

PROJECT CONCEPT No. M17

TITLE: Conservation of Biodiversity in the Annamese Lowlands and Dalat Plateau

AIM: To identify and secure the designation of protected areas and to prepare conservation prescriptions as a basis for their long-term viability.

PHASING: Phase I

PROJECT DURATION: two years

JUSTIFICATION: BirdLife International has recently identified 221 areas worldwide that are critical for the conservation of global biodiversity. This study mapped the distribution of the world's birds to reveal centres of so called Endemic Bird Areas (EBAs). The available evidence suggests that levels of endemism are similar for other faunal and floral groups. Two of these areas, the Dalat Plateau and Annamese Lowlands are the major biological hotspots in SE Asia.

Fieldwork by BirdLife has revealed that the protected areas network in these EBAs is insufficient to meet national and global conservation requirements, and further that the endemic fauna is dependant on forests which are under severe pressure due to the expansion of agriculture and logging.

SCOPE: The project will identify and secure the designation of protected areas within these centres of biodiversity, and prepare conservation and development prescriptions as a basis for their long-term viability. This will require inter alia surveys of forest areas identified by satellite imagery and forest-cover maps, rural appraisals to determine land-use by local communities and their development needs, and local and national workshops to agree on conservation and development objectives. The project expects to provide assistance with the implementation of these prescriptions as a second phase.

LOCATION: Ha Tinh, Nghe An, Quang Binh, Thua Thien Hue, Dac Lac, Lam Dong and Ninh Thuan.

RESPONSIBLE AGENCIES: Ministry of Forestry, Provincial Forest Departments.

BUDGET: Small

CONVENTION ON BIODIVERSITY ARTICLES: 6, 7 and 8

PROJECT CONCEPT No. M18

TITLE:	Establishment of Coral Reef Protected Areas
AIMS:	To select representative coral reef sites of high conservation values and to establish protected areas at such sites.
PHASING:	Phase I
PROJECT DURATION:	five years
JUSTIFICATION:	Despite the long and complex coastline and marine ecosystems, there are no marine protected areas in Vietnam. High biodiversity of coral reefs and their role as fisheries nursery grounds are seriously threatened and warrant immediate conservation efforts. Establishing protected areas will help concentrate efforts on high priority sites under limited resources (management capacity and finance).
SCOPE:	<p>This project is to be implemented as two phases:</p> <ul style="list-style-type: none">I) Baseline surveys and feasibility studies.II) Establishment of protected areas and preparation of management plans. <p>While little-known sites will be dealt with in phase I, sites that have already be surveyed in detail under various projects such as WWF-VN0011 and National project KT-03-11 can enter phase II directly.</p> <p>As there is not yet an authority responsible specifically to marine and coastal protected areas, such an authority has to be identified or created, pulling together expertise from all aspects related to marine conservation, before the commencement of phase one. At phase two, protected area authorities will be formed at local levels to plan and manage the protected areas.</p>
PHASE I LOCATIONS:	Sites which will be surveyed and assessed before July 94 under WWF project VN0011: Phu Quoc and Cu Lao Cham; Islands that have been surveyed under national project KT-03-11 but require more detailed feasibility studies: Bach Long Vi. Sites that require baseline surveys: Con Dao, Spratly Archipelagos, Phu Quy and nearby islands and reefs.
PHASE II LOCATIONS:	Hon Mun (VN0011) and Hon Cau (VN0011). These two sites have been proposed as marine park and marine reserve respectively and can become demonstration sites for other proposed areas. Other sites from phase I that possess high biodiversity values and conservation potential.
RESPONSIBLE AGENCIES:	Local Governments; Departments of Fisheries; Committee of Science, Technology & Environment; HIO, IOOC, SIEBR
BUDGET:	Medium
CONVENTION ON BIODIVERSITY ARTICLES:	8

