi-level analysis* will be conducted in defined geographical areas within two (of the three above mentioned) countries. This analysis will cut across relevant EU focal areas for that country/locality.

Follow-up CSP reviews will then be conducted in these two countries to evaluate whether the current EC Country Strategies are addressing the poverty-environmental concerns identified in the multi-level analysis. Recommendations will be drawn from results of the multilevel analysis and CSP reviews and distributed to raise awareness on the need to improve poverty-environmental streamlining in EC development assistance.

Methodology for Objective 2:

Institutional evaluations will be conducted to identify policy and institutional opportunities to improve future poverty-environmental streamlining. This evaluation will describe current procedures used by the EC and partner developing countries to integrate environmental concerns in Country Strategies and will account for current efforts by the EC to improve environmental integration. *Recommendations* will be drawn to *raise awareness* on the long term institutional and policy opportunities.

Why the methodology is appropriate to the focus area and project results:

This research fundamentally relies on evaluations structured about *poverty-environmental issues*, acknowledges *multi-level causality and linkages*, and highlights *institutional and process oriented changes*. These approaches have intentionally been used to help ensure that results of this research may translate into long term changes that will improve environmental streamlining in EC aid programming and in turn environmental conditions and the livelihoods of the rural poor.

6.0 Activities.

- 6.1 Collection and collation of baseline information, from relevant institutions and review relevant policy documents
- 6.2 Fieldwork.
- 6.3 Data analysis
- 6.4 Report writing
- 6.5 Presentation of initial results

7.0 Expected Output and Deliverables

7.1 Report submissions.

The consultants shall submit 4 copies of all the expected outputs both in hard copies and on CD-ROM copies. The consultants must also submit 4 copies of an **Executive Summary** of all the major findings and recommendations as stand-alone report both in hard and soft copies on CD. Two copies of the main reports and the Executive summary both in hard and soft copies shall be submitted to WWF.

8.0 Level of Efforts and Expertise Required

This study will require the expertise of scientist with professional knowledge and academic qualification if Masters degree or above. The consultant must have at least over five years of working experience. Details of the level of effort for each team member are included in the illustrative budget but in total, the whole work will take at most 40 days per person.

9.0 Assignment Period and Deliverables

The assignment shall start on **March 14, 2005** and continue for a period of **39 days** including fieldwork. The draft report shall be submitted by **May 6, 2005**, comments will be submitted to consultants one week thereafter. The **FINAL** report shall be submitted to client by **May 27, 2005**. Other deliverables include a short brief on results at field level due **April 15, 2005** and a short brief on results at national level **April 29, 2005**.

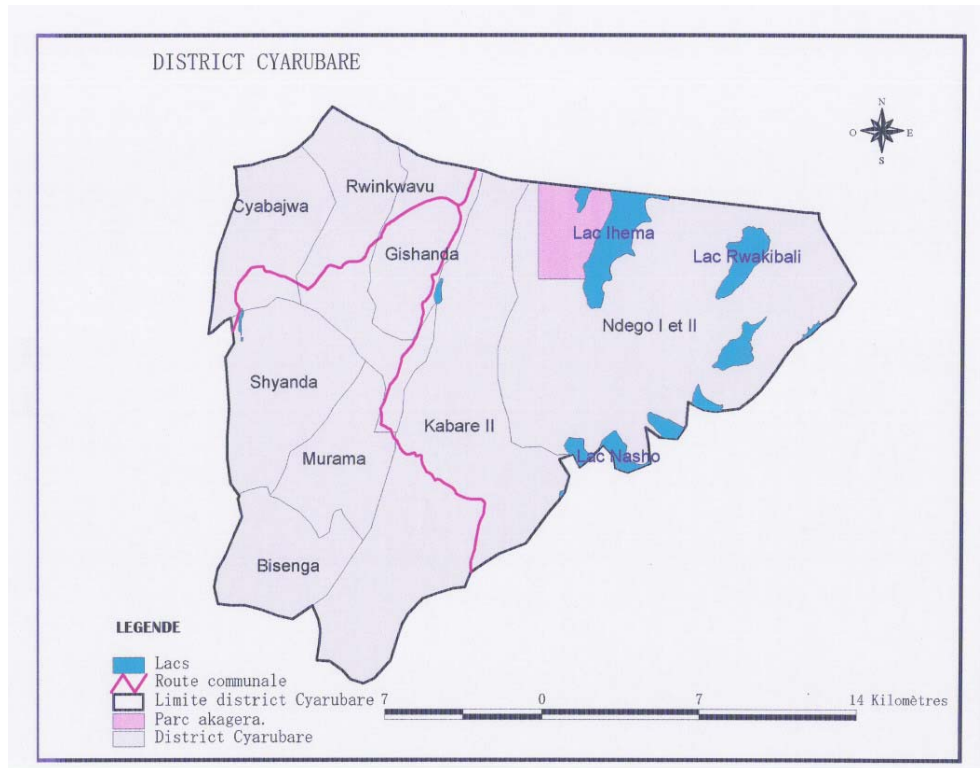
10.0 Oversight

REMA is responsible for facilitating implementation of the study with support from WWF-MPO and WWF-EARPO. The Consultants will therefore report to and work very closely with the research coordinator in REMA.

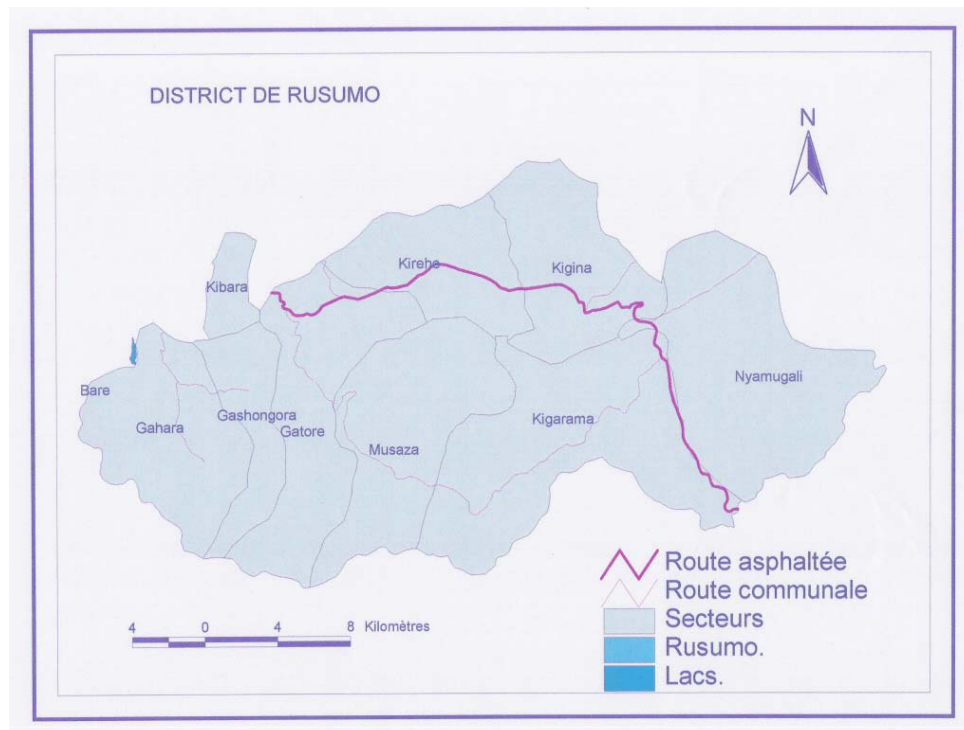
Annex 2. Maps



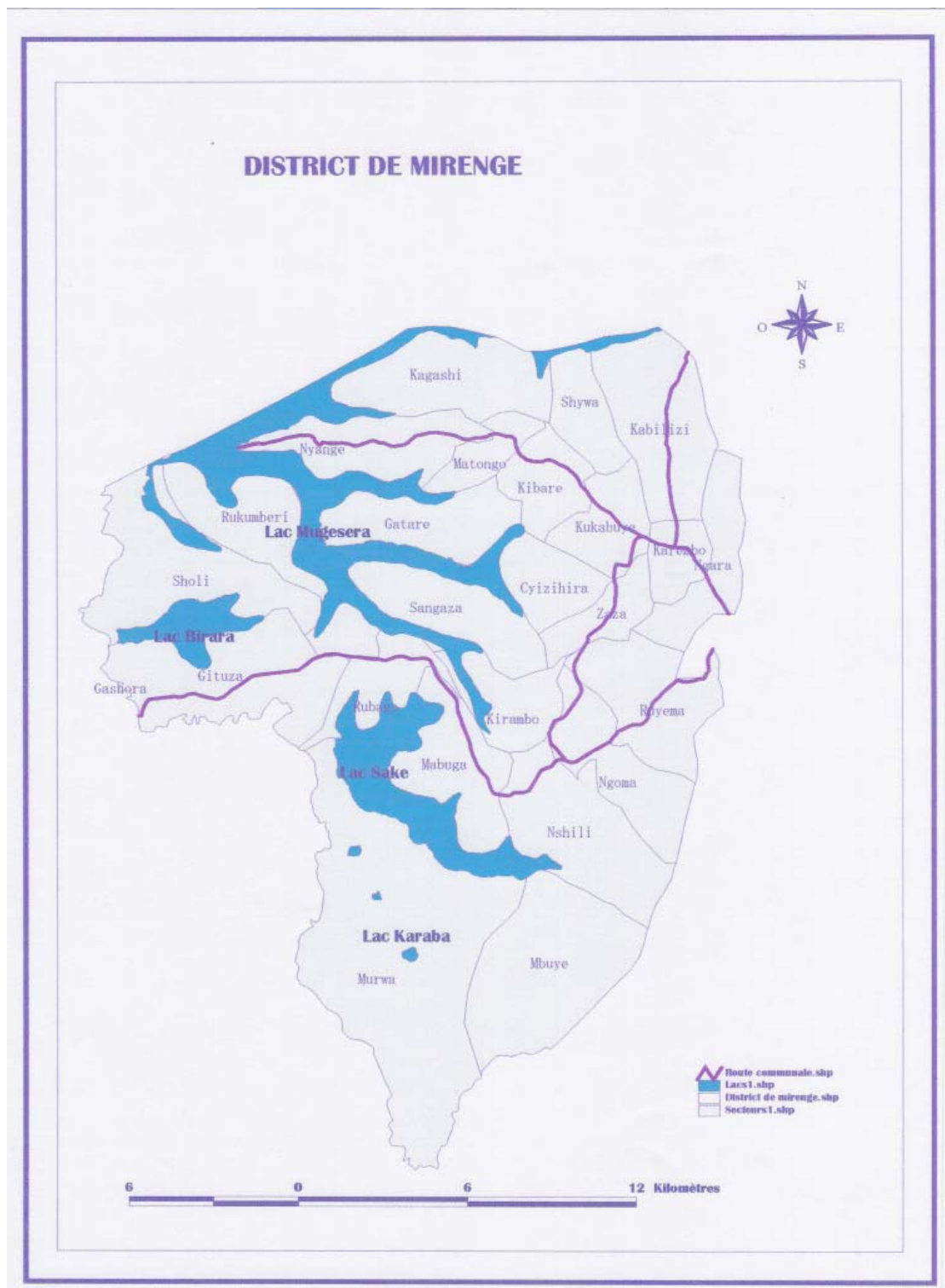
Map 1. Province of Kibungo in southwestern Rwanda. Cyarubare, Rusumo, and Mirenge Districts were chosen for this study.



Map 2. Cyarubare District in Kibungo Province. The Sectors of Murama, Ndego II, and Rwinkwavu were visited in this study.



Map 3. Rusumo District in Kibungo Province. The Sectors of Kigarama, Kirehe, and Nyamugali were visited in this study.



Map 4. Mirenge District in Kibungo Province. The Sectors Mbuye, Nyange, and Ruyema were visited in this study.

Annex 3. Questionnaires

QUESTIONNAIRE FOR COMMUNITY MEMBERS

Date/Time:
Location:

ECONOMIC

1. What natural resources do you use to earn a living?
2. What are the main activities undergone to generate income from those resources?
3. What are the environmental consequences of these activities?
4. How does the environment contribute to reduce the poverty? (positive impact)
5. What are the economic opportunities of natural resources?
6. What are the main environmental constraints to reducing poverty in your area? List top three...
7. What are the socio- economic consequences on your daily life because of these constraints?
8. What must be done to alleviate poverty relative to the existing resources?(solutions, propositions)

SOCIAL

1. What is the social history of the land?
2. What is the division of labor of men and women?
3. What are the social consequences of environmental degradation?
4. What is the role of men and women and youth in decision-making at the local level?
5. How are common resources shared between and among communities?
6. What is the linkage between local community, institutions, and CDC?
7. What are the mechanisms of arbitration mechanisms between and among communities?
8. What are your sources of information on environmental issues?

POLICY

Men and Women separate:

1. Who owns the environmental resources? (wetlands, forest, etc.)
2. How is access to national/environmental resources allocated?
3. How is technical advice for agriculture, engineering, and water supply management provided to you?
4. Do you know any laws governing the use of environmental resources?
5. Who enforces these laws?
6. How well do you think your concerns are represented to the commune/sectorCDC?
 - a. Poor
 - b. Ok, but could be better
 - c. Good
 - d. Excellent
7. What are your key environmental concerns?

QUESTIONNAIRE FOR THE SECTOR LEVEL

Interviewer	Date/Time
Interviewee:	Location:
Position	
Comments:	

N o	Question	Response
1	What are the general problems for your sector?	
2	What is the current state of environment in your sector?	
3	How do you plan and budget your projects?	
4	What projects do you envision?	
5	Who owns the environmental resources? (Wetland, forest etc.)	
6	How is access to natural/environmental resources allocated?	
7	How is technical advice for agriculture, engineering, and water supply management provided to you?	
8	Do you know of any laws governing the use of environmental resources?	
9	Who enforces these laws?	

10. How well do you think your concerns are represented to the commune/sector/CDC/District level?

1. Poor 2. OK but could be better 3. Good 4. Excellent

Policy and Institutional Questionnaire (District, Province, National)

Interviewer	Date/Time
Interviewee: Name	Location:
Position	Level: District Province National
Comments:	

Question	Response
What are the general problems for your jurisdiction?	
What is the current state of environment in your jurisdiction?	
How do you plan and budget your projects?	
What projects do you envision for CDC funding?	
What are the responsibilities of your organization toward the environment?	1. Enforcement of law. 2. Awareness of regulations. 3. Reporting of breeches to other authorities. 4. Other
How often does the group meet?	1 weekly 2. Biweekly 3. Monthly 4. Bimonthly 5 quarterly 6. Biannually 7. Annually 8. Other
Who is invited?	
Where is the meeting held?	
What is the procedure for addressing breeches of environmental regulations/ law enforcement?	
How do you find out about environmental laws and regulations?	
Where do you get resources to conduct your activities?	
Are the resources....?	1. Very good 2. Too little 3 Adequate

Have you received any environmental training? What was it?	
Was it...?	1. Very good 2. Too little 3 Adequate
What sort of additional training do you think you need?	
How is technical support for agriculture, engineering, water supply management provided at this level?	
What are the key environmental concerns in the area?	

How do you prioritize them?

Issue	1	2	3	4	5	6	Score
6							
5							
4							
3							
2							
1							

How well do you think your concerns are represented Level up and level down?
Community, CDC, Sector, District, Province, National

Organisational Level	Relations with level up	Relations with level down	Comments

1. Poor 2. OK but could be better 3. Good 4. Excellent

What are the benefits of decentralisation? <i>Organisational, Institutional, Financial</i>	
What are the drawbacks? <i>Organisational, Institutional, Financial</i>	
What improvements need to be made?	

Annex 4. List of Contacts

District de Cyarubare

Date	Nom et prénom	Fonction
23/03/05	Rwigamba Aimable	Maire de district
23/03/05	Mukamasabo Donata	V/M, chargée de la promotion féminine et gender
23/03/05	Nyiramanzi J.Bosco	Agronome de district
24/04/05	Nzabanita Claude	Coordinateur du secteur Murama
28/04/05	Bimenyimana Livingston	Coordinateur du secteur Ndego II
28/04/05	Kayitare Phocas	Président du CDC/Ndego II
29/04/05	Bizimana J.Pierre	Executive Secretary for Rwinkwavu Secteur

District de Rusumo

Date	Nom et prénom	Fonction
30/04/05	Ntabyera Emmanuel	Maire de district
	Kanamugire P.Claver	V/M, chargé des affaires sociales
	Mungarurire Bejamin	V/M, chargé de la jeunesse
	Nzeyimana J.Damascène	Agronome forestier
31/03/05	Twizerimana Eliezer	Coordinateur du secteur Kirehe
01/04/05	Seramuka Etienne	Coordinateur du secteur Kigarama
04/04/05	Bizimungu Théogène	Coordinateur du secteur Nyamugali

District de Mirenge

Date	Nom et prénom	Fonction
05/04/05	Bizimungu J.Baptiste	Maire de district
05/04/05	Kabagwire Claudine	Secrétaire Exécutive du district
05/04/05	Sibomana Emmanuel	Agronome de district
05/04/05	Nyiraneza Espérance	V/M, chargée de la promotion féminine et du gender
05/04/05	Nyirinshuti Etienne	V/M, chargé des affaires sociales
06/04/05	Kayibanda Faustin	Coordinateur du secteur Mbuye
08/04/05	Sindikubwabo Théogène	Coordinateur du secteur Nyange
08/04/05	Nyirantibumva Donata	Secrétaire Exécutive du secteur Nyange
11/04/05	Nsabiyaremye Cassien	Coordinateur du secteur Ruyema

Province de Kibungo

Date	Nom et prénom	Fonction
	Ntabana Innocent	Préfet de la province de Kibungo
	Bosenibamwe Aimé	Secrétaire Exécutif de la Province
	Mukwiye Martin	Professionnel de l'environnement et des forêts
	Munyarusisiro Norbert	Chargé de l'appui à la décentralisation (GTZ)

National Level

Name	Title	Institution	Date (2005)
Eddy DELAUNAY-BELLEVILLE	Programme Officer (Rural Economy, Food Security, Decentralization, and Environment)	European Commission	April 14
Alessandro VILLA	Counsellor- Head of State (Rural Economy, Food Security, Decentralization, and Environment)	European Commission	April 14
Rose MUKANKOMEJE	Director General	REMA	April 14
Vincent GAHAMANYI	Project Analyst	CDF- MINALOC	April 15
Willy NDIZEYE	Project Analyst	CDF- MINALOC	April 15
Claudien HABIMANA	Director of Forests	MINITERE	April 19
Suzanne UWIMANA	Director of Environment	MINITERE	April 19
Bruno MWANAFUNZI	Director of Water	MINITERE	April 19
Earnest RWAMUCYO	Director of Strategic Planning Unit (PRSP)	MINECOFIN	April 20
Leslie BLINKER	Project Manager, DEMP	MINITERE/UNDP	April 22
Teobald MASHINGA	Head of Compliance and Enforcement Unit	REMA	April 25
Lillian KUMANZI	Head of Information	Bureau of Standards/ MINICOM	April 25
Eugene RURANGWA	Director of Lands	MINITERE	April 26
Fidele RUZIGANDEKWE	Executive Director, Rwanda Wildlife Authority	ORTPN	April 28
Telesphore NGOGA	Community Conservation Manager	ORTPN	April 28
Innocent BIZIMANA	Director of Planning	MINITERE	May 3

Presentation Participants on May 13, 2005 at NOVOTEL:

1. Gahamanyi Vincent, CDF
2. Kabera Juliet, MINITERE
3. Rwabutogo Joseph, MINITERE
4. Gerard Frank, REMA
5. Dusabeyezu Sébastien, REMA
6. Mangaran Francis, MINITERE
7. Rudasingwa Laurent, UNDP
8. Delaunay-Belleville Eddy, EC
9. Villa Alessandro, EC
10. Ntabyera Emmanuel, Mayor of Rusumo
11. Twagirayezu Innocent, GTZ
12. Bizimungu Jean Baptiste, Mayor of Mirenge
13. Rwigamba Aimable, Mayor of Cyarubare
14. Mukankomeje Rose, REMA
15. Gahamanyi Christine, ORINFOR

Annex 5. Recorded Results from Communities

1. Secteur MURAMA (District Cyarubare)

Aspects	Terre	Forêts	Eau	Marais/District
1.Caractéristiques principales (état de la situation)	<ul style="list-style-type: none"> - Terres dénudées par une sécheresse endémique et sans boisements ; - Végétation de savane à proximité du parc de l'Akagera (localisé dans l'ancienne délimitation du parc) - Peuplement récent (trois vagues : les années 70, 80, et 97) - Parcelle d'environ 0,5 ha chacun 	- déforestation massive et très peu de boisement public (à peine 4 ha environ)	Pas d'eau (pas de pluies ni rivières ni lac) sauf quelques sources	<p><i>4 grands marais dont trois sont aménagés</i></p> <p>Murama : 2 petits marais (Rugazi et Rwagasagura) qui ne sont pas aménagés.</p>
2. Activités exercées	<ul style="list-style-type: none"> - Agriculture (surtout sorgho) - Elevage (surtout caprin) - Construction de maison (briques adobes) 	- Activités pratiquement éteintes sur la ressource bois	-	- <i>Agriculture en trois saisons par les Associations uniquement</i>
3. Out put et Trend	<ul style="list-style-type: none"> - rendement agricole très faible à cause du manque de pluies Trend : - Passé : « 2 Ibigege »(7 sacs) - Actuel : environ 2 sacs sorgho - important cheptel caprin (<i>principale source de revenus actuellement</i>) 	<ul style="list-style-type: none"> - Out put nul actuellement <p>N.B. : le manque d'eau (fabrication de briques adobes) a accéléré la disparition des boisement due à la construction des maisons (repeuplement)</p>	-	-
4. Droit de propriété et Accès	<ul style="list-style-type: none"> - peuplement par l'Etat d'émigrés venus d'autres provinces (années 70) - achat des parcelles par de nouveaux arrivés (années 80) et morcellement des terres ! - partage des parcelles par l'Etat après 1994 et habitat regroupé sur des parcelles égalitaires 	Plus aucun accès car disparition de la ressource	-	- Accès autorisé par l'autorité locale pour les associations
5.Conseils techniques	<ul style="list-style-type: none"> -structures organisationnelles de l'Etat - un seul agronome du District (en conclusion : peu encadré) 	Conseils de l'autorité locale à reboiser, mais plusieurs contraintes	-	aucun

6.Problèmes et conséquences	<ul style="list-style-type: none"> - érosion et dégradation des sols - forte diminution des pâturages pour bovins <p>Conséquence évidente : <i>d'avantage de pauvreté</i></p>	<ul style="list-style-type: none"> - déforestation massive (repeuplement) et raréfaction du bois de chauffe : longs trajets vers secteur Ndego - réduction des précipitations (depuis 1994) - érosion sur les terres 	- beaucoup de conséquences : etc...	- dégradation des marais due aux bananerais (cultures pérennes)
7.Stratégies d'adaptation	<ul style="list-style-type: none"> - élevage de caprins : principale source de revenu - servir de main d'œuvre pour les voisins mieux lotis 	-	-	-
8. Conflits/litiges sociaux	- quelques litiges des parcelles. De plus les familles nombreuses se sentent lésées.	-	-	-
9. Contraintes	<ul style="list-style-type: none"> - manque de pluies - étroitesse des terres à cultiver - insuffisance de moyens (1 agronome/ district) - termites 	- termites (reboisement et cultures)	Pas de sources d'eau	Non aménagement des marais
10. Solutions/proposit°	<ul style="list-style-type: none"> - engrais minéraux (fertilisation des terres) - lutte contre l'érosion - reforestation - lutte contre les termites - foyers améliorés - création d'emplois non agricoles - captage d'eau des toitures 	<ul style="list-style-type: none"> - vulgarisation des foyers améliorés ou énergies alternatives - reboisement 	<ul style="list-style-type: none"> -adduction d'eau - forage dans nappes phréatiques 	Aménagement des marais

2. Secteur NDEGO II (District Cyarubare)

Aspects	Terre	Forêts	Eau	Marais
1. Caractéristiques principales (état de la situation)	<ul style="list-style-type: none"> - Terres marquées par une sécheresse endémique (trois ans sans pluies suffisantes) depuis plusieurs décennies - Végétation de savane à proximité du parc de l'Akagera - Repeuplement récent et massif dans une zone limitrophe du parc : <i>déboisement pour cultiver , construire les maisons et vendre du charbon</i> - Réduction rapide des parcelles (2 ha pour le installés en 1997, 1 ha pour tous en 1998) - terres fertiles en cas de pluies 	Quelques forêts galeries près du parc de l'Akagera	<ul style="list-style-type: none"> - Plusieurs lacs poissonneux mais interdits d'exploitation à la population - pas d'adduction d'eau potable (usage des eaux lacustres) - eaux de pluies rares 	Presque pas de marais « hari inkuka ya l'Etat » à proximité du lac Ihema
2. Activités exercées	<ul style="list-style-type: none"> - Agriculture (surtout sorgho) - Elevage (surtout bovin) - Construction de maison (briques adobes) 	Déforestation pour : <ul style="list-style-type: none"> - agriculture - charbon - charpente 	<ul style="list-style-type: none"> - pas de pêche pour la population (plutôt enrichissement des riches de Kigali – SOPEM) - activité d'adduction d'eau en cours - 	-
3. Out put et Trend	<ul style="list-style-type: none"> - Rendement agricole très faible à cause de : i) manque de pluies ii) espace cultivable iii) animaux prédateurs from parc iv) l'herbe kura isuka <p>Trend : pas de passé, anciennement parc, nouvellement habité depuis 1997</p>	-	-	-
4. Droit de propriété et modalités d'accès	- peuplement par l'Etat d'anciens et nouveaux réfugiés en 1997	- Accès massif et anarchique quoique interdit	Droit d'exploitation des lacs accordée par l'Etat à la seule Société ...	-
5. Conseils techniques	<ul style="list-style-type: none"> - structures organisationnelles de l'Etat - un seul agronome du District (en conclusion : peu encadré) - ORPN pour la protection de l'env. - LWF pour les pépinières 	-	-	-

6. Problèmes et conséquences socio-économiques	<ul style="list-style-type: none"> - déforestation massive - sécheresse - diminution du rendement des terres - aller vendre sa force de travail pour les hommes, délaissant sa famille dans une plus grande pauvreté (environ 50%) des chefs de famille <p>En conclusion : davantage de pauvreté</p>	-	<ul style="list-style-type: none"> - amarebe sur Nasho Lac - non accès à la pêche -destruction des ingazi (protégeant les bords du lac) pour les besoins de la construction des maisons- Non accès à la pêche sur Ihema, ni aux poissons pêchés par la Société de Pêche 	Pas d'activités agricoles en saison sèche (insuffisance de marais)
7. Stratégies d'adaptation	- servir de main d'œuvre pour les voisins mieux lotis ou dans d'autres localités	-	-	-
8. Conflits/litiges sociaux	Quelques cas litigieux « kwonesha mu myaka y'abandi »	-	-	-
9. Contraintes	<ul style="list-style-type: none"> - carence des pluies (grande sécheresse) - termites - insuffisance de ressources financières et humaines - animaux prédateurs 	-	<ul style="list-style-type: none"> - non accès à la pêche et aux poissons - pas de sources d'eau 	-
10. Solutions	<ul style="list-style-type: none"> - tranchées de protection contre les animaux prédateurs du Parc - reforestation - lutte contre les termites - irrigation des eaux des nombreux lacs - introduction des cultures à cash crops tel que « Molingo » et résistant à la sécheresse 	Arrêter la déforestation en cours	<ul style="list-style-type: none"> - irrigation des eaux des lacs - accès contrôlé des associations locales à l'exploitation des ressources halieutiques 	-

En conclusion : les particularités du secteur NDEGO II sont :

- migrations récentes sur des sols non exploités auparavant
- climat de forte sécheresse
- non accès aux ressources halieutiques
- destruction des animaux prédateurs en provenance du Parc (faible compensation de l'ORTPN)

3. Secteur RWINKWAVU (Cyarubare District)

Aspects	Terre	Sous-sol	Eau et Marais
1. Caractéristiques principales (état de la situation)	<ul style="list-style-type: none"> - Terres marquées par une sécheresse endémique (trois ans sans pluies suffisantes) depuis plusieurs décennies - Quasi-disparition de la végétation de savane qui préexistait dans cette proximité du parc de l'Akagera - Repeuplement massif en 1997 dans cette zone jadis prospère (années 70) - Réduction rapide des parcelles : 1 ha pour tous en 1997) - terres fertiles en cas de pluies mais, parsemées de géantes et nombreuses termitières 	Présence de gisement (cassitérite) actuellement exploité par une Société Privée qui interdit désormais l'exploitation artisanale sur les zones de l'ancienne REDEMI	<ul style="list-style-type: none"> - Pas d'eau, pas de source, pas de pluies (environ 2 mois par an !) - un seul petit marais qui pourrait être drainé pour irriguer les champs ?
2. Activités exercées	<ul style="list-style-type: none"> - Agriculture - Elevage (surtout caprin) - Construction de maison (briques adobes) 	Exploitation des mines	Agriculture
3. Out put et Trend	<ul style="list-style-type: none"> - Rendement agricole très faible à cause de : i) manque de pluies ii) espace cultivable fortement réduit iii) animaux prédateurs from parc <p>Trend : Passé années 70 : 2 à 5 ha/parcelle Actuel : 1 ha avec une production d'environ 20% du passé</p>	Voir Société Privée, avec : <ul style="list-style-type: none"> - diminution de l'effectif jadis employé dans les carrières - diminution des revenus tirés de l'exploitation minière 	-
4. Droit de propriété et modalités d'accès	- peuplement par l'Etat d'anciens et nouveaux réfugiés en 1997	Autorisation accordée à une seule société privée (processus de privatisation de l'ex-REDEMI)	-
5. Conseils techniques	<ul style="list-style-type: none"> - structures organisationnelles de l'Etat - un seul agronome du District (en conclusion : peu encadré) 	-	-

6. Problèmes et conséquences socio-économiques	<ul style="list-style-type: none"> - déforestation massive - forte diminution des parcelles et du rendement des terres - aller vendre sa force de travail pour les hommes, délaissant sa famille dans une plus grande pauvreté <p>N.B. : <i>forte tendance à l'émigration d'une zone qui ne dispose plus de ressources naturelles pour faire vivre ses habitants</i></p>	Problèmes d'érosion sont apparus sur les anciennes carrières	
7. Stratégies d'adaptation	<ul style="list-style-type: none"> - servir de main d'œuvre pour les voisins mieux lotis ou dans d'autres localités - élevage de caprins 	-	-
8. Conflits/litiges sociaux	Quelques cas litigieux : conflits entre agricultures et éleveurs	-	-
9. Contraintes	<ul style="list-style-type: none"> - carence des pluies (grande sécheresse) - termites - insuffisance de ressources financières et humaines - animaux prédateurs 	-	Difficulté de s'approvisionner en eau
10. Solutions	<ul style="list-style-type: none"> - tranchées de protection contre les animaux prédateurs du Parc - reforestation - lutte contre les termites - introduction des cultures à cash crops tel que « Molingo » et résistant à la sécheresse - renforcer les pmer hors agricoles 		reforestation

En conclusion : - Cas typique d'une zone dont la forte pression humaine explique la quasi-disparition actuellement observée des ressources naturelles dont les habitants tirent l'essentiel pour vivre. Il ne reste pratiquement plus que :

- une **très petite terre** et non rentable à cause du manque de pluies
- un **sous-sol** qui ne nourrit plus grand monde comme dans le passé

4. DISTRICT DE RUSUMO

Aspects	Terre	Forêts	Eau	Marais
1. Caractéristiques principales (état de la situation)	<ul style="list-style-type: none"> - Grand district et très peuplé - Terres marquées par une sécheresse endémique (rarement plus de 2 mois successifs de pluies suffisantes par an depuis plusieurs années) - Repeuplement par vagues successives dans une zone anciennement peu peuplée : avant les années 70, les années 70 à 94, après 1994 - termites - Réduction rapide des parcelles et faible rendement (surexploitation de la terre) : 0,5 ha par ménage en moyenne - terres fertiles en cas de pluies - habitat regroupé et champs éloignés 	Déforestation massive	<ul style="list-style-type: none"> - pas assez d'eau, mais quelques sources non aménagées - eaux de pluies rares 	Plusieurs marais non aménagés et cultivés anarchiquement
2. Activités exercées	<ul style="list-style-type: none"> - Agriculture - Elevage - Construction de maison 	Déforestation pour : <ul style="list-style-type: none"> - construction des maisons pour les retournées - énergie combustible - terres à cultiver agriculture 	-	Quelques cultures de riz de façon spontanée et des cultures traditionnelles
3. Out put et Trend	<ul style="list-style-type: none"> - Rendement agricole très faible à cause de : i) manque de pluies ii) espace cultivable réduit 			
4. Droit de propriété et modalités d'accès	<ul style="list-style-type: none"> - peuplement par l'Etat d'anciens et nouveaux réfugiés (respectivement en 1995 en 1997) 	<ul style="list-style-type: none"> - Accès massif et anarchique entre 1994 et 1997 (repeuplement) 		Seulement pour les associations agricoles agréées

5. Conseils techniques	<ul style="list-style-type: none"> - structures organisationnelles de l'Etat - 2 agronomes du District (en conclusion : peu encadré) - LWF pour les pépinières 	Pratiquement aucun, sauf instruction interdiction d'accès	-	Aucun
6. Problèmes et conséquences socio-économiques	<ul style="list-style-type: none"> - déforestation massive - sécheresse - diminution du rendement des terres - <i>Inaccessibilité du grand marais de l'Akagera potentiellement riche</i> - élevage en divagation 	<ul style="list-style-type: none"> - manque de bois de chauffe, de construction et probablement la sécheresse qui s'est accrue depuis quelques années 	<ul style="list-style-type: none"> - Grande perte de temps pour aller chercher de l'eau - problème d'arrosage des plants de reboisement 	
7. Stratégies d'adaptation	<ul style="list-style-type: none"> - servir de main d'œuvre agricole pour les voisins mieux lotis et surtout en Tanzanie 	<ul style="list-style-type: none"> - utilisation des végétaux séchés pour la cuisson (feuille de bananiers, arbustes du marais de l'Akagera, etc..) 	-	-
8. Conflits/litiges sociaux	<ul style="list-style-type: none"> Quelques cas litigieux « kwonesha mu myaka y'abandi » - problèmes liés au départage des terres 		Dispute sur les sources aménagées	-
9. Contraintes	<ul style="list-style-type: none"> - carence des pluies (grande sécheresse) - termites - insuffisance de ressources financières (budget de 46 MFRw CDF pour 2005 !) et humaines 	<ul style="list-style-type: none"> - <i>sécheresse et termites qui contrarient les efforts de reboisement</i> 	<ul style="list-style-type: none"> - sécheresse et absence de forêts 	Non aménagement des marais (inaccessibilité)
10. Solutions	<ul style="list-style-type: none"> - activités pmer hors agricoles - reforestation - lutte contre les termites - irrigation des eaux de l'Akagera - introduction des cultures à cash crops tel que « Molingo » et résistant à la sécheresse - élevage moderne en stabulation - water havesting (anti-érosive) - énergies alternatives 	<ul style="list-style-type: none"> - Reboisement - Utilisation d'énergies alternatives 	<ul style="list-style-type: none"> - irrigation des eaux de l'Akagera - adduction d'eau - reforestation 	<ul style="list-style-type: none"> - aménagement des marais - conseils techniques pour culture de riz

Spécificités pour les trois secteurs :

KIREHE	KIGARAMA	NYAMUGALI
<ul style="list-style-type: none"> - coût social d'accès à l'eau élevé - relativement moins de sécheresse - élevage de bovins en stabulation 	<ul style="list-style-type: none"> - forte érosion des sols - déforestation massive et terres dénudées - carence marquée d'eau 	<ul style="list-style-type: none"> - pas de sources d'eau - grande sécheresse - vaste marais de l'Akagera non aménagé (accès quasi-impossible)

5. DISTRICT DE MIRENGE

Aspects	Terre et sous-sol	Forêts	Eau et Marais
1. Caractéristiques principales (état de la situation)	<ul style="list-style-type: none"> - Terres marquées par des périodes de sécheresse prolongées - Repeuplement par vagues successives dans une zone anciennement peu peuplée : avant les années 70, les années 70 à 94, après 1994 - termites - Réduction rapide des parcelles et faible rendement (surexploitation de la terre) : 1 ha maximum par ménage en moyenne - terres fertiles en cas de pluies - habitat regroupé - sous-sol riche en kaolin (secteur de Mbuye) 	<ul style="list-style-type: none"> -Déforestation massive - activité de reboisement (pépinière) handicapée par la carence de pluies suffisantes et les termites 	<ul style="list-style-type: none"> - présence de nombreux lacs de cuvette - Plusieurs marais non aménagés et d'accès difficile - lacs en voie d'assèchement (marais de Matongo) et abritant des animaux ravageurs de cultures
2. Activités exercées	<ul style="list-style-type: none"> - Agriculture - Elevage - Construction de maison - Exploitation de carrières de kaolin à Mbuye 	Déforestation pour : <ul style="list-style-type: none"> - construction des maisons pour les retournées - énergie combustible - terres à cultiver agriculture 	<ul style="list-style-type: none"> - activité de pêche traditionnelle sur les lacs ; - transport lacustre sur des pirogues à pagaie ou à moteur électrique - agriculture non contrôlée dans les marais
3. Out put et Trend	<ul style="list-style-type: none"> - Rendement agricole très faible à cause de : i) manque de pluies ii)espace cultivable réduit <p>Trend : la terre s'est morcelée au cours des vagues successives de peuplement, passant d'une EAF de 3 ha à un maximum de 1 ha aujourd'hui</p>	Quasi disparition des forêts (reste quelques boisements domaniaux)	-
4. Droit de propriété et modalités d'accès	- peuplement par l'Etat d'anciens et nouveaux réfugiés (respectivement en 1995 en 1997)	- Accès massif et anarchique entre 1994 et 1997 (repeuplement)	-

Aspects	Terre	Forêts	Eau et Marais
5. Conseils techniques	<ul style="list-style-type: none"> - structures organisationnelles de l'Etat - 2 agronomes du District (en conclusion : peu encadré) - LWF pour les pépinières 	Pratiquement aucun, sauf instruction interdiction d'accès	Pratiquement aucun conseil technique (pas d'agronome)
6. Problèmes et conséquences socio-économiques	<ul style="list-style-type: none"> - déforestation massive - sécheresse - diminution du rendement des terres - <i>Inaccessibilité du grand marais de l'Akagera potentiellement riche</i> - élevage en divagation (sauf relativement à Nyange Sector) 	<ul style="list-style-type: none"> - manque de bois de chauffe, de construction 	<ul style="list-style-type: none"> - Grande perte de temps pour aller chercher de l'eau - problème d'arrosage des plants de reboisement (pas de pluies, mais des lacs souvent éloignés) - sécheresse et absence de forêts <p>Non aménagement des marais (inaccessibilité)</p>
7. Stratégies d'adaptation	<ul style="list-style-type: none"> - servir de main d'œuvre agricole pour les voisins mieux lotis 	<ul style="list-style-type: none"> - utilisation des végétaux séchés pour la cuisson 	-
8. Conflits/litiges sociaux	<p>Quelques cas litigieux entre agriculteurs et éleveurs (bétail en divagation et s'alimentent parfois dans les champs des voisins)</p> <ul style="list-style-type: none"> - problèmes liés au départage des terres 	-	-
9. Contraintes	<ul style="list-style-type: none"> - carence des pluies (grande sécheresse) - termites - insuffisance de ressources financières 	<p><i>- sécheresse et termites qui contrarient les efforts de reboisement</i></p>	- Non aménagement des marais
10. Solutions	<ul style="list-style-type: none"> - activités pmer hors agricoles - reforestation - lutte contre les termites - irrigation des eaux de l'Akagera - élevage moderne en stabulation - water harvesting (anti-érosive) - énergies alternatives 	<ul style="list-style-type: none"> - Reboisement - Utilisation d'énergies alternatives - 	<ul style="list-style-type: none"> - irrigation des eaux de l'Akagera - adduction d'eau - reforestation - aménagement des marais - conseils techniques pour culture de riz

Spécificités pour les trois secteurs :

MBUYE	NYANGE	RUYEMA
<ul style="list-style-type: none"> - beaucoup de lacs créés par la rivière Akagera - animaux prédateurs venant du « lac-marais » Matongo - grande carrière de kaolin et subsistance d'une petite superficie de forêt naturelle 	<ul style="list-style-type: none"> - - déforestation massive et terres dénudées - carence marquée d'eau - grande activité de pêche (même par des associations de femmes) - beaucoup de conflits liés aux problèmes des parcelles de terre 	<ul style="list-style-type: none"> - relativement moins frappé par la sécheresse (assez de pluies) - persistance de forêts et boisements (cas rare dans le district !) - grande pauvreté suite à l'étroitesse des parcelles encore fertiles - cultures de café et présence de coltan non exploité

Annex 6. Terms of Reference for Strategic Plan Development

TERMS OF REFERENCE

CONSULTANCY ON THE DEVELOPMENT OF REMA's STRATEGIC PLAN AND INSTITUTIONAL FRAMEWORK

1. BACKGROUND

Environmental law is an essential tool for the governance and management of the environment and natural resources. After the 1994 war and genocide and the emergency period that followed, Rwanda has committed herself to the principles of sustainable development. As a result of this, the GoR evolved a systematic process of developing environmental legislation which culminated in the approval of the Environmental Bill in 2003 and 2004 by the Senate and Parliament.

In order to ensure that careful and systematic implementation of the law is achieved, the GoR of Rwanda has established the Rwanda Environment Management Authority (REMA). It is the responsibility of REMA as a national regulatory agency to support and facilitate the protection and management of environment in Rwanda. REMA will therefore be required to have a very sound strategic plan with appropriate institutional framework backed with a strong human capital base. In this respect, REMA has identified the need for developing a strategic plan that will serve as a roadmap in pursuance of her mandate.

2. DESCRIPTION OF THE ASSIGNMENT

The main beneficiaries for this assignment will be the all population of Rwanda, entitled to have a better and clean environment. The direct beneficiary will be REMA and MINITERE.

The new Environmental Law clearly states that:

“For the application of this law there shall be created:

- (a) The Rwanda Environment Management Authority, a public establishment endowed with legal personality, financial autonomy and executive powers;*
- (b) The National Fund for the Environment in Rwanda (FONERWA), which shall be the financial organ;*
- (c) An environmental Tribunal which shall be the judicial organ and for conflict resolution; and*
- (d) Provincial and District Committees in charge of environmental matters.”*

The ability of REMA to deliver services and live up to its mandate solely depends on a clearly defined roadmap and on the capacity of its human resource and the mechanisms in place to ensure optimum utilization of the same. This requires a robust organizational structure, clear policies on employee resourcing and rationalized reward system. As a consequence, in order to draw from experiences elsewhere, a need has arisen to have a team constituted by an International Consultant in the field of strategic planning/institutional change with the support of

local consultants to: (i) guide a participatory process of developing REMAs Strategic Plan; (ii) develop appropriate institutional framework and human resources strategy covering such areas such as optimal staffing levels, source of documents for job/person specifications and performance contract; (iii) identify the cross-sectoral linkages that REMA will be required to establish in order to effectively fulfill her mandate at the national and local levels; and (iv) develop a framework for identification of training needs.

The consultant team will work under the supervision and direction of the Director General, Rwanda Environment Management Authority to perform the following functions:

- (i) Review proposed organizational structure for REMA taking into account conflicts, overlaps and gaps and develop an appropriate institutional framework with appropriate optimal staffing levels;
- (ii) Develop appropriate institutional management tools which will outline REMA's policy on appointment, remuneration/reward, promotion, staff appraisal, discipline, severance terms and monitoring and evaluation.
- (iii) Assess the training needs of REMA staff, cross-sectoral agencies and decentralized entities and develop an implementation logframe for training;
- (iv) In conjunction with relevant ministries and development partners, develop a sound strategy for resource mobilization;
- (v) Prepare a five year Strategic Plan for REMA combining all the issues covered under (i) to (iv) above;
- (vi) Discuss the Strategic Plan with MINITERE and other relevant lead agencies especially decentralized entities, development partners and other stakeholders;
- (vii) Present the draft Strategic Plan at a national consensus building workshop (which will be organized by REMA in collaboration with MINITERE); and
- (viii) Submit the final report on REMA's Strategic Plan.

3. EXPERTS PROFILE

A team with an international expert (15 years of professional experience/Category One), team leader, and two national experts (10 years of professional experience/Category 2) will be constituted. The team will have the following expertise:

- (i) Advanced degree in Public Administration, strategic planning or Personnel/Human Resources Management.
- (ii) Hands on experience in the management of Human Resources or Public Affairs or Strategic Planning.
- (iii) Experience in similar assignments and specifically those related to institutional development of Environmental Management Institutions.
- (iv) Excellent communication and reporting skills in English and/or French.

4. LOCATION AND DURATION

The consultancy will take place in Kigali and will be performed within a period of three months implemented as two separate missions of:

- (i) 30 working days for both experts (including travel time for the international expert) to collect materials, consultation meetings with relevant stakeholders, according to steps (i) to (vi) of the assignment.
- (ii) 20 working days for both the experts (including travel time for the international expert), according to steps (vii) and (viii) of the assignment, where the consultant team will present during a national consensus building workshop the draft Strategic Plan.

5. REPORTING

The outputs from the assignment will be:

- (i) A costed Strategic Plan
- (ii) An Institutional Framework and Human Resource Strategy
- (iii) A costed Training Needs Assessment
- (iv) Resource Mobilization Strategy

A draft report in English or French, including all the abovementioned outputs, will be produced in 10 copies at the end of the first mission. The final report, will be finalized before the end of the second mission after receiving the comments from stakeholders and produced also in 10 copies.

Annex 7. Terms of Reference for EIA Guidelines

TERMS OF REFERENCE

CONSULTANCY ON THE DEVELOPMENT OF EIA GUIDELINES, REGULATIONS AND PROCEDURES AND CRITERIA FOR LISTING OF EIA EXPERTS

6. BACKGROUND

Environmental law is an essential tool for the governance and management of the environment and natural resources. After the 1994 war and genocide and the emergency period that followed, Rwanda has committed herself to the principles of sustainable development. As a result of this, the GoR evolved a systematic process of developing environmental legislation which culminated in the approval of the Environmental Bill in 2003 and 2004 by the Senate and Parliament.

In order to ensure that careful and systematic implementation of the law is achieved, the GoR of Rwanda has established the Rwanda Environmental Management Authority (REMA). It is the responsibility of REMA as a national regulatory agency to support and facilitate the protection and management of environment in Rwanda. REMA is obligated to develop appropriate environmental tools to support this endeavour. Such tools include EIA/environmental audit guidelines and environmental quality standards among others.

Pursuant to this responsibility, REMA has identified the area relating to the development of the EIA guidelines, criteria for listing individual or firm of EIA experts; a framework for environmental audit to be important priorities in order to implement EIA, now mandatory under the new environmental law.

7. DESCRIPTION OF THE ASSIGNMENT

The main beneficiaries for this assignment will be the all population of Rwanda, entitled to have a better and clean environment. The direct beneficiary will be REMA and MINITERE.

The new Environmental Law clearly states that:

“Every project shall be subjected to prior environmental impact assessment before granting it official approval. It shall be the same for programmes, plans and policies likely to affect the environment. A ministerial order shall provide specific details thereon.”

The import of this section is that there is a necessity to establish a framework and procedures for EIA (new projects), environmental audit (on-going activities) and strategic environmental assessment (policies, programmes and plans). Furthermore, Rwanda has not had the benefit of having an elaborate framework for conducting EIAs. As a consequence, in order to draw from experiences elsewhere, a need has arisen to have a team constituted by an International Consultant in the field of EIA with the support of a local consultant: (i) to guide a participatory

process of developing EIA guidelines, regulations and procedures; and (ii) to develop a criteria for listing individual experts or firm of experts authorized to conduct or prepare EIA studies and reports in Rwanda. This process will not only lead to promulgation of EIA/environmental audit guidelines, regulations and procedures but will also build local capacity in EIA/Environmental Audit for future reviews and improvements as and when necessary. It is also important to note that because of the absence of these guidelines, some investors/developers depending on their country of origin and funding agency, have used a variety of EIA guidelines especially World Bank and those of South Africa.

It is therefore envisaged that under this consultancy national EIA guidelines, regulations and procedures; criteria and procedure for listing EIA experts and environmental auditors authorized to conduct or prepare EIA studies and reports; and a framework and procedures for environmental audits will be developed.

The consultant team will work under the supervision and direction of the Director General Rwanda Environmental Management Authority to perform the following functions:

- (ix) Review the provisions of the Environmental law relating to EIA and develop EIA Guidelines, Regulations and Procedures for promulgation;
- (x) Develop criteria and procedures for listing of individual experts or firm of experts authorized to conduct or prepare EIA studies and reports, respectively;
- (xi) Establish a framework for strengthening institutional capabilities for a good understanding of EIA legislation and regulatory processes and procedures;
- (xii) Develop a framework and procedures for environmental audit;
- (xiii) Discuss the EIA guidelines, regulations and procedures, criteria and procedures for listing EIA experts and the framework and procedures for environmental audit with REMA;
- (xiv) Present the draft EIA guidelines, regulations and procedures; criteria and procedures for listing EIA experts; and the framework and procedures for environmental audit at a national consensus building workshop (which will be organized by REMA); and
- (xv) Submit the final report on EIA guidelines, regulations and procedures; criteria and procedures for listing EIA experts; and a framework and procedures for environmental audits.

8. EXPERTS PROFILE

A team with an international expert (15 years of professional experience/Category One), team leader, and a national expert (10 years of professional experience/Category Two) will be constituted. The team will have the following expertise:

- (v) Advanced degree in Environmental Impact Assessment and Environmental Law.
- (vi) Hands on experience in development of EIA guidelines and procedures and implementation.
- (vii) Experience in similar assignments and specifically in development of environmental management systems.
- (viii) Good communication and reporting skills in English and/or French.

9. LOCATION AND DURATION

The consultancy will take place in Kigali and will be performed within a period of two months implemented as two separate missions of:

- (iii) 20 working days for both experts (including travel time for the international expert) to collect materials, consultation meetings with relevant stakeholders, according to steps (i) to (v) of the assignment.
- (iv) 10 working days for both the experts (including travel time for the international expert), according to steps (vi) and (vii) of the assignment, where the consultant team will present during a national consensus building workshop the draft report on EIA guidelines, regulations and procedures; criteria and procedures for listing of EIA experts; and framework and procedures for environmental audits.

10. REPORTING

The outputs from the assignment will be:

- (i) EIA Guidelines, Regulations and Procedures ready for promulgation.
- (ii) Criteria and Procedures for Listing EIA experts (individuals and/or firms).
- (iii) A costed and targeted training needs assessment on EIA for the implementing agencies, decentralized entities and other supportive sectors.
- (iv) Framework and Procedures for environmental audits.

A draft report in English or French, including all the abovementioned outputs, will be produced in 10 copies at the end of the first mission. The final report, will be finalized before the end of the second mission after receiving the comments from stakeholders and produced also in 10 copies.

Annex 8. Terms of Reference for Environmental Quality Standards

TERMS OF REFERENCE

CONSULTANCY ON THE DEVELOPMENT OF ENVIRONMENTAL QUALITY STANDARDS

1. BACKGROUND

Environmental law is an essential tool for the governance and management of the environment and natural resources. After the 1994 war and genocide and the emergency period that followed, Rwanda has committed herself to the principles of sustainable development. As a result of this, the GoR evolved a systematic process of developing environmental legislation which culminated in the approval of the Environmental Bill in 2003 and 2004 by the Senate and Parliament.

In order to ensure that careful and systematic implementation of the law is achieved, the GoR of Rwanda has established the Rwanda Environment Management Authority (REMA). It is the responsibility of REMA as a national regulatory agency to support and facilitate the protection and management of environment in Rwanda. REMA is obligated to develop appropriate environmental tools to support this endeavour. Such tools include EIA/environmental audit guidelines and environmental quality standards among others.

Pursuant to this responsibility, REMA has identified the area relating to the development of the Environmental Quality Standards which will set the threshold values of the various environmental parameters such as water and air quality, emissions, wastes, noise and pesticides and toxic substances.

2. DESCRIPTION OF THE ASSIGNMENT

The main beneficiaries for this assignment will be the all population of Rwanda, entitled to have a better and clean environment. The direct beneficiary will be REMA and MINITERE.

The new Environmental Law clearly states that:

“Appropriate standards for the protection of the environment must be instituted while standardization and management services for the environment must ensure strict compliance.”

The import of this provision is that REMA must develop environmental quality standards which will enable her to monitor compliance. Furthermore, Rwanda requires environmental quality standards to provide a benchmark for determining the environmental impact. It will be very difficult to approve an EIA study without a threshold value upon which a decision can be made the intervention or activity will have a negative or positive impact or no impact. Thus, standards provide such benchmark. As a consequence, in order to draw from experiences elsewhere, a need has arisen to have a team constituted by an International Consultant in the field of environmental

quality standards with the support of local consultants to guide a participatory process of developing national environmental quality standards for Rwanda. This process will not only lead to the promulgation of environmental quality standards but will also build local capacity to monitor environmental quality standards. It is also important to note that because of the absence of such standards, REMA and other interested and affected parties will have to resort to international standards some of which may be inappropriate for Rwanda.

It is therefore envisaged that under this consultancy, working in collaboration with REMA and Rwanda Bureau of Standards, national environmental quality standards will be developed.

The consultant team will work under the supervision and direction of the Director General Rwanda Environment Management Authority to perform the following functions:

- (i) Develop minimum quality standards in respect to water quality, air quality, noise, waste, ionizing and other radiation, control of noxious smells and pesticides residues in raw agricultural commodities, processed foods and animal feed;
- (ii) Criteria and procedures for the measurement and monitoring of water quality, air quality, noise and sub-sonic vibrations and ionizing and other radiation;
- (iii) Document the analytical methods by which various environmental quality standards can be determined (including criteria for designating analytical and referral laboratories);
- (iv) Establish a framework for strengthening institutional capabilities for a good understanding of environmental quality standards legislation and regulatory processes and inspections;
- (v) Discuss the environmental quality standards with relevant lead agencies especially REMA, RBS among others;
- (vi) Present the draft environmental quality standards at a national consensus building workshop (which will be organized by REMA in collaboration with RBS); and
- (vii) Submit the final report on environmental quality standards.

3. EXPERTS PROFILE

A team with an international expert (15 years of professional experience/Category One), team leader, and a national expert (10 years of professional experience/Category Two) will be constituted. The team will have the following expertise:

- (i) Advanced degree in environmental science especially environmental chemistry or related subject.
- (ii) Hands on experience in development of environmental quality standards and implementation.
- (iii) Experience in similar assignments and specifically in development of environmental management systems.
- (iv) Good communication and reporting skills in English and/or French.

4. LOCATION AND DURATION

The consultancy will take place in Kigali and will be performed within a period of three months implemented as two separate missions of:

- (i) 30 working days for both experts (including travel time for the international expert) to collect materials, consultation meetings with relevant stakeholders, according to steps (i) to (v) of the assignment.
- (ii) 20 working days for both the experts (including travel time for the international expert), according to steps (vi) and (vii) of the assignment, where the consultant team will present during a national consensus building workshop the draft report on environmental quality standards.

5. REPORTING

The outputs from the assignment will be:

- (i) Minimum standards for the various environmental quality standards ready for promulgation.
- (ii) Criteria and procedures for the measurement and monitoring of various environmental quality standards;
- (iii) Document on the analytical methods for determining various environmental quality standards (including criteria for designating analytical and referral laboratories);
- (iv) A costed and targeted training needs assessment on environmental quality monitoring for the implementing agencies, decentralized entities and other supportive sectors.

A draft report in English or French, including all the abovementioned outputs, will be produced in 10 copies at the end of the first mission. The final report, will be finalized before the end of the second mission after receiving the comments from stakeholders and produced also in 10 copies.

**European Community's Poverty Reduction
Effectiveness Programme (EC-PREP) research project:
Streamlining poverty-environment linkages in the European
Community's development assistance**

EP/R05/15

**National-level assessment of
EC Country Strategy Papers:
Rwanda follow-up CSP (2002-2007) review
and institutional evaluation¹**

In partial completion of activities 5 – 10²

August 2005

1. Background

This national-level assessment of the Rwanda Country Strategy Paper (CSP) is one of several activities being conducted under an initiative on “Streamlining poverty-environment linkages in the European Community’s development assistance” – an initiative aimed to provide to the European Commission and its development partners recommendations to improve poverty-environment integration in EC development assistance. This assessment builds upon results of a recently conducted multilevel evaluation in Rwanda that identified – from especially the local perspective – poverty-environment dynamics and the meso to macro level policy and institutional factors shaping these.

The recent multilevel analysis identified various environment-poverty issues associated with current EC support under the 9th European Development Fund (EDF) and more specifically highlighted environmental/livelihood issues linked with the Decentralized Programme for Rural Poverty Reduction (DPRPR) programme – a four year program supported under the “rural development” focal area that is focused on providing direct financial support to decentralized levels of government at cellule, sector, district, and national level. Results of the multilevel analysis emphasized the need to improve environmental mainstreaming in the current decentralization process – implemented since 2001 – and highlighted the need to support environmental management capacity at local to national levels.

