

Review¹ of the Protected Area System of Vietnam

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BACKGROUND INFORMATION

Vietnam has a landmass of 329,566 km² and is bordered by China on the north, and Laos and Cambodia on the east. Most of the country consist of hills and mountains reaching up to over 3,000 meters above sea level, a 3,260-km long coastline harbouring a variety of marine and coastal habitats, inland lakes and rivers, tropical rainforests, monsoon savannah, sub-alpine scrubland and two important river deltas. These habitats are home to more than 12,000 plant species of which 10,484 have been identified and 2,300 are used for food, medicine, construction timber and others. Fauna includes 280 mammal, 828 bird, 180 reptile, 80 amphibian, 471 freshwater fish, 2,500 saltwater fish and many insect species (Hoang Hoe, et al, 2001).

The World Conservation Monitoring Center rated Vietnam as the 16th most biologically diverse country in the world (WCMC, 1994). About 40% of inventoried plant and 10% of animal species such as mammals, birds and fish, are endemic to Vietnam (Hoang Hoe, et al, 2001). The country also harbours globally important populations of some of Asia's most threatened animals, such as Javan Rhinoceros, Crested Argus, Douc and Delacour Langurs, Edwards Pheasant, Green Peafowl and Tonkin Snub-nosed Monkey²

¹ This article draws information from existing literature duly referenced which has been verified for accuracy, updated and complemented in collaboration with agencies and professionals operating in Vietnam.

² Before its 1992 re-discovery in Ba Be National Park, the species was thought to be extinct.

(*Rhinopithecus avunculus*). The global significance of the country's biodiversity has been reinforced by the discovery of four new species of large mammals between 1992 and 1994: the Sao la (*Pseudoryx nghetinhensis*), the Giant Muntjac (*Muntiacus vuquangensis*), the Truong Son Muntjac (*Muntiacus truongsonensis*) (Hoang Hoe, et al, 2001; Birdlife, FIPI, 2001; Pham Nat, et al, 2000), and the Annamite Striped Rabbit (*Nesolagus timminsi*) (Timmins and Duckworth in Baltzer et. al., 2001).

Forest vegetation suffered significant degradation in the 20th century, decreasing from 45% of the total land area in 1945 to 30% in 2000 (Hoang Hoe, et al, 2001). There are many threats to the country's terrestrial biodiversity but the most important has been deforestation due to logging, clearance for agriculture, forest fires, war damage, shifting cultivation, firewood collection and overgrazing. The remaining area of good quality forest continues to decline. Apart from deforestation, many individual species are endangered or have been eliminated due to massive over-utilization. Collection of rare medicinal plants and timbers, over-hunting and collecting of wildlife for trade are all common threats.

Marine ecosystems consist of mangroves (252,000 hectares), coral reefs (40,000 ha), tidal marshes and mudflats (290,000 ha), and saline and brackish aquacultural ponds (200,000 ha). Recent inventories show that more than 11,000 species of marine flora and fauna thrive in these waters, including seagrass (15), seaweed (653), fish (2,175) reptiles (21), marine

mammals (21) and migratory waterfowl (200). Some 617 species of coral have also been identified (NEA/MOSTE, 2001[1]). Important marine fisheries are based on shrimps, lobsters, crabs, squid, mackerel, pomfret, sardines, bream and bass.

Freshwater and marine habitats are threatened by siltation, industrial and domestic pollution, over-fishing, destructive fishing methods, pollution from agricultural pesticide run-off, land reclamation, physical disturbance, and introduction of exotic species.

Habitat fragmentation also has major impacts on biodiversity. As habitat patches become encroached and split, their capacity to support species declines. Many larger, low density or species with wide range requirements may soon vanish.

THE PROTECTED AREA SYSTEM Legal Framework

In 1945, then President Ho Chi Minh signed Ordinance No. 49, which transferred the management of the Forest Service, including the Forest Protection Department (FPD), to the Ministry of Agriculture. The FPD tasks have largely concentrated on managing forest use to assist the war effort and meet general public demand, and did not consider the development of protected areas (Hoang Hoe, et al, 2001).

Legislation specific to protected areas can be traced back to Ordinance No. 18/LCT, the Law on Organization of the Government Council of the Democratic Republic of Vietnam, which established the General Department of Forestry in 1962. The Department became responsible for managing and developing plans for the national forestry sector. In the same year, the Department declared Cuc Phuong Protected Forest as the first National Park, which became the first component in the country's Special-Use Forest system. In the following years, the Department continued to under-

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take forest surveys in northern Vietnam, and designated 49 Special-Use Forests. However, high wartime demand for timber and lack of resources meant that these areas received few management inputs and forest degradation continued (Birdlife, FIPI, 2001).