PROJECT CONCEPT No. M19

- TITLE:** Establishment of Coastal Marine Protected Areas
- AIMS:** To select sites & establish a system of coastal marine prot areas.
- PHASING:** Phase II
- PROJECT DURATION:** 5 years
- JUSTIFICATION:** The biodiversity, ecological and economical values of coastal marine ecosystems have long been recognised. However, human dependence and threats on, and logistics of management of these ecosystems are so complex that protection of such systems is minimal. The establishment of protected areas will help concentrate efforts on high priority sites under limited resources (management power and finance).
- SCOPE:** This project will be divided into two phases:
- I) Detailed feasibility studies with special reference to the economic-technical basis for protection.
 - II) Protected area establishment and preparation of management plans. All sites proposed have been surveyed under KT-03-11, but require detailed feasibility studies before entry to phase II.
- Due to pressing human pressures on coastal wetland, multiple-use protected areas with complex zoning and management designs will be applicable to many cases. Other sites may, however, warrant a status that will allow them to remain safe from reclamation or conversion into ponds.
- LOCATIONS:**
- Lagoons: - Tam Giang (Hue)
- Oloan (Phu Yen)
- Tidal marsh: - Tien Yen
- Ha Coi (Quang Ninh)
- Yen Hung (Quang Ninh)
- Tien Lang (Haiphong)
- Xuan Thuy (Nam Ha)
- Duyen Hai (Ho Chi Minh City)
- Ca Mau (Minh Hai)
- LEAD AGENCY:** To be formed at central level (NCNST/MOSTE/MOF)
- RESPONSIBLE AGENCIES:** HIO, IOOC, Hue University, HCM University, Fisheries Departments and Agricultural Departments.
- BUDGET:** Medium
- CONVENTION ON BIODIVERSITY ARTICLES:** 8

PROJECT CONCEPT No. M20

TITLE:	Establishment of Muong Nhe Reserve
AIMS:	Ensure high level of protection for remaining patches of original forest and stabilise land-use practices over a large area.
PHASING:	Phase III
PROJECT DURATION:	five years
JUSTIFICATION:	Muong Nhe is Vietnam's largest nature reserve. Although the reserve largely contains secondary forest and scrub, it still supports large mammals including elephants, gaur, tigers and other larger mammals. Surviving forest patches support gibbons and other forest fauna and flora typical of NW region.
SCOPE:	<ol style="list-style-type: none">1. Enlarge the existing reserve of 180,000 ha to a total of 400,000 ha including development of buffer zones for nine communities in line with the management plan.2. Build a protection team with an emphasis on the recruitment of ethnic minorities.3. Develop infrastructure and purchase equipment necessary to focus protection on forest areas of high biodiversity value.4. Control hunting and ban on the use of explosives and poison for fishing and use of automatic weapons for hunting.5. Develop transfrontier links with proposed Phou Dene Dinh Nature Reserve in Laos.
LOCATION:	Muong Te and Muong Lay districts, Lai Chau Province.
RESPONSIBLE AGENCIES:	Ministry of Forestry, Lai Chau Peoples Committee
BUDGET:	Medium
CONVENTION ON BIODIVERSITY ARTICLES:	8 and 10

PROJECT CONCEPT No. M21

TITLE: Integrated Coastal Zone Management (ICZM)

AIMS: To prepare an ICZM Strategy for the coastal zone of Vietnam.

PHASING: Phase I

PROJECT DURATION: three years

SCOPE: Due to the complexity of coastal environments and the types and intensity of utilisation in these areas, an integrated management strategy is needed for the sustainable utilisation and development of such areas and resources. This ICZM Strategy will form the guidelines for the management of the coastal zones of Vietnam covering activities such as mangrove deforestation, reclamation for agriculture and settlement, aquaculture development, coastal construction and industries, etc.

LOCATION: Central

LEAD AGENCY: SPC/MOSTE

RESPONSIBLE AGENCIES: MOF, MOA, MOE

BUDGET: Medium

CONVENTION ON BIODIVERSITY ARTICLES: 8 and 10

PROJECT CONCEPT No. M22

TITLE: Yok Don Integrated Conservation

AIMS: To secure the long-term viability of Yok Don National Park

PHASING: Phase I

PROJECT DURATION: five years

JUSTIFICATION: Yok Don National Park is unique because it is the only protected dry dipterocarp forest. It is also unusual in being a protected area consisting largely of primary forest habitats without human habitation. However, Dac Lac Province receives numerous migrants annually, many of whom settle in areas peripheral to Yok Don. The development of a buffer zone is urgently required.

SCOPE: At present the lands proposed as buffer zones are largely forested -- an exception in Vietnam. It is important that forest cover is maintained on these lands and that human land-use is strictly stabilised to meet the conservation objectives of the national park. This project will involve the co-operation of several agencies to plan, develop and execute a land-use scheme in support of the conservation objectives of Yok Don National Park. Development of ecotourism will also be included.

LOCATION: Dac Lac

RESPONSIBLE AGENCIES: Yok Don National Park Management Office, Provincial Forest Protection Department, Ministry of Forestry, Ministry of Sedentarisation.