This national/EC assessment was conducted:

¹ This report was written by Mathilde Snel (mathildesnel@hotmail.com), a consultant contracted by WWF. Overall supervision was given by Hervé Lefeuvre (WWF-EPO, Hlefeuvre@wwfepo.org) and Dawn Montanye (Dawn.Montanye@wwf.org). This work has been financed under an award granted to the World Wide Fund for Nature (WWF) by the European Community’s Poverty Reduction Effectiveness Program (EC-PREP’s), a program jointly defined by the EC and DFID and funded through DFID. This report includes extracts from an initial pre-CSP review on the Rwanda CSP (Snel, 2004) and a similar assessment recently conducted for the Tanzania CSP (Snel, 2005).

² Activities 5 – 10 in the EC-PREP include follow-up CSP review and institutional evaluation activities for both the Tanzania and Rwanda case studies. This report discusses results for only the Rwanda case study.

- 1) to further evaluate environment-poverty concerns associated with EC support in Rwanda to the “rural development” and other focal areas (e.g., “macro support”);
- 2) to assess if current CSP investment is addressing the identified environment-poverty issues;
- 3) to evaluate EC- and national-level processes that are currently being used to mainstream environment-poverty linkages; and
- 4) to identify long-term institutional and policy recommendations to help improve environment-poverty streamlining in EC development cooperation.

In addition to this report, this initiative relies on an additional case study of the Tanzania CSP – that similarly entails a multilevel and national-level assessment – as well as a Brussels level institutional evaluation – that focuses on identifying entry points to improve environment-poverty integration in future CSP design. Awareness building material will be developed on recommendations drawn from the multilevel, national, and Brussels-level evaluations towards enhancing the impact of EC’s development assistance on poverty through increased attention to the role that the environment plays to people living in poverty.

2. Overview of paper and methodology

This national-level assessment of the Rwanda CSP relies on two key evaluations:

- a “follow-up CSP review” (section 4) that assesses:
 - environment-poverty issues linked to EC investment and
 - whether current CSP investment is addressing the environment-poverty concerns and
- an “institutional evaluation” that evaluates current EC and national processes used to mainstream environment-poverty linkages (section 5).

Lessons learned and best practices are drawn from the above evaluations to identify long term institutional and policy opportunities to improve poverty-environment integration in EC development strategies (“Recommendations” – section 6).

The study’s assessment relies on numerous interviews and an extensive review of documents. Interviews were conducted in July (2005) at various institutions including the EC country delegation in Kigali, national agencies (e.g., the Rwandan Environmental Management Agency, Ministry of Finance and Economic Planning, and Ministry of Lands, Environment, Forestry, Water and Mines), NGOs (e.g., International Gorilla Conservation Programme), and other donors (e.g., UNDP) (see Appendix 1 for a list of individuals contacted). National respondents were asked on primarily environment-poverty issues linked to EC investment and current national-level processes to integrate environment-poverty issues. EC respondents were asked particularly about processes used and opportunities to improve mainstreaming of environment-poverty linkages in the CSP process (see Appendix 2 for copies of the questionnaires used for respectively the national- and EC-level respondents). The questionnaires were not used as a blue print but were rather referred to facilitate discussion. As mentioned previously, this evaluation fundamentally builds on results from a recently conducted multilevel evaluation that identified using a bottom-up analysis environment-poverty issues from a local perspective and the structural impediments shaping these (Bush et al., 2005)³. The paper furthermore draws on (and contains extracts from) a pre-CSP assessment conducted for Rwanda (Snel, 2004) and follows a similar format as used in the recent Tanzania CSP evaluation (Snel, 2005).

³ The multilevel analysis relied on numerous interviews – with individuals and target groups – and an extensive survey of documents.

Prior to the follow-up CSP review and institutional evaluation (respectively sections 4 and 5), an overview is provided on current EC/CSP funding in Rwanda (section 3). Background information on Rwanda has furthermore been included in Appendix 3.

3. CSP investment in Rwanda (2002 – 2007)

Over the period 2002 – 2007 the EC is allocating under the 9th EDF a total amount of 186 million Euros to the Government of Rwanda⁴. Current EC/CSP spending in Rwanda – is focused on two primary focal areas: “rural development” and “macroeconomic support”. In addition, EC funding is being provided to fund primarily good governance initiatives that are centred about institutional and electoral support, justice, and reconciliation⁵. Following the mid-term review an amount of 176 million Euros has been allocated to support the following three core areas:

- *Rural Development*: 75 million Euros (43% of total);
- *Macro support*: 86 million Euros (49%); and
- *Other/non-focal support (namely good governance/institutional support)*: 15 million Euros (9%) (Delegation of the EC in Kigali and Ministry of Finance and Economic Planning of Rwanda, 2003)⁶.

In addition to the above, 10 million Euros remain in the CSP budget (under Envelope B), envisioned to be used to fund rural development interventions especially related to issues on land reform, water, energy, and environment (Kalisa personal communication, 2005; Delegation of the EC in Kigali and Ministry of Finance and Economic Planning of Rwanda, draft, 2004). EC support in the above indicated core areas are described in detail below.

3.1. Rural development (75 million Euro)

Initiatives funded under the “*rural development*” core area are as follows.

- Support to the Government of Rwanda’s *decentralization process* through namely the Decentralized Programme for Rural Poverty Reduction (DPRPR) – a programme aimed at providing direct support to communities so that they can initiate and implement their own community development plans (32 million Euros)⁷.
- Ten million Euros will be allocated directly to the cellule level, the most local level of government (*Ubudehe*). As indicated in Rwanda’s PRPS, each cellule will under decentralization be allocated \$1000 each year to collectively identify priority problems and to develop community-led problem solving in action plans (incorporated into Community Development Plans (CDPs)) (Government of Rwanda, 2002).
- Most of the remaining DPRPR budget will be used to support sector and district development priorities (formalized in District Development Plans (DDPs)). Funds are being allocated to the impoverished southeastern regions of Kigali-Ngali and Kibungo province. Funds are being distributed to districts in these provinces to support projects and budget support through the Common Development Fund (CDF) – a funding facility managed by the Ministry of Local Governance, Community

⁴ These are being provided under two envelopes – Envelope A (124 million Euros) and Envelope B (62 million Euros). Note that following Rwanda’s Mid Term Review most funds in Envelope B – allocated to cover unforeseen expenses – were reallocated to support Envelope A activities (Delegation of the EC in Kigali and Ministry of Finance and Economic Planning of Rwanda, 2003).

⁵ Spending for good governance/institutional support initiatives is under “non-focal” support.

⁶ This entailed reallocations of 62 million Euros from Envelope B into Envelope A. Prior to the mid-term review allocations for rural development, macroeconomic support, and non-focal area support were at respectively 62 million Euros (50% of the Envelope A budget), 50 million Euros (40%), and 12 million Euros (10%) (République Rwandaise et Communauté Européenne, 2003; Kalisa personal communication, 2005).

⁷ An additional 4.5 million Euro outside of the 9th EDF is also being used to cover the cost of the DPRPR programme (estimated at 36.5 million Euro) (EU and the Republic of Rwanda, 2004).

Development, and Social Affairs (MINALOC)⁸ (Bush et al., 2005; Villa personal communication, 2005; EC and the Republic of Rwanda,). An emphasis in the DPRPR programme is being placed on supporting – especially during initial years of implementation – labour intensive initiatives (e.g., through restoration of rural road network and conservation of soils).

- A substantial percentage of funds under the “rural development” focal area are furthermore earmarked for the development of a *transportation* network to improve rural access, especially in northwest Rwanda. Priority is being given to the rehabilitation of the primary road between Ruhengeri and Gisenyi. Funds are furthermore being provided to support a roads maintenance fund (Fonds d’entretien routier - FER) (33 million Euro) (Neubert personal communication, 2004)⁹.
- The remaining amount of 10 million Euros under the “rural development” focal area will be used to implement *other* rural development interventions including water and sanitation programs, land reform, environmental initiatives, and the development of agricultural information systems.

3.2. Macroeconomic support (86 million Euro)

EC funds under “macroeconomic support” in Rwanda are being used to meet the objectives of the current PRPS/PPARP (Programme Pluriannuel d’Appui a la Réduction de la Pauvreté [still add accent grave on “a”, etc.]) (Government of Rwanda, 2002) which are categorized under the following six broad areas:

- 1) *rural development and agricultural transformation*: that focuses on improving the ability of people to increase their income (e.g., through the modernization of agriculture, non-agricultural employment, and improved credit access).
- 2) *human development*: that seeks to improve quality of life (e.g., through strengthened health and education programmes, improved water supply and sanitation facilities, and voluntary relocation of people to *imidugudu*¹⁰).
- 3) *economic infrastructure*: which includes the development of energy, communications, and other infrastructure in rural and urban areas.
- 4) *governance*: that supports decentralization, constitutional reform, reconciliation, criminal justice, transparency, civil service reform, etc.
- 5) *private sector development*: to promote investment in the private sector, export growth, etc.
- 6) *institutional capacity building*: that focuses on strengthening institutions and facilitating the development and retention of skills.

Since EC financing under “macro support” are – as with other donors budget support funds – transferred directly into the national treasury, tracking how EC funds are specifically used towards meeting the above noted objectives is not possible¹¹.

3.3. Other (non-focal)/ good governance/institutional support (15 million Euro)

Non-focal EC support in Rwanda concentrates primarily on supporting good governance and institutional support. This entails:

- supporting institutions (such as statistics);
- financing rule of law initiatives (e.g., justice, reconciliation, and civil society);

⁸ Ten percent of Rwanda’s government revenue will eventually be committed to fund the CDF.

⁹ An amount of 2.1 million was furthermore recently allocated to the finance the Gitarama-Akanyaru road.

¹⁰ The development of *imidugudu* (grouped settlements) is intended to encourage off-farm employment and the commercialization of farming, while facilitating market access and security.

¹¹ Although budget support funds are being used to support various PRSP objectives, the EC assesses its performance in this focal area by using indicators in the health and education sectors (Leeming personal communication, 2005).

- integrating and mobilizing vulnerable groups in urban districts;
- supporting electoral processes (channelled through UNDP's basket fund for the National Electoral Commission and a number of NGOs);
- funding a Technical Cooperation Facility; and
- possible co-financing of NGOs (Delegation of the EC in Kigali and Ministry of Finance and Economic Planning of Rwanda, draft, 2004).

4. Follow-up CSP review

The subsequent "follow-up CSP" review evaluates:

- 1) environment-poverty concerns associated with current CSP investment (namely under the "rural development" and "macro support" focal areas) (section 4.2) and
- 2) whether current 9th EDF funding in Rwanda is addressing the identified environment-poverty issues (section 4.3).

Since the following review fundamentally relies on environment-poverty concerns assessed in the multilevel evaluation, these are foremost summarized (section 4.1). This follow up review – along with this paper's institutional evaluation (section 5) – will be used to provide recommendations to not only improve the integration of environment-poverty issues in subsequent CSP funding in Rwanda (e.g. under the 10th EDF), but will furthermore provide practical suggestions to EC headquarters/Brussels towards improving environmental mainstreaming in EC development assistance.

4.1. Summary of environment-poverty concerns identified in the multilevel evaluation

The recently conducted multilevel evaluation identified various environment-poverty concerns particularly regarding EC investment that is helping finance Rwanda's current decentralization effort, supported under the Decentralized Programme for Rural Poverty Reduction (DPRPR) (Bush et al., 2005). The multilevel evaluation selected the Kibungo Province – one of the two provinces in which the DPRPR programme is focusing – as its case study due to its diversity of environmental issues¹². Three districts with unique characteristics were identified within this province for further assessment: the Cyarubare, Rusumo, and Mirenge districts¹³. The multilevel evaluation highlighted both key environment-poverty concerns linked to rural development (section 4.1.a.), as well as policy challenges and opportunities to mainstream environmental issues in Rwanda's current decentralization effort, particularly in the Common Development Fund through which central government funds are being allocated to the decentralized network of government (section 4.1.b.).

4.1.a. Key environment-poverty issues linked to rural development

The multilevel evaluation foremost highlighted key environment-poverty concerns linked to rural development as summarized below.

- *Land scarcity and decreasing parcel size:* The three evaluated districts indicated significant land scarcity due in large part to unprecedented resettlement and increasing population pressure. National programmes to resettle returning refugees from neighbouring countries following the 1994 genocide have been especially concentrated in the Kibungo province. In the Rusumo district alone plot size is currently estimated at 0.5 hectares per family, down from 3 hectares in the 1970s. Land scarcity remains a serious

¹² The DPRPR also focuses on the Kigali-Ngali province. Note that there are a total of eleven provinces in Rwanda plus the City of Kigali: Butare, Byumba, Cyangugu, Gikongoro, Gisenyi, Gitarama, Kibungo, Kibuye, Kigali Ngali, Ruhengeri, and Umutara.

¹³ Various sectors (units in which districts are disaggregated in Rwanda) within each of the three districts were further evaluated.

issue throughout Rwanda as population increases and as parcel size continuously reduces (see also Appendix 3).

- *Degradation in soil quality and soil erosion and deterioration of agro-pastoral land:* Land scarcity is in turn forcing poor rural farmers to cultivate more intensely on already marginal land. Less land is furthermore available for pasture leading to overgrazing. Intensive farming is resulting in severe and accelerated soil erosion and salination of water bodies (see also Appendix 3).

- *Low land productivity:* Intensive cultivation and grazing on marginal land coupled with significantly restricted use of very little or no fertilizers is keeping land productivity low, leading to food insecurity and further impoverishment.

- *Overdependence on agriculture and natural resources:* More than 95% of the inhabitants of the Kibungo province live from agriculture and the rearing of livestock, reflective of trends elsewhere in Rwanda (where 90% of the population currently relies on subsistence agriculture). The rural population in Kibungo – as in other Rwandan provinces – significantly depend on environmental resources including forest products (fuelwood for cooking and energy, timber for construction, etc.) and water resources (e.g., for drinking and washing) (see also Appendix 3).

- *Increasingly scarce forest resources:* Exploitation of forest resources – used for firewood, construction material, etc and to make way for human settlements and agriculture land – has been massive and unregulated. Only one percent of the surface area in the evaluated districts remain covered with woodlots.

- *Degradation of water bodies and destruction of ecosystem services from wetlands:* Frequent and prolonged droughts – exacerbated by deforestation and wetland reclamation – have been observed in this region over the past five years. The droughts have significantly negatively impacted agricultural activity and basic water needs. Women and children have been especially affected manifested in increased time spent to search for water (vs. to cultivate fields or go to school). The degradation of water bodies especially wetlands and lakes have furthermore contributed to the loss of habitat and biodiversity.

- *Increased vulnerability to disasters and conflict:* Continued intensification of agro-pastoral activity and severe destruction of watersheds is exacerbating risk to natural disasters including land slides, drought, and floods. Furthermore, as natural resources become scarcer, social insecurity and conflicts over limited environmental resources may increase.

4.1.b. Key environment-poverty concerns linked to the CDF/ decentralization process

The multilevel evaluation furthermore identified challenges and opportunities to mainstream the environment in Rwanda's decentralization effort, particularly in the CDF facility through which the central government finances the decentralized network.

- *Lack of capacity – in terms of human, institutional, and technical – to integrate environment in the decentralized process:* It was underscored that significant capacity will need to be built at all levels (from the cell, sector, district, provincial to national levels) towards helping ensure that the environmental dimension is integrated in Rwanda's current decentralized process. This includes strengthening environmental capacities in local government at the cell, sector, district, and provincial levels: such as by supporting the placement of district environmental officers and improving the provision of technical information at the district level. At the national level this includes supporting the newly developed Rwanda Environmental Management Authority (REMA) mandated to control, monitor, and evaluate environmental integration in all development projects and activities. It was noted that in the evaluated districts, only one (or less)

agronomist and forester (mandated to provide technical advice including on environmental issues) is currently available.

- *Need to mainstream environment in Community Development Plans (CDPs)*: While Community Development Plans (CDPs) – through which communities identify and propose projects under current decentralization – are required to make some mention of potential environmental impacts, there is a lack of extensive environmental impact assessment for the community-based projects. It was recommended that REMA – as well as other relevant institutions (e.g., Ministry of Local Government, Information and Social Affairs - MINALOC) – take a lead in developing relevant environmental management tools and guidelines that may be used at the community level.
- *Mainstreaming environment in the CDF*: The multilevel assessment underscored that although environmental considerations have not yet been mainstreamed in the CDF at the project and programme levels (see respectively points above and below), the CDF *does* currently require that 5% of its finances are directed to environmental initiatives¹⁴. Furthermore, the EC requires that all projects supported through the CDF undergo environmental screening. Guidelines and procedures for environmental screening, however, still need to be developed (see point above).
- *Integrating environment in DDPs*: As the CDF moves away from a project approach to budget support – in which districts will receive direct funds to support District Development Plans (DDPs) – integrating environmental considerations in the broad district development plans will become increasingly important. Already 20 districts this year are being given direct budget support, including the Rusumo and Mirenge districts assessed in the multilevel evaluation.
- *Lack of financing to the CDF*: While in theory the CDF should obtain at least 10% of annual government revenue, in practice funds have been much lower. Funds for the current budget year were, for example, dramatically cut by 50% due to financial constraints as a result of the current energy crisis (see Box 2 in section 5 on the energy crisis). It was noted that low financing to the CDF will affect performance in all sectors, including environmental.
- *Integration of environment concerns in national strategies, policies, etc.*: Integrating environmental-poverty linkages in national policies, plan, and programmes – upon which the decentralization process significantly depends – was underscored. This in particular includes environmental integration in the PRPS.

4.2. National level evaluation of environment-poverty concerns of CSP investment

Based on the above multilevel evaluation, a national-level assessment was conducted to further evaluate environment-poverty concerns linked to EC/CSP investment being used to finance Rwanda's current decentralization process (section 4.2.a), as well as to fund transportation (under "rural development") and macro support initiatives (respectively sections 4.2.b and 4.2.c).

4.2.a. Environment-poverty concerns linked to decentralization/rural development (32 million Euro)

Discussions with respondents regarding current decentralization similarly noted insufficient capacity in environmental management at local to national levels to mainstream environmental considerations in the decentralization process. It was noted that while important initial steps have been made to strengthen environmental management capacity – namely through the recent

¹⁴ More specifically, the CDF requires that public utilities (e.g., schools and hospitals) construct a water tank as well as sanitation facilities (Gahamanyi personal communication, 2005).

development of REMA and enactment of environmental legislation (i.e., the Environmental Bill and Environmental Policy) – much needs to be done to ensure implementation of the new environmental regulations (Mukankomeje personal communication, 2005; Hajabakiga personal communication, 2005; Mashinga personal communication, 2005; Gahamanyi personal communication, 2005). It was emphasized that local governance will especially need strengthening and that sufficient support will be required for the newly established REMA to fulfil its broad mandate to control, monitor, and evaluate the integration of environmental concerns in all development projects or activities. A number of specific entry points to strengthen environmental integration in the current decentralization process were also noted.

- *Improved awareness on sustainable agriculture techniques:* A review of current District Development Plans – upon which the decentralization process heavily relies – indicated that most districts did not prioritize sustainable agriculture initiatives (e.g., terracing or agro-forestry). Rather the development plans underscored the need for infrastructure (e.g., schools and hospital) and road development (Ruzindaza personal communication, 2005). While this may reflect current community needs, it was noted that this may also indicate a general lack of awareness (e.g., by villagers) of the importance of sustainable agricultural techniques: a villager may be more apt to request a school than to ask for terracing, soil conservation, etc. about which little is known (Buckara personal communication, 2005). Respondents indicated that it will be important to raise awareness on sustainable agriculture – especially prior to the development of the community and district development plans – so that villagers are aware of available options/techniques (e.g., to improve crop/agricultural productivity). Synergies with existing activities (e.g., NGOs and private initiatives) need to continue to be sought and extension needs to be strengthened (Buckara personal communication, 2005).
- *Lack of prioritization of environmental and related initiatives:* A preliminary review of the DDPs furthermore indicated that environmental and related projects were not prioritized in the development plans. A pilot study is currently being conducted on three districts to evaluate entry points to improve environment-poverty streamlining in future DDPs (Innocent personal communication, 2005). This initiative is being implemented by the Decentralization and Environmental Management Project (DEMP), a project aimed at strengthening the integration of environmental and natural resources issues in current decentralization¹⁵. Synergies with the DEMP initiative will be essential.

4.2.b. Environment-poverty concerns linked to transport/rural development (33 million Euro)

As previously mentioned, a significant amount of EC funding under the “rural development” focal area is being provided to improve rural access. These funds are predominantly being used to support the rehabilitation of the primary road between Ruhengeri and Gisenyi and to a lesser degree to support the Road Maintenance Fund (RMF) (refer back to section 3.1 for detail).

4.2.b.i. Ruhengeri-Gisenyi road:

EC funds will be used to rehabilitate the Ruhengeri and Gisenyi primary road in northwest Rwanda, a road previously developed in the 1980’s. This road is currently in fair/poor condition¹⁶. Due to delays in implementing this initiative the condition of this road has further deteriorated (Delegation of the European Commission in Kigali and The Ministry of Finance and Economic Planning of Rwanda draft, 2004; Neubert personal communication). Although

¹⁵ Key activities and outcomes of the DEMP include raising awareness to individuals involved in spearheading the development of DDPs, developing a practical guide for the integration of environmental issues in DDPs, and developing a popular version of current environment policies and legislation (UNDP, 2004; Rudasingwa personal communication, 2005).

¹⁶ The road has various potholes and stretches of the road are inaccessible during the rainy season.

improving roads such as the Ruhengeri-Gisenyi road will be critical towards ensuring improved market access and in turn economic growth in Rwanda, respondents noted various environment-poverty issues relating to its rehabilitation as described below. It is anticipated that the EIA for this road – that should be available soon – will highlight similar issues. Under the newly enacted Environmental Policy (2005), EIAs are required for all development projects including road works. This will be the first road in Rwanda for which an EIA is developed (MINITERE, 2005; Rugumire personal communication, 2005; Mugambira personal communication, 2005)

Soil erosion: Northwest Rwanda – the region in which the Ruhengeri-Gisenyi road is located – is noted for its high relief, porous (and fertile) soils, intensive cultivation (often on steep slopes), and dense populations (Garadi and Twesigye-Bakwatsa, 2005). A recurrent problem to the existing Ruhengeri-Gisenyi road has been its exposure to sand banks resulting from excessive soil erosion. The sand banks have made vast sections of the road inaccessible during especially the rainy season (Neubert personal communication, 2005; Rudasingwa personal communication, 2005). The EC is seeking to help address this issue by developing income generating activities that will support soil conservation works especially about areas of the road susceptible to the sand banks. This effort seeks not only improve market access and restore soils (e.g., through grass and tree planting), but furthermore to provide communities with off-farm employment alternatives (Neubert personal communication, 2005).

Compensation/widening of road: The rehabilitation of the Ruhengeri-Gisenyi road works will entail repaving and widening of the primary road. A widening by one meter along the entire traverse is anticipated: in urban areas, however, the road may need to be further widened (Neubert personal communication, 2005; Rugumire personal communication, 2005). Owing to dense population along significant sections of the Ruhengeri-Gisenyi road, a widening of one or more meters will likely entail relocation and in turn compensation. Verifying that appropriate capacity exists to provide fair and timely compensation for those required to resettle will be imperative. In addition to the above noted one meter widening of the road, under a recently enacted Land Policy (Republic of Rwanda, 2004) national roads and their “edges” – a ten meter buffer about both sides of the road – have been officially designated as government land. No houses and businesses will in the future be allowed to exist in this ten meter buffer (Rurangwa personal communication, 2005; Rudasingwa personal communication, 2005)¹⁷. While the ten meter buffer has not yet been enforced, its future enforcement will obviously have major implications for populations residing along densely populated road stretches. An evaluation of the social impacts of this decree, especially on the poorest segments of society that may be more likely to reside closer to existing roads, is vital.

Tourism: The area about the Ruhengeri-Gisenyi road is endowed with various important tourist destinations including the Virungu National Park and Lake Kivu. The Volcanoes National Park is habitat to one of the world’s few remaining mountain gorilla populations, while Gisenyi – situated on the eastern shore of Lake Kivu – is a lakeside resort town that currently attracts wealthier Rwandans, expatriates, and travellers. The new tourism strategy that aims to substantially increase the number of tourists visiting the country – to almost double tourism visitor numbers since peak levels in 1984 – is promoting the building of new tourist accommodation in the Ruhengeri and Kivu areas, as well as in Butare and Akagera (ORTPN,). While the tourism strategy is focused on avoiding mass tourism and targeting high valued ecotourism customers, hotels may in periods of economic difficulty offer lower prices and in turn (albeit unintentionally) induce lower paying (as well as higher numbers of) tourists to visit. While tourism can generate much needed foreign income, its development needs be

¹⁷ It is anticipated that trees will be planted in this buffer.

adequately controlled to mitigate negative environment/livelihood impacts. Furthermore it will be vital that local communities – especially those that neighbour protected areas and other tourism attractions – benefit from tourism growth (such as through revenue sharing schemes - see section 4.2.c.ii under “Growth in tourism sector”).

Human settlement: Although the area about the current Ruhengeri-Gisenyi road is already very densely populated, high fertility coupled with easier accessibility may induce further human settlement in this region. Human settlement may be especially prompted if secondary roads are improved and/or developed in this region, as may be financed through the Road Maintenance Fund (see next section 4.2.b.ii) (Rurangwa personal communication, 2005; Behm-Masozera personal communication, 2005). Increased human settlement may lead to increased land scarcity that in turn may compel farmers to cultivate more intensively on already marginal land. Furthermore, escalated land scarcity may increase the risk of land/resource-based conflict.

Regional trade: The Ruhengeri-Gisenyi road is considered to be a part of the core road network of Rwanda and is anticipated to help facilitate regional trade and the country’s integration into international markets. Regional instability – such as in the DRC – are however currently limiting such improved trade prospects. Future trade may include increased imports and exports of minerals, agricultural crops, and forest resources. While such improved trade is key to regional and national economic growth, if unsustainably managed the increased exploitation of natural resources in Rwanda and neighbouring countries may significantly damage the environment and in turn poor peoples’ livelihoods.

HIV: Improved regional trade prompted by the development of the Ruhengeri-Gisenyi road may place populations – especially at road junction towns – at higher risk to contracting HIV/AIDS¹⁸. Synergies with initiatives already involved in HIV/AIDS awareness and education campaigns are essential.

4.2.b.ii. Road fund

The Roads Maintenance Fund (RMF/FER – Fonds d’entretien routier) is a national financial facility that was recently set up to maintain all roads including for primary and secondary roads. The fund is currently financed by a fuel levy, as well as supported by donor support such as the EC (Delegation of the European Commission in Kigali and the Ministry of Finance and Economic Planning of Rwanda draft, 2004). While few environment-poverty concerns are currently associated with the road fund (in large part due to its recent establishment), the future maintenance and upgrading of especially secondary roads is cause for concern. While in no doubt improving rural access will be critical towards ensuring improving market access and economic growth, the rehabilitation of secondary roads (especially if upgraded to paved status) may prompt human settlement that in turn may induce further intensive cultivation on marginal lands, exacerbate soil erosion, etc. (see also section 4.2.a under “human settlement”). It is imperative that EIAs – as recently required in Rwanda – are conducted on all road works projects including the rehabilitation and development of secondary roads.

4.2.c. Environment-poverty concerns linked to macroeconomic support (86 million Euro)

As previously noted, the EC is in addition to supporting “rural development” initiatives is providing substantial financing to “macroeconomic support” – funds allocated towards meeting the objectives of the current PRPS (Government of Rwanda, 2002) (refer back to section 3.2 for detail). While the current PRPS (2002-2007) is supporting various noteworthy initiatives to

¹⁸ HIV prevalence is currently at 11.2% nationally and 10.8% in the rural areas (Government of Rwanda, 2002).

improve socio-economic conditions – such as through education, health, and good governance/justice initiatives – it is widely agreed that the current PRPS does not adequately mainstream environment-poverty linkages (TOR for task team, 2005; Garadi and Twesigye-Bakwatsa, 2005; Rwamucyo personal communication, 2005; Usengumuremyi personal communication, 2005; Innocent personal communication, 2005). A Poverty Environment Integration (PEI) task team has recently been developed to help ensure that environment-poverty considerations are better mainstreamed in the next PRPS (planned for 2007-2010) (see section 5.2). Owing in part to poor environment-poverty integration, various initiatives in the current PRPS are associated with environment-poverty concerns as described subsequently.

4.2.c.i. Modernization of agriculture:

The transformation and modernization of agricultural stands central to the objectives of the PRSP. This includes increasing input use (e.g., fertilizers and pesticides), the regionalization of crops (e.g., the (re)planting of cash crops where they can be competitive), encouraging cash crop exports, strengthening extension, improving access to seeds, and endorsing sustainable agricultural techniques (Government of Rwanda, 2002). While these initiatives are intended to improve food security and manage soils, several of these activities may concurrently (albeit unintentional) be associated with environment-poverty issues as noted below.

Food insecurity: Although the current agricultural strategy is intended to improve food security – by improving crop productivity through higher input use, better access to seed, etc., – the current emphasis on increasing agricultural exports of cash crops, coupled with the regionalization of crops, may have the opposite unintended effect of decreasing domestic food supply and in turn food security. Higher supplies of domestically produced cash crops may, for example, be exported while farmers are simultaneously encouraged to abandon the cultivation of staple crops that are traditionally used to secure nutrition needs.

Increasing input use: Increased input use (e.g., fertilizers) is emphasized in the current PRSP: current levels of agricultural yield are very low in Rwanda and declining (MINAGRI, 2004). While fertilizer and pesticide use in Rwanda is currently very limited (almost insignificant) and unlikely to cause environmental problems in the near future, intensive future input use (e.g., of chemical fertilizers) may pose environmental threats if unsustainably and unsafely used. Environmental threats include contamination of ground and surface water and may, more specifically, contribute to the current water hyacinth problem¹⁹. The leaching of agro-chemicals in surface and ground water is of particular concern to Rwanda's wetlands and aquatic lands that represent about 15% of the national territory (MINITERE, 2005). Fertilizer application by especially poor illiterate farmers is furthermore problematic. While standards do currently exist in Rwanda to control the quality of commodities, standards on the application and use of fertilizers and pesticides have not yet been developed (Behm-Masosera personal communication, 2005; Buckara personal communication, 2005).

Regionalization/Promotion of rice production in wetlands: A major crop targeted for expansion in the PRPS is rice: other targeted crops include tea, coffee, maize, potatoes, soya and beans. While rice was grown on approximately 6,000 hectares in 2003, the recently developed "Strategic plan for agricultural transformation in Rwanda" notes of intentions to increase "new rice perimeters" to 11,800 hectares by 2009 (MINAGRI, 2004). Furthermore, a "marshlands utilization plan" identifies an estimated 48,000 hectares of marshland that can be

¹⁹ Water hyacinth have thrived in many of Rwanda's rivers due to high levels of siltation. This has lowered fish supplies and in some cases affected nutritional intake (Mwanafunzi personal communication, 2005; Mashinga personal communication, 2005).

used for rice production. The conversion of wetlands into rice paddies, coupled with anticipated increases in input use to boost rice production, is worrying. A recent environmental decree has, however, severely restricted the use of wetlands by banning activities in wetland areas unless approved by the Ministry of Lands, Environment, Forestry, Water, and Miners (MINITERE) (Mashinga personal communication, 2005). Evaluating how this decree will affect plans to convert wetlands into rice paddies – as well as influence poor peoples’ livelihoods that critically depend on the wetlands (!) – is vital (see Box 1 in section 4.2.c.ii on the effect of this decree on brick makers).

4.2.c.ii. Privatization/Macroeconomic reforms

In addition to the modernization of agriculture, another key objective of the PRPS with which environment-poverty concerns are associated entails the privatization and liberalization of various sectors including agricultural, tourism, mining, and industrial.

Privatization of agricultural crops: Growth of coffee and tea plantations, as well as other agricultural and related markets (e.g., pyrethrum²⁰, rice, bananas, tanneries, and diaries), is actively being promoted through privatization and other macroeconomic reforms. Already numerous tea factories have been privatised including Sorwathé, while various agribusinesses – such as tanneries, diaries, and pyrethrum, maize, sugar factories – have been sold (Privatisation Program, 2004). Although the promotion of agribusinesses is anticipated to provide much needed foreign revenue, their growth is associated with environmental/livelihood concerns. Increased cultivation of cash crops may, for example, place an increasing strain on already depleting water resources, especially as private companies are more likely (due to higher revenues) to invest in irrigation facilities. Furthermore, the drying of tea and pyrethrum has traditionally used large quantities of fuelwood (Villa personal communication, 2005; Delaunay-Belleville personal communication, 2005). Fortunately substantial amounts of fuelwood used in these sectors comes from well managed commercial woodlots (Weber and Vedder, 2001).

Growth in the tourism sector: The PRPS considers the tourism sector to be a vital “new engine of growth” (Government of Rwanda, 2002). The Rwandan government is working on a new tourism strategy that aims to almost double tourism since peak levels in 1984 to 70,000 annual visitors by 2010²¹ (see also section 4.2.b.ii. under “Tourism”). While tourism can provide an important source of foreign income, its sustainable development hinges on the support and involvement of local communities, as well as the development of an effective regulatory framework to minimize potential environmental/livelihood damage.

Ensuring that local communities benefit from tourism growth is critical in Rwanda where many key tourism destinations (e.g., protected areas) are encircled by densely populated agrarian communities. Rwanda recently developed draft guidelines for tourism revenue sharing – spearheaded by the ORPTN (Office Rwandaise du Tourisme et des Parcs Nationaux) – towards helping ensure that local communities neighbouring protected areas benefit from tourism revenue²². While the details of the revenue sharing programme have not yet been

²⁰ Pyrethrum comes from dried chrysanthemum flowers which when refined can be used to produce natural and environmental friendly insecticides (Kayigamba, 2001). Pyrethrum provides highly effective protection against mosquitoes and in turn against such diseases as Malaria and Yellow Fever.

²¹ Prior to the genocide of 1994, tourism was a major foreign currency earner in Rwanda - while the number of visitors to Rwanda peaked in 1984 at 39,000, tourism numbers fell to 16,000 visitors in 2001 (Environmental News Network, 2003).

²² This concerns Rwanda three protected areas: the Volcanoes National Park, Akagera National Park, and Nyungwe forest.

worked out, a percentage of total tourism income will go to a “national pool” which will then be allocated to communities neighbouring the protected areas (ORTPN, 2005; Ruzigandekwe and Ngoga personal communication, 2005). The initiation of a tourism revenue scheme is a critical development in Rwanda where many local communities have been (and continue to be) adversely affected by park activities – such as through crop destruction by wildlife, restricted access to important natural resources, and increased exposure of infectious disease carried through wildlife to humans and livestock (Kock, 2004; Ruzigandekwe and Ngoga personal communication, 2005). Making sure that these communities benefit from and help support the conservation of these protected areas is essential towards the long term viability of tourism in Rwanda.

Aside from revenue sharing, it is equally important that Rwanda continue to develop an effective environmental management framework to help ensure that tourism growth minimizes environmental damage. Rwanda’s current tourism policies already emphasizes various sustainable practices including a focus on low environmental impact tourism and high value (v.s. mass) tourists (cited in ORTPN,). Policies oriented towards visiting mountain gorillas in the Volcanoes National Park – a key tourism attraction in Rwanda – similarly underscores environmental safeguards including strict restriction on the number of visitors allowed to visit the gorillas. Such policies have helped sustain mountain gorilla population which despite the challenges of political turmoil have shown to have increased during the past 15 years (WWF news, 2004; Rurangwa personal communication, 2005b; Kalpers personal communication, 2004; New York Times, 2004)²³.

Growth of the mining sector: Rwanda is striving towards diversifying its exports, including the export (and re-export) of minerals such as cassiterite, wolfram, colombo-tantalite (coltan), gold, and sapphires. The mining sector in Rwanda is being promoted through privatisation and liberalization (e.g., through tariff reductions and export tax removals). Most mining in Rwanda is currently small scale – sufficient deposits have yet to be located to support large-scale commercial operations (Government of Rwanda, 2002; Privatisation Secretariat,). Nonetheless the search for minerals and development of small scale mining industries has led to some environment-poverty concerns. The search for gold and for coltan particularly in the Nyungwe forest has, for example, led to the degradation of forests and protected areas (MINITERE, 2005). In addition, quarries for brick making and the exploitation of lime, sand, and stones has increased erosion throughout Rwanda, especially where pits have been left open (MINITERE, 2004). Brick making has, however, recently been significantly curbed through an environmental decree that has banned the indiscriminate cutting of trees. While the intentions of this environmental decree are laudable, the impact on especially poor peoples’ livelihoods that significantly rely on access to natural resources needs be evaluated (see Box 1 on the “effects of the environmental decree on brick makers”).

Aside from small-scale mining, the Government of Rwanda is seeking to promote value added activities, including the processing of minerals extracted in Rwanda, as well as those legitimately imported (Munyanganizi personal communication, 2005; Uwizeye personal communication, 2005; MINITERE, 2004b). While value-added processing of minerals in Rwanda currently does not entail chemical processing, if in the future other minerals are imported that do require chemicals for processing (e.g., gold), appropriate environmental safeguards will be needed.

²³ Five groups of gorillas may be visited a day by no more than eight tourists in each group.

Box 1: Effects of the environmental decree on brick makers

As construction demands have increased in Rwanda, so too has the demand for bricks: quarry production's contribution to the GDP increased by more than five-fold between 1995 to 2004 in large part due to the development of construction materials (MINITERE, 2004b). Until the current environmental decree – that among other things banned the use of firewood for brick making and construction – thousands of rural poor Rwanda people were involved in and employed through brick making. The environmental decree has affected especially thousands of unskilled youth in the Kigali rural province who depended on making bricks for their livelihoods (Garadi and Twesigye-Bakwatsa, 2005 [p. 49]). In addition to the banning of the indiscriminate cutting of fuelwood, the decree has placed significant restrictions on the use of wetlands and limits agricultural and related activities about water bodies (Mashinga personal communication, 2004; Mwanyanginzi personal communication, 2005).

Other industrial growth: Although industrial activity is currently limited in Rwanda, it is assumed that existing industries such as located in Kigali's Gikondo industrial zone – a wetland area designated as industrial in the 1960's – are contributing to pollution (Hajabakiga personal communication, 2005; Mashinga personal communication, 2005). Levels of industrial effluent as well as their affect on Rwanda's wetlands (where most industries are currently located) have, however, not yet been monitored. Monitoring in Rwanda, as in other developing countries, is confounded by a general lack of data collection and analysis in the environmental and related sectors. There is, for example, currently no systematic data collection to monitor water quality in Rwanda (Mwanafunzi personal communication, 2005).

4.3. CSP investment to address the environment-poverty concerns

A follow-up CSP review was conducted to assess if: 1) the above-noted environment-poverty issues are identified in the current Rwanda CSP and 2) if current CSP investment is being used to address the environment/livelihood concerns.

4.3.a. Recognition of environment-poverty issues in the CSP***Rural development***

Although the CSP does indicate that "Poverty in Rwanda is tightly linked to... interdependent questions, namely of land, demography, environmental degradation, poor management of public affairs, and insufficient growth" (République Rwandaise et Communauté Européenné, 2003, p. 8) and indicates numerous constraints facing the country including "demographic pressure, low agricultural productivity, ...and progressive deterioration of the environment" (p. 3), the CSP does not highlight environment-poverty considerations in specifically describing its support to the decentralization process and transportation initiatives.

Decentralization: While the CSP does indicate that financing to support decentralization will build upon national efforts to “reinforce institutional capacities to protect the environment” (p. 27/28), there is no mention on how environment-poverty considerations will be integrated in Rwanda’s decentralization process. Entry points to ensure the integration of the environmental dimension in the decentralisation network – as identified by the multilevel evaluation (Bush et al., 2005) and this national assessment – are not noted.

Transportation/Improved rural access: The CSP does not mention possible environment/livelihood impacts due to the proposed rehabilitation of the primary road between Ruhengeri and Gisenyi. As noted previously (see section 4.2.b), although improved market access is an important means to alleviate poverty, this may be associated with the displacement of people, settlement of humans on already marginal lands, and other environment-poverty concerns. It is anticipated, however, that the EIA for the Ruhengeri-Gisenyi road – the first road for which an EIA is required in Rwanda – will capture various environment-poverty issues.

4.3.a.ii. Macro support

Modernization of agriculture: Although the CSP makes ample reference on how the modernization of agriculture is intended to improve food security (e.g., through increased input use) and export growth, specific reference is not made on possible negative environment/livelihood consequences. As noted in section 4.2.b (under “Modernization of agriculture”) the promotion of export crops, regionalization of cash crops, and increased input use may – albeit unintentional – lead to food insecurity, wetland degradation (to make way for rice paddies), and adverse human health effects.

Macro reforms/Privatization: Despite much needed economic growth, as indicated in section 4.2.b. (under “Privatization/Macroeconomic reforms”) the development of the agricultural, tourism, mining, and other industrial sectors may without appropriate environmental safeguards lead to adverse environment/livelihood impacts. While the CSP emphasizes the positive impact macro economic reforms will have in reducing poverty, the adverse environment/livelihood effects prompted by privatization and rapid economic growth are not thoroughly discussed.

4.3.a.iii. Good governance

While the CSP generally notes of the need to “reinforce institutional capacity in the environmental sector” (République Rwandaise et Communauté Européenné, 2003, p. 24), the CSP in its discussion of the non-focal area on “good governance and institutional support” does not specifically indicate the need to strengthen good *environmental* governance. Furthermore, the CSP does not highlight that environmental management in Rwanda is at its infancy: EIAs were, for example, only recently required, environmental quality standards will soon be developed, and REMA was only recently institutionalized.

4.3.b. CSP investment to address the environment-poverty concerns

The Rwanda CSP was furthermore reviewed to assess if current CSP investment is addressing the identified environment-poverty concerns (as noted in sections 4.1 and 4.2).

4.3.b.i. Rural development

Decentralization: While CSP funding to support decentralization may indirectly address environment/livelihood concerns, this assumes that such concerns are integrated in the community and district development plans. As noted in section 4.2.a, preliminary reviews of the district development plans indicate that insufficient emphasis has been placed on requesting environmental and agricultural initiatives.

Transport: Although not mentioned in the CSP, the Rwandan delegation is seeking ways to address soil erosion issues (especially about stretches of the Ruhengeri-Gisenyi road that are currently prone to sand banks) by supporting labour intensive initiatives to restore soils. It is envisioned that this initiative will entail employing community members to plant grass and trees, as well as working jointly with neighbouring communities to promote agro-forestry and soil conservation (Neubert personal communication, 2005).

4.3.b.ii. Macro support

The CSP does not specifically indicate how 9th EDF funds will be used to address environment-poverty concerns associated with economic liberalization, the modernization of agriculture, and other initiatives funded through “macro support” (as noted in section 4.2.b.). The EC is, however, financing under another budget line an initiative to help address environmental concerns linked with the processing of pyrethrum – one of the crops targeted for expansion in the current PRSP (see next section on “Other – environmental budget lines...”).

4.3.b.iii. Good governance/institutional support

While no specific mention is made in the CSP regarding how 9th EDF funds will support “good environmental governance”, the delegation is looking into supporting the strengthening of environmental management capacity in Rwanda. This will likely be financed through the rural development focal area (vs. the non-focal areas on “good governance/institutional support”) (Villa personal communication, 2005; Delaunay-Belleville personal communication, 2005).

4.3.b.iv. Other – environmental budget lines, previous CSP investment, etc.

Although current CSP investment does not underscore addressing environment-poverty issues (see above section), the EC has been involved in a number of environmental and related initiatives supported namely under other budget lines.

Solar drying of pyrethrum (currently 200,000 Euro with an additional 500,000 Euro planned, STABEX funds): STABEX funds have in Rwanda since 2003 been used to help promote environmental friendly ways of drying pyrethrum²⁴. Traditionally pyrethrum has been dried in ovens requiring fuelwood. In an effort to curb deforestation this initiative is supporting the distribution of drying tables upon which pyrethrum may be dried in the sun (vs. in ovens using wood). This initiative has not only resulted in decreasing fuelwood cost - both in terms of money to buy and time required to collect firewood – but has furthermore decreased transportation costs: the dried flowers – that weigh one-fifth the weight of wet flowers – can now be transported directly (Delaunay-Belleville personal communication, 2005). The Rwanda delegation is furthermore looking into opportunities to support energy alternatives to dry tea. As with pyrethrum the drying of tea requires firewood. While solar energy has not been proven effective to dry tea, the use of gas methane that may be extracted from Lake Kivu is an alternative. Synergies with initiatives to extract gas methane from the lake are currently being explored (Villa personal communication, 2005).

Support to Non-State Actors (8 million Euro, EC budget lines): A total of 8 million Euros is being allocated by the EC to finance Non State Actor activities in different areas including democracy, food security, and the environment. Although the majority of projects address human rights – mainly to support Rwanda’s national reconciliation activities – some funds are

²⁴ EC STABEX funds have been established to compensate farmers for losses due to low and falling international prices for cash crops (e.g., tea and coffee).

being allocated towards environmental related initiatives such as in the Agricultural Production and Education for Sustainability (APES) programme.

Agricultural Production and Education for Sustainability (APES) programme (2001-2004, approximately 295,000 Euro in EC funds, EC budget lines ²⁵): This programme – that is funded in large part by the EC – aims to contribute to the sustainable conservation of biodiversity in the Volcanoes National Park (PNV) by improving agricultural practices and building environmental awareness. The programme through a “trickle-down training” approach has resulted in the training of 13,310 farmers in sustainable agricultural practices and has helped to – among other things – control erosion and improve crop yields and family nutrition. In addition to the training of farmers, the programme has raised environmental awareness amongst people living around PNV through the creation of environmental clubs. Awareness raising has entailed: distributing environmental education material on wildlife, soil, and water conservation; providing club leaders with training to establish other similar environmental clubs; and promoting participation in the annual environmental week (Dian Fossey Gorilla Fund Europe, 2005).

5. Institutional evaluation

Although the EC is financing a number of environmental and related initiatives in Rwanda, the current CSP (and in turn its investment) is shown to insufficiently underscore environment-poverty linkages (see previous section 4.3). EC respondents interviewed generally acknowledged a lack of environment-poverty mainstreaming in the CSP and national strategies (e.g., PRPS) and indicated substantial interest to improve environment-poverty integration in subsequent CSP programming. Furthermore, it was emphasized that given the current energy crisis – and in turn increased national awareness on the importance of sustainable development – ample opportunities exists to improve environmental integration (see Box 2 on the current “energy crisis”). The subsequent review assesses current institutional processes that are being used to integrate the environmental dimension in the CSP programming towards seeking entry points/opportunities to strengthen environment-poverty integration in future CSP/EDF programming (section 5.1). Since the Rwanda CSP (as in other CSPs) heavily relies on national strategies, efforts to mainstream environment-poverty issues in the Rwanda PRSP has also been evaluated (section 5.2). The following evaluation – as with the previous “follow-up CSP review” – relies on interviews (conducted with EC- and national-level stakeholders) and an extensive document review (refer back to section 2).

Box 2: Energy crisis: increased recognition on the linkages between environment, poverty, and economic development

There is increasing recognition in Rwanda that population pressure on natural resources coupled with environmental mismanagement are substantially adversely affecting key economic sectors such as energy, agriculture, and water. Rwanda’s recent hydroelectric power problems - that resulted in the decline of almost 50% of the national electricity supply – was, for example, caused by a decline in water flows between Lakes Bulera and Ruhondo. Low water levels were in turn a consequence of poor upstream wetland and watershed management, including upstream deforestation, wetland degradation, and intensive cultivation. Other hydroelectric power stations that depend on other water bodies (e.g., the Rusizi and Gihira rivers) seem to similarly be affected by dropping water levels and siltation (UNDP and Republic of Rwanda, 2005; Karani et al., personal communication, 2005). Environmental integration in policies and the next national strategy are being prioritized. A Poverty Environment Initiative was, for example, recently developed to help ensure that environment-poverty considerations are better mainstreamed in the next PRPS II.

5.1. EC-level processes to integrate environment-poverty issues

EC-level respondents were asked on how environmental considerations were mainstreamed in the current CSP and opportunities to strengthen environment-poverty integration in future country programming. More specifically EC respondents were asked:

- how the CSP was developed and reviewed in light of environmental integration (section 5.1.a);
- whether existing environmental guidelines/tools were used in developing the CSP (e.g., Country Environmental Profiles²⁶ and Strategic Environment Assessments²⁷) (section 5.1.b.);
- awareness on existing environmental integration procedures (section 5.1.c.); and
- opportunities to strengthen environment-poverty integration in future CSP programming (section 5.1.d.).

5.1.a. CSP process

The Rwanda CSP was developed through a dialogue-driven process between the partner countries (e.g., government and civil society), the European Commission (e.g., country delegations and headquarters), and EU member states. More specifically:

- a draft CSP was initially developed based on discussions with the National Authorizing Officer (NAO), EC (entailing the Rwanda country delegation and Brussels), and national-level stakeholders (namely government agencies);
- a seminar was subsequently held to get input from civil society on the draft CSP in which (invited) member from NGOs, government agencies (e.g., MINITERE), and other institutions participated;
- comments from the seminar were integrated in the CSP; and
- a draft was sent to the Commission for approval (Kalisa personal communication, 2005).

Regarding CSP reviews, it was noted that activities financed through CSP are evaluated periodically through a “rolling programming” of annual, mid-term, and end of the term reviews (Kalisa personal communication, 2005; EC 2000). The Mid-Term Review (MTR) – entailing a more extensive strategic/performance review – was recently conducted for the Rwanda CSP in 2003/2004 (Delegation of the EC in Kigali and Ministry of Finance and Economic Planning of Rwanda, 2003). As with the development of the CSP, the MTR solicited input from civil society by inviting namely representatives from national government agencies (e.g., MINITERE), local government (e.g., MINALOC and provincial leaders), private agencies, NGOs, and other donors. Comments were subsequently integrated into the MTR (Kalisa personal communication, 2005).

5.1.b. Use of environmental tools/guidelines

In theory, environmental considerations are currently mainly integrated in EC country programming – in Rwanda and elsewhere – through the development of a Country Environmental Profile (CEP) and Strategic Environmental Assessment (SEA). As in many other countries, the Rwanda CSP did not include a CEP or request a SEA: a study of 60 CSPs indicated that only six countries included a CEP while only three countries made reference to a SEA (and only one integrated a SEA) (Davalos, 2002). EC respondents in Rwanda noted that the CEP was not included in part because of a lack of capacity at the delegation to integrate environmental

²⁶ A Country Environmental Profile (CEP) includes a brief overview of the country (physical, economic, social, etc. conditions); summary of the state of the environment; overview of the environmental policy, legislative, and institutional framework; and recommended priority actions (Davalos, 2002).

²⁷ A Strategic Environmental Assessment (SEA) is an overarching assessment at programming level that integrates environment and development issues, provides information on alternative options, and identifies potential environmental impacts of proposed policies and plans (Davalos, 2002).

considerations, as well as due to a general lack of awareness on existing environmental tools and requirements (Villa personal communication, 2005; Kalisa personal communication, 2005; Leeming personal communication, 2005). A CEP was, however, included in the recent MTR (Delegation of the EC in Kigali and The Ministry of Finance and Economic Planning, 2003; Leeming personal communication, 2005). While the CEP provides a good summary of key environment-poverty issues currently facing Rwanda – including soil erosion, low crop productivity, land scarcity, population pressure, deforestation, loss of wildlife habitat, and overgrazing – the environmental profile does not specifically indicate how CSP investment (e.g., under the “rural development” and “macro support” focal areas) is seeking to address these concerns.

5.1.c. Awareness on environmental tools/helpdesk and environment-poverty linkages

While most of the EC respondents were aware of the Commission’s environmental helpdesk, this has not often been consulted (Kalisa personal communication, 2005; Villa personal communication, 2005). One respondent did, however, recently receive a training through the EC helpdesk which was considered to be very useful. Emphasis was placed on the need to more generally raise awareness on environment-poverty linkages (e.g., at the delegation and headquarter level) and on the need to get more specific information on environment-poverty issues facing Rwanda’s poor. It was noted that such information is currently lacking in Rwanda and that without it environment-poverty linkages cannot be effectively integrated in future CSPs as well as in national strategies, programmes, etc. (Delaunay-Belleville personal communication, 2005).

5.1.d. Opportunities to strengthen environment-poverty integration

Respondents noted that it would be useful to employ an environmental advisor within the country delegation (as done by other donors such as the World Bank). A key mandate of such an advisor would be the responsibility to follow up on environmental integration in delegation documents, including CSPs (Villa personal communication, 2005). Furthermore, it was noted that specific guidelines to mainstream the environmental dimension in CSPs programming, as well as further training on environmental tools and environment-poverty linkages, would be useful (Kalisa personal communication, 2005; Delaunay-Belleville personal communication, 2005). Emphasis was placed on the need to integrate environmental issues throughout CSP programming and not to reserve environmental mainstreaming to solely the development of the CEP: as one respondent put it there is a need to “green the EDF” (Villa personal communication, 2005).

5.2. National processes and capacity to address environment-poverty issues

Since CSPs heavily rely on national strategies such as PRSPs, evaluating how environment-poverty issues (and concerns) are integrated in national strategies is vital. This is particularly important as donors - including the EC - are increasingly seeking to harmonize donor funds with national frameworks and considering to increase levels to direct budget support. While it is currently widely agreed that the current PRPS (2002-2007) does not adequately incorporate environment-poverty linkages, efforts are underway to help ensure that the environment is mainstreamed in the next PRPS (to be finalized in 2007) (TOR for task team, 2005; Garadi and Twesigye-Bakwatsa, 2005; Rwamucyo personal communication, 2005; Usengumuremyi personal communication, 2005; Rudasingwa personal communication, 2005; Innocent personal communication, 2005). A Poverty Environment Integration (PEI) task team was recently developed towards improving environment-poverty integration in the next PRPS II²⁸. The overall

²⁸ This UNDP/UNEP initiative is funded by Belgium and Norway and is referred to as the “Capacity Building Programme for the Integration and Institutionalization of Environmental Management into National Poverty Reductions Programmes and Related Activities”.

objective of the task team is to develop and manage the implementation of a strategy and to integrate environment-poverty issues into the preparation of PRPS II. More specifically, the team will be involved in: reviewing the current PRPS on environment-poverty gaps; developing recommendations and guidelines to improve environmental streamlining in the next PRPS II; evaluating the economic importance of environmental resources; and raising awareness and building political support on the importance of environmental integration in the PRSP II. Recommendations will furthermore be drawn upon to help identify and integrate poverty-environment indicators in the next PRSP – indicators that will be used to monitor and evaluate performance of the PRPS II.

6. Recommendations/Opportunities to improve environment-poverty mainstreaming

Based on the above institutional evaluation (section 5) and follow-up CSP review (section 4) various lessons learned and best practices have been drawn to develop long-term institutional and policy recommendations to improve environmental-poverty mainstreaming in EC development assistance. Emphasis is placed on recommendations to improve environment-poverty integration in future CSP programming and design. Recommendations are foremost directed to the EC (delegation and headquarter level – section 6.1), followed by practical suggestions to national and EC/delegation stakeholders (section 6.2).

6.1. EC delegation and headquarters

1) As donors seek to increase budget support – towards improving harmonization with national strategies and processes (e.g., decentralization) – environmental performance (e.g., of EC funds) increasingly depends on in-country environmental management capacity. While Rwanda has made important initial steps towards improving environmental management – such as through the enactment of the recent Environmental Policy and development of REMA – significant support (including from the EC) is needed to strengthen environmental management capacity at national to local levels. In the case of Rwanda, this will entail at the national level strengthening capacity at REMA and other relevant institutions (e.g., MINITERE and MINALOC), while at the local levels this includes supporting district environmental officers (as proposed under REMA’s institutional structure) and reinforcing local extension.

2) Although environment-poverty issues may be addressed (albeit indirectly) through support of decentralization processes – as being funded by the EC in Rwanda – this may not be assumed. As noted for Rwanda, preliminary assessments indicate that current district development plans, upon which Rwanda’s decentralization process heavily relies, do not underscore environmental and agricultural concerns. Rather the development plans highlight the need for infrastructure development (such as schools, hospitals, and roads). While this may reflect current village/community needs, this may also indicate a general lack of awareness: it may be more evident for villagers to request for schools than to ask for soil restoration/environmental techniques about which little is known. It will be essential that where the EC finances decentralization, environmental management capacity is sufficiently supported to help facilitate environmental integration in the decentralization process (see also point 1 above). More specifically, it is recommended that the EU take a lead in supporting evaluations to identify entry points to strengthen environmental mainstreaming in decentralization – as conducted by this initiative’s multilevel analysis (Bush et al., 2005) and national assessment. Synergies will need to be sought: in the case of Rwanda, collaboration with the Decentralization and Environmental Management Project (DEMP) – a project aimed at strengthening the integration of environmental and natural resources issues in Rwanda’s decentralization process – will be essential.

3) There is increased recognition in Rwanda that the first PRSP (2002-2007) – whose objectives are being funded by the EC under “macro support” – did not adequately incorporate environment-

livelihood considerations. As indicated in this report, in part due to such poor environmental integration current PRPS initiatives may be associated with wetland degradation, water depletion, food insecurity, and other environment/livelihood concerns. Prior to funding budget support, it is vital that the EC – ideally in collaboration with other donors – evaluate how/if national strategies (e.g., PRSP) have mainstreamed environment-poverty issues. A Strategic Environmental Assessment – an overarching assessment that helps identify potential environmental (and social) impacts and alternative options – may be useful. Supporting environmental management capacity at national to local levels is instrumental towards strengthening environmental integration in future national strategies, programmes, processes, etc. (see also points 1 and 2). Synergies are again essential, such as in the Rwanda context collaboration with a UNEP/UNDP initiative that is aimed at integrating and institutionalizing environmental management in Rwanda's next PRSP.