In 1976, the General Department of Forestry was upgraded to Ministry of Forestry. Decision No. 41/TTg of the Prime Minister also established the category of Prohibited Forests and gazetted 10 forest areas, which together covered 44,310 ha. Several protected areas were designated in the following years, including Nam Cat Tien National Park in 1978, Mom Ray Nature Reserve in 1982, Con Dao National Park in 1984, and Cat Ba National Park in 1986 (Birdlife, FIPI, 2001).

In 1986, Decision No. 194/CT decreed the establishment of 73 new Special-use Forests nationwide, most of which lacked management boards, budgets or investment plans. This situation was corrected by Decision 1171/QD, which defined Special-Use Forest categories as well as management regulations.

Expansion of the Special-Use Forests system continued in the early 1990s, bringing the total number of Special-Use Forests to 93 with a total area of 985,280 ha. A 1991 review of the forestry sector, however, revealed that many Special-Use Forests were too small and/or too degraded to meet conservation objectives. The review proposed a significant increase in the areas set aside to conserve the nation's biodiversity (WCMC, 1994).

In 1995, the government approved the Biodiversity Action Plan (BAP), which was the country's response to its ratification of the Con-

vention on Biological Diversity. Major programmes of the BAP include the establishment and management of protected areas and the development of their buffer zones; creation of marine and wetland protected areas; establishment of gene banks; and the enhancement of measures to protect agricultural biodiversity. In line with BAP objectives, the Ministry of Agriculture and Rural Development (MARD) announced plans to expand the Special-Use Forest system to 2 million hectares.

In 1997, MARD hosted a national conference on the Special-Use Forests network, after which the Forest Protection Department (FPD) prepared what became known as the '2010 list.' The list proposes the addition and removal of certain sites from the system to bring its total coverage to 2 million hectares by 2010, covering over 6% of the national land area (Birdlife, FIPI, 2001). The list has yet to be submitted to the government for approval and is currently being revised by the FPD based on the Sourcebook of

Protected Areas developed by the Forest Institute for Planning and Inventory (FIPI) and Birdlife, a comprehensive set of classification criteria and a Protected Area Strategy both developed by the National Protected Area Working Group under MARD.

The latest regulations on the management of the three types of forests, including Special-Use Forests, have been promulgated through Decision No. 08/QD-TTg, which defined protected area categories, and prescribed the institutional structure that would manage the Special-Use Forest system.

Other legislations significant to the management of Special-use Forests are listed in **Table 1**. Legal instruments directly affecting wildlife protection are found on **Table 2**.

In addition, Vietnam is also party to a number of international agreements related to biodiversity conservation. The Decree 20/2002/ND-CP regulates the signing and implementation of international agreements.

Table 1. Directives significant to the management of Special-Use Forests

Legal Document	Date
Decision No. 08/QD-TTg on the management of Special-Use Forest, Protection Forest and Production forest	11 January 2001
Decree 163/ND-CP on allocation and lease of forest land to organisations, households and individuals for long-term forestry purposes	16 November 1999
Circular 56/1999/TT-BNN-KL guiding the elaboration of village and hamlet conventions on protecting and developing forests	30 March 1999
Decision 34/1999/QD-BNN-TCCB by MARD promulgating the regulation on working relationships between the Forest Protection Department and the National Parks under MARD	12 February 1999
Decision 245/QD-TTg of the Prime Minister on state management responsibility of all levels on forest and forestry land	21 December 1998
Decision 661/1998/QD-TTg on objectives, tasks, policies and organisation of the 5 Million-Hectare Reforestation Program	29 July 1998
Directive 286/TTg by the Prime Minister on urgent measures to protect and develop forests	2 May 1997
Decree No. 77/CP on penalties/fines in forest protection and forest resources management	29 November 1996
Directive No. 130/TTg on protection and management of endangered plant and animal species	27 March 1993
Decree No. 14/CT on penalties/fines in forest protection and management	5 December 1992
Decision No. 327/CT on use of open land, bare hills, forest, coastal alluviums and water bodies	15 September 1992
Decree No. 18/HDBT on endangered species and management and conservation mechanisms	17 January 1992
Decree 58/LCT/HDNN by the State Council on the Law on forest protection and development	19 August 1991