BUDGET: Medium

CONVENTION ON BIODIVERSITY ARTICLES: 8 and 10

PROJECT CONCEPT No. M23

TITLE: Buffer Zone Management

AIMS: To study new ways of managing buffer zones

PHASING: Phase II

PROJECT DURATION: 5 years, with a second phase after 2000

JUSTIFICATION: Biodiversity conservation will require the support and collaboration of local people. One way of involving them in the management of biodiversity is the designation of buffer zones around core protection zones. The concept of buffer zones is still relatively new, and there are no tested management models available yet. The project will help develop appropriate models for Vietnam.

SCOPE: The project will work with the communities around a few selected protected areas, and involve the authority responsible for the management of the core area. Community approaches to biodiversity conservation will be studied using PRA and other relevant techniques, and management models will be developed. The project will need to have a follow-up phase, in order to evaluate success and review progress.

LOCATION: Selected biodiversity "hot spots".

RESPONSIBLE AGENCIES: MOF, MOSTE, Fisheries, Provincial Committees, local communities

BUDGET: Medium

PROJECT CONCEPT No. M24

TITLE:	Rehabilitation of Degraded Mangrove Forests in Ca Mau Peninsula
AIMS:	To bring additional land under mangrove forests; To protect important sites for wildlife, especially birds
PHASING:	Phase I
PROJECT DURATION:	6 years
JUSTIFICATION:	Historically, Ca Mau peninsula had one of the richest and most complex mangrove systems in SE Asia. Although entirely destroyed during the wars, it has been extensively reforested. New forests are less complex than the original and face new threats from local people making fish ponds. A new effort to restore these mangroves is urgently needed.
SCOPE:	<p>Following an assessment of existing forest cover in the peninsula and a review of existing the settlement policy, the project will include:</p> <ol style="list-style-type: none">1. Protection and enrichment planting in areas where such practices will ensure rehabilitation of mangrove forests.2. Establishment and maintenance of plantations in completely denuded mangrove areas.3. Review of regulations regarding use of mangrove forests.4. Prepare and implement plans for protection and of important sites for wildlife especially birds.5. Increase awareness among local people of the importance of conservation measures. <p>The project will involve a social development component to ensure that local villagers do not destroy planted mangrove forests. Some forests will be strictly protected as in-situ conservation areas.</p>
LOCATION:	Ca Mau peninsula
RESPONSIBLE AGENCIES:	Ministry of Forestry, Peoples Committee of Minh Hai
BUDGET:	Medium
CONVENTION ON BIODIVERSITY ARTICLES:	8, 9, 10 and 11

PROJECT CONCEPT No. M25

TITLE: Midlands Restoration Research

AIMS: To examine various models for sustainable land-use patterns in degraded mid-land areas in different parts of the country.

PHASING: Phase II

PROJECT DURATION: 5 years

JUSTIFICATION: Vietnam is attempting to restore fertility and productivity to over 10 million ha of degraded lands. Existing research as to which croppings or inter-cropping systems are most suitable is still rudimentary.

SCOPE: The project will provide advice to local communities willing to set up experimental land use plots, will provide some physical assistance and seeds to participating communities and will measure and analyse productivity and impacts on soil quality, water-table and other factors.

Analysis of the data will lead to recommendations of suitability of different integrated agro-forestry or crop rotational systems for different land and climate conditions.

LOCATION: Selected mid-land localities in north, central and south Vietnam

RESPONSIBLE AGENCIES: MOSTE will supervise research programmes undertaken by several agencies.

BUDGET: Medium

CONVENTION ON BIODIVERSITY ARTICLES: 6 and 10

PROJECT CONCEPT No. M26

TITLE:	Capacity Building for Biodiversity Conservation
AIMS:	Develop a skilled cadre of conservation officers at all levels.
PHASING:	Phase I
PROJECT DURATION:	five years
JUSTIFICATION:	Several agencies connected with conservation and biodiversity have a shortage of staff with specialised training in wildlife biology, conservation and protected area management.
SCOPE:	<ol style="list-style-type: none">1. Develop training centres in three national parks.2. Develop training courses for Protected Area managers, technical staff and rangers.3. Conduct field training courses.4. Upgrade forestry training programmes.5. Organise overseas training in special skills.6. Organise overseas study-tours for in-service upgrading. <p>The on-going project will train more than 2,000 people.</p>
LOCATION:	Hanoi
RESPONSIBLE AGENCIES:	Ministry of Forestry
BUDGET:	Medium (funding secured)
CONVENTION ON BIODIVERSITY ARTICLES:	12

PROJECT CONCEPT No. M27

TITLE: Cuc Phuong National Park Training Development

AIMS: Develop a training centre in the National Park and develop buffer zones

PHASING: Phase I

PROJECT DURATION: five years

JUSTIFICATION: A shortage of trained field staff and managers is one of the principal constraints in in-situ conservation in Vietnam.

