



# Good practices

from the natureandpoverty\* programme

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natureandpoverty\*

National Committee of  
The Netherlands  
**IUCN**  
The World Conservation Union

 **Friends  
of the Earth  
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The loss of services derived from ecosystems is a significant barrier to the achievement of the Millennium Development Goals to reduce poverty, hunger, and disease Millennium Ecosystem Assessment, 2005

# 01

## Introduction

The majority of the world's poor live in rural areas and depend on forests, waters, wetlands, fields and pastures for their livelihood. Many of these ecosystems are under threat and poorly managed. The Millennium Ecosystem Assessment, a comprehensive study by the United Nations of the state of the planet's ecosystems, concludes that 60% of the world's ecosystems are degraded or unsustainably used. This has a direct impact on the livelihoods of the poor who depend on these resources for subsistence, security and income. The culprits include growing demands for natural resources, low public investment, poorly defined property rights, and global commodity trade policies that provide incentives for over-exploiting resources.

Nature conservation and poverty reduction programmes increasingly recognize the importance of tackling these issues simultaneously. Making the change from an exclusive nature conservationist or poverty alleviation focus to an integrated approach and a local-global perspective is not easy. It helps when organizations can benefit from each other's experiences and learn which strategies have worked well under certain conditions and which have not.

That is the purpose of this booklet. It contains brief descriptions of selected good practices that best illustrate the intervention strategies adopted in the natureandpoverty\* programme. It has been compiled to help those working for nature conservation and poverty reduction to share experiences, and to stimulate debate on good practices for poverty alleviation through sustainable ecosystems management.

## The natureandpoverty\* programme

The natureandpoverty\* programme was a collaborative venture by the World Wide Fund for Nature Netherlands (WWF NL), Friends of the Earth Netherlands (FOE NL), the IUCN National Committee of the Netherlands (IUCN NL) and their international affiliates<sup>1</sup>. Its main aim was to alleviate poverty through a strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way.

The programme was implemented in fifteen countries spanning four continents, and addressed seven themes across five sub-programmes. It was launched in 2003 with a budget of € 10 million from the Dutch development cooperation department and formally ended on 1 January 2007.

<sup>1</sup> A Programme Management Unit, responsible for overall project coordination and support, was staffed by the not-for-profit consulting firm AIDEnvironment, Amsterdam.

# 02

## Poverty alleviation and ecosystem management



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The natural environment and the livelihoods of the rural poor are intrinsically linked. The majority of the world's poor live in rural areas and depend on natural resources for their security (ecosystem services) and as a primary source of subsistence and income (fishing, hunting and gathering natural products). The poor are politically marginalized and excluded from the decision-making processes that guide the management of natural resources. They also lack the knowledge, skills and power to play a critical role in ecosystem management.

The poor are most vulnerable to environmental degradation through soil depletion, deforestation, over-exploitation and pollution, and are directly affected by industrial exploitation of natural resources (logging, fisheries, plantations and mining). The natural resources are often shared by many users ('common pool resources') without clearly established legal tenure and management rules. Gradual erosion of traditional user rights often contributes to further degradation of ecosystems.

These linkages are illustrated in Figure 1 (page 8). Drivers of change influence ecosystem functions and eventually the well-being of local communities that depend on them. The drivers may be indirect or direct.

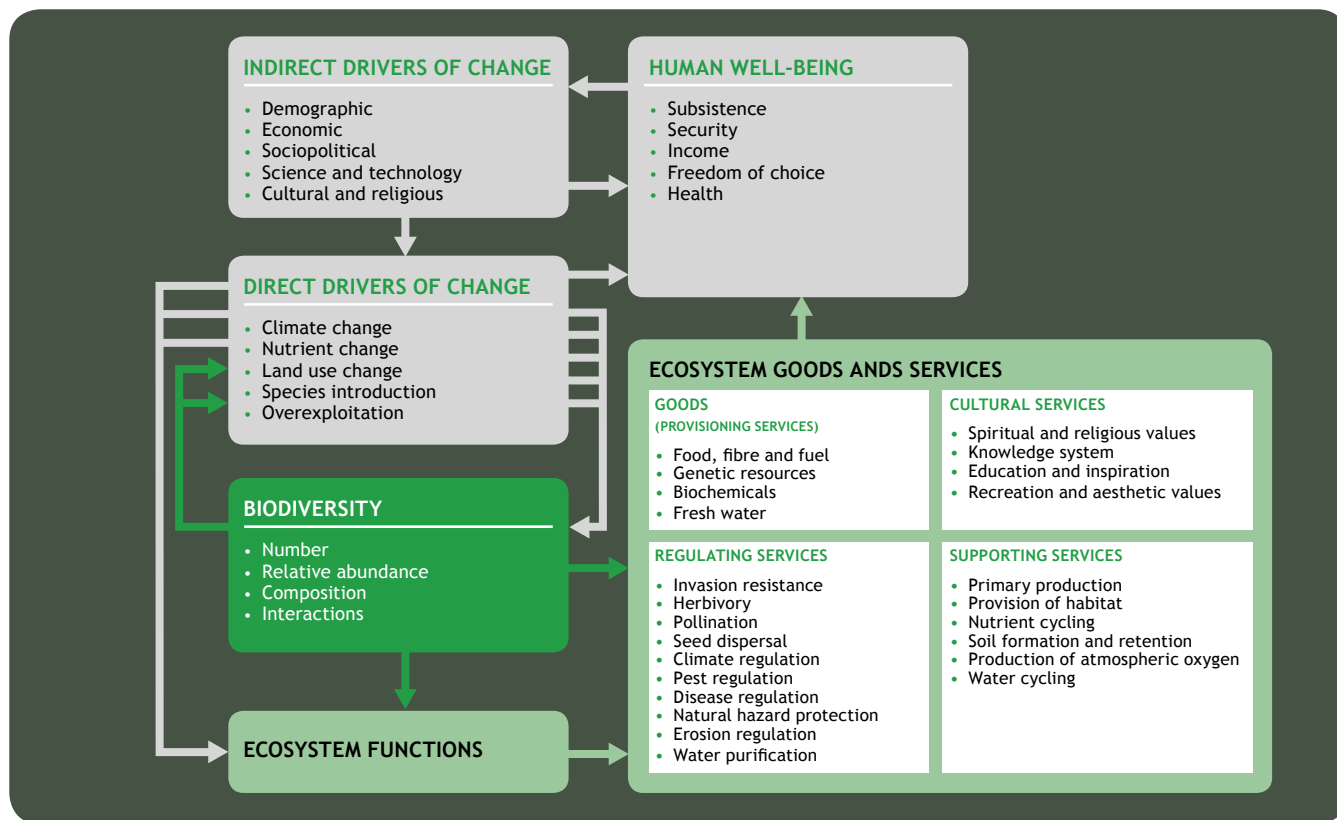


Figure 1. Livelihood ('Human Well-Being') - Ecosystem Interaction.

Adapted from Global Diversity Outlook 2, Convention on Biological Diversity, 2006.

## Principles for action

Action to reduce poverty should take these linkages and drivers into account and be guided by two main principles. First, ecosystems must be considered as potential wealth-creating assets for the poor and not just as a means for their survival. Mechanisms should be established for increasing environmental income in ways that help maintain the quality of the livelihood resources available to the poor. Second, local communities should be directly involved in the sustainable management of the ecosystems and have a clear mandate in the decision-making and control over those resources. This usually contributes to a better protection of biodiversity and to reduced conflicts between different users.

## Intervention topics

These principles are applied to interventions throughout the whole commodity chain, from local production systems to trade in global markets. In applying these principles for intervention, four main topics are identified:

1. **Local level poverty reduction** - direct support to poverty reduction and improved ecosystem management at the local level, increasing the income of vulnerable groups through the sustainable use of ecosystem products and services.
2. **Commercialization of ecosystem products and services** - establishing opportunities and mechanisms that allow the poor to compete effectively in emerging markets.
3. **Governance and land use rights** - supporting governance and policies that give the poor a clear role in the management of natural resources through property rights, access to information, adequate representation in decision-making structures and a fair distribution of the costs and benefits of resource management.
4. **Global trade** - influencing global trade policies that negatively affect the poor and their environment.

## Intervention strategies

The natureandpoverty\* programme tackled these issues through a combination of three interrelated intervention strategies:

- A. Direct poverty reduction through improved ecosystem management.
- B. Capacity building of Southern stakeholders and partner organizations.
- C. Influencing policies and practices to improve ecosystem management and to enhance the positive effects on poverty.

The strategies are often integrated around a certain theme or commodity. For example, the good practices on unsustainable shrimp production in South East Asia show a combination of policy influencing measures at the regional and global level and support to the development of sustainable shrimp production at the local level.

## Synergy and learning

The natureandpoverty\* approach requires input from partners with different core competences or strengths. An important aspect of the programme was an emphasis on collaboration, knowledge exchange, institutional learning and joint planning by the partners to obtain synergy and raise the effectiveness of interventions.

Figure 2 illustrates this approach.