Table 2. Legal Instruments for Wildlife Conservation

Legal Instrument	Year
Decree 11/2002/ND-CP on management of export, import and transit of wild animals and plants	2002
Document 637/KL-BTTN of MARD instructing the management of wild fauna and flora	2000
Official Letter No. 2472/NN-KL-CV on strengthening wildlife protection and development	1996
Directive No. 359/TTg on urgent measures to protect and develop wild animal species	1996
Government instruction on protection and administration of precious, rare floral and faunal species	1993
Decision 18 of the Council of Ministers on a total ban on logging or hunting of 13 species of trees and 36 species of animals and a limited ban on logging/harvesting of 19 plants species and 10 animals	1992
Decision 276 of Ministry of Forestry forbidding hunting of 38 wildlife species	1989
Law on Forest Protection including articles of administration of forest wildlife	1973
Government regulations on forest wildlife hunting	1963
Government instruction forbidding elephant hunting	1960

Protected Area Categories

Forestland in Vietnam is divided into three categories, namely Production, Protection and Special-Use Forests. Production Forests are earmarked for exploitation in compliance with approved management plans while Protection Forests are designated to protect land and water sources in critical areas (Nguyen Van San, et al, 1999) and their exploitation is restricted to mainly non-timber forest products in natural forests. Special-use Forests are designated on the basis of their importance for

Ratification of International Agreements

Convention on Biological Diversity
Signature Date: 28/05/1993
Ratification Date: 16/11/1994
CITES - 1994
RAMSAR Convention - 1988
WHC - Signed 19 October 1987

the conservation of Vietnam's biodiversity, science, tourism or cultural and historical heritage. In January 2001, Decision No. 08/QD-TTg, classified Special-use Forests into the following categories:

- National Parks
- Nature Reserves - this was further divided into two sub-categories: 'nature reserves' and 'habitat/species management areas'; the latter, however, is not clearly defined
- Cultural, Historical and Environmental sites (Landscape conservation areas).

These protected areas (**Table 3**) comprise mainly terrestrial forest sites but also include a small number of wetland and major marine sites like Con Dao, Bai Tu Long and Cat Ba.

Some of these protected areas have also gained worldwide recog-

niton as:

Ramsar Sites - Xuan Thuy was designated as the first (1988) and currently the only Ramsar Site in the country. Proposed Ramsar Sites include Tram Chim National Park, Thai Thuy proposed nature reserve, the wetlands of Cat Tien National Park and Tam Giang-Cau Hai proposed marine protected area.

World Heritage Sites - There are currently four in Vietnam: Ha Long bay, the complex of Hue monuments, Hoi An ancient town and My Son sanctuary.

Man and the Biosphere (MAB) Reserves - The mangroves of Can Gio, in Ho Chi Minh City, and Cat Tien were designated as Man and the Biosphere Reserves in year 2000 and 2001 respectively. Can Gio has been directly categorised as a MAB reserve, while Cat Tien has been already decreed since 1992 and still is a National Park. In addition, discussions have been initiated to classify Hoang Lien mountain range (Yen Bai, Lai Chau and Lao Cai provinces) as a future MAB reserve.

Institutional Arrangements

In terms of biodiversity conservation, the 1995 Biodiversity Action Plan (BAP) decreed that the Ministry of Science, Technology and Environment (MOSTE) is the key organisation that would implement the BAP through concerned Ministries, sectors and local agencies. Under MOSTE, the National Environment Agency (NEA) is responsible

Table 3. Protected Areas in Vietnam (Year 2002)

Category	Number of Protected Areas	Distribution of Categories on total number of Protected Areas	Total Land Area (ha)*	Distribution of Categories on Total PA's Land area (%)	Distribution of Categories on the country's landmass (329,566 km ²)
National Parks	16	16.8%	476,621	22%	1.5%
Nature Reserves	61	64.2%	1,528,751	71%	4.64%
Cultural, Historical and Environmental sites (Landscape conservation areas)	18	18.9%	141,599	7%	0.43%
Total	95	100.0%	2,146,971	100%	6.51%

(*) Total Land Area includes wetlands and excludes marine components. This computation allows for establishing a correct ratio with respect to the country's landmass. The Total Area (including the marine components of Con Dao NP, Bai Tu Long NP and Cat Ba N) is 2,176,029 ha.

Sources: "Number of PA" and "Total Land Area" have been provided by Nguyen Huu Dzong, Director of the Conservation Division, Forest Protection Department (2002). Marine components have been calculated on the basis of figures provided in the Sourcebook of Existing and Potential Protected Areas in Vietnam (Birdlife & FIPI, 2001)

for assisting the Ministry in the unified management of environmental protection activities throughout the country. Tasks include review of environmental protection policies, appraisal of Environmental Impact Assessment (EIA) reports, development and management of environmental monitoring, assessment and forecasting systems, and promotion of international relations on environmental protection, among others. The Policy Department of NEA is the focal point for the Global Environmental Facility. NEA also serves as the Vietnam National Biodiversity Reference Unit (NBRU) for the ASEAN Regional Centre for Biodiversity Conservation (ARCBC).

