WWF

POLICY BRIEF

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Valuing Nature for the Sustainable and Equitable Growth of the Lower Mekong

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Fish from the Mekong Delta wetlands provide a valuable food source for local communities.

OVERVIEW

COUNTRIES: Laos, Cambodia, Vietnam and Thailand

MECHANISM TYPE: Natural capital valuation

KEY POLICY MESSAGE: Within a green economy approach, natural capital is recognized and managed as a fundamental pillar of economic and social well-being. In order for natural capital to be recognized and managed in a sustainable way in the Lower Mekong region, these countries must maintain their regions rich natural resource base and ecosystem integrity. A first step towards doing this is to ensure that there is adequate information available on the value of natural capital and the ecosystem services it provides. WWF's 2013 report, *Economic Analysis of Ecosystem Services in the Lower Mekong Region*, found that there is a lack of information on almost all ecosystem values in the region. Government investment is required to generate information on the economic value of natural capital via credible scenario modelling and associated economic analysis. This information needs to be built through a much broader based dialogue with key stakeholders and experts in the region. Policy-makers must demand the information from natural capital valuation studies to help with their decision-making and be willing to incorporate these values into land use and development planning. Finally, information from these valuation exercises must be used to establish economic incentives and related policies in ways that encourage improved stewardship of natural resources. Removing perverse incentives and instituting positive ones, such as encouraging the sustainable use of natural capital through a range of policy, price and market mechanisms, should be integrated into government structures and private sector practices and norms.

INTRODUCTION

The *natural capital*[1] of the Lower Mekong countries is of huge economic importance for the region. However, governments, businesses and investors often fail to account for the value of natural capital in their decision-making.

This is partly because of a lack of credible, specific evidence of its value. As a first step towards filling this gap, WWF published a comprehensive report, *Economic Analysis of Ecosystem Services in the Lower Mekong Region*[2], in 2013. It draws on the best available published data and techniques to quantify the economic value of ecosystems in Cambodia, Laos, Thailand and Vietnam at local, national and regional level, and provides an analysis of the costs and benefits of managing them sustainably now and in the future.

WWF has produced this report as a starting point for dialogue with decision makers for improved natural resource management. Key questions for this dialogue include: how stakeholders think ecosystems are likely to change in the Lower Mekong? And what future ecosystem services must be guaranteed if Lower Mekong countries are to achieve the economic growth and social development goals set out in their green growth strategies and policies? In order to answer such questions, investment is required in generating more information on the economic value of ecosystem services, and joining the dots between this information and how this information can be applied to assist policy decisions. This case study brief provides a summary of the research produced by the WWF 2013 report and what it means for policy-makers in the Lower Mekong region in terms of concrete actions and recommendations.

PROBLEM STATEMENT

Economies in the Lower Mekong are growing rapidly.[3] Not only is the region seeing escalating land, resource and infrastructure demands but also changes to natural systems from climate change. These pressures, combined with a rapidly growing human population[4] and increasing integration into regional (i.e. with the ASEAN) and global markets, mean that biodiversity and ecosystem services in the Lower Mekong are, if not valued and reflected properly in decision making, on a pathway towards gradual decline and degradation.

1 The stock of natural resources such as land, water and biodiversity, which yields a flow of valuable ecosystem goods or services.

[2] The report covers the countries of the Lower Mekong Countries only (i.e. Thailand, Laos, Vietnam and Cambodia) and hence why reference is not made to the Greater Mekong which also covers Myanmar and parts of Southern China.

[3] For example, according to the World Bank GDP growth in Cambodia and Vietnam between 2010 to 2014 was 7.4% and 5.4% respectively.

[4] For example according to the World Bank population growth in Cambodia and Vietnam between 2010 to 2014 was 5.08% and 3.09% respectively.