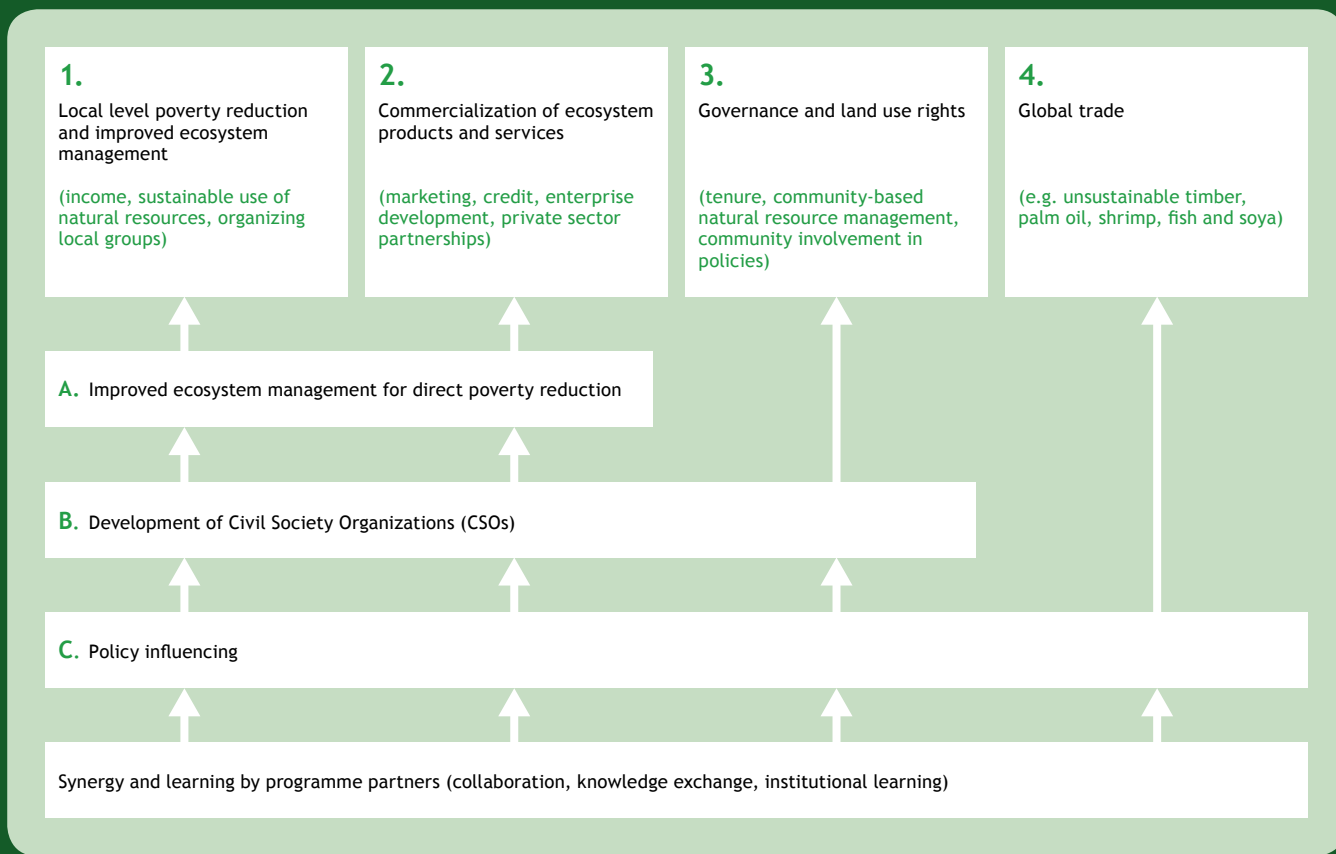


Figure 2. Natureandpoverty\* intervention framework

# 03 What are good practices?

A good practice in the context of nature conservation and poverty reduction can be defined as:

*a method, process or approach that has resulted in a breakthrough and that has a lasting effect in the area of poverty reduction and sustainable ecosystem management.*

Good practices have four key qualities:

1. **Innovative** - they show new and creative solutions to common problems of poverty and environmental degradation.
2. **Effective** - they make a difference and have a lasting positive effect on the quality of life and the environment of the people concerned.

3. **Sustainable** - they can be continued without the need for further external support from donors or development organizations.

4. **Replicable** - they can be adopted and replicated by other organizations or communities and serve as a model for generating policies and initiatives elsewhere.

Good practices are an important tool for institutional learning. They can benefit not only the implementing organizations and stakeholders involved, but also outsiders who work in similar contexts and are looking for effective strategies. Carefully documented cases can provide useful guidelines for policy making and strategic planning.

## Good or best practice?

We use the term 'good practices' rather than 'best practices' to avoid suggesting they are the only right remedies for certain problems. This would be misleading as there are no single methods that provide the best solution in all contexts. A good practice simply shows what has worked well in a certain environment and why it is successful. It serves as a model that can be adapted to other circumstances. The challenge is to identify the factors that determine the relative success of a particular practice for certain conditions and to envisage how these could be adopted in other circumstances.

The identification and successful replication of good practices requires insight into the dynamics of poverty-ecosystem relationships. The principal factors that determine success or failure within certain contexts – e.g. ecological, technical, political, institutional or financial – must be identified. Before replicating a good practice, it will have to be thoroughly tested and adapted to the new conditions.

## Natureandpoverty\* good practices

The examples of good practices presented in this booklet illustrate the intervention strategies of the natureandpoverty\* programme. They are grouped accordingly by theme and region. Although the instrumental role of natureandpoverty\* and the degree of innovation varies from case to case, the selection is a representative mix of local-global issues to which the various partners have contributed. The good practices also illustrate the process of learning and cooperation between partners that were not used to working together.

Good Practice		Theme	Country and region	Intervention strategy*		
				A	B	C
GP 1	Community management of marine resources in Cayar	Fisheries	Senegal	X		
GP 2	Micro finance in support of conservation	Fisheries	Senegal	X		
GP 3	Participatory process for establishment of marine protected areas	Fisheries	Senegal, West Africa	X		X
GP 4	Organic shrimp aquaculture in Sidoarjo	Shrimp culture	Indonesia	X	X	
GP 5	Influencing purchasing policy of European retailers via EurepGAP	Shrimp culture	Global, S.E. Asia		X	X
GP 6	Promotion of sustainable criteria through the Round Table on Sustainable Palm Oil	Palm oil	Global, S.E. Asia			X
GP 7	Influencing Dutch palm oil trade policies through a working visit of Members of Parliament	Palm oil	Netherlands, S.E. Asia			X
GP 8	Managalas Organic Coffee Project in Papua New Guinea	NTPF, coffee	Papua New Guinea	X		
GP 9	Process for improved mangrove conservation through learning	Mangrove conservation	Africa, mostly West Africa	X		
GP 10	Wood energy saving fish smoke houses in Cameroon	Mangrove conservation	Cameroon	X		
GP 11	The Pantanal Network ('Rede Pantanal')	Institutional collaboration	Pantanal (Brasil, Paraguay, Bolivia)		X	X
GP 12	Environmental Education in Bolivia	Environmental education	Pantanal (Bolivia)		X	X
GP 13	Land rights of the Bagyéli in Campo Ma'an, Cameroon	Land rights	Cameroon	X		X
GP 14	Partnerships with private sector forestry operators	Forestry	Cameroon			X

\* A = Poverty reduction through ecosystem management; B = Development of Civil Society Organizations; C = Policy influencing

# 04 Fisheries in Senegal



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Fishing is a vital sector of the Senegalese economy, but is threatened by over-exploitation. Three good practices illustrate initiatives for the sustainable management of marine resources through community-based management (GP1), provision of microfinance (GP2) and the participatory establishment of Marine Protected Areas (GP3).

Fishing is Senegal's most important economic sector, employing about 600,000 people (15% of the Senegalese working population). Of the 63,000 fishermen, 94% are artisanal fishers using piroques, traditional canoes 8–22 metres long. Women play an active role in processing and trading in fish products, which provide over 75% of the animal protein consumed in the country.

Fresh fish and fish products are Senegal's main export to Europe, Asia and neighbouring countries, generating about a quarter of the Senegal national budget. Fish exports account for about 30% of total export revenues. The Senegalese government draws revenue from granting European and Asian industrial fishing vessels access to the Senegalese Exclusive Economic Zone.

The pressure on marine resources has increased significantly due to over-exploitation and unsustainable fishing techniques. Most fish is caught by the artisanal fishers, but industrial fleets from European and Asian countries add to the pressure. The demersal (deep-swimming) fish species and shellfish are considered over-exploited and the pelagic (shoal-swimming) species in surface waters are fully exploited in most areas. In total 400,000 tonnes of fish are caught annually in the Senegalese Exclusive Economic Zone.

The Code de la Pêche, a legal framework for the fisheries sector established in 1998, regulates access to marine areas and the use of certain fishing nets, but the rules are usually not enforced. Management of fishing resources is centralized, with little involvement of local authorities and stakeholders.

## The natureandpoverty\* programme in the West African Marine Ecoregion

The natureandpoverty\* sub-programme Safeguarding Natural Marine Resources for Coastal Communities ran field activities from January 2004 to December 2006. It followed on from earlier initiatives by WWF's West African Marine Ecoregion office, with a **stronger** focus on the linkages between marine conservation, livelihood resources and poverty alleviation.

The overall objective was 'to contribute significantly and demonstrably to the well-being of natural marine resources and of the people that are directly dependent on those resources'.

## GP 1. Community management of marine resources in Cayar

**Strengthening a community-initiated process for the sustainable management of marine resources improves livelihoods and income.**

### ***The Cayar model of marine resources co-management***

Cayar is a fishing community about 60 kilometres north of Dakar. Over the past twenty years the population has expanded rapidly, exploiting the area's economic potential for fishing and for vegetable and fruit production. The community currently covers around 1,600 hectares. Cayar is now one of Senegal's most important fishing communities, with an annual production of 43,000 tonnes of predominantly pelagic fish of high commercial value.

Initiatives for community management of the marine resources date back thirty years, when the first attempt was made to demarcate fishing zones to halt emerging conflicts between local fishermen. In 1994 the devaluation

of the CFA Franc sparked off an economic crisis. The prices of imported equipment and petrol doubled, but local market prices for fish fell. The drop in prices was further aggravated as fishermen oversupplied the market by making more trips per day.

The fishermen responded by setting up the Comité de Pêche de Cayar (CPC) to regulate prices, and forced traders to pay reasonable prices by withholding produce. The CPC also works to improve the sustainable management of the fisheries and supply fishing materials. To ensure its legitimacy, the fishermen involved the relevant government institutions, especially the Department of Fisheries.

A number of regulations were established over time for the sustainable exploitation of artisanal fishing resources:

- Quotas for the number of trips (one trip per day) and daily catches (3 boxes of 15 kilograms each)
- Restrictions on the use of encircling net fishing ('purse seine') and a ban on the use of drift nets
- Protection of juvenile fish by prohibiting fishing during certain periods in designated reproduction areas and a control system for rejecting immature fish
- Measures for improved health, safety and environmental quality

The Cayar community management system has shown that regulating fishing efforts and increasing the minimum size of fish caught, along with a well organized market, can substantially boost income for fishermen. But its success is threatened by a number of problems, such as conflicts with migrant fishermen unwilling to respect the established rules and insufficient management and technical capacity.