SCOPE: This is Vietnam's first National Park established in 1962. Most of the necessary infrastructure already exists. The project will construct a training centre in the park for training guards and managers of protected areas in north Vietnam. Construction and running of training courses are already guaranteed under the GEF project.

Several villages of Muong people have been relocated from the central valley of the park. These and other villages around the park need further support to develop stable buffer zones.

LOCATION: Ninh Binh Province

RESPONSIBLE AGENCIES: Ministry of Forestry, National Park Management Committee

BUDGET: Training centre - Medium (part of US\$3 million GEF project)
Buffer zones - Medium (awaiting funding)

**CONVENTION ON
BIODIVERSITY
ARTICLES:** 12

PROJECT CONCEPT No. M28

TITLE:	Promoting Non-Damaging Fishing Methods
AIMS:	To gradually replace damaging fishing practices by non-damaging methods while maintaining the fisher's livelihoods.
PHASING:	Phase I
PROJECT DURATION:	three years
JUSTIFICATION:	Marine biodiversity and fisheries resources have been hampered by damaging fishing methods in many areas all across the country. Fishermen are not always to be blamed as they generally know very well the harm they are causing but have no alternative way of fishing for a living. It is essential that technical and financial assistance be given to help fishermen convert to non-damaging fishing methods, else no protective measures will be effective.
SCOPE:	The project will involve research and promotion of fishing methods such as long line to replace damaging methods especially dynamite fishing, night fishing with strong lamp and bottom set nets. Financial assistance (from aid agencies or bank loans) will be provided and collective arrangement made to help fishermen purchase new fishing gear and vessels. Expertise on when and where to catch will also be passed onto fishermen to avoid hampering fisheries recruitment and sustainability.
PRIORITY LOCATIONS:	Quang Ninh - Haiphong Khanh Hoa - Binh Thuan Kien Giang - Minh Hai
LEAD AGENCY:	Ministry of Fisheries
RESPONSIBLE AGENCIES:	- Fisheries Resources Protection Department in provinces. - RIMP
BUDGET:	Medium
CONVENTION ON BIODIVERSITY ARTICLES:	10 and 16

PROJECT CONCEPT No. M29

TITLE: Wetlands Conservation Strategy

AIMS: Complete surveys of priority wetland sites in Vietnam and develop a wetland conservation and management programme.

PHASING: Phase I

PROJECT DURATION: 2 years

JUSTIFICATION: Conservation of important wetland sites in Vietnam is vital. But, many sites are threatened by development including drainage, overuse and pollution. A critical review and development strategy are urgently needed.

SCOPE: The outline of a wetland programme contained within the BAP, provides the basis for developing a national wetland strategy.

Several sites are identified for more in depth surveys and studies. Some wetlands need immediate protection.

LOCATION: Hanoi

RESPONSIBLE AGENCIES: MOSTE to co-ordinate suitable planning team

BUDGET: Medium

CONVENTION ON BIODIVERSITY ARTICLES: 6

PROJECT CONCEPT No. M30

TITLE:	Models for Management of Uncontrolled Migration - Dac Lac
AIMS:	To reduce/control illegal migration and strictly regulate legal migration to Dac Lac.
PHASING:	Phase I
PROJECT DURATION:	10 years
JUSTIFICATION:	Dac Lac Province has the largest remaining forest area and is probably the most important single province for biodiversity conservation in Vietnam. Illegal migration of people from north Vietnam to Dac Lac is perceived as the major threat to biodiversity in Dac Lac. It is estimated that between 30,000 - 50,000 people illegally settle in Dac Lac each year. Most of these people settle and clear forested areas.
SCOPE:	<p>The project will include a full biological and socio-economic survey of all forests in Dac Lac and preparation of a zoning and development plan.</p> <p>By means of an advocacy programme and strict law enforcement this project aims to halt illegal migration and to review and strictly regulate legal migrants.</p> <p>This will involve the co-operation of a number of agencies in co-ordinated inter-sectoral planning. It will involve the thorough review of all migration and new economic zone policies in the province, the active lobbying of central government representatives and the establishment of provincial border posts to control human traffic.</p>
LOCATION:	Dac Lac
RESPONSIBLE AGENCIES:	Dac Lac Provincial Peoples Committee, Forest Protection Department, Provincial Committee for Science and Technology, Police and judiciary, CEMMA, Provincial Peoples Committees.
BUDGET:	Medium
CONVENTION ON BIODIVERSITY ARTICLES:	5, 6 and 14

PROJECT CONCEPT No. M31

TITLE: Investigation of the Status of Offshore Fishery Resources

AIMS: To reveal the status of offshore fisheries resources and estimate the stock and maximum sustainable yield of major fisheries

PHASING: Phase III

PROJECT DURATION: three years

JUSTIFICATION: Over exploitation of inshore fisheries and the desire for offshore fisheries are recognised by both scientists and fishermen. However, due to the lack of finance and expertise, very little research has been done concerning offshore resources. The hasty development of offshore fisheries without background knowledge on the stock and sustainable yield of these resources is likely to jeopardise future production.