4) Although there is substantial interest to improve environment-poverty mainstreaming in future CSP programming in Rwanda, current environmental capacity at the delegation-level was noted to be insufficient. EC respondents indicated that environmental mainstreaming may be facilitated by employing an environmental advisor at the delegation level (as done by other donors such as the World Bank), improving awareness on environment-poverty linkages, and developing guidelines to mainstream environmental issues in CSP programming vs. solely in the CEP (see also point below). It is recommended that needs assessments are conducted in Rwanda and other delegations to evaluate and respond to delegation-level environmental related capacity constraints and needs.

5) While a CEP is a useful tool to help identify environmental issues, a CEP such as included in the recent mid term review in Rwanda did not make clear linkages to initiatives being proposed in the CSP. There is a need to strengthen EC environmental guidelines so that environment-poverty issues are integrated throughout CSPs. Such guidelines should explicitly link to focal area development, identify environment-poverty concerns related to focal area development, and indicate how CSP investment will help address these environment/livelihood concerns. The revised guidelines need to fundamentally underscore environment-poverty linkages (see also Snel, 2005b).

6) The Rwanda CSP – as in many other CSPs - did not include a CEP or request a SEA. Ambiguity on the need to include CEPs is challenging the inclusion of environmental profiles in CSPs (see also Snel, 2005b). It is recommended that clear policy requirements are made regarding the need to integrate environment-poverty linkages throughout CSPs (see also point above).

7) Although the EC requires that EIAs are developed for all large scale development projects and infrastructure, it has supported initiatives in countries where EIAs are not mandatory. Until recently, for example, Rwanda did not require EIAs. More specifically EIAs were not required for the development or rehabilitation of roads – a sector that has been heavily supported by the EC. It is recommended that the EC take an active involvement in supporting the development of EIA legislation and guidelines and their implementation.

8) Evaluating environmental as well as *social* impacts of road development and/or rehabilitation – a sector heavily supported by the EC – is crucial. As indicated for Rwanda, the rehabilitation of a primary road in northwest Rwanda may entail displacement of people and increase human settlement on already marginal land. Livelihood impacts are especially anticipated when/if a new decree is enforced stipulating that ten meters about each side of roads is government land. While not yet enforced, due to Rwanda's high population density implementation of such a decree may significantly adversely affect especially poor peoples' livelihoods who may more likely reside

next to existing roads. Verifying that appropriate national capacity exists to provide fair and timely compensation for those required to resettle is also imperative.

9) Despite EC requirements, environmental assessments for select roads already developed and rehabilitated under previous EDFs were not found at the Rwanda delegation. While this may be due to poor archiving (or reflect national requirements that until recently did not require EIAs – see point above), sufficient support is needed at the delegation-level to make sure these assessments are appropriately archived (and retrievable). Posting environmental assessments on the internet, such as done by the World Bank, is encouraged.

10) The Rwanda EC delegation is considering to fund labour intensive works to address soil erosion in the Ruhengeri-Gisenyi region – the area in which the Commission is currently supporting the rehabilitation of a primary road. It is anticipated that such works will not only improve soil conservation and promote non-farm income, but will furthermore reduce the incidence of sand banks that has already affected stretches of the primary road. Jointly addressing livelihood, environmental, and economic issues is a noteworthy best practice.

11) While the development and review of the Rwanda CSP currently involves various stakeholders including national institutions, NGOs, and other donors, individuals are currently *invited*. Due attention needs to be given to involve environmental stakeholders during the development and review of CSPs – including from conservation interest groups, environmental and related NGOs. etc. Opening reviews to the general public at large – as done in other delegations/countries (e.g., Tanzania) – helps further facilitate participation.

12) Lack of environmental baseline data in Rwanda – as in many other developing countries – will challenge the integration of environment-poverty linkages in CSPs, as well as in national strategies, programmes, processes, etc. It is vital that strengthening environmental management capacity includes supporting significant improvements in environment-poverty monitoring (data collection, analysis, etc.) (see also points 1 and 2).

6.2. National and EC respondents

13) Although current efforts in Rwanda to modernize agriculture – a key objective in the current PRPS and supported by the EC through “macro support” – are oriented towards increasing crop productivity and in turn food security, such efforts may concurrently have the opposite (and unintended) effect of degrading the environment and in turn peoples’ livelihoods. For example, the regionalization of crops coupled with the promotion of export cash crops, may encourage the production of cash crops over staple food crops (that are used to meet domestic food supplies). Due consideration needs to be made to promote the sufficient production of staple food crops to ensure that export cash crops do not compromise domestic food needs.

14) A major crop targeted for expansion in the PRPS is rice. If wetlands are converted for rice production, EIAs – as recently required in Rwanda – will need to thoroughly evaluate the environmental as well as *social* and *economic* impacts associated with such wetland conversion²⁹.

15) While fertilizer and pesticide use in Rwanda is currently very limited (almost insignificant) and is unlikely to cause environmental problems, intensive future input use – as being promoted by the current PRSP – may pose environmental threats if unsustainably and unsafely used.

²⁹ The recent drainage of the Rugezi swamp that made way for agricultural land has, for example, been associated with significant economic cost: the drainage of the swamp disrupted water holding capacity that in turn contributed to low water levels and the recent power deficit.

Special provisions need to be made to ensure that safety standards and application instructions are accessible to illiterate farmers. Poor illiterate farmers in many other countries have succumbed to injuries due to their inability to read and understand such instructions.

16) Increased cultivation of cash crops, as being promoted by the PRPS and financed by the EC through “macro support, may place an increasing strain on already depleting water resources as private companies may spend higher revenues on irrigation facilities. It will be crucial that private companies are provided incentives to use water saving technologies.

17) While tourism growth in Rwanda – a key objective of the PRPS – is focused on avoiding mass tourism and targeted at high valued ecotourism customers, hotels may in periods of economic difficulty offer lower prices and in turn induce visits (albeit unintentionally) of lower paying and higher numbers of tourists. As Rwanda seeks to diversify its tourism attractions environmental safeguards to minimize tourism related environmental damage will become increasingly important. Sufficient support – including by the EC – is vital to ensure that REMA not only develop environmental standards and guidelines, but have sufficient capacity to implement these new standards and guidelines (see also point 1).

18) The recent development of a revenue based scheme in Rwanda is a key effort geared towards helping ensure that local communities benefit from tourism revenue/growth, as being promoted by the current PRSP. Similar approaches are needed in other sectors (e.g., energy) towards helping ensure that local communities benefit from sectoral growth and are compensated for negative externalities.

19) While intentions of recent environmental decrees enacted in Rwanda are laudable in seeking to address the current energy crisis and related environmental problems, recent reports indicate that the decrees are jeopardizing poor peoples’ livelihoods, including of thousands of brick makers. It is recommended that prior to the enactment of future policies and decrees that an evaluation is conducted (such as through a SEA) on potential *environment* and *livelihood* impacts. Furthermore, EIA guidelines – as will soon be developed for Rwanda – should similarly highlight assessing both *environmental* and *social* impacts.

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³⁰ (*) - indicates individuals that were contacted previously (e.g., for a pre-CSP assessment)

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Appendix 2: National- and EC-level questionnaires

National-level questionnaire:
Questionnaire: Streamlining poverty-environment linkages in the European Community's development assistance

Follow-up CSP review

- *Rural development (62 million Euro EC funds)*: A recent multi-level evaluation (March/April, 2005) highlighted numerous environment-poverty concerns associated with rural development including land scarcity, water degradation, soil erosion, and deforestation. How is modernization of agriculture (e.g., increased fertilizer use/application) anticipated to affect the environment and people? How is the rehabilitation of the primary road between Ruhengeri and Gisenyi (also supported by the EC under the "rural development" focal area) envisioned to impact key economic sectors and in turn the environment (e.g., about parks and protected areas) and poor peoples' livelihoods (improved market access, income generation, etc.)? What are opportunities/synergies to address the environment-poverty concerns?

- *Macro support (50 Million Euro EC funds)*: How are macroeconomic reforms (privatization, liberalization, etc.) that are supporting (anticipated) growth in the tourism, mining, and other economic sectors (e.g., coffee, tea, pyrethrum, livestock, and textiles) affecting the environment (freshwater, fish, forests, etc.) and the livelihoods of especially the rural poor (their access to natural resources, health, employment, etc.)? Which geographic areas and peoples are affected most? How are people living in poverty benefiting from such (anticipated) growth? Initiatives needed to address the environment-poverty concerns? Possible opportunities/synergies?

Institutional evaluation:

- *Governance (31.9 Million Euro EC funds)*: The multi-level analysis (2005) underscored environmental management capacity constraints at the local to national levels and the importance of using the PRPS as a fundamental tool to mainstream environment-poverty issues in national priority setting/planning. How is the PRSP II envisioning to integrate environment-poverty issues (e.g., in programming, budgeting, and monitoring)?

Case studies?

Other contacts?

EC-level questionnaire:

Questionnaire: Streamlining poverty-environment linkages in the European Community's development assistance

Follow-up CSP review

- *Governance (12 Million Euro EC funds – update?):* A recent multi-level analysis (March/April 2005) highlighted environmental management capacity constraints at the local to national levels. How is CSP investment helping address environmental management capacity in Rwanda? Opportunities? Synergies?
- *Rural development (62 million Euro EC funds – update?):* The multi-level evaluation identified various environment-poverty concerns linked to rural development (including land scarcity, water degradation, soil erosion, and deforestation) and underscored the need to increase local to national capacity to promote sustainable agriculture development. How is CSP investment helping address the environment-poverty concerns? How is CSP investment strengthening environmental management capacity in the agricultural sector? How are environment-poverty concerns being considered in rehabilitating the primary road between Ruhengeri and Gisenyi (EIA, environmental screening notes, etc.)?
- *Macro support (50 Million Euro EC funds – update?):* How is CSP investment helping address environment-poverty concerns associated with the (anticipated) growths of tourism, mining, and other key economic sectors (e.g., coffee, tea, phyrethrum, livestock, and textiles)?

Institutional evaluation:

- *EC-level:* What types of opportunities exist to improve environment-poverty streamlining at EC-level?
 - *CSP Process:* How was the Rwanda CSP developed? Was representation from the environmental lobby present? If so, who? How were environment-poverty issues integrated in the Country Strategy? Are efforts underway to include a Country Environmental Profile (CEP)³¹ in the Rwanda CSP following the mid term review? Why was a CEP not developed for the initial Rwanda CSP (2002)? What tools were used (or would be useful) to help mainstream environment-poverty concerns in the CSP and raise awareness on environment-poverty issues? Level of awareness on environment-poverty issues in the country delegation? What type of follow-up has there been by EC (Brussels) to facilitate environmental streamlining in the CSP? Would this help facilitate environment-poverty streamlining in the CSP process? Have Strategic Environmental Assessments (SEAs) been developed in Rwanda? What CEP and SEA³² guidelines were used? Opportunities at programming level to improve environment-poverty integration? Possible synergies?
 - *EC involvement in PRSP Process:* Was the EC involved in reviewing the Tanzanian PRPS upon which the CSP heavily relies (e.g., regarding macroeconomic policies' impact on the environment)? Does the Poverty Reduction Budget Support Facility – to which EC funds are channeled under macro support/budget support – check on

³¹ A CEP provides an overview of: the state of the environment; environmental policy, legislation, and the institutional framework, and recommended priority actions.

³² A SEA is an overarching assessment at programming level that integrates environment and development issues, provides information on alternative options, and identifies potential environmental impacts of proposed policies and plans.

environmental impacts of proposed investment? Opportunities to improve environment-poverty integration? Synergies?

- *EC investment/project-level*: Are the environmental impacts of projects/programmes financed under the current CSP sector assessed and being monitored? If so, how (EIA, environmental screening notes, etc.)? By whom? Opportunities to strengthen? Possible synergies?

Case studies?

Other contacts?

Appendix 3: Background on Rwanda (includes extracts from Bush et al, 2005; other sources – TOR for task team, 2005; Garadi, A., and C. Twesigye-Bakwatsa, 2005; MINITERE, 2005). For more detail refer to Bush et al., 2005 – pp. 1-3.

Rwanda is a small country in the Great Lakes Region of Africa with a population of approximately 8 million inhabitants. Rwanda's population density and growth rates are among the highest in Africa at respectively 321 persons per sq. kilometer and 3.1% (population has nearly quadrupled in the last four decades). Increasing population pressure coupled with a predominance agrarian economy – in which 90% are employed through agriculture – has led to serious land scarcity. An estimated 75% of households currently subsist on 1 hectare or less (of which 54% own 0.5 hectares or less). Rwanda is one of the poorest countries in the world ranking 159 out of 177 countries on the 2004 Human Development Index.

Since the 1960's Rwanda's human environment has been punctuated with violence, immigration, and emigration. During the 1994 genocide up to 1 million individuals were killed, while approximately 3 million fled to neighboring countries. Despite speedy recovery, the country continues to face challenges in the legal system, institutional restructuring, shelter, and demobilization. The conflict has left a very complex legacy of questions including on the assignment of property rights (Government of Rwanda, 2002).

Environmental resources (primarily land, wetlands, forests, and water) continue to support the welfare of the majority of poor Rwandese in which 90% of the population depends on subsistence agriculture, 99% rely on biomass for cooking, 90% depends on biomass for energy, etc. Intensive agriculture, extensive deforestation, and land degradation (caused by significant population pressure) is deteriorating livelihoods especially of the rural poor. The Ministry of Agriculture and Livestock (MINAGRI), for example, estimates that Rwanda loses the capacity to feed 40,000 people each year due to extensive soil erosion, estimated at an annual loss of 945,000 tonnes of organic matter.

Environmental damage has been exacerbated by the resettlement of returning refugees. After the 1994 genocide the government of Rwanda was forced to resettle people into formerly uninhabited natural areas, including the former Gishwati forest and Akagera National Park. This has inevitably led to the overexploitation of natural resources. Resettlement has not only led to deforestation and conversion of natural parks, but has furthermore accelerated deforestation outside of reserves and parks.

Destruction of environmental resources including watersheds and wetlands are having significant economic repercussions. The current energy crisis – that has resulted in the decline of almost 50% of the national electricity supply – has been directly linked to declining water flows at the hydroelectric power station (between Lakes Bulera and Ruhondo) that in turn has been caused by upstream deforestation and wetland degradation (refer to Box 2 – section 5).

Mainstreaming Poverty – Environment Linkages in the European Union’s Development Assistance in Tanzania.

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Consultancy Report Submitted to

World Wide Fund for Nature (WWF)

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EXECUTIVE SUMMARY

Introduction

This study is one of the studies conducted in ACP countries in order to provide recommendations to the European Union and its development partners to address poverty-environmental linkages in development assistance. The main objective of the study is to enhance the impacts of the EC's development assistance on poverty alleviation through increased attention to the role of the environment in the livelihoods of the rural poor in its country development strategies.

The research was based on the analytical framework by Reed (2004). It is based on three case studies: a road transport project in Shinyanga region, a fishery project in Mwanza region and coastal marine resources in Dar es Salaam region. The research involved review of documents, fieldwork and data analysis at local / meso, and national levels. Fieldwork involved site visits, interviews, focused group discussions, and interviews with key informants.

Research Findings

The local communities, district and national authorities appreciate the importance of the road project, as it will open up markets, facilitate trade and enhance economic growth. However, poverty is a multi-facet phenomenon such that road improvement alone may not lead to poverty alleviation unless access to feeder roads, water and farmland is also improved. Unless deliberate effort is made to regulate resource use through improvement of property rights and fair trade, the road development may lead to further degradation of the environment. Environmental issues were integrated in the project. However there was inadequate consideration of the poverty – environmental linkages since short term environmental impacts (such as borrow pits, outlet culverts, etc) were evident in the field. Persistence of poverty is likely to force the people to degrade the environment further.

The majority of the people living around Lake Victoria rely on the fishery resources for their livelihoods. However, development of the Nile Perch fish export has created mechanisms of change that impact the livelihoods of the poor. The growth of fish export without improving incomes of the local communities is likely to environmental degradation. The poorer

stakeholders (boat crew, artisanal processors, local village communities, etc) are in a weaker position to compete with private business sector to which they have lost business. Although the fish export generates a lot of revenue, very little trickles down to the local community level. Consequently there has been a growth of settlements on shore and on islands that is not supported by adequate provision of infrastructure and services. Competition for resources is increasingly leading to conflicts and environmental degradation.

Along the coast there is complex relationship between poverty and environment. Much of the problem of environmental degradation centres on poverty as both a cause and effect. The overuse of coastal resources and decline in fish stocks has led to a reduction in earnings and ability of fishermen to buy sustainable fishing gear. This in turn, has forced many fishermen to use fishing methods that provide better short-term rewards for their cost but are also environmentally degrading. Hence, this perpetuates the problem by contributing towards the further decline in the marine resources available. Unless the question of marine resource degradation is addressed, incidences of poverty among the coastal communities will persist.

Opportunities for streamlining poverty and environmental linkages

Economic opportunities arise from improved export, local trade / businesses and tourism and private sector involvement in resource management. There has been a growing trend towards institutional developments (through macro and micro reforms) at regional, national and local levels which are meant to enhance involvement of the private sector and local people's participation in resource management. Effort has been made to integrate poverty and environmental issues in sectoral policies and development strategies.

Impediments for poverty and environmental linkages

Although there efforts towards institutional development, there are still weaknesses such as lack of community based initiatives and organisations; multiplicity of institutions with overlapping mandates that are also weakly coordinated. Economic impediments as reflected by lack of well-developed credit system for the poor; low level of technology used; and imperfect fish and agricultural markets. Social conflicts arising from unfair competition for resources and weakening social cohesion. Furthermore, Social problems such as spread of STDs including HIV/AIDs associated with rapidly growing settlements. Infrastructure and social services at local scale are not adequately developed. Environmental impediments such as pollution and resource depletion are likely to hinder efforts towards poverty alleviation.

Conclusion

The findings from the three case studies have indicated that there is strong link between the dependency on local natural resource base and rural poverty. However, the poverty-environmental linkages are complex and mediated through various factors such as policy measures, market forces, local institutional arrangements and property rights. For example, the liberalization of the fishery sector and development of coastal tourism have marginalized the poor. In turn this has undermined the capacity of the poor to use resources sustainably. Institutional, economical, structural, social cultural constraints have hindered realisation of poverty – environment integration.

Recommendations

There is the need for the government to regulate imperfect markets such as potential for cartels and protect disadvantaged groups such as the poor, women, etc.

The national, regional, district and local communities should develop mechanisms to enable small-scale fishers and farmers to have access to market information and credit services to enable them utilize the growing opportunities.

There is the need to review the law and improve compensation rates for personal assets lost during road development.

Effort is required to diversify the local economies to avoid over dependence on one sector e.g. Development of non-fish export sector.

Support the review of institutional structures that do not provide better opportunities to local communities.

There is a need to strengthen benefit-sharing mechanism to ensure that local communities the benefit from resources harvested. This includes use some of the revenues generated from fish to support other sectors of the economy (crop cultivation, livestock keeping and non-farm activities) to make them also relatively strong.

There is need to promote local enterprises such as handicraft production, to ensure that local communities benefit from coastal tourism.

There should be a follow-up on development projects to see whether with time they really contribute to poverty alleviation and environmental conservation.

There is the need to support and enhance the development of civil society organizations for managing natural resources for poverty alleviation and sustainable livelihoods.

Geographical areas of concern which include critical habitats should be given intensive proactive planning management

There is the need for improvement in integration of environmental and poverty concerns of the local communities in development assistance programmes.

The EU anticipated investments in the country need to go hand in hand with reversing the depletion of natural resources.

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LIST OF ABBREVIATIONS

ACP	African, Caribbean and Pacific
BMU	Beach Management Unit
CMA	Community Management Area
CSPs	Country Strategy Papers
DAS	District Administrative Secretary
DED	District Executive Director
DFO	District Fisheries Officer
DFSO	District Fisheries Officer
EAME	Eastern African Marine Ecoregion
EC	European Community
ECHO	European Community Humanitarian Office
EDF	European Development Fund
EEZ	Exclusive Economic Zone
EIA	Environmental Impact Assessment
EU	European Union
FD	Fisheries Division
FMP	Fisheries Management Plan
FoB	Free on Board
GDP	Gross Domestic Product
HIV	Human Immunodeficiency Virus
Km	Kilometer
LGRP	Local Government Reform Programme
LVFO	Lake Victoria Fisheries Office
LVEMP	Lake Victoria Environmental Management Project
LVFRP	Lake Victoria Fisheries Research Project
LVFMP	Lake Victoria Fisheries Management Plan
LVTRP	Lake Victoria Tanzania Research Project
MACEMP	Marine and Coastal Environment Management Project
MMA	Marine Management Area
MPA	Marine Protected Area
MPO	Macroeconomic Policy Office
MSc.	Master of Science Degree
MNRT	Ministry of Natural Resources and Tourism
MRALG	Ministry of Regional Administration and Local Government
NSGRP	National Strategy for Economic Growth and Poverty Reduction
PRSP	Poverty Reduction Strategy Paper
PhD	Doctor of Philosophy
STDs	Sex Transmitted Diseases
TAFIRI	Tanzania Fisheries research Institute
TANROADS	Tanzania Roads Agency
TCMP	Tanzania Coastal Management Partnership
ToR	Terms of Reference
TPO	Tanzania Programme Office
Tsh.	Tanzania Shillings
URT	United Republic of Tanzania
VicRes	Victoria Research
WWF	World Wide Fund for Nature

1. INTRODUCTION

Tanzania is a well-endowed country from a natural resource point of view; with its area of more than 945,000 km² of which 388,000 km² is forests and woodlands. About 6 percent of the acreage consists of permanent crops, 40 percent of permanent pastures and 7 percent is inland waters in terms of ocean, lakes and rivers. Other natural resources include wildlife and minerals. According to the census of 2002, the population growth is around 2.9 percent per year and the population size is now estimated at 34.6 million (URT, 2003). Despite this abundance in resources the majority of her population is poor. Thus contemporary development interventions through macro and micro economic and social reforms give priority to poverty alleviation. These efforts in Tanzania are reflected in the Tanzania Development Vision 2025 (URT, 1999), Poverty Reduction Strategy Paper (URT, 2000), Tanzania Assistance Strategy (2000), and the National strategy for Economic growth and reduction of Poverty (URT, 2004).

However, poverty is multi-dimensional in nature and recent analytical evidence in many places shows that poverty levels and inequalities are still high (URT, 2004), and that in order to realize significant poverty reduction more resources must be used. At the same time concern has been growing over the last half century on the decline of the natural resources base. Inadequate consideration on environmental issues in poverty alleviation is considered as one of the major weaknesses of various reforms and strategies for development from national as well as from international development interventions. Analysis of environmental-poverty integration in country strategy papers (CSPs) of Tanzania, other ACP countries and in international development assistance has indicated that institutional, policy and structural impediments are contributing to the weaknesses (Snel, 2004). Poverty-environmental concern is raised case studies of many sectors of the economy including transport, mining, tourism, fishing and agriculture/export growth (*ibid*, Jambiya and Lewis 2003).

The majority of the poor lives in rural areas and mostly depends directly and/or indirectly on natural systems such as forests, fishery, wildlife and land for subsistence. But also in most cases these poor people are also landless. These people also continue to be poor because of decline of the resource base and quite often are forced to degrade the environment further (Bucknall, *et. al.*, 2001). The rapid population growth in Tanzania, increasing land scarcity,

coupled with declining yields in agriculture (after reduced use of fertilizers and other inputs), has created a situation where the pressure on remaining stocks of forestland has increased substantially.

It is now widely acknowledged therefore that a great attention also must be paid to mainstreaming poverty - environment linkages in national and international development assistance in order to meet targets of economic growth and poverty reduction. Environmental change affects poor people's well being both positively and negatively in terms of opportunities, capabilities, security and empowerment.

This research seeks to provide to the European commission and its partner developing countries recommendations to address poverty-environmental weaknesses in current country strategy papers (CSPs) and to improve environmental streamlining in European Community (EC)'s development assistance. This study will further identify institutional, policy-oriented changes and structural impediments encountered in addressing poverty-environmental gaps in development interventions. Detailed Terms of Reference (TOR) are provided in Appendix I.

2. BACKGROUND

2.1 POLICY STATEMENTS ON ENVIRONMENT – POVERTY LINKAGES IN TANZANIA

The Poverty Reduction Strategy Paper (PRSP) of 2000/01 – 20002/03 emphasized poverty alleviation and set out the medium term strategy for poverty reduction and indicators for measuring progress. It defined objectives for poverty eradication by 2010, with the following key priority areas for achieving its goals:

- (i) Reducing poverty through equitable economic growth
- (ii) Improving human capabilities, survival and social well being, and
- (iii) Containing extreme vulnerability among the poor

The Country Strategy Paper (CSP) recognises the heavy dependence of the poor households on the environmental resources (land, minerals, water and forests) for monetary and non-monetary incomes. Although the Government of Tanzania has not categorised natural resources as a priority sector there is a growing understanding of the important role they play in supporting about 86% livelihoods by providing their income and in sustaining important ecological services. However, the CSP did not mention key environment – poverty linkages

and the likely consequences to the poor if the environment resources are degraded and strategies to address the consequences.

The National Strategy for Economic Growth and Reduction of Poverty (NSGRP) (URT, 2004) is a second national framework for putting the focus on poverty reduction high on the country's development agenda. The NSGRP is a five-year strategy (2005/06 – 2009/10) and builds on the first PRSP. The NSGRP mentions that it will pay great attention to mainstreaming cross-cutting issues namely HIV and AIDS, gender, environment, employment, governance, children, youth, elderly, disabled and settlements.

Following the ideological shift from centrally planned economy in 1980s, the Government has been implementing wide ranging institutional and policy reforms including the Public Sector Reform Programme (PSRP) and the Local Government Reform Programme (LGRP). The reforms focus at strengthening Local Government Authorities (LGA), making them effective in implementing the expanding responsibilities through both decentralization and devolution.

The PSRP has helped to re-define the role of the State in Tanzania. The Government has withdrawn itself from direct production of goods and services. It has reduced its roles and functions and enhancing the participation of NGOs and private sector in the delivery of goods and services. The civil services have also been substantially re-structured and employment levels have been reduced. Restructuring of the civil services and reduction of employment levels have, for example, resulted to inadequate staff at regional and district levels making it difficult to implement the good policies and strategies. Inadequate implementation capacity and poor enforcement of local and national policies and legislation both contribute, in a very significant manner, to environmental degradation (Jambiya and Lewis, 2003).

The re-introduction of the Local Government System was aimed at providing a meaningful decentralization, by facilitating more democratic participation and decision-making and implementation at all levels. The major feature of the Local Government Act of 1982 (URT, 1996) was to make Village Assembly the supreme policy-making body, vesting of executive power in the Village Council and opening up for the Village Council to enact by-laws, which however had to be approved by the Full District Council to become officially enforceable laws. The overall objective of the Local Government Reform Programme is to improve the

quality of and access to public services provided through or facilitated by the Local Government Authorities (URT, 1999). Nevertheless, many village councils and village natural resource management committees have failed to exercise their powers because of the delay by District Councils in approving by-laws. A study conducted by Ngaga and Luoga (2003) in 14 districts of Tanzania shows that on average, each district has prepared 47 by-laws of which Full District Councils had approved only 6 hence weakening the capacity of local communities to enforce sustainable management and utilisation of natural resources.

It is worth pointing out here that in addition to the above reforms/strategies, the Government of Tanzania has put considerable efforts to ensure sustainable management and utilisation of natural resources by formulating policies and regulations that facilitate poverty alleviation and environmental management (URT, 2002). The National Agricultural and Livestock Policy (URT, 1997a) points out that agriculture is the lead sector in Tanzania on which the majority of the rural poor depends. The policy acknowledges that one of the major constraints to the sector is erosion of natural resource base and environmental degradation. It points out further that the present use of natural resource is unsustainable, and barriers to communities gaining increased benefits from natural resources remain.

The National Environmental Policy (Vice-President's Office, 1997), points out that there is a clear cause-and-effect relationship between poverty and environmental degradation, and that environmental degradation leads to widespread poverty. Therefore one of the objectives of the policy is to ensure sustainable and equitable use of resources for meeting the basic needs of the present and future generations without degrading the environment or risking health or safety.

The National Fisheries Sector Policy and Strategy Statement (URT, 1997b) also emphasizes that the fisheries sector has significant economic and social impacts. Its focus is among other things to promote its contribution towards poverty alleviation, food security and employment. On the other hands, the policy empowers the communities to participate in the management and conservation of the fisheries environment by ensuring responsible fishing principles by all communities. The policy insists on adherence to environmental impact assessment (EIA) before launching any fisheries investment. It bans destructive fishing and processing methods thereby discouraging water pollution.

The National Forest Policy (MNRT, 1998) acknowledges that forest resources must be used to combat poverty and deprivation in order to improve people's welfare. As a deliberate intervention to enhance livelihood systems of the local communities, the policy promotes forest-based activities for the benefits of the local communities and national development. Among other things, the policy strives to prevent and control degradation of land, water, vegetation and air that constitute life support systems. Also it strives to ensure ecosystem stability through conservation of forest biodiversity, water catchments and soil fertility. This involves establishment of some new catchment forest reserves for watersheds management and soil conservation in critical watershed areas.

The current Mineral Sector Policy (URT, 1997c) is designed to address among other issues creation of gainful and secure employment in the mineral sector and provide alternative source of income particularly for the rural population, and ensure environmental protection and management. For example, the 1998 Mining Act (URT, 1998a), has an impressive catalogue of environmental standards that investors are supposed to observe. The Act for example makes extensive provisions for environmental matters in relation to mining activities particularly with regard to limits of discharge of pollutants, noise or vibrations into the environment, reclamation requirement standards for land, waste dumps and waste treatments.

The main objective of the National Water Policy (URT, 2002) is to develop a comprehensive framework for sustainable development and management of the Nation's Water resources. However, the Water and Utilization and Control Act of 1974 makes extensive provisions for environmental matters. The Act stipulates specific standards for production of certain water products, discharge of effluents/water back to receiving waters, treatment of effluents and maximum permissible concentrations for different chemicals and compositions.

The Wildlife Policy (URT, 1998b) emphasises the involvement of all stakeholders in wildlife conservation and sustainable resource utilisation as well as in a fair and equitable sharing of benefits as one of its visions. The policy also aims at using wildlife resources to contribute to poverty alleviation and improve the life quality of Tanzanians. The policy prohibits human settlement and hence activities in the National Parks and Game Reserves. It therefore discourages the destruction of resources such as water catchment and soil.

The National Beekeeping Policy's (URT, 1998c) main goal is to enhance sustainable contribution of the sector for socio-economic development and environmental conservation. One of the policy's objectives is to prevent and control degradation of water resources and vegetation and in this view; it encourages sustainable management of natural resources.

Although the policies cited above and others have indicated poverty and environmental concerns but their linkages and strategies to address linkage consequences are weak and/or lacking. It is further pointed out by Jambiya and Lewis (2003) that there is little analysis of the nature of poverty and environmental relationship, and even less guidance on the steps that can be taken to reduce the negative and enhance the positive aspects. In addition, the government has shown weakness in the management of natural resources due to inadequate manpower, limited funding and weak implementation of its policies and enforcement of regulations (Ngaga *et al.*, 2003). As such, there is very little on the ground especially at district and village levels on implementation.

In reality, the District Councils are capacity constrained in terms of finances, inadequate and qualified human resources and working facilities. The districts are severely constrained in terms of transport especially vehicles, motorcycles and bicycles. Almost all districts have inadequate capacity in terms of computers, photocopiers and other office supplies, office rooms and facilities such communication systems (Telephone and Radio Calls) (Ngaga *et al.*, 2003). This shows that reforms and structural changes alone cannot solve current range of problems associated with poverty and sustainable management of natural resources in District Councils and villages. Complementary changes of building capacity in training, provision of working tools, changes in individual staff attitude/behaviour to improve governance and accountability are imperative.

There is also the problem of awareness/appreciation and/or mindset of some of the district officials of the need to have highly qualified staff in certain areas of speciality. For example some districts do not have professionals in forestry, supplies and auditing/accounts, and almost all districts do not have tourism and environmental experts (Ngaga *et al.*, 2003). It is reported by Jambiya and Lewis (2003) that at district level, there is no official post for either environmental management or poverty reduction as a result there no allocation of responsibility of day-to-day running of these responsibilities.

Furthermore, implementation of natural resource policies and Acts at district and village levels is weak because of the inadequate link between the natural resources departments in the districts with the mother Ministry of Natural resources and Tourism (MNRT) (Mtuy 1994; Ngaga, 1998; Ngaga *et al.*, 2003). Most of the staff at districts are employed by District Councils and answerable to the Councils under the President's Office - Regional Administration and Local Governments, and not directly answerable to the MNRT. To strengthen poverty and environmental linkages, human resources at District Councils must be linked to the Sector Ministries responsible for policy, regulatory, training, standards, monitoring and evaluation. There is little analysis of how the weakly developed cross-sectoral and multi-sectoral policy coordination functions at districts and national levels can be improved to maximise poverty reduction and environmental management (Jambiya and Lewis 2003).

The low financial capacity of the districts can also be attributed to the policy of the Central Government that natural resources sector was not among the four priority sectors (education, health, water and infrastructure) set by the Central Government of Tanzania. Natural resources are by and large considered as sources of revenue to the District Councils and consequently are allocated small budgets.

Most Community Based Organisations (CBOs) at local levels are entities that generate income from the natural resource base and in most cases people are willing to sustain them even from their own resources. In this respect therefore, these CBOs can be very important entry points to capacity building at grass root level to address poverty and environmental concerns and participatory natural resources management. Remarkable challenge however lies with the present and future performance of Village Natural Resource Committees (VNRCs) because of low incentives to motivate VNRCs, and the pace of formulation and enacting by-laws by village governments and approval by district councils.

2.2 EU-ACP POLICY ON ENVIRONMENT – POVERTY LINKAGES

Cooperation between the European Union (EU) and the countries of Africa, Caribbean and the Pacific (ACP) dates back to the origin of the Community. During this period many changes especially in ACP countries have taken place, which has necessitated a modification/revision of the development assistance approach in order to accommodate these changes. To date the EU's primary concern has been poverty alleviation and promote the

integration of the ACP countries into the global economy. Nevertheless, the two goals may conflict and hence require proper planning to balance them. Also the link between poverty and deterioration of the environment is given priority in the EU's development assistance to ACP countries (EC, 1997).

Despite the reordering of priorities of the international development community to focus on poverty alleviation, relatively little attention has been given to the critical role that environment and access to environmental goods and services play in poverty alleviation, particularly of the rural poor (Snel, 2004). A recent review by the ACP-EU joint assembly adopted in October 2003 – on the “Sustainable management and conservation of natural resources in ACP countries in the context of the 9th European Development Fund (EDF) aid programming” indicated that the European Commission development assistance inadequately addresses environmental issues, especially with regard to the critical role that natural resources assets play in alleviating poverty (*ibid*).

In order to effectively address poverty alleviation, understanding the critical role that environment plays is important. This study is therefore an attempt to explore this link in the ongoing EU development assistance in Tanzania through case studies. It seeks to understand how key environmental-poverty linkages have been integrated in development programmes and identify various environmental-poverty weaknesses and types of interventions that may be used to address the concerns.

2.3 EU ASSISTANCE TO TANZANIA

Tanzania is among the ACP countries that benefit from EC assistance European Development Fund (EDF) programmed aid. The EDF support to Tanzania has been increasing both in magnitude and sectoral coverage. Table 1 shows the magnitude and focal sectors for the 6th to 9th EDFs. The allocation of funds has grown from 176.5 m€ for the 6th EDF to 290 m€ for the 9th EDF. The focal sectors have grown to include transport infrastructure, agriculture, Communication infrastructure, human resources development, education, social infrastructure and services, and macro economic support. These sectors play a great role in enhancing economic growth and alleviating poverty. Governance, though not a focal sector, has also received funding as it has a key role to play in enhancing people's development initiatives.

Table 1: EDF Allocation to Tanzania

EDF	Value	Focal sectors
6	176.5 m€	Transport infrastructure and Agriculture
7	185 m€	Transport and communication infrastructure, Human resources development
8	204.5 m€	Transport infrastructure, social infrastructure and services
9	290 m€	Transport infrastructure, macro economic support, education, and Governance (non focal sector)

Source: URT and EC, 2002

The 9th EDF allocation to sectors is shown in Table 2. The transport sector is allocated 40% of the funds. Support in the transport sector is aimed at opening up the market and improves access and hence promote the growing sector of mining, tourism and agriculture activities through regional and international trade. Another large share of 34% is allocated to macro-economic support. Macro support is aimed at facilitating growth the same sectors mentioned including the agribusiness sectors. Macro economic support has facilitated liberalization of the economy including the fisheries sector. The support of EU in mining and tourism has, for example, enabled the sectors to grow rapidly in Tanzania. Education and governance have been allocated 15% and 10% respectively.

Table 2: Allocation of the 9th EDF by Sectors.

Focal Area	Allocation (A Envelope) m€	Percentage of overall allocation
Transport infrastructure	116.0	40%
Macro-economic support	98.6	34%
Education	43.5	15%
Governance (non-focal sector)	31.9	10%
Total	290.0	100%

Source: URT and EC, 2002.

Tanzania's road network (about 85,000 km) is poor by international standards. Less than 20% of the road network is in good condition and the situation is bad in rural areas. EU assistance to transport sector has been central. EDF allocation has financed the building/rehabilitation of

more than 800 km of trunk roads. It has contributed in repair and maintenance programmes, building/maintenance of feeder roads, and institutional support. Some of the road projects implemented or under implementation include Mwanza roads, Mwanza / Shinyanga border - Tinde-Isaka-Nzega, backlog maintenance programme and institutional support.

Tanzania also receives other funds from the European union, Through the European Community Humanitarian Office (ECHO), the EC has also given support to refugees in Tanzania. Tanzania has also received significant funds through STABEX (for cotton, coffee and tea), EIB loans, structural adjustment, emergency aid, and community budget lines. EC support on the fisheries sector in Tanzania, has concentrated on ocean marine fisheries and Lake Victoria fisheries through regional programmes.

Through its development assistance to Tanzania, EC aims to integrate the local economy to global economy by promoting trade, It also intends to alleviate poverty among the local population. These objectives are not benign and care is required in order to achieve both. The promotion of gold mining, for example, has increased growth of the national economy with little linkage effects to the economy of the local communities. Gold mining has gained greater importance in the trade structure of Tanzania in terms of export value. However, the gold mining sub-sector has had limited linkage effects to the rest of the economy (URT and EC, 2002).

Trade between EU and Tanzania in fresh water fishery products through its regional programme has been growing rapidly. The EU support on fisheries in Lake Victoria for the past 10 years has been on research. EU has funded Lake Victoria Fisheries Research Project (LVFRP) that involved a consortium of European researchers; institutions and fisheries research institutes of Tanzania, Uganda and Kenya (Bugenyi and Knaap, 1997). The outcome of the research project is the Lake Victoria Fisheries Management Plan (LVFMP) which the EU has shown interest to assist. The water and fisheries sectors have also benefited from the macro support fund mentioned above. Certainly the European Union's support to Tanzania through EDF has been significant and crucial for the development of the national economy. Further support is expected in future.

3. OBJECTIVES OF THE STUDY

The main objective of the study as outlined by the terms of reference (ToR) is to enhance the impact of the EC's development assistance on poverty through increased attention to the role of the environment in the livelihoods of the rural poor in its country development strategies.

More specifically, the objectives of this research are:

- i. To evaluate the anticipated environmental impacts of the projects,
- ii. Assess linkages between natural resource assets and rural poverty,
- iii. Identify socio- economic, institutional and structural impediments operating at local, meso and macro levels,
- iv. Evaluate the extent of environmental integration in EU assistance in Tanzania and identify poverty-environmental gaps,
- v. Identify long term policy and institutional opportunities to improve poverty-environmental streamlining to enhance future effectiveness of EC development assistance, and
- vi. Propose strategic interventions that are needed to address the envisioned environmental problems.
- vii. To formulate recommendations for long term EU and national institutional and policy changes to facilitate poverty-environmental integration in the Country Strategy Paper process.

Key hypotheses:

The key hypotheses of this research are:

Hypothesis 1:

The roles of natural resource wealth, especially their contribution to rural livelihoods, have been inadequately addressed in EC development programmes. An evaluation of poverty-environment impacts and ways to address these shortcomings is needed.

Hypothesis 2:

Long term national to local level institutional and policy changes are needed to help ensure that country development strategies better integrate poverty-environment concerns.

4. STUDY AREA AND METHODOLOGY

4.1 DESCRIPTION OF THE STUDY AREAS

The geographical study areas were around the Lake Victoria Basin, particularly the EC investments in Shinyanga and Mwanza regions and the marine coast areas of Dar es Salaam. The Lake Victoria basin is selected because it has been identified as a hot spot with unregulated growth in the mining, tourism, fishing and other sectors resulting to significant environmental problems such as deforestation, biodiversity loss and water degradation (Snel, 2004). There is also significant socio-economic impacts (Kulindwa 2001), depletion of the commercially important fish species due to over fishing (Wilson, 1993; Bwathondi *et al.*, 2001) and growing fish exports and investments (URT 2003b). The regions face environmental pressure on natural resources because of prolonged drought, demographic growth and rapid urban development affecting land uses. To enable the basin especially the regions sustain this pressure there is need to properly address poverty-environmental linkages in the ongoing and future development interventions.

According to the 2002 census, Shinyanga region was estimated to have 2,805,580 people, which is 8% of the total population of Tanzania mainland making it the second populated region (URT, 2003a). Annual average population growth was estimated at 3.3% and the average household size is 6.3. Mwanza region was estimated to have 2,942,148 people, which is 9% of the total population of Tanzania making it the most populated region. Annual average population growth was estimated at 3.2% and the average household size is 5.9 (URT, 2003a). The rapid growth in population in Lake Victoria basin has made the environment vulnerable. It has also increased pressure on natural resources and need for transport infrastructure and services

4.1.2 Resources Endowment in Shinyanga and Mwanza Regions

Shinyanga and Mwanza are endowed with wide range of resources including arable land, forests, water, and 85% of the region's population is rural and relies on crop and livestock production systems. The agricultural sector contributes 65% of the region's GDP (URT, 1998d and 2003b). However the agricultural sector is constrained by the low fertility of the good proportion of the regions' soils and the erratic rainfall patterns. With the exception of Geita and northern parts of Sengerema districts, rainfall in the rest of the regions is marginally adequate and highly variable. The main food crops are maize, paddy, sweet

potatoes and cassava. The regions are experiencing rapid increase in population size and densities. Mwanza region is susceptible to frequent recurrence of food shortages. Reliance on food importation from other regions implies that food is relatively expensive to the local communities.

Both regions have traditionally been the major producer of cotton. Cotton is grown by peasant farmers in all the districts and is an important foreign exchange earner for the regions. However, recently there has been a declining trend in cotton production due to low profitability of the crop (URT, 1998d and 2003b). This is despite EU support of Euro 2.2 million through STABEX to the cotton sector (EU Newshabari, 2002). This has great implications to the livelihoods of the local communities that for many years had relied on the crop for cash income. Livestock keeping is another important sub-sector that contributes to incomes and livelihoods of the local population. However, the population of livestock has been declining recently probably due to migration to other regions and / or diseases (URT, 2003b). The average cattle population density in Mwanza, for example, dropped from 122 in 1994/95 to 108 in 1998/99 and to 69 per square kilometers in 2002 (URT, 2003b). The decline in cattle population in the regions relieves pressure on land resources. Overgrazing is an environmental problem in drier areas. Overgrazing is more pronounced in Kwimba, Magu and Missungwi districts where serious soil erosion problems are faced. The livestock production sector is also facing problems of diseases and inadequate livestock facilities and veterinary services.

The regions are rich in natural resources including forestry, fisheries, beekeeping, wildlife and minerals. However, the regions have lost most of tree cover through extensive clearing of forests for agricultural production; timber and firewood, charcoal; wild fires, etc. Fuel wood and charcoal account for 95% of the domestic energy. Shortage of supply of fuel wood leads to acute energy scarcity for domestic uses. Mwanza city and Shinyanga municipality have to rely on importation of firewood and charcoal from Tabora and, Kahama and Bukombe districts of Shinyanga region.

Lake Victoria is one of the African Great lakes, and the second largest lake in the world covering 68,000 km². The lake is shared by Kenya (6% by area), Uganda (43%) and Tanzania (51%). It has a mean depth of 40 m, maximum depth of 84 m, shoreline of 3450

km, a water retention time of 140 years and a catchments area of 193 000 km² which extends into Rwanda and Burundi.

Lake Victoria is the key resource base for Mwanza region and its local communities. Fishing has been a traditional occupation of local communities living around the lake. Most of the local people rely on fishing and agriculture as the main source of livelihood. However recently fishing has become more commercialised. The fishery sector has replaced cotton as the leading foreign exchange earner and the major contributor to the region's economy. The local people are increasingly relying on fishing as the main source of their livelihood. It is widely acknowledged by respondents in Mwanza that fishing is more important than crop farming among communities of the Lake Victoria zone. The implication of the commercialisation of the fishery sector and especially the growth in export of fish fillet to the local economy has been a subject of major debate among social scientists.

The organization of the fisheries sector in Tanzania is with Central Government and Regional/Local Government functions. At the center fisheries are under the Ministry of Natural Resources and Tourism (MNRT). Fisheries administration is vested in the fisheries Division (FD), which is headed by a director of Fisheries.

The MNRT liaises with the Ministry of Regional Administration and Local Government (MRALG). The District Fisheries Officer (DFO) falls under the Natural Resources and Environment sector of MRALG. When dealing with technical matters, the Director of Fisheries communicates directly with the DFO through the District Executive Director (DED). The DFO receives funds for fisheries activities from the Director of Fisheries, but these funds are channeled through the DED. Some of the funds sent by the DF through the DED for fisheries activities are, however, sometimes diverted by the DED to non- fisheries activities. The Fisheries Department is developing a system of funding fisheries activities directly without going through DED to overcome this problem. The DFO is in charge of extension, licensing and surveillance. In Tanzania, the government at the district level has developed management partnerships involving fishing villages, known as beach management units (BMU) which are charged with enforcing and implementing the national fisheries regulations. However, the effectiveness of these BMUs is constrained by capacity in terms of inadequate and qualified human resources, lack of regular training, finances, and working facilities such as transport to monitor illegal activities

4.1.3 The Eastern African Marine Ecoregion -Tanzania

The marine part of Tanzania is a component of the broader Eastern African Marine Ecoregion (EAME). The EAME extends approximately 4,630 km along the eastern coast Africa, including the southern part of the coast of Somalia, the entire coastline of Kenya, Tanzania, and Mozambique and the northern part of the eastern coast of South Africa. It covers an area roughly estimated at 540,900 km², including the territorial waters and Exclusive Economic Zones (EEZ) of these countries to the 2,000 m depth contour beyond the continental slope. The north-south orientation of the EAME, covering about 30 degrees of latitude, contributes to its high levels of marine biodiversity: more than 1,500 species of fish, 200 species of coral, 10 species of mangrove, 12 species of seagrass, 1,000 species of algae, several hundred sponge species, 3,000 species of molluscs, 300 species of crabs and 250 of echinoderm, have been recorded (WWF, 2004).

The EAME vision aims to define how the EAME should appear in 2051 and is as follow: A healthy marine coastal environment that provides sustainable benefits for present and future generation of both local and international communities, who also understand and actively care for its biodiversity and ecological integrity.

4.2 METHODOLOGY

4.2.1 Data Collection Methods

As dictated by the objectives of the study, the study team began by familiarizing with various approaches used in this kind of studies. The analytical approach (Reed 2004) was adopted in this study. The approach was found useful in understanding poverty-environmental linkages and in identification of strategic interventions for removing obstacles to sustainable resource management and reduces rural poverty. The analytical approach is multi-disciplinary, analyses local poverty-environmental dynamics; links local level dynamics to meso and macro levels, and integrates economic and institutional analysis into a coherent framework.

After brainstorming, the main components of the study were identified and comprised of background (Review of document), fieldwork at Local/Meso Level Assessment, national level Assessment and analysis and Interventions/Recommendations.

4.2.1.1 Review of Documents

An extensive survey of literature was conducted covering EC development Assistance in roads and fisheries, socio economic profile and environment on Shinyanga and Mwanza regions. Documents on road construction project, fisheries in Lake Victoria and their linkage with poverty and environment were reviewed. Literature on EU development assistance in Tanzania included annual reports, policy documents and newsletters.

In addition, different sectoral and national policies were reviewed such as environmental policy, fisheries policy, transport policy, forest policy and agricultural policy. Strategic / reforms documents reviewed include National Strategy for Growth and Reduction in Poverty (NSGRP), Public Sector Reform Programme (PSRP), Local Government Reform Programme (LGRP) and Tanzania Development Vision 2025.

Based on review of documents and discussion, issues to be studied, data requirement and sources, methods of data collection, key/specific questions were identified as indicated in appendix 2. Thereafter key contacts at local, meso and macro levels were identified and research tools were developed and administered to individual as indicated in Appendix 6.

4.2.1.2 Field Visits

Activities during field visits included observations, administering questionnaires/checklists, focused group discussions and consultative meetings. Field visits were conducted at three levels. At local and meso levels, Shinyanga and Mwanza regions were visited. In each region, districts and villages/ local people relevant to the study/ project were interviewed using questionnaire and checklist (Appendix 3 and 4).

For the road project in Shinyanga region districts visited include Shinyanga urban, Shinyanga rural and Kishapu. Villages whose target groups were interviewed included Tinde, Kituli, Mipa, Maganzo, Ibadakuli and Nata (in Nzega district in Tabora region).

For the fisheries sector in Mwanza region, Mwanza city and Magu district including landing sites in each were visited. At region, City and district levels, officials and fish industry owners were interviewed. At fish landing sites fish selling/buying agents, boat owners, boat crews, individuals and village governments were interviewed. Landing sites visited for

observations and interviews conducted include Kayenze, Igombe, Kibangaja and Kigangama (see Figure 2).

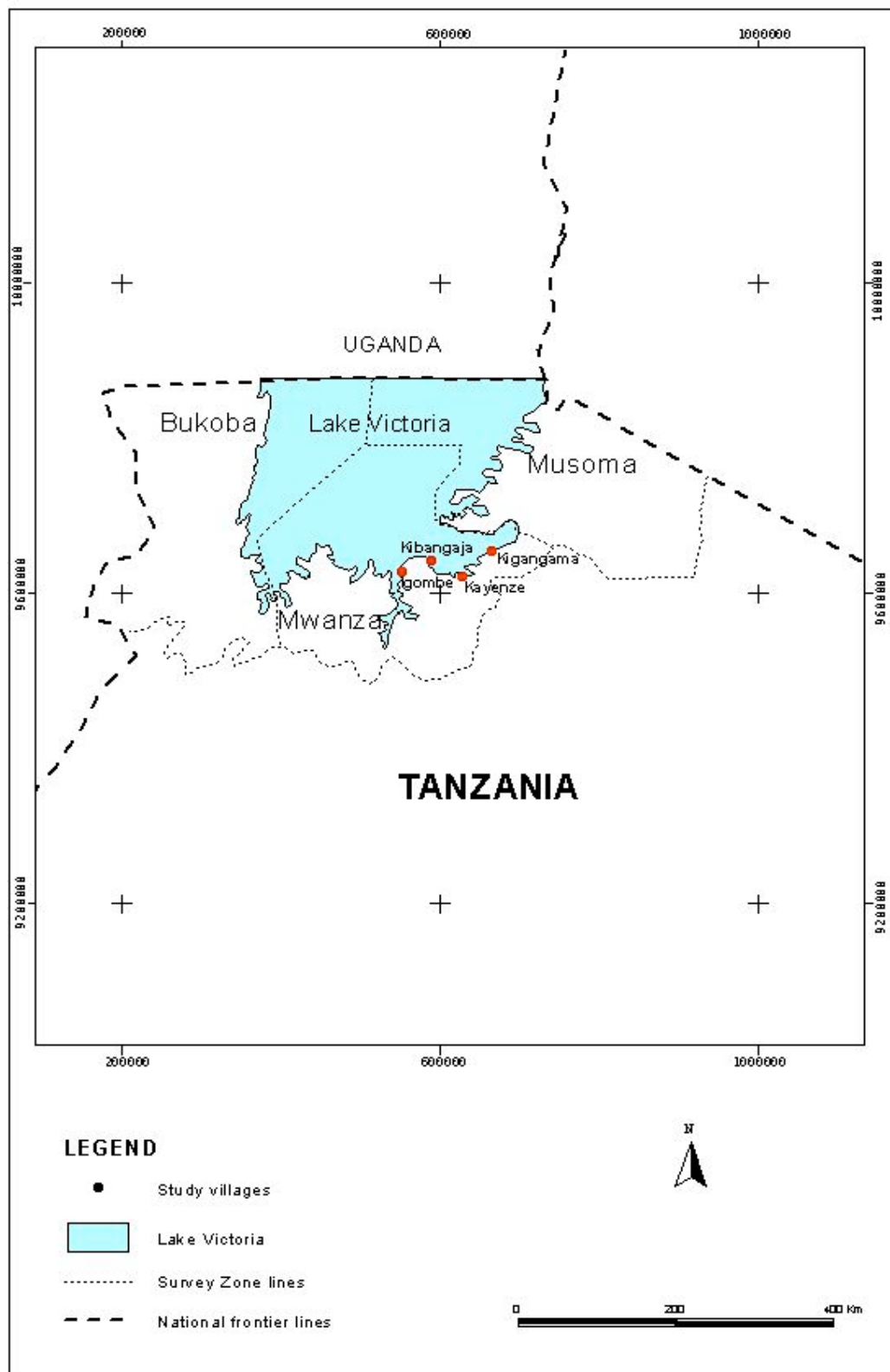


Figure 1: Location of Landing Sites Visited

In addition, key informants and focused group discussions were carried out opportunistically with village governments, resource management units e.g. Beach Management Units in the case of fishing, fishers and other key user groups of the resource/project. The questionnaires served to enhance understanding on household practices, expectations/benefits of the projects (road and fishery), how the environment contributed to poverty and vice versa; reliance on local resources and access, environmental problems and institutions and their relation to poor and the environment.

In addition, the questionnaires sought to understand how improvement of road or fisheries will affect/has affected people's livelihoods and the environment, and increase in degree of dependency and relationships with local resources and poverty. The checklists developed (Appendix 4) for semi-structured interviews or consultative meetings were administered to Regional and District officials, TANROAD, Fisheries Department and other relevant official (See Appendix 6).

At national level, interviews, consultative meetings and research were conducted with the Presidents Office- Planning and Privatization, Vice-Presidents Office-Poverty Desk and Division of Environment, Ministry of Natural resources and Tourism (Fisheries Division), Tanzania Investment Centre, and Ministries of Finance, Transport, Works, Industries and Trade. List of individual contacted in these offices is indicated in appendix 6. The main focus at national level was to identify their link with meso and local levels in order to identify opportunities and impediments for poverty reduction and environmental linkages.

The coastal marine study involved the following activities:

- a) Literature review, using existing research focusing on the root causes analysis for EAME, that updates and builds on the root causes analysis as well as other socio-economic analysis for the area.
- b) Identification of structural impediments, (economic /institutional), operating at local, sub-national and national levels that encourage environmental mismanagement and keep rural areas locked in poverty.
- c) Visiting two villages along the coastline of Tanzania to further assess and validate the poverty environment linkages

- d) Visiting the local and regional government offices to determine the opportunities and blockages to environmental management and poverty alleviation.

4.3 DATA ANALYSIS

Data collected was analyzed quantitatively and qualitatively based on the analytical approach (Reed, 2004). This is a multi-level analysis with focus on local dynamics, and how meso and macro level influences local level dynamics. Therefore, discussions held with officials, key informants and focused group discussions were broken down into written presentation/statements through personal interpretations. Qualitative analysis enabled to understand the local situation and the way people interact with local resources and the environment, and interaction amongst members of the society. In some cases models, maps and figures were found useful in driving the message and understanding the actors and how they are linked. This was found useful especially in identifying impediments and interventions. The data and analysis conducted provide both the local level dynamics and meso level influences, and some policy and institutional concerns.

Detailed National-level assessment of CSP on how the poverty - environment concerns are addressed is addressed in another study¹. The National level assessment of CSP will be linked with multi-level analysis to establish the relationship of local poverty-environmental dynamics to macro policies and institution, and provide recommendations and strategic interventions needed to address current weaknesses.

4.4 LIMITATIONS OF THE STUDY

The study is limited in:

- Coverage as not all villages along the road (Shinyanga region) and fish landing sites along Lake Victoria (Mwanza region) were covered. Instead, sampling was done through which five villages along the road and six villages and four land sites were sampled in Shinganya and Mwanza regions respectively.
- As the visits to road sites were done at the time when only about 20% of the construction was completed and some of the villages were yet to be reached to be able to see the impact.

¹ A national level study, to which this study contributes, is being undertaken by Matilde Snel.

- Difficulties in acquisition of data as several staff in some districts were not readily available or could not provide data in time. In addition the questionnaire used was not meant for quantitative analysis.
- EU assistance in the fishery sector was at research level therefore the impact assessment on poverty-environment from local communities perspective was hard to establish.
- The study is focused on/limited to evaluating, from the local perspective, the poverty-environmental impacts of EU assistance in the lake fisheries, transport sectors and marine resources.