### ***Intervention strategy***

The natureandpoverty\* strategy aimed to build on the process of co-management and sustainable fishing practices initiated by the fishermen themselves. It set out to remove some critical obstacles and provide direct technical, organizational and institutional support. At the start, the community was consulted on what needed to be done. The following activities were explicitly demanded and adopted for implementation:

- Set up a micro finance scheme (see GP 2)
- Establish a Marine Protected Area (see GP 3)
- Build ovens for fish processing by women
- Strengthen the capacity of local organizations on various topics, such as financial management, sustainable exploitation, value addition and safety measures at sea

The programme also lobbied for the legal recognition of community management rules and their enforcement. The WWF lobby in Brussels helped to block the European Union's attempt to obtain fishing rights in Cayar.

The Senegalese government views the Cayar model as an example for the rest of Senegal and has promoted the establishment of *conseils locaux de pêche* in other fishing villages.

### ***Achievements***

- Guaranteed prices for delivered fish
- Increase in fish stocks and reappearance of some lost species
- Cleaner coastal environment and beach.
- Adequate supply of fishing equipment
- Improved relationships between fishermen and traders
- Social benefits, such as financial support to victims of accidents at sea, a pension scheme and supporting dispensaries

### ***Critical factors for success and replication***

- A demand-driven approach that matches the community's needs and the processes already put in place by the fishermen themselves (the community readily embraced the natureandpoverty\* activities because they recognized the need to resuscitate their livelihood)

- A clear link between conservation and socio-economic interests
- Legal instruments that enable the community to enforce compliance with the management plans by migrant fishermen and deviant community members

*The economic situation of the fishermen in Cayar seems to have improved. Due to better management, the size of fish is increasing along with the prices. The fishermen perceive the trainings on how to add value to the products as very helpful. Although not all problems with co-management are solved, fishermen feel empowered and are well aware of the quality of their management system.*

Evaluation of the Theme-Based Co-Financing (TMF) Programme - Lot 3: Biodiversity Conservation and Poverty Alleviation, Wageningen International, 7 March 2006 (page 85).

## GP 2. Microfinance in support of conservation

**A community-driven microfinance scheme raises household income and eases pressure on fishing resources.**

### ***The microfinance programme***

The Mutuelle d'Epargne et Credit microfinance programme acts as a lever for conservation, poverty alleviation and community development. The scheme seeks to reduce the pressures on marine and coastal resources by providing funds for environmentally-friendly fishing gear and establishing alternative income generating activities. It helps fishermen to adopt sustainable fishing practices and enables them to obtain greater benefits from processing and marketing. It also supports them if they want to move from fishing to other employment.

The scheme started in October 2004 in Cayar and was later extended to Popenguine in 2006. Women are important beneficiaries of the scheme. In Cayar, for example, women

have used microcredit funds to start their own wholesale fish businesses instead of selling to middlemen (see table on page 21). In Popenguine, the majority of beneficiaries are women.

Membership of the credit unions is limited to community members. The main borrowing and lending rules are set by the Senegalese Central Bank, but local communities can set additional regulations (e.g. which activities are eligible). Every credit union must have a community council, made up of the members, and a General Assembly, as well as working principles agreed by the communities that clearly articulate how funds should be used and by whom. In Cayar, the community has decided only to permit loans that promote activities that respect the environment, reduce poverty and promote development. As interpersonal and family ties are very strong, social pressures ensure that funds are properly lent and repaid.

Microfinance and savings	Cayar	Popenguine
Membership 2006	721 (528 in 2005)	422
Credits	€ 70,515	€ 5,145
Funded activities	Gardening, petty trade, fish trade, processing of fish products and fishing	Sales of souvenir handicrafts, agriculture and fishing
Credit beneficiaries	234 (42% women)	60 (87% women)
Average credit/beneficiary	€ 301	€ 86
Range credit/beneficiary	€ 38 – € 762	€ 76 – € 305
Repayment rate first year	99%	Not yet started
Savings	€ 20,000	€ 12,860

### ***Intervention strategy***

The fund was initially established in Cayar with a loan of € 15,000 and a members' savings fund of about € 7,500. This was later substantially increased (see table above). It is expected that all the funds will be reimbursed by October 2007, by which time the Cayar credit union will be entirely self-sufficient.

Apart from providing the funds, the programme's major activities were related to public awareness raising, capacity-building of the credit union, and monitoring. Establishing and managing a credit union requires specific skills. The programme helped to organize communities and facilitated training of credit union employees. It was also involved in periodic audits to ensure that the facilities are operated within government standards and according to rules set by the communities.

Other fishing communities have expressed interest in the scheme. Exchange visits have been planned between them and communities that have operational credit unions.

### ***Achievements***

- Establishment of two credit unions with over 1,000 members
- Increased investment and income from supported activities
- Women are important beneficiaries
- Excellent repayment rates
- Reduced pressure on marine resources

### ***Critical factors for success and replication***

- A demand-driven and participatory approach. The involvement of all stakeholders ensures that the programme responds to the real needs of the beneficiaries, which also encourages a high level of commitment and repayment.
- Gender sensitivity. Women in particular have benefited from alternative employment, which make their households less dependent on income from fishing.
- Substantial technical support and training, which has resulted in good management capacity, credibility of the credit unions and viability of their operations.
- Awareness raising on conservation measures. Linking conservation with microfinance requires a shared vision of the stakeholders. Financing of conservation activities should not violate financial principles of viability and sustainability.
- Adherence to official credit policies and borrowing and lending rules set by the Senegalese Central Bank.

### GP 3. Participatory process for the establishment of Marine Protected Areas (MPAs)

Participatory planning process for Marine Protected Areas serves as a model for replication and scaling up in Senegal and neighbouring countries.

#### ***Participation process and intervention strategy***

A participatory planning process for the establishment of four Marine Protected Areas (MPAs) in Senegal was initiated to ensure the sustainable exploitation of coastal fishing resources. Local authorities, government departments, NGOs, universities, research institutes and fishermen's interest groups were brought together in a five-step approach:

1. Defining criteria for the establishment of new MPAs and identification of sites. Research on criteria used world-wide for the selection of MPAs and identification of those relevant to Senegal resulted in 18 critical and secondary criteria. The most important criterion was the support of local communities for the MPA establishment. A comparison of the selected criteria against the characteristics of 33 initially identified potential sites brought the list of sites down to 11.
2. Designing and implementing a field survey by scientists and a representative of the civil service in the 11 identified sites.
3. Selecting the sites. A matrix of critical criteria and sites was drawn up (see table on page 24). The field survey teams scored the sites for each criterion using the information gathered. The totals were then added up for each site and the four sites with the highest scores were selected: Saint-Louis, Cayar, Joal-Fadiouth and Abéné.
4. Informing local communities and obtaining backing from local leaders to create MPAs.

5. Meeting with, and writing a request to the Senegalese Minister of Environment for the official creation of the MPAs. Given the importance of MPAs and their cross-sectoral nature, the minister forwarded the request to the president, who decreed the establishment of four MPAs.

The natureandpoverty\* programme was instrumental in facilitating the process, developing a communications strategy and lobbying at decision-making levels.

### ***Achievements***

- Four officially designated MPAs (Saint-Louis, Cayar, Joal-Fadiouth and Abéné) covering about 1,000 square kilometres
- Political commitment by the governments of Senegal and neighbouring countries to create additional MPAs.
- Increased environmental awareness among coastal communities
- Ten requests for the creation of new MPAs
- Formal methodology for establishing MPAs

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### **Critical criteria for ranking sites**

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Economic importance at national/international level

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Preservation of traditional methods of resource exploitation

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Existence of local organizations

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Cultural value

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Educational value

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Support from local communities

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Support from political authorities

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Consistency with the established resource exploitation system

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Ecological importance at national/international/global levels

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Existence of vulnerable habitats (this calls for protection)

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Existence of species or populations of special concern (endemic, threatened, rare, of global importance)

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Importance in terms of ecosystem functioning and linkages

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### ***Critical factors for success and replication***

- A participatory, cross-sectoral and multidisciplinary approach
- Selection of sites on scientific criteria, validated by local actors
- Strong lobbying capacity and communication skills, backed by a good grasp of decision-making mechanisms, and a good communication strategy to avoid the large number of interest groups slowing down the process
- A leadership capable of mobilizing actors for conservation
- Political support

## **A Gift to the Earth**

A Gift to the Earth was celebrated in recognition of the outstanding conservation achievement. A Gift to the Earth is recognition by WWF of a globally significant conservation action undertaken by a government or an organization. This Gift to the Earth resulted in a political commitment by the governments of Senegal neighbouring countries (Gambia, Cape Verde, Guinea-Bissau) to create an additional 10 to 15 MPAs.



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# 05 Shrimp production and trade in South East Asia

The expanding shrimp production in South East Asia damages the environment and affects local livelihoods. Two good practices illustrate initiatives for the sustainable production of shrimps in Indonesia (GP4) and the establishment of a European retailer shrimp certification system (GP5).

Shrimp is the most traded seafood, the main importers being Japan, the United States and the European Union. In 2000, worldwide shrimp production reached 1.2 million tonnes, with a value of over € 7 billion.

Shrimp aquaculture is expanding in the coastal areas of many countries and now makes up almost 30% of total shrimp production. About 80% of the industrial shrimp aquaculture is located in South East Asia (China, Thailand,

Indonesia and India). Two species, Pacific White Shrimp and Black Tiger Prawn, account for more than 85% of the world's farmed shrimp production.

Intensive shrimp aquaculture in Indonesia became popular in the 1980s because yields are high and profits four times as great as the returns from paddy cultivation. In 2005 aquaculture in Indonesia already covered 800,000 hectares and growth was estimated to be 14%. Its aquaculture exports were valued by the Food and Agriculture Organization at over € 2 billion in 2000.

