



Sustaining the environment, sustaining people



Sustaining the environment,

■ Degradation or overexploitation of the natural asset base of a community is often directly linked to the deepening of poverty. The converse can be equally true – reversing the degradation, conserving, and building up natural assets is a way back from a bleak future to an improving and sustainable one.

WWF, the global conservation organization – with almost 2,000 active projects, often in the poorest parts of the world – sees increasing evidence that well-designed conservation programmes, which involve local communities and consider their rights, needs, and aspirations are helping tackle poverty in some of the world's most vulnerable communities. In the search for alternatives to environmentally threatening activities, new income and employment opportunities are opening up, the risks communities face from adverse markets and events are being reduced, and more confident and capable communities are negotiating better outcomes from outside bodies.



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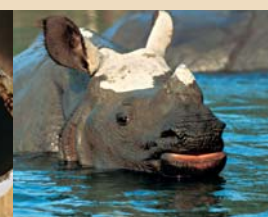
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sustaining people | Case studies on reducing poverty through conservation

In China, we are helping the sustainable development of the Lake Dongting area, the country's second largest lake, by setting up alternative livelihood projects for farmers who lost their homes and income following the dramatic flooding along the Yangtze River in the 1990s. Today, with WWF's help, the income of many of these farmers has doubled.

The Sibuyan indigenous community of the Philippines has been successful in securing tenure and improving natural resource management in and around the Mt Guiting-Guiting Natural Park, giving them the incentive to conserve the forest's resources and providing a source for sustainable livelihoods.

Our work in the Senegalese coastal town of Kayar shows that support for traditional fisheries controls and the establishment of effective marine protected areas means more and bigger fish, more food, and more to take to market.

With often surprisingly small amounts of external assistance and intervention, communities have become more resilient and avoided seemingly inevitable futures of increasing poverty linked to continuing degradation of their resource base. Indeed, as the following case studies demonstrate, natural resource management and environmental restoration are now holding out the hope of improved quality of life, income, and security to poor communities in what is emerging as a key mechanism for the delivery of the Millennium Development Goals.



Chief Emeka Anyaoku
President, WWF International



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Restoring fish stocks

■ More than 1,000 species of fish are found along the West African coast, together with dolphins, whales, endangered marine turtles, monk seals, and one of the world's most important coral reefs.

On this coast, the Senegalese town of Kayar was once made prosperous by the surrounding sea. But as fish stocks started to collapse, so did the town's prosperity. According to El Hadj Abdoulaye Ndoeye, an 80-year old town elder, a day at sea used to provide enough fish for the entire community. Now, two days of fishing can often yield nothing.

Clear culprits include European Union trawlers fishing off the coast, which although contributing much of Senegal's foreign exchange, are

devaluing the country's natural resource base. Another problem is the abundance of traditional fishing boats from coastal Senegalese communities, some of which use highly destructive fishing methods and inappropriate equipment that can not be sustained by the fishery.

Since the recent establishment of a partly locally-managed marine protected area, which will allow for some fish to recover, Kayar has become a signal of hope for other communities in a similar situation. In addition, local communities have banned destructive fishing methods like dynamite fishing and the discard of non-biodegradable nets. Well-organized community groups have also taken more control of the way fish are transported from Kayar's beach to the markets in the capital, Dakar. This has increased the return from fishing, contributing to a better fishery and a better environment.

WWF and partner organizations have also been assisting the Senegalese government to negotiate better outcomes from its offshore fishery. In Kayar, for instance, WWF has been supporting efforts to reverse the decline of the artisanal fishing sector for the benefit of both the community and the sea. The hope is that the town can become a model that can be replicated in other fishing centres in West Africa.

There are, of course, continuing challenges with industrial fishing trawlers straying into artisanal zones and protected areas, and migrant fishers do not always observe the bans and restrictions that are imposed. But Kayar proves there is a link between environmental protection, sustainable resource management, and improved livelihoods.



In Kayar, WWF has been supporting efforts to reverse the decline of the artisanal fishing sector for the benefit of the community and the sea. As a result of a recently established marine protected area, some fish stocks are now likely to recover.

Renewing floodplains for people and wildlife

■ Dongting Lake – China’s second largest freshwater lake and home to important fish and waterbird populations – has been the focus of a WWF project to ensure conservation of the area’s wetlands through sustainable development, including several alternative livelihood projects.

This is part of WWF’s work with the Chinese government on the Yangtze River and includes the removal of flood dykes around thousands of hectares of floodplains, once used for intensive rice cultivation and urban settlements. WWF China has offered small grants and technical assistance for farmers who lost their fields to set up organic pig, duck, and fish-breeding facilities.