The Ministry of Planning and Investment (MPI), based on domestic sources and foreign aid, following the main objectives of the Biodiversity Action Plan (BAP) and in close coordination with MOSTE, is responsible for laying out annual implementation plans of each component of the BAP for the mandated agencies (BAP, 1995).

The Ministry of Agriculture and Rural Development (MARD), the Ministry of Fisheries (MOFI) and the National Centre of Natural Science and Technology are the major implementing organisations of the BAP. These organisations shall work closely with MOSTE and MPI on the annual implementation plans and inform MOSTE about the outputs of their components (BAP, 1995).

The Forest Protection Department (FPD) of MARD, has overall management responsibility of the Special-use Forest network, although various organisations are involved at the provincial, district and site levels (Birdlife, FIPI, 2001). Currently, 9 national parks are managed by the central government through a management board under the FPD in Hanoi and 7 by Provinces. The criteria for the management level are currently being developed. Members of the centrally-managed management

boards are usually drawn from staff of the relevant provincial FPDs.

Nature Reserves are largely the responsibility of provincial governments. These are administered by management boards under the supervision of provincial People's Committees, through the provincial Forest Protection Sub-Departments (FPD) or Departments of Agriculture and Rural Development (DARD). Members of the management boards are also often from the staff of relevant provincial FPDs, or, in some cases, from other organisations such as forest enterprises (Birdlife, FIPI, 2001).

According to Decision No. 08/QD-TTg (2001), the Ministry of Culture and Information, in cooperation with MARD, is responsible for establishing and managing cultural, historical and environmental sites.

Marine resource management has been initially under the responsibility of the MOSTE according to the Law on Environment Protection (1993). In addition, MOSTE prepared the list of wetlands of national importance (NEA/MOSTE, 2001 [2]). A few of these are already included in the Special-Use Forests and are mainly managed by Forest Protection Sub-Departments. The MOFI has recently been assigned the responsibility for establishing and

managing the marine protected areas system. Through the Fisheries Protection Department (FiPD), MOFI is responsible for implementing the Ordinance on Conservation and Management of Living Aquatic Resources. This ordinance provides a legal basis for establishing fisheries protection zones, which have some conservation objectives without being yet classified as protected areas.

Examples of Ongoing Conservation Projects and Donor Support

A number of international organisations have made significant contributions to protected area management and biodiversity conservation in the country (See **Table 4** for list of protected area-based projects). These include, among others:

Asian Development Bank (ADB) - In the past the Bank's assistance has focused on agricultural policy reform, rural infrastructure, rural credit, water resources, forestry and fisheries. In recent years it has increasingly supported Government's priority programmes for poverty reduction, reforestation and sustainable resource management. The ADB is the third largest donor to Vietnam, after the Japan International Cooperation Agency (JICA) and the World Bank. ADB contributed with

Table 4. List of Ongoing Major ICDPs in Viet Nam

Location	Donor/Executant	Year Began
Cuc Phong NP	FFI	1996
Pu Mat NR	EU	1997
Cat Tien NP	WWF	1997
Na Hang NR TCP	Munster Zoo	1997
U Minh Thuong NR	DANIDA/CARE Denmark	1998
Phong Nha NR	WWF	1998
Ba Be & Ke Go NTFPs	IUCN	1998
Ba Be/Na Hang NP/NR	UNDP	1999
Yok Don NP	UNDP	1999
Cat Tien NP	WB	1999
Chu Mon Ray NR	WB	1999
Ke Go NR	DANIDA	2000
Cat Ba NP	FFI	2000
Hon Mun Marine PA	DANIDA/IUCN	2001
Small-Grants Facility	UNDP/GEF	2000
Song Thanh NR	WWF	2001
Pu Luong Nature Reserve	FFI	2002

their South China Sea pilot study in Con Dao and other major technical assistance to the development of a marine protected area system in Vietnam.

CARE International - Since 1990, CARE has focused on agriculture and natural resources development, small enterprise development, as well as health and emergency assistance. More recently it ventured into biodiversity conservation, including the Ngoc Lac Natural Resources Conservation (1999-2003) project.