Development of intensive shrimp aquaculture in ponds is accompanied by serious environmental and social problems. Mangrove coastlines cleared for farms no longer afford protection against coastal abrasion, provide breeding

grounds for fish species, or supply the wood, medicinal leaves and other resources used by local communities. The development of shrimp farms has created social problems arising from land seizures, poor labour conditions, unfair contract farming arrangements and credit systems that often lead poor farmers into a debt trap.

And the intensive shrimp farms are unsustainable. They depend on high levels of chemical inputs, pollute local coastal waters with waste and cause saltwater intrusion into rice fields and other agricultural land. After a few years they are abandoned leaving non-productive, saline land that cannot be used for agriculture. In Asia the average productive period is around five years. In Thailand, more than 1 billion cubic metres of waste is discarded each year from intensive shrimp aquaculture. An outbreak of white spot virus in the early 1990s nearly wiped out the aquaculture industry and caused many producers to go out of business. Viral infections and diseases still affect intensive shrimp farming.

Fishing for wild shrimp also has major negative impacts on the marine ecosystem. Shrimp trawling has a very high level of 'bycatch', or non-target fish caught along with

the shrimp. The Ecological Justice Foundation estimates that in Indonesia this is as high as 26:1; in other words, for each kilogram of shrimp 26 kilograms of other species are caught. Shrimp trawling has been prohibited in Indonesia since 1980, but illegal trawling continues in many marine areas.

## Loss of mangrove forests

Over the last twenty years about a quarter of the world's mangrove forests have been cleared to make way for shrimp ponds. In 1994 more than 16% of the mangrove forest in Indonesia, excluding Papua, was converted into shrimp ponds. In Lampung province almost 85% of the 160,000 hectares of mangroves have gone. The destruction has made coastal communities more vulnerable to floods and threatens their livelihood. Java, one of the islands that became the focus of shrimp industrial expansion, has experienced four times more floods between 1996 and 2003, affecting 3,000 coastal villages.

## GP 4. Organic shrimp aquaculture in Sidoarjo, Indonesia

Farmers in Sidoarjo have developed a sustainable method of shrimp cultivation based on traditional low-risk production systems.

### *Development of fishponds in Sidoarjo*

Brackish fish culture in Indonesia can be traced back 600 years. The ponds were initially used for farming milkfish (*Chanos chanos*) and shrimp together, the shrimp fry and plankton being brought ashore by the tide. The mangrove trees were left intact as they provided food and shelter for the milkfish.

In the 1980s many farmers turned to the intensive culture of tiger prawn (*Penaeus monodon*), encouraged by the Indonesian government and the Thailand-based Charoen Phokpand food company. A dramatic land conversion from mangrove forest to aquaculture took place along the coast, and even in the higher areas, where rice fields were converted into ponds.

In the early 1990s the white spot virus struck. The worst pond failures occurred along the northern coast of Java between 1993 and 1994. In Sidoarjo mass shrimp mortality affected 72% (11,285 hectares) of all ponds. Many producers shifted back to semi-intensive or traditional systems or abandoned aquaculture altogether.

### *The Sidoarjo shrimp farming model*

The Sidoarjo organic shrimp aquaculture system was developed as a viable and sustainable alternative to the intensive shrimp culture system. The model is based on traditional cultivation methods with some innovations for improved management:

- Using natural feed (pond-bottom algae, plankton and wild bushes on the banks)
- Using organic fertilizers to allow algae and plankton to grow better, such as manure made from bat faeces and rice husks

- No pesticides and antibiotics; spices are occasionally used to kill unwanted fish
- Polyculture (several species cultivated in one pond, commonly milkfish (*bandeng*) with shrimps)
- Improved water quality management by creating a series of ponds or plots (*tandon* or *jalon*) and charcoal filters (*waring*)
- Harvesting by-products: wild fish and white shrimp (*udang werus*) carried from rivers into the ponds are caught in a net (*prayang*) and either consumed or sold
- Planting trees, such as mangroves, *canari* (nuts) and *petai* (a type of pea) at seven metre intervals around the pond

The system requires less capital and complex treatment than intensive shrimp culture, is less risky, generates beneficial side-products, and is environmentally friendly.

*'I'm feeling more secure now.'*

One day in 1994, Iwan found dead shrimps with white spots in his pond. This was the second time since Iwan started his intensive shrimp culture. As he had limited capital and spent a lot of money on his pond, the failure was serious. Iwan joined a group of farmers, led by Hajj Ali Ridho, that were developing a form of aquaculture based on traditional methods, with some innovations. After several years experience, Iwan concludes that this Sidoarjo-style culture is profitable. When the shrimp harvest fails, he can still get some profit from the milkfish and use other by-products. Although the net profit is less than that from intensive culture, the production cost and risks are much lower. 'I'm feeling more secure now,' says Pak Iwan.

### ***Intervention strategy***

The organic shrimp aquaculture system was pioneered by farmers incorporated in the Ali Ridho Group (ARG), which is also the largest shrimp collector in Sidoarjo. One of the initial efforts made by ARG, from 1996 to 2000, was to rehabilitate the mangrove forest in the mouth of the Ketingan River. Mangroves are still being planted along the river banks and around the ponds. ARG serves as the representative and community organizer for local farmers and teaches them the cultivation methods. The strategy adopted by natureandpoverty\* local partner WALHI (Friends of the Earth Indonesia) is to promote and facilitate the adoption of the Sidoarjo model through training and study visits by farmers from other areas, and make and distribute communication materials, such as documentaries.



WALHI also facilitated the establishment of FORMAT, an organization of shrimp farmers in Lampung province. The model has a high potential for replication in other areas in Indonesia where conditions are very similar.

### ***Achievements***

- Over 600 farmers in Sidoarjo have adopted the low risk model, which contributed to 50% lower production costs, reduced waste and rehabilitated mangroves.
- Through WALHI's replication efforts, the Sidoarjo model is now being adopted by many farmers from other areas, such as Lampung Province. The established organization of shrimp farmers, FORMAT, is helping to promote wider uptake of the model.

### ***Critical factors for success and replication***

- Building on a successful technology through a partnership with a strong local organization (Hajj Ali Ridho and ARG)
- Suitability of the model to local conditions and farmer economy (in contrast to the high risks, costs and environmental problems associated with intensive shrimp culture)

## GP 5. Influencing purchasing policy of European retailers via EurepGAP

**Facilitating the inclusion of biodiversity and social criteria in a European retailer shrimp certification system.**

### ***Shrimp certification***

Increasing public criticism over the negative impact of tropical shrimp production has prompted retailers in North America and Europe to move towards a certification system. They want to convince consumers that their business is based on sustainability principles. But there is concern about the transparency of the procedures for establishing standards and certificates, the level of involvement of concerned stakeholders, and the difficulties with implementation.

NGOs can make a major contribution to moving this process forward. Some NGOs are open to negotiations with the private business sector; others, especially from the South, have less faith in such certification agreements and prefer to continue campaigning against unsustainable shrimp production.

### ***Intervention strategy***

The strategy involved two types of interventions: streamlining NGO activities and facilitating the adoption of retailer standards.

### ***Information exchange and streamlining of NGO activities***

In September 2006, natureandpoverty\*, working through IUCN NL and other organizations, brought together NGO representatives from Southern tropical shrimp producing countries, the UN Food and Agriculture Organization (FAO) and the Network of Aquaculture Centres in Asia-Pacific (NACA) for a three day meeting in Bangkok. They discussed the risks, opportunities and implications of shrimp certification. The different strategies and views on the certification process, especially between Northern and Southern NGOs, needed to be clarified in a consistent way to improve the coordination of the respective programmes.

Different strategies on the international and national tropical shrimp certification initiatives were examined with a view to better coordination and synergy of activities between Northern and Southern NGOs.

***Support to EurepGAP in setting standards for aquaculture products***

EurepGAP is a private sector body that sets voluntary standards for the certification of agricultural products around the globe. The EurepGAP membership includes 30 retailers that represent roughly two-thirds of European food imports, as well as members from countries exporting to Europe. EurepGAP intends to establish a set of minimum quality standards for cultured shrimps as guidance to EurepGAP members on which shrimps to buy. Members are not obliged to follow the EurepGAP standards, but there is a clear intention to achieve full compliance. The Dutch retail members of EurepGAP have committed themselves to buying only EurepGAP certified produce for all existing standards by the end of 2008.

Following twelve months of informal meetings with Heiploeg BV (the largest European shrimp importer and Chair of the EurepGAP Technical Committee) and Albert Heijn (the largest supermarket chain in the Netherlands), the Technical Committee on Aquaculture asked IUCN NL, Oxfam Novib, WWF US and other organizations to advise the committee on adopting EurepGAP standards for aquaculture products (including shrimps). The committee reached an agreement that is 'advisory to the Board of EurepGAP'. If the 'road testing' of the standards is successful, the EurepGAP Board will probably adopt the standards in March 2007, initially for a period of three years.

## ***Achievements***

- A better understanding of North-South NGO strategies, more specifically the aims of a business dialogue, the opportunities for improved coordination between different NGO strategies, the production of a document outlining the main risks and opportunities of a 'business engagement' strategy and certification, and strengthening of various shrimp networks.
- Unique to the EurepGAP standard-setting meeting was that the committee included NGOs and discussed and agreed on the inclusion of social and biodiversity criteria (not only for shrimps, but also for all fish aquaculture products).

## ***Critical factors for success and replication***

- Consultation between Northern and Southern partners
- Building trust through dialogue between NGOs and business partners
- Non-confrontational dialogue with key decision makers within the business





**Palm oil is an important raw material  
for both food and non-food industries.**

# 06 Palm oil production and trade in South East Asia

Palm oil production in South East Asia is a major cause of deforestation and has disrupted the livelihoods of local communities. These good practices present policy influencing initiatives for sustainable production directed at the palm oil industry (GP6) and the Dutch Parliament (GP7), and a case for alternative income generation from non-timber forest products in Papua New Guinea (GP8).