5. THE CASE STUDY OF THE ROAD PROJECT IN SHINYANGA

5.1 THE ROAD PROJECT

Shinyanga region is located on the North West of Tanzania and is part of Lake Victoria zone. It is about 20 to 160 km south of Lake Victoria. In Shinyanga region the study site was the Mwanza/Shinyanga border – Tinde/Isaka – Nzega road (see Figure 2). The total length of the road project is 170 km. administratively the road is divided into Lot 1 and Lot 2. Lot 1 is the Mwanza/Shinyanga border – Tinde (97 km) and Lot 2 is Nzega-Tinde – Isaka (73 Km). The road project passes through four districts namely Kishapu, Shinyanga urban and Shinyanga rural in Shinyanga region, and Nzega district in Tabora region. These road segments form an important part of the Mwanza-Dar es Salaam Road and their improvements will substantially reduce journey time, vehicle operating costs and contributes towards agricultural and mineral production of the project area.

The improved roads are most likely to have an additional importance because apart from linking Shinyanga and the lake zone regions with those in Central and South of the country, they also provide a link to the neighbouring countries of Rwanda and Burundi. Already there is some trade especially the fish products between Mwanza and the neighboring countries. With an improved road network fish trade will be further promoted and stimulate exchange of other goods in the region. It is highly likely that there will be an increased flow of goods from the neighbouring countries. These goods may include agricultural products, fisheries and even forest products. This may also intensify the rate of natural resources degradation, particularly forest products because with improved roads the transport costs are likely to fall and thereby attract people to invest in timber business. Generally though, the rehabilitation of the road has the potential to stimulate economic growth in the Lake Victoria zone because this zone will be opened up to a wider trading zone that includes the neighbouring countries. Therefore, road rehabilitation is likely to have long-term impacts on poverty-environment linkages.

5.2 POVERTY-ENVIRONMENT LINKAGES IN SHINYANGA REGION

The majority of the sample population acknowledged that poverty is a multi-facet phenomenon and that it cannot be reduced to a single dimension. To some respondents poverty was characterized by lack of reliable means of earning a living such as livestock

keeping. Therefore, people who do not have cattle are generally considered as poor. To others, the poor are those who do not have any reliable cash income and those without enough food. Households that cannot keep enough food to last them to the next harvest season are also considered as poor. Yet others view the poor as those who are disabled to an extent of failing to engage themselves in any productive activity. The poor, according to other farmers in Mipa village also included people who cannot afford to take their sick for treatment. Indeed, this is further evidence in support of the view that poverty is multi-dimensional.

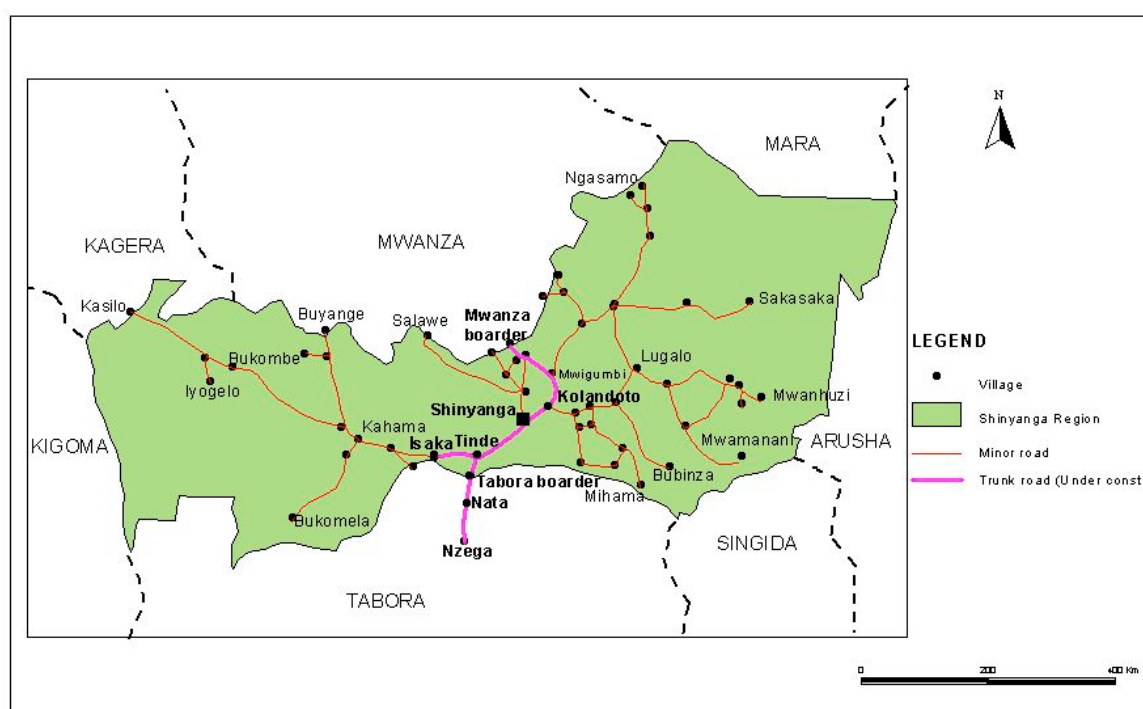


Figure 2: The Location of the Road Projects

In describing their own poverty the majority of the poor in the sample villages in Shinyanga Region highlighted the crucial role of the environment and environmental change to their well-being and ability to control their lives. They often depend directly on a diversity of natural resources and ecosystem services for their livelihoods, and therefore are the most severely affected when the environment is degraded or their access to natural resources is limited.

Invariably all people in the sample villages were aware that their environment is under serious problem of degradation. This degradation is evidenced by declining productivity of

the soils, disappearance of natural vegetation, but especially more, natural forests, shrinkage of pasture land and scarcity of water. While some viewed this to be natural phenomenon, others attributed this change to increased pressure on land. Indiscriminate cutting down of trees and continuous cultivation on land were identified as the major causes of environmental degradation in the region.

In linking environmental degradation and poverty, respondents in the sample villages were aware that part of the degradation of the environment was caused by the need for some poor people to survive. For example, farmers in Ibadakuli and Nata villages argued that they were forced to invade the natural vegetation simply to survive and not necessarily to make profits. Most respondents were of the low agricultural productivity but cannot afford organic fertilizers and therefore resort to shifting cultivation. Also alternatives for income generation were limited. Consequently they resort to use natural resources and leading to environmental degradation. They also cited examples that in some parts of Shinyanga region forests were disappearing due to the greed of some wealthy people wanting to make profits out of these resources.

On whether environment degradation could contribute to poverty incidences, most respondents affirmed this and mentioned issues like decline in land productivity as contributing to their poverty. In addition however, the lack of capital was also mentioned as a contributing to their poverty. It was evident from the respondents and observations that the major causes of poverty in Shinyanga region is related on unreliable rain fed agriculture, use of hand hoe by the majority of the people, lack of sufficient fertile land, low producer prices for their agricultural products.

Poverty and environment in Shinyanga Region are linked in both directions, i.e. poverty is both a cause and an effect of environmental degradation. In a positive way the poor depend upon natural resources for undertaking farm and non-farm activities for their livelihoods. Natural resources particularly soils and grazing land are among the main sources of income for the poor. These resources are not only used for subsistence farming activities, but also for commercial crops. Other groups of the poor use or sell products such as timber and charcoal as a way of supplementing their incomes. Therefore, natural resources provide important inputs into the livelihoods of poor people and also contribute to their well-being.

The specific ways in which poor people depend on natural resources and are affected by environmental changes is not universal, but area specific. In Shinyanga region for example, as in many other regions in the country, water is a very critical resource and it is very decisive in terms of what is a good year for crop cultivation and livestock keeping. Therefore, the poor in the region tend to suffer more than others when extreme events like drought occur. In addition, the majority seems not to have the resources to cope with these events.

Given the limited capital and alternative livelihood options common property resources in Shinyanga Region tend to be more important to the poor than the rich. It follows that the effects of natural resource degradation are also more pronounced on the livelihoods of the poor people. Poor people, particularly women are disproportionately affected by natural resource degradation because of their particular dependence on communal resources. Thus, the degradation of these resources is a major source of vulnerability for the rural poor, particularly women.

The endowment of Shinyanga region with natural resources, such as soils, and pastureland does not guarantee the local communities with sustainable livelihoods. Rather from the field visits it was very evident that the extent to which people can improve their livelihoods and reduce poverty depends on their access to assets like financial, human and social capital. The institutional set-up, governance and property rights, embedded in these resources do shape people's access to these resources. This means that even with the improvements of the road it is possible that only few people can be able to take this opportunity. Furthermore, through road improvements, the local communities are more integrated to global economy through commercialization. External integration of the local economies further shapes the people's access to resources; creates competitive production systems and relations that the poor may not have the ability to cope with.

Members of the local community in Mipa village and Nata expressed the fear that poor governance at the village level could contribute to the poor, especially those along the roads to lose their land to land speculators. Likewise, ambiguous property rights, particularly on such resources as forests may also contribute to their unsustainable use.

5.3 INSTITUTIONAL SETUP OF THE ROAD SECTOR

The set-up of the transport sector in Tanzania consists of the following institutions: The Ministry of Works (MoW); Ministry of Communication and Transport (MCT); and President's Office for Regional Administration and Local Governments (PORALG). The Ministry of Works is in charge of the national and regional road networks, and PORALG shares with local authorities the responsibility for the district/municipal networks. The responsibility of MCT include road transport operations i.e. traffic on the roads the remaining transport sub-sectors and general transport policy issues.

In accordance with the road sector reform, the road agency is in charge of all financial and technical issues related to road project management and implementation. The MoW is responsible for the general direction of TANROADS and the overall accountability to the Parliament. PORALG is responsible for assisting and supervising local authorities, notably for the management of the district, urban and feeder roads. Maintenance of this network is financed by the Road Fund and complemented by the Districts and Municipal Councils.

Besides the three ministries, the following institutions are of particular importance to the roads sub-sector: the Road Fund and Road Fund Board (RFB), Tanzania National Roads Agency (TANROADS), and the National Road Safety Council (NRSC).

The responsibilities of the RFB are the following:

- (i) To ensure full collection of the Road Fund revenues;
- (ii) To monitor the use of funds by TANROADS, the MoW, PORALG and local governments
- (iii) To advice the government on adjustments to the existing sources of funding
- (iv) To ensure adequate and stable flow of funds to road infrastructure operations.

The Tanzania national Roads Agency (TANROADS) has the responsibility to provide cost-effective and sustainable maintenance and development of the national and regional roads. Other activities include procurement and management of contracts for design and supervision, maintenance, emergency repairs, rehabilitation, upgrading and construction of roads, improvement of road safety and advice to the Minister of Works on regulations and standards for road works.

The National Road Safety Council (NRSC) is responsible for law enforcement relating to road safety matters. NRSC activities also include monitoring, preparing studies, conducting training, and making proposals to improve road safety.

The institutional set-up as described above is a matter of concern, particularly the division of the transport sector responsibilities between two ministries (MoW and MCT) part from PORALG. The involvement of three bodies makes it difficult to ensure the implementation of coordinated transport policies at the national level. In this case the improvement of the Mwanza-Shinyanga boarder road is a national road, but for this road to have direct impact of the rural people parallel efforts to improve the feeder roads in the area have to be made. However, such feeder roads (which are district and urban) might not be priority for the ministry concerned (PORALG). As a result the concept of network improvement might not bear the expected benefits.

5.4 ROAD TRANSPORT AND POVERTY ALLEVIATION: LOCAL PEOPLE'S VIEWS

Transport is an intermediate service-it is a means to an end. While transport alone cannot reduce poverty, it serves a pervasive and crucial complementary role. Transport may reduce absolute poverty mainly by increasing economic efficiency-by lowering costs and prices and enhancing opportunities. Members of the local communities in the sample villages believed that road investment could result in an increase in agricultural productivity and non-farm employment. This would consequently contribute directly in raising the wages and employment of the poor and, their economic welfare. During the construction phase the local people in the roadside settlements experienced short term benefits such as temporary employment of various forms in construction works, increased number of food vendors, small shops, restaurants, saloons, guest houses, bars etc. especially more around the villages of Maganzo, Tinde, and Nata. On the other hand it was further argued that with low level of agricultural productivity of the land farmers would have very little to transport on roads.

Respondents in the sample villages were however very cautious that improved roads do not necessarily promise them of total reduction of their poverty. This is because some of the causes of poverty in the region (e.g shortage of land and water) had nothing to do with roads. The distribution of benefits from road expansion may be ambiguous. They argued that, indeed improved roads have the potential to reduce poverty but one needs to have capital to invest in productive activities in order to take advantage of the improved roads. It was

strongly felt that the business community for example, stands to gain more than the smallholder farmers. Therefore, while road improvements may increase the potential for mobility, farmers in the region felt that they were poor and worst placed to profit from it.

So long as there is unequal distribution of land among the social groups poverty would remain, even if roads were to be improved. Few others, especially those in Tinde village feared that they would lose their farmlands to urban development. Farmers in Nata village also expressed the same fear. These farmers were worried about a growing trend whereby richer farmers from outside the village grab land that has high irrigation potentials. What was feared most was that village leadership is not powerful enough to reverse the trend. The regional and district officials shared this position by arguing that the poor are at the bottom end of line in benefiting from road improvements. It was further argued that farmers ought to undergo structural changes before they can benefit from road improvement. By virtue of their educational and training background, the regional and district officials viewed the road improvement from the point of view of linking Shinyanga Region with other areas in the Lake Victoria zone and also the neighbouring countries. On the other hand, members of the local communities were most concerned with their immediate transport needs at local levels.

In the views of the regional and district officials on the one hand, and members of the local communities on the other, poverty is a multi-facet phenomenon and road improvements alone cannot alleviate poverty among the poor. Thus unless the causes of poverty (shortage of land, water and capital) for agricultural investment the poor will remain poor and continue to rely and degrade the natural resource base.

What is most evident from the responses of farmers is that the impact of the roads on the poor will depend on the specific transport conditions associated with the location and travel needs of the poor. It is the extent to which the poor are "connected" to the general transport system that will shape the benefits that they receive. In addition, transport access is complementary to the availability of other basic services such as water, health care and education. Therefore, the effectiveness of direct service assistance strategies depends significantly on the accessibility of the poor to those services.

Women on their part expressed their positive views on the benefits of road improvements, in terms of increased mobility and transportation of goods. Perhaps what catches more attention are the views of a female farmer in Ibadakuli villages who argued that she was poor not

because of bad roads, but more because she had no enough land and little to invest on. Again, this gives further evidence that while road improvements have the potential to alleviate poverty; the poor are locked in a vicious circle of poverty that makes it difficult to benefit from such projects. Furthermore, the domestic and agricultural transport activities of women in the region plus those trips associated with health care and use of markets are essential to the reproductive and productive well being of the households. Therefore, the extent to which the poor, particularly women, are likely to benefit from road improvements depends on how these transport needs are addressed.

The local people's views on the role of road improvement on poverty alleviation are worthy noting. However in order to realize the potential role of roads in alleviating poverty there has to be strong governance and institutions at the local community and meso levels that would reduce corruption, distorted public investment choices, and neglected maintenance. These are necessary for enhancing infrastructure's contribution to economic growth and diversion of benefits to the poor.

5.5 IMPACTS OF ROAD CONSTRUCTION ACTIVITIES

5.5.1 Short-term Impacts

There are both short-term and long-term environmental impacts. The short-term impacts include mainly those impacts experienced during the construction phase. Such impacts are more pronounced mainly in the roadside villages. However, in the long-term even the remote villages will experience significant socio-economic and environmental impacts.

5.5.1.1 Borrow Pits:

Ideally borrow pits are dug along the roads in distances ranging from 1 – 1.5 km away from the road. The agreement requires that borrow pits are filled in after the completion of excavation of the building materials. This is to be done to ensure that no waterlogged conditions are created and for fear that they may become breeding grounds for mosquitoes. Filling in the borrow pits is also necessitated by the need to maintain the scenic view of the areas. However, given the scarcity of water in many parts of Shinyanga, borrow pits in some places have become good water reservoirs for both livestock and people. Most respondents (backed by their village governments) are happy with the borrow pits because now they act as

water reservoir both for livestock and domestic uses. On the other hand, the contractors would like to abide to the agreement and fill in the pits.

A compromise is being sought to ensure that the local people benefit from these pits. Such a contentious issue reflects the importance of water in the livelihood of the people in the region. To many people who reside along the roads that are being rehabilitated borrow pits have become a blessing. The divided opinion between road construction companies and the local communities suggest that the design and implementation of road project did not properly incorporate the important need for water for local communities. Furthermore, the unfilled pits and their use for livestock may bring unanticipated impacts such as tracking along or across the road; nearby fields, which will have further environmental impacts. On the negative side however some borrow pits were dug in areas used for cultivation, and hence leading to loss of farmland. Although in such cases the owners of land are compensated, the rates are still very low compared to a loss of such a valuable asset.

5.5.1.2 Outlet Culverts

Outlet culverts have become a very notable feature in road construction. These culverts are designed to drain rainwater away from the roads. Some run up to 200 metres away from the road side and cut across farmlands. The construction of these outlets has therefore contributed to loss of farmland and crops. Not only that farmland is lost, but in many instances these outlets empty their water into other farmlands and creating water logged conditions there. Again, like in the case of borrow pits farmers who have lost their farmlands have been compensated. However, the majority complained that the rates of compensation were very low. Had the project considered the need for water by local communities these outlet drains could have been linked to water storage systems as means of water harvesting.

5.5.1.3 Excavated Soils

Just like the case of borrow-pits, the excavated soils had both negative and positive effects on the people but more specifically on the farmlands along the road. To some farmers particularly those who had been experiencing waterlogged conditions in their farms the dumping of the excavated soils contributed to reclaiming the land and putting it into productive uses, especially crop cultivation. In some other cases however, the dumping of such soils led to loss of farmland because this is now covered by sub-soils that are not good

for growing crops on. Generally though the dumping of soils has contributed more to loss of farmland than land reclamation.

5.5.1.4 Noise and Air Pollution

Noise and air pollution was another environmental effect brought about by the blasting of rocks. Residents in Mipa and Tinde villages complained of these problems. Air pollution is made worse by the absence of trees that would otherwise trap the dust. Villagers close to the quarrying sites are given an advance notice but in some cases these noises are very damaging. In an isolated incidence of a woman miscarrying due to noise pollution was reported by the respondents in Tinde village.

5.5.1.5 Blasting

Blasting of rocks was a problem most felt in Mipa village where nearly 90 houses had developed cracks due to blasting of rocks. The same problem was also experienced in Tinde village. Actually most of these houses are more than 2 kilometers away from the blasting plants. The law that governs compensation on property damaged by blasting stipulates that such compensation will be made to property within 400 metres from the blasting plants. However, evidence from Mipa and Tinde villages clearly shows that effects of blasting can reach as far as more than 2 kilometers depending on the types of rock being blasted.

5.5.1.6. Loss of Farmland and Property

There has been considerable loss of farmland to construction activities and nearly all farmers have been compensated. Farmland is lost either to outlet drains; borrow pits and dumping sites for excavated soils. Usually, the compensation rates stand at 25/= per square metre of land. This means that a loss of 1 hectare is compensated with 250,000/=. This may seem a lot of money to some people, but this is only equivalent to a one-year income from a maize field of the same size of land. The fact of the matter is that the loss of such farmland represents a loss of livelihood assets. Some of the lost property such as fruit trees is not easily replaceable. Actually some farmers made outright admission that they did not replant the fruit trees but spend the money on something else. This is understandable because of what was explained as the critical need for cash.

5.5.2 Long-term Impacts of Construction Activities

5.5.2.1 HIV/AIDS

Although new and improved roads may bring economic and social benefits, they can also facilitate the spread of diseases, especially communicable diseases such as HIV/AIDS. Workers involved in the construction and maintenance of roads usually comprise a mobile and at risk population as far as HIV/AIDS is concerned. Their comparative wealth enables them to purchase sexual services. Transport operators, especially truck drivers will be faced with the same likelihood of increased sexual activity as those in construction. This fear was raised in almost all villages covered by this study, particularly in Tinde, Maganzo and Tinde townships. This is hardly surprising because there is strong evidence to show that increased mobility is linked to the spread of HIV. For example, in Mwanza region the HIV-1 infection was 2.5% of the adult population in rural villages, 7.3% in roadside settlements and 11.8% in town. On the Dar-es-Salaam highway for example, HIV prevalence was noted to be 28% for truckers and 56% for their female partners in 1991.

In addition to spread of communicable diseases the increase of people into the region especially in towns and settlements along the road is also likely to contribute to insecurity and lawlessness. The feeling of some respondents was that there is temporary social unrest due to immigrants looking for employment and other engagements. Already people in Nata, Maganzo and Tinde townships have been complaining of an increase in incidences of banditry, rape, and armed robbery in their areas. It is more likely that with improved roads these offences will be on the increase.

5.5.2.2 Deforestation

Road improvement is likely to have direct and indirect impacts on natural resources management. Road construction in the region is likely to increase the existing incentives to extract wood and to convert the remaining forests to commercial farms, and also extend the economic radius within which it is profitable to do so. Unless some controls are instituted road improvements may consequently lead to more deforestation in the region. The main source of forest products especially charcoal in Shinyanga and Mwanza regions is Bukombe and Kahama Districts. This has made transportation costs high. With improvements of the road this means that the costs of transporting these products will be significantly reduced and this could lead to more investment into the business. Unless there is more elaborate control

system the remaining natural forests in Bukombe District may also disappear through deforestation. Mwanza region relies on Shinyanga for fuelwood and charcoal supply. Improved transportation through road rehabilitation is likely to enhance tree harvesting for charcoal and fuelwood supply to Mwanza.

Road construction in the region is likely to increase the existing incentives to extract wood and to convert the remaining forests to commercial farms, and also extend the economic radius within which it is profitable to do so. Unless some controls are instituted road improvements may consequently lead to more deforestation in the region.

Indirectly and more positively road improvement may mean more diversification of the rural livelihoods and hence less pressure on the natural resources. In other words, with increased opportunities to invest in other sectors of the economy, pressure on natural resources (especially forests) may be reduced. Furthermore, depending on the extent of livelihood diversification the dependence on land resources either for crop cultivation or livestock keeping) may considerably ease out thereby relieving the natural resource base from unsustainable pressure.

5.5.2.3 Expansion of Trading Activities

Improved road transport is considered by many that it will hasten transport of goods especially farm produce and goods from other trading centers in the lake zone. In this construction phase residents in roadside settlements have appreciated the immediate impact that the road has on their livelihood. Improved income and hence increase in money circulation along road settlements are among the benefits of the new road. With an improved road there is definitely going to be an increase in the number of trading activities especially in roadside settlements. This may consequently result in increased penetration of consumer goods into the more remote villages. In a way this may also lead to a more diversified economy in the region. However, members of the local community in Ibadaguli and Nata villages were very cautious that the improvement of the road would benefit those people who are already rich or middle class, e.g. traders because these are the people who have capital to invest in trading activities.

5.5.2.4 Easy Marketing of Agricultural Products

The majority of the respondents in the sample villages reckoned that there would be significant improvement in the marketing of agricultural products – both livestock products and crops. Again, the majority was very cautious that since the poor farmers have less to offer to the market, it is only the rich who are able to produce enough for consumption and sell the surplus. Also, most of the poor people are far from the road, unless feeder roads are also improved they are likely to benefit less by a bitumen standard road.

Shinyanga region has the highest number of livestock in the country. However, it is one of the regions that have been hard hit by drought and therefore posing a threat to both livestock and people. Improvements of the road, coupled with the increased penetration of consumer goods in the region may tempt the local people to increase the sale of their livestock and consequently improve their well-being. However, this is only possible with an elaborate system that protects these livestock keepers from unscrupulous businesspersons. Therefore for the road to have any significant impacts on the livelihoods of the people the small farmers must be protected against unfair trade. Thus, no matter how beneficial the road may seem to be, if the farmers do not get a fair deal of their products they may continue to get poor prices for their farm and livestock products and rely on natural resources and hence degrade the environment even further.

5.5.2.5 Diversification of Livelihoods

The upgraded road is likely to result into more diversified rural livelihoods in the region. With improved roads it will be possible to access goods produced from distant places both within the region and from the neighbouring countries. With more trading activities more consumer goods will penetrate into the rural areas and thereby stimulating the growth of the service sector. Therefore, the rehabilitation of the roads in the region is likely to result into reduced dependence of the poor on the land.

5.5.2.6 Better Houses

From the local people's point of view and as observed in the field better houses are being constructed especially in the roadside villages. Road contractors have also hired houses and this has enabled house owners to improve their houses. The money that was received from compensation is now used to build better houses. Most people who were interviewed

considered this as one of the positive effects of road construction in the area. At Tinde village for example it was estimated that about 40 -50 houses have been constructed or renovated using corrugated iron sheets.

5.5.2.7 Increase in the Number of Road Accidents

Residents living in villages along the road feared that with an increase in the number of vehicles there would be an increase in the number of road accidents due to over-speeding. This concern was more noted in rapidly growing small townships of Nata, Tinde and Maganzo near the Mwadui Gold mines.

5.5.2.8 Food Insecurity and Malnutrition Cases

While the improvement of the road is expected to stimulate more marketing of agricultural products, it is also possible that many farmers may be tempted to sell all their stocks of food in anticipation of making some profits. Elsewhere in the country traders are penetrating into rural areas to lure farmers to sell their crops even before they are harvested. This may also happen due to increased demand for cash following the introduction of more consumer goods in the rural areas and increased traders. If this happens then, food insecurity and incidences of malnutrition may affect the rural residents.

5.5.2.9 Employment Opportunities

The construction phase of the road has created employment opportunities. For example, nearly 30 youths in Nata village and 100 youths in Tinde villages were employed in road construction on temporary basis. The majority of these were male youths. Such opportunities contribute to cash income to the villagers.

6 THE CASE OF THE FISHERY SECTOR IN MWANZA REGION

6.1 EU ASSISTANCE IN THE FISHERY SECTOR IN MWANZA REGION

Mwanza region is among the regions in Tanzania that have benefited from EU support through the macro economic reforms including the liberalization of the fishery sector and consequently, growth in fish export trade. Other areas of EU assistance in Mwanza region include road, sanitation and fishery sub-sectors. EU supports the Water Supply Programme to the regional centres of Mwanza, Iringa and Mbeya. Phase 1 of this grand project was allocated 32 m€ from EU and 10 m€ from the Federal Republic of Germany. Phase II of the programme is expected to start in 2005 and is predicted to cost 53 m€. EU has also funded water supply and sewerage rehabilitation in Mwanza city. 5.5 m€ were allocated for the sewerage rehabilitation project that intended to prevent the overflow of raw sewage from Mwanza City directly into Lake Victoria (EU Newsletter, October 2003). Also through support from EU, the Mwanza Region Transport Programme has involved the construction of Mwanza – Nyaguge Road Road (35 km); construction of Mwanza City roads (22 km); and improvement of Mwanza bypass road (earth road) (20 km) (Delegation of the European Commission, 2001). As discussed in section 2.3, the fishery sector in Lake Victoria has benefited from EU financial support through the 9th EDF allocation to macro-economic support.

The fishery sector plays an important role to the economy of Mwanza region. Fish fillet export to EU has grown rapidly from late 1990s. Investment in sustainable development of the fisheries sector is therefore crucial to both Mwanza region and the European Community. Thus, the fisheries sector is one of the areas that have received assistance from EU. The EU funded the Lake Victoria Fisheries Research Project (LVFRP) through its regional indicative programmes. The total budget for the region was € 29.9 m (including € 9.3 m for Tanzania. The LVFRP was carried out in Tanzania, Kenya and Uganda had two phases: 1997 to 2002 (LVFO, n.d.).

On the Tanzania side the LVFRP involved provision of a research vessel, RV Victoria Explorer. The EU assistance intended to assist TAFIRI to carry out fish stock assessment and socio-economic studies; to support operational costs; workshops and data analysis; capacity building through training at M.Sc. and Ph.D.; provision of research equipment and books;

computers, vehicles and technical assistance (LVFO, n.d.). The research work was consigned to the Tanzania Fisheries Research Institute. The research works in all the three countries aimed at assessing the fish stocks and understanding the ecosystem dynamics. The socioeconomic studies were undertaken for understanding the impact of fishery management on the local communities. The major output of these research activities is a baseline data set and the Lake Victoria Fisheries Management Plan (LVFMP) (see Bwathondi, et al, 2001). Information from the Mwanza regional fisheries office indicated that the EU has shown interest to support the implementation of the LVFMP. URT (2004) documents some of the proposed activities. The implementation of the FMP is at its initial stage. The activities involved include inception workshops and development of specific projects both at country and regional levels. More funding (3 billion Tanzanian shillings) from EU is expected for the supporting the Fisheries Department of the Ministry of Natural Resources and Tourism (MNRT) through EDF allocation for macro-economic support.

Certainly there has been some EU assistance to the fisheries sector in Mwanza region, although not comparable to other sectors in its magnitude. EU assistance in the fishery sector in Mwanza region is crucial for the development of the fish production for export that has recently dominated the sector. There is a growing concern on the implications of the development of fish export trade on the livelihoods of the local communities that suggest lack of adequate consideration for poverty and environmental impacts of its development. The sustainable development of resource utilisation through EU assistance calls for more streamlining of poverty – environment linkages. This study intends to contribute to this.

6.2 THE CONTRIBUTION OF THE FISHERY SECTOR TO THE LOCAL ECONOMY

The contribution of the Lake Victoria fishery sector at local, regional and national level is very significant. The fisheries sector now leads cotton as the major contributor to the region's GDP and export earnings (URT, 2003). Fish processing factories employ 2,740 people making them the largest employers among industrial establishments in the region.

The fishery sector is dominated by Nile Perch (*Lates Niloticus*). The growth in the fillet export has transformed the traditional fishing economy tremendously. Jansen (1997) identifies two main periods in the history of fishery in Lake Victoria. The pre – Nile perch regime was dominated by traditional fishing where the low technology vessels and fishing gears were owned by the local community; there was a fairly even distribution of income;

fish processing was dominated by the fishers and was done around the lake; traders had no control over the fishers; and there was little capital penetration from outside the fishing communities. Fishing was predominantly artisanal and for local consumption.

The Nile perch regime from 1980 – 1995, is characterised by the change in fish mass composition that was dominated by the Nile Perch and other minor ones like *Tilapia* and *dagaa*. More fishing gear and of better technology and more labour force were employed. Factories do fish processing. These necessitated the sector to recruit more people from the local as well as non-local population for employment. Increasing demand for fish fillet from abroad presented the danger of over-fishing. Factories began to compete for fish and as most of the catch was processed, access to fish in the local communities became difficult. The growing foreign demand on fish filler has attracted foreign investment in the sector. To the present, the fishery sector is dominated by national and international capital. The number of fish processing plants has grown. There were eight fish processing plants in Mwanza region in 2001. The plants are the largest employers of the region. Fish export has been growing very rapidly in the region. Table 1 below shows changes in fish fillet export.

Table 3: Growth in Fish Fillet Exports

Year	Quantity (metric tonnes)	Data source
1981	Less than 1000	Jansen, 1997
1986	124,000	Jansen, 1997
2000	38,290.86	URT, 2003
2001	95,540.34	URT, 2003
2003	37,290.86	Hoza, 2004

Increase in fish fillet export goes hand in hand with increase in employment, and fishing gear as shown in Table 2 for Mwanza City. The city authority conducts fishery census once for every two years. Whereas the number of boats almost doubled between 2000 and 2002, the number of fishermen increased only slightly. This shows there was an increasing in fishing effort.

Table 4: Some Changes in the Fishery Sector in Mwanza City

Items	Year		
	2000	2002	2004
Number of fishing boats	650	1205	1406
Number of carrier boats	40	100	171
Total number of boats	690	1305	1577
Number of fishermen	3000	3473	4989

Source: Mwanza City Council office

Similar trends in changes in the fishery sector are shown in Table 3 below:

Table 5: Fishery Resources, Facilities and Production in Mwanza Region.

Year	Number of registered Fishing Licenses	Number of Fishermen	Fish catches Weight (tons)	Value (Tshs to Fishermen)
1997	3,566	16,867	137,695	30,813,365
1998	3,369	16,385	173,630	40,365,770
1999	3,369	16,385	227,717	52,879,159
2000	7,678	29,301	281,605	65,392,674
2001	7,678	29,301	335,493	77,906,232
Total	-	-	1,156,340	267,357,400

Source: URT, 2003 p. 88.

The growth in fish export has brought about the greater integration of the fishing communities into the global market. This has great impacts to the local communities that require attention. There is the concern that the local communities are being marginalised in the process. Unless this phenomenon is addressed properly, development intervention on the fishery sector is likely to exacerbate the problem of rural poverty and this will have environmental repercussions. The growth in fish fillet export trade has impacts on the following areas:

a) Inequalities in Income Distribution

Fishery sector growth has detrimental effects to the local population due to growing social inequality. There is a growing tendencies towards monopoly and control fisheries activities and incomes that bring unfairness e.g. traders have control over fishermen; factory operators gain more control over agents/fisherman. These monopolistic situations, unless controlled lead to unfair trade that largely impoverish the local communities. The development in the

fisheries sector has changed the requirements for capital investment in fishing gear that are beyond the ability of the members of the local fishing communities. This has rather opened up opportunities for investors, external investors who eventually gain control of the sector at the expense of marginalisation of the local communities. Whereas earnings from have increased tremendously, the majority of the rural poor have benefited very little. Although the fishing community appreciates that income from fishing are relatively better than those from farming, their distribution is more skewed. There are growing income inequalities and the majority of the poor have very little to benefit. The Lake Victoria Fisheries Management Plan (LVFMP) acknowledges that the gap between the richest and poorest fishers in some beaches is widening. The gap between the benefits obtained from fishery by vessel owners and labouring classes is also growing (Bwathondi, et al, 2001).

b) Differential Employment Opportunities

The development in the fish export has transformed the traditional employment structure. Factories are creating monopolies and are increasingly being engaged in all activities along the production chain. This draws artisanal fishermen out of business. Mechanised fishing and trawling has rendered artisanal fishing system functionless. Artisanal fishermen and local fish processors are being driven out of business. This has been related to the concentration of capital and fishing resources into fewer hands. Most of the fishing crews do not own the means of production and employees of the boat owners. Consequently there has emerged a new re-categorisation of workers in the fishing sector including: fishing crew; machinga at the lower level, to boat owners, traders and factory agents and factory owners. The income and employment differences among these categories are reinforced by the contractual relations established between them. The loss of employment and income earning opportunities exacerbates poverty among the local communities.

c) Food Insecurity

The impact of fish export development on food insecurity is strongly argued by Abila (n.d.). Less fish stock is available for local consumption as most of the catch is taken for factory processing. Effort to improve and maintain quality standards through refrigeration have meant that there is less fish rejected by factories that would feed local market. The use of by-products for local consumption has been a common phenomenon. As most of the fish is taken to factories, fish has become too expensive for the local population to buy. The price fluctuates between Tshs. 1,000 and 1,400 per kg depending on the demand and catch. Also

remuneration of crews by giving a portion of the catch is being replaced by other means such as cash. This has also reduced the access to fish by households.

d) Discrimination Against Women

Field observations and focus group discussion at landing sites showed that women had relatively fewer opportunities to participate in the fishery sector. The few women found were engaged as artisanal fish processors and suppliers to the local market. Some women worked as 'machinga'. Women did not feature as boat owners except at Igombe where one woman owned several boats. Even fish factory agents very few of them were women. Discrimination of some social groups – through limiting their access to fishery resources – e.g. women, crews, etc. Medard, et al. (2001) observes that women are being marginalised in the fishing industry and their involvement is being limited to small scale, lower remuneration, trade of processing of native species such as dagaa (*Rastrineobola argenteus*).

Also the women have been neglected despite their contribution to the artisanal fish industry. Field interviews and discussions show that there is growing marginalisation of the artisanal and small-scale fishers in the process of fisheries development. It seems most women are engaged in activities which don't require rigorous supervision / management and little capital. Mkumbo and Mwanisongole, (1995) (quoted in Yanda (2004) make a similar observation that the fisheries management presents a trend of monopolization and marginalization of the artisanal sector. This partly due to concentration of the fishing gear into fewer hands; reduced access to fish by the poor and artisanal processors. Fish trade is increasingly becoming under monopoly of few companies and private boat owners. Women, in particular, are engaged in the less lucrative sections of fish trade. Boat crews, small-scale fish traders and artisanal traders are poorly organized and have less power and resources to ensure fair trade. There has been little support to women in the development of the fishery sector.

e) Inadequate Benefits to Local Communities

Observations have indicated that there is less trickling down of benefits to local communities from the growing fish export industry. Discussion with the Mwanza city mayor revealed that wealth from the fishery sector goes out the city region. It was observed that a very small proportion of turnover from fishing filtered down to the local communities. Similar

observations were made in our discussion with LVEMP officers that money from export was not trickling down to local communities.

Local dynamics are centred on the fishery activities. Respondents acknowledged that there is an increased circulation of money in the fishing village / settlements around or near landing sites. The local government collects revenue from fish trade at landing sites. A private agent selected through tender often assigned to collect revenue at landing sites. In Mwanza city the revenue collected at beach landing sites is 7 - 10 Tshs per kilogram. Part of the revenue is supposed to be returned to the local village communities, but this is rarely taking place. At national level, the government takes royalty from fish export at the rate of 6% of FoB value. Income from the booming fisheries sector acquired by the private operators and the local government rarely trickles down to the poor majority. Even the little income received by crews for example goes back to the business community that runs various social entertainment businesses at the land site settlements.

The local village governments are therefore unable to cater for the growing requirements of population and settlement dynamics along the lakeshores and in the islands, such as service and infrastructure development; civic institutional organisation, etc. This phenomenon of little redistribution of benefits from fish export to local communities is not peculiar to Mwanza region. Namisi (2001) makes similar observations for Uganda.

f) Over Dependence on the Fisheries Sector

The growth in fish export trade in Mwanza region and its relative importance in the economy of the region suggest a trend towards over dependence on the fishery sector and poor integration of the sector with other sectors of the economy. Removal of subsidies in agriculture might have affected cash crop farmers leading to low productivity and hence shifting to fishing. But overdependence on one sector or sub-sector of the economy makes it more vulnerable to changes. There is need for economic diversification to avoid risks of overspecialisation. There is little evidence that profits from fishery sector spill over to key sectors such as agriculture, infrastructure and services provision. This is more critical for the sustainable livelihoods of the poor majority. Moreover, re-investment of the profits from fish export trade in the better management of the fishery resources is limited. The development of landing sites, local people's participation in fishery management; conflict management; surveillance and research face resource constraints. The newly introduced beach management

units (BMUs) face serious constraints for undertaking their tasks, but there is little that they can draw from the profits of fish export trade.

Whereas the fish export sector has received a lot of support through investments and improved management, the non-export fishery sector has been neglected. Quality standards of fish products for the local market and export to neighbouring countries receive little attention. The post harvest sector that employs the majority of small scale processors and traders has received very little support from government or donor community.

At local community level, the over dependence on the fishery sector implies that there are fewer alternatives income generating activities. This is further aggravated by the declining cotton economy. This is likely to hinder fishermen from accepting restrictions on fishing practices and methods that are harmful to the fishery environment.

g) Environmental Implications

The growth of the fish export dominated by Nile Perch has some implications to the environment. Over-fishing and pollution are the key environmental issues that have attracted research interest on Lake Victoria (see Odada, et al, 2004). There are also claims that fish carcasses have provided food for birds and hence their increase, which at times causes problems to flights. Nevertheless, disposal of by-products is still a problem that needs to be addressed.

i) Changes in Fish Mass Composition

Most of the fishers indicated that the main species found in the lake are Nile Perch and Tilapia. The balance of species in Lake Victoria has changed dramatically since the 1980s with the Nile Perch, dagaa (*Rastrineobola argenteus*) and Tilapia growing at the expense of other species (URT, 2003 p. 86).

ii) Environmental degradation

Environmental degradation at fishing settlements such as poor sanitary conditions is an emerging problem. The fishing industry has attracted fishers from different parts of the country. This has led to rapid growth of fishing settlements that put pressure on the resources,

infrastructure and services available. Information from key informants indicated that over concentration of population at fishing camps along the seashore and in the small islands caused major problems to sanitation. As the number of vessels operating in the lake increase, there is a concern towards pollution of the lake's water through toxic substances such as engine oil and fuels if not properly managed.

iii) Energy requirements for fish processing.

The development in fish factory processing for export market has significantly reduced the proportion of fish processed by local artisans for the local consumption. This has reduced the charcoal and fuel wood consumption for fish processing. Certainly this is likely to reduce environmental impacts of fish smoking. Field information however indicated that fish smoking in the fishing camps on the islands and landing sites continues to rely on fuel wood and charcoal. Also fuel wood and charcoal are major energy sources in the rural areas. The rapid growth of fishing village settlements camps and landing sites and their related activities implies that there is an increasing demand and use this energy sources. Jambiya and Sosovele (2002) observe that a business of selling firewood and charcoal has been growing between the islands and landing sites. At Igombe landing site, for example, charcoal loads were seen being unloaded from the islands for use in the mainland. This suggests that the use of profits from fish export trade for supplying electricity to rural areas will reduce further environmental degradation on the islands. However, the rural poor may not be capable of tapping electricity if their incomes will continue to decline due to unfair fish trade. But, provision of electricity per se may not be a solution to the problem, since electricity is often used for lighting rather than for other energy needs (Kulindwa, 1994).

Over-fishing

Over-fishing is another environmental problem in Lake Victoria. The growing demand for fish fillet for export has encouraged growth in the number of fishers, fishing vessels and improvement in fishing technology (see Table 4). Excessive fishing for export may contribute the collapse of the fishery and undermine the nutritional security of the local community. Evidence of overexploitation of fish stocks include 'reduction in age/length at maturity, higher mortality, especially caused by fishing pressure; reduction in catch per unit effort; reduction in mesh size of nets used and an increased proportion of immature fish in the catches (Bwathondi, et al, 2001, p. 8). Fish maturing at small sizes is a sign of over fishing

(LVPO, n.d). The LVFO asserts that there is a serious risk of fisheries collapse in Lake Victoria unless urgent action is taken to improve their management.

v) Deforestation

The depletion of forest resources is not only due to growing needs of energy resources by the local communities, but also growth of the fish – export and sectoral changes have led to an increase in demand for forest products for boat construction and maintenance. Canoes are the most commonly used vessels for fishing. Jambiya and Sosovele (2002) note that boat builders have to rely on distant sources of materials as local resources have been depleted. As sturdy hardwood required for boat building are no longer available, softer and less sturdy woods are increasingly being used. Consequently the life span of the boats is shorter and more frequent repairs are required. This implies more exploitation of the forest resources. Also it becomes more difficult for poorer members of the communities to own and run fishing vessels.

Other areas that fish export has impacted on the local communities include:

a) Social Conflicts

There is open access to fishery resources. The growing competition for fish resources has intensified conflicts between users. The conflicts are between big fishers and small scale fishers mainly using canoes, between those using boats and those using fish hooks, between Nile perch fishers and dagaa fishers. The LVFMP notes the growing economic and social distance along three dimensions: between migratory and sedentary populations of both fishers and non-fishers; between the owners of large and smaller fishing operations; and between owning and non owning classes (Bwantondi, et al., 2001 p. 13). A conflict between migrant dagaa fishers from Lake Tanganyika and sedentary population was evident at Nyakabanja landing site. Migrant fishers are denied access to land for house construction and therefore are forced to live in temporary structures at beach site.

b) Social Insecurity Off-shore

Discussions with fishing crews and boat owners at Igombe and Kayenze landing sites revealed that theft of fishing gears, vessels, as well as piracy were rampant in the lake. As disparities and social distance among the fishing communities grow, these problems are likely to increase. Bwantondi, et al, (2001 p. 13) do correctly view that the deteriorating security situation on the lake poses serious threats to the fisheries, fishers, fishing communities and the lake environment.

c) Local people's Participation in Resource Management

Participation of the local communities did not feature very much in the LVFRP's training and capacity building in research and resource management. The project supported the establishment of BMUs primary for enhancing community participation in enforcing fishery regulations. The fishery resource is open access. A major problem related to fishery management therefore, as seen by the regional fisheries office is the weakness in enforcement of fishery regulations. This explains the establishment of BMUs as a way of enhancing participation of the local communities in the management of the fishery sector. Enforcement of regulations on its own is not adequate for sustainable fishery resource management. Unless problems of poverty are addressed, the local community may be compelled to exploit resources in a non-sustainable manner.

6.3 THE STRUCTURE OF THE FISHERY SECTOR

The structure of the fishery sector is very complex. An identification and analysis of its different players and their roles is important for understanding the dynamics of the sector, its implications to poverty and environment as well as the entry point for interventions. The relationship among the key players dictates the relative benefits each category is able get from the growth of the sector. The LVFRP fish market study (SEDAWOG, 1999) uses the category 'fishers' as a collective noun. This hides some key variations within the category that require attention for understanding the dynamics of the sector. As noted earlier the traditional fishery structure has changed with growth of fish export trade. Fishers are more differentiated than it used to be. The differentiation is based on emerging patterns of production relations (Figure 1). Ownership of fishing gear is becoming more concentrated in fewer hands and the majority of the crews does not own the fishing gears and therefore work for the boat owners. Ownership of fishing gear is an important indicator of a person's wealth status in the fishing communities.

Through field observations and discussion with informants, we were able to identify several categories of fishers: the crews (locally known as ‘wategaji’); boat owners; and agents (Figure 3). The crew category is dominated by the youth. These do not own the fishing gear but work under contract for the boat owners. They have to bring the fish stock caught to boat owners at landing sites. There are different ways of remunerating boat crews. A common practice has been sharing the catch between the boat owner and the crews. At Igombe landing site, for example, some boat owners used a cycle of 9 fishing days. Out of these the boat owner takes a fish stock caught in 6 days and the boat crews take fish stock harvested in 3 days. The boat crews are obliged to deliver to the boat owner all the catch and their share is paid in monetary value. Boat crews complained of boat owners deducting any other expenses such as fuel and fees from share belonging to the boat crews and therefore reducing their share of income. The crews are paid 500 Tshs every day they return from work for breakfast (chai).

A newly emerging contract is that of monthly payment. In this case the crews are given a flat rate payment of 250 Tshs per kilogram of fish they bring to the boat owner at the landing site. However, boat owners deduct operating costs such as fuel cost from this rate. Unlike the traditional fishing system where the crews were able to bring fish home, the current arrangement gives little opportunity for the crews’ households to access fish.

Another collective category is that of traders. These link the fishers and the factory processors. In this category there are agents for the factories. These buy fish from boat owners for the factories. This trade requires high level of capital investment in transportation vehicles and refrigeration facilities. Due to factory competition for fish, factory owners have contractual arrangements with agents through which they supply them with credit, special transport vessels, etc. To ensure their fish supplies, agents also make contractual arrangements with boat owners that involve credit, supply of fishing gear and refrigeration facilities. Boat owners are obliged to supply fish to such agents. Sometimes, though illegally, agents may buy fish direct from boat crews. This may happen offshore. As this may mean that boat crews contravene their contractual agreement with boat owners, this becomes a source of conflict and insecurity at offshore.

Informants from the Mwanza City Directorate and LVEMP indicated that regulations do not allow factory owners to engage in fishing. However, to ensure adequate fish supply from

competitive sources, factories rely on contractual arrangements with boat owners and agents and through such arrangements, factory owners are engaged in fishing though indirectly. Some factories have their own fishing gears, and have direct access to and collect fish from fishing camps. This has great repercussions in the sector as it introduces more monopolistic conditions in the fish trade that lead to unfair trade. Whereas the factory owners have established a Fish Processors' Association to promote their interests, such organisations do not exist for fish traders, fish agents, boat owners and fishing crews.

Among the traders, there are other sub-categories. The '*wamachinga*' operate at the landing sites. These buy fish that is not suitable for factory processing, either due to small size or poor quality, for sale to artisanal fish processors. Sometimes the *machinga* traders may accumulate fish bought in pieces from crews and eventually sell to factory agents. The artisanal fish processors also operate at the landing sites. They prepare fish for local markets. As measures for quality standards have improved such as refrigeration, less and less fish is becoming available for artisanal processors. Women are more involved in these two categories of fish traders. The fish export trade has tended to deprive opportunities for these groups to earn a living.

Another group of fish traders and artisanal processors is engaged in factory fish by-products such as punk, fish cuts that are further processed for export to regional markets such as Rwanda, Burundi, and the Democratic Republic of Congo (DRC); and the local market. This category of fish traders and artisanal processors operates from urban environments.

Figure 3 summarises the structure of fish trade in the region. The relationships between the different players in the fish trade structure are rooted in their contractual arrangements. The nature of the contractual arrangements ensures concentration of ownership of resources and undermines the opportunities for a sellers' market (Jansen, 1997). Also there has been a growth in the involvement of the more well – to – do people at the expense of marginalisation of the rural poor. There are reports of incidences of 'absentee fishermen' – civil servants, businessmen working and residing away from the lake who own boats and employ people to operate for them.

Field information suggests existence of unfair trade by unscrupulous traders and factory owners through various forms of contractual arrangements. This perpetuates poverty among

members of the local communities. Credit mechanisms, for example, make fishermen dependent on agents who in turn are dependent on factory owners. These relationships are reproduced at lower levels. For example, a '*machinga*' issues credit (locally called '*skadi*') to boat crews (to enforce contract) in order to be assured of fish supply.

The factory owners are the dominant players. They fix fish prices. The bargaining power of the fish factory agents, fishing crews, *machinga* and artisanal processors at the lower level of the export fish market is low as they have no collective organisation to promote their interests.

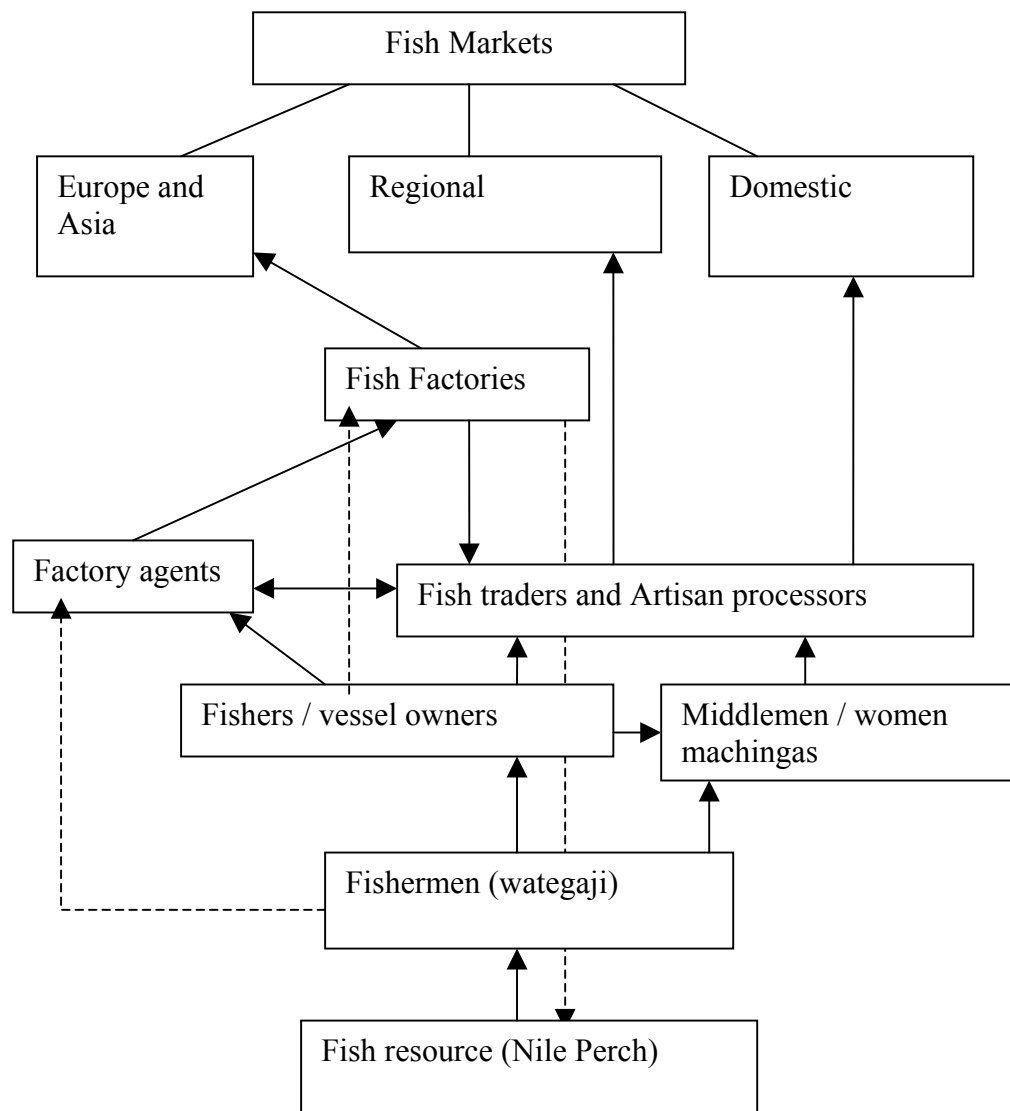
The structure of the export fish industry limits the possibilities of trickle down effects to the local communities from the growth of the sector. Profits from the trade are not adequately re-invested in the local fishing communities. Certainly some rich traders have invested in better housing with the local communities. Data to quantify this phenomenon is unavailable. Developments and landing sites and fishing villages are more associated with the provision of consumer services. These include guesthouses, bars and restaurants, and shops. The growing entertainment services serve to draw more income from low-income earners for the benefit of the rich traders.

6.4 INSTITUTIONAL ORGANISATION

The LVFRP funded by EU realises the need for improving fisheries management for sustainable development of fisheries resources. Thus the development of participatory fisheries management is a central matter in the proposed Lake Victoria Fisheries Management Plan (Bwatwondi, et al, 2001). The FMP responds to some of the critical problems facing the fishery resources of Lake Victoria. These include excessive fishing effort; over-fishing; degradation of fishing habitats; destructive fishing methods and gears; inadequate enforcement of fisheries laws and regulations; limited involvement of fishers and lakeside communities in the management process, etc.

Various institutions are involved in the management of the Lake Victoria fisheries resources including the Departments / Directorates of Fisheries, Fisheries Research Institute, donor projects (LVFRP and LVEMP). The LVFMP intends to integrate fisheries management from the regional level to the local (beach levels).

The LVFMP also realises the need for developing infrastructure to alleviate problems facing post harvest sector due to the remoteness of the land sites. It acknowledges that poor handling facilities such as ice plants, storage facilities; sanitary conditions at landing sites contribute to poor fish qualities. Non export fish processing also faces poor quality problems due to lack of racks at beaches leading to drying on sand as was seen at Kabangaja landing site (see Plate 1); facilities for smoking; and frying. The post harvest sector constitutes the majority of small-scale processor / trader population at the landing sites. Unfortunately this sector has received little support and making the fish industry less beneficial to the poor majority.



----- Dotted lines show relationships / transactions out of normal practices.

Figure 3 Trade Structure of the Fishery Sector

The LVFMP also realises the need for developing infrastructure to alleviate problems facing post harvest sector due to the remoteness of the land sites. It acknowledges that poor handling facilities such as ice plants, storage facilities; sanitary conditions at landing sites contribute to poor fish qualities. Non export fish processing also faces poor quality problems due to lack of racks at beaches leading to drying on sand as was seen at Kabangaja landing site (see Plate 1); facilities for smoking; and frying. The post harvest sector constitutes the majority of

small-scale processor / trader population at the landing sites. Unfortunately this sector has received little support and making the fish industry less beneficial to the poor majority.



Plate 1. Drying Dagaa on Sand at Kabangaja Landing Site

The problem of growing social insecurity off shore and increasing social conflicts, require the development of management organisations for addressing the problems. This features strongly in the establishment of the beach management units (BMUs) that are empowered to take on management functions at local level. The establishment of the BMUs in Mwanza region was supported by the LVFRP, LVEMP. BMUs are operating under the supervision of Fisheries Departments at district levels. Their establishment is seen as a method of delegating some responsibilities for the management of the fisheries resources to communities. The prime responsibility of the BMUs is enforcement and implementation of national and local fisheries regulations. Thus, the BMUs are often associated with the functions of *Sungusungu*. The BMUs members are selected by the village assembly and operate under the village sub-committee of *ulinzi na usalama* (literally defence and security). The basis of the BMUs is biased to enforcement of government fisheries regulations and inadequately responds to civic organisation needs of the local communities. As Medard, et al., (n.d.) have noted in their study of the Kabangaja fishing village and landing site, there is no community involvement in the design and implementation of BMUs activities. Our field findings show that where BMUs

are involved in revenue collection, for example, they have no authority and have little influence in ensuring that part of the revenue is brought back to the village as regulations demand. Where part of the revenue has been sent back to local communities, some significant developments are apparent, as is the case at Kayenze landing site.

The BMUs have taken up the tasks of fisheries management including enforcing regulations against destructive fishing, conflict resolution, and some supervising licensing of fishers and traders and recording production data;. However, BMUs face a lot of resource constraints. Several BMUs have been dissolved and new ones have been formed due to default in membership. Acceptability of BMUs by the local community is hard to establish. The BMU at Kayenze site is a good example of excellent performance. Apart the usual responsibilities, it has been able to collect revenue from the fish industry and to reinvest the profits in the development of the landing site infrastructure (see Plate 2). Patrol of fishing operations that is required for checking destructive fishing; offshore conflicts; and offshore insecurity is hardly undertaken by BMUs due to resource constraints. This leaves a gap that requires immediate solution to safeguard the local fishing communities and the environment. Most BMUs work on voluntary basis as there is no remunerations to compensate for the time spent on BMU activities.