At the 100 ha Xipanshanzhou restoration site, for example, the project supported several of



these alternative income-generating activities for 147 families, which saw their incomes more than double. In 2000, income attributable to the project was 1,465 yuan (about US\$180) per household, in 2003 it was 2,881 yuan (US\$355) per household, and in 2004 it was 3,196 yuan (US\$395) per household. A survey showed households



A motivated local community and support for alternative livelihoods contributed to the restoration of some of China’s floodplains and increased wealth for local communities.

participating in the project had a higher income level than those not participating in the project and that higher incomes were received across different income levels, across gender, and across age levels.

In addition to income, other important benefits have been generated as a result of this project. Most importantly, the overall well-being of participating farmers improved in terms of housing conditions, use of biogas, number of telephones, nutrition, healthcare, and improved ecological conditions. For example, some farmers who lost their houses due to floods have been able to build new ones as a result of the project, while more than half of the families now use biogas for cooking, which has an added benefit of saving firewood and freeing the time of women for more productive activities.

The project has also contributed to the sustainability of a number of small businesses, many of which have received certification for their organic oranges, tea, lily flowers, and vegetables by China's Organic Development Centre. Furthermore, an association headed by local farmers has taken the responsibility for livelihood development and biodiversity conservation in the area, while commercial organic agriculture companies are providing support and marketing advice to farmers and Xipanshanzhou's organic agriculture association.

A motivated local community, favourable national policies, partnership building, adaptive management, innovative approaches, and support for alternative livelihood transition has not only contributed to the restoration of the floodplains, they have demonstrably increased wealth for local communities.

It is the increased level of confidence among indigenous people that WWF regards as one of the most significant results of the project as they are now more knowledgeable about environmental laws, and their rights and responsibilities.

SIBUYAN
THE PHILIPPINES

Rec

■ Many large intact forests in the Philippines designated as protected areas overlap with the ancestral claims of indigenous peoples. This has resulted in significant conflicts leading to increased poverty and resource degradation. Central to the issues of conservation, development, and fulfilling indigenous peoples' rights is security through land tenure.

WWF, in close collaboration with other non-governmental organizations (NGOs) and government agency partners, has assisted the indigenous group *Sibuyan Mangyan Tagabukid* on Sibuyan Island – long viewed by the local government as illegal squatters – in securing tenure and improv-



ognizing land rights

ing natural resource management in and around Mt Guiting-Guiting Natural Park.

Forests cover nearly 75 per cent of Sibuyan Island, making it a striking exception in the Philippines as a whole, where a meagre 2 per cent of the country is still forested. But the island is also densely inhabited with many people relying on the forest for timber, agricultural land, firewood, and other essentials. While the authorities are trying to dissuade indigenous people from pursuing these activities within the park, WWF-Philippines has focused on providing assistance for developing alternative livelihoods that are sustainable, and at the same time, ensuring that their rights are recognized.

Without proof of land ownership, the indigenous community on Sibuyan Island – numbering some 1,600 people – faced threats of

eviction from the newly protected Guiting-Guiting area. Also, without the prospect of secure land tenure, there would be no incentive for the indigenous people to conserve the forest resources and abandon destructive activities. For these reasons, the WWF-supported project decided to give high priority to providing assistance to the communities in the upland zones in and around the protected area.

In 1997, several land tenure options were presented to the indigenous community. After a long, participatory process, and with the assistance of several other NGOs, the Certificate of Ancestral Domain Title (CADT) was finally awarded to the Sibuyan people on 17 January 2001 after the claim was checked by local authorities to verify plots for agriculture, burial grounds, sacred groves, and hunting and harvesting areas covering rivers, streams, and mountains. After acceptance of the claim, public notices were placed over the island, and advertised in the provincial newspaper.

Villagers agree that awarding the title was an historic event. After a series of community dialogues, a land-use plan has been developed which identifies indigenous conservation areas and agricultural areas. In the land-use plan, the indigenous people have agreed to ban clear-cutting to establish new farms, identified limits to settlements along rivers and streams, and banned the use of *cymbus*, a local pesticide used to catch *ulang* (freshwater shrimp).

Most importantly, it is the increased level of confidence among the indigenous people that WWF regards as probably the most significant result of the whole process. They are now more knowledgeable and assertive about environmental laws, their rights and responsibilities, and are better prepared to face any outsiders involved in illegal activities in the forests.



Promoting sustainable energy

WWF is helping provide people living in rural Africa with access to electricity. Small shops and restaurants in the village of Ngarambe, Tanzania can now stay open an additional four hours each night.