Palm oil is an important raw material for both food and non-food industries. EU policies on renewable energy are driving a growing market for its use as biomass energy. It has the highest yield per hectare of any oil or oilseed crop and is the world's second largest oil crop after soya. Malaysia and Indonesia together account for 85% of global palm oil production.

Global palm oil usage has increased by 70% since 1995 and the past few decades have seen a rapid expansion in production. Dutch palm oil imports, the largest in Europe, increased by 115% over the last ten years. At the same time, the industry is perceived to be a major cause of environmental degradation and social injustices. Large areas of rain forests with high conservation value have been converted to oil



palm plantations. In Indonesia, the area of oil palm plantations has doubled in the last ten years and deforestation continues at a rate of more than 2 million hectares per year, threatening the rich biodiversity of these ecosystems. Species threatened with extinction include the orangutan and Sumatran tiger. Between 1992 and 2003, orangutan habitat has shrunk by more than 5.5 million hectares, while the palm oil plantations across Borneo and Sumatra increased by almost 4.7 million hectares. Use of fire for preparation of land for oil palm planting has been reported as one of the causes of the forest fires in the late 1990s. Production causes pollution of soils and water and leaves behind scrubland when plantations are abandoned after becoming unproductive.

Apart from the ecological effects, the plantations also threaten the livelihoods of forest communities, who face

reduced access to and control over natural resources. Many plantations have been established in customary lands of indigenous peoples following formal land acquisition processes, sparking off social conflict. Local communities, plantation workers and smallholders often suffer from pollution hazards, land use conflicts and inequitable relations with companies. While the large-scale schemes might generate some income and employment to the local communities, the main benefits accrue largely to outsiders, commercial companies, central government and the international trade and investment community.

There is growing recognition of the need for sustainable palm oil production. Indonesia announced in March 2006 that it would end plans to establish a 1.8 million hectare oil plantation in the rainforest of Borneo, which would have destroyed one of the most biodiverse ecosystems on earth.

## GP 6. Promotion of sustainability criteria through the Round Table on Sustainable Palm Oil

Principles and criteria for the sustainable production of palm oil have been adopted by major stakeholders in the palm oil industry.

### *The Round Table on Sustainable Palm Oil (RSPO)*

The RSPO is an international association created in April 2004 by producers, processors and retailers of palm oil with the aim of promoting the cultivation and use of sustainable palm oil. The RSPO consists of Ordinary Members in seven different sectors and Affiliate Members. Key members include Malaysian and Indonesian palm oil companies and European processing and retailing companies and banks.

The RSPO has set itself the following tasks:

- Research and develop definitions and criteria for the sustainable production and use of palm oil.
- Undertake practical projects to facilitate implementation of sustainable best practices.
- Develop solutions to practical problems related to the adoption and verification of best practices for plantation establishment and management, procurement, trade and logistics.
- Acquire financial resources from private and public funds to finance projects under the auspices of the Roundtable on Sustainable Palm Oil.



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## Players in the Sustainable Palm Oil Supply Chain



A Criteria Working Group (CWG) was appointed to develop sustainability principles and criteria for a voluntary standard to be adopted by the industry to ensure palm oil is socially and environmentally acceptable. The CWG contained representatives of producers (10), processors and retailers (5), environmental interests (5) and social interests (5). In November 2005 the RSPO General Assembly adopted the principles and criteria.

### ***Intervention strategy***

The natureandpoverty\* partners Sawit Watch and WWF Indonesia are RSPO Ordinary and Executive Board Members and were actively involved in the CWG. Their combined advocacy to promote social and environmental considerations secured many important conditions in the principles and criteria: customary rights to land (no land taken without free, prior and informed consent), respect for ratified international law, workers' rights, non-discrimination,

minimized and safe use of pesticides, fair pricing for small holder products, and recognition of high conservation value areas and other important environmental features. Other nature and poverty\* partners deliberately did not join the RSPO Round Table. They continued campaigning against the unsustainable palm oil production outside the Round Table, supporting the work of the other partners in the RSPO.

The RSPO sustainability criteria provide a sound basis for developing best practices in the industry, halting conversion of high conservation value forests, promoting zero burning and phasing out the use of agrochemicals. Affected communities agree with this draft standard and preliminary field studies suggest that it will offer significant protection. Looking to the future, these measures – along with commitment from actors on the global supply chains – should prove instrumental for the adoption of environmentally acceptable practices in the palm oil industry.

### ***Achievements***

- In November 2005, the RSPO General Assembly adopted the principles and criteria. The standard is being tested in a two-year trial implementation phase in which 17 large companies have volunteered to participate.
- A Smallholder Task Force has been set up to assess the suitability of the principles and criteria for smallholders and propose measures for effective smallholder involvement.
- Collaboration in the RSPO increased synergy and partnership between NGOs, particularly Sawit Watch and WWF Indonesia.

### ***Critical factors for success and replication***

- Multi-sector approach, bringing together leading businesses involved in the palm oil industry and NGOs representing environmental and developmental interest groups
- Complementary approach, networks and focus (social, environmental) by the partners
- Multi-stakeholder approach, enabling local organizations to gain support from international social and environmental NGOs with strong lobbying mechanisms

## GP 7. Influencing Dutch palm oil trade policies through a working visit of Members of Parliament

Six months of lobbying and a working visit by Dutch Members of Parliament (MPs) to South East Asia secured adoption by the Dutch Parliament of a motion to ban unsustainably produced palm oil from the Dutch market.

### *Intervention strategy*

A series of coordinated events were organized by all natureandpoverty\* partners to inform, convince and mobilize a selected group of parliamentarians to push the Dutch Government for policy reforms related to sustainable palm oil:

- A Round Table with a group of 25 experts from NGOs, business and government to inform the MPs about the complexity of the topic. Substantial in-depth information was provided in a reader that included maps, fact sheets, newspaper articles, reports and an overview of legislation, questions in parliament, bills and motions related to the topic.

- An informal working visit of three MPs to Indonesia, including a three day field visit to Borneo and meetings with national ministers, provincial government, local communities and representatives from business.
- A public debate in the Netherlands.

Working visits have a high potential for replication regardless of the topic (e.g. palm oil, soya and timber) or the sector (government, civil society and private sectors). Positive results have also been achieved from working visits by the private sector (ABN AMRO bank and Dutch Timber Trade Organization to Indonesia). However, working visits cannot be endlessly repeated for the same topic and sector.

### ***Achievements***

- A motion to draft legislation and measures to ban unsustainably produced palm oil from the Dutch market was adopted by the Dutch Parliament on 23 May 2006.
- For the first time in twelve years a General Meeting on Forest and Wood was held in the Dutch Parliament in August 2006 to review the effectiveness of Dutch policies on this topic over the past decade.
- Formal questions were put to the minister asking for increased budget support for programmes addressing the relation between nature conservation and poverty alleviation.
- A planned official governmental visit will probably include time to follow up the informal visit and provide opportunities to continue the dialogue with the Indonesian authorities.
- Unsustainable palm oil and illegal wood issues are back on the agenda of parliament, NGOs and the private sector in the Netherlands.

### ***Critical factors for success and replication***

- A committed group of representatives from Northern and Southern nature and poverty\* partners supporting the whole process
- Professionalism of local partners in presenting information on the various dimensions of palm oil production and trade and handling a logistically complex visit
- An impartial, knowledgeable and diplomatic delegation leader whose authority was accepted by the MPs
- Visibility in the field of threats and opportunities
- Providing factual and comprehensive information to MPs that covers the pros and cons and a range of insights and viewpoints throughout the whole process
- Selecting truly committed MPs who covered their international travel expenses
- A strong link between the working visit and the current political agenda
- Follow-up in the Netherlands

## Excerpt from Motion no. 20 (30305), adopted by the Dutch Parliament in May 2006

Observing that as a result of the growing worldwide demand for palm oil, the required volume possibly far exceeds the available land area for palm oil cultivation, which will exert a disproportionate pressure on the biodiversity of tropical areas suitable for palm oil cultivation;

Concluding that Indonesia is one of the world's largest exporters of palm oil and the Netherlands is one of the largest importers;

Requests the government to develop an instrument based on RSPO criteria in collaboration with private sector and non-governmental organizations to establish a comprehensive approach to excluding palm oil that is not produced according to RSPO criteria from the market, including the energy sector.

Requests the government to continue to support initiatives that contribute to the preservation of the remaining rainforests and indigenous way of life, including support for the dialogue with the Indonesian authorities on land rights issues and viable economical alternatives for large-scale palm oil production.

## GP 8. Managalas Organic Coffee Project in Papua New Guinea

Community-based organic coffee production successfully introduced in a conservation area is a good example of South-South collaboration.

### *The Managalas Plateau*

The Managalas Plateau covers 360,000 hectares, 800 metres above sea level in a remote region of Papua New Guinea. Its 16,000 inhabitants have limited access to markets and basic services and earn an average annual income of € 45 per family.

Over the past decade a number of proposals for timber extraction, oil palm plantations and mining development have been presented. While welcoming the opportunity for development, the Managalas communities strongly opposed many of these projects, citing poor consultation with resource owners and the lack of guarantees for environmental protection or benefits to the community.

### *Intervention strategies*

Having worked with the Managalas Plateau tribes for over fifteen years, Partners with Melanesians (PWM) investigated alternative income generating activities that support the natural resource-based livelihood systems of the communities.

A feasibility study on non-timber forest products (NTFP) was conducted in June 2005 and recommended coffee as a potential income earner for the Managalas Plateau. A coffee expert from the NTFP Exchange Programme (NTFP-EP) Philippines undertook a detailed survey on organic coffee and helped the communities to write a business plan for coffee production within the conservation area. The business plan was approved by the PWM Board and local communities in March 2006. The Managalas Organic Coffee Project started in June 2006. The project will be handed over to a separate Board of Directors representing the people of the Managalas Plateau in 2008.