SCOPE: Preliminary observations indicate valuable fisheries potential around Bach Long Vi Islands in Tonkin Gulf and pelagic (migratory) fish resources in offshore areas, especially the central region. Detailed survey studies on fisheries stock and maximum sustainable yield will be focused in these areas. Foreign institutions will be invited to become partners of such research to bring in expertise and funds and to facilitate knowledge exchange.

LEAD AGENCY: NCNST

RESPONSIBLE AGENCIES: RIMP, HIO, IOOC, SIEBR, MOF

LOCATIONS: Northern and Central Vietnam

BUDGET: Medium

CONVENTION ON BIODIVERSITY ARTICLES: 12 and 10

PROJECT CONCEPT No. M32

TITLE: Scientific Training on Marine Environment, Resources and Conservation Abroad

AIMS: To raise the level of knowledge on marine conservation among government officials and scientists.

PHASING: Phase III

PROJECT DURATION: six years

JUSTIFICATION: Marine conservation is a new concept for Vietnam, especially concerning the management of marine protected areas and fisheries resources. Information and training from abroad are extremely important to raise the present level of knowledge in these fields.

SCOPE: Topics of particular importance are fisheries management, coastal and marine ecology, marine pollution and EIA, and aquaculture (estuarine and marine). Scholarships and/or exchange programmes with foreign institutions should be granted to young scientists and government officials presently involved or planned to engage in marine conservation. It is necessary to draw up contracts to prevent loss of trained expertise.

LOCATION: Abroad

LEAD AGENCY: NCNST

RESPONSIBLE AGENCIES: Various Institutions (north & south)

BUDGET: Medium

CONVENTION ON BIODIVERSITY ARTICLES: 12

PROJECT CONCEPT No. M33

TITLE: Ecotourism and Protection of Ba Ra Forests

AIMS: The conservation of natural forest on Ba Ra.

PHASING: Phase III

PROJECT DURATION: five years

JUSTIFICATION: Song Be has lost most of its natural forest cover. Ba Ra (736 metres) is an isolated mountain and the highest point in Song Be. Natural vegetation cover on the mountain is high but the forest is degraded and subject to continued logging and agricultural encroachment. Ba Ra is of great provincial importance because it is a unique landscape feature, an isolated mountain and because of its considerable historical value.

SCOPE: The project will ensure that adequate protection is afforded to the remaining forest to prevent its further destruction. This project will require forest protection measures to help regenerate natural forest.

A paved track leads to the summit providing spectacular views over Song Be, Dong Nai and Cambodia. This site therefore also has potential as a tourist site and has great educational value. Developments of this potential will be included in the project.

LOCATION: Song Be

RESPONSIBLE AGENCIES: Song Be Forest Protection Department, Provincial Forest and Tourist Departments.

BUDGET: Small

CONVENTION ON BIODIVERSITY ARTICLES: 8

PROJECT CONCEPT No. C1

- TITLE:** Establishment of National Genebank of Useful Plants
- AIMS:** Ensure plant genetic resources (PGR) of economically useful plants and their wild relatives.
- PHASING:** Phase I
- PROJECT DURATION:** 4 years
- JUSTIFICATION:** Situated in one of the vavilov centres of crop distribution, Vietnam is the origin of about 40 crop species. In addition, hundreds of other plants have been used for medicines and other uses. During 4,000 years of history many thousands of domestic varieties of plant have been raised in Vietnam. However, many are threatened with local extinction as people adopt more high-yield varieties because of the need to feed a growing population.
- SCOPE:** The project will co-ordinate the development of the extensive national project by improving facilities, construction, purchase of equipment for conservation and research of plant genetic resources, establishment of propagation nurseries, field collection and training of PGR management workers.
- Cold storage facilities at the Vietnam Agricultural Sciences Institute (INSA) that currently hold 17,000 accessions of more than 50 plant species will be replaced by larger and modern facilities. The social elements of PGR conservation will be tackled. A database will be established and linked to the network of Institute of Ecology and Biological Research (IEBR). The project will include:
- Investigating and collecting of PGR
 - Conserving the material collected
 - Characterising, evaluating and enhancing the germ plasm
 - Documenting germplasm
 - Co-operating with national, private and international organisations and NGO's in PGR research and management
- LOCATION:** An Khanh, Hanoi
- RESPONSIBLE AGENCIES:** The Vietnam Agricultural Sciences Institute (INSA) in co-operation with 20 research institutes already involved in the PGR network in Vietnam.
- BUDGET:** Medium
- CONVENTION ON BIODIVERSITY ARTICLES:** 9