Plate 2: Kayenze landing site

A major weakness in the institutional organisation for fisheries management is the lack of community based organisations to promote the interest of low income members of the fishing community who are unfairly monopolised and marginalised by richer fishers and traders. Although the importance of the fisheries cooperatives is recognized in the Cooperative Development Act of 1997 (URT, 1997d), there is little evidence of support of the fishing communities in developing cooperative societies. Clauses 3.5 and 3.6 of the policy state that:

“The government will play the role of facilitating and catalyst with emphasis on information provision, sensitization, education, training, inspection and supervision” (Article 3.5)

“The government will encourage women participation in cooperatives by removing inhibiting traditional laws, customary values and any other constraints”. (Article 3.6)

However, information from land sites we visited indicated little effort towards formation of community-based organisation for promoting the interests of low income fishers and traders. Focus group discussions at Igombe landing site revealed that boat crews had no organisations that united them for promoting their common interest and defending them from unscrupulous traders and boat owners. Such organisations of fishers and traders can bring great economic and social advantages through economies of scale, greater bargaining power and social cohesion. These would also enhance collective effort and participatory management of fishery resources. It was revealed during discussion with boat owners, fish factory agents, and traders that most of them are constrained by poverty background and inadequate education making it difficult to mobilise themselves and have a single stand/voice. Those who have relatively managed to break through poverty fear to create a situation that may jeopardize the already established opportunities, and cannot have a strong social cohesion (or talk in the same language) with those who are very poor to have a single voice and a greater bargaining power.

Lack of development of community-based organisations has also weakened the development in credit services systems for the low-income fishers and traders. The National Fisheries Sector Policy and Strategy Statement of 1997 (URT, 1997b) identifies the unfavourable credit condition from lending financial institutions as one of the constraints in the fisheries sector.

6.5 SOCIAL ISSUES

The increasing social distance among members of the local communities at the landing sites and fishing camps goes hand in hand with the declining moral behaviour. As social differentiation increases unlawful ways of sharing wealth are likely to lead to social insecurity. Discussions with respondents indicated an increasing concern over the growing situation of lawlessness both off-shore and on shore.

Medard (2001 p. 156) complains of the neglect of women by government and non-governmental organisations. The women are forced by the circumstances to work in the lowest levels of technology as modern technology marginalises them. Williams (2001 p. 151) made a similar observation that women are relegated to low paying tasks as technology develops. The conflict between migrant fishers and local sedentary population at Kabangaja was quite evident in the field discussions. Also most women in landing settlements were working in social/entertainment activities such as restaurants and bars.

6.6. FOOD INSECURITY AND NUTRITION ISSUES

The impact of Nile Perch export trade on food security of the local communities has been highly debated. Some deny the argument that the export trade has denied access to fish by the local population. This argument suggests that Nile Perch has not been a preference dish for the local communities due to its fatty nature. Tilapia is preferred to Nile Perch (LVFRP, 1999:125). It also holds that the local communities do still have access to other fish species.

Arguments that export trade leads to food insecurity (Onyango, 2001) centre on the increase in price of Nile Perch as well as other fish species and fish products. The increase in the price of Nile Perch has also triggered a rise in the price of other fish. It is generally agreed that fish has become more expensive and low-income household cannot afford buying fish regularly. As noted in the discussion above, the commercialisation of the fish sector has changed traditional ways that used to ensure household access to fish. Since a large proportion of the fish catch is delivered for fish processing factories, it is obvious that there is less fish for local consumption.

As noted earlier, Mwanza region is more vulnerable to the problems of food shortage and often relies on food imports from other regions. This means food items are very expensive and therefore poor households are at greater risk. This is where linkage of the fish industry

with the other sectors is important. Profits from the fish industry could be used to boost the agricultural sector that is the major source of food requirements for the local population.

6.7 POVERTY - ENVIRONMENTAL ISSUES

The poverty implications of the development in fish export discussed above have repercussions on the environment. Growing impoverishment of the local fishing communities means limited capacity for them to better manage the fishery resources. As fishers find it difficult to acquire expensive fishing gears they are likely to resort to cheap, but destructive fishing gears like the '*kokoro*', trawling; and fish poisoning (Bugenyi and Knaap, 1997). Certainly the improvement in quality control and adherence to quality standards is likely to discourage the use of destructive fishing gears and methods in Nile Perch industry. But lack of quality control in non-export fish sector is likely to entertain the use of destructive fishing methods and gears. The low-income communities are more likely to experience the health hazards that are related to poor quality of the non-export fish products.

In order to improve their income more poor people have to work in the sectors as labourers for boat owners, and have to spent many hours fishing as fish stock declines. This has tended to encourage population concentration in fishing camps both on the shore and in the islands. Growth of fishing settlements (villages at landing sites; fishing camps on islands, artisanal fish processing camps, etc) has related environmental problems (e.g. Sanitation, use of fuel-wood for fish processing and other domestic uses). Settling on fishing camps is a coping strategy of the poor but leads to environmental degradation. The EU support on sewage management in Mwanza city has helped to reduce pollution of Lake Victoria. Yet, the pollution that is likely to arise from the concentration of population in numerous villages and fishing camps along the shores and in islands of Lake Victoria is yet to be addressed. The urban way of life in the growing settlements involves generation of wastes that find their way into the lake. Runoff from the villages into the lake affects the quality of water.

The deterioration of the environmental resources / fish stock deterioration will impact more the poorer as they are the least capable of adapting to the expected consequences. Due to the growing demand for fish export, there is the danger of over-fishing.

Capacity of village authorities to conserve the environment is limited due to less revenue transfer from fish trade to the village level. Local authorities lack the capacity to provide for required services and infrastructure in the rapidly growing settlements.

7 THE CASE STUDY OF MARINE RESOURCES

The objective of this undertaking is to formulate marine and coastal related recommendations for long term EU and national institutional and policy changes, and long-term opportunities to facilitate poverty-environmental integration in the Country Strategy Paper process.

7.1 EU AND COASTAL PROGRAMME

The EU is anticipating investment in the coastal area-with a focus on poverty alleviation. EU investment will build on the existing World Bank MACEMP project and focus on areas of governance for regional coastal zone management, EEZ management and capacity at the District level.

The Marine and Coastal Environment Management Project (MACEMP) hosted by MNRT is a six-year project that is to improve the management of coastal and marine resources. It has a view to contribute to economic growth and poverty reduction in coastal communities. The Project emphasizes the establishment of an effective regulatory and institutional framework, participatory planning and the creation of an enabling environment for integrated coastal and marine resources management and private investment.

MACEMP will, amongst others: strengthen marine management institutions with a focus on creating a common governance regime for the Exclusive Economic Zone (EEZ) (Component 1); support coastal area planning and the establishment of a network of marine protected areas (MPAs), community management areas (CMAs) and marine management areas (MMAs) for conservation of biodiversity and sustainable utilisation of coastal and marine resources (Component 2); and create an enabling environment for environmentally sustainable investment along the coast (Component 3).

While the overall goal of MACEMP is to improve current economic, social and environmental conditions over the long-term, it is recognized that some activities may negatively affect individuals and households. Resource management will be changing from what is currently an open access regime to a regulated or limited-access regime. Reducing the availability of or access to resources has the potential to place already impoverished populations at risk when the productive assets are lost. Other potential impacts include a

weakening of community institutions and social networks, traditional authority, and potentially diminishing or removing mutual help systems that exist in communities.

The ocean bordering the East coast of Africa is one of the last areas where fishing activities are largely unregulated. Despite the declaration of a 200-mile Exclusive Economic Zone (EEZ: Law of the Sea), Tanzania lacks the institutional and financial capability to exercise their jurisdiction. While fish species living in a narrow coastal strip are harvested, the potentially valuable offshore species are left to foreign fishing fleets that rarely, if ever, pay reasonable "resource rents" for exploitation of the fishery, tend to land fish outside East Africa, and do not assist in management of the resource by sharing data with Tanzanian authorities.

The Project seeks to improve the regulatory and institutional framework for management of marine resources- particularly establishing the links between the marine environment and the fishery resource and what are expected to be conservative estimates of sustainable commercial exploitation of marine fishery resources. It also aims to fill gaps in the data describing the fishery in Tanzanian marine waters and the coastal and offshore environment upon which the fishery depends. The objective is to enhance the contribution of these resources to economic growth and reduction of poverty, and to develop the scientific understanding of the status of the resources and major threats to them.

7.2 METHODOLOGY

In addition to the review of literature two sample villages along the coast of Dar es Salaam were selected. These villages were Kunduchi and Amani Gomvu in the north and south of Dar es Salaam city respectively. Kunduchi Mtongani village is basically part of the Dar es Salaam city. Both the livelihood system and natural resource utilization clearly reflect the influence of the city. Relatively fewer households depend directly on fishing in Kunduchi village. Otherwise, the majority are engaged in various non-farm activities. By any standards the majority of the residents in Kunduchi village can be categorized as poor.

On the other hand, Amani Gomvu can be best described as a rural village with minimal influence of /from the city. Crop cultivation and fishing are the most dominant livelihood activities for the majority of the people. Like Mtongani village, Amani Gomvu is also

experiencing pressure from tourist development. This pressure is reflected in losses of village land to tourist hotel investment. The livelihoods in Amani Gomvu are not as diversified as those in Kunduchi village. Again this can best be explained by the influence of Dar es Salaam city.

Both primary data and secondary data were used. Through literature reviews secondary data pertaining to resource use patterns and livelihood systems were collected. WWF library provided the major basic source of secondary data. Primary data was obtained through interviews, and focus group discussion with members of the local communities in Kunduchi and Amani Gomvu villages. In addition officials from Kinondoni and Temeke municipalities also provided an invaluable source of data for the assignment.

7.3 THE NATURAL RESOURCE BASE AND LIVELIHOOD SYSTEMS

7.3.1 The Natural Resource Base

The coastal communities in the rural areas of Tanzania are richly endowed with a wide range of natural resources that people can utilize (with technology and capital at their disposal) to form the basis of their livelihoods. People in the sample villages for example, perceive the ocean and land as their most important natural resources, and for decades now the livelihood options have, to a large extent been influenced by this richness.

Members of the local communities in Kunduchi and Amani Gomvu are aware of the potentials in their villages. The sandy soil, fishing grounds and remnants of the natural forest (especially in Gomvu) for example, were identified as the most valuable resources in these villages. Although all these resources are under pressure and are currently being over exploited, the villagers consider them as their lifeblood. In fact this is hardly surprising given the low level of technology that locks them into dependence on the natural environment.

Mangroves are one of the most productive habitats on the coast of Tanzania. Associated with mangroves are lagoons and estuaries, which are important habitats for aquatic organisms. Mangrove forests occupy the largest area of all these coastal habitats, typically around river estuaries. Coastal communities use mangroves to supply local needs for fuel wood, charcoal making, fences, house construction, boat building, fish traps, fishing stakes and medicines.

Coral reefs form another marine resource in the coast. These are located along about two thirds (600 km) of Tanzania's continental shelf. These coral reefs are known to be the home of about 4,000 fish species as well as a variety of sponge, mollusks and other invertebrates. Coral reefs and associated habitats also support species such as marine turtles, dugongs, rays, whale sharks, and others (Bunting, 2001). Over 500 species of commercially important fish and other mammals such as lobsters, octopuses, bivalves, gastropods, and sea cucumbers are commonly found (Horrill et al. 2001, Wagner 2000).

Another form of marine resource is the sea grass. The sea grass beds are very productive areas and are high in species diversity and numbers of individuals (Semesi, et al., 1999). Their most notable role is that they provide breeding, nursery, and feeding areas for many invertebrates and vertebrate species including commercially important species of finfish, and shellfish. Seaweeds grow attached to rocks, or to shells of marine animals, or grow as epiphytes on other marine plants. Currently, seaweed farming is an important economic activity and provides an alternative livelihood to fishing in many coastal communities particularly Zanzibar, Tanga, Muheza, Pangani, Bagamoyo, Mtwara and Lindi (Mgaya, 2000).

The marine biodiversity of eastern Africa, with its many plants and animals constitutes a vital resource for the well being of coastal and inland inhabitants. Today however, the growth of the coastal population, expansion of industrial activities and the development of tourism have combined to contribute to the degradation of these resources.

The resource use patterns clearly reflect the level of technology as well as the growing pressure as caused by population increase and the economic policy reforms. In the views of most members of the two local communities the different natural resources that are found in their area belong to them. In fact such perceptions have tended to shape the patterns of resource utilization. For example, the majority of these people own small tracts of land, usually an acre or two, and very few have land for cultivation exceeding ten acres. The land is usually underutilized. This is because of low technological and capital inputs. Other assets owned by the indigenous people beside land include the dwellings, in which the majority of the people dwell in themselves, and fishing gear. The technological limitation on the fishermen confines them to short off shore distances. As for crop cultivation again, the size of

land that can be cultivated is, to a large extent determined by the level of agricultural technology.

With the liberalization of the economy in the mid-1990s a new category of resource uses has emerged. There are large-scale investors, mostly foreigners who have acquired large tracts of land by the seaside for building expansive hotels for the tourism industry. The hotel compounds are enclosed by walls, which extend out to the beach areas. Some investors enclose their property in electrified fences to enhance security of their property. By law, the beach areas are supposed to be open to public access, but it seems that investors are taking advantage of poor law enforcement and deny access for to the communities to access and use the ocean and the beaches.

Local migrants from within the country own some land in the coastal areas. These have acquired relatively sizeable amount for settlement and investment. The amount of land they acquire is usually less in size than that of foreign investors, but also larger than that of the local dwellers.

There is a noticeable changing access to land ownership pattern along the coast but especially more near urban centres like Dar es Salaam. The local communities are losing more of their resources, but most notably land, to the outsiders. Many of them are bought off from their land and settle in confined settlements with small patches of land. The land bought by the investors is withdrawn from production, fenced and strategically left undeveloped for extended periods of time for future investments. The need for cash made available to them on immediate basis tempts farmers to sell their land to investors.

Up until recently, ownership of resources within the geographical locations of the coastal communities was through customary tenure. The system ensured a relatively fair allocation of non-public resources to the indigenous people. Following major transformations in the political and economic policies prominently featured by economic liberalisation land is being bought and put under the rights of occupancy.

The new system requires one to have capital and insight into legal aspects concerning property laws. In this respect, the people of the local communities are disadvantaged because they lack the financial capability and knowledge about their property rights, the necessary

aspects to be able to compete in the open market system. Experience of the events of the past decade at least has shown little or no initiative on the part of the government to help address and redress the externalities associated with adoption of new economic policies on the ownership security of the local people. As a matter of fact, in some cases the government deliberately evicted people from the property considered to be worthy of supporting investments that would increase government income through taxes. In view of the preceding discussions, it is evident now that the institutional set-up and changes in economic policies shape the access and resource use patterns.

7.3.2 Livelihood Systems

The coastal people in Tanzania are involved in a wide range of activities that exploit the rich biodiversity of the coast for their livelihoods (WWF, 2001; TCMP, 2001). In most of the coastal districts, for example, farming and fishing are the primary means of livelihood of the poor communities. Other secondary alternatives exist, some of which are related to the fisheries resource, but many others are not. The major economic activities practiced by the people of the coastal communities are basically extractive ones, featured by crop cultivation, fishing, and some non-farm activities. The prevalence of these activities results from a complex interplay factors including natural resource endowment, level of technological know how and associated tools, and nature of capital base.

7.3.2.1 Fishing

Fishing is the most dominant activity for the majority of the people living in the two sample villages. The importance of marine fisheries resources to the livelihoods of the local communities can be best appreciated because they provide nutritional requirements, creation of job opportunities, and income generation among the communities.

The fisheries activities as practiced by the local people in the two villages are of small-scale using mostly traditional gear. The activity takes place onshore rather than offshore and this is largely because of the poor technology. A wide range of species is fished. However, the government protects some marine species, and therefore by law they do not form part of catch. These include prawns and turtles. In the onshore waters there are fewer fish than there are in offshore. In addition, fish stocks onshore fluctuate with seasons and decline with time. However, for the fishermen to practice offshore fishing they need sophisticated boats and

equipment, which they cannot afford. It follows, therefore, that those who can exploit reliable fish stocks are outsiders with powered vessels and their employees, which may be some local fishermen or those they come with. This scenario has implications on fish markets. Within the villages where no offshore fishing is practiced, the price of fish fluctuates inversely in relation to fish availability. Where offshore suppliers market their fish, such as the major market centres, the prices remain relatively stable throughout the year.

Fishing is an important livelihood activity in nearly all coastal villages. In addition to the supply of food, it is also a source of income. In recent years however, the artisanal fishers have been facing some problems. The fish prices are low because many such fishing villages are not served with a reliable transport. In such situations, few people (traders) who can afford to take fish to the urban markets take advantages as they force a wide price margin at the expense of the fishers.

In nearly all fishing villages, the type of fishing gear used determines the amount of fish catch. The boats used are mainly small dug out canoes poled or sailed. Boats are used to fish with nets, hand lines and traditional traps, as well as diving for octopus. Most fishers do not own a boat and a high percentage of fishers do not use boats at all. The low proportion of boat use is due to the relatively high cost of boats. A boat made in soft wood will last around 3 to 5 years and a hard wood boat could last for 20 years.

Commonly fishers share a boat. Boats are usually owned by one individual, but can also be owned between 2 to 6 fishers. The most common is for fishers to share a boat between two or three to go fishing. In the case where individuals own boats, fishers share the catch and give a share for the boat. Some fishers rent boats, on a monthly basis for example. They also could rent a boat on an occasional basis. Again for most fishers, having to pay for the rented vessels means even lower net return from fishing.

A wide spectrum of gear is used along the coast of Tanzania and they include: Gill nets: of 3-4 ply and of 2.5-3 inch mesh from 50 to 100m long are usually set by boat, and left all night in deeper areas. This method of fishing is done at low tide during both night and daytime depending on the tide. Cast nets are also used. These are small size and small mesh size, nets that are cast over sardines, prawns or small fry (dagaa). Cast nets are used at low tide, during

the day or at night mainly in sandy or muddy shallower areas. Another type of gear used is the beach seine. These are very small mesh size (about 0.5 inch) nets. Fishers on a boat spread the seine over a large area encircling a group of fish, while the two extreme ends of the net are held by two groups of fishermen at the beach. Perhaps this is one method that leads to indiscriminate fishing and actually fisheries authorities are discouraging it, although it is the most preferred by fishermen.

Home made spear, spear guns, sticks are also used. Crabs are collected in mud flats/mangrove areas, with hooked sticks, during low tide and in all seasons. Divers use sticks or spear guns or nothing to target lobsters, octopus, sea cucumber and reef fish. Other fishers use fence traps. these can be fixed larger structures or light removable ones. Harvesting occurs at low tide when fish are trapped at the end of the fence. Other gears include hand lines. These are very common and fishers often use them as well as nets. They are bought and are mainly used from boats, in all seasons, in both tides.

7.3.2.2 Farming

Besides fishing and its related activities, the local people along the coast are also engaged in farming activities. Crop production in the two coastal communities is practiced in small, enclosed, and fertile lands. The individually cultivated fields are small, usually more or less than an acre. The crops grown include, rice, cassava, sweet potatoes, peas, cow peas, traditional vegetables, okra, etc,) or production of cash crops (coconuts, cashew nuts and fruits. Generally however, farming is mainly for subsistence than a source of cash. Problems of accessibility explain why much of the produce crops do not reach the urban markets. Like in fishing, only few middlemen who can afford to transport the goods to the urban markets get good benefit.

In many cases the farmlands, small as they are, are not fully utilised because of limited available labour and technological input: usage of tools that are simple extensions of the hand, limited use of fertilizers, and limited capital input. There are patches of high potential lands along the coast but these have not been fully utilized largely because of shortage of labour and problems of transport.

7.3.2.3 Small scale business

Retail shops and kiosks supply fishers and other villagers with essential commodities and are found in all coastal villages and landing sites. They supply household needs (rice, flour, cooking oil, kerosene, matches, soap etc.). The traders may have other livelihood earning activities including fishing. Few rely solely on retailing to make their living. The small businessmen and women are also engaged in selling fish at their villages or market centers, particularly dried fish. Due to its proximity to Dar es Salaam city Kunduchi village has more of these activities than Amani Gomvu village in the far south.

7.3.2.4 Firewood Collection

Nearly all the coastal communities in Tanzania depend on wood or charcoal as their main source of energy (cooking, heating, etc.). Women are engaged in firewood collection for their households. Men may be engaged in firewood cutting/collection for sale to other users, or making charcoal, or for salt making and lime making where heat processing methods are used. The source is the mangrove and coastal forests. The lime and salt heat processing methods utilize a lot of firewood, hence are very destructive. Drying fish is basically done on the sun but the larger ones are dried on open fire using firewood. Fish frying is done using charcoal or firewood as source of energy. This is yet another evidence of the linkages between poverty and the environment.

7.3.2.5 Wood carving and weaving (local craftsmen)

Wood carving and weaving employ a reasonable number of people, especially in Amani Gomvu village. Whilst it is unlikely any fisher would undertake carving, a member of the fisher's family would, as an additional source of the family's income. They make their living through sale of the carvings by selling to tourists visiting the nearby hotels. The carvings are made out of special trees selected from the coastal forests. Generally the selling prices are low and therefore their engagement in this activity has just little contribution to the household economies.

7.3.2.6 Salt making

Production of salt through solar evaporation is another activity in which some villagers are engaged in. Many of these saltpans are located near mangroves, which have been cleared of trees. This activity demands substantial hired labour and occasionally fishers may seek temporary employment to work in the salt production when not fishing but this is not regarded as an important fisher's alternative source of livelihood. However the saltpans form an alternative fishing ground in the rainy season when fishing in the open sea is not possible and salt production stopped until the dry season commences.

7.3.2.7 Quarrying

In recent years, business involving construction materials (sand and stone) has been on the increase. Quarrying activities take place in areas within vicinity of the settlements. This activity employs a large number of people as individuals (small aggregate crushers) or groups working on industrial stone crushing factories. To some villagers this is a full time activity and sole source of income. This was particularly noted in Mtongani village. Men and women are engaged in aggregate breaking by hand. Fishers may be involved in stone quarrying for sale or for building own houses when they are not fishing. Alternatively if the fisher's piece of land has some stone outcrops, he may contract crushers who will pay him royalty bringing in additional income to the fisher's family.

7.3.2.8 Charcoal Burning

This is another non-farm activity undertaken by the coastal communities. Nearly all the charcoal produced is sold in Dar es Salaam city. The ever-increasing demand for this product by the urban population, has significantly contributed to the loss of forest in areas around Dar es Salaam. In Amani Gomvu charcoal makers complained of the growing scarcity of good trees from which charcoal can be made. Nearly all good trees have been cleared for charcoal and this has contributed to the rise of price. A bag of charcoal sells at Tshs. 3,000/= at production sites. The middlemen in the villages sell at Tshs. 8,500/= and sold even higher price in urban markets.

7.4 ENVIRONMENTAL GOVERNANCE

In the views of most respondents in both villages (Amani Gomvu and Kunduchi) environmental governance along the coast was perceived to be the responsibility of the

formal institutions. Respondents in Amani Gomvu mentioned the Fisheries Department as being incapable in implementing its plans. What is even more interesting however is that there are no community initiatives to spearhead efforts towards environmental conservation. Based on the findings of livelihood appraisals (King, 2000) it appears that informal rules exist and these relate to conflict avoidance (e.g. not disturbing an area where nets are set. The lack of community initiatives in Gomvu village for example, was attributed to mistrust among the community members. “We have made several attempts to work together for a common goal that is, improving the fishing activities, and establishing our own funds, but we are not told how this is spent” This was a remark by one respondent in Kunduchi village. Apparently the complaint was directed to village leaders who were also alleged to have initiated communal efforts for their personal gains. Without community unity it is even difficult to access credit that would have been used to improve the fishing gear.

The need for good governance of marine resources can not be overemphasized given the growing pressure on these resources. The increase in the number of fishers and the development of coastal tourism has all combined to put pressure on marine resources. Liberalization policies have attracted investors especially for the development of tourist hotels, and this means more pressure on resource use, ownership and control has been altered, indeed, that is why the issues of governance are becoming even more important than ever before.

Thus until recently the Fisheries Act of 1970 provided the first comprehensive legislation to safeguard the marine environment. Although some areas along the coast were declared as protected, in most cases there was no management framework for environment and resource protection. We also note that there is a general trend of failure may be due to lack of trained personnel and financial resources as well as political will among the government authorities and local community. Furthermore, these problems are made worse because most of the local people are not involved in implementation of environmental management activities thus leading to resource use conflicts. It is because of this that the riverine conservation (Ngaramio River) in Amani Gomvu village has created problems and clashes between the local people and the investors. With the good intentions by the investors to conserve the biodiversity along the river, the villagers still see this as a denied use of ‘their river’. All this is happening because the local community members were not part of the planning.

The continued violations of even the available by-laws and policies by the investors including the use of the 200 metres considered lawfully to be public, is also a cause for concern. With denied direct access to the ocean, villagers in Amani Gomvu cannot feel like conserving the area that is not theirs.

Many residents have expressed contempt towards the presence of the investors in their neighbourhoods and communities. They claim to perceive no collateral benefits from the foreign investors. Indeed, some of them think the presence of the investors has and is worsening community life. For example, they claim that some of the investors have deliberately constrained their access to forests and fresh water sources they have depended on for generations by placing them under their control. Some of the community dwellers claim investors have overloaded community infrastructure. For example, residents of Kunduchi village in their area claim they do not get enough water from the village taps because a hotel owner drains water to fill up a swimming pool and water the hotel compounds. Such reservations by majority stakeholders and lopsided realisation of interest by the moneyed-and-informed few indicate governance in the resource acquisition and management is not at its best. More needs to be done by all that are involved to ensure fairness, transparency, accountability, and responsibility for the benefit of all.

As far as the legal and policy issue on marine resources are concern the country is not short of them. For example, the fisheries laws include; the Territorial Sea and Exclusive Economic Zone Act (1989); the Fisheries Act No. 10 of 1994 and the Marine Parks and Reserves Act No 29 of 1994. As for the policies the following are noted; the national Environment Policy (1997); the National Fisheries Sector –Policy and Strategy Statement (1997) and the Fisheries Master Plan (2002).

From both the literature (e.g. Malleret-King, 2000) and evidence from the survey villages, it was evident that the management of fisheries resources was found to be the fact of formal institutions mainly; traditional management if it existed has lost its power. The local stakeholders consider management of fisheries resources to be the responsibility of national institutions, particularly the Fisheries Department. Management is therefore a top down affair. This also means that there is a gap, but such a gap in management is not being filled by community based management initiatives. Indeed, this contributes to perpetuating the use of illegal gear and thus to exacerbating the unsustainable use of overexploited resources and

the destruction of marine resources. King (2000) further notes that the little amount of community initiatives among the coastal communities, might be the result of lack of empowerment.

Problems of mistrust between community members were noted in Kunduchi village. It was claimed that the local fisheries committee was formed to benefit few individuals. This partly explains the lack of community groups.

Complications were also found to address the question of responsibility and accountability, the general perception was found to be that the local people perceived themselves as neither responsible nor accountable to the situation existing but rather they viewed the government to be the sole responsible and accountable body. To them it was the government and particularly the municipal authority that was responsible and accountable for all the miseries. To see responsibility and accountability in a different perspective, two ideas ushers in one is that it was the municipal authority that shouldered the responsibility of making sure that the investors do get established there, but not taking it is the never ending responsibility to oversee and regulate the relationship between the investors and the local people. The second idea is that because of the blurred nature of responsibility even the question of accountability was found to be a nightmare.

An example of the involvement of the private sector in marine resource management is obtained from Chumbe Island.

Chumbe Island Coral Park Ltd. (CHICOP) is a private marine conservation project established in 1991 for sustainable management of uninhabited Chumbe Island, a small coral island of 22 ha, located 8 miles southwest of Zanzibar town. Based on the initiative of CHICOP, the island and part of the fringing coral reef were gazetted in 1994 as a protected area by the Government of Zanzibar which has semi-autonomous powers over its natural resources within the United Republic of Tanzania. CHICOP was given management rights and developed a model of sustainable park management, where ecotourism supports conservation and free island excursions for local schoolchildren. Thereby, project objectives are non-commercial, while operations follow commercial principles.

With increasing pressure on coastal resources and the generally weak enforcement of fisheries regulations the understanding and support of the local fishing communities became essential to the effective protection of the island from exploitation. Therefore, the CHICOP relied on educating and convincing local fishers about the benefits they could gain from a small totally protected area. Therefore the strategy of recruiting local fishers to become park rangers, trained on the job proved successful and cost-effective.

Source: Riedmiller, S (2002)

There are several lessons that can be learned from the experience of Chumbe Island. First, there are long-term benefits when a private sector institution establishes and manages small MPAs for effective resource protection, economics, capacity building and environmental awareness.

Second, a small private management body dealing with direct stakeholders has comparative advantages over large central management authorities. Present and future stakeholders participate and benefit more directly, when local fishers are trained as park rangers to deal with local communities, employment is offered to local people, and when schoolchildren and ecotourists are offered environmental education.

Third, sustainable private management of MPAs is feasible. Where coral reefs have tourism potential and are not yet over-exploited for subsistence by local communities, privately managed marine parks are viable and can generate considerably more income than fisheries and other resource extraction.

Fourth, where private investment is encouraged the tourism sector can help with management and enforcement of MPAs, and raise awareness on the environmental, investment, economic, legal or social policies required for effective conservation and sustainable management on the ground.

7.5 POVERTY-ENVIRONMENT LINKAGES

7.5.1 Levels and root causes of poverty

7.5.1.1 Local People's Views

Despite their resources endowment most coastal communities are generally considered as poor. However, the poverty levels in these communities cannot be properly assessed because of the lack of basic information. Nevertheless the fisheries communities are also amongst the more marginalized groups in the population.

Based on the wealth ranking exercise conducted in Amani Gomvu village it is quite clear that poverty is a multi-dimensional phenomenon. Respondents in this village identified several that can be used to distinguish the poor from other categories (Table 6).

Table 6: Wealth ranking in Amani Gomvu village

Criteria	Well-off	Middle group	Poor
Food security	Food secure all year round	Experience problems in food security	More food insecure for more than 6 months
Land	Own more than 5 acres of land	Have between 3 to 4 acres of land	Have less than 3 acres of land
Fishing gear	Some own motorized fishing gear	Use traditional gear	Poor gear or no gear at all
Education	Nearly all have reached Standard VII	Some have gone to Standard VII	Some have not reached Standard VII
Household assets	May possess a bicycle, radio, good house	Fewer of these assets	May not have
Economic activity	Engaged in petty trading, have a shop, more diversified sources of income	Good farmers and have a more diversified economy	Generally considered as lazy, sell labour

The majority of the people in the coastal communities are poor. According to the respondents in Gomvu Amani village most of the people are poor because they do not have enough land and production of crops rarely go beyond subsistence levels. Even in situations where agricultural production goes far beyond subsistence levels the poor roads makes marketing rather difficult and hence keeping the farms in state of poverty. Although there is a wide range of economic activities the scale of operation is small and lacks technological inputs. Production of handcrafts could have been a profitable sector but the quality of the goods is quite low and hence fetch low price. It was also noted in Amani Gomvu village that despite the resource endowment especially the ocean the fishing gear has been a hindrance towards poverty alleviation. Most of the poor members of the community own poor gear and some do not own them at all (Table 6).

Another contributing factor to poverty in coastal communities is the attitudes towards resource use. Most of the fishermen still harbour the “Sea never dry’ attitudes. As argued by some respondents in Kunduchi village, “The Sea will never dry, it will always be there forever, and I will always get fish from it, so why invest?” Indeed this attitude has perpetuated the problem of lack of investment amongst most people. Instead, fishing remains

a hand to mouth activity, with very few people rising beyond subsistence levels. Although nearly all fishermen in Amani Gomvu had noted the decline of fish in recent decades they still believe that the fish stock will never be completely exhausted. These observations reflect some of the typical reasons for rural poverty.

In both villages the local people face serious problems in marketing their products. The marketing of fish draws in a chain of stakeholders. Fish passes various hands –auctioneering, processing, and preparation before reaching the consumers. Given the low purchasing power of local people, the prices of fish are kept low and as a result the fishers get very low price for commodities/items whose production is perhaps their full time occupation.

Appreciably the level of technology in crop cultivation and fishing is generally low. Fishers who did not use boats were found to be poorer than those who did. With poor fishing vessels the fishers lack access to deeper waters. Thus, we note that the type of boat used affected households' wealth, as the larger and more sea worthy the boat, the more wealthy the households. In this case, poverty confines the fishers to exploit fisheries resources closer to on shore.

Resource degradation is one of the root causes of poverty in most fishing villages along the coast. As the population increases the impact is felt on the natural resources that support the livelihoods of the people. For instance, with population increase the number of fishermen has also increased. However, given that the majority cannot afford deep water vessels it means the fishing activities are concentrated on shallow waters. As a result of this the fish stock tends to decline in these areas. In addition, the decline of mangroves has also contributed to the degradation of the fishing grounds and hence a decline in fish stock.

Poverty among the people along the coast may also be attributed to growing rates of HIV/AIDS infections. Fishing communities along the coast are often among the highest-risk groups in the country. Infection rates of blood donors in the coast region are approximately 10% of male and 25% of female donors (Ministry of Health, 2002). This information suggests that in some coastal districts of Tanzania, the prevalence of HIV positive individuals is higher than the national average. Increasing mortality from AIDS changes the demographic characteristics of impacted communities including age structure, sex ratios, and life

expectancy. HIV/AIDS lowers life expectancy, slows population growth, and affects the age structure of affected communities.

Linkages between this health issue and coastal resources and biodiversity are many and strong. As people get sick and die prematurely from AIDS, communities face an unexpected loss of capacity and traditional knowledge (ABCG 2002) about sustainable management of their natural resources. Households impacted by AIDS become increasingly desperate and may revert to destructive use practices and exhibit a greater tendency to break local rules on resources use and management (USAID 2002). The prognosis for coastal conservation and sustainable resource use in coastal areas becomes grimmer as families impacted by HIV/AIDS seek coping strategies and look for easy ways to find food and make money.

As females, who engage in most of the subsistence agricultural production, fall sick to HIV/AIDS, there may also be less food available for coastal communities and households, poorer nutrition and declining health (Topouzis 1999). As men fall ill, it becomes increasingly difficult for them to continue the physically demanding job of traditional fishing. Hence, marine conservation areas, which tend to have higher abundance of fish, become easy targets for illegal fishing. For example, dynamite fishing is a quick, easy, and profitable way to earn money and may be seen as an alternative to more physically demanding traditional fishing methods.

The vulnerability to HIV/AIDS stems from complex, interacting causes that may include the mobility of many fisher folk, and the time fishermen spend away from home. Fishing, processing and trading provides almost daily cash income to small-scale, inshore fisher folk and fish traders, and irregular but substantial sums to offshore fishermen. In studies conducted recently, small-scale fisher folk's incomes have been found to be comparable or higher than those of other occupational groups in the same areas. In the context of generally low incomes, this may not make fisher folk 'wealthy' by absolute standards, but in a very poor coastal or lakeshore village, they may be among the few people with a disposable income (Tietze, 2000)

Although increased cost of health care provision is the most obvious burden of HIV/AIDS on national economies, loss of labour has also been highlighted as one of main economic impacts. The HIV/AIDS pandemic threatens the sustainability of fisheries by eclipsing the futures of many fisher folk. The burden of illness puts additional stresses on households,

preventing them from accumulating assets derived from fishing income. Premature death robs fishing communities of the knowledge gained by experience and reduces incentives for longer-term and inter-generational stewardship of resources.

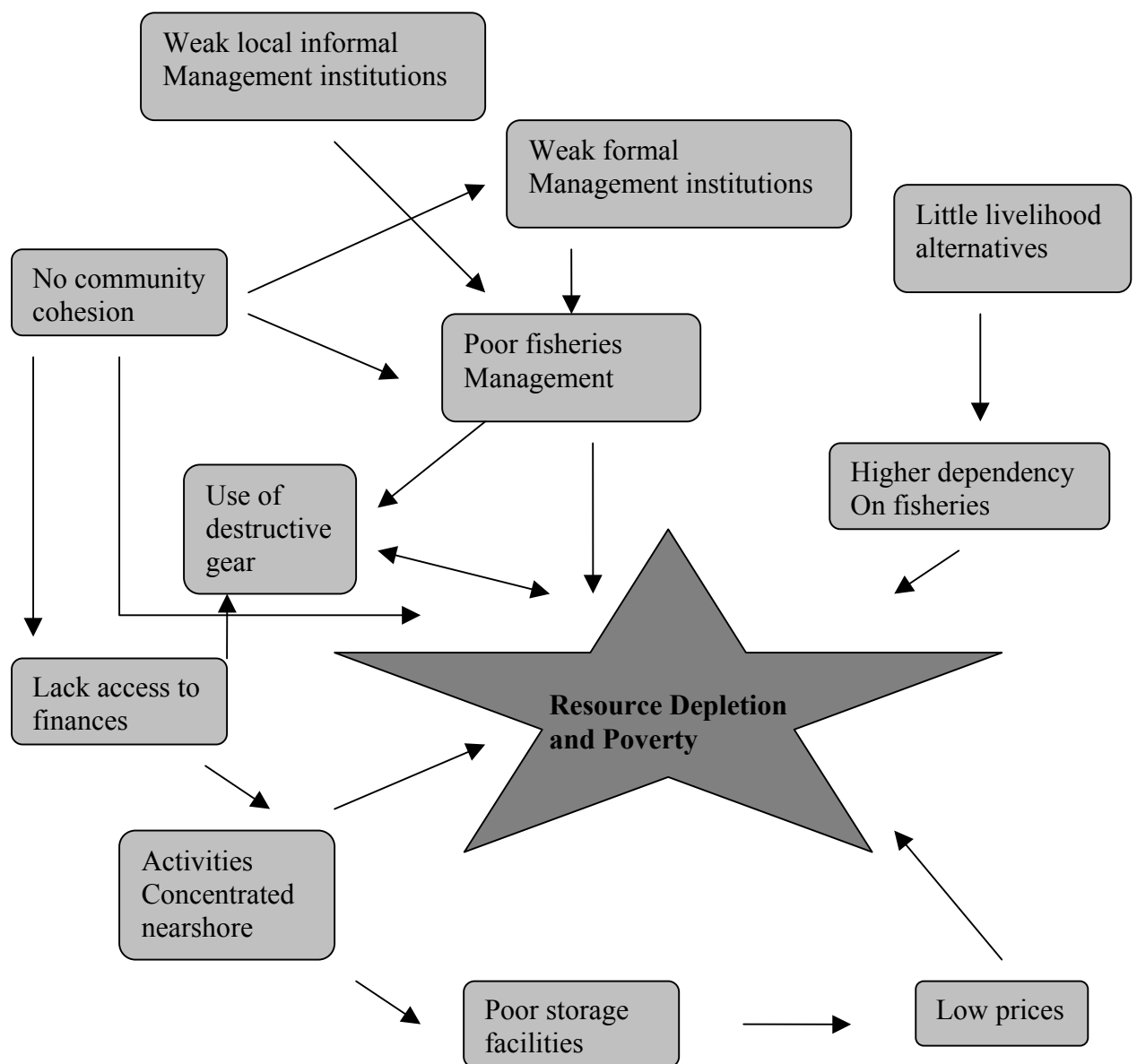


Figure 4: Fisheries associated livelihoods. Poverty cycle

7.5.1.2 Municipal officials' views

In the views of the municipal officials poverty among the people in the coastal areas is largely attributed to their attitudes to life. It was reported that the majority of the people have a tendency to neglect the value of education. They would rather engage their children in fishing activities instead of taking them to school. As a result some of the children have not

had a chance to attend school at all. Officials from Kinondoni Municipality also had the opinion that most people along the coast are not willing to adopt new technologies to improve their lives. Furthermore, it was also reported that community spirit and initiatives are lacking among people living in the coast. This was explained to be due to historical reasons of not having a centralised chieftdom among the Zaramo people. As a result, there has only been low community spirit.

7.5.1.3 National level

It was acknowledged that rural areas along the coast are among the poorest in the country. The causes of poverty were explained to be related to the lack of granted and sought opportunities, for example for tourism for income generation and stimulation of other economic activities. Even where such opportunities existed, the low education of the people prevented them from getting better jobs. The depletion of heavily dependable upon marine resources for subsistence was also cited as a major cause of poverty. In particular officials from The Tanzania Coastal Management Partnership (TCMP) cited the destruction of fishing grounds. The lack of financial and technological resources was also given as contributing factors to poverty among people in the coastal communities.

Problems of governance were also cited as contributing to poverty in coastal areas. In particular, it was reported that the top down approach to resources management deprives the fishers the opportunities to participate in managing fisheries resources. This problem was made worse by lack of implementations of the by-laws and regulations on proper resource uses. The failure to enforce the laws governing the use of marine resources has contributed to the continuation of using destructive fishing gear.

7.6 ROOT CAUSES OF ENVIRONMENTAL DEGRADATION

Coastal and indigenous fishing communities have a long-term stake in the conservation and protection of biodiversity, given their reliance on coastal and marine biodiversity for livelihoods and income. Generations of close interaction with the coastal ecosystem have led to well-developed traditional ecological knowledge systems (TEKS). Such TEKS have contributed to sustain both the livelihoods of these communities and the integrity of the ecosystems.

In more recent decades, however, coastal and marine biodiversity, including mangrove forests, are under serious threat from various sources. The root causes of this degradation are several but most are related to increasing human activities in the coastal areas. For example, habitat degradation of coral reefs is occurring through destructive fishing practices such as dynamite fishing and trawling and pollution. These practices have led to coral reef destruction, mangrove depletion, reduced fish stocks and declining marine biodiversity.

7.6.1 Poverty

Poverty is one of the factors that has contributed to the degradation of the environment along the coast. In particular, the limitations of alternative livelihoods to fishing and crop cultivation force the people to rely almost wholly on the extraction of natural resource base. Much of this pressure is felt on the fisheries. As a result, fishing pressure on the coast is increasing. Few coastal households have the capacity to successfully implement income diversification strategies to cope with poverty and income fluctuations, including income failure. However in many cases, there are no alternatives locally to fishing and/or farming. In such situations, artisanal fishers are forced to continue to work in fisheries. Therefore, the lack of access to alternative livelihoods and income sources adds to the exploitation of marine natural resources above the level that would occur if these were available. More and more people depend on the same limited resources (water and land) to generate income and provide food. The competition for these resources coupled with the desire to increase income has increasingly led to destructive fishing practices. Thus, a combination of a growing human population and increased poverty prompts the unsustainable use of coastal resources.

A study by Jambiya and Lewis (2003) also found out that the causes of poverty and environmental degradation to include; limited alternative income generating opportunities, cultural dependence and subsistence, resistance to change, use of inappropriate technology and the need to maximize short-term benefits at the expense of long-term ones.

Non-fisheries activities, in particular the extraction of sand, gravel and limestone rock for construction purposes has also contributed to the destruction of coral reefs. Coral mining is conducted along the entire coastline of Tanzania. Mined coral is taken from living reefs at the land water interface or from ancient fossilised reefs on shore and a little distance inland. Both live and fossilised coral is used for building blocks and aggregate. From the preceding

discussion it is evident that it is not only the poor who are responsible for the degradation of the marine resources. The well off people too, especially in urban areas and the neighbouring villages contribute to the degradation of marine resources. Their activities however, are more of wealth creation than poverty alleviation.

In the views of the MNRT (in particular TCMP) officials, coastal dwellers are not provided with alternative sources of livelihoods. An example was given that when a resource is gazetted the local people are not provided with an alternative resource. As a result those who have been deprived of their resources are forced to use the remaining resources in a sustainable manner. This may be for matters of survival rather than wealth accumulation.

7.6.2 Development of tourism activities

The coast of Tanzania is home to many excellent natural and cultural resources that have the potential to serve as world-class tourist attractions. However, while tourism activities, especially the construction of hotels is booming there has not been any strong partnership between the private sector and the local communities. Thus it is hardly surprising that villagers in Amani Gomvu feel that they have not benefited much from the development of tourism in their village. The expansion of tourism industry, especially the establishment of hotels along the coast has contributed to problems of pollution and the destruction of mangroves. Mangroves are cleared to allow tourists have a good view of the beaches and the ocean. There is also increased pressure from tourism, industry and population growth. The booming tourism industry has also created a rapidly growing market for marine products and contributed to over-exploitation.

7.6.3 Poor Fishing technology

Destructive fishing methods, such as the use of dynamite and small-meshed nets, have destroyed seagrass beds and coral reefs. These practices still continue in many places along the coast despite being illegal. As a result of these destructive fishing methods the marine fishery resource has reached the upper level of exploitation. This is believed to be due to fishermen continuing to exploit the same fishing areas, limitation of the range of their fishing vessels, which are not powered by motor engines and lack of proper management strategies. At the root of this problem is the issue of poverty among the coastal communities. The

underlying cause of environmental degradation is the short term imperative of poverty which force poor resource users to use destructive techniques (Jambiya and Lewis, 2003).

Large proportions of the by-catch (e.g. non-commercial or unwanted species) of shrimp trawlers are juvenile fish. The loss of these immature individuals threatens future fishery resources. Offshore fishing grounds, some of the only areas on earth from where fish catches are increasing, are also open to plundering, often by industrial foreign fleets.

7.6.4 Population Increase

The five coastal regions of mainland Tanzania encompass about 15 percent of the country's land area and are home to approximately 25 percent of the country's population. Recent estimates indicate that the population of the five coastal regions now numbers about eight million, with a growth rate ranging between two and six percent. Correspondingly the number of fishers in coastal areas has also considerably increased particularly over the last two decades. This is commonly considered a contributing factor in the overexploitation of marine fisheries resources and the deterioration of the coastal environment.

In areas where large populations are located, sprawl and uncontrolled land use and development are problems. This is made worse by unplanned settlements, both in urban and rural areas, where there is no access to potable water and sanitary systems. In all five coastal regions, 15 to 23 percent of today's households do not have toilets, leading to health problems like cholera and diarrhea.

8 OPPORTUNITIES AND IMPEDIMENTS

The EU development assistance in Tanzania in general and particularly in the road transport, the fishery sectors of the Lake Victoria zone and the coastal areas has brought a wide range of opportunities for poverty alleviation and sustainable management of environmental resources. However the realization of the opportunities has been hindered by a number of institutional, economic, social, cultural and structural impediments. Unless rural poverty alleviation is addressed, it is unlikely that environmental problems will be reduced. Reducing the impediments is, therefore, crucial for achieving gains from the prevailing opportunities.

8.1. OPPORTUNITIES

8.1.1 Economic opportunities

The EC assistance in road transport and fishery sector has contributed towards improved trade and businesses in the regions. Within the fishery sector, export trade to European, American and Eastern markets has grown rapidly. Trade business between the region and neighbouring countries is also growing. Development assistance from individual members of EC and from other countries has given opportunities for developing the utilisation of environmental resources for generating incomes and employment to the local communities as well as revenue to the country.

Trade activities between the region and the neighbouring countries as well as local trade is greatly enhanced by the development in the road transport sector. These developments will further be enhanced with efforts for economic development within the East African countries for example harmonisation of custom tariffs. There is further room for integrating the development in the fishery and road sector with other sectors of the economy such as agriculture, industries, etc. At the national level, efforts towards formalisation of informal household assets will enable households to use their assets for economic ventures, especially in accessing credits / loans.

In the fisheries sector there are opportunities for livelihood diversification among the poor. In the road construction, opportunities exist in further taking advantage of the emerging structures like borrow pits and outlet culverts to maximize benefits from their continuous use through better project design.

The coastal areas in the country are richly endowed with a wide range of marine resources. These areas also have tourist attractions, and all these present good economic opportunities which if properly harmonized and utilized could contribute to poverty alleviation.

8.1.2. Institutional opportunities

The development of institutional organisation is crucial for sustainable resource management. Within last two decades, institutional development in the fisheries sector has been a great opportunity for poverty alleviation and environmental conservation. The EC support to the fishery sector has facilitated the development of regional initiatives for collaborative fishery resource management for Lake Victoria. Such efforts include the formation of the LVFO and the LVFMP. Regional research projects (e.g. LVTRP, LVEMP and VicRes) have also played a significant role by making data on resource use and potential available. This has enhanced knowledge on the resource base of the area. In particular institutional developments have focused on the local communities' participation in resource management through BMUs. More initiatives are undertaken at village level to develop and enforce resource management by-laws. Furthermore, capacity building at national, regional, district and local levels offer greater opportunities for poverty alleviation and reducing environmental degradation. At regional level efforts are made to harmonize tariffs to enhance trade and cooperation between the states and their communities.

The Fisheries Division intends to extend the BMU's ideas to the marine waters with the intention of merging its functions with those of Village Environmental Committees (VEC) to ensure that the BMUs are legally recognized. In addition, the Fisheries Master Plan (2002) has been put in place to operationalize the National Fisheries Sector Policy and Strategy Statement (1998). The Plan's objective among others is to develop a fishery environment and economic/social welfare of the fisheries communities.

8.1.3. Social Opportunities

Poverty and environmental issues are addressed in the sector policies and development strategies. This offers the opportunity for the consideration of poverty alleviation and environmental conservation in resources management and development planning.

Population dynamics including settlement growth along the shore, on islands and along the roads offer opportunities for greater diversification of people's livelihoods. As the

composition of the local communities becomes more complex, there is the opportunity for changing traditional inward looking attitudes that have denied opportunities for some disadvantaged groups such as women, to participate fully in resource use and management. Incoming migrants present challenges to the local communities that may encourage change to the better.

8.1.4. Structural Opportunities

The structural transformations taking place in Tanzania including the local government reforms that involves decentralisation of decision making offer other opportunities for consideration of poverty and environment in resource management and utilisation. Further consideration of the participation of local communities in decision making will enable society to address their needs.

8.1.5. Environmental Opportunities

The natural environment in the study region is rich in natural resources that offer opportunities for the local communities to earn income and food items. Lake Victoria is rich in fishery resources and Shinyanga region has potentials for agricultural development. These opportunities are, however, threatened by increasing pressure on and use of the prevailing resources.

Opportunities exist in fostering environmental conservation through promotion of environmentally friendly practices, correction and mitigation of environmental problems. These could be achieved through awareness creation and capacity building of all stakeholders.

The coastal areas of Tanzania have rich habitats that support not only the local economies, but also even the national economy. The marine resources provide a potential for improving the livelihoods of the people. In addition, this richness is also an attraction to tourism activities.

8.2. IMPEDIMENTS

Whereas national development policies and strategies, as well as, EU assistance policy recognize the need for addressing poverty in development interventions, linkages between poverty and environment have not been easy to incorporate. It is evident from this study that

poverty hinders adoption of environmental conservation practices as the poor lack the motivation and ability to adopt environmentally friendly production method and gears. Yet, environmental degradation arising, further deprive the poor of the ability to generate adequate income and food. Addressing poverty-environment linkages is therefore very important if development assistance has to contribute to poverty alleviation. However, the mainstreaming of poverty and environment linkages in EU development assistance in the region has faced several impediments. The impediments have reduced the potential for the local communities to benefit from the prevailing opportunities.

8.2.1. Institutional Impediments

Whereas the development assistance has enabled and is likely to encourage economic growth in the region, institutional developments in the region have hindered the realisation of poverty alleviation and environmental conservation. Revenue collection and enforcement of fishery regulations have been the key issues behind institutional organisation development such as the establishment of BMUs. Whereas revenue from the fishery sector is collected at local and national levels, little of the revenue trickles down to the local communities. Village leaders complained that their share of revenue was rarely sent back to the village. Similarly, local communities benefit very little from revenue generated through export royalties. This deprives village governments of the capacity to invest in the development of infrastructure and services for the growing rural settlements.

Villagers along the coast made the same observation. Members of the local communities felt that the hotel owners were paying revenue to the municipal councils but nothing trickled down to the villagers.

Enforcement of the regulations requires that institutions developed for the purpose have capacity to carry their tasks. However the regional, district authorities and BMUs had poor capacity to undertake their tasks. As the development in the fish business involves concentration of capital, meso and local level institutions are not in position to adequately enforce the fishery regulations.

Generally institutional organisations that promote the interest of the poor are lacking. In some occasions informal associations of boat crews exist for mutual assistance in case a fellow is in need of social assistance such as when one is deceased. Lack of fishers' associations hinders

the attainment of economies of scale among artisan fishers and processors. This also means that poor members of the community are not well placed to compete in the fish trade. This gives room for unfair trade that accounts for the impoverishment of the poor.

Revenue collection relates to collection and access to data. Revenue collection is usually tendered. In some cases the tenderer is at the same time doing the task of data collection and monitoring. This has the danger that data may be manipulated to suit the interest of unscrupulous tenderers and therefore deny the local community its right share of the revenue.

As far as the marine resources are concern there are conflicts with regard to the mangrove ecosystem. According to the Management Plan for the Mangroves the existing Forest Ordinance, which prohibit cutting of mangroves, seems to be applicable to villagers only. On the other hand, local authorities continue to issue licenses to commercial groups to cut poles and to clear mangroves to construct saltpans. This implies that the present legislation and level of enforcement does little to manage or conserve mangroves.

8.2.2. Economic Impediments

Unlike the traditional artisan fishing, the modern fishing business requires more capital investment in the fishing gear and trade. Field observations and discussions show that to be a factory agent one requires a capital of 10 million Tanzanian shillings. As indicated earlier, ownership and operating a boat is expensive and not easily affordable by the local poor. Due to this economic impediment, the majority of the artisans have lost their traditional occupations. There is a lack of well-developed credit system for the poor. Low level of agricultural technology and lack of access to credit facilities were also mentioned as barrier against poverty alleviation in the region. This problem is further compounded by inadequate capital to invest in the sector. Most smallholder farmers in the sample villages were aware of the existence of credit facilities at district levels but complained of the difficulties of getting access to such facilities.

The prevailing imperfect fish market is another economic impediment. Due to concentration of capital in few hands, various forms of market imperfection such as monopolies exist. Owners of fish processing factories, for example, monopolise information of export prices and actually determine the fish price. Capital concentration in few hands is likely to change

people's access to resources. This impediment is more felt among artisan fish processors, most of who are women.

Along the coast, the lack of access to finances to purchase high-powered and more seaworthy boats and modern gear confine the fishers within the lagoons. Furthermore, the lack of finances has also led to an increase in the use of destructive gear such as beach seines.

8.2.3. Social Cultural Impediments

Social conflicts arise due to some social impediments. Migrant fishers are often not acceptable in the sedentary local communities as is the case at the Kabangaja landing site. The migrant fishers are forced to live in temporary structures as the local community denies them access to land for settlement development. Other impediments arise from competition for resources which has grown through social differentiation and break-up of the social cohesion. This further hinders development of social capital systems and institutional organisations to cater for the interest of the local communities.

Along the coast, culture and historical influences play an important role in the way communities behave and accept intervention programmes to alleviate poverty and environmental management. The coastal areas had no traditional state system. This has contributed to the lack of community initiatives, which in turn partly explains the difficulties of accessing credit.

The level of literacy is generally low among coastal communities. There seems to be large dropouts from primary schools, particularly women (Semesi, 1991, MNRT/JICA 2002). In addition, compared with women from other regions of Tanzania, those of the coastal villages are more confined to their houses. The man makes most decisions, and are involved in almost all community decision making forums.

Concentration of population in fishing villages and camps create social problems. Increase in social interactions and mixed communities have encouraged spread of STDs including HIV/AIDs. Inadequate provision of infrastructure and services further weaken poverty alleviation and environmental degradation. The cultural setting among the Wasukuma in Shinyanga region is such that women cannot own land on themselves. Such a restriction contributes to unequal distribution of land and hence impacting on agricultural expansion.

Women are therefore likely to remain in poverty and less likely to benefit from road improvements

8.2.4. Structural Impediments

Members of the local communities, for example in Mipa and Ibadakuli villages complained of problems of local leadership. It was reported that the local leadership was not strong enough to deliver solutions to local environmental problems. Similar observations were made in revenue collection from the fishery sector. The village governments require more capacity to actively follow-up their right share of revenue and development benefits.

The lack of strong leadership was more pronounced in the coastal communities where most village leaders felt they were not strong enough to negotiate with foreign investors on matters related to sharing benefits from the development of tourist hotels. In this case, not even the officials at municipal level felt strong enough to deal with these investors.

8.2.5. Infrastructural Impediments

Inadequate development of infrastructure at local scale is a great impediment to poverty alleviation and environmental improvement. Whereas improvement in the trunk roads will enhance economic growth, poor feeder roads hinder development effects at local scale. Health and education infrastructure can also hinder mainstreaming of poverty and environment at local level. Development of sewerage infrastructure is lacking in the growing village settlements along the main roads and the lake shore and on the islands.

With respect to the coastal communities the lack of storage facilities (cold storage) means that both the fishers and traders have to sell their products as fast as possible, thus at very low prices when the catch is good.

8.2.6. Environmental Impediments

Environmental impediments for the fishery sector are still prevailing. The danger of stock depletion as demand for fish increases threatens the sustainability of the fishing industry. Degradation of the fishery resources through pollution and destructive fishing hinders the sustainable development of the sector. The increasing income differentiation worsens the situation as it compels the poor local communities to degrade the fishery resources.

Environmental impediments along the coast are quite significant. Just as it is the case with Lake Victoria, the marine resources are being depleted due to a combination of forces such as the increase in the number of fishers, pollution, and the use of destructive gear.

With a low level of agricultural technology smallholder farmers become very vulnerable to changes in environmental conditions, especially rainfall. The unreliability of rainfall is still a big constraint to agricultural production in the region. For example, the prolonged drought that has hit the region in recent years have severely. Water is perhaps the scarcest resource to most people in the region. This scarcity impacts so much on agricultural activities as a lot of farmers' prime time is spent on the search for water. Therefore, even with investments on road transport poverty is likely to persist unless initiatives to provide people with water are introduced.