The countries of the Lower Mekong have recognized the pressure on natural resource stocks, and have announced their vision of a "poverty free and ecologically rich" region to be achieved through "a green, inclusive and balanced economy". [5] The Gross Domestic Product (GDP), the established and conventional measure of growth and economic progress used within these countries, however, does not capture progress against this vision for the region. In green economies, natural capital is incorporated into the measurement of societal progress and equity, and recognized and managed as a fundamental pillar of economic and human well-being. The region must demonstrate success in living up to commitments to maintain ecosystem integrity before claims to having 'greened' their nations growth can be made. A first step in meeting this commitment is to ensure that there is adequate information available on the socioeconomic importance of ecosystems and the services that they provide. Natural capital valuation is a critical component towards enabling decision makers to make more informed decisions when it comes to maintaining natural ecosystems and ensuring the right development/conservation tradeoffs are made. If the contribution of healthy ecosystems to equitable economic development and growth is made visible to all, then choosing between keeping those benefits or losing them becomes a transparent choice rather than a de facto outcome of development.

THE ANALYSIS

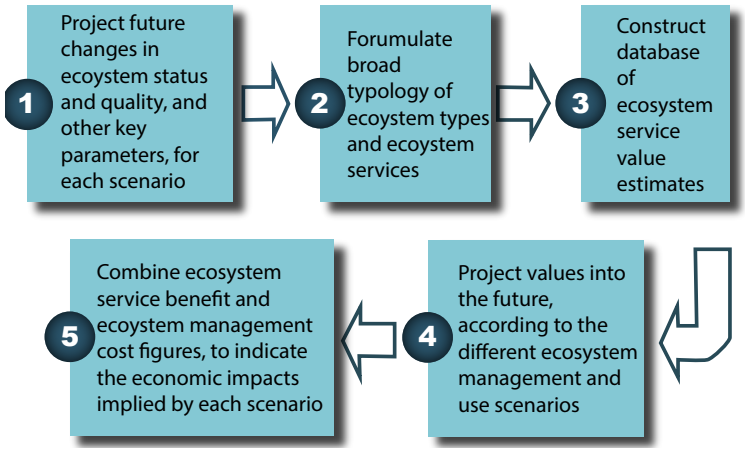


FIGURE 1: A summary of the analysis undertaken to model the change in ecosystem services and their economic values in two scenarios, Business as Usual and Green Economic Growth, in the Lower Mekong countries up to 2035.

Approach

Four broad categories of ecosystems were chosen as the focus of this report: forests, freshwater wetlands, mangroves and coral reefs. By reviewing the available literature

and building up a database of estimates of the value of the various services that these ecosystems provide, an average per-hectare value for each ecosystem was developed. The current area of each ecosystem, and its average per-hectare value, was compared with projected areas, and values, for 2035 in two scenarios – Business As Usual (BAU) and Green Economic Growth (GEG). Each scenario presents a simple model of how the use of land and resources, and the area and quality of ecosystems, might change over the next 25 years in the Lower Mekong countries. The analysis approach is summarised in Figure 1.

The BAU scenario is a dominant development paradigm which emphasizes short-term economic gains at the expense of longer-term sustainable development. In practical terms, this typically means that natural capital is not recognized significantly enough to instigate its effective management and so biodiversity and ecosystem services are consequently degraded, converted and lost. The GEG scenario, however, depicts what will happen if rates of ecosystem loss will decline and therefore provides a strong argument to maintain and restore natural capital and biodiverse landscapes.

By maintaining healthy ecosystems, we can ensure the provision of valuable ecosystem services.

Results

The scenario analysis makes it clear that there are considerable gains to the region from GEG rather than a continuation of BAU. At the regional level, the net present value added from pursuing such a strategy is estimated at almost US$10.5 billion (Table 1). As ecosystems are maintained and improved, all ecosystem services increase in value over the 25-year period modelled. Although the value added to harvested production is not insignificant, with a net present value (NPV) of more than US$2.5 billion, regulating and supporting[6] services contribute by far the greatest proportion – around three-quarters – of this value (Figure 2). Importantly, these values can also be thought of as the costs of policy inaction over the next 25 years; the losses that will accrue as a consequence of failing to reverse the current trends of ecosystem degradation and underinvestment.