PROJECT CONCEPT No. C2

- TITLE:** Culture of Rare and Depleted Marine Species
- AIMS:** To develop culture of highly valuable and depleted species to reduce pressure on wild stocks and to provide alternative income for fishermen previously engaged in damaging fishing activities.
- PHASING:** Phase II
- PROJECT DURATION:** five years
- JUSTIFICATION:** Many economically important species overexploited by uncontrolled fishery activities. Stock recovery of such species is impossible if exploitation cannot be controlled. Culture of these species will enhance stock recovery by taking away pressures off the wild stocks, restocking the wild populations and creating alternate income to ease fishermen's dependence on the already depleted resources.
- SCOPE:** This project is to be divided into two components:
- a) Develop culture of little known and depleted species such as the scallop *Chlamys nobilis*, abalones *Haliotis* spp. and *Lutraria philippinarum* through research and experimental farms. Such technology will be passed on to local fishermen when successful.
 - b) Promote farming of precious species already successfully cultured such as *Pteria martensii* and *Pinctada maxima*. Financial and technical assistance and employment will be provided especially for fishermen that have been forced to engage in damaging fishing activities due to poverty. Mariculture activities should be carried out in ways that do not damage the natural environment or wild populations. The project should be linked with existing programmes of a similar nature such as the aquaculture projects for Vietnamese returnees run by the EC.
- LEAD AGENCY:** Ministry of Fisheries
- RESPONSIBLE AGENCIES:** Departments of Fisheries; Various research institutes (RIMP, HIO, IOOC, Nha Trang Institute of AquaProducts)
- PRIORITY LOCATIONS:** Nha Trang and Van Phong bays (*P. maxima*) Quang Ninh, Haiphong (*Pteria martensii*, *Haliotis*, *Lutraria philippinarum*); Binh Thuan (*C. nobilis*)
- BUDGET:** Medium
- CONVENTION ON BIODIVERSITY ARTICLES:** 16 and 9

PROJECT CONCEPT No. C3

- TITLE:** Zoological Garden Management Strategy
- AIMS:** To ensure that the Zoological Gardens in Vietnam contribute optimally to efforts to conserve biodiversity in Vietnam
- PHASING:** Phase II
- PROJECT DURATION:** 5 Years
- JUSTIFICATION:** Worldwide, zoological gardens have proven to be a useful asset in the battle to conserve biodiversity. In general they can serve three types of purpose. (i) Education. A zoo can be an excellent tool for informing the general public on the value of biodiversity, and on ways to conserve biodiversity; (ii) Research. Skills and resources in zoos can complement efforts of scientists to better understand individual species, families and biodiversity conservation; (iii) Ex-situ conservation. Additionally the specimens resident in the world system of zoos can contribute to efforts to build up populations of endangered species. At present, the zoological gardens in Vietnam are not contributing optimally to this strategy.
- SCOPE:** This project will develop a nationwide strategy for zoological gardens. The three underlying reasons for zoological gardens described above will be the driving force for the strategy. A main element to the strategy will be the financial sustainability of zoos in Vietnam. The project will also seek to reverse the negative impact of some existing zoos in Vietnam, such as the drain they place on wildlife stocks and the inappropriate education they offer to visitors. In addition, the project will assist the start-up of two model appropriate zoological gardens (or revision of existing gardens), one in the north of the country, and one in the south.
- LOCATION:** Zoological Gardens in Vietnam and Research Institutes.
- RESPONSIBLE AGENCIES:**
- BUDGET:** Medium
- CONVENTION ON BIODIVERSITY ARTICLES:**