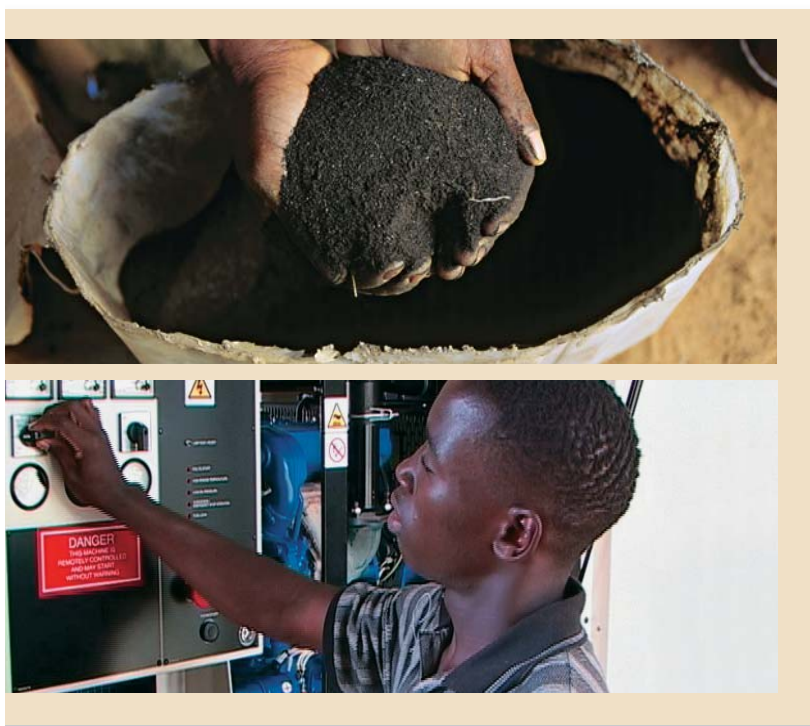
■ How do you provide 1.6 billion people around the world – about a third of them in sub-Saharan Africa – with access to electricity when most are not even on a centralized grid? With the majority of these people living in poverty, the challenge is to provide power in an affordable and climate-friendly manner for the long term.

Electricity plays an important role in the fulfilment of development goals and human rights as a source of energy, heating, lighting, and refrigeration. WWF and ABB Ltd., a multinational electro-engineering company, teamed up to provide people living in the village of Ngarambe, in southern Tanzania near the Selous Game Reserve, with access to electricity. The project also developed a new business model under which authorities and the villagers themselves agree on a “realistic” price to be paid for the power consumed.

WWF staff have had a long relationship with the local community developed over years of joint projects. This mutual trust was the key to ensuring the success of the project. As a first step, ABB laid underground power lines, installed low-voltage equipment such as switches and plugs for key buildings, and trained two village-appointed men to maintain the generator grid once installed. Meters were also installed to prevent individuals from using more electricity than they could afford.

The power supply was switched on in mid-2004 and the benefits are already visible: small shops, restaurants, and tailors on the main road in Ngarambe now take advantage of the electricity and stay open an additional four hours every night. Also, the local school can hold classes after dark. At the medical centre, the doctor can now treat his patients at night and is intending to install a refrigerator to store medicine.

Steps are now being taken to replace a temporary generator with a cleaner, carbon-neutral, sustainable power source, such as biogas or biofuel. This pilot project paves the way for WWF and ABB involvement in other potential projects in rural Tanzania.



Conserving wildlife habitat through community forestry

■ Nepal's Terai Arc – an area in the shadow of the Himalayas covering five million hectares from Nepal's Bagmati River in the east to India's Yamuna River in the west – is highly significant in both human and wildlife terms. Sometimes described as the “ricebowl” of the country, it is home to some of the largest surviving populations of Bengal tiger and greater one-horned rhinoceros.

The densely populated area, however, is currently under extreme ecological pressure, to the detriment of both wildlife and human populations, especially the rural poor. All these issues are compounded by a high level of political instability in the country.

WWF has been involved in wildlife conservation in Nepal since 1967. Its integrated conservation and development programme in the 1980s recognized certain species as ecological flagships for an area which included human settlements and their associated needs and aspirations.

An analysis carried out in the Terai Arc identified that rural livelihoods are heavily dependent on forests, which are home to many wildlife species. Habitat conservation has benefited not only the wildlife, but also the livelihoods of the rural poor in significant ways. Conservation of and access to forest resources has provided regional communities with everyday fuel, food, fodder for animals, building materials, agricultural and household tools, and medicine.