9 CONCLUSIONS AND RECOMMENDATIONS

9.1. CONCLUSIONS

The findings have indicated that there is strong link between the dependency on local natural resource base and rural poverty. In Shinyanga region, for example, the majority of the poor most of the people rely on land for agriculture and livestock keeping and to a small extent on mining. Likewise in Mwanza, the dependence of poor people on land for agriculture and fisheries was evident. Development assistance to support economic and/or sector growth for example road and fishery open up the resources to a wide use and puts more pressure on resources with little benefits to the poor people.

The poverty-environmental linkages in the road project are not direct. Environmental integration in the road project is reasonably good but poverty integration is weak. This is because poverty is a multi-dimensional phenomenon and investments on road transport is only a contributive factor. While it is true that the road will open up markets and increase trade in agricultural products, this will only be possible if farmers who are the poor will produce more and get good market price. This entails that feeder roads and other institutional, structural and economic impediments have to be removed. Given the land constraint, dependence on rainfall and lack of capital to buy fertilisers without other interventions, the road itself may not help to alleviate poverty and on the contrary, may accelerate poverty as people will be compelled to sell even food stocks and increase environmental degradation.

In the fishery sector in Lake Victoria, the growing population and the liberalization of the fishery sector is resulting into over fishing which consequently affects the resource stock. The liberalization of the industry has sidelined the poor and most of them cannot afford to use modern fishing gears an technology, and as a result may tend to resort poor and unlawful fishing gears such as trawlers, hence causing more environmental damage.

The observed short term environmental impacts of the road project relate to construction phase activities. These impacts relate to borrow pits, culverts and dumping of excavated soils on farmlands. In the long term, investments on road improvements is likely to impact of the road is open up and expand agricultural and mining markets and hence growth in trade. These improvements are also likely to lead to increased deforestation in the two regions and increase in charcoal trade, agricultural produce and mining.

A poverty-environmental linkage in EC development assistance is weak. While the EC supports development of the road to open up markets and expand trade. It is not obvious that this will alleviate poverty without in-built interventions to address impediments for the poor to benefit from such developments. There is weak integration in the programme of the consequences (for example growth in charcoal trade and over fishing) of development support to stimulate growth in trade as a result of road improvement and fish export. Other environmental issues not adequately addressed include dumping of fish carcasses, and growing of settlements in fish landing sites causing inadequate service facilities.

Inadequate enforcement of regulations and monitoring of fishing activities in general was noted and lack of clear regulatory framework for sustainable fishing. Nevertheless, there was improvement on enforcement and monitoring of fish quality standards for export market but weakly enforced for domestic and regional markets.

As far as the marine resources are concerned the poverty-environmental linkages are quite vivid. Much of the problem of environmental degradation centres on poverty as both a cause and effect. The overuse of coastal resources and decline in fish stocks has led to a reduction in earnings and ability of fishermen to buy sustainable fishing gear. This in turn, has forced many fishermen to use fishing methods that provide better short-term rewards for their cost but are also environmentally degrading. Hence, this perpetuates the problem by contributing towards the further decline in the marine resources available. Therefore, given the complexity of the linkages between poverty and the environment suffice to conclude that unless EU addresses the question of marine resource degradation incidences of poverty among the coastal communities will persist.

9.2. RECOMMENDATIONS

9.2.1 Recommendations to the Government of Tanzania

1. Imperfect price mechanisms of fish and need for a regulator:

It was evident that the fish price is controlled by the fish factory operators who have access to the export market. The export market information is not readily available to fish agents and fishers as a result they don't have strong bargaining power on the prices. There is need for the government, as a regulator, to intervene on the marketing and to minimize the potential for cartel. Fishers and fish agents should be facilitated to have market information on the prevailing international market prices. Regulations that require fish factory companies not to

engage in fishing to allow the local community to earn incomes from fishing lack enforcement as factory processing firms indirectly through contractual arrangements engage in fishing.

2. Credit facilities or financial support should be extended to small scale fishers to enable them to utilize the growing opportunities. The empowerment of artisanal fishers would enable them acquire improved fishing gear and vessels that will in turn enable them exploit better the fisheries. This could be made possible through the formation of viable fisher cooperative organizations through which credit and donor or government support could be channeled. This credit support will significantly improve fishers well-being especially fishing crews and boat/canoe owners who seem to be the most disadvantaged in the fishery industry.

3. Remittance of revenue share to local communities. It was apparent that for royalty/fees collected for the central government or the City, the local communities must get 5% of the royalty/fees. However, most local communities don't get their share due to lack of transparency and an effective mechanism that would ensure that their share is obtained. There is therefore a need to strengthen benefit-sharing mechanism to ensure that local communities the benefit from resources harvested. This will not only improve their incomes but also it will act as an incentive in the management of the resources. Fish processing factories should be encouraged to invest in rural social services and infrastructure.

4. Review of compensation rates for personal assets. It was apparent that compensation rates for damaged trees, houses and land were very low. Compensation rates for trees and land are paid once at a fixed rate/unit. The rates don't take into account the accumulated benefits which the owner of the asset could earn for several years. Most of the people who own these assets are poor and such rates don't help them to alleviate poverty, or find alternative means of livelihood. Likewise there is also need to revise the law on compensation for damages caused by quarry and blasting sites. In principle only damages within 400 metres from blasting sites are compensated. However, evidence from Mipa village in Shinyanga region shows that properties, especially houses beyond 400 metres were also damaged. There is need therefore for the law to be more flexible and take into consideration the material conditions obtaining in a place.

5. The need for diversification of the local economic activities. It was observed that the economy of Mwanza region by and large depends on Nile perch export. The consequences of this overdependence was felt when the EU banned fish export from Lake Victoria. There is therefore a need to use some of the revenues generated from fish to support other sectors of the economy (crop cultivation, livestock keeping and non-farm activities) to make them also relatively strong.

In addition, as income generated from the trade rarely benefits the rural poor communities, there is the need for deliberate efforts to promote and develop the non-export fish sector. There is currently little attention to fish development (hygiene, quality and standards) for the local market making poor people susceptible to diseases.

6. Capacity building and empowerment of local communities. Strengthening of community involvement (e.g. BMU) in management of natural resources. It was pointed out that most BMU are weak and cannot enforce regulations and monitor fish harvesting activities effectively. Thus, they need to be strengthened. Also modalities for establishing similar units for the marine fisheries resources along the coast should be speeded up with the intention of merging the functions of the BMUs and those of the Village Environment Committees (VEC). Furthermore, efforts should be made to ensure that the BMUs are legally recognized.

Capacity building should also include development/formation of institutional organisations e.g. the formation of fishers and traders' associations or cooperatives. These will not only safeguard the local communities against unfair trade from monopolistic traders and fish processors, but also will enhance the income, food security and better management of fishery resources. The organisations may also function as pressure groups that would ensure that sufficient profits from the fishery sector are allocated to the development of infrastructure and services for the local communities.

7. Given the size and length of some of the outlet culverts, it is not clear if the large quantity of water collected don't cause environmental damage especially where culverts end. Therefore a follow up to establish its effects will be useful for the remaining part of road construction and for future plans.

8 Nearly all areas along the coast have the potential to become tourist destinations. In order to realize this potential fully, there is need to identify and promote specific enterprises that local people can undertake. Such enterprises as handicraft production, and the other products using local materials will ensure that coastal tourism benefits the local people too.

9.2.2 Recommendations to WWF

1. There should be a follow-up on these projects /interventions to see whether with time they real contribute to poverty alleviation and environmental conservation. This should be done in the light of developing initiatives that are necessary to overcome any impediments towards poverty alleviation and environmental conservation goals. Thus WWF is urged to support the review of institutional structures that do not provide better opportunities to local communities.
2. There is the need for WWF to support and enhance the development of civil society organization for managing own natural resources for poverty alleviation and sustainable livelihoods.
3. Geographical areas of concern which include critical coastal habitats such as mangroves, sea-grass, watershed and coral reefs areas require and should be given intensive proactive planning management. Their potential uses should be well planned to resolve possible conflicts before they occur.

9.2.3 Recommendations to EU

1. There is the need for improvement in integration of environmental and poverty concerns of the local communities in development assistance programmes.
2. Poverty-environmental integration in the road project and in the fishery sector is weak and need to be strengthened at planning level especially integration of impediments e.g. poor agricultural productivity and reliance in rainfall, which are likely to constrain them to benefit from the assistance. One way would be to link with plans of the national and other development partners (collaborative approach).
3. According to the contract agreement, borrow pits must be re-filled. Some of the borrow pits are located close to residential areas. However it was observed that in some places local communities didn't want them refilled so that water collected from runoff can be used for livestock. Therefore, there is need to consider local community's concerns in advance and locate borrow pits in areas that are relatively convenient and safe for use..

4. There is need to take into consideration the temporarily influx of people in road construction camp sites causing unsatisfactory provision of infrastructure and social services. Also there is need to take into consideration the growing of settlements around Lake Victoria especially along fish landing sites so as to improve infrastructure needs. Most of the living in these settlements are the poor and are therefore likely to degrade further the environment because they have limited alternative.

5 The EU anticipated investments in the coastal areas need to go hand in hand with reversing the depletion of fisheries resources.

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APPENDICES

Appendix 1

TERMS OF REFERENCE FOR THE CARRYING OUT OF A STUDY ON STREAMLINING POVERTY-ENVIRONMENT LINKAGES IN THE EUROPEAN COMMUNITY'S DEVELOPMENT ASSISTANCE IN TANZANIA

1.0 Introduction

The European Community's Development Policy's (2000) principle aim is to refocus its activities to combat poverty" where the "environment ... will play an important role supporting the main objective" while the continuo Agreement (2000) similarly states that activity".... Shall be centered on the objective of reducing and eventually eradicating poverty consistent with the objectives of sustainable development....."Despite these commitments, a recent review by the ACP-EU joint assembly – adopted October 2003 – on the "Sustainable management and conservation of natural resources in ACP countries in the context of the 9th European Development Fund aid Programming" indicates that EC development assistance inadequately addresses environmental issues, especially with regards to the critical role that natural resources assets play in alleviating poverty.

This research seeks to provide to the European commission and its partner developing countries recommendations to address poverty-environmental weaknesses in current Country Strategy papers (CSPs) and to improve environmental streamlining in EC development strategies through its six focus areas. This research will do so by evaluating the effects of development strategies on local poverty-environment dynamics through: reviewing CSPs on anticipated environmental impacts of EC thematic aid sectors in various countries; conducting multi-level evaluations to determine structural impediments and strategic intervention areas to address poverty-environment weaknesses; and identifying institutional and policy opportunities to strengthen environmental integration in future CSP design.

EC Country Strategies will be reviewed and interviews conducted for 3 countries on the role of natural wealth in alleviating poverty, anticipated environmental impacts, and areas of possible intervention. Candidate countries for evaluation include Tanzania,

Madagascar, Kenya, Vietnam, and Papua New Guinea. To gain a detailed understanding of the environmental consequences and specific strategic interventions needed to address poverty-environmental concerns, multi-level evaluations will be conducted in 2 countries (of the above 3 mentioned countries). The multi-level evaluations will use a bottom-up analysis to identify the structural impediments operating at local to national levels that reinforce rural poverty and environmental concerns – highlighted in the multi-level evaluation – are being addressed in the development strategies. This research will be structured about key poverty-environmental issues on how the proposed EC Country Strategies are anticipated to affect rural poor's livelihoods, their rights to land and resources, their health due to anticipated environmental deterioration, and their vulnerability to environmental disasters. The multi-level evaluations and CSP reviews will result in recommendations to address poverty-environmental weaknesses in EC development strategies.

This study will further identify institutional and policy-oriented changes needed to address poverty-environmental gaps. This activity will rely on document review and interviews with individuals involved in CSP development and their revision. The evaluation will be conducted at EC and country levels (for the same 2 countries in which the multi-level evaluations were conducted) and will build upon current EC environmental integration efforts. Results of this study will be summarized and distributed to raise awareness on the need and opportunities to enhance poverty-environment integration in EC development assistance.

1.0 Significance of the study

Within the specific field of poverty-environment analysis, most recent work has focused on ways that the poor at the local level interact with natural resources as part of their strategies to maintain livelihoods. While this new research has contributed significantly to better understanding the livelihood strategies of the rural poor, seldom are linkages made to specific policy and institutional factors at meso and macro levels.

Over the past 10 years, WWF has given considerable attention to developing and implementing an analytical approach that cuts across these multiple levels. The analytical approach begins at the local level and then works up through a chain of causal factors to link to meso and macro drivers.

This kind of “bottom up” analytical perspective is important for analysis of the poverty-environment impacts of EC Country Strategies by grounding this analysis in a concrete understanding of the real problems and impediments facing the rural poor. This study will use the results of the multi-level analysis specifically to evaluate likely environmental impacts of EC development programs and will provide recommendations to EC and partner developing countries on ways to improve poverty-environmental performance. While a growing number of studies have assessed the poverty-environment impacts of non-EU development policies (e.g., of the World Bank), none have yet done so for EC development programmes. Even fewer studies have sought to translate the poverty-environment concerns into recommendations for policy and institutional changes to improve resource management and the livelihoods of the rural poor.

2.0 Objectives of the study

Main objectives:

The overall objective of this research is to enhance the impact of the EC’s development assistance on poverty through increased attention to the role of the environment in the livelihoods of the rural poor in its country development strategies. This research seeks to provide to the EC and partner developing countries recommendation to address poverty-environmental weaknesses in current Country Strategy papers (CSPs) and to improve environmental streamlining in EC development strategies through its six focus areas. More specifically, the objectives of this research are:

Objective 1: To evaluate the anticipated environmental impacts of proposed EC CSP sector investment areas in select countries and propose strategic interventions that are needed to address the envisioned environmental problems. This assessment will

emphasize linkages between natural resource assets and rural poverty and will identify structural impediments, be they economic or institutional, operating at local to meso to macro levels that encourage environmental mismanagement and keep rural areas locked in poverty.

Objective 2: To evaluate current aid programming processes used to develop and revise CSPs, specifically with regard to environmental integration in the EC focus areas, and identify long term policy and institutional opportunities to improve poverty-environmental streamlining to enhance future effectiveness of EC development assistance. This activity will build upon current EC efforts to improve environmental integration (e.g. EC manual development).

How the objective relate to the theme(s) of the EC-PREP:

The aim of the EC-PREP is to enhance the impact of the EC's development assistance on poverty through support to policy-oriented research, including cross-cutting research on environmental dimensions of poverty. This study seeks to inform the EC and developing countries on poverty-environment dynamics in selected study areas and their relationship to meso and macro policy and institutions in two countries, and will provide detailed recommendations on measures needed to address current poverty-environmental problems as well as institutional opportunities to improve long term poverty-environment integration in future EC CSPs.

As noted above, a recent review by the ACP-EU joint assembly indicates that EC development assistance inadequately addresses environmental issues, especially with regard to the critical role that natural resource assets play in alleviating poverty. The research program that we are proposing will review selected country strategy papers for their anticipated poverty-environment impacts and link this to an analysis of major constraints to substantively improve the livelihoods and environmental conditions of the resource-dependent poor in specific rural areas. This program will:

- conduct a bottom-up analysis that links local, meso and macro institutions and economic changes
- draw on this analysis to inform a review of EC Country Strategy papers, identifying gaps that need to be addressed to affect the problems of resource-dependent rural poor.
- Provide recommendations to improve mainstreaming of poverty-environment considerations in the development of CSPs.

How the objectives relate to development work already undertaken in this area:

Despite the reordering of priorities of the international development community to focus on poverty alleviation, comparatively little attention has been given to the central role that the environment and access to environmental goods and services play in poverty alleviation, particularly of the rural poor. The Rural poor have an immediate survival dependence on natural resources from which they derive food, water, energy, housing, medicines, and clothing on an uninterrupted basis. They are more likely to be exposed to deteriorating environmental conditions (e.g. illness due to water pollution) and have fewer means to cope to the consequences of environmental deterioration and natural disasters. Despite considerable growing recognition of poverty-environment linkages, these linkages have seldom been recognized in many pro-poor development policies, including PRSPs. Where these linkages have been mentioned, they have failed to translate such concern into investment programs and policy initiatives to improve resource management and improve livelihoods for the rural poor.

Key hypotheses:

Key hypotheses of this research are

Hypothesis 1: The roles of natural resource wealth, especially their contribution to rural livelihoods, have been inadequately addressed in EC development programmes. An evaluation of poverty-environment impacts and ways to address these shortcomings is needed.

Hypothesis 2: Long term national to local level institutional and policy changes are needed to help ensure that country development strategies better integrate poverty-environment concerns.

3.0 The study area

The geographical study area in Tanzania is around the Lake Victoria Basin, Particularly the EC investments in Mwanza and Shinyanga and Kagera Regions.

4.0 Methodology of the Study

a series of linked research activities will be completed by this study as described below:

- *CSP reviews* will be conducted to evaluate anticipated environmental impacts of EC country strategy investment in three countries. The reviews will rely on interviews with experts and staff of relevant local to national institutions and draw on documents such as EC development policies and papers that describe environmental and livelihood impact of similar programs. This activity is currently being co-financed by WWF EPO and MPO (see Annex 2 under “CSP Reviews”) and will be conducted prior to the start of EC-PREP funding.
- *Multi-level analysis* will be conducted of local poverty-environment dynamics in defined geographical areas within two countries, and the policy and institutional factors shaping them at meso and macro levels. This analysis will be conducted by small, multidisciplinary teams of researchers with oversight and management from WWF in-country offices and WWF-MPO.
- *Follow-up CSP reviews* will be conducted to assess if the Country Strategies are addressing the poverty-environment concerns and required interventions as highlighted in the multi-level case study analyses. This review will be conducted by WWF EPO in conjunction with local offices.
- *Institutional evaluations* will be carried out to identify long term institutional and policy opportunities to improve poverty-environmental streamlining in future CSP design. The institutional evaluations will rely on document reviews and interviews with individuals – at country and EC level – involved in CSP development and revision. This activity will build upon current EC

environmental integration activities (e.g., manual development) and will be conducted by WWF EPO.

- *Recommendations* will be drawn based on results from the multi-level analysis and CSP reviews on strategic gaps and weaknesses that need to be addressed in CSPs in relation to environmental dimensions of poverty. Recommendations will also be developed on measures to improve poverty-environmental integration in the process of developing CSPs.
- *Awareness building* material on the need and opportunities to address EC Country Strategy poverty-environment weaknesses will be developed by WWF EPO and MPO. Its distribution will be conducted by the WWF network and by local to national organization with oversight from WWF EPO and MPO.

Methodology

Owing to this study's emphasis on the importance of natural resources assets to the rural poor, this study is fundamentally structured around key poverty-environment linkages. These linkages are namely: that poor people's livelihoods are disproportionately dependent on natural resources; that especially the rural poor fundamentally rely on natural resources and land rights; that poor people are more likely to suffer health consequences from deteriorating environments; and that people living in poverty are more vulnerable to and have fewer means to cope with environmental disasters. This study's evaluation including its CSP reviews and multi-level evaluations are critically based on such poverty-environmental issues.

This study's methodology furthermore highlights micro to macro linkages, particularly higher-level policy and institutional factors shaping local poverty-environment dynamics. Finally, the methodology emphasizes long term approaches to address poverty-environmental weaknesses. This research will provide recommendations on programs of action needed to address current poverty-environmental weaknesses and on long term

institutional and policy changes needed to improve future poverty-environmental streamlining in EC aid programming.

Methodology for Objective 1

CSP reviews and multilevel analyses will be used to evaluate anticipated environmental impacts of current CSPs and to identify areas of strategic intervention. The CSP reviews will be structured around key poverty-environmental issues described above and conducted in three countries. Criteria for country selection include: representation of EU focal areas and WWF ecoregions; availability of CSPs and synergies with similar programs. Candidate countries are Tanzania, Madagascar, Kenya, Papua New Guinea, and Vietnam.

- *Multilevel* poverty-environment analyses will subsequently be undertaken to gain a more detailed understanding of structural impediments that are reinforcing (or anticipated to reinforce) rural poverty and environmental degradation in particular localities or sub regions. The analysis will assess poverty-environment dynamics at the local level, establish the relationship of constraints to meso-level institutional arrangements, and make linkages to macro policies and institutions. Due to resource constraints, the multilevel analysis will be conducted in defined geographical areas within two (of the three above mentioned) countries. This analysis will cut across relevant EU focal areas for that country/locality.
- *Follow-up* CSP reviews will then be conducted in these two countries to evaluate whether the current EC Country Strategies are addressing the poverty-environmental concerns identified in the multilevel analysis. Recommendations will be drawn from results of the multilevel analysis and CSP reviews and distributed to raise awareness on the need to improve poverty-environmental streamlining in EC development assistance.

Methodology for objective 2

- Institutional evaluations will be conducted to identify policy and institutional opportunities to improve future poverty-environmental streamlining. This

evaluation will describe current procedures used by the EC and partner developing countries to integrate environmental concerns in Country Strategies and will account for current efforts by the EC to improve environmental integration. Recommendations will be drawn to raise awareness on the long term institutional and policy opportunities.

Why the methodology is appropriate to the focus area and project results:

- This research fundamentally relies on evaluations structured about poverty-environmental issues acknowledges multi-level causality and linkages, and highlights institutional and process oriented changes. These approaches have intentionally been used to help ensure that results of this research may translate into long term changes that will improve environmental streamlining in EC aid programming and in turn environmental conditions and the livelihoods of the rural poor.

TERMS OF REFERENCE

Multi-level analysis to influence EU Country Strategy Papers in the Eastern African Marine Ecoregion: Focus on Tanzania

CONTEXT

Building on the root causes analysis and other socio-economic analysis for EAME in Tanzania. The assessment will emphasize linkages between natural resource assets and rural poverty in coastal area of Tanzania. The research will also identify structural impediments, be they economic or institutional, operating at local, sub-national and national levels that encourage environmental mismanagement and keep rural areas locked in poverty.

The research will emphasize the importance of natural resources assets to the poor coastal communities. The study is fundamentally structured around key poverty-environment linkages. These linkages are namely: that poor people's livelihoods are disproportionately dependent on natural resources; that especially the rural poor fundamentally rely on natural resources and land rights; that poor people are more likely to suffer health consequences from deteriorating environments; and that people living in poverty are more vulnerable to and have fewer means to cope with environmental disasters.

The study's methodology furthermore highlights micro to macro linkages, particularly higher-level policy and institutional factors shaping local poverty-environment dynamics. Finally, the methodology emphasizes long-term approaches to address poverty-environmental weaknesses. This research will provide recommendations on programs of action needed to address current poverty-environmental weaknesses and on long term institutional and policy changes needed to improve future poverty-environmental streamlining in EC aid programming.

The researcher will use existing research focusing on the **root causes analysis for EAME** to carry out a literature review that updates and builds on the root causes analysis as well as other socio-economic analysis for this area. The researcher will **visit selected**

coastal areas in Tanzania to further assess and validate the poverty environment linkages and **visit with local and regional government offices** to determine the blockages to environmental management and poverty alleviation.

Issues to focus will include land tenure arrangements, ownership of resources utilization and management, links to markets, ability to invest or borrow funds. Next, the research will be taken to the national level government offices to determine impediments at the national level. Research visits will include the National Environmental Management Council, Ministry of Transport and Communication, Ministry of Finance, and those involved in Fisheries, Forestry, Tourism, Micro-credit and Planning.

A final report will include the research results and recommendations for the EC as they develop their coastal program. As background to this coastal program, the EC is anticipating investment in the coastal area-with a focus on poverty alleviation. They will build on the existing World Bank **MACEMP** project and focus on areas of governance for regional coastal zone management, EEZ management and capacity at the District level. Recommendations should be targeted at these anticipated areas of work.

OBJECTIVES OF THE CONSULTANCY

The objective of this consultancy is to formulate marine and coastal related recommendations for long term EU and national institutional and policy changes, and long-term opportunities to facilitate poverty-environmental integration in the CSP process.

ACTIVITIES

In this regard a consultant(s) will carry out the following activities:

- e) Literature review, using existing research focusing on the root causes analysis for EAME, that updates and builds on the root causes analysis as well as other socio-economic analysis for the area.

- f) Identify structural impediments, be they economic or institutional, operating at local, sub-national and national levels that encourage environmental mismanagement and keep rural areas locked in poverty.
- g) Visit selected areas along the coastline of Tanzania to further assess and validate the poverty environment linkages
- h) Visit local and regional government offices to determine the blockages to environmental management and poverty alleviation.
- i) Provide recommendations on programs of action needed to address current poverty-environmental weaknesses and on long term institutional and policy changes needed to improve future poverty-environmental streamlining in EC aid programming.

OUTPUT

The consultant must submit a final technical report, which must include the research results and recommendations for inclusions to the **Coastal Program** that is being developed by EC. The EAME report will form a chapter in the much larger report being prepared by the consultant for the whole of Tanzania (including Lake Victoria) in collaboration with WWF-MPO and WWF-TPO. The final report by the consultant to the WWF-MPO and WWF-TPO will therefore be regarded as the deliverable for this consultancy.

Appendix 2: Analysis of TOR to identify data requirement, sources and methods of data collection

Item	Data required	Sources	Methods
<p>Background</p> <ul style="list-style-type: none"> • EC-ACP policy on environment – poverty linkages and trends over time, • Sustainable development • EU assistance in Tanzania • EC assistance in transport and fishery sectors 	<ul style="list-style-type: none"> • Policy statements • Number, types of projects, value of assistance • Trend over time • Data on road and fishery investments in Tanzania • Geographical distribution of projects 	<p>EC-ACP documents and web sites</p> <ul style="list-style-type: none"> • Annual reports • TIC • EU – delegation • Finance • TANROADS • fisheries 	<ul style="list-style-type: none"> • Documentary review
<p>Background to the study area</p> <ul style="list-style-type: none"> • how livelihood relate to the resource base • institutions and their functions 	<ul style="list-style-type: none"> • socio-economic profile • Environmental profile • NR base • Poverty levels • List of institutions and their activities 	<ul style="list-style-type: none"> • Mwanza and Shinyanga socio-economic profiles 1999 • LVEMP • TCMP • POPP • Household budget survey • REPOA • Regional / district offices 	<ul style="list-style-type: none"> • Documentary review
<p>Objective1: Evaluation of the anticipated environmental impacts of the projects</p>	<ul style="list-style-type: none"> • EC investments on roads and fishery 	<ul style="list-style-type: none"> • EIA reports • Fisheries industries 	<ul style="list-style-type: none"> • Documentary review • Interviews

<ul style="list-style-type: none"> • Assess linkages between NR assets and rural poverty • Identify socio- economic, cultural impediments • Institutional impediments • Policy impediments • Structural impediments 	<p>sectors</p> <ul style="list-style-type: none"> • Number of factories and traders engaged in fisheries • Growth in the number of vehicles using the road • Type and Volume of cargo being handled • Volume of trade • Growth in urbanization along the road • Costs and benefits of the projects, long term and short term, direct and indirect • Stakeholders' perceptions of the impacts of the project • Project linkages with economic activities, informal activities, health sector, food security 		<ul style="list-style-type: none"> •
<p>Objective 2: Propose strategic interventions needed to address the envisioned</p>	<ul style="list-style-type: none"> • extent of environmental / NR degradation 	<ul style="list-style-type: none"> • As in objective 1 • 	

environmental problems	<ul style="list-style-type: none"> Peoples perception of the benefits from the fishery / road projects 		
<p>Objective 3: Evaluate the extent of environmental integration in EC assistance in Tanzania</p> <ul style="list-style-type: none"> identify poverty-environmental gaps 	<ul style="list-style-type: none"> Peoples (local communities) perception of the benefits from the fishery / road projects Perceptions of investors, beneficiaries, government officials, civic organisations 	<ul style="list-style-type: none"> Local communities Officials at ministerial levels and agencies 	<ul style="list-style-type: none"> Interviews Focused group discussion Documentary reviews
<p>Objective 4: Identify policy opportunities to improve poverty - environment streamlining</p> <ul style="list-style-type: none"> Environmental policy Water policy Fisheries policy Transport policy PRS 	<ul style="list-style-type: none"> Policy documents CSP / PRS Policy-oriented changes needed to address poverty-environmental gaps 	<ul style="list-style-type: none"> Policy documents 	<ul style="list-style-type: none"> Documentary reviews
<p>Objective 5: Identify institutional opportunities to improve poverty - environment streamlining</p>	<ul style="list-style-type: none"> Environmental law By laws Institutional-oriented changes needed to address poverty- 		<ul style="list-style-type: none"> Documentary reviews Interviews Focused group

	environmental gaps <ul style="list-style-type: none"> • Local govt. reform programme • Public sector reform programme • New Rural Development Strategy • Dev. Vision 2025 • MDGs 		discussions
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Key issue	Specific questions	Data	Obstacles towards
Local level dynamics	<ol style="list-style-type: none"> 1. Main social actors (multiplicity of institutions) <ul style="list-style-type: none"> • The poor • Govt offices • Private sector (formal and informal) • CSOs 2. Functions of main actors 3. Local natural environment features (eg. Environmental degradation, use of biomass energy, natural resource base) 4. Environmental issues / problems affecting livelihoods and welfare 5. Dynamics of poverty-environment relations and main drivers <ul style="list-style-type: none"> • Extent to which social activities and 	<ul style="list-style-type: none"> • Socio-economic conditions as they have changed over time • People's perception on the relationship between environment and poverty • Multiplicity of institutions and their functions 	<ul style="list-style-type: none"> • Poverty reduction <ul style="list-style-type: none"> • What obstacles prevent local communities from attaining poverty reduction • Environ. Sustainability <ul style="list-style-type: none"> • What obstacles hinder attainment of environmental sustainability

	<p>poverty are affected by the environment</p> <ul style="list-style-type: none"> • How poverty affects the environment • How local dynamics (survival, poverty reduction, wealth accumulation objectives) impact on the environment • Drivers: (e.g. expansion of farmland, increase in reliance on biomass, climate change, changes in economic policies/liberalisation, change in infrastructure, population change, consumption patterns, etc) • Cultural factors / influence on the dynamics 		
Meso level (District and region)	<ol style="list-style-type: none"> 1. Principal institutions influencing development dynamics (e.g. District natural resource committee,) <ul style="list-style-type: none"> • Organisational institutions • Laws • Governance arrangement, • Traditions • Cohesion 2. Social relations influencing local and national level development dynamics 3. Who are the main actors driving the relations and how do they exert their influence? 4. Relationship with lower and higher levels 	<ul style="list-style-type: none"> • Identify principal institutions and how they link with the local level dynamics • Identify main actors 	<ul style="list-style-type: none"> • Poverty reduction • Environ. sustainability
Macro level	<ol style="list-style-type: none"> 1. Macro economic and development policies 	<ul style="list-style-type: none"> • How are the policies 	<ul style="list-style-type: none"> • Poverty reduction

	<p>influencing development options (e.g. structural adjustment of the economy, trade liberalisation, abolition of subsidies)</p> <p>2. Sectoral policies (transport + fishery)</p> <p>3. Institutional arrangement</p>	<p>transmitted to lower levels</p> <ul style="list-style-type: none"> • How these influence local and meso level dynamics • How they create opportunities and constraints • 	<ul style="list-style-type: none"> • Environ. sustainability
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Appendix 3:

**A STUDY ON STREAMLINING POVERTY-ENVIRONMENT LINKAGES IN
THE EUROPEAN COMMUNITY'S DEVELOPMENT ASSISTANCE IN
TANZANIA**

**CHECKLIST FOR LOCAL COMMUNITIES AND CIVIC ORGANIZATIONS
BENEFITING FROM THE EUROPEAN COMMUNITY'S DEVELOPMENT
ASSISTANCE**

A: IDENTIFICATION VARIABLES

ITEM	NAME/NUMBER
1. Sheet No.	
2. Name of Interviewer	
3. Date of Interview	
4. Name of respondent(s) and position	
5. Village name	
6. Ward	
7. Division	
8. District	

B. OTHER VARIABLES

**B.1 CHECKLIST FOR LOCAL COMMUNITIES/VILLAGE
LEADERS/CIVIL ORGANIZATIONS MEMBERS**

1. Who are the rural poor in your village?
2. What criteria do you use to distinguish the poor and the rich?
3. What are the causes of being poor?
4. What are the main activities of villagers undertaken for a living?
5. What natural resources do you use to make a living?
6. How do you access these resources?
7. How does the environment contribute to poverty?
8. How does poverty contribute to environmental degradation?
9. What must be done to alleviate poverty in rural areas?
10. What are the main local environmental features?
11. What are the main environmental problems and causes in the area?
12. Are things getting better or worse for the poor and the environment

	Same? Better? Worse?	How?	Why?
Poverty			

Environment			
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13. Indicate Institutions available in the village

Institutions	Functions	Importance to the poor	Importance to the environment	Relations of the poor and the environment

14. In what way is the road important to you?
15. How would the improvement of the road affect you?
16. How would the improvement of the road affect the environment?
17. What activities have increased as a result of road construction?
18. Do you think road construction has improved/decreased local community income?, employment?
19. Quantify the improvements/decrease observed
20. How do you think road construction has influenced utilization of natural resource/environmental assets?
21. How much does the resource utilization contribute to the economy of the household (cash and own consumption at home)?
22. Any other comments?

Appendix 4:

**A STUDY ON STREAMLINING POVERTY-ENVIRONMENT LINKAGES IN
THE EUROPEAN COMMUNITY'S DEVELOPMENT ASSISTANCE IN
TANZANIA**

**CHECKLIST FOR REGIONAL AND DISTRICT OFFICIALS/NATURAL
RESOURCE MANAGERS BENEFITING FROM THE EUROPEAN
COMMUNITY'S DEVELOPMENT ASSISTANCE**

A: IDENTIFICATION VARIABLES

ITEM	NAME/NUMBER
1. Date of Interview	
2. Name of respondent(s) and position	
3. District	

B: CHECKLIST ITEMS

- EC investments on roads and fishery sectors
 - Number of factories and traders engaged in fisheries
 - Growth in the number of vehicles using the road
 - Type and Volume of cargo being handled
 - Volume of trade
 - Growth in urbanization along the road
 - Costs and benefits of the projects, long term and short term, direct and indirect
 - Stakeholders' perceptions of the impacts of the project
 - Project linkages with economic activities, informal activities, health sector, food security
 - extent of environmental / NR degradation
 - Peoples perception of the benefits from the fishery / road projects
 - Peoples (local communities) perception of the benefits from the fishery / road projects
 - Perceptions of investors, beneficiaries, government officials, civic organisations
1. List the villages, sub-villages and population in each village and sub-village around the road being investigated or the fish industries.
 2. Indicate how villages and sub-villages utilize/benefit from the development project/industry.
 3. How much did the transport and communication sector/fish sector in the region grow as a result of the road construction/EC Investment in fish industry)?
 4. What was the GDP contribution of the transport and communication sector /fish sector in the region as a result of the road construction/EC Investment in fish industry)?
 5. What services and sectors in the region grew as a result of the road construction/EC Investment in fish industry)?

6. Estimate the revenue and other benefits obtained from fish industry or as a result of the road project.
7. Explain the extent of trade in natural resources products and /or services from fish industry or road construction by specifying quantity and price for each product and/or service (including installations if any).

Product/service traded	Quantity	Price (Tsh.)

8. In what ways have your district strived to create markets for goods/services to utilise these developments?
9. How much does the road or fish industry contribute to the economy of the household, village and district?

Appendix 5

Itinerary for the study team on streamlining poverty-environment linkages in the European community's development assistance in Tanzania

S/N	DATE	PLACE	ACTIVITY
1	15/12/2004 – 23/12/2004 and 27/12/04 – 31/12/2004	Dar es Salaam	Literature review, Identification of key contacts/target groups, Policy reviews, Interviews at TANROADS Head Office and Tanzania Investment Centre (TIC)
	2/1/2005		Travel to Shinyanga
2	3/1/2005 – 8/1/2005	Shinyanga	Courtesy calls and Discussion with RAS & DED Discussion with Regional TANROADS Manager Discussion with Regional Natural Resources Advisor Discussion with Regional Agricultural Advisor Discussion with Regional Engineer Advisor Discussion with Regional Agricultural Officer Discussion with Regional Agricultural Officer Acting Zonal Mangroves Manager Courtesy call and discussion with District Administrative Secretaries of Shinyanga rural and Kishapu Field visits for administering questionnaires, interviews and road observations
	9/1/2005		Travel to Mwanza
3	10/1/2005 – 16/1/2005	Mwanza	Courtesy calls and Discussion with RAS & City Director Discussion with Regional Fisheries Advisor Discussion with Regional Forest Advisor Discussion with City Fisheries Officer Discussion with Operations Manager, LVEMP Field visits for Field visits for administering questionnaires to various fishery stakeholders and observations
	16/1/2005		Travel to Dar es Salaam
4	17/1/2005- 21/1/2005	Dar es Salaam	Visits and consultative meetings with Vice-President's Office – Poverty desk and Division of Environment, President's Office – Planning and privatization (POPP), National Bureau of Statistics, LVEMP Head Office, Ministries of

			Finance, Works and Natural Resources and Tourism (Fisheries Division). Administering questionnaires to some of the districts and sub-components staff
5	24/1/2005 – 13/2/2005	Dar es Salaam and Morogoro	First draft report writing
6	14/2/2005	Dar es Salaam	Report submission

Appendix 6.

Persons met during a study on streamlining poverty-environment linkages in the European community's development assistance in Tanzania

NO	NAME OF PERSON	POSITION/TITLE AT THE TIME OF MEETING
1	Eng. Mgani	TANROAD Dar es Salaam, Project supervisor – Mwanza boarder/Shinyanga – Tinde – Isaka – Nzega road project
2	Mr. M.I. Iyombe	Regional Manager, TANROADS Shinyanga
3	Mr. K. Kiyabo	Graduate engineer, TANROADS Shinyanga
4	Mr. L. Mashamba	Graduate engineer, TANROADS Shinyanga
5	Mr. Mwandambo	Graduate engineer, TANROADS Shinyanga
6	Mr. E.M. Msafiri	Regional Planning Officer and Ag. RAS, Shinyanga
7	Eng. D. Mushuga	Regional engineer advisor, Shinyanga
8	Mrs. M. Jilumbi	Regional Economist Advisor, Shinyanga
9	Mrs. M. Mashaka	Regional Agricultural Advisor, Shinyanga
10	Mr. E.M. Mbassa	Shinyanga rural District Administrative Secretary
11	Mr. L.L. Simkoko	Kishapu District Administrative Secretary
12	Mr. H. K. Usungu	Ward Executive Officer (WEO), Nata
13	Mr. S. H. Pundugu	Village government member, Nata
14	Mr. A. Mashangara	Ward Education Officer, Nata
15	Mr. S. Mahike	Ilula Sub-village Chairman, Nata
16	Ms. P. Kulwa	Mishishi Sub-village Chairman, Nata
17	Mr. A. Mahona	Village government member, Nata
18	Mr. S. Makwelu	Village government member, Nata
19	Mr. H. Shabani	Village executive Secretary, Nata
20	Mr. A. O. Sauli	Village government member, Nata
21	Mr. J. Massudi	Village Chairman, Nata
23	Mr. J. Abdallah	Village government member, Nata
24	Mr. A. Maswanya	Village government member, Nata
25	Mr. M. Gundu	Village government member, Nata
26	Mr. H. Milambo	Village government member, Nata
27	Mrs. B. Maige	Village military commander, Nata
28	Mr. B. Charles	Ten cell leader, Nata
29	Mr. M. Hussein	Manager, Aids Defence and Environment Programme (ADEP)
30	Mr. K. J.K. Kihembe	Villager
31	Mrs. C. Kisa	Villager
32	Ms. S. F. Swati	Villager
33	Mr. J. Kamolo	Villager
34	Mr. A. N. Mngeja	Villager
35	Mr. M. Martin	Villager
36	Mr. M. Mussa	Village Chairman, Tinde
37	Mr. B. Kasuka	Ward Executive Officer (WEO), Tinde
38	Mr. C. Maganga	Village Education Officer, Tinde
39	Mr. M. Nkengi	Jomu Sub-village Chairman

40	Mr. K. Nyali	Village Chairman, Kituli
41	Mr. K. Jomanga	Village Education Officer, Kituli
42	Mr. J. Kanolo	Sub-village Chairman
43	Mr. W. Mnyashi	Village Education Officer, Tinde
44	Mrs. C. Masanja	Village Education Officer, Tinde
45	Mr. M. Mpanda	Ward Education Officer
46	Mr. L. Sambaji	Sub-village Chairman
47	Mr. J. Malula	Village Education Officer, Tinde
48	Mr. S. Mabula	Sub-village Chairman
49	Mr. S. Shija	Sub-village Chairman
50	Mr. M. Kashinje	Sub-village Chairman
51	Mr. M. Magale	Sub-village Chairman
52	Mr. H. Sanula	Sub-village Chairman
53	Mr. M. Mihambo	Sub-village Chairman
54	Mr. J. Salum	Village Chairman, Jomo
55	Mr. P. Katanga	Land surveyor
56	Mr. S. Kasoga	Regional Planning Officer, Mwanza
57	Mr. Mahatane	Regional Fisheries Advisor
58	Mr. T. Kyamba	Planning Officer
59	Mr. H.G. Mbilinyi	Fisheries officer – Quality Control, Mwanza
60	Mr. P. Kauswa	City Fisheries Officer
61	Mr. Makuke	City Fisheries Staff, Mwanza
62	Mr. S. Mbwana	LVEMP Operations Manager, Mwanza
63	Mr. Shindika	Fisheries officer, Fisheries Division, DSM
64	Mr. A. Muhuna	Fish agent
65	Mr. B. Abdu	BMU Chairman, Kayenze
66	Mr. E. Lwigisha	BMU Vice Chairman, Kayenze
67	Mr. E. Ntemu	BMU Secretary, Kayenze
68	Mr. J. Baiskeli	Village Chairman, Kigangama
69	Mr. K. Kireka	BMU Chairman, Kigangama
70	Mr. E. Mashara	BMU Secretary, Kigangama
71	Mrs. M. Machanulo	BMU member, Kigangama
72	Mrs. M. Simoni	BMU member, Kigangama
73	Mr. M. Kasheto	BMU member, Kigangama
74	Mr. T. Chule	BMU member, Kigangama
75	Mr. Kazimbaya	Fisheries staff, Magu District
76	Mr. M. Masanywa	Fisheries staff, Magu District
77	Mr. T. Makwaya	Councillor – Ibadakuli Ward
78	Mr. P. Kashinje	Villager – Ibadakuli
79	Mr. Mwagala	Village Executive Officer – Ibadakuli
80	Mr. Mihayo	Villager – Ibadakuli
81	Mr. Ngatale Nyau	Villager – Ibadakuli
82	Mr Sekebugolo	Villager Mipa
83	Mr Emanuel Tasiano	Acting Village Executive Officer – Mipa
84	Mr. Castory Seni	Villager - Mipa
85	Mrs S. Saida	Villager – Mipa
86	Mr. A. Mayunga	Villager - Mipa
87	Mrs Amina Shilumba	Villager – Mipa

88	Mr. Rashidi Bakari	Villager - Maganzo
89	Mr. Augustino Francis	Village Executive Officer – Maganzo
90	Mr. Hirsi	Villager - Maganzo
91	Mrs Rehema Hussein	Villager – Maganzo
92	Mr. Kisoronyi Matiko	Villager – Maganzo
93	Mr. J Daffa	TCMP – Dar es Salaam
94	Mrs Mwawa Johari	Fisheries Officer -Kinondoni Municipal
95	Ramadhani Yusufu	Villager – Amani Gomvu
96	Dunia Amiri	Villager – Amani Gomvu
97	Fatma Shabani	Villager – Amani Gomvu
98	Zubeda Bakari	Villager – Amani Gomvu
99	Makwaya Sango	Villager – Amani Gomvu
100	Bakari Mlambo	Villager – Amani Gomvu
101	Ahmed Sibanga	Villager – Amani Gomvu

**European Community's Poverty Reduction
Effectiveness Programme (EC-PREP) research project:
Streamlining poverty-environment linkages in the European
Community's development assistance**

EP/R05/15

**National-level assessment of
EC Country Strategy Papers:
Tanzania follow-up CSP (2002-2007) review
and institutional evaluation¹**

In partial completion of activities 5 – 10²

June 2005

1. Background

This national-level assessment of the Tanzania Country Strategy Paper (CSP) is one of several activities being conducted under an initiative on “streamlining poverty-environment linkages in the European Community’s development assistance” - an initiative aimed to provide to the European Commission and its development partners recommendations to improve poverty-environment integration in EC development assistance. This assessment builds upon results of a recently conducted multilevel evaluation in Tanzania that identified from a local perspective poverty-environment dynamics and the meso to macro level policy and institutional factors shaping these dynamics (Ngaga et al., forthcoming). The recent multilevel analysis highlighted numerous environment-poverty concerns associated with the transport and fisheries sectors in Tanzania - two sectors heavily financed by the EC. This national assessment was conducted:

- 1) to further evaluate environment-poverty concerns in these and other growth sectors (that are linked to CSP investment);
- 2) to assess if current CSP investment is addressing the identified environment-poverty concerns; and
- 3) to evaluate EC- and national-level processes that are currently being used to mainstream environment-poverty issues.

These above evaluations were in turn used to identify long-term institutional and policy recommendations to help improve environment-poverty streamlining in EC development cooperation.

¹ This report was written by Mathilde Snel (mathildesnel@hotmail.com), a consultant contracted by WWF. Overall supervision was given by Hervé Lefeuvre (WWF-EPO, Hlefeuvre@wwfepo.org) and Dawn Montanye (Dawn.Montanye@wwf.org). This work has been financed under an award granted to the World Wide Fund for Nature (WWF) by the European Community’s Poverty Reduction Effectiveness Program (EC-PREP’s), a program jointly defined by the EC and DFID.

² Activities 5 – 10 in the EC-PREP include follow-up CSP review and institutional evaluation activities for both the Tanzania and Rwanda case studies. This report discusses results for only the Tanzania case study.

In addition to this report, this WWF EC-PREP-funded initiative relies on an additional case study of the Rwanda CSP (that similarly entails multilevel and national-level assessments) as well as a Brussels level institutional evaluation that focuses on identifying entry points to improve environment-poverty integration in future CSP design. Awareness building material will be developed on recommendations drawn from the multilevel, national, and Brussels-level evaluations towards enhancing the impact of EC's development assistance on poverty through increased attention to the role that the environment plays to people living in poverty.

2. Overview of paper and methodology

This national-level assessment of the Tanzania CSP relies on two key evaluations:

- a "follow-up CSP review" (section 3) that assesses both:
 - environment-poverty concerns in key growth sectors and
 - if current CSP investment is addressing these concerns and
- an "institutional evaluation" that evaluates current processes used to mainstream environment-poverty concerns at EC- and national-level (section 4).

Lessons learned and best practices are drawn from the above evaluations to identify long term institutional and policy opportunities/recommendations to improve poverty-environment streamlining in EC development strategies ("Recommendations" – section 5).

The study's assessment relies on numerous interviews and an extensive review of documents. Interviews were conducted between March 14 and March 25 (2005) at various institutions including national agencies (e.g., Fisheries Division, TANROADS, Poverty Eradication Division, and Environment Division), NGOs (WWF-Tanzania, World Vision, and LEAT), the EC country delegation, and other donors (World Bank) (see Appendix 1 for a list of individuals contacted). National respondents were asked primarily on environment-poverty concerns highlighted in the multilevel evaluation (namely concerns associated with transport and fisheries as well as in other growth sectors) and on current national-level processes used to integrate environment-poverty issues. EC respondents were in particular asked about processes used and opportunities to improve mainstreaming of environment-poverty concerns in the CSP process (see Appendix 2 for copies of the questionnaires sent to respectively national- and EC-level respondents). The questionnaires were not used as a blue print but were rather referred to facilitate discussion. As mentioned previously this evaluation fundamentally builds on a recently conducted multilevel evaluation that identified - using a bottom-up analysis - environment-poverty issues from a local perspective and the meso to macro level policy and institutional factors that are shaping these (Ngaga et al. forthcoming)³. The paper furthermore draws on (and contains extracts from) a pre-CSP assessment conducted for Tanzania (Snel, 2004).

3. Follow-up CSP review

Based on results of the multilevel evaluation, a follow-up review was conducted on the Tanzania CSP to:

- 1) further evaluate – at the national-level – environment-poverty concerns associated with the transport, fisheries, and other growth sectors (linked to CSP investment) (section 3.2) and
- 2) assess if current CSP investment is addressing the identified environment-poverty concerns (section 3.3).

³ The multilevel analysis relied on numerous interviews (with individuals and target groups) and an extensive survey of documents.

Since the following review fundamentally relies on environment-poverty concerns identified in the multilevel evaluation these are foremost summarized (section 3.1).

3.1. Summary of environment-poverty concerns identified in the multilevel evaluation

The multilevel evaluation (Ngaga et al. forthcoming) focused on assessing environment-poverty issues for two case studies: a road transport project in the Shinyanga region (the Mwanza/Shinyanga border – Tinde/Isaka – Nzega road in north-west Tanzania) and a fishery sector case study in the Mwanza/Lake Victoria region. These case studies were chosen due to strong linkages with current CSP investment that is financing: transport (40% - 116 million Euro)⁴ and macro support (including promoting macroeconomic reforms/liberalization in growth sectors such as fisheries, 34% - 98.6 million Euro) (see Appendix 3 for an overview of current 9th European Development Fund (EDF) spending of the current Tanzania CSP)⁵. Furthermore, the Mwanza region was selected due to EU financing of various environmental and related projects in the region including: the Lake Victoria Fisheries Research Project (LVFRP) (9.3 million Euro), the Water Supply Programme to regional centers of Mwanza, Iringa, and Mbeya (32 million Euro in EU funds), and water supply and sewerage rehabilitation in Mwanza city (5.5 million Euro) (see also section 3.3.b.).

3.1.a. Environment-poverty concerns in the transport sector/ the road transport case study

While the roads case study highlighted various benefits that improved road transport has brought to local communities – including opening up markets, facilitating trade, enhancing opportunities, diversifying livelihoods, and increasing economic efficiency and incomes⁶ - local respondents interviewed in the multilevel evaluation noted various environment-poverty concerns, including:

- loss of land and property rights disputes (linked with road development and rehabilitation - e.g., due to land conversion into commercial farms along roads and land used for roads, borrow pits, and outlet culverts);
- deforestation (associated with anticipated increase in charcoal trade from improved accessibility);
- noise and air pollution (brought about by the blasting of rocks during road construction/rehabilitation);
- excavated soils (e.g., leading to loss of farmland where fertile soils are covered); and
- HIV/AIDs (associated with increased mobility).

3.1.b. Environment-poverty concerns in the fisheries sector/Fisheries project in the Mwanza region

Although the Mwanza region/Lake Victoria fishery sector has contributed significantly to local, regional, and national-level economic growth, local-level respondents noted that they have not sufficiently benefited from such growth. Various environment-poverty concerns were noted, including:

⁴ Under the 8th EDF substantial support was allocated to among other things pave the Mwanza Sinyanga border-Tinde and the Nzega-Isaka roads. This road is a part of the regional network that connects to international trading routes (Delegation of the European Commission in Tanzania, 2003) (see also Appendix 3 for a summary of EC funds allocated to the transport sector).

⁵ Note that under new allocations after the recently completed Mid Term Review (The United Republic of Tanzania and EU, 2005) allocations (that include transfers from previous EDFs) have been adjusted to: 28% for transport (110-125 million Euro), 40% for macroeconomic support (159 – 186 million Euro), 11% for education (43.5 million Euro), and 21% for good governance (81.35 million Euro) (see also Appendix 3).

⁶ In addition some local respondents noted that they had benefited from borrow pits that had been dug along the road – these have acted as important water reservoirs for livestock and people (water scarcity is common in many parts of Shinyanga). Although contractors typically cover the borrow pits after completion of the roads construction/renovation, a compromise is being sought to help ensure that local people can continue to benefit from the use of the borrow pits.

- increased conflicts over access to fishing waters and resources (e.g., between different user groups such as small scale vs. big fishers).
- declining fish stocks (linked to excessive fishing for fillet such as of Nile Perch⁷);
- contaminated water (associated with poor sanitation at fishing settlement camps),
- deforestation (linked to fuelwood consumption for fishing processing and at settlement camps), and
- food insecurity (although contested, arguments hold that export trade has led to increased prices in/lower supplies of fish, in turn making it more difficult for low income households to afford/have access to fish).

3.2. National-level evaluation of environment-poverty concerns of CSP investment

Based on the above multilevel evaluation, a national-level assessment was conducted to further assess environment-poverty concerns related to the transport and fisheries sectors, as well as in other key growth sectors (e.g., mining and tourism) linked to CSP investment.

3.2.a. Environment-poverty concerns linked to rehabilitation/development of roads

The following evaluation focuses particularly on the rehabilitation/development of the high priority corridors that are being financed by in part the EC (under the current and previous EDFs) (see Appendix 3 for more detail on CSP investment in the transport sector). While in no doubt Tanzania critically relies on developing infrastructure to open up market, facilitate trade, and enhance economic growth, a lack of an environmental management framework is anticipated to result in numerous negative environment/livelihood consequences as indicated below.

Deforestation: The rehabilitation and development of in particular the Central and Lake Circuit corridors is anticipated to lead to further increases in the charcoal trade. Already large supplies of charcoal and fuelwood – such as from the Bukombe and Kahama districts - are transported by road to Dar es Salaam, Mwanza, and other urban areas. Furthermore, charcoal is illegally exported to Rwanda and Burundi from the Shinyanga region (in addition to Saudi via Mombasa and Oman via Zanzibar) (Rugemalira personal communication, 2005; Sawe personal communication, 2005; Mgani personal communication, 2005). It is anticipated that in the absence of a more elaborate control system that improvements of the road networks - in addition to decreased transportation costs - will facilitate the sale and (illegal) export of charcoal and fuelwood supplies.

Spill-over effect on mining, fish, tourism, and other natural resources-based sectors: The development and rehabilitation of the Central and Lake Circuit corridors is anticipated to have spill-over effects on various natural resources-based sectors including in mining, agriculture, fish, and tourism. On mining, the EC notes that “[the Central Corridor] is strategically located to serve the mining areas”. The mining sector has already seen significant growth in Tanzania - growing by 17% in 2003 - and currently accounts for one of the fastest growing economic sectors in Tanzania (United Republic of Tanzania, 2005). While economic growth in Tanzania’s mining and other sectors has been hailed as a significant economic achievement, in the absence of a strong environmental regulatory framework there is significant risk that growth in this sector is oriented towards short term gains at the expense of long term sustainability. Rapid and uncontrolled growth in the mining sector has already been linked to water contamination, health consequences (especially for poor neighbouring communities), and human rights abuses (see also section 3.2.b.).

⁷ Evidence of overexploitation of fish stocks include reduction in catch and age/length at maturity as well as increased proportion of immature fish caught (Bwathondi et al., 2001 – cited in Ngaga et al., 2005)

HIV/AIDS: Junction sleep-over towns such as Isaka and Tinde – that have grown as a consequence of the EC funded road development – have already been documented to show a proliferation of bars, guest houses, and prostitution and are being targeted by task forces working against the spread of HIV/AIDs and Sexually Transmitted Diseases (STDs) (Jambiya, personal communication, 2003).

Road kill and wildlife corridors: Development of the Central and Lake Circuit corridors – that is anticipated to significantly improve accessibility and in turn traffic and vehicle speed – is envisioned to increase road kill especially in sections of the central corridor that have few human settlements and serve as important wildlife habitat (such as the Dodoma-Singida-Tabora road section). The development of the Dodoma-Morongoro road built in the 1980's, for example, affected a wildlife corridor that existed between Selous Game Reserve, Mukumi National Park, and Taragire National Park affecting the migration routes of numerous animals including the oryx, zebra, wilderbeest, and great African Eland (Rugemalira personal communication, 2005).

Socio-economic concerns/Compensation: Development and rehabilitation of roads often entails the relocation of humans and human settlements. Although the current Land Act stipulates that individuals required to move due to road development and works are duly compensated, compensation is often delayed (e.g., due to lack of funds in national treasury) and has in some instances even taken several years (Mwankusye personal communication, 2005). Furthermore, where individuals live within 22.5 meters from either side of roads - identified under a highway ordinance (1967) - no compensation is currently provided: these areas were officially designated as government land in 1967 (Mwankusye personal communication, 2005)⁸.

Human safety/road accidents: The development/rehabilitation of roads inherently puts individuals that reside along/close to the road at greater risk to vehicle-related injuries. While the Tanzanian government is currently emphasizing campaigns to educate drivers to decrease vehicle speed - towards helping reduce traffic related accidents - the government is at the same time opting to reduce the number of speed bumps: in some instances this has entailed rejecting villagers requests to install speed bumps (Mwankusye personal communication, 2005).

3.2.b. Environment-poverty concerns linked to fishing and key growths sectors

Environment-poverty concerns associated with the fishing as well as other key growth sectors (i.e., mining and tourism) were further evaluated in this national-level assessment. These sectors were chosen due to linkages with EC financing in the “macro support” focal area that have (along with government and other donors funds) helped finance the liberalization of - and in turn unprecedented growth in – these sectors⁹. While growth in these sectors has been hailed as a

⁸ This is waived where individuals can prove that they lived in the specified area prior to 1967 - often, however, difficult to prove (Mwankusye personal communication, 2005).