Danish Agency for Development Assistance - DANIDA supports a number of initiatives related to natural resource management and biodiversity conservation, in particular the Strengthening Protected Area Management (SPAM) Project. DANIDA also assists TRAFFIC in implementing CITES, as well as the development of marine protected areas.

European Commission (EC) - Over the period 1997-2005, the European Commission has committed 30 million Euro to support Vietnam's efforts to protect its environment and sustainably manage its natural resources, as prioritised in the National Strategy for Environmental Protection (2001-2010) and the Forest Sector Support Programme (FSSP) (2001, EU Delegation, Hanoi). Other significant contributions include projects on "Expanding the System of Protected Areas in Vietnam for the 21st Century (1996-2001) and the recently approved Community-based Conservation of the Hoang Lien Son Mountain Ecosystem (2002-2005).

Global Environment Facility (GEF) - United Nations Development Program (UNDP) and World Bank are implementing agencies for GEF in Vietnam³ and supervise the development of medium and full size GEF proposals (e.g. Ba Be - Nahang, Yok Don, Pu Luong and others under

preparation). On the Vietnamese Government side, NEA is the focal point reporting to an inter-ministerial National GEF Steering Committee. The GEF Small Grants Programme (SGP) managed under UNDP provides funding to community-based organizations and local non-government organisations for activities that address issues related to the GEF focal areas: biodiversity, climate change, international waters and ozone layer. Activities involve conservation of bird sanctuaries, national parks, endemic species, indigenous bamboo forest, and medicinal plants (2000-2004).

IUCN - The World Conservation Union - IUCN is working with government and national non-government agencies to implement a number of biodiversity-conservation initiatives in the country including a Biodiversity Awareness Project (2000-2001) and the development of a National Center for Non-Timber Forest Products (NTFP) under the Forest Science Institute with two field sites at Ba Be National Park and Ke Go Nature Reserve. Furthermore, IUCN, together with WWF, Wildlife Conservation Society, Birdlife and others, is coordinating the Critical Review of Protected Areas and their Role in Socio-Economic Development in the lower Mekong region (2001 - 2003).

Ministry of Economic Co-operation and Development: The Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ) - GTZ is active in the sector of protection and sustainable management of natural resources, with particular emphasis on the forestry sector. GTZ cooperated with MARD in the reform of the forestry administration (2000), and assists the provinces of Son La and Lai Chau on social forestry (1993-2004) and the Mekong River Secretariat on the Sustainable Management of Resources in the Lower Mekong Basin. Two new projects in this sector have been recently approved: Rural Development in Dak

Lak Province and Management Support to the Tam Dao National Park, the latter being the first direct contribution to biodiversity conservation. The Kreditanstalt für Wiederaufbau (KfW) is supporting a series of afforestation projects in north and north central Vietnam.

Royal Netherlands Embassy - The Royal Netherlands Embassy finances and co-finances a multitude of projects in environment and forestry: Cat Tien National Park project implemented by WWF, Local Environment Fund and a Forestry Project in Thua Tien Hue managed by SNV Netherlands Volunteer Organisation, Forest Protection and Rural Development Project (WB), ADB Forest Sector Project, the upcoming GEF Conservation Sinking Fund under WB Forest Sector Development Project, and various other relevant projects and initiatives, in particular the Forest Sector Support Program.

Swedish International Development Agency (SIDA) - SIDA supported Vietnam's National Environment Agency (NEA) and MOSTE through a Strengthening Environmental Management Authority (SEMA) Technical Assistance project, which established the foundation for the proposed upgrading and re-organising of NEA to a General Department of Environment.

United Nations Development Program (UNDP) Vietnam - The UNDP has provided assistance to Vietnam since 1977 through projects that seek to eradicate poverty, promote the advancement of women and foster development that balances economic progress with environmental protection for the benefit of present and future generations. Projects include Creating Protected Areas for Resource Conservation (1998-2003), Environmental Management in Coastal Aquaculture (2000-2003) as well as Environmental Education in the Schools of Vietnam (1999-2004).

World Bank - World Bank assistance includes the design and financ-

¹ Recently, ADB also acts as implementing agency for GEF.

ing of development projects, policy analysis and advice, technical support, poverty reduction and sustainable resource management. In its Forest Protection and Rural Development Project (1998-2004), WB supports the management of Chu Mom Rey Nature Reserve and buffer zone development in the forest complex of Cat Tien and Cat Loc National Park. In the framework of the planned Forest Sector Development Project, a major GEF conservation sinking fund is being prepared with the Government of Vietnam. Co-financing is provided by the Royal Netherlands Embassy. WB also financed a Conservation of Limestone Biodiversity Project (initiated in 2001) executed by Flora and Fauna International (FFI).