PROJECT CONCEPT No. C4

TITLE:	Upgrading Botanical Gardens
AIMS:	Develop a co-ordinated programme of ex-situ botanical conservation and research.
PHASING:	Phase III
PROJECT DURATION:	four years
JUSTIFICATION:	Botanical gardens of Ho Chi Minh City and Hanoi have degraded to public parks. Gardens in some reserves are long neglected. There is a need for a northern montane Garden. There is no co-ordination between efforts at ex-situ plant conservation.
SCOPE:	<ol style="list-style-type: none">1. Upgrade the following botanical gardens: Ho Chi Minh City Hanoi Bach Ma Dalat Cuc Phuong2. Establish a new botanical garden at Sapa.3. Establish a Vietnam Association of Botanical Gardens and develop a Botanical Garden strategy.4. Develop a database of collections.5. Co-ordinate efforts to study and propagate Vietnam's endangered plants, with assistance or co-operation of overseas botanical gardens.6. Conduct research into use and propagation of biologically rare and economically threatened plant species.
LOCATION:	Various towns and reserves
RESPONSIBLE AGENCIES:	Town Committees and National Park Management Committees, FIPI
BUDGET:	Medium
CONVENTION ON BIODIVERSITY ARTICLES:	9 and 13

PROJECT CONCEPT No. C5

TITLE: Wildlife Farming Pilot Projects

AIMS: To make wildlife farming a positive asset to the conservation of biodiversity in Vietnam.

PHASING: Phase III

PROJECT DURATION: 5 years

JUSTIFICATION: Wildlife farming can be a positive asset to biodiversity conservation in Vietnam. However the present situation encourages the breeding of threatened species in an inappropriate manner. There is a need to develop a necessary framework to supervise and guide wildlife farming programmes.

SCOPE: This project will:

- review wildlife farming systems in other countries in the region
- prepare and propose a permit system for wildlife farms in Vietnam
- develop plans to integrate farming facilities into national research programmes
- develop a plan for the enforcement and monitoring of the permit system, including financial considerations
- develop the human resources to enforce and monitor the permit system
- review existing legislation and make proposals for additional or changed legislation. This should protect endangered species from any threats originating from farming.

LOCATION: Hanoi and various wildlife farms in Vietnam

RESPONSIBLE AGENCIES:

BUDGET: S

CONVENTION ON BIODIVERSITY ARTICLES:

PROJECT CONCEPT No. C6

TITLE: Village Biodiversity Development

AIMS: To help villagers understand the concept of biodiversity and take part at village level in biodiversity protection and conservation.

PHASING: Phase I

PROJECT DURATION: four years (enough duration to see the first results)

JUSTIFICATION: As biodiversity cannot be protected by regulations alone, active support and participation of local communities are fundamental. While all projects to establish in-situ conservation will involve community involvement, it is important to have a project devoted specifically to promoting this aspect. The project can be networked with other in-situ projects on-site.

SCOPE: To protect biodiversity at village level by limiting hunting and over-harvesting of fuelwood.

The strategy is to organise at each village a committee that will be responsible for checking and enforcing the law or regulations and plan the use of natural resources. They will decide, for example, the area for no hunting, fishing, the closed seasons for hunting and fishing, etc.

As the project is experimental by design, it will start with a maximum of eight villagers in B2 of PA (three North, three South, two Centre).

LOCATION: Buffer zones of three parks:

North: Ho Ba be, Centre: Bach Ma,
South: Nam Cat Tien

RESPONSIBLE AGENCIES: Leading agency at central level: MOSTE
Include as many agencies as possible at local level (provincial, district, and village), including schools, party members, Ministry of Forestry, Ministry of Fisheries, NGOs and others.

BUDGET: Medium

CONVENTION ON BIODIVERSITY ARTICLES: 6, 10 and 11

PROJECT CONCEPT No. C7

TITLE: Research on Suitable Methods for Reforestation and Regeneration

AIMS: To assist programmes to regenerate buffer zones and corridors

PHASING: Phase II

PROJECT DURATION: 3 years

JUSTIFICATION: Much of Vietnam's forest land is in a degraded state. However there is also much secondary forest, bamboo forest and regrowth lying near to good primary forest. Much of this forest has little population pressure. Accordingly there is potential to increase the area of biodiversity area through the regeneration of corridors and buffer zones. There is a need to develop methods appropriate to successful regeneration in Vietnam. greatly to the habitats in Vietnam.

SCOPE: This research-oriented project will:

- review efforts in other countries to regenerate degraded forests
- analyze the constraints to regenerating buffer zones and corridors in Vietnam
- undertake research on regrowth processes in Vietnam
- recommend ways to accelerate regrowth of forest and extension of habitats in key areas in Vietnam
- monitor the situation

For all stages a full integration of social, cultural, economical and ecological issues will be considered.

RESPONSIBLE AGENCIES: IEBR, MOF, FIPI

BUDGET: S

CONVENTION ON BIODIVERSITY ARTICLES:

PROJECT CONCEPT No. C8

TITLE: Conservation of Domestic Animal Diversity (Animal Agrobiodiversity)

AIMS: To maintain and develop the genetic diversity of the breeds of livestock in Vietnam and their close relatives.