Sustainable management practices through community forestry are restoring corridors in the landscape, connecting protected areas essential



On average a community forest users' group can earn US\$4,760 annually from a variety of sources including tourism, timber, fuelwood, or non-timber forest products. The user groups empower women to participate in management and decision making.

for the dispersal and survival of the tiger and other species. Forest user groups are proving to be resilient governance structures that are making it possible for conservation work to continue during periods of conflict.

Results of the project show that resource management by local communities is providing perhaps the only workable model of governance in remote, conflict-torn regions. Enabling local people to become resource managers, beneficiaries, and stewards is a key strategy which also recognizes that species conservation goals cannot be achieved in isolation. Community forestry is legally mandated in the country and gives forest user groups clear rights and responsibilities that provide them with access, use, and measurable economic gains. On average, a community forest users' group can earn US\$4,760 annually from a variety of sources including tourism, timber, fuelwood, and non-timber forest products. The groups empower women to participate in management and decision making.



Enabling local people to become resource managers is a key strategy, recognizing that species conservation goals cannot be achieved in isolation.

WWF's species conservation programme has demonstrably assisted the local community by diversifying on and off-farm economic activity, strengthening resource management and entrepreneurial skills, and providing support structures such as small credit and marketing schemes. Improvements to local infrastructure include renovated school buildings, small irrigation schemes, healthcare centres, subsidiary roads, micro-hydro schemes, fuelwood-efficient stoves, biogas plants, and toilets.

Political conflict has caused setbacks in the achievement of conservation goals and the optimal benefits to be gained. But over a longer term, wildlife habitat conservation through community forestry management in Nepal protects and enhances the resource base, promotes sustainable use of resources, and benefits communities.

AFRICA

Clean to red

■ As much as 50,000 tonnes of obsolete stockpiles of pesticides are leaking into Africa's environment, contaminating soil, water, air, and food sources. These hazardous chemicals are a significant threat, particularly to the poorest communities on the continent where dangers are compounded by unsafe water supplies and working conditions, illiteracy, and lack of political empowerment.

Access to a healthy and safe environment is difficult for poor people when they live, work, or play in close proximity to toxic substances, such as persistent organic pollutants (POPs) – a growing concern and priority for the international community. Multilateral agreements on POPs, pesticides, and biodiversity help protect the environment, but their implementation must demonstrate justice and equity, and prioritize the interests and needs of the poor.

WWF's work in the Africa Stockpiles Programme – a multi-stakeholder partnership being implemented over a 12- to 15-year period – aims at clearing all obsolete pesticide stocks from

Cleaning up toxic chemicals to reduce poverty

sub-Saharan Africa and putting in place measures to help prevent their recurrence. By reducing and removing long-standing toxic threats, this innovative project offers real on-the-ground solutions and promotes improved public health, environmental safety measures, and poverty reduction – all critical elements of sustainable development.

In sub-Saharan Africa, the average poverty rate is well over 50 per cent, with a majority of poor people living and working in rural areas. Cleaning up the environment markedly improves the natural resource base and quality of life of even

the poorest rural communities. In addition, an unpolluted environment and clean agricultural production have important implications for both subsistence and commercial activities, with potential for creating export opportunities and improving the value and marketability of crops. These factors in turn lead to better health, greater revenues, and increased employment opportunities.



By reducing long-standing toxic threats, the Africa Stockpiles Programme offers real solutions on the ground, and promotes improved public health and environmental safety measures, as well as poverty reduction – all critical elements of sustainable development.

- > **It is estimated that some 1.6 billion people worldwide** depend on forests for their livelihoods, with 60 million indigenous people depending directly on forests for their subsistence. Recent estimates put the rate of natural forest loss at over 14.6 million hectares each year. That's 30 hectares every minute.
- > **One-third of the world's population live in countries experiencing moderate to severe water problems.** More than one billion people worldwide do not have access to safe drinking water, while 2.6 billion do not have adequate sanitation services. The annual death toll from water-borne diseases is estimated at more than three million.
- > **Fish from our oceans provide the principal source of protein for more than 1 billion people,** but more than 70 per cent of the world's fisheries are classified as "over-exploited", and unsustainable fishing threatens the economy and traditional livelihoods of communities throughout the world.
- > **It is estimated that a total of 15,589 species face extinction.** One in three amphibians and almost half of all freshwater turtles are threatened, on top of the one in eight birds and one in four mammals known to be in jeopardy.



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WWF's mission is to stop the degradation of the planet's natural environment and to build a future in which humans live in harmony with nature, by:

- conserving the world's biological diversity
- ensuring that the use of renewable natural resources is sustainable
- promoting the reduction of pollution and wasteful consumption.

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