⁹ The bulk of EU funds allocated under “macro support” are used to contribute to budget support through Tanzania's Poverty Reduction Budget Facility - to which various donors (except for World Bank and IMF) contribute. In line with the Tanzania PRSP (United Republic of Tanzania, 2000) - and more recently Tanzania's draft National Strategy for Growth and Reduction of Poverty (NSGRP) - budget support funds may be used to support priority sectors identified in the PRSP (e.g., education, health, agriculture, roads, judiciary, and HIV/AIDs prevention) or in the near future clusters in the NSGRP (e.g., economic growth, increased incomes and reduction of poverty, improved quality of life, or good governance). Both the PRSP and draft NSGRP support on-going macroeconomic and structural reforms initiated since the mid 1990s (e.g., liberalization, privatization, and fiscal stabilization policies): as indicated in the Tanzania CSP (2000) “Continued macro-economic reforms are a basic foundation of the PRSP” (p.7), while Tanzania's Mid Term Review (2005) notes that, “The government continues to pursue macro economic reforms including reforms [to create a] conducive environment for private sector development...Important reforms have taken place in the public sector...through privatization of state owned enterprises and the continuous liberalization of the financial sector”.

significant economic achievement, these have been linked with numerous environment-poverty concerns as described below. Section 4 looks at how EC- and national-level processes - including in the new PRSP/NSGRP that has significantly improved environment-poverty mainstreaming – are seeking to address the environment-poverty concerns.

3.2.b.i. Mining

Continued privatization and liberalization - a key objective of Tanzania's PRSP (United Republic of Tanzania, 2000) and supported by numerous donors including the EC through budget support - has helped make the mining sector one of the most dynamic and fastest growing economic sectors in Tanzania: in 2003 mining grew by 17%, while in 2002 by 15% (United Republic of Tanzania, 2005). The mining sector - particularly large-scale mining - has seen significant growth since the 1990s when macro-economic reforms were initiated. Foreign investment in mining (and its exploration) has dramatically increased: between 1997 - 2000 an estimated \$700 million was, for example, invested in mining exploration, while in 2001 Tanzania was considered to be Africa's third largest gold producer after South Africa and Ghana (Goldman, 2000 and Guardian Reporter, 2001 – cited in Lissu, 2003). Other mineral resources in Tanzania include diamonds, gemstones, coal, limestone, and salt (OECD, 2002).

While economic growth - including in the mining sector - can be a powerful means to reduce poverty, such growth must be sustainably managed and focus on pro-poor initiatives. The growth in the mining sector has, however, come at significant environmental and social cost (National Environmental Research Institute, 2001; Reed, 2001; Lissu, 2003, Lissu personal communication, 2005). The new PRSP/NSGRP similarly underscores these concerns noting that, "Serious poverty concerns have been raised regarding the impacts on environment, tensions over land rights and labour relations in areas where these [mining] activities have risen dramatically." (United Republic of Tanzania, 2005, p. 7).

Environmental costs associated with the mining sector: Studies of the Mererani mine in Arusha, Geita mine in Mwanza, and Uмба mine in Tanga indicate that mining has led to significant water contamination, loss of biodiversity, and deforestation. Miners and local communities have in turn been exposed to mercury, graphite, and kerosene poisoning in water supplies, increased disease incidence, and degradation of agricultural fields (Reed, 2001). The opening of the Geita mine in 2000 - located in the Lake Victoria Basin catchment area and East Africa's biggest gold producer - has been associated with similar environment/livelihood concerns. It is expected that contamination by sodium cyanide at the Geita mine - used to extract gold from ore - will have serious consequences on the Lake Victoria watershed. Such contamination will poison fish and lead to serious health consequences for local fishermen and communities. If toxic elements are found in the fish, fish exports may furthermore be suspended, in turn threatening a key source of income for local fishing communities¹⁰ (Wildnet Africa News Archive, 2000; United Republic of Tanzania, 2004).

Social costs associated with the mining sector: Attractive financial incentives in Tanzania's mining sector (e.g., five year tax holidays, repatriation of profits, low royalty rate at 3 - 5%, and waived import duties) have in particular benefited large and mid sized mining operators at the expense of small poor artisanal miners¹¹. While small-scale artisanal mining became one of the most important and dynamic sectors of the Tanzanian economy from the 1980s to early 1990s -

¹⁰ In 1999 fish exports were already banned by the EU on Nile Perch fillets from Lake Victoria due to water contamination (namely because of poor sanitary conditions at especially fish landing and handling sites). The ban significantly impacted livelihoods by putting fishermen, food vendors, fish traders, and fish processing plants out of business and by reducing significantly money circulation in settlements about Lake Victoria (World Bank, 2004).

¹¹ Artisanal mining has typically been practiced by uneducated poor people living in the remote rural areas (Lissu, 2003).

accounting for an enormous increase in incomes of local communities - subsequent support to large scale mining and foreign corporate investors have driven (often forcibly) artisanal communities from mineral rich areas (and in turn from their livelihoods) (Lissu, 2003; Lissu personal communication, 2005)¹². Although direct foreign investment in the mining sector has been justified on the grounds that employment will be generated that in turn will reduce poverty, the large-scale mines that are capital- and technology-intensive have favoured predominantly skilled urban-based workforce vs. the less educated poor rural labour force (Lissu personal communication, 2005; Sosovele personal communication, 2005; Jambiya personal communication, 2005). Furthermore it has been contended that earnings accrued by the mining sector have insufficiently benefited the national economy and have again strongly favoured private investors: between 1997 to 2002 six key mining companies mining gold, tanzanite, and diamonds earned an estimated US\$895.8 million of which only 13% was funneled back into the national economy (e.g., through government taxes, revenue, community development projects, and training of workers) (Lissu, 2003).

3.2.b.ii. *Tourism*

Privatisation and liberalization has resulted in substantial growth of Tanzania's tourism sector. Tourism has grown an average of 6.7% over the last four years (2001/2002 - 2004/2005), earns annually US\$739 million, and currently accounts for 12% GDP. Tanzania has in turn become the 5th top tourism earner in Africa and continues to see increases in direct foreign investment (United Republic of Tanzania, 2005). While growth in Tanzania's tourism sector has been welcome, such growth has due to a poorly developed environmental regulatory framework been associated with environmental degradation and has insufficiently benefited local communities (Sosovele, personal communication, 2005). The new NSGRP that is currently being drafted similarly states, "...apart from the indirect impact of increased revenue to government, growth in tourism has not led to direct reduction of income poverty." (United Republic of Tanzania, 2005, p. 7).

Environmental costs linked to the tourism sector: In Bagamoyo and Zanzibar, tourist hotel construction (and its expansion) has led to the clearing of large tracts of mangrove areas that in turn has resulted in coastal erosion, water pollution, and negative impacts on fisheries. In addition dumping of untreated effluent by hotels into rivers and the ocean has increased water related illnesses in surrounding communities (Wood et al., 2000). Due to Tanzania's uncertain land ownership and a dual system of land tenure¹³, hotel construction and expansion have furthermore caused small farmers and fishermen to lose access to valuable farming and fishing areas (Reed, 2001).

Social costs associated with tourism: While in theory the National Tourism Policy (1999) recognizes that priority must be given to tourist initiatives that benefit local communities living within and about tourist destinations, in reality only a very small percentage of revenue generated

¹² Although the 1979 Mining Act and 1983 'Small Scale Mining Policy' provide a legal basis for artisanal mining operations, thousands of artisanal miners have in recent years nonetheless been forcibly evicted including "many hundreds of thousands of artisanal miners and other residents" in Bulyanhulu to make way for Canadian corporate investors: such evictions have lead to "unprecedented human rights crimes" (Lindu, 2003, p. 14, p. ; Lindu personal communication, 2005).

¹³ The current land tenure regime – i.e., the National Land Policy of 1995 and Land Acts of 1999 – in theory gives priority to local communities but continues to allow all land to be vested under the President. [is this still the case? — e.g., under the amended Land Act, 2004]

in the tourist sector goes back to these communities. For example, although the Ngorongoro Conservation Area earns an estimated US\$10 million in gate fees each year (and while in theory the current policies and legislation stipulate that the Maasai should be the main beneficiaries) the Maasai residing in the area continue to live in considerable poverty (United Republic of Tanzania, 2004; Lissu personal communication, 2005).

3.2.b.iii. Fishing

The fishing sector in Tanzania has grown tremendously although again at a high environmental and social price: fish exports between 1999 and 2004 almost doubled (Boucey personal communication, 2005).

Environmental concerns linked to over-fishing/rapid expansion of fishing settlements: As documented in detail in the multilevel evaluation (Ngaga et al. forthcoming) rapid and poorly regulated growth of the fisheries sector has been associated with numerous environmental concerns including over-fishing, deforestation, and water contamination. Respondents in the national-level assessment voiced similar concerns such as deforestation (linked to timber used for boat and house construction); over exploitation of fish resources (e.g., through use of illegal gear and fishing of juveniles); and water contamination (in the rapidly expanding settlements along the lake) (Jambiya personal communication, 2005; Medard et al. personal communication, 2005).

Socio-economic impacts associated with over-fishing: In the Lake Victoria region conflicts over access to fisheries resources are escalating as fish supplies decline. There have been increasing reports of theft and deliberate destruction of property and boats (to decrease competition/fish extraction) and conflicts over access to fish resources (e.g., local fishermen being intentionally chased away by prominent/commercial fishers) (Jambiya personal communication, 2005; Medard et al. personal communication, 2005). Various socio-economic impacts have also been noted in another well document study, the Rufiji Delta Prawn Farming Project in southern Tanzania. The development of the multimillion dollar prawn farm (in 1997) in the largest mangrove forest in East Africa resulted in the ripple effect of environmental and socio-economic concerns including deforestation, loss of biodiversity, displacement of local communities, water contamination (due to the absence of water treatment facilities), and social tensions (between those who support and didn't support the development of the prawn farm) (WRM, 2001; Wood et al., 2000).

3.3. CSP investment to address the environment-poverty concerns

Given the above noted environment-poverty concerns, how then is CSP investment addressing these concerns. A follow-up CSP review was conducted to assess if: 1) the above-noted environment-poverty issues were identified in the current Tanzania CSP and 2) if current CSP investment is being used to address the environment-poverty issues. This evaluation is structured about three key areas of current CSP investment: transport, macro support, and good governance¹⁴.

3.3.a. Recognition of environment-poverty issues in the CSP

3.3.a.i. Transport

In describing transport issues, the Tanzania CSP notes that “[priority transport corridors will] promote trade and investment by opening up areas of key economic activities and potential such as mineral deposits, tourism, agriculture, providing the required competitiveness through reduction of transport costs.” (United Republic of Tanzania and European Community, 2000, p.

¹⁴ Note that the education focal area – another focal area being supported by the current Tanzania CSP - has not been included in the subsequent evaluation (see Appendix 3).

10). No specific reference in the CSP is however given on possible environment-poverty spill-over effects that such growth in key economic sectors may have – these may range from deforestation to water contamination and HIV/AIDs (see section 3.1.a. and 3.2.a.). It is, however, noted that “Environmental considerations will be consistently addressed throughout the programme” (p. 21) and that based on the National Transport Policy (1998) that a national-level “EIA for all transport projects [will be carried out to]... ensure that construction and maintenance works adhere to environmental protection guidelines” (United Republic of Tanzania and European Community, 2000, p. 49)¹⁵. Gaining access to EIAs was however challenged by poor archiving (Mwankusye personal communication, 2005; Woringer personal communication, 2005). As indicated in section 4, although EIAs are a useful means to evaluate environmental impacts, this paper emphasizes the need to underscore environment-poverty concerns early in CSP/focal area programming.

3.3.a.ii. Macro support

The CSP acknowledges that privatization, liberalization, and macroeconomic reforms - supported by the PRSPs (and in turn CSP investment) – are not yet adequately benefiting people living in poverty: “Progress in reforms and renewed macroeconomic stability have yet to translate into sustainable improvement in the standard of living of the people” (United Republic of Tanzania and European Community, 2000, p. 6) and “Even if [private sector] growth occurs in mining, tourism and services sectors, the direct impact on poverty reduction may not be significant, as these are capital-intensive” (United Republic of Tanzania and European Community, 2000, p. 12). While the CSP generally notes of possible environmental impacts due to the uncontrolled expansion of tourism, no reference is made to specific environment-poverty concerns in the tourism or other growth sectors (e.g., mining and fishing) that may range from water contamination to over-fishing, deforestation, disease, and conflicts over access to and rights over resources (see section 3.1.b. and 3.2.b.).

3.3.a.ii. Good governance

Although the CSP notes that “Governance, gender and environmental issues have been made integral parts of all areas identified.” (p. 2) and that “sustainable management of the environment and natural resources is a cross cutting issue to be incorporated into all areas of co-operation” (p. 21) there is no specific reference towards addressing specific environment-poverty concerns in the good governance focal area. While in no doubt current initiatives supporting the development of transparent and participatory decision making (e.g., through increasing Non State Actor participation and supporting the anti-corruption strategy) will positively impact all sectors including the environmental and natural resources-based sectors, the good governance focal area can be taken a step further towards addressing environment-poverty concerns by strengthening good *environmental* governance (see also section 5) (see Appendix 3 for a description of initiatives currently being supported under the “good governance” focal area).

3.3.b. CSP investment to address the environment-poverty concerns

The Tanzania CSP was furthermore reviewed to assess if current CSP investment has been linked to the noted environment-poverty issues (as identified in section 3.2). Although in respectively the transport, macro support, and good governance focal areas specific environmental initiatives were not indicated, the current CSP does refer to a number of environmental and related initiatives that are being supported under budget-lines (that fall outside of the current EDF), previous EDFs (e.g., 7th and 8th EDF)¹⁶, and regional initiatives (identified in Regional Strategy

¹⁵ Note that the EC requires that EIAs are developed on projects that may have environmental impacts including those in the transport sector (EC, 2001 – cited in Snel, 2004 report).

¹⁶ Due to backlogs, several initiatives funded under previous EDFs are currently being implemented.

Papers/Regional Indicative Programmes). Various EC funded environmental and related projects that are helping (have helped) address environment-poverty concerns - particularly in the tourism, mining, and fisheries sectors - are noted below. While these initiatives are helping contribute towards pro-poor sustainable development, this paper calls on the need to improve environment-poverty mainstreaming in early stages of future CSP programming towards more sufficiently prioritizing (and financing) environmental and related initiatives (see next section 4).

Lake Victoria Fisheries Research Project (LVFRP) (29.9 million Euro): This regional initiative aims to address issues relating to sustainable fisheries in the Lake Victoria region for Tanzania, Kenya, and Uganda and more specifically has involved assessing fish stocks, ecosystem dynamics, and impact of fisheries management on local communities. Research activities have resulted in the development of baseline data and implementation of the Lake Victoria Fisheries Management Plan that began in 2003 (United Republic of Tanzania and European Union, 2005; Ngaga et al. forthcoming). [look on web for additional information... - see e.g., <http://www.inweh.umu.edu/lvfo/lvfrp.htm>]

Water supply and sewerage rehabilitation in Mwanza city (6.6 million Euro): This initiative - that has been funded under a previous EDF - has involved the rehabilitation of the existing sewerage network in Mwanza city. The project aims to improve the sewerage system to help ensure that wastewater is treated before being discharged into Lake Victoria (United Republic of Tanzania and European Union, 2005).

Water Supply Programme to regional centers of Mwanza, Iringa, and Mbeya (33.6 million Euro in EU funds): This programme - funded under a previous EDF - seeks to rehabilitate water supply in three urban areas/regional centers (i.e., Mwanza, Iriga, and Mbeya).

SADC Fisheries Monitoring Control and Surveillance Project (MCS): This initiative (funded under a previous EDF) focuses on the development and implementation of a surveillance system to monitor fishing in the Economic Exclusivity Zone (EEZ) towards improving surveillance of coastal fisheries resources. More specifically the project includes developing policy, implementing monitoring systems, and establishing air and sea surveillance of the EEZ (United Republic of Tanzania and European Union, 2005).

Support to the Southern Eastern African Mineral Centre (SEAMIC) (1.4 million Euro): This regional initiative (2004 – 2005) supports research and development, training, and data collection in the Southern Eastern African Mineral Centre (SEAMIC). The mission of the independent regional centre - established in 1977 and under the umbrella of the United Nations Economic Commission for Africa (UNECA) - is to promote in eastern and southern Africa environmentally and socio-economically responsible mining.

Support to Tanzania Game Reserves (1.98 million Euro): This initiative is focussed on protecting game reserves by securing biodiversity, promoting rational wildlife resource utilization, and supporting participation. To date this initiative has supported two projects: the Kagera/Kigoma Game Reserve project (619,000 Euro) – that is currently focusing on constructing buildings in numerous game reserves – and the Selous Black Rhinoceros Protection Project (287,000 Euro) – that is supporting rhino conservation and future implementation of the Rhino development strategy (United Republic of Tanzania and European Union, 2005).

Strengthening of the tourism section (80,000Euro): Launched in 2000 and concluded in December 2003, this project provided support for a tourism training programme and policy development in the tourism sector (United Republic of Tanzania and European Union, 2005).

4. Institutional evaluation

While the above review indicates that the EC is financing various environmental and related initiatives in Tanzania - under budget lines and previous (and regional) CSPs - the current Tanzania CSP (and in turn its investment) is shown to insufficiently underscore environment-poverty issues especially associated with key growth areas such as tourism, fishing, and mining. The subsequent review evaluates current institutional processes that are being used to integrate the environmental dimension in the CSP programming towards seeking entry points/opportunities to strengthen environment-poverty integration in future CSP programming (section 4.1). Since the Tanzania CSP (as in other CSPs) heavily rely on national strategies, processes and capacity to mainstream environment-poverty issues in Tanzania's new NSGRP/PRSP have also been evaluated (section 4.2). The following evaluation - as with the previous "follow-up CSP review" - has heavily relied on interviews (conducted with EC- and national-level stakeholders) and an extensive document review (refer back to section 2).

4.1. EC-level processes used to integrate environment-poverty issues

EC-level respondents (mainly at the Tanzania EC Delegation and EU desk at the Ministry of Finance) were asked on how environmental considerations were mainstreamed in the Tanzania CSP process and on opportunities to strengthen environment-poverty integration in future country programming. More specifically respondents were asked:

- how the CSP was developed (and reviewed) in light of environmental integration (section 4.1.a);
- whether existing environmental guidelines/tools (e.g., CEP and SEA) were used in developing the CSP (section 4.1.b.);
- awareness on existing environmental integration procedures (section 4.1.c.); and
- opportunities to strengthen environment-poverty integration in future CSP programming (section 4.1.d.).

4.1.a. CSP process

The CSP - officially referred to as the CSS (Country Support Strategy) - is developed through a dialogue-driven process between the partner countries (e.g., government and civil society), the European Commission (e.g., country delegations and headquarters), and EU member states (Mukome personal communication, 2005; EC, 2000). In developing the Tanzania CSP civil society concerns - including environmental - are primarily voiced through a Non-State Actor workshop (see Step 2 below) (Mukome personal communication, 2005). More specifically the development of the Tanzania CSP entailed the following steps.

Step 1: The National Authorizing Officer (NAO) foremost spearheads the CSP/CSS process by facilitating discussions with line ministries, departments, civil society, etc. to develop a draft CSS. In Tanzania, this initially entailed discussions with numerous ministries including of health, agriculture and food security, water and livestock, natural resources and tourism, and energy and minerals. After lengthy discussion (this stage usually entails about 2-3 months) ministerial priority needs, interest, etc. were identified, focal areas selected (e.g., macro support, education, etc.) and a CSS drafted (Mukome personal communication, 2005; EC, 2000).

Step 2: Civil society/Non State Actors (NSAs) were subsequently asked to provide input on the draft CSS during a two day workshop: the workshop was open to the general public (including to NGOs, journalists, the private sector, and other donors) and was advertised (e.g., in key newspapers). During the NSA workshop presentations were made on the proposed priority focal areas (macro support, transport, etc.) and civil society/NSA input was solicited. The draft CSS

was subsequently edited to reflect input from the NSAs (Mukome personal communication, 2005).

Step 3: The draft CSS (based on national priorities, strategies, etc.) was then presented to the European Commission (country delegation and headquarters – including to the Quality Support Group (QSG)). Their response was articulated in a Response Country Support Strategy and revisions were subsequently made to the CSS based on discussions between the Commission, NAO, and member states (Mukome personal communication, 2005).

Step 4: The revised draft CSS was (re-)submitted to EC headquarters (Brussels) and discussed with the EDF committee for formal approval (Boucey personal communication, 2005). Upon approval, the CSS/CSP was finalized to become the National Indicative Program (NIP)¹⁷ and adopted by the country delegation and NAO¹⁸.

On CSP reviews, it was noted that activities financed through CPSs/NIPs are evaluated periodically through a “rolling programming” of annual, mid-term, and end of the term reviews (Mukome personal communication, 2005; EC 2000). The “rolling programme” reviews are heavily based on performance indicators – that may include environmental indicators - developed in the CSP/NIP¹⁹ (EC, 2000; Mukome personal communication, 2005). A Mid-Term Review – entailing a more extensive strategic/performance review – was recently conducted for the Tanzania CSP (EU desk - Ministry of Finance, 2005). As with the development of the CSP/NIP, the MTR solicited input from NSAs through a 2 day workshop: the workshop was open to the public and involved approximately 200 participants ranging from civil society groups to development partners (Mukome personal communication, 2005). In addition to the above on-going reviews, ad hoc reviews - initiated by the headquarters or requested by beneficiary states - may be conducted. EC environmental audit are, for example, currently being conducted in various countries including in Tanzania (Boucey personal communication, 2005).

4.1.b. Use of environmental tools/guidelines

In theory, environmental considerations are currently mainly integrated in EC country programming – in Tanzania and elsewhere - through the development of a Country Environmental Profile (CEP)²⁰ and Strategic Environmental Assessment (SEA)²¹. As in many other countries, the Tanzania CSP did not include a CEP or request a SEA: a study of 60 CSPs indicated that only six countries included a CEP while only three countries made reference to a SEA (and only one integrated a SEA) (Davalos, 2002). Respondents at the country delegation noted a CEP was not included in part because the environment was not prioritized as a focal area and more generally due to a lack of awareness on the need to submit a CEP (Paris-Ketting et al.

¹⁷ The NIP includes a work programme consisting of a summary/budget of the selected focal areas and a set of tables consisting of an intervention framework matrix on targets, objectives, performance indicators, etc. (EC, 2000).

¹⁸ Note that in practice the CSP and NIP are currently often considered the same document and developed simultaneously (personal communication, Mukome, 2005).

¹⁹ The performance indicators need to cover management of the EC programmes (used for the annual reviews), good governance, macro-economic management, and poverty focused on sustainable development (the latter three are used extensively during midterm and end of term reviews) (EC, 2000). The indicators need to be realistic and attainable: “The indicators must be developed jointly, and accepted by both sides at the outset as being realistic and attainable in the foreseen time-scales.” (EC, 2000, p. 40 – part II).

²⁰ A CEP includes a brief overview of the country (physical, economic, social, etc. conditions); summary of the state of the environment; overview of the environmental policy, legislative, and institutional framework; and recommended priority actions (Davalos, 2002).

²¹ A SEA is an overarching assessment at programming level that integrates environment and development issues, provides information on alternative options, and identifies potential environmental impacts of proposed policies and plans (Davalos, 2002).

personal communication, 2005). A forthcoming report by Snel (2005) similarly underscores ambiguity with regards to the need to develop a CEP: while the development of a CEP is supported by the Commission, their development does not seem to currently be required²².

4.1.c. Awareness on environmental tools/guidelines

Respondents in the institutional evaluation noted that while they were aware of the environmental helpdesk this had not yet been consulted. Furthermore, the environmental integration manual – although recently consulted – was considered to be very useful. It was noted that it would be useful to have trainings in environment-poverty linkages as well as in procedures/guidelines described in the environmental integration manual. The development of useable and user friendly guidelines was underscored (Paris-Ketting et al., 2005).

4.1.d. Opportunities to strengthen environment-poverty integration

Respondents noted that it may be useful to employ an environmental desk officer within the country delegation (as done in other donors – e.g., World Bank) as well as to strengthen TORs regarding environmental commitment of staff. Furthermore, it was noted that donors (including the EC) can play a key role in evaluating environment-poverty integration in national strategies (e.g., PRSPs) upon which CSPs heavily rely (Paris-Ketting et al., 2005) (see also section 4.2).

4.2. National processes and capacity to address environment-poverty issues

Since CSPs heavily rely on national strategies such as PRSPs, evaluating how environment-poverty issues (and concerns) are integrated in national strategies is vital. This is particularly important as donors - including the EC - are increasingly seeking to harmonize donor funds with national frameworks and considering to increase levels to direct budget support²³. The following section evaluates:

- how environment-poverty concerns have been streamlining in the Tanzania PRSP process (programming, financing, and monitoring – section 4.2.a.) and
- institutional capacity to implement the Tanzania PRSP targets (section 4.2.b.).

4.2.a. Environment-poverty mainstreaming in Tanzania's national strategies

4.2.a.i. NSGRP programming

There have been significant recent developments in mainstreaming environment-poverty issues in a new PRSP - National Strategy for Growth and Reduction of Poverty (NSGRP) - that is currently being drafted. While environmental and other cross-cutting issues were minimally integrated in the initial PRSP (2000), programming in the current/new NSGRP (planned for 2005/06 – 2009/10) has deliberately set out to mainstream cross-cutting issues including the environment. The development of the new NSGRP – also referred to by its Kiswahili acronym MKUKUTA - included extensive consultation with numerous stakeholders including from the environmental,

²² The Commission's Communication on "Integrating environment and sustainable development into economic and development co-operation policy: Elements of a comprehensive strategy" (EC, 2000b, p. 16) indicates that CEPs "should serve as an input to the country strategy document", while various other Commission documents - including the staff working papers on environmental integration (EC, 2001b) as well as "The 9th EDF Programming Process" working document (EC, 2000) - indicate that CEPs and SEAs are "important tools" and "should" (vs "must") be developed in EC-funded country strategies²². The new environmental integration manual - currently being drafted - recognizes this limitation by stating that, "... recommendations to integrate the environment ... exceeds the lawful obligation" and that the manual should in turn be considered as a "guide on good practice" (Environmental helpdesk, 2005, p. 7 - quotes from the draft environmental integration manual have been translated from French).

²³ Such as in accordance to the Paris and Rome declarations on donor harmonization.

natural resources, and related sectors (Jambiya personal communication, 2005; Howlett personal communication, 2005; Mugurusi and Howlett, 2005; Likwelile personal communication, 2005)²⁴.

By considering environment-poverty issues early in the programming process, the NSGRP has in turn done a much better job acknowledging the importance of environment-poverty concerns including in the fastest growing sectors of the economy - namely tourism and mining. While the NSGRP continues to support macroeconomic reforms, the new national strategy does acknowledge various environment-poverty concerns in these sectors and is seeking ways to help address these issues. On the development of the mining sector, for example, the NSGRP notes, "Serious poverty concerns have been raised regarding the impacts on environment, tensions over land rights and labor relations in areas where [mining] activities have risen dramatically. The challenge ahead is to ensure that investments benefit the wider economy giving particular attention to disadvantaged regions" (p. 7). In the tourism sector, environment-poverty concerns are similarly voiced, "...apart from the indirect impact of increased revenue to government, growth in tourism has not led to direct reduction of income poverty. Barriers to communities gaining increased benefits from natural resources (e.g., wildlife) need to be removed" (p. 7). Targets indicated in the NSGRP to help address these environment-poverty concerns include "increasing contributions from wildlife, forestry, and fisheries to incomes of rural communities", "reduction in harmful industrial and agricultural effluents", "reduction in land degradation and loss of biodiversity", "reduced negative impacts on environment and people's livelihoods", and "increased proportion of rural population with access to clean and safe water from 53% in 2003 to 80% 2009/10". Fourteen percent of the targets in the NSGRP relate to the environment and natural resources: many of the targets link with MDG goals (Mugurusi and Howlett, 2005; Howlett personal communication, 2005).

4.2.a.ii. Financing

Line ministries are currently being asked to link their sectoral strategic plans and activities to targets - including environmental - indicated in the new MKUKUTA: information that will feed into the Mid Term Expenditure Framework (MTEF) (Assey personal communication, 2005; United Republic of Tanzania, 2005). Furthermore, a Public Expenditure Review (PER) on the environment was recently conducted for Tanzania to evaluate current environmental investment needs in the country (United Republic of Tanzania, 2004b). The report highlighted the need to increase funds to strengthen environmental management at national to local levels noting that "While environmental resources contribute significantly in terms of revenue collections and national income, ... the environmental sectors are financially under resourced." (United Republic of Tanzania, 2004b, p. xii).

4.2.a.iii. Monitoring of the PRSP/PRBS/PRSC

Progress of the PRSP targets are monitored at national-level through a Poverty Monitoring System (PMS). The PMS relies on performance indicators that are identified by sectors and other stakeholders in accordance to the PRSP objectives/targets. Under the new MKUKUTA emphasis is being placed to identify/develop indicators in key areas that were previously not well represented including the environmental sector (United Republic of Tanzania, 2005b). Although the PMS intends to facilitate the harmonization of both national and donor funding under one system, donors funds that are directly transferred to budget support (e.g. PRBS/PRSC²⁵) are

²⁴ Various groups were developed on cross-cutting issues (environment, gender, etc.) that consisted of NGOs, CSOs, etc. The groups were asked to integrate the respective issues (environment, gender, etc.) during separate and mixed sessions.

²⁵ The PRBS (Poverty Reduction Budget Support) and PRSC (Poverty Reduction Support Credit) are the facility to which donors contribute to budget support in Tanzania.

currently monitored under a Performance Assessment Framework (PAF): a PAF identifies indicative actions that will be tracked by donors (United Republic of Tanzania, 2005). While donors use the same PAF in Tanzania, the World Bank insisted on adding additional parameters to monitor progress in the environmental sector (Hewawasam personal communication, 2005). Such environmental indicative actions included the development of legislation on environmental management, guidelines to integrate the environment into the PER process, and drafted environmental regulations on EIA and environmental standards.

4.2.b. In-country environmental management capacity

While Tanzania has developed an impressive number of environment and related targets in the new MKUKUTA (as well as various new environmental policies and regulations²⁶), a key challenge will be to implement and adequately finance the environmental sector: as similarly noted by a recent Public Expenditure Review on the environment: "... a key challenge remains is on how the government will invest in [the] environment to meet the national development and poverty reduction objectives" (United Republic of Tanzania, 2004b, p. 1). In the following section capacity in two national-level institutions are assessed to highlight key constraints (as well as opportunities) currently facing environmental and related institutions in Tanzania. In line with the multilevel evaluation – that evaluated the fisheries and transport sectors – capacity at the Fisheries Division (under the Ministry of Natural Resources and Tourism) and TANROADS (Tanzania National Roads Agency - responsible for implementing road development and rehabilitation) were evaluated.

Fisheries Division: The Fisheries Division – under the Ministry of Natural Resources and Tourism - is significantly challenged by a lack of human and financial resources to carry out its mandate to promote the sustainable use of fisheries resources. The division has been heavily affected by public service reforms that entailed the retrenching of approximately 600 individuals: while prior to the public service reforms the fisheries division had one fisheries officer in each district, after the reforms only priority districts have a fisheries officer (Nyanyaro personal communication, 2005). Monitoring of coastal waters has been especially weak: priority has traditionally been placed on the lake regions. While BMUs - responsible for the enforcement and implementation of national and local fisheries regulations - continue to be an instrumental link between villagers and the district level they too face significant resource constraints. A lack of resources, enforcement, and poor monitoring in the fisheries sector, is threatening sustainable use of fisheries resources in Tanzania. In Bagamoyo, for example, records show that only six fishermen were arrested in 1999 in connection with dynamite fishing and that only two received a fine of US\$3.50: Tanzania's Fishing Act, however, stipulates that individuals arrested for dynamite fishing *should* be penalized US\$757 or imprisoned for a minimum of three years (Wood et al., 2000).

TANROADS: TANROADS is a semi-autonomous road agency in charge of implementing road development, rehabilitation, and maintenance using private contractors and consultants. TANROADS is one of several executive agencies that have recently been established to improve government efficiently. Previously the Division of Roads (under the Ministry of Works), the number of staff was significantly cut (from an estimated 1000 to 600 staff), remuneration was improved, and bureaucracy cut down (Mgani personal communication, 2005). Various other divisions/departments have similarly been revamped into executive agencies including the Tanzania Revenue Authority (previously the Revenue Department under the Ministry of Finance)

²⁶ The new Environmental Management Act – that was developed this year - is helping strengthen environmental capacity by calling on improved coordination, sectoral requirements to abide to environmental regulations, and strengthened enforcement (Mugurusi, personal communication, 2005).

and Tanzania Building Agency (previously the Building Division under the Ministry of Works) (Mgani personal communication, 2005). An environmentalist and sociologist were recently employed at TANROADS who are responsible to in particular support the development of EIAs and SIAs for roads development and works (Ben Gerritson personal communication, 2005; Mwankusye personal communication, 2005). While improvements are being made to integrate environment and socio-economic issues in transport initiatives, work at TANROADS is significantly challenged by limited institutional capacity in environmental management at the national to local levels: in turn NEMC and the Ministry of Works formally recommended last year the need for environmental officers at the district level (Mwankusye personal communication, 2005).

5. Recommendations/Opportunities to improve environment-poverty mainstreaming

Based on the above institutional evaluation (section 4) and follow-up CSP review (section 3) various lessons learned and best practices have been drawn upon to develop long-term institutional and policy recommendations to improve environmental-poverty mainstreaming in EC development assistance. Emphasis is placed on recommendations to improve environment-poverty integration in future CSP programming and design.

1) The sustainable development of natural resources-based sectors - such as in fishing, mining, and tourism - fundamentally depends on the development of a strong environmental management regulatory framework. The EC, as well as other donors, must prioritize supporting the long term development of environmental capacity in partner countries. In the case of the EC, the good governance focal area provides an excellent opportunity with which good *environmental* governance may be supported.

2) Prior to funding budget support - as done by the EC under the “macro support” focal area - it is vital that the EC (ideally in collaboration with other donors) evaluate how/if the national strategy/PRSP has mainstreamed environment-poverty issues and addressed environmental capacity concerns. This includes evaluating: how NSAs were involved in developing the national strategy; how environment-poverty issues have been integrated and financed in the national strategy; and how environmental capacity will be strengthened (e.g., capacity in natural resources and related institutions at national to local levels, development of environmental and related policies, capacity to enforce these policies, etc.). The use of a SEA - as recently used to assess the Poverty Reduction Support Credit in Tanzania (United Republic of Tanzania, 2004) - may be useful.

3) In the case of Tanzania while the first PRSP (2000) poorly integrated environment-poverty issues, there have subsequently been significant developments in environment-poverty mainstreaming in the succeeding national strategy - the NSGRP/MKUKUTA. While integrating environment-poverty linkages in national strategies/PRSPs is in no doubt a fundamental first step towards addressing environmental/livelihood challenges, this must be followed up with appropriate investment - by the government and donors - in the environmental, natural resources, and related sectors (see also points 1 and 2). Priority must especially be given to strengthening linkages between national to district to local levels.

4) Macroeconomic reforms - supported by the EC (through the “macro support” focal area) and other donors - have resulted in unprecedented growths of numerous natural resources-based sectors and have in the absence of a strong environmental management framework resulted in significant negative environment/livelihood consequences. Negative environment/poverty impacts in the case of Tanzania include water contamination (e.g., due to sodium cyanide and mercury poisoning in the mining sector), over-fishing (due to unsustainable increases in fish

exports), and conflicts over access to and control over resources (due to tourist hotel construction, mine development, etc.). Development of environmental management capacity to help address these concerns is vital, especially in countries such as Tanzania that are highly dependent on natural resources (see also points 1 and 3).

5) According to this study, in the case of Tanzania inadequate prioritization of environment-poverty issues during country/CSP programming has in turn resulted in insufficient funding of environmental and related initiatives to address environment-poverty challenges. There is a dire need for the EC to review existing CSP, environmental, and related guidelines to improve the integration of the environment as a cross-cutting issues. This in particular entails developing useable and mandatory environmental guidelines that explicitly link with focal area development (i.e., trade; support to macro-economic policies; transport; rural development; regional co-operation, and good governance) (see also next point 6).

6) While a CEP is a useful tool to help identify environmental issues, the CEP - currently included as an appendix to the CSP - does not underscore the need to mainstream environment-poverty concerns throughout country programming. As indicated above there is a need to strengthen EC environmental guidelines to explicitly link to focal area development. Revised guidelines must underscore environment-poverty linkages and clearly link to the CSP process (as described in section 4.1.a. for Tanzania).

7) The Tanzania CSP – as in many other CSPs - did not include a CEP or request a SEA. Ambiguity on the need to include CEPs is challenging the inclusion of environmental profiles in CSPs (see also Snel, forthcoming). It is recommended that EC environmental guidelines are made to explicitly be mandatory and that awareness is subsequently raised on environmental procedural requirements.

8) It is recommended that needs assessments are conducted at country delegation-level to evaluate environmental capacity and needs. Such an assessment may highlight the need to strengthen TORs, recruit staff with environment and development backgrounds, and raise awareness on environment-poverty linkages.

9) TORs of country delegation staff, NAOs, etc. need to be strengthened regarding environmental commitments. More specifically TORs need to be revised/strengthened to indicate e.g., who will be responsible/held accountable to integrate the environment-poverty dimension in CSPs, to develop a CEP, to check to see if a SEA(s) will be conducted (e.g., on the national strategy), to follow-up on whether environment-poverty concerns have been integrated in focal development programming, etc. (see also Snel, forthcoming).

10) Although macroeconomic reforms in Tanzania have resulted in economic growth at the national level, local communities have insufficiently benefited from such growth. Priority by the EC and partner countries must be given to support benefit sharing and similar schemes (e.g., in tourism, mining, and other natural resources-based sectors) towards helping ensure that local communities benefit from and help manage natural resources.

11) It has been contested that current financial incentives are too heavily skewed towards benefiting large foreign operators/investors at the expense of national growth. In the mining sector in Tanzania, for example, foreign investors are currently only required to pay 3% - 5% royalties to the government. It is recommended that the EC support initiatives to investigate how national to local economies (see point 10 above) are benefiting from foreign investment towards seeking ways to more equitably distribute natural resources-based earnings.

12) Road development/rehabilitation - a sector heavily financed by the EC - is associated with numerous long term environment-poverty concerns - albeit indirect - including in the case of Tanzania deforestation (linked to anticipated increases in charcoal export) and property rights disputes (associated with land conversion for roads and envisioned increased number of commercial farms along roads) (see section 3.1.a. and 3.2.a.). EIAs/SIAs conducted for roads initiatives (e.g., at national level) must explicitly note of long-term environment/livelihood issues.

13) Gaining access to EIAs (e.g., on roads development) in Tanzania was problematic due to poor archiving. Adequate resources need to be allocated to make sure that EIAs/SIAs are properly archived, retrievable, and publicly accessible at EC- and national-level.

14) While EIAs are currently required by the EC for projects that are anticipated to have environmental impacts, SIAs are not yet required. Requiring the development of SIAs is fundamental towards addressing environment/livelihood concerns including e.g., that compensation is just and timely, that human safety and rights issues are addressed, that legal frameworks are in place to deal with property rights disputes, (forced) evictions, etc.

15) Public sector reforms have significantly impacted environmental capacity in natural resources and related sectors. Increased investment (government and donor) is needed to strengthen human resources in environmental, natural resources, and related sectors. Furthermore, identifying ways to improve institutional efficiency - as done in Tanzania through the development of executive agencies – needs to continue to be a priority.

16) Improving the selection/identification of CSP performance indicators – that are heavily relied upon during CSP reviews – provides a key entry point to facilitate environment-poverty integration in CSP design. Furthermore, indicators used by donors to evaluate budget support (e.g., the PAF in Tanzania) provide an additional opportunity to mainstream environmental issues. It is recommended that EC environmental and related guidelines are strengthened to include suggestions on types of environmental performance indicators that country delegations may consider to use (e.g., by linking to MDGs) (see also Snel, forthcoming).

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Appendix 2: National- and EC-level questionnaires

²⁷ (*) - indicates individuals that were contacted previously (e.g., for a pre-CSP assessment)

**National-level questionnaire:
Streamlining poverty-environment linkages in the
European Community's development assistance**

Environment-poverty impacts/ Follow-up CSP review

Transport (116 Million Euro EC funds): A recent multilevel evaluation (conducted January/February 2005) indicates the following poverty-environment concerns associated with the development and rehabilitation of roads in the Shinyanga region (northwest Tanzania)²⁸. Please provide additional information and/or case studies on the following:

- *Land scarcity and property rights disputes* (linked with road development and rehabilitation in Tanzania due to the conversion of land into commercial farms along roads, land used for roads and borrow pits, etc.);
- *Deforestation* (associated with anticipated increase in charcoal trade due to improved accessibility);
- *Other poverty-environment concerns* (linked to road development/rehabilitation in Tanzania – e.g., how is improved accessibility affecting economic growth in the fishing, mining, tourism, industrial, and other sectors and in turn impacting the environment and peoples' livelihoods - their health, accessibility to land and water, employment, etc.?)
- Which geographic areas and peoples are affected most by the above environment-poverty concerns? Any regional environment-poverty concerns (spillover effects in Rwanda, Burundi, etc.)? Institutional capacity and challenges to assess, monitor, and manage environment-poverty impacts associated with roads development/rehabilitation in Tanzania?

Macro support (98.6 Million Euro EC funds):

Fishing sector: The recent multilevel analysis (2005) furthermore indicates the following poverty-environment concerns linked to the liberalization of the fishing sector. Please provide additional information and/or case studies on the following:

- *Conflicts over access and use to fishing waters and resources*
- *Declining fish stocks and food insecurity*
- *Contaminated water* (linked with poor sanitation at fishing settlement camps)
- *Deforestation* (linked to fuel wood consumption for fishing processing and at settlement camps)
- *Other poverty-environment concerns?*
- Which geographic areas in Tanzania are most affected by the above? Any regional impacts? Institutional capacity and challenges to assess, monitor, and manage the above noted concerns (e.g., at fisheries departments)?

Other sectors: How are macroeconomic reforms (liberalization, privatization, etc.) affecting the growth of other sectors (mining, tourism, industrial activities, etc.) and in turn affecting the environment and poor peoples' livelihoods. Provide case studies where possible. Institutional capacity and challenges to address these concerns?

²⁸ Note that the EC is key donor funding road development and rehabilitation in Tanzania. The Tanzanian government will prioritize how to use EC funds in its Road Fund and Tan Roads budget. Since the 1990's the EU has heavily funded Tanzania's Integrated Road Project that has included the development and rehabilitation of the Mwanza Shinyanga border-Tinde, Nzega-Isaka, Wazo Hill-Bagamoyo, Mwanza-Nyangugue, Dodoma-Morogoro, Dar es Salaam port access, and Kigoma-Nyakanasi roads).

Governance (31.9 Million Euro EC funds): How are decentralization and the public service reforms (e.g., the Local Government Reform Program) influencing institutional capacity to address the above noted environment-poverty impacts/concerns?

Environment-poverty streamlining/ Institutional evaluation:

National-level: What types of national-level institutional and policy opportunities exist to improve environment-poverty streamlining? Current environment-poverty streamlining in national policies (e.g., in PRSP, sectoral policies, at Ministry of Finance, in Poverty Reduction Budget Support Facility, etc.)? Synergies with other programs/projects? In which places and to which people should the policy and institutional changes be directed to? Tools?

Other contacts?

**EC-level questionnaire:
Streamlining poverty-environment linkages in the
European Community's development assistance**

Environment-poverty impacts/ Follow-up CSP review

Transport (116 Million Euro EC funds)²⁹: A recent multilevel evaluation (conducted January/February 2005) indicates the following poverty-environment concerns associated with the development and rehabilitation of roads in the Shinyanga region (northwest Tanzania). Please provide additional information and/or case studies and indicate how CSP investment is addressing the following:

- *Land scarcity and property rights disputes* (linked with land conversion along roads);
- *Deforestation* (associated with anticipated increase in charcoal trade due to improved accessibility);
- *Other poverty-environment concerns* (linked to roads development and rehabilitation in Tanzania)

Macro support (98.6 Million Euro EC funds):

Fishing sector: The recent multilevel analysis (2005) furthermore indicates poverty-environment concerns linked to the liberalization of the fishing sector. Please provide additional information and/or case studies and indicate how CSP investment is addressing the following concerns:

- *Conflicts over access and use to fishing waters and resources*
- *Declining fish stocks and food insecurity*
- *Contaminated water*
- *Deforestation*
- *Other poverty-environment concerns* (associated with the liberalization of the fishing sector)

Other sectors: How are macroeconomic reforms (liberalization, privatization, etc.) affecting the growth of other sectors (mining, tourism, industrial activities, etc.) and in turn affecting the environment and poor peoples' livelihoods (their access to resources, health, employment, etc.)? CSP investment to address these env.-pov. concerns?

Governance (31.9 Million Euro EC funds): How are decentralization and the public service reforms (e.g., the Local Government Reform Program) influencing institutional capacity to address the above noted environment-poverty impacts/concerns?

Environment-poverty streamlining/ Institutional evaluation:

EC-level: What types of opportunities exist to improve environment-poverty streamlining at EC-level to address the above noted environment-poverty concerns?

- **CSP Process:** How was the Tanzanian CSP developed? Was representation from the environmental lobby present? Were local communities represented? If so, who and how? How were environment-poverty issues integrated in the Country Strategy?

²⁹ Note that the EC is key donor funding road development and rehabilitation in Tanzania. The Tanzanian government will prioritize how to use EC funds in its Road Fund and Tan Roads budget. Since the 1990's the EU has heavily funded Tanzania's Integrated Road Project that has included the development and rehabilitation of the Mwanza Shinyanga border-Tinde, Nzega-Isaka (both in the Shinyanga region), Wazo Hill-Bagamoyo, Mwanza-Nyanguge, Dodoma-Morogoro, Dar es Salaam port access, and Kigoma-Nyakanasi roads.

- *CEPs³⁰ and SEAs³¹*: Are efforts underway to include a Country Environmental Profile (CEP) in the Tanzanian CSP following the mid term review? Why was a CEP not developed for the initial Tanzania CSP (2000)? Have Strategic Environmental Assessments (SEAs) been developed in Tanzania? What are CEP and SEA guidelines?
 - *Tools and awareness building*: What tools were used (or would be useful) to help integrate and raise awareness on environment-poverty issues in CSPs? Level of awareness on environment-poverty issues in the Country Delegation? What type of follow-up has there been by EC (Brussels) to facilitate environment-poverty streamlining in the CSP?
 - *Other*: Other opportunities at EC programming level to improve environment-poverty integration? Possible synergies?
 - *EC involvement in PRSP Process*: Does the Poverty Reduction Budget Support Facility – to which EC funds are channeled – check on environment-poverty impacts of proposed investment? Opportunities to improve environment-poverty integration? Synergies?
 - *EC investment*: Are the environment-poverty impacts of current CSP sector investment being monitored? If so, by whom and how? Opportunities for strengthening? Possible synergies?
- National-level:** What types of national-level institutional and policy opportunities exist to improve environment-poverty streamlining? Current environment-poverty streamlining in national policies (e.g., in PRSP, sectoral policies, at Ministry of Finance, in Poverty Reduction Budget Support Facility, etc.)? Synergies?

Other contacts?

³⁰ A CEP provides an overview of: the state of the environment; environmental policy, legislation, and the institutional framework, and recommended priority actions.

³¹ A SEA is an overarching assessment at programming level that integrates environment and development issues, provides information on alternative options, and identifies potential environmental impacts of proposed policies and plans.

Appendix 3: Tanzania CSP: Allocation under the 9th EDF

Transport: Tanzania CSP (116 million Euro)³²

The EC is one of the main donors funding the roads sector in Tanzania. The EC currently accounts for 36% of total funding for the road sector in Tanzania. The 9th EDF funds will be used to continue to support the development and maintenance of the main road networks (as defined by the government). More specifically, the Tanzania CSP currently intends to:

- support backlog maintenance of rural/regional roads (30Million Euro);
- support backlog maintenance of paved/trunk roads (30Million Euro);
- contribute to the Road fund³³ (30Million Euro);
- support institutional development/strengthening (5million Euro); and
- finance of the Zanzibar port (21million Euro) (EU desk - Ministry of Finance, 2005).

While 9th EDF resources were initially earmarked to support the development of the central corridor road linking Dodoma with Singida the government recently decided to use its own resources. Although the roads budget has been modified, a final agreement regarding EC support in the transport sector is not expected until end of 2005 (EU desk - Ministry of Finance, 2005). Furthermore, although the Tanzania EC delegation had initially hoped to move towards sectoral support - that would emphasize building national capacities to maintain roads vs. supporting the development or rehabilitation of specific roads - this is being challenged by requirements/guidelines (e.g., at Brussels level) and a general lack of coordination in the roads sector (e.g., various national agencies current deal with road works including the Ministry of Works, TANROADS, and Ministry of Regional Administration and Local) (Gerritson, personal communication, 2005; Woringer, personal communication, 2005).

The EC has traditionally taken the lead among donors to fund road development in Tanzania and there are intentions to continue to do so: “Transport has been at the center of EC assistance to Tanzania since the start of co-operation in 1975” (United Republic of Tanzania and EC, 2000). Under the 8th and 7th EDFs, substantial support to transport was allocated to Tanzania to – among other things – pave the Mwanza Shinyanga border-Tinde road and the Nzega-Isaka road (169km); rehabilitate the Wazo Hill-Bagamoyo road (43km); reconstruct the Mwanza-Nyanguge road (35km), and maintain the Dodoma-Morogoro, Dar er Salaam port access, and Kigoma-Nyakanasi roads.

Macro support: Tanzania CSP (114 million Euro)³⁴

EC funding for macro support will be in line with the PRSP objectives and will support macroeconomic reforms implemented since the mid 1990s. The bulk of macro support (109 million Euro) will be used to contribute to budget support through the Poverty Reduction Budget Facility (PRBSII) to which various donors - except for the World Bank and IMF - contribute³⁵. A remaining 5 million Euro is being allocated to finance the government’s PFMRP (Public Financial Management Reform Programme) (3 million Euro) and to improve Tanzania’s Poverty

³² This amount represents the initial indicative allocation in the Tanzania CSP to the transport sector. Indicative allocations after the Mid Term Review (March 2005) indicates that including transfers from previous EDFs this amount is higher at between 110 to 125 million Euro (EU desk and Ministry of Finance, 2005).

³³ TANROADS is a semi-autonomous road agency in charge of implementing road development, rehabilitation, and maintenance using private contractors and consultants. EC and other donor funds will likely be allocated to TANROADS “basket fund”.

³⁴ This amount represents the initial indicative allocation in the Tanzania CSP to macro support. Indicative allocations after the Mid Term Review (March 2005) indicates that including transfers from previous EDFs this amount is higher at between 159 to 186 million Euro (EU desk and Ministry of Finance, 2005).

³⁵ 30% of the overall PRSP budget is supported by donors, while the remaining 70% is supported by domestic revenue.

Monitoring System (2 million Euro) (EU desk - Ministry of Finance, 2005). EC funds allocated to budget support are transferred into the national treasury: tracking EC (vs. other donor) funding is therefore not possible. EC funds are being disbursed on an annual basis for 3 years under the PRBSII program that in the PRSP (United Republic of Tanzania, 2000) are:

- supporting the priority sectors identified in the PRSP: education, health, agriculture, roads, judiciary, and HIV/AIDs prevention;
- maintaining macro-economic stability/supporting on-going macroeconomic and structural reforms including:
 - privatization: growth sectors have been confined to the mining, tourism, and services sectors (United Republic of Tanzania, 2000, p. 11);
 - liberalization of foreign trade; and
 - stabilization objectives (e.g., to maintain domestic inflation).

Full details are provided on the PRSP objectives and macroeconomic reforms in the Tanzania PRSP (2000) and Tanzania's Interim PRSP (Annex III).

Governance: Tanzania CSP (31.9 million Euro)³⁶

Approximately 17.4 million Euro will be allocated by the EC to support a Capacity Building and Participatory Development programme. This programme is focused on building capacity at local government level in 7 districts including of district-level administrators, key district agencies, and local councils wards. Additional EC funding was requested by the Ministry of Finance to support the Local Governance Reform Programme (LGRP) (8.2 million Euro). An amount of 3.5 million Euro will furthermore be allocated to support a non-state actors project: a project that aims to evaluate how non-state actors participated in developing the Tanzania CSP and how participation may be strengthened in the future. In addition the EC will provide support for an anti-corruption strategy (3.5 million Euro) and to the National Audit Office (3.8 million Euro) (EU desk - Ministry of Finance, 2005; Paris-Ketting personal communication, 2003).

Education: Tanzania CSP (43.5 million Euro)³⁷

EC support in the education sector is aimed to improve gender-balanced and equitable access to basic education. EC funds are being allocated to support the implementation of the Education Sector Development Programme (ESDP). Under the guidance of the Basic Education Development committee (BEDC), the ESDP aims to improve the teaching and learning environmental of primary schools (through availability of teaching materil, quality of teachers, etc.) and has been instrumental in aboloshing school fees (that in turn is resulting in increased primary school enrolments) (see Tanania CSP for more detail on support being provided to the Education and other focal area) (EU desk – Mininstry of Finance, 2005).

³⁶ This amount represents the initial indicative allocation in the Tanzania CSP to the good governance (“non-focal sector”). Indicative allocations after the Mid Term Review (March 2005) indicates that - including transfers from previous EDFs - this amount is being adjusted to 81.35 million Euro (EU desk and Ministry of Finance, 2005).

³⁷ This amount represents the initial indicative allocation in the Tanzania CSP to the education sector. Indicative allocations after the Mid Term Review (March 2005) indicates that including transfers from previous EDFs this amount will remain at 43.5 million Euro (EU desk and Ministry of Finance, 2005).

III. European Commission (Brussels-level)

European Community's Poverty Reduction
Effectiveness Programme (EC-PREP) research project:
Streamlining poverty-environment linkages in the European Community's
development assistance

EP/R05/15

**Institutional and policy opportunities to improve environment-poverty streamlining
in the CSP process: institutional evaluation at EC level¹
Activities 11 and 12**

May 2005

Abstract:

Although the EC is committed through numerous EC policies and multilateral agreements to mainstream the environment in its development assistance, this paper indicates that - despite noteworthy developments in updating the Commission's environmental integration manual (currently being drafted) – that:

- 1) there are few specific guidelines to fully integrate the environment as a cross cutting issue in EC country strategies (particularly regarding the six focal areas of EC development assistance – i.e., trade, support to macro-economic policies, transport, rural development, regional co-operation, and good governance);
- 2) ambiguity with regards to whether environmental integration is mandatory in country strategies;
- 3) vague articulation regarding who is responsible/held accountable to integrate environmental issues in country programming; and
- 4) insufficient emphasis on environment-poverty considerations that should stand central in EC development assistance.

This report identifies key entry points to strengthen (and strategic gaps that are challenging) environment-poverty integration in the CSP process. This paper does so by reviewing the CSP process (e.g., how CSPs are developed and reviewed), evaluating existing procedures to integrate the environmental dimension in country programming, and assessing if current guidelines/tools underscore environment-poverty mainstreaming. This paper provides various long term institutional and policy recommendations including practical suggestions on: developing useable guidelines to integrate the environment-poverty dimension in focal areas of EC development cooperation (trade, support to macro-economic policies, transport, etc.); integrating poverty-environment linkages at the core of country programming; and developing clear strategic institutional procedures to improve accountability of environment mainstreaming in country programming.

¹ This report was written by Mathilde Snel (mathildesnel@hotmail.com), a consultant contracted by WWF. Supervision was given by Hervé Lefeuvre (WWF-EPO, Hlefeuvre@wwfepo.org). This work has been financed under a recent award granted to the World Wide Fund for Nature (WWF) European Policy Office (WWF-EPO) and WWF Macroeconomic Policy Office (WWF-MPO) granted under the European Community's Poverty Reduction Effectiveness Program (EC-PREP) initiative.

1. Background and methodology

This report is focused on identifying long-term institutional opportunities and policy changes needed to facilitate environment-poverty integration in future Country Strategy Paper (CSP) design². This study does so by:

- describing the CSP process (how the CSP developed and reviewed, who participates, etc.);
- describing how environmental (-poverty) issues are currently integrated in EC country strategies (what guidelines are used, who is responsible to integrate environmental issues in the CSP, whether environment-poverty linkages have been acknowledged, etc.);
- identifying key entry points/opportunities to improve and conversely strategic gaps that are challenging environment-poverty integration in the CSP process; and
- providing long term institutional and policy recommendations/practical solutions to strengthen mainstreaming of environment-poverty issues in country programming.

The assessment highlights the need for country programming:

- to fully integrate the environment as a cross-cutting issue in the six core areas of EC development cooperation (i.e., trade, support to macro-economic policies, transport, rural development, regional co-operation, and good governance);
- to recognize the important role that natural resources management plays sustaining economies and alleviating poverty; and
- to acknowledge key environment-poverty linkages, namely that people living in poverty:
 - significantly depend on natural resources for their livelihoods;
 - rely on rights to and access of land and natural resources;
 - are more likely to suffer the health consequences of deteriorating environmental resources; and
 - are more vulnerable to natural and man-made disasters (DFID et al., 2002).

The evaluation relies mainly on a review of documents, including of EC policies, Commission communications, environmental guidelines, and reports on the programming process. The paper draws especially on “The 9th EDF Programming process” (EC, 2000) - a key document used to introduce principles and procedures of programming under the 9th EDF - and the Commission’s “Environmental Integration Manual” (Environmental helpdesk, 2005; EC, 2001) - that sets out environmental mainstreaming procedures to be followed in EC programming as well as project management and policy making (Environmental help desk, 2005; EC, 2001)³. Interviews have been conducted where further information/follow-up was needed. While this report is focused on evaluating institutional and policy processes at the EC (Brussels) level, the report - where applicable - draws on country-level assessments that have been conducted by WWF EPO and MPO for select country strategies, namely for Tanzania, Rwanda, and Madagascar (Snel, 2004a; Snel, 2004b; Snel forthcoming, 2005)⁴. This activity fundamentally builds upon current efforts to improve environmental streamlining in EC development assistance – such as the updating of the EC environmental integration manual that is currently taking place.