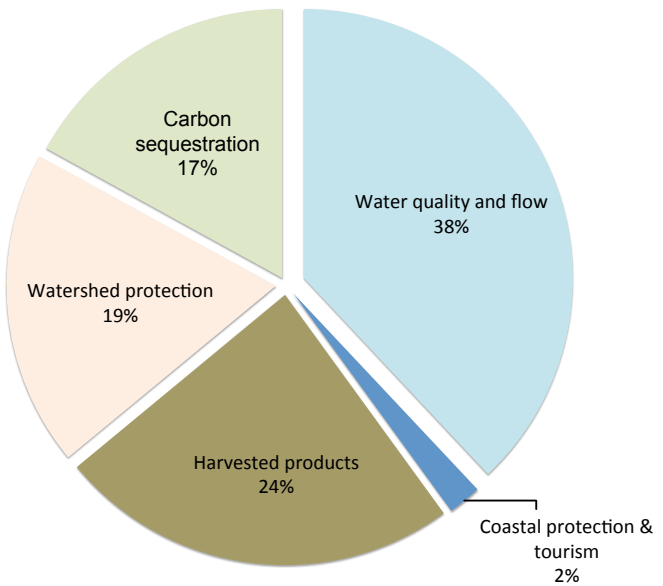
[6] Two of the four types of ecosystem services; regulating services are those whose benefits are obtained from the regulation of natural processes (e.g. water filtration, climate regulation, crop pollination) and; supporting services keep ecosystems functioning (e.g. nutrient cycling, soil formation).

TABLE 1: Annual regional ecosystem services values under BAU and GEG (Net Present Value, USD billion)

	BAU	GEG	Value added
Natural forests	64.19	69.87	5.68
Freshwater wetlands	45.82	50.41	4.59
Mangroves	1.10	1.19	0.1
Coral reefs	0.63	0.71	0.08
Total	111.74	122.19	10.45

	BAU	GEG	Value added
Harvested products	26.39	28.91	2.52
Watershed protection	25.34	27.33	1.99
Carbon Sequestration	19.14	20.94	1.79
Water quality and flow	39.38	43.35	3.96
Coastal protection	1.32	1.48	0.16
Coastal tourism	0.17	0.19	0.02
Total	111.74	122.19	10.45

FIGURE 2: Regional Net Present Value added by GEG by ecosystem service type



POLICY OPTIONS

In order to recognize the benefits of a GEG scenario, governments will need to address the discrepancy between unsustainable short-term economic gains and managing natural capital to provide long-term benefits. This can be achieved through establishing incentives that make sustainable investments competitive. A critical approach by governments, along with conservation partners such as WWF, must be to structure economic incentives and related policies in ways that encourage good stewardship of the resource base. Removing perverse incentives and instituting positive ones, such as encouraging the sustainable use of natural capital through a range of policy, price and market mechanisms, should be integrated into government structures and private sector practices and norms. Determining which mechanism to implement and how they should be structured would require economic and legislative analysis at country and regional level. The most common economic tools that decision makers can use for capturing and mainstreaming the value of natural capital across their development planning, projects and policies include: Budgetary allocations to natural capital maintenance and restoration; environment-related/green taxes; earmarking non-environment-related domestic taxes; international taxes; green bonds; and green subsidies.

The use of valuation tools to generate information on natural capital values can support a transition to a Green Economy if they are embedded in government policy-making processes. To do this the governments of the Lower Mekong should consider incorporating natural capital values:

- In all social and economic analysis of regulations and policies (i.e. cost-benefit analysis, regulatory options analysis);
- In determining the amounts payable on the basis of a willingness-to-pay or willingness–to-receive schemes in cases where an economic instrument has been decided (e.g. Payment for Ecosystem Services);
- In the development of land use plans; and
- In constructing natural heritage accounts[7].