World Wide Fund for Nature (WWF) - WWF is working in proposed marine protected areas in Con Dao, Phu Quoc and other sites on species conservation and with support from the Danish Government and the Asian Development Bank in policy development for marine conservation. WWF implements a tiger conservation project in several provinces. Together with FFI, it has supported the development of an elephant action plan for Vietnam, adopted by the government in 1996. WWF is also active in Phong Nha - Khe Bang National Park, Vu Quang and Cat Tien (with funds from the Netherlands) National Parks and Song Thanh Nature Reserve. These projects aim to integrate conservation with sustainable development in and around the protected areas, to ensure the long-term survival of their wild fauna and flora. Currently, WWF develops, with seven Provinces in the Central Annamites, a Landscape Conservation Initiative and Strategy. Through funding from DANIDA, WWF implements with the Forest Protection Department under MARD and four provinces, the major policy project on Strengthening Protected Area Management (SPAM) aimed at the development and pilot

implementation of a national protected area strategy.

An increasing number of local non-government organisations are involved in protected areas. These include among others the Vietnam National Parks and Protected Areas Association (VNPPA), the Center for Environment, Tourism and Development (CETD) and Education for Nature Vietnam.

ASSESSING THE PROTECTED AREA SYSTEM

A number of reviews have been conducted in the past to assess the protected area system in Vietnam. In 1990, a study by John MacKinnon provided inputs to the Tropical Forestry Action Plan (TFAP). The study revealed that many protected areas were too small or too damaged to satisfy conservation goals, lacked tangible levels of infrastructure and had poor management standards. In addition, management plans were often little more than biological descriptions. Institutional and legal arrangements for wetland sites and marine protected areas at the time had yet to be finalised (WCMC, 1994). As a result, the TFAP proposed doubling the area of nature reserves and adopted the target of two million hectares of nature reserves set by the Ministry of Agriculture and Rural Development (MARD).

A more recent assessment was carried out by the EC and BirdLife International co-funded project "Expanding the Protected Areas Network in Vietnam for the 21st Century," which began in 1999. The project provided the Forest Inventory and Planning Institute (FIPI) support to identify and prioritise areas for inclusion in an 'expanded' Special-use Forests network, as well as to improve the equitability of the system in terms of representation of different forest types, ecoregions, elevation zones and globally threatened species. A major output of the project is a "Sourcebook of Existing and Proposed Protected Areas in

Vietnam", which was produced with financial support from the ASEAN Regional Centre for Biodiversity Conservation (ARCBC). The Sourcebook provides a comprehensive overview of Vietnam's protected areas network and is aimed at a broad audience, including protected area planners, research institutions, government and non-government organizations, and funding agencies.

Results of the assessment mirrored those of the 1991 study: a number of Special-use Forests no longer retain any natural forest cover, are too small or heavily degraded. Some actually contain large areas of non-forest land, principally agricultural land, scrub and non-natural grassland. The institutional arrangement for the management of the Special-use Forest network is also a cause for concern. The assessment recommends that management boards of protected areas involve a diversity of stakeholders, with suitable incentives in place to foster effective management. Local communities should also be assured of a share of benefits derived from conservation, to foster support for zonation-based management. These strategies would allow communities to consider the benefits derived from environmental conservation through protected areas. The assessment also states the lack of institutional arrangements and ad-hoc legislation for wetland, coastal and marine protected areas. Some wetland and marine areas have been protected, but have been lumped into the Special-use Forest category. The government is currently working on proposals that would set up a system of wetland and marine protected areas (Birdlife, FIPI, 2001).

The WWF/MARD project "Strengthening Protected Areas Management" has been completing its comprehensive consultancy programme of policy research, review and recommendations. The reports generated by 12 consultancies (e.g. legal framework,

Table 5. Conservation Strategies and Action Plans

Policies	Year
National Protected Area Strategy 2002 – 2010 under preparation	2002
Forest Development Strategy 2001 - 2010	2002
National Strategy for Environmental Protection (2001-2010) to be approved	2001
Environmental Action Plan (2001-2005) to be approved	2001
Biodiversity Action Plan For Vietnam (1995 - 2000) approved	1995
National Plan on Environment and Sustainable Development (1991-2000) approved	1991
Strategy on Nature Conservation not approved	1985
Strategy on Forest Protection	1972

institutional analysis, buffer zone management, biodiversity assessment methodologies, law enforcement and forest protection) will form the basis for the development of the national Management Strategy for Protected Areas in Vietnam.