As the 3,660 coffee growers on the Plateau have been constrained by the poor market access, PWM helped the communities secure funding to repair the road. At harvest season in 2006, PWM bought a vehicle and set up a collection scheme, offering a higher price for the beans than the independent buyers. Fifteen tonnes of the tribes' organic coffee beans were purchased, transported from the plateau and shipped to Port Moresby, milled and graded in a hand-picked facility, and finally auctioned off at the local market. Profits amounting to € 20,000 were deposited in a trust fund that will be redistributed according to a pre-approved formula. A certain percentage will go into educational, health and road maintenance trust funds and used to cover the operational costs.

PWM is negotiating for an export agreement with Trabocca, a coffee trader in the Netherlands. An initial quality assessment resulted in a good grading. New samples from the current season will be collected for further testing before the agreement is signed.

### ***Achievements***

- Approved business plan for community-based organic coffee production within a conservation area project.
- Establishment of an organic coffee business with over 3,000 farmers, resulting in a first year production of 15 tonnes. This was not very high due to a late start in the season but in 2007 the yield is expected to rise to 50 tonnes.
- Negotiations with a Dutch coffee trader are expected to result in a sales agreement, which will secure the market.

### ***Critical factors for success and replication***

- Fruitful South-South collaboration. The technical assistance from an experienced coffee specialist provided by NTFP-EP (Philippines) was crucial to the successful start of the project
- Extensive experience and credibility of natureandpoverty\* partner PWM in working with the Managalas Plateau communities
- Viability of the project, which benefits the producers (cash) and the communities (funds for community development) and supports conservation of the natural resources
- Arrangements for handing over the project to the communities in 2008



# 07 Mangrove conservation and rehabilitation in West Africa

Mangrove forests perform important socio-economic and ecological functions, but their destruction continues apace. The good practices described here illustrate strategies for the sustainable management and rehabilitation of mangroves in West Africa (GP9) and the energy-efficient fish smokehouse to reduce use of mangrove wood (GP10).

Mangroves are salt-tolerant forest ecosystems commonly found along sheltered coastlines, in deltas and along river banks in the tropics and sub-tropics. Millions of fishermen and coastal communities depend on them as a source of wood, medicines and food. Mangrove forests provide spawning grounds and nurseries for fish and shellfish and are host to a diversity of organisms. Mangroves trap silt from uphill erosion and provide coastal protection from winds and waves. Evidence indicates that the 2004 tsunami in Asia caused less damage to coastal villages with extensive areas of mangroves.



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After Asia, the mangrove ecosystems of Central Africa's western coast are the world's largest. Coastal communities depend on mangroves for fuel wood and charcoal and for timber used in home construction and boat building. The mangroves also provide water-resistant roof thatching as well as fodder for feeding some domestic animals.

During the past 25 years around 20% of the world's mangrove forests were lost to over-exploitation, pollution and conversion to other uses, including fish and shrimp farming, agriculture, salt production, petroleum exploitation and urban development. About 15 million hectares of mangrove forest remain.

In the past, governments actively encouraged such developments in order to boost local and national economies. However, an increased awareness of the wider value of mangrove ecosystems has led to new legislation, better protection and management of mangrove resources and, in some countries, an expansion of mangrove areas.

Nonetheless, the destruction of mangrove swamps continues to take place in many parts of the world. In some areas a lack of enforcement, coupled with the economic incentive to reclaim land, results in deliberate destruction.

The primary threats to Central Africa's mangroves are rapid urban development, petroleum exploitation and fuel wood consumption for fish processing.

## Ramsar Convention

The Ramsar Convention on Wetlands is an intergovernmental treaty that provides a framework for national action and international cooperation for the conservation and sustainable use of wetlands. Its ratification has enabled a number of countries to declare mangroves and other wetlands as designated areas for protection.

## GP 9. Learning process for improved mangrove conservation and rehabilitation

Comparison and analysis of different initiatives for mangrove conservation and socio-economic development reveal strategies that work.

### *Process initiated by the African Mangrove Network*

Through the natureandpoverty\* programme, the African Mangrove Network (AMN) and its affiliates have identified good strategies for mangrove conservation. The AMN collected information on 17 initiatives from 15 member organizations in 10 different countries. They visited the countries to review the projects, provide technical assistance and exchange ideas. After reviewing the data, four cases were selected as best practices:

- Establishment of community-based fish smokehouses that save mangrove wood (Cameroon; GP10)
- Community silvofisheries as an option for mangrove conservation and improvement of coastal community livelihoods (Kenya)

- Promotion of ecological horticulture in the coastal area (Togo)
- Improved shrimp trade and sustainable development of the coastal zones (Senegal)

### *Intervention strategies for mangrove conservation or rehabilitation*

The 17 cases are very diverse in terms of strategies and focus, but they also have elements in common. Awareness raising (information campaigns, resource centres) is an important part of the strategy. Activities are targeted to specific community groups living in the coastal areas and linked to concrete activities related to improved livelihoods or to special conservation interests (birds in Gambia, eco-system rehabilitation in Senegal).

Most cases integrate conservation with the development of alternative income generating activities such as fish farming (ponds and pots), crab, shrimp, oyster and salt production, and horticulture. Many target specific beneficiary groups such as women, youth, fishermen and horticulturists. Technical training, either in conservation techniques or in income generation activities, is included in all cases.

### ***Achievements***

The results of the initiatives vary substantially. Some practices show excellent results; for others the outcome is less clear. Most results are positive, showing increased income and rehabilitation of the mangrove ecosystem.

### ***Critical factors for success and replication***

- Awareness raising targeted to specific groups and linked to concrete activities
- Demonstrated efficacy of introduced technologies (people are more likely to accept technologies that have been shown to work in similar circumstances elsewhere than to experiment with new methods)
- Ownership and co-financing, and in the case of public/state resources, co-management
- Participatory approach and evaluation throughout the whole process
- The use of the farmer field schools concept for training
- Continuous encouragement, support and good conflict management skills from the service provider (NGO)



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## GP 10. Wood energy-saving fish smokehouses in Cameroon

Energy-saving fish smokehouses reduce the use of mangrove wood and provide income to coastal communities.

### *Use of mangroves for the fish processing industry*

Over 40% of the loss of mangrove forests in Cameroon and the Gulf of Guinea can be attributed to fish processing: the wood is used for the construction of kitchens and for smoking fish. An impact assessment by Cameroon Wildlife Conservation Society (CWCS) showed that in the Douala-Edea region mangrove wood extracted for this purpose between 1998 and 2004 contributed to an annual loss of 180,000 cubic metres, or 140 hectares. This represents an annual decline in the total mangrove forest in the region of 0.9%.

Mangrove wood is preferred for its high calorific value and flammability under wet conditions, which reduces wood processing costs. Traditional fish smoking methods, using platforms (*bandas*) in palm-leaf-thatched kitchens, make very inefficient use of the heat and the smoke causes serious health problems.

### *Intervention strategy*

Energy-efficient smokehouses were designed that reduce mangrove wood consumption, minimize the health hazard and reduce production costs. Ownership and sustainability are ensured through a participatory approach in six steps:

1. Identification of pilot project sites. Pilot communities are selected on the basis of criteria such as the importance of fishing and fish smoking, the magnitude of deforestation in the area and the level of organization of fishermen or other groups ready to form an association. The selected communities are expected to promote the system to other areas in the region through a well planned outreach programme.
2. Organization and empowerment of stakeholders. The target group is trained in various organizational and technical aspects, such as group dynamics, gender issues, management, environmental education, health, technologies in food and fish processing, storage and marketing.

3. Design of efficient smokehouse. The design is based on an analysis of secondary data, requests by stakeholders and testing of technologies.

4. Construction. The smokehouses are built with the participation and contribution of the beneficiaries. The communities, in association with local councils, provide land, raw materials, technical information materials, water, electricity and refreshments during the construction and demonstration phases. NGOs finance materials for construction (roofing sheets, wood, nails and cement) and pay for labour and technicians. Government provides funds through special programmes to assist the project.

5. Evaluation. Stakeholders continuously evaluate the performance of the smokehouses and propose improvements.

6. Management of the smokehouse. A supervisory board representing all stakeholders is responsible for the management of communal smokehouses. It empowers registered groups of fishers for daily management.

To ensure sustainable use, the design is linked to the establishment of timber quotas based on forest stock inventories and monitoring of permanent sample plots.

### ***Achievements***

- Five community smokehouses and 15 individual ovens have been built.
- Other communities are showing interest in adopting the system.
- Strong institutional collaboration and exchange:
  - Smokehouses are used as demonstration sites for FAO projects.
  - Local government provides technical forestry services.
  - Smokehouses are used for student projects in universities.
  - Exchange visits are undertaken by national and international NGOs.



### ***Critical factors for success and replication***

Mangrove deforestation attributed to fish processing activities presents similar problems throughout the entire Gulf of Guinea. The opportunities for replication are therefore good.

#### **Critical success factors are:**

- A participatory, cross-sectoral and multidisciplinary approach with the communities having the final word on design and management
- Linkage to forest stock inventories and monitoring of permanent sample plots
- Support from the local council and technical services of fisheries and forestry departments
- Regional exchange and outreach using model sites

# 08 Conservation of the Pantanal Wetlands, Latin America

The Pantanal, the world's largest freshwater ecosystem, is threatened by various developments. Two good practices describe initiatives for effective collaboration between stakeholders (GP11) and for introducing environmental modules into the school curriculum (GP12).

The Pantanal forms the heart of the greater Paraguay-Paraná Wetlands catchment area, which is shared by Bolivia, Brazil and Paraguay. Covering about 200,000 square kilometres, it is the world's largest freshwater ecosystem and is rich in biodiversity and fish stocks. The 250,000 people who live there are mainly poor and politically marginalized indigenous communities with limited sources of income and poor access to health care and education.

Cattle ranching is the dominant land use. Most land is privately owned and land use planning systems favour the large landowners. Policies focus on large-scale development, which does not benefit the local population.