² This report has been developed in completion of Activities 11 and 12 for research being conducted on “Streamlining poverty-environment linkages in the European Community’s development assistance” funded under the EC-PREP initiative.

³ Note that the 2001 Environmental Integration Manual is currently under review. Where updated documents are available, reference will be made to these. A draft of the manual – that is currently being updated - is posted on: <http://www.agreco.be/hde/EN/index.php>, while the 2001 Environmental Integration Manual is available at: http://europa.eu.int/comm/development/body/theme/environment/env_integ/env_integration/index1.html.

⁴ Country level assessments that have recently been conducted (Snel forthcoming, 2005; Snel 2004b) are funded under the EC-PREP initiative.

2. Scope of study

This paper is focused on evaluating environmental integration in the CSP process and emphasizes environment-poverty mainstreaming early in the programming process so that:

- harmful (direct and indirect) environment impacts can be avoided early on and
- opportunities can be identified and implemented to improve environmental/livelihood conditions.

While this paper underscores early phases of the programming process, reference is made to other stages of the programming cycle (e.g., evaluation). This study focuses on procedures, guidelines, tools, etc. used to integrate environmental issues in country programming (vs. project or sectoral programming⁵). Note that under the current 9th European Development Fund (EDF) (2002 – 2007) - through which country strategies are financed - an amount of 10 billion Euro is currently being allocated under programmable aid at the country level; an estimated 9 billion Euro of outstanding balances from previous EDFs is also being drawn upon (EC, 2000).

3. CSP process

A Country Strategy Paper (CSP) – officially referred to as a Country Support Strategy (CSS) - is a common agreement between a receipt country and the EC outlining EC development assistance to partner countries and an instrument to guide, manage, and review EC assistance programs (EC, 2000; WWF-EPO, 2004). The CSP includes a strategic analysis of the country's own development plans (e.g., PRSPs), existing donor activities, a response strategy, and implementation plan (EC, 2000). After having drawn a CSP, countries are obligated to develop a National Indicative Programme (NIP) which presents a budget for each of the selected focal areas (trade, macro support, etc.) (WWF-EPO, 2004). The NIP includes a work programme consisting of a summary/budget of the selected focal areas and a set of tables consisting of an intervention framework matrix on targets, objectives, performance indicators, etc. (EC, 2000)⁶. Activities financed through CSPs/NIPs are evaluated periodically through annual, mid-term, and end of the term reviews (see Figure 1 on the country programming cycle).

⁵ Sectoral programming seeks to provide direct support to initiatives defined by countries themselves by financing public sector budgets (e.g., government initiatives in health, education, and energy sectors). While the concept is still evolving, the objective of sectoral orientations is to support national ownership and to improve effectiveness of implementation and management of national and donor resources (EC, 2000). Sectoral programming use other guidelines which tend to vary between thematic and geographic programmes.

⁶ Note that in practice the CSP and NIP are currently often considered the same document and developed simultaneously (personal communication, Mukome, 2005).

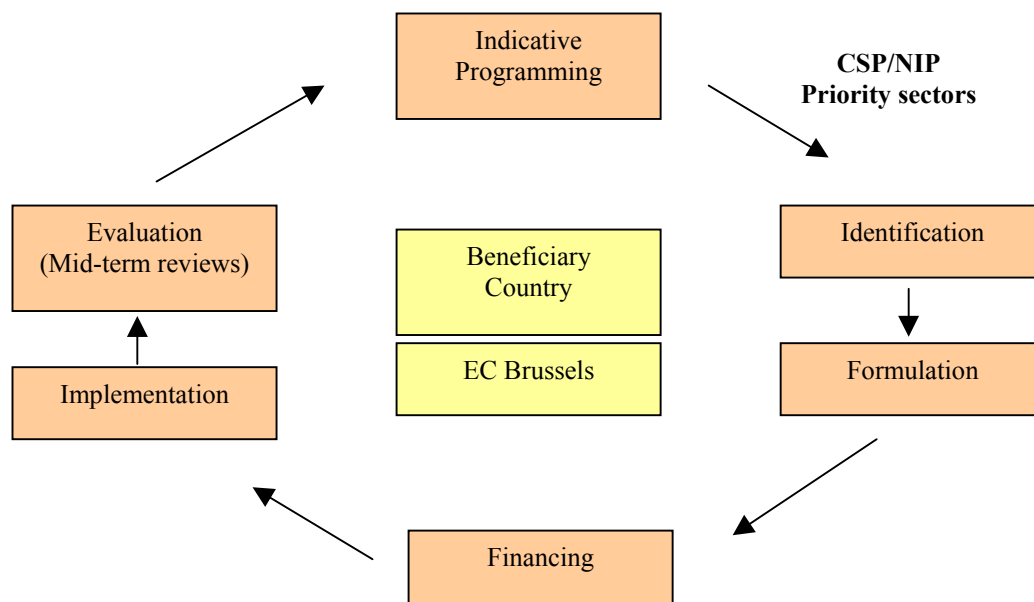


Figure 1: Country programming cycle (adapted from WWF, 2004)

The following sections describe in more detail the CSP process and focuses on how CSPs are developed (section 3.1) and reviewed/evaluated (section 3.2). This evaluation is drawn upon to identify key entry points to improve environmental mainstreaming in CSP design (section 5).

3.1. CSP development

The CSP - officially referred to as the CSS (Country Support Strategy) - is developed through a dialogue-driven process between the partner countries (e.g., government and civil society), the European Commission (e.g., country delegations and headquarters), and EU member states (EC, 2000). The development of the CSP entails the following key phases:

- phase 1: describing the partner country's own development strategies, plans, and priorities (e.g., in PRSPs);
- phase 2: analyzing the country situation;
- phase 3: elaborating the Community response that includes the development of an indicative work programme/budget for actions and programmes (typically discussed about 2-3 selected focal areas)⁷ (EC, 2000).

⁷ The indicative work plan/NIP includes the identification of performance indicators (by delegations and NAOs) upon which CSP reviews heavily rely (see section 3.2.a): "The indicators must be developed jointly, and accepted by both sides at the outset as being realistic and attainable in the foreseen time-scales." and "Rolling programming is based to a significant extent on performance measurement and reward... the development and application of suitable performance indicators from the outset, will be crucial (EC, 2000, p. 40 – part II). The performance indicators need to cover management of the EC programmes (used for the annual reviews), good governance, macro-economic management, and poverty focused on sustainable development (the latter three are used extensively during midterm and end of term reviews) (EC, 2000).

More specifically the National Authorizing Officer (NAO) spearheads the CSP/CSS process by facilitating discussions with ministries, departments, civil society, etc. to develop a draft CSS (personal communication, Mukome, 2005) (EC, 2000; personal communication, Mukome, 2005)⁸. The draft CSS (based on national priorities, strategies, etc.) is then presented to the European Commission (delegation and headquarters – including to the Quality Support Group (QSG)) and revised based on discussions between the Commission, NAO, and member states (see steps 1 and 2 in Figure 2). The revised draft CSS is (re-)submitted to EC headquarters (Brussels) and discussed with the EDF committee for formal approval (steps 3 and 4 in Figure 2). If approval is granted, the CSS/CSP is finalized and adopted by the country delegation and NAO (steps 5 and 6). If the CSS/CSP is not approved, additional discussions take place between the country delegations, headquarters, NAO, etc.. Environmental integration in the above noted steps is discussed in section 4.

3.2. CSPs reviews/evaluation

Initiatives that are proposed in the CSP are reviewed through a “rolling programme” of on-going, annual, mid-term, and end of the term reviews.

3.2.a. On-going and annual reviews: The on-going and annual reviews examine progress and may entail the re-allocation of financial resources. An annual review relies on the submission of an annual joint delegate/NAO report, a position paper, and a formal review meeting. Headquarters, Members States, and EIB (European Investment Bank) may participate in the formal meeting. Once relevant feedback has been transmitted from headquarters to the delegation, the results of the review are finalized and adopted by the delegation and NAO (EC, 2000). The “rolling programme” review is based significantly on performance indicators developed in the CSP/NIP (see footnote #7).

3.2.b. Mid-term and end of term reviews: The mid-term review is a more extensive strategic/performance review. The mid-term review requires the development of a position paper that:

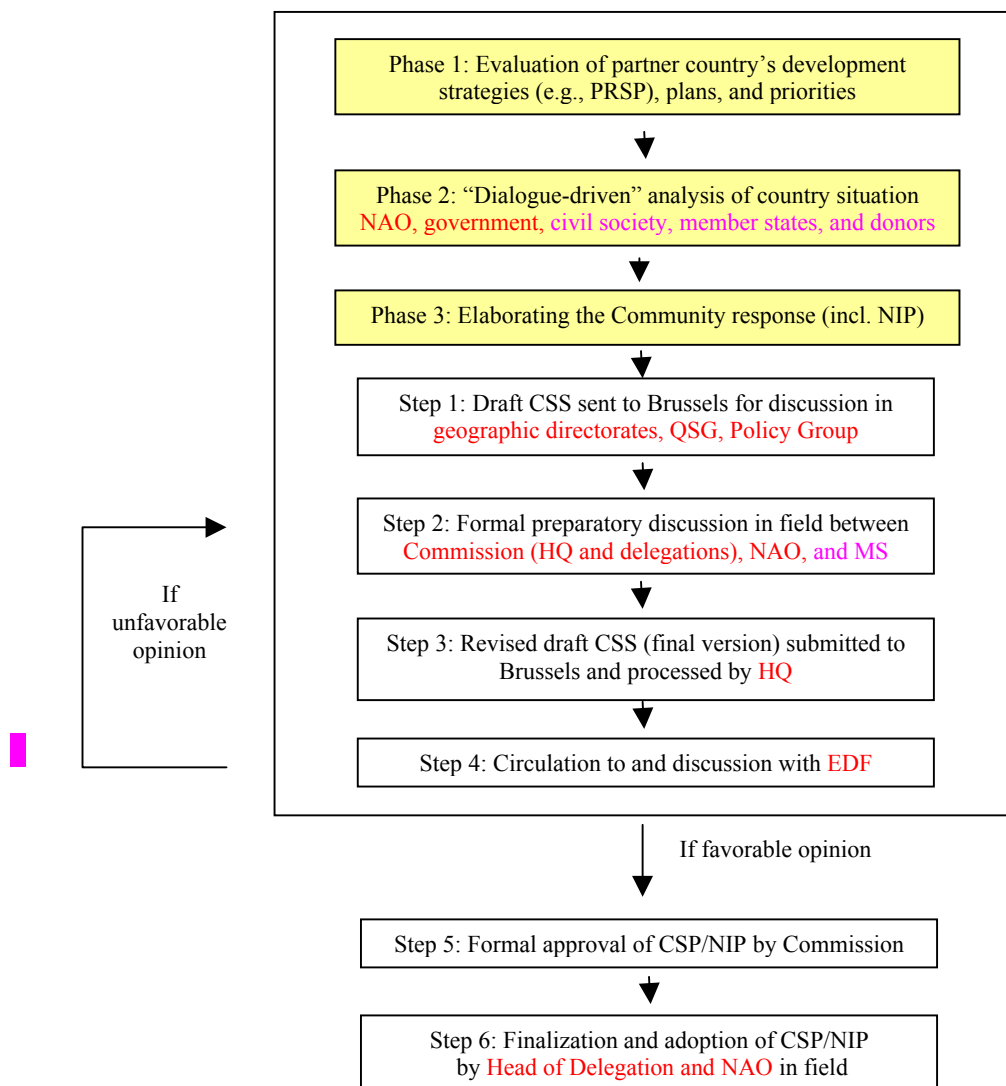
- articulates the effectiveness of the CSP based on the agreed performance measurement criteria (e.g., the performance indicators - see footnote #7) and
- the need to modify activities and resource allocation.

The position paper is prepared by the delegation in close consultation with the locally represented MS (Member States) and headquarters. The draft position paper is discussed by the headquarters policy group and in exceptional cases (such as if the mid-term review recommends major re-programming) is submitted to the Quality Support Group (QSG). Following the formal review meetings, the draft position paper is processed by headquarters and transmitted to the EDF Committee for formalization.

3.2.c. Ad hoc reviews: In addition to the above ad hoc reviews may take place. These may be initiated by the headquarters (e.g., an environmental audit) or requested by beneficiary states (e.g., if significant changes take place such as a natural disaster or conflict).

Figure 2: Development of the CSP (adapted from EC, 2000).

⁸ The Commission’s working document on “The 9th EDF programming process” notes that “civil society is probably the most important single factor in development...” and “An effective dialogue between public and private actors will not only help to generate consensus on priorities, but will also help identify who is best placed to deliver services” (EC, 2000, p. 15 - part II).



4. Environmental integration in the CSP process

Given the above CSP process, how then is the environment integrated in the CSP process. This section specifically describes current procedures that are used to integrate the environmental dimension in light of the above noted CSP process steps and evaluates:

- how the environment is mainstreamed in the CSP process (e.g., what guidelines/tools are currently used) (section 4.1);
- if the mainstreaming underscores environment-poverty linkages, particularly for each of the six focal areas of EC development assistance (section 4.2);
- policy requirements regarding environmental integration for country programming (section 4.3);
- who is responsible/held accountable to integrate the environment (-poverty) dimension in country programming (and follow up on the quality of environmental mainstreaming) (section 4.4); and
- awareness on and capacity to mainstream the environment-poverty dimension in the CSPs (section 4.5).

4.1. Environmental integration in the CSP process

Based on an extensive review, the environment is integrated in the CSP process through mainly the development of Country Environmental Profiles (CEPs) and Strategic Environmental Assessments (SEAs). Furthermore, although less emphasized checklists in the Commission's environmental integration manual and working document on "The 9th EDF programming process" provide a set of issues/questions - albeit general - that may be used to help integrate the environment dimension in country programming.

4.1.a. Country Environmental Profiles: A Country Environmental Profiles (CEPs) is a summary of the environmental, social, and economic situation and more specifically include background information on: the state of the environment (e.g., the physical environment, biological conditions, biodiversity, socio-economic conditions, and human health); current environment policies and legislation; existing institutional structures that deal with environmental issues; and environmental concerns in main economic sectors (e.g., agriculture and mineral resources)⁹. The 9th EDF programming process working document (EC, 2000) notes that the CEP "should be compiled especially before the finalization of the indicative work programme" (p. 102) (before step 4 in Figure 2). In practice this seldom occurs since the CSP and NIP are often developed simultaneously (personal communication, Mukome, 2005). While CEPs are typically developed during the programming phase, a CEP may also be used in other stages of the country programming cycle: e.g., to identify the need for environmental programmes and projects (the "identification" stage), to prioritize funds (the "formulation" stage), and to evaluate progress (e.g., in mid term reviews – the "evaluation" stage)¹⁰ (see Figure 1) (WWF-EPO, 2004). The CEP is attached as an appendix to the CSP and is intended to provide background information through which the environmental dimension may be systematically integrated in the CSP (see also section 4.1.c.).

4.1.b. Strategic Environmental Assessment: SEA is a systematic process for evaluating the environmental impacts of proposed policies, plans and programmes (EC, 2001). More specifically a SEA includes a description of proposed activities, evaluation of environmental impacts (including short- and long-term as well as likely and unlikely impact), identification of mitigation measures, and recommended mitigation measures (drafted in an environmental management plan). The working document on "The 9th EDF programming process" recommends that SEAs are conducted in the preparation of indicative programmes (NIPs) and notes that "by incorporating environmental issues at this early stage, programmes are more likely to contribute to sustainable development and to narrow the scope of environmental integration required downstream during programme implementation" (EC, 2000, p. 103). Although it is preferable to conduct a SEA early in the programming cycle, SEAs may also be used in other stages including to identify and formulate programmes under sectoral budget-lines (energy, fisheries, etc. sectors) and focal areas (macro support, transport, trade, etc.) (Environmental helpdesk, 2005)¹¹. While in principle a SEA provides guidelines to help mainstream environmental issues in country programming, in

⁹ <http://www.agreco.be/hde/Download/D13/CEP-TOR.doc>

¹⁰ Note that CEPs are not used for annual reviews. The Commission's working document on "The 9th EDF programming process" indicates that environmental considerations should be included in the annual report: "Critical environmental trends [in the annual report] should be analyzed and the adequacy of public policy responses to curb negative environmental trends should be assessed" and that "Specific measure taken to ensure the integration of crosscutting issues should be outlined" (EC, 2000, p. 29/30 – partII). Performance indicators are used to a significant extent in annual rolling programming (see section 3.2.a.).

¹¹ SEAs are, for example, encouraged for structural and sectoral programmes and for major new infrastructures.

reality SEAs have rarely been developed: in a study of 60 CSPs, only three countries made reference to a SEA and only one integrated a SEA (Davalos, 2002)¹².

4.1.c. Environmental integration in country strategies: Although emphasis is placed on developing CEPs and SEAs (see sections 4.1.a and 4.1.b), the Commission's working document on "The 9th EDF programming process" (EC, 2000) and environmental integration manual (Environmental helpdesk, 2005; EC, 2001) provide general checklists that may be used to help streamline the environmental dimension in the country strategies (see respectively Appendix 1 and 2). The new environmental integration manual draft (Environmental helpdesk, 2005) furthermore notes of the need to integrate environmental issues in prioritizing focal areas and identifying performance indicators: "In all these [focal] areas, crosscutting principles (respect for human rights, effect on poverty reduction, gender equality, environmental sustainability) will apply and be mainstreamed" (p. 35 – part II) and "[the basic criteria for the review process will require choosing indicators that entail]...poverty focusing and sustainability of development ([e.g.,] public spending on environmental management and natural resource conservation, national environmental trends, etc.)" (p. 42 – part II). A preliminary/draft list of indicators is provided in the draft environmental integration manual (Environmental helpdesk, 2005) that may be used to help evaluate environmental impacts for each of the six focal areas of EC development assistance: the preliminary list of pressure-state-response indicators are intended to facilitate the development of other indicators. This list of indicators has been drawn upon to develop a preliminary set of indicators to improve environmental-poverty integration in the CSP process (see section 6, point **m.**).

4.1.d. Other (outside of the scope of this paper)

Environmental impact assessment: If projects are proposed in CSPs that are anticipated to have adverse environmental impacts, EIAs must be developed (e.g., for roads development). An EIA is used to: identify, predict, and evaluate potential environmental impacts of a project; determine if modifications to improve environmental consideration are needed; and indicate if the project can be sustainably implemented.

Sectoral guidelines: The environmental integration manual includes guidelines for numerous specific sectors - used for orientations financed under sectoral budget-lines (see section 2 and footnote **#5**) - including for emergency aid, agriculture and food security, fisheries and aquaculture, protected areas and conservation, mineral resources, tourism, and transport (EC 2001b). The sectoral guidelines indicate key environmental issues that are associated with various sectors and provide approaches that may be used to help address the issues. The sector guidelines may be drawn upon to helping improve environmental integration in country programming - particularly for the EC development cooperation's six focal areas (see section 5.1).

4.2. Environment-poverty integration in the CSP process

The following assessment evaluates if the existing CSP programming guidelines/tools (as described above) underscore the need to integrate the **environment-poverty** dimension in country strategies, especially regarding each of the six focal areas of EC development assistance. The evaluation highlights the need to underscore the importance of natural resources management to sustain economies and more specifically to highlight key environment-poverty linkages, namely that people living in poverty:

- significantly depend on natural resources for their livelihoods;
- rely on rights to and access of land and natural resources;

¹² Several countries have, however, recently committed to carry out SEAs (e.g., Mozambique, Malawi, Botswana, Namibia, Nigeria, and Zambia) (Le Grand, personal communication, 2005).

- are more likely to suffer the health consequences of deteriorating environmental resources; and
- are more vulnerable to natural and man-made disasters (DFID et al., 2002).

The evaluation is structured about the three environmental guidelines used for country programming (as discussed in the previous section 4.1.): CEPs, SEAs, and environmental integration checklists. The evaluation does not evaluate project guidelines/tools (e.g., EIAs) or sectoral guides (used for orientations under sectoral budget-lines) which are outside the scope of this study (see previous section 4.1.d. and section 2).

4.2.b. CEP: Vague reference is given in the CEP guidelines on poverty-environment linkages: updated draft CEP terms of reference, for example, notes that: “The Profile will establish the key linkages between the environment and poverty reduction” and consider in the state of the environment assessment, “especially socio-economic conditions in relation to environmental issues (public health, vulnerability to disasters, access to natural resources and commodities)”¹³. Specific guidelines are not given regarding how poverty-environment linkages may be highlighted in the CEP particularly for each of the six focal areas. Similarly, the CEP guidelines do not underscore the importance of natural resources to economies and rather generally note of the need to “examine the integration of environmental concerns in [various sectors...: [e.g.,] agriculture, fisheries, forestry, industry, mining,...” (Environmental helpdesk, 2005)¹⁴.

4.2.c. SEA: Draft SEA terms of reference generally indicate the need to describe environment-poverty linkages noting the need to identify: “socio-economic and cultural conditions in relation to environmental issues (public health, vulnerability to disasters, and access to natural resources and commodities)”¹⁵. Although the environmental integration manual draft (Environmental helpdesk, 2005) does provide guidelines to develop SEAs (e.g., to evaluate CSPs and focal areas), specific guidelines are not provided on how the **environment-poverty** dimension may be integrated as a **cross-cutting issue** in CSPs¹⁶.

4.2.c. Environmental integration checklists: Although current environmental tools/guidelines for country programming emphasize the use of CEPs and SEAs (see above section 4.2.b and 4.2.c), checklists are provided to help mainstream the environment in CSPs (see section 4.1.c.). While the checklists do generally note of the need to evaluate the environmental impacts of focal area development, they do not provide specific guidance on how the **environment-poverty** dimension can be integrated as a **cross-cutting** issue in each of the six focal areas of EC development assistance.

4.3. Requirements

This section reviews whether integrating environmental issues in CSPs – as described above - is indeed mandatory. An extensive review indicates that while the development of CEPs and SEAs

¹³ <http://www.agreco.be/hde/Download/D13/CEP-TOR.doc>

¹⁴ Quotes from the draft environmental integration manual (Environmental helpdesk, 2005) have been translated from French. Note that while the CEP guidelines do not provide specific questions/indicators to assess the contribution of environmental resources to economic growth and poverty reduction, the introduction of the draft environmental integration manual (Environmental helpdesk, 2005) does describe how the Commission’s six focal areas are linked to environmental considerations.

¹⁵ <http://www.agreco.be/hde/Download/D13/SEAssector-TORdraft.doc>

¹⁶ Note, however, that the environmental integration manual draft (Environmental helpdesk, 2005) does provide SEA guidelines for initiatives supported under macro support and more generally for the other focal areas: the guidelines note of the need to evaluate environmental impacts, linkages between the environment and policy reforms, and institutional capacity.

– primarily used to integrate the environment in CSPs - is supported by the Commission their use/integration in country strategies is **not mandatory**. The Commission's Communication on "Integrating environment and sustainable development into economic and development co-operation policy: Elements of a comprehensive strategy" (EC, 2000b, p. 16) indicates that CEPs "*should* serve as an input to the country strategy document". Various other Commission documents - including the staff working papers on environmental integration (EC, 2001b) as well as "The 9th EDF Programming Process" working document (EC, 2000) indicate that CEPs and SEAs are "important tools" and "should" (vs "must") be developed in EC-funded country strategies¹⁷. The new environmental integration manual - currently being drafted - recognizes this limitation by stating that, "... recommendations to integrate the environment ... exceeds the lawful obligation" and that the manual should in turn be considered as a "guide on good practice" (Environmental helpdesk, 2005, p. 7)¹⁸. Such lax policy may be a key reason why few country strategies have included CEPs and SEAs: a review on environment mainstreaming in Country Strategy Papers indicate that only six out of 50 countries included a CEP, while only one country integrated a SEA (Davalos, 2002) (see section 7). Aside from CEPs and SEAs, the "9th EDF programming process" working document (EC, 2000) does indicate that, "environmental background information *must* be integrated in the country [(regional)] document" in which the CEP is considered to provide the bulk of background environmental information for such integration. Considering that CEPs have not been included in many country strategies - a key document used to integrate the environmental dimension in country strategies (see section 4.1.a) - it may be assumed that environmental integration in CSPs is in turn challenged.

4.4. Responsibilities/Accountability

Based on the above, who then is responsible to integrate the environment in CSPs, follow up on whether environmental issues have indeed been integrated, and check on the quality of environmental mainstreaming? The environmental integration manual indicates that, "[Geographic and technical officers] managing [the development of country strategies are] responsible for integrating [the] environmental [dimension], with assistance from the Commission's environment services or from external consultants" and that "the tasks are to be undertaken to the Commission official responsible for formulation, implementation, and evaluation of programming" (EC, 2001). Quality Support Groups (DG-RELEX), the environmental service (DG-Development), as well as country delegations are subsequently responsible to follow up and check on the quality of environmental mainstreaming in the CSP: "A preliminary draft programming document *must* be submitted to the environmental service for review" (EC, 2000,) and "improvement of the overall quality of the integration of environmental aspects [occurs] through Quality Support Groups." (EC, 2000b, p. 16) (see step 1 in figure 2)¹⁹. The new environmental integration manual draft includes an appendix noting "shared responsibilities" to integrate environmental issues in development strategies (Environmental helpdesk, 2005). No specific reference is, however, made on who is specifically **accountable** to integrate the environment in the CSP process: e.g., to develop (or initiate the development of) the CEP, to check to see if a SEA(s) is required (and if so develop a SEA), to integrate environmental background information in the CSP, etc. (see also section 4.3 above on "requirements").

¹⁷ Note, however, that recent Mid Term Review guidelines (EC, 2004) do require that CEPs (REPs) are included as a mandatory annex (EC, 2004; Le Grand, personal communication, 2005). Furthermore, although outside the scope of this study EIAs are required for projects that envision environmental impacts.

¹⁸ Quotes from the draft environmental integration manual (Environmental helpdesk, 2005) have been translated from French.

¹⁹ The new environmental integration manual more specifically notes that the country delegations, DG-RELEX, and DG-Development are responsible to check on the quality of CEPs, while country delegations should follow-up on the quality of SEAs (Environmental helpdesk, 2005).

4.5. Awareness and capacity

Respondents in country-level evaluations conducted as a part of this EC-PREP initiative (see section 1) were asked about awareness on Commission environmental integration guidelines and capacity (at delegation level) to address environment-poverty concerns. While there was significant interest to improve environment-poverty integration in future country programming, there is insufficient awareness on existing Commission environmental guidelines/tools (e.g., environmental integration manual) and a need to strengthen environment-poverty capacity (Snel forthcoming, 2005). Various EC documents have similarly indicated this weakness and note of the need to strengthen environmental capacity: “the capacity of officials with geographic or sectoral responsibilities needs to be enhanced so that they can adequately integrate environmental issues into their tasks” (EC, 2001b, p. 8)²⁰. The environmental helpdesk is offering a number of trainings on environmental integration (in EC development cooperation) to help raise environmental awareness and capacity²¹.

5. Key entry points to improve environmental integration in the CSP process

Based on the above evaluation a number of key opportunities to improve environmental mainstreaming in the CSP process have been identified (section 5.1). Conversely, strategic gaps that are challenging environmental integration in country strategies are described (section 5.2). This evaluation is subsequently drawn upon to develop long term institutional and policy recommendations/practical solutions to strengthen environmental integration in future CSP design (see section 6).

5.1. Opportunities

- a. The **updating of the environmental integration manual** - that is currently being drafted - **provides an important opportunity to strengthen environment-poverty integration in the CSP process.**
- b. Awareness on the need to fully integrate the environment as a cross cutting issue in country strategies **must target all actors involved in the CSP process** (as highlighted in red and purple in Figure 2 - e.g., NAO, QSG, EDF committee, etc.).
- c. **Improving environment-poverty streamlining in PRSPs** - upon which EC funded CSPs are significantly based – **significantly facilitates environment-poverty integration in EC development strategies**²².
- d. **Improving the selection/identification of performance indicators** – that are heavily relied upon during CSP reviews – **provides a key entry point to facilitate environment-poverty integration in CSP design.**
- e. **Existing sector guides** (currently used to support orientations financed under sectoral budget-lines) **and indicators** (being drafted in the new environmental integration manual) **provide key entry points to strengthen guidelines/indicators to facilitate environment-poverty integration** in EC country strategies (particularly for each of the six focal areas).
- f. **The Commission’s environmental helpdesk trainings provide an important opportunity** through which awareness may be raised on environment-poverty mainstreaming in country strategies.

5.2. Challenges

²⁰ The EC furthermore recognizes that in relation to its environmental commitment levels, EC staff resources are considerably lower than in other major donor organizations (EC, 2000b).

²¹ <http://www.agreco.be/hde/EN/index.php#>

²² See also Snel, forthcoming, 2005.

- g. **Current environmental guidelines** used in country programming **focus too strongly on the development of a Country Environmental Profiles and Strategic Environmental Assessments**. Insufficient attention is given to the importance to fully integrate the environment as a cross-cutting issue in country strategies, particularly for each of the six focal areas of EC development assistance (macro support, good governance, rural development, transport, etc.).
- h. Despite EC policy commitments, **mainstreaming environmental issues in country strategies (e.g., through CEPs and SEAs) is not mandatory**. Commission documents, for example, indicate that CEPs and SEAs are “important tools” and “should” (vs. “must”) be used.
- i. Although Commission procedures indicate generally who is responsible to mainstream environment in country strategies, **the current procedures do not indicate who is held accountable**: to, for example, develop the CEP, determine if a SEA is needed, and integrate environmental background information in the CSP, etc (see also point **h**).
- j. **Current environmental guidelines insufficiently highlight key environment-poverty linkages** and the critical role that natural resources play in supporting economies. Other linkages such as between natural resources and conflict are similarly inadequately underscored.
- k. While the environmental integration manual is a very useful reference and includes numerous environmental tools, **the manual is cumbersome and needs a clear pragmatic strategic approach to fully integrate environmental issues in CSPs** (see also point **g**).
- l. While **Non State Actors** (NSA) participate in developing the draft CSS/CSP, their **participation needs to be strengthened throughout the CSP process** (including in CSP reviews).

6. Long term institutional and policy recommendations/practical suggestions

Based on the above review various recommendations/practical suggestions have been made that highlight long term institutional and policy opportunities to improve environment-poverty streamlining in CSP design and EC country programming.

- m. **A strategic approach is needed to fully integrate the environment as a cross cutting issue in the CSP process**. This entails:
 - **Developing a useable set of CSP environmental integration guidelines/indicators** that underscores poverty alleviation through sustainable development. The guidelines/indicators will need to:
 - highlight key environment-poverty linkages (see also next point);
 - use a simple and straightforward format;
 - be explicitly linked to the Commission development cooperation’s six focal areas (i.e., trade, regional economic integration, macro economic support, access to social services, transport, and rural development); and
 - fundamentally build upon existing Commission environmental integration efforts (e.g., environmental integration manual and environmental helpdesk).

It is recommended that environmental guidelines, indicators, processes, etc. currently used by other donors are reviewed and drawn upon in formulating a usable set of environmental guidelines for country programming (Appendix 3 includes a preliminary review of environmental guidelines used by some donors). Developing (and agreeing) upon a set of environmental integration guidelines/indicators will require extensive dialogue and involvement of especially staff (with expertise in environment and development) at the Commission, donor agencies, NGOs, etc.

Testing sample environmental guidelines/indicators in various countries may be a useful approach to check the usability of proposed environmental guidelines in varying contexts. Appendix 4 and 5 include a preliminary set of questions/guidelines (not exhaustive) that may be used to: 1) fully integrate the environment as a cross cutting issue in country strategies and 2) mainstream environment-poverty considerations in four (of the six) EC focal areas (i.e., rural development, macro support, transport, and government)²³. The preliminary indicators are intended to improve the selection of performance indicators upon which CSP reviews heavily rely (see section 3.5). Preliminary indicators have been highlighted in Appendix 5 in red.

- Ensuring that the environmental guidelines address fundamental issues at the center of poverty/environment dependencies:

The environmental guidelines/indicators will need to critically highlight poverty/environment linkages and the important role that natural resources management plays in sustaining economies and alleviating poverty. More specifically, the guidelines need to emphasize: ownership structures, land tenure regime, control of/access to natural resources by especially the rural poor; health consequences of natural resources deterioration on especially the poor; the link between natural resources and conflict; and institutional/policy capacities to address environment-poverty issues.

- Clearly articulating who will be held accountable to integrate the environment-poverty dimension in CSPs.

Environmental commitments in existing TORs of Commission staff, NAOs, etc. (see Commission stakeholders of the CSP process highlighted in red in figure 2) will need to be revised and strengthened to indicate who will be responsible/held accountable to integrate the environment-poverty dimension in country strategies (e.g., who will be responsible to develop the CEP, check to see if a SEA(s) is required, follow-up on whether environment-poverty issues have been mainstreamed in the CSP, etc.).

- Addressing environmental capacity. Current capacity in the Commission needs to be strengthened. This includes adjusting TORs, recruiting staff with environment and development backgrounds, and possibly developing environment specialist units at delegation level (as some other donors have done).

- Intensifying the involvement of Non-State Actors in country programming.

This entails strengthening civil society participation (e.g., environmental NGOs, local interest groups, etc.) in drafting CSSs/CSPs, developing indicative programmes (e.g., NIP), and reviewing performance of country programmes (e.g., midterm reviews).

- n. **Environmental integration in EC country strategies must be mandatory.** Without explicitly requiring environmental integration, a continuation of poor environmental mainstreaming in EC country programming is inevitable. Existing guidelines, TORs, policies, procedures, etc. need to explicitly state that environmental issues **must** be fully integrated in CSPs. This will entail revising existing Commission guidelines (the 10th EDF programming procedures, environmental integration manual, etc.) as well as modifying policies (adding an environmental assessment requirement to Appendix IV of the Cotonou EU-ACP agreement, etc.).
- o. Once the environmental guidelines have been revised and formalized, **a strategy needs to be developed to raise awareness** on the new environmental guidelines. This includes raising awareness to Commission staff, NAOs, etc. (see stakeholders of the CSP process in figure 2 highlighted in red and purple) on the: **requirement** and **responsibilities** to

²³ Preliminary guidelines still need to be developed for the regional cooperation and trade focal areas.

mainstream the environment-poverty dimension in CSPs, new environmental integration procedures, and need to highlight key environment-poverty linkages.

- p. **Developing strategies to increase environment-poverty awareness and capacity in host governments.** In addition to strengthening capacity at the EC-level, the EC (and other donors) need to fundamentally support initiatives to strengthen environment-poverty awareness and capacity in host countries. This may entail EC (and other donor) programme/project assistance to: improve environment-poverty integration in national strategies and policies (e.g., PRSP); raise awareness on poverty-environment linkages; and increase institutional capacity to address environment-poverty concerns. EC programme assistance should be strongly linked with the good governance focal area towards strengthening environmental management capacity and supporting good **environmental** governance programming in host countries²⁴.

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Appendix 1: List of questions in the Commission’s working document on “The 9th EDF programming process” to integrate environmental background information in the country programming document (EC, 2000, p. 104/105).

- “Does the document contain a summary review of the environmental background information collected?
 - Does the economic prediction take account of environmental constraints to economic growth or create new environmental constraints (e.g., availability of freshwater resources for industry or agriculture, regenerative capacity of marine fisheries)?
 - Will further development in the focal sector have an impact on the intensity of utilization of natural resources in other sectors (cross-sectoral effects, e.g., transport sector development in remote areas on exploitation/conversion of tropical forests)?
 - Does the programme contain actions to address environmental threats to economic development (e.g., capacity building to tackle environmental problems in focal sectors, monitoring of environmental indicators)?
 - Are there sufficient environmental safeguards to ensure sustainability of programmed activities (e.g., environmental impact assessments, environmental monitoring)?
 - Does the proposed programme include environmental actions that support economic and social development (e.g., sewage treatment for better health, fight against soil erosion for increased agricultural productivity)?
 - Are provisional environmental screening categories provided for projects identified to indicate the type of assessment/action required downstream (see screening lists in the Environmental Integration Manual)?
 - Are there sufficient measures to implement environmental strategies established within the country or region (e.g., adequacy of public expenditure/human resources on environmental protection agencies)?
 - Are global environmental issues requiring political dialogue addressed in the programme (e.g., protection of threatened species/habitats/landscapes, energy efficiency issues)?
 - Does the proposed programme support the implementation of environmental conventions or other environmental priorities (in particular as related to the Convention to Combat Desertification, Convention on Biological Diversity and Framework Convention on Climate Change)?
 - Does the programme address environmental problems in the country, and include environmental mitigation and environmental management measures?”
- Appendix 2:** Checklist of environmental issues to be included in the country- (regional-) related programming in the (EC, 2001).

Appendix 2: Checklist of environmental issues to be included in the country- (regional-) related programming in the Commission's environmental integration manual.

I. Checklist in old version of the environmental integration manual (EC, 2001)

“Country-related Programming

For country-related programming, the environmental review should ensure that:

- the document contains a summary review of the environmental background information assessed in ‘Task 1. Collect environmental background information in consultation with the environmental service’;
- the economic predictions take into account environmental constraints to economic growth;
- the programme contains actions to address environmental threats to economic development;
- there are sufficient environmental safeguards to ensure sustainability of programmed activities;
- the proposed programmes includes environmental actions that support economic and social development;
- provisional environmental screening categories are provided for identified projects (see ‘Projects’) to indicate the type of assessment/action required downstream;
- there are sufficient measures to implement EC environmental strategies established within the country or region;
- global environmental issues requiring political dialogue are addressed in the programme;
- the proposed programme supports the implementation of ‘International Conventions’ or other environmental priorities; and
- the programme contributes to addressing environmental problems in the country, through including mitigatory action, environmental management measures or supporting environmental capacity development.” (EC, 2001, p. 65)

II. Checklist in new draft version of the environmental integration manual – currently being updated (Environmental helpdesk, 2005).

List of issues that may be used to check if the environmental dimension has been integrated in the CSP (translated from French):

“....

Description of objectives of the EC co-operation: including [a description of] the objectives of sustainable development and the [d’inversion??] of environmental degradation;

Political agenda of the beneficiary country: including [a description of] the political importance of the environment as identified in the CEP.

Analysis of the political, economic, and social situation: although the environment is not explicitly mentioned in this heading, [the environment] needs to be considered as a pillar of sustainable development that influences economic and social issues of the population, as well as the viability of existing policies.

Summary of past or current EC cooperation: information on Member States as well as other donors programs: environmental lessons drawn and prior actions that have accounted for these.

Response strategy of the EC, coherence with EC policies, complementarity within the EC and with other donors, sector selection, approach and objectives that will be implemented, and (notably) environmental implications, including the need to reinforce capacity.

Indicative programme (NIP)...” (Environmental helpdesk, 2005, Annex 8)

Appendix 3: Review of existing environmental guidelines and indicators used by select donors.

I. Department for International Development (DFID)

DFID: Environmental Screening Notes (ESN) are mandatory for all DFID interventions (projects or programmes) with a value of over 1 million pounds sterling: “Funding above the 1 million pounds sterling threshold will not be released without an ESN on file. Even ESNs that indicate no environmental impact should be sent” (DFID, 2003, p. 17).]. The screening notes are directly linked to DFID’s mission to eliminate poverty and highlight key poverty-environment linkages. The ESNs use a simple format and clear institutional procedures regarding who is responsible to complete, screen, and submit the screening notes. The environmental guide provides various checklists that indicate opportunities and risks associated with interventions (e.g., rural development, trade, direct budget support, water resources management) – these may be referred to in developing the ESN. The checklists highlight how environmental impacts may affect the livelihoods, health, etc. of people living in poverty. Extracts from a number of checklists of relevance to EC focal sectors have been included below] – see pages 26-51 for checklists by development theme).

Rural development

“Opportunities

-
- Poor people’s rights over – and access to – both land and common pool resources can be strengthened, for example, with land tenure reform.
-

Risks

-
- Agricultural development may encroach on forest, wetlands and rangelands and threaten the livelihoods of poor people”...
- Inappropriate applications of pesticides and fertilizers remains common, threatening the livelihoods of the poor as well as the environment.” (DFID, 2003, p. 42)
-

Trade

“Risks

- Changes in trade patterns can create major shifts in demand and production... These can have significant effects on local livelihoods, increase pressure on scarce natural resources and impact on biodiversity, water, and soil quality. Adverse impacts often have disproportionate impact on the poor.
- The concerns of the poor are often missing from international debates on trade. The poor may not be able to articulate how policies are impacting on their livelihoods and the resources on which they may depend. ...” (DFID, 2003, p. 33)

Direct budget support

“Risks

- The nature of budget support – where the funds contributed by donors cannot be separated from the national budget – involves an inherent risk. The government may undertake development activities that are environmental damaging, unsustainable, or threatening to the livelihoods of the poor. This is an issue which donors need to be sensitive.
- There may not be a sustainable environmental management framework in place to ensure that the PRS will be implemented in a way that promotes environmental sustainability.

Key aspects of a suitable framework include: an autonomous national agency responsible for environmental management, an active parliament and civil society, suitable regulations and laws that can be enforced” (DFID, 2003, p. 29).

II. Swedish International Development Cooperation Agency (SIDA)

Under a Directive of SIDA’s Director General, it is indicated that a strategic environmental analysis “shall be made” for all SIDA funded country strategies (SIDA, 2002). Guidelines for the strategic environmental and sustainability analysis highlight the relationship between poverty, health, vulnerability and the environment; economic policy and the environment; rights, gender equality and environment; conflict and the environment; and institutional commitment and capacity to sustainable development. Various questions are identified in the SIDA guidelines that may assist the environmental analysis of the country strategy. An extract of these questions follow that may be of relevance towards improving environment-poverty streamlining in EC country strategies.

“ 1. Poverty and the environment

...

- How are the poor affected by the destruction of the environment?
-
- Is access to, and the quality of, clean water improving or deteriorating among the poor?
- ...
- How well is poverty reduction and improvements in the environment and use of natural resources integrated in the country’s Poverty Reduction Strategy (PRS) or equivalent national development plan?

....

2. Economic policy and the environment

....

- Is the country’s economy based on the unsustainable consumption of raw materials?
- ...
- Are policy instruments (rules, taxes) used to contribute to sustainable use of natural resources?
-
- Does the country finance its debts with the aid of unsustainable exploitation and export of natural resources?
- What effects have structural adjustments and economic reforms had on the environment?
- Are there any initiatives taking place in the country that are analyzing and trying to understand these issues?

....

3. Health and the environment

....

- What are the greatest environment-related health problems? How do these affect the poor?
- ...
- How does water pollution and the availability of water affect the health of the population?
- ...
- Are there any initiatives taking place in the country that are analyzing and trying to understand these issues?
- ...

4. Population and the environment

....

- What proportion of the scarce natural resources (for example drinking water, firewood) does the present population consume?
- ...
- How does population growth affect access to water, cultivable land and fuel?
- Do movements of people take place that cause/are caused by considerable degradation of the environment?
- ...
- Are there any initiatives taking place in country that are analyzing and trying to understand these issues?

...

5. Capacity development, institutions, legislation and the environment

...

- ...
- Does the country's legislation promote the sustainable use of resources?
- ...
- Are there rights for the use and ownership of natural resources that promote sustainable use?
- Does corruption exist ... that seriously contribute to environmental problems and the unsustainable exploitation of natural resources?
- Does civil society participate in the process of change towards a sustainable society?
-

6. Rights, equality and the environment

...

- Does the country receive or "produce" environmental refugees?
- Do violations of human rights in the country contribute to environmental problems?
- ...
- Are there inequities that result in the unsustainable use of resources... ?
- Who owns/controls the natural resources that the poor depend on?
- ...
- Does the situation in the country in respect of equality (for example in access to land) contribute to environmental problems?
- ...

7. Risks of conflict, vulnerability and the environment

...

- Is the scarcity of resources (for example cultivable land, water, fuel) increasing in total? For certain groups?
- ...
- Are corruption and general social and political dissatisfaction becoming increasingly widespread?
- Are there any signs of an increase in the number of disputes in respect of land ownership?
- How are the risks arising from floods, storms, drought and other nature-related disasters being handled? ...
- ...
- What importance does HIV/AIDS have in respect of increasing vulnerability in relation to the use natural resources?

8. The environment situation and sustainable development

....

-

- To what extent is the country dependent on its natural resource base?
-
- Does the country share important natural resources and ecosystems with other countries?
- ...
- Is the country part of an internationally important ecosystem (for example a catchment area, coastal zone)?
- Does the country have any species threatened with extinction that are of global importance?
- ...

9. The work being done by the partner country for sustainable development

...

- Does the country have a national strategy/plan of action for sustainable development? Is it linked to a strategy/plan for poverty reduction..?
-
- Are the strategies/action plans supported by a good, strategic environmental analysis?
- ...
- Has the country undertaken to follow, or has it started implementing, the international environment-related conventions/protocols on climate, desertification, biological diversity or wetlands?
-
- Has the country drawn up natural resource accounts that follow up trends in the country's natural capital?" (SIDA, 2002, p. 5-17).

Appendix 4: Preliminary guidelines to integrate the environmental-poverty dimension in CSPs (builds on DFID, 2004).

The following questions underscore that the environment-poverty dimension is integrated as a cross-cutting issue in country strategies. The set of questions highlights key environment-poverty linkages and builds upon a recent DFID (2004) publication on the “Contribution of the environment and natural resources to pro-poor growth: a checklist examining these issues within a poverty reduction strategy”. For a more detailed set of questions refer to DFID (2004)

Has the CSP addressed the following questions?:

- How dependent is economic growth on the country’s main natural resource sectors (e.g., forestry, fisheries, tourism, and mining)? Percentage in terms of GDP?
- Is there recognition of the economic costs associated with environmental degradation (e.g., through air and water pollution)?
- How dependent are people living in poverty to natural resources (e.g., legal and illegal use of timber, charcoal, tourism, and agriculture)? How much employment is generated to especially poor people in natural resource sectors (e.g., agriculture, fisheries, and forestry)?
- Is there a clear understanding of key environment-poverty linkages in the CSP, namely that poor people significantly depend on natural resources for their livelihoods and suffer more if environmental resources are damaged (in terms of health and exposure to natural and man-made disasters)?
- What access to and control over natural resources and land do especially poor people have? How are people living in poverty benefiting from development in the focal areas (e.g., through benefit sharing schemes)? How are these issues being addressed in the country strategy? How can initiatives be adapted to better address these issues?
- Is development of the focal area deteriorating natural resources (review for each of the selected focal area – refer also to questions posed in Appendix 5)? If so, how is this anticipated to affect people’s health (particularly of the rural and urban poor who are more likely to be exposed to environmental degradation)? What initiatives are being proposed in the CSP/NIP to address these issues? How can initiatives be adapted to better address these issues?
- Is access to or control over natural resources a major issue? May this result (or is this resulting) in conflict? Are conflicts being funded (or anticipated to be funded) through natural resources extraction? What initiatives are being proposed to tackle these issues in the country strategy? How can initiatives be adapted?
- What institutional capacity exists to ensure that poor people will benefit from growth in the focal areas (review for each of the focal areas – refer also to questions posed in Appendix 5)? What types of labour standards are there? Institutional capacity to enforce these? How are these issues being addressed in the development strategy? How can initiatives be adapted to better address this issue?
- What types of environmental policies, strategic plans, etc. exist? Institutional capacity to enforce these? How are the issues being addressed in the CSP (e.g., are initiatives in good *environmental* governance being supported)?
- Are there issues of illegal resource use and corruption? How are these issues being addressed in the CSP? How can initiatives be adapted to better address these issues?

Appendix 5: Preliminary CSP guidelines/indicators to mainstream the environment-poverty dimension in the EC focal areas. [Consider this a brainstorm of sorts (!)... still needs a lot of work... In coming up with a more comprehensive sample set of guidelines/questions would suggest that be conducted a more extensive review of current guidelines (as started to do in Appendix 3) and develop a sample/preliminary set of questions with individuals involved in environment mainstreaming in development strategies (e.g., at DFID, SIDA, OECD, World Bank, etc.)]

The following preliminary CSP guidelines/indicators have been developed to facilitate the integration of the environment-poverty dimension in four (of six) Commission focal areas (i.e., rural development and food security, macro economic support, transport, and good governance)²⁵. The set of questions/indicators highlight environment-poverty linkages and emphasize the importance of natural resources management to sustain economic growth. Indicators have been highlighted in red²⁶. The preliminary guidelines draw upon existing EC and other donor environmental guidelines and indicators (Environmental helpdesk, 2005; SIDA, 2002, DFID, 2003; DFID, 2004).

Rural development and food security

- Do the rural development initiatives seek to strengthen especially poor people's rights over and access to both land and common pool resources? [land acts/policies]
- How are activities supported in this focal area envisioned to impact the environment (water, forests, wildlife, fish, air, etc.)? [nutrient balance, fertilizer use, duration of fallow, erosion gullies, water level, pollution levels in ground water, forest biomass, bush fires, size of (fish) spawning stocks, etc.] How in turn will this affect especially people living in poverty that significantly depend on natural resources:
 - their livelihoods?, [harvest levels, size of (fish) spawning stocks, fish catches, charcoal production, etc.]
 - health? [exposure to ground water contamination from fertilizers, occurrence of skin ailments/disease due to dangerous exposure/contact to fertilizers, etc.]
 - if applicable, vulnerability to natural (or man made) disasters? [occurrence of bush/forest fires, etc.]
- How are the initiatives seeking to address the above indicated issues? How can the proposed initiatives (in the focal area) be strengthened/adapted to minimize negative environment/livelihood impacts? [agroforestry, fertilizer restrictions/safety codes, fishing net restrictions, strengthening field extension, etc.]
- Did especially the rural poor participate in identifying/prioritizing initiatives in this focal area? How were women and marginalized groups involved? [involvement of women, elderly, children, and the disabled]
- How are the initiatives (supported in this focal area) seeking to improve the rural poor's access to services, credit, opportunities, etc.? How are people living in poverty anticipated to benefit from the proposed rural development initiatives? [number (and clients) of community banks, money available through community banking/credit schemes, support to women entrepreneurs, etc.]
- How are the initiatives (supported in this focal area) seeking to strengthen local governance and tackle corruption? [local mechanisms of participation, coadministration and management of natural resources, transparent fiscal accounting, etc.]

²⁵ Preliminary guidelines/indicators still need to be developed for the two remaining EC focal areas (i.e., trade and regional economic integration).

²⁶ The proposed indicators have drawn upon indicators developed by OECD (2004) and proposed in the environmental integration draft manual.

- Links to conflicts (e.g., over access to/control over natural resources)? [conflicts relating to natural resources]

- ...

Macro economic support

- What policy changes/structural adjustments are being promoted through macro economic support (trade liberalization, privatisation, etc.) [structural reforms]? How are these envisioned to impact key economic sectors (mining, fishing, tourism, agriculture, forestry, etc.)? How in turn is it anticipated to impact the environment (water, forests, wildlife, fish, air, etc.) [intensity of forest resource use, forest area management and protection, volume (or monetary value) of timber harvested, volume (or monetary value) of minerals extracted, concentration of heavy metals in water, number of tourists, number of new hotels, total pollution emissions, quality of water and air, water shortages (frequency, duration, and extent), size of (fish) spawning stocks, etc.]? How in turn are the environmental impacts envisioned to impact the livelihoods of poor people that significantly depend on natural resources:

- their access to/control over natural resources and land? [legal support to rural communities, number of courts in rural areas, number of court cases granted regarding natural resources/land tenure issues, etc. ???]
- health? [number of cases of cholera and other water borne diseases, occupational hazard guidelines/policies, access to potable water, etc.]
- if applicable, vulnerability to natural (or man made) disasters? [strikes/local riots due to mining/forestry operation, (forced) relocation, etc.]

- How are people living in poverty benefiting from the structural adjustments (e.g., through benefit sharing and employment)? What types of labour policies exist? Is there capacity to enforce the above mentioned policies? [benefit sharing policies, employment generated through benefit sharing, amount of money transferred to communities through benefit sharing schemes, labour policies, number of fisheries/forestry/agricultural extension in relation to local population, population connected to sewage treatment plants, etc.]

- Were initiatives conducted to facilitate the integration of environment-poverty issues during the development of the Poverty Reduction Strategy Paper (PRSP)? During the implementation of the PRSP? If so, what were/are these? Has the PRSP been evaluated regarding its mainstreaming of environment-poverty issues? If so, how? How did the PRSP perform? Has environmental performance been integrated into national accounting mechanisms (e.g., are environment-poverty indicators included in public expenditure reviews, status of green accounting, etc.)? [environment-poverty indicators in PRPS and/or public expenditure review, status of green accounting, etc.]

- What types of environmental policies, national strategies, etc. exist? Does institutional capacity exist to enforce environmental policies? What is being done by the EC (and other donors) to strengthen good environmental governance? [see indicators under the good governance focal area]

- Links to conflicts (e.g., over access to/control over natural resources)? [conflicts relating to natural resources]

- What initiatives are being proposed in the CSP to address the above noted issues? How can these be adapted to better address the environment-poverty concerns? [promoting certified logging and mineral extraction, green accounting, renewable energy, public access to environmental information, local community participation, etc.]

- ...

*Transport*²⁷

- What are anticipated (long term and short term) environmental impacts relating to activities supported in the transport focal area (on forests, water, wildlife, biodiversity, soil, air, etc.)? [deforestation (about roads), car emissions, disturbance of wildlife corridors (about roads)] How will these environmental impacts in turn affect the livelihoods of the poor people:
 - their access over/control of natural resources and land? [number of people relocated (by local population??)]
 - health? [population exposed to road accidents, number of speed bumps (per km2 road)]
 - if applicable, vulnerability to natural (man-made disasters)? [local riots, etc.]
- How will the initiatives proposed in the transport focal area affect economic sectors that rely on natural resources (this includes in-country as well as regional impacts)? [number of tourists, mineral extraction, timber extraction, etc.] How in turn will this effect the environment and people's livelihoods (see above)?
- Did especially the rural poor participate in identifying/prioritizing initiatives in this focal area? How were women and marginalized groups involved? [participation of women, elderly, children, and the disabled]
- Is there just compensation (e.g., where people have been forced to relocate)? Institutional capacity to ensure that compensation is fair and provided in a timely fashion? [amount of money allocated to compensate for relocation/damage, time required for compensation, etc.]
- Have initiatives been included in this focal area to help ensure that especially the rural poor will benefit from the transport activities? [allocation of tax on fuel to community projects, ??]
- Linkages to conflicts (e.g., over access to/control over natural resources)? [conflicts relating to natural resources]
- How can initiatives in the transport focal area be adapted to address the above noted concerns? [proposed route does not open up closed forest areas, protect wildlife corridors, traverse through national parks and protected areas, considered indirect impacts, etc.]

- ...

Good governance

- What types of environmental strategies and policies exist? Is there capacity to enforce environmental policies? [environmental policies, number of fisheries/forestry/agricultural extension in relation to local population, co-management of natural resources, level of decentralization]
- Upon which natural resources does the economy depend? What institutional capacity exists to manage and monitor these natural resources - at national to local levels (e.g., capacity at fisheries, forestry, and agricultural departments to collect, analyze, and disseminate data)? [status of national census, presence of an environmental/poverty information system, environmental curricula (at elementary school to university level), number of fisheries/forestry/agricultural extension in relation to population, national data and archiving standards, public access to (environmental) information, etc.]
- What types of policies are in place to safeguard especially the rural poor's access to and control of natural resources and land? [land act/policies]
- Are policies in place to hold institutions, companies, etc. accountable for environmental/livelihood damage (water pollution, relocation of communities, etc.)? Is there sufficient capacity to enforce these policies/follow-up? [routine monitoring of industrial emission]
- Are there policies in place to help ensure that especially the rural poor benefit from natural resources-dependent economic growth (e.g., through mining and tourism expansion)? Are there

²⁷ Note that the EC requires that EIAs are developed for many infrastructure initiatives (such as the development of roads).

benefit sharing policies in place? If so, what has the success been of such policies been? Is there a need to strengthen enforcement/follow-up? [benefit sharing policies, employment generated through benefit sharing, amount of money transferred to communities through benefit sharing, etc.]

- Were initiatives conducted to facilitate the integration of environment-poverty issues during the development of the Poverty Reduction Strategy Paper (PRSP)? During the implementation of the PRSP? If so, what were/are these? Has the PRSP been evaluated regarding its mainstreaming of environment-poverty issues? If so, how? How did the PRSP perform? Has environmental performance been integrated into national accounting mechanisms (e.g., are environment-poverty indicators included in public expenditure reviews, status of green accounting, etc.)?

[environment-poverty indicators in PRPS and/or public expenditure review, status of green accounting, etc.]

- Are current (anticipated) conflict linked to access over/control of natural resources?

- How is the government tackling issues of corruption, including corruption linked to natural resources extraction? [transparent fiscal accounting (company and government level)?,...]

- What types of environment/livelihood impacts are anticipated for the initiatives proposed in the CSP? [see proposed indicators under other focal areas]

- How are initiatives described in the CSP helping address the above noted issues? How is the CSP supporting good *environmental* governance? How can initiatives be adapted to strengthen good *environmental* governance? [supporting public access to environmental information, strengthening routine (environmental) data collection and analysis (at fisheries, forestry, water, statistics etc. departments), supporting green accounting, green certification (for logging, mining, etc.), renewable energy initiatives, etc.]

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■

IV. Awareness raising