IUCN is currently implementing under the UNDP/GEF funded project in Ba Be, Nahang and Yok Don a study to develop financial plans for the three protected areas involved.

Another multilateral ongoing initiative is the "Critical Review of Protected Areas and their Role in Socio-Economic Development of the Four Countries of the Lower Mekong Region" (<http://www.mekong-protected-areas.org>). The (2001-2003) review examines approaches for integrating protected area management with socio-economic planning for the sustainable development of the region's natural resources. Results of the review will be presented at the World Parks Congress in Durban, South Africa in September 2003. It also cites a number of achievements in the protected area system including:

- Establishment of an extensive national network of protected areas soon to include wetlands and marine areas;
- Introduction of zonation-based management planning;
- Resolutions and decisions providing greater protection to natural resources within protected areas;
- Improvements in terms of awareness of the biodiversity

and the economic importance of protected areas; and

- Government recognition of the contribution of protected areas to socio-economic development.

These positive policy trends have not yet been put into practice at the local level and will take considerable time to be fully implemented and consolidated.

Sustaining the management of protected areas requires that the needs of the protected area system be integrated into national financing mechanisms. Vietnam has been very supportive in this regard, largely through a number of environment plans such as the Biodiversity Action Plan (1995), which institutionalised the goal of attaining 2 million hectares of protected areas. It determined the locations and size of the system of forest, marine and wetland areas that have to be protected. This has become the essential foundation for development planning towards ensuring the sustainable development and conservation of ecological systems and valuable species (Tran Lien Phong, 2001).

The National Strategy for Environmental Protection (NESP) 2001-2010 reiterates the importance of protected areas and stresses that future efforts in this area will focus on protecting biodiversity in areas with international and national significance, harbouring endemic and threatened species. Implementation of the priority programmes of NESP 2001-2010 is detailed in the Environmental Action Plan 2001-2005,

which includes several actions that directly affect protected area management. These include a review of the 1995 Biodiversity Action Plan, a priority of which is capacity building for protected area planning, establishment and management. Research and strategies that will provide inputs into the development of marine and wetland protected areas are also indicated, as well as a plan to upgrade the National Environment Agency (NEA) to a General Department of Environment within the Ministry of Science, Technology and Environment (MOSTE).

The Forest Development Strategy 2001 - 2010 addresses a number of issues related to special-use forest and forest ecosystems. It proposes that sound management of special-use forests requires strengthened and encouraged cooperation between the Management Boards and the local communities. Besides depending on the particular conditions of each special-use forest, attention and support should be given to the establishment and socio-economic development of its buffer zone. The institution and staffing of already approved special-use forests should be completed and new nature reserves in Northeast, Northwest, Northern Central, Central Highland have to be created. In addition, the proposed strategy should pay attention to wetland areas in the Red River and Mekong River Deltas.

The Draft National Management Strategy for Protected Areas developed under MARD will address issues for terrestrial, wetland and marine areas and is scheduled for completion in April 2002. A national workshop will follow in late May.

These programmes of action, as well as a number of national programmes (such as the Five Million Hectare Reforestation Programme - 5MHRP) require substantial financial resources and technical assistance for their implementation. While inclusion of plans for protected areas in national environment strategies and

the forest development strategy should ensure adequate support, this is often not the case since competing needs often far outweigh the capabilities of the national budget. The Forest Sector Support Programme (FSSP), which has been developed as a comprehensive partnership in the forestry sector (broader than the 5MHRP), will provide an important mechanism for enhanced support and cooperation in the forestry sector.

Since protected areas are largely under the jurisdiction of the Ministries of Fisheries (for the marine protected areas to be decreed) and of Agriculture and Rural Development (terrestrial and a few marine - e.g. Con Dao, Phu Quoc, Ca Ba), management needs are addressed in the respective ministries' annual, 5-year or long-term development plans. The proposed budget for the special-use forests comes from the overall budget for the forest sector (around 350 hundred billion VND or 23 million USD) and for marine protected areas, from the Ministry of Fisheries (nearly 60 billion VND or 4 million USD). The support is meant for infrastructure, staffing, working facilities, surveys, boundary demarcation, monitoring, supervision, support to community development and education. Still, the budget is not enough to meet all protected area management requirements. Infrastructure and staffing, in particular, currently constitute the major part of actual costs (Phan Thu Huong, 2001).

A mix of financing mechanisms to support the implementation of the strategies relevant for protected areas should then be considered to ensure effective management. One such option is tapping into local environment funds, which developed as a result of the country's shift to a market-based economy, and from centralized to decentralized governance (Phan Thu Huong, 2001). The fund can encourage enterprises to use clean technology, and improve

the capability of important environmental institutions in terms of environmental monitoring, research and project development. Environmental responsibility may also be encouraged among local communities if the fund is used for revenue sharing or for compensating participation in the implementation of environmental protection efforts.