#### The Pantanal faces four main threats:

- Soybean and sugar cane cultivation and cattle ranching, causing soil erosion and water contamination
- Tourism for sport fishing, which attracts about half a million of tourists annually
- Construction of water works that alter the flood plains (hydroelectric schemes, canalization of the Paraguay-Paraná river basin)
- Mining

#### The natureandpoverty\* approach in the Pantanal:

- Developing alternative livelihoods and income generating activities for communities that depend on the natural resources of the Pantanal
- Stimulating an ecoregional, participatory and decentralized approach to the land use planning of the Paraguay-Paraná River Basin
- Mainstreaming ecological criteria into the investment policies of financial institutions and the governments of Brazil, Bolivia and Paraguay
- Environmental education to raise awareness of the fragility of the ecosystem and prevent its distortion and degradation

## GP 11. The Pantanal Network

**Institutionalization of a network of organizations from different regions has made policy influencing and interventions for the sustainable development of the Pantanal more effective.**

### ***The Pantanal Network***

The Pantanal Network - or 'Rede Pantanal' - consists of over 50 non-governmental and civil society organizations from Brazil, Paraguay and Bolivia working on environment, socio-economic development and human rights issues in the Pantanal. The network was established in 2002 to meet the need for better coordination and more effective and influential representation of the various interest groups at the Regional Agenda of the Pantanal area.

Before the Pantanal Network was established, many organizations involved in environmental and social development activities in the Pantanal focused on particular geographic areas. Some collaborated on specific issues, such as the 'Aliança Rio Paraguai', a group lobbying against

the canalization of the Paraguay River; others formed part of a Coalition 'Rios Vivos' which had a much broader geographical scope. The Pantanal Network gives them a more coordinated focus and synergy at the Pantanal Regional level, more political power and greater capacity to act.

The natureandpoverty\* partner Ecologia e Ação (ECO) was elected as the executive secretariat. Working groups have been established for specific key themes, such as fishing resources and tourism, water resources, mega-projects and protected areas. These groups play a crucial role in facilitating dialogue with government, research institutes and other sectors.

### **The Rede Pantanal Mission**

To promote and support regional and local activities undertaken by its member organizations for the conservation of the Pantanal and for the protection of the life and culture of the Pantanal communities.

## ***Intervention strategies***

The Pantanal Network is strongly supported by nature- and poverty\* as part of its strategy for improved synergy and institutional cooperation. It has five main activity areas:

1. Learning - Strengthening the capacity of its member institutions by exchanging experiences regarding strategies and methodologies for sustainable livelihood and ecosystem management.
2. Support to local initiatives, empowerment of CSOs - Supporting the implementation of local programmes in the region - disseminating information, lobbying, environmental education and field projects.
3. Own projects and campaigns - Organizing campaigns and projects and permanent monitoring of their outcomes.
4. Representation at policy making structures - Representation in planning processes at different levels and influencing social and environmental policies and legislation.
5. Partnerships - Developing partnerships with other regional networks (e.g. Rede SOS Mata Atlântica, Rede Cerrado, Amazone networks) and with research

institutes, government authorities at local, regional and national level, tourism organizations, private landowners and others through the working groups.

## ***Achievements***

- International recognition of the Pantanal Network by governments and other key decision-makers in the region, raising its influence over policies and processes in the region.
- A high level of interaction and coordination among members.

## ***Successful campaigns in which the Network was instrumental***

- Halting the construction of sugar cane plants in the Brazilian Pantanal.
- Three campaigns against forest fires (Quemada Mata), each mobilizing around 100,000 people, resulting in the State Government of Mato Grosso do Sul allocating a budget for the prevention and control of fires of € 550,000 for 2006 and € 800,000 for 2007.

- Permanent campaign and monitoring against the construction of alcohol plants in the Upper Paraguay River Basin in Brazil, reaching around 100,000 people and resulting in the state government withdrawing from the project and prohibiting such developments.
- Campaign against the industries and the steel plants in the border zone of Bolivia and Brazil. In 2006, this resulted in the creation of a Negotiation Platform of companies and NGOs that includes the Pantanal Network's working group on mega-projects.
- A lobby for international recognition of the integrated Paraguay-Paraná Wetlands resulted in a declaration by the governments of Brazil, Bolivia, Paraguay, Uruguay and Argentina.
- Adoption of new policies and legislation for sustainable fisheries in Brazil.

The similarities in terms of context, socio-environmental problems and objectives facilitated the establishment and effective functioning of the Pantanal Network. Many organizations and stakeholders have improved their capacity,

knowledge and political influence and over 500,000 people in the region have been involved in meetings, trainings, workshops and campaigns.

### ***Critical factors for success and replication***

- A shared focus by local organizations and the belief that cooperation is more effective than competition
- A common voice on regional policies and unsustainable activities to increase members' power and recognition
- Strong organization through a democratic decision-making process and an active and experienced executive secretariat
- The creation of thematic working groups that encourages the participation of institutions on different subjects
- Complementary approaches: on the one hand, strong lobbying campaigns against unsustainable practices; on the other hand, partnerships and cooperation with a wide network of different stakeholders to increase knowledge and influence policies

## GP 12. Environmental education

**An officially approved environmental curriculum designed exclusively for Pantanal schools.**

### ***Need for environmental awareness***

The Bolivian part of the Pantanal occupies about 20% of the total ecoregion. Population density is low and the environment is relatively well preserved. During the past two years the zone has been subject to a series of controversial infrastructural developments, including the construction of a commercial port and railway access at the mouth of the Paraguay River, and the exploitation of Mutun, one of the world's largest iron mines. These projects, and the absence of an integrated sustainable land use planning system, have serious environmental implications and negatively affect the population's livelihoods.

### ***Intervention strategies - environmental education***

Different strategies are being taken to reverse these trends:

- Promotion of sustainable land use practices and alternative incomes
- Strengthening the local capacity for sustainable development/land use planning
- Creation of environmental awareness

Environmental education is considered the cornerstone on which the other strategies depend. Without community awareness of the importance of the ecosystems for their livelihood, conservation efforts will be in vain.

Natureandpoverty\* partner WWF Bolivia and Fundación Amigos del Museo (Fuamu), in collaboration with municipal and departmental institutions, launched a capacity building process in 2003. Teachers and school authorities were trained on key aspects of their immediate environment

and two information centres were opened which were closely coordinated with the schools in the areas. Students and the wider community were gradually brought into the process through education fairs, school horticulture projects and waste recycling.

The experience served as a foundation to develop the curriculum for the schools in the Bolivian Pantanal ecoregion. Agreements were signed with the departmental educational service under the Prefecture of Santa Cruz and the three municipal educational districts. They collated information with teachers in the districts (Puerto Suárez, Puerto Quijarro and San Matías) and drew up a draft curriculum based on the technical guidelines from the Educational Reform. The curriculum was taught during the 2005 school year and after an evaluation for the educational authorities was officially approved by the ministry.

Environmental education allows controversial unsustainable practices to be discussed in a non-confrontational manner and helps to put these issues on the political agenda.

### ***Achievements***

- The environmental education modules formally adopted in the region's school curriculum.
- The Ministry of Education officially approved the environmental curriculum in total accordance with the Educational Reform.
- The environmental curriculum is used as a model for the development of similar modules in other regions.
- Training has been completed by 190 teachers and over 10,000 students and other community members.

### ***Critical factors for success and replication***

- Participatory development based on the needs identified by the teachers in different districts
- Ensuring a high technical standard and compatibility with the official curricula formats required for approval by the Ministry of Education
- Close collaboration with the official education authorities and local government
- Integration with community and civic society activities
- Cooperation with other experienced and specialized NGOs

# 09

## Congo Basin Forests



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The Congo Basin's forests and the livelihood of its indigenous people are threatened by extensive logging and other pressures. These two good practices illustrate initiatives for the recognition of land rights (GP13) and for the establishment of partnerships between the private sector and NGOs (GP14).

The Congo Basin, stretching from the Democratic Republic of Congo to the Gulf of Guinea, contains a quarter of the world's tropical forests. These biodiversity-rich rainforests are threatened by over-exploitation of timber resources, expanding agriculture, increased hunting, urbanization and mining. Forest resources are often exploited for short term gains by national and foreign companies. Illegal and uncontrolled logging is depleting valuable economic resources, with minimal return for the countries involved. Rare animal species, including the bonobo (pygmy chimpanzee), forest elephants and the mandrill (the largest monkey in the world), are rapidly disappearing.



The construction of forest roads, usually a by-product of commercial logging, encourages people to settle and convert forest land for agriculture and other purposes. Modern laws often conflict with traditional land management and user rights, the most vulnerable being indigenous forest dwelling peoples. Many of the pygmies in Cameroon have been forced to give up their traditional nomadic way of life and move to towns.

Field activities in biodiversity rich but economically 'poor' areas in Cameroon and Gabon focused on land and access rights, benefit sharing arrangements and strengthening of local stakeholders. External threats to the ecosystems and the livelihoods of local communities – especially from logging – were investigated and addressed through national and international lobbying.

## GP 13. Land rights of the Bagyéli in Campo Ma'an, Cameroon

The rights of Bagyéli pygmies to use forest resources as part of their livelihood system is officially recognized in the Management Plan for Campo Ma'an National Park.