PHASING: Phase I

PROJECT DURATION: 5 years (initially)

JUSTIFICATION: The development over history of the breeds of Vietnam is now seriously jeopardised by the large-scale crossing using exotic breeds. Much of this is done without proper evaluation of the economic and social results and so far, without longterm plans for the use and maintenance of diversity.

SCOPE:

1. The project will establish a national genebank for the longterm storage of sperm, ova and embryos of all domestic breeds and their close relatives in Vietnam.
2. The detailed results of crossbreeding (to varying degrees), will be collected especially from local, small farms and evaluated in the context of efficient, sustainable use of resources.
3. The national policy document will be supplemented and amended as a result of the evaluations and programmes for the in-situ development of some indigenous breeds will be established.

LEAD AGENCY: MAFI

RESPONSIBLE AGENCIES: Depts of Extension and Animal Husbandry, MOSTE, Various Institutes and Universities, NGOs.

BUDGET: Medium

CONVENTION BIODIVERSITY ARTICLES: ON 6, 8, 9 and 10.

PROJECT CONCEPT No. C9

- TITLE:** Natural Habitat Monitoring Programme
- AIMS:** To monitor the extent, condition and status of wildlife habitat in Vietnam.
- PHASING:** Phase I
- PROJECT DURATION:** 5 years
- JUSTIFICATION:** Monitoring is essential to evaluate the effectiveness of management prescriptions. To bring optimal benefits from conservation to management practices, natural areas should be evaluated both qualitatively and quantitatively and revised or intensified.
- SCOPE:** The project will combine remote sensing with ground truth survey of inventory plots. As monitoring both plant and animal diversity provides long-term information, managers can measure habitat change over time, identify gaps in existing knowledge, or set priorities to fill these gaps. Furthermore, the programme will contribute much to the national biodiversity database.
1. Annual re-evaluation of purchased TM Landsat imagery overlaid as a time series GIS.
 2. Periodic review of land status and land-use classification.
 3. Monitoring of forest conditions in over 5,000 permanent sites at grid intervals of 8 m across the entire country.
 4. Specific wildlife survey data incorporated from monitoring programmes of all established protected areas and special habitat survey teams.
- Training courses will be organised to ensure standard survey methodology is used across the country. Technical assistance is needed.
- LOCATION:** Hanoi, Forest Inventory and Planning Institute
- RESPONSIBLE AGENCIES:** Ministry of Agriculture, Ministry of Forestry, Ministry of Fisheries with provincial forestry, agriculture and fisheries departments.
- BUDGET:** Medium
- CONVENTION ON BIODIVERSITY ARTICLES:**

PROJECT CONCEPT No. C10

TITLE: Establishment of National Biodiversity Database

AIMS: Develop a comprehensive biological inventory and monitoring programme to develop a national biodiversity database. Collate data on status and distribution of species and their habitat. Monitor trends and threats to Biodiversity.

PHASING: Phase II

PROJECT DURATION: 5 years (initially)

JUSTIFICATION: Although several agencies have gathered details of select groups of species in certain areas, the information generated thus far is insufficient for long-term and comprehensive conservation. A systematic attempt at information gathering for groups of plants and animals including their ecological functions is especially urgent given the rapid exploitation of natural resources in Vietnam combined with growing human population.

While developing comprehensive biological inventories and monitoring schemes, it is essential to have the involvement and full participation of all key agencies.

SCOPE: The database would be a network between key agencies involved in different aspects of biodiversity management. Update of the biodiversity database would be a continual process where remote sensing data with ground-truth surveys will link with the monitoring data in the form of relational databases and GIS.

The network should be compatible with and establish data sharing links with other regional and global programmes especially the World Conservation Monitoring Centre (WCMC) in England.

The project will involve acquisition of hardware and software, training of data managers, development of data handling protocols, integration with existing remote sensing and forestry and fisheries monitoring programmes and additional field-surveys and ground truth checking.

LOCATION: Hanoi, Haiphong.

RESPONSIBLE AGENCIES: Institute of Ecological and Biological Research, Forest Inventory and Planning Institute, Ministry of Forestry, Institute of Oceanography. To be co-ordinated through MOSTE.

BUDGET: Medium

CONVENTION ON BIODIVERSITY ARTICLES: 6, 7, 16, 17 and 18

PROJECT CONCEPT No. C11

TITLE:	Marine Biodiversity Database
AIMS:	To collate and facilitate exchange of scientific