A number of financial instruments have also been used to support protected areas, including financial supports, tax exemptions or deductions and the application of different types of environmental taxes, such as the natural resource tax and the water tax, which are already in place. The collection of service fees (such as entrance fees in protected areas) is a means for generating income, which can be used for maintenance and operational activities. Soon it will be necessary to analyze and assess various experiences in applying these tools so that positive lessons may be learned and replicated elsewhere (Phan Thu Huong, 2001).

THE WAY FORWARD

The various assessments conducted on Vietnam's protected area system pose a number of challenges for environmental managers and planners. Pressing issues include:

- * Funding - more investments from the public and private sector and an appropriate pattern of distribution are necessary to address the cost of establishing and managing the expanded protected area system, in particular the nature reserves under provincial management;

- * Institutional arrangements - should be re-focused to remove overlaps and gaps in authority and regulated for the management boards. The establishment of a National Conservation Agency should be studied;

- * Stakeholder participation - multi-sectoral representation should be encouraged in protected area management, mainly at the level of provincial conservation strategies and

in the protected area management boards;

- * Harmony between development and conservation - has to be clearly established so that the environment, the community and the economy would all benefit from conservation efforts. Conservation of biodiversity has to be promoted and integrated into overall development planning; and

- * Migration - people moving in to exploit resources significantly adds to protected areas threats. Socio-economic development in priority conservation landscapes has to consider population growth and movements.

The actions undertaken by the government at the conclusion of the various assessments seem to indicate its commitment to dealing with biodiversity depletion by working towards the establishment of a functional and representative protected area system. Given the preponderance of terrestrial protected areas, attention must now be paid to wetland and marine ecosystems. New proposals by NEA/MOSTE on the protection of critical wetlands represent an important step forward. Wetlands are among the most threatened habitats in Vietnam, and support some of the most threatened species. Fifteen of Vietnam's 33 globally threatened bird species are wetland-dependent, including White-shouldered Ibis (*Pseudibis davisoni*), Black-faced Spoonbill (*Platalea minor*), Lesser Adjutant (*Leptoptilos javanicus*) and Bengal Florican (*Houbaropsis bengalensis*) (BirdLife, FIPI, 2001). Proposed areas should be representative of wetland habitats in the country and have the appropriate management structure in place to ensure their sustainability. Although wetlands are not recognised as a separate conservation management category, the NEA/MOSTE has already identified 79 areas of national importance, which, when approved, may form the basis of a wetland protected area system

in the country. Responsibilities for the actual management of these wetland conservation areas have then to be clearly defined and take into consideration the management capacities at provincial and local level.

The legal and institutional status of marine protected areas is under discussion, with particular effort in developing collaboration between different government stakeholders. The Ministry of Fisheries (MOFI) is likely to have overall management responsibility for this particular protected areas system but the Ministry of Agriculture and Rural Development (MARD) and Ministry of Fisheries (MOFI) will jointly manage sites with terrestrial and marine components. Management regulations for marine protected areas are also under discussion but these are likely to be broad and flexible to allow management regulations to be tailored to specific geographical areas and management requirements (Birdlife, FIPI, 2001). Efforts have been underway for several years to develop a legal and institutional basis for marine protected area establishment and management with ADB and DANIDA support. The government has set a target to formally establish 15 marine protected areas by 2010 (NEA/MOSTE 2001 [1]).

The success of ongoing plans directed at protected area management also entails the full involvement and participation of local communities. Since global experience largely reflects the leadership of communities, citizens' groups and NGOs in environmental protection, new government strategies (NESP 2001-2010, Environmental Action Plan 2001-2005, Forest Development Strategy 2001-2010) have given greater emphasis to "encouraging public participation" in environmental and forestry programmes. The strategies also stress the need to improve institutional effectiveness, to ensure that government agencies tasked with natural resource management have the capability to do

so. Existing technical assistance programmes to both government and community-based organisations provide some hope that environmental goals will be met.

However, the management effectiveness of the existing protected area system, mainly forests, should be further assessed and improved with support from international donors, NGOs and Government under the recently signed Memorandum of Agreement to implement the Forest Sector Support Program Partnership.

What is quite interesting about the protected area system in Vietnam is the concerted effort made by both local and international organizations towards its improvement. The fuel for change and innovation has been provided. Let's hope it will lead to a fruitful ride. ■

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