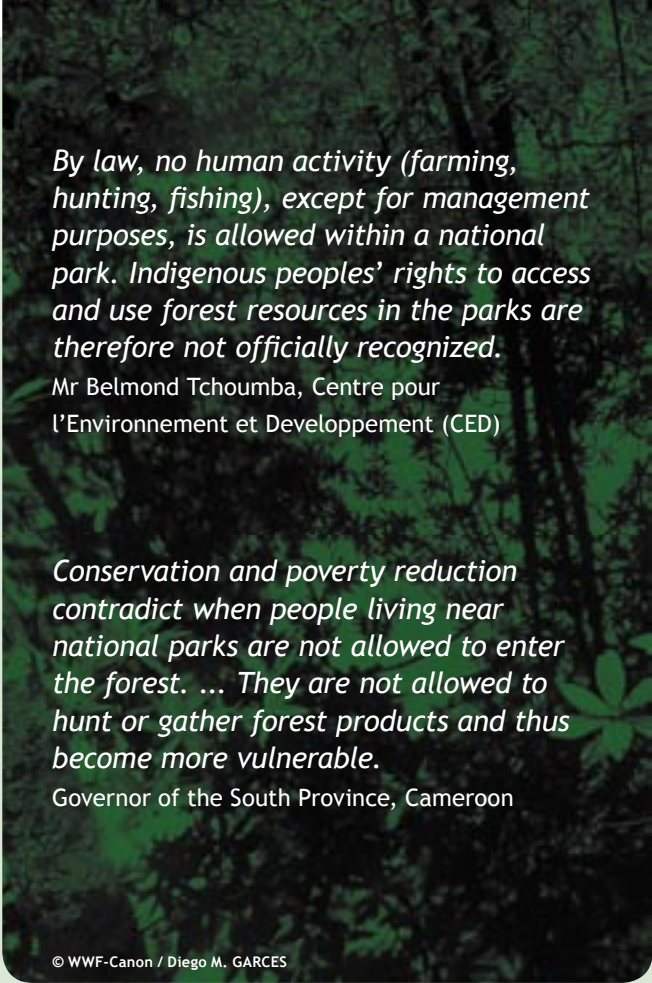
### *Campo Ma'an and the Bagyéli pygmies*

The Campo Ma'an National Park in south-west Cameroon was created by the government in 2000 as compensation for the environmental damage caused by the Chad-Cameroon oil pipeline. The park covers an area of 264,064 hectares and is home to many endangered animals and endemic plant species, but is threatened by poaching and land use conflicts.

The total population in and around the park is estimated at 60,338, including 25 Bagyéli pygmy settlements in the forest, worker camps in logging and agro-industrial concessions that border the park, and around 120 villages located in the periphery of the park.

The Bagyéli pygmies are a minority tribe who traditionally depend on hunting, fishing and gathering forest products. The restrictions placed on their hunting activities within the park and the loss of their land because of intensive logging and industrial farming have forced many Bagyéli to give up their traditional way of life and move to towns or settlement camps.

Efforts to counter these threats have intensified over the past years through the Global Environment Facility (GEF) funded Project for the Management of the Biodiversity of Campo-Ma'an (1996 – 2003) and ongoing technical support to the management of the park from WWF, with support from natureandpoverty\* and funding from FEDEC (an environmental compensatory mechanism for the Chad-Cameroon Pipeline Construction Project).



*By law, no human activity (farming, hunting, fishing), except for management purposes, is allowed within a national park. Indigenous peoples' rights to access and use forest resources in the parks are therefore not officially recognized.*

Mr Belmond Tchoumba, Centre pour  
l'Environnement et Developpement (CED)

*Conservation and poverty reduction contradict when people living near national parks are not allowed to enter the forest. ... They are not allowed to hunt or gather forest products and thus become more vulnerable.*

Governor of the South Province, Cameroon

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### ***Intervention strategies - the Management Plan***

The development of an overall management plan was a crucial step towards the sustainable use of the park and its environs. The process began in 1999 but was criticized for not sufficiently considering the needs of the indigenous people.

A participatory mapping exercise on forest resource use and the hunting zones of the Bagyéli was undertaken by Centre pour l'Environnement et Developpement (CED) with the support of the Forest Peoples Project (FPP). The findings were used in a lobby at the World Bank, the government of Cameroon and other partners to ensure that the interests of the Bagyéli were taken into account. The effort was successful and the concerns are reflected in the final Management Plan, which clearly recognizes the right of the Bagyéli to make use of the forest resources for subsistence purposes in accordance with their traditional way of life.

## Campo Ma'an Management Plan

*The Management Plan formally recognizes the rights and obligations of the Bakola/Bagyéli minority in accordance with the Cameroon constitution of 1999 concerning the indigenous people, in agreement with the Convention on Biological Diversity (CBD), and other relevant international conventions to which the Republic of Cameroon is signatory.*

Plan d' Aménagement du Parc National de Campo-Ma'an et de sa Zone Périphérique, Section 5.4.3.1.

The natureandpoverty\* partners CED, with their strong advocacy focus on indigenous people rights, and WWF Central Africa Regional Programme Office, responsible for the management of the park, were major players in the development of the Management Plan. Despite considerable differences in focus and strategies, their partnership and complementary competencies have been instrumental in the successful adoption of the Bagyéli rights in the Management Plan. The detailed arrangements still have to be worked out, pending further studies on resource use and availability. The implementation of the Management Plan will present an additional challenge.

## Achievements

- The Management Plan, validated in 2005, was officially approved by the Cameroon government in December 2006.
- The Management Plan explicitly acknowledges the rights of the Bagyéli to use the forest land and resources in accordance with their traditional way of life. This has already resulted in reduced harassment of the Bagyéli by authorities, companies and others people (CED).
- In 2005 the Cameroon Government recognized Campo Ma'an as one of Cameroon's two model forests, the only ones in Africa that are part of the International Model Forest Network hosted by the International Development Research Centre (IDRC) with support from leading international partners such as the Canada International Development Agency (CIDA), the Centre for International Forestry Research (CIFOR), the Food and Agriculture Organization (FAO) and the Central African Forest Commission (COMIFAC). The aim is to implement sustainable forest management while accounting for community needs and ensuring every actor has a say in the use of the forest.

### ***Critical factors for success and replication***

- A participatory approach in the development of the management plan
- Research on the Bagyéli's hunting zones and use of forest resources through participatory mapping
- Effective cooperation between CED and WWF CARPO

*Full credit is to be given to the project for successfully drafting the management plan.*

*As far as the indigenous people are concerned, the approach of concentrating on the improvement of the legal environment for better rights of the Pygmies combined with direct income generating activities development is promising.*

Evaluation of the Theme-Based Co-Financing (TMF) Programme - Lot 3: Biodiversity Conservation and Poverty Alleviation, Wageningen International, 7 March 2006 (pages 71 and 74 respectively).

## GP 14. Partnerships with private sector forestry operators

Private companies increasingly recognize the benefits of establishing partnerships with NGOs.

### ***Role of the private sector in forestry***

Forest exploitation accounts for 7 to 15% of GDP in the national economies in the Central African region, mostly in the form of taxation. The sector provides thousands of direct and indirect jobs.

The private sector, mostly foreign companies, is responsible for the major share of forest exploitation. The operations of many of these companies date back to the colonial era and have continued with little interference from civil society or supervision by the state. The transformation of logs in Central Africa is not well developed and the exportation of round logs, although prohibited in some countries, still continues. Forest exploitation in the past was not based on sustainability principles, did not take the livelihoods of local people into consideration and often violated the law.

The situation in Cameroon changed in 1994, when a new forestry law was introduced that puts more focus on the ecological and socio-economic impacts of forest exploitation. Forest companies have to meet new obligations that reduce environmental damage and support local development.

The companies operating in forestry are very diverse. Some seek FSC certification and are willing to move beyond legal prescription, whereas others are still not respecting the law. Illegal logging continues and accounts for about 50% of the traded logs, of which the European timber trade is a major beneficiary.

### ***Intervention strategies - partnerships with the private sector***

The relationships between civil society and the private sector are dualistic. Civil society activities vary between campaigning against companies on the one hand and partnering with them on the other.

1. Monitoring/campaigning - NGOs, particularly natureandpoverty\* partner Centre pour l'Environnement et Développement (CED), play an important role in monitoring the logging activities of forestry companies and campaigning against illegal and unsustainable practices. CED works closely with Milieudefensie (FOE NL). For example, after CED reported illegal logging practices by a Dutch timber trader in Cameroon, Milieudefensie raised a legal case against the trader at the Dutch Timber Trade Federation and also informed the buyers. Likewise, Milieudefensie detected that timber from Cameroon was used in government construction projects and asked CED to investigate the source of the timber. Such campaigns have clear effects.

For example, an agreement with another Dutch company was reached on a compensation package for local communities affected by its operations.

2. Partnerships - Timber companies are under increasing pressure from the international market to prove that they produce in a sustainable manner. They are more willing to cooperate with NGOs to benefit from their institutional, technical and legal knowledge of sustainable management:
  - a. Certification - WWF works through its Global Forestry Trade Network with forestry companies on certification.
  - b. Positive publicity - CED is monitoring commercial logging and providing this information to the Cameroon civil society.
  - c. Specific training such as Reduced Impact Logging (RIL) - IUCN BRAC supported forestry education through its Forestry Schools network RIFFEAC and

natureandpoverty\* helped to co-finance the development of training modules and the placement of consultants (forestry training experts) with private companies.

d. Support to community development and policy changes - IUCN organized a training workshop for villages in the Campo Ma'an site on Principles Criteria and Indicators for sustainable logging, with support from CED and WWF; WWF supported sustainable use of NTFP around Campo Ma'an; and natureandpoverty\* has helped finance IUCN work with forest company FIPCAM, local communities and government to set up a platform for the sustainable development of forest resources.



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## ***Achievements***

- National principles, criteria and indicators for sustainable forest management have been discussed and approved by all stakeholders, including the private sector.
- The forestry training institutions distribute new training modules for forest managers developed after exchanges with three private sector forestry companies in three countries.
- Documents have been published that show different aspects of forest management and expose abuse and unsustainable practices, notably the use of development aid to assist private sector forestry companies that violate sustainable practices.
- Policy documents, including the African Forest Law Enforcement and Governance (AFLEG) ministerial declaration, have been made available to private sector companies.
- Dialogue has been ongoing with two private sector companies to remedy illegal logging practices and improve their overall management practices.
- A stakeholder forum of different actors around a forest concession has been created and the participants have

been informed and trained on different aspects of national forestry legislation.

- Initiatives have been undertaken to improve government tools for monitoring forest management and law enforcement (e.g. EIA, private sector obligations, user rights).

## ***Critical factors for success and replication***

- Advanced national forest legislation addressing sustainable forest management
- Complementary approaches and mandates of the partner organizations
- Improved information access, production of tools and training guides
- Inclusion of NGOs and community based organizations in initiatives to increase openness, communication and understanding
- The global reach of the natureandpoverty\* partners for effective lobbying and campaigning
- Clear goals for the partnership and awareness of mutual interests

notes



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