[7] For further information on use of natural capital valuation by government see: http://www.iddri.org/Publications/Valuation-without-action-On-the-use-of-economic-valuations-of-ecosystem-services and https://www.wavespartnership.org/sites/waves/files/images/Moving_Beyond_GDP.pdf

RECOMMENDATIONS AND NEXT STEPS

The findings from the report present a first attempt to generate indicative and rough estimates that will give some idea of the broad magnitude of the value of the services provided by different ecosystems in the Lower Mekong region. It is to be hoped that as better and more accurate information becomes available, these figures can be updated and improved.

The opportunities evident from conducting this research are:

- A credible scenario modelling exercise and associated economic analysis demands a broad-based dialogue on realistic scenarios with key stakeholders and experts in the region. This study needs to be considered as a starting point for that dialogue – not a final set of results.
- A range of individual ecosystem valuation techniques should be employed for further valuation exercises, as each technique is suitable for different situations and it is generally considered best practice to deploy as broad a range of techniques as possible.
- Findings from valuation exercises needs to be communicated in a form that is practical, policy-relevant and credible to decision-makers, and which leads to real changes in both development and conservation policy and practice.

As such, WWF makes four recommendations for government and civil society actors:

1. In parallel with mapping the Lower Mekong's natural capital stocks, invest in generating more information on its economic value. This will support the effective implementation of the national green growth strategies and policies under development in the Lower Mekong countries and help decisions makers make more informed decisions and development tradeoffs. This investment should support the work that academic institutions and NGO's are also doing in natural capital valuation.
2. Continue the work of natural capital valuation and scenario modeling within a broader context with key stakeholders and experts in the region. Only through this wider consultation and input can realistic scenarios of future development, conservation and ecosystem trends be described.
3. Policy-makers must request valuation studies at relevant to the scale and context of particular policy issues. Practitioners must engage in a dialogue with end users of valuation data in order to design and produce valuation studies that support land use and development planning issues.
4. Undertake analysis, and implement findings, of the most appropriate mechanisms for mainstreaming the value of natural capital into strategies and policies of the Lower Mekong countries.

References

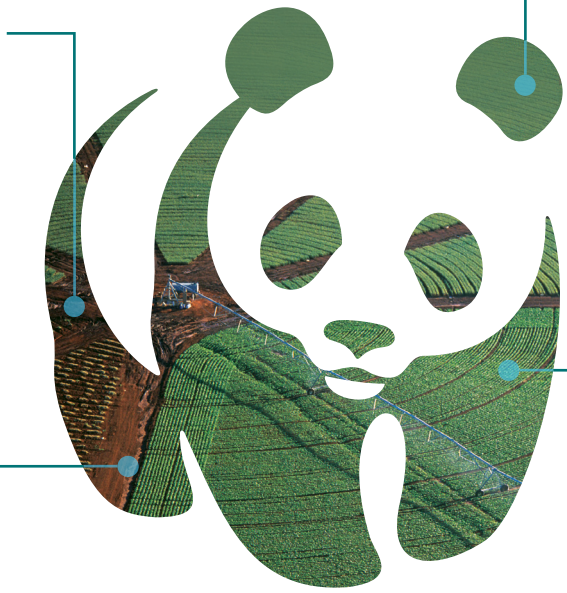
WWF (2013). The Economic Analysis of Ecosystem Services in the Mekong Basin. Available at: http://d2ouvy59p0dg6k.cloudfront.net/downloads/report_economic_analysis_of_ecosystemservicesnov2013.pdf

10.45 BILLION

Annual value added by switching to a Green Economy approach in the Greater Mekong, in USD

300 MILLION

Population of the Greater Mekong region



2.52 BILLION

Annual value added to harvested production when switching to a Green Economy approach in the Greater Mekong, in USD

38%

Regional Net Present Value added by GEG for ecosystem services that maintain water quality and flow

CASE STUDY SERIES: TESTING SUSTAINABLE FINANCING FOR CONSERVATION IN THE GREATER MEKONG

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Why we are here
To stop the degradation of the planet's natural environment and to build a future in which humans live in harmony with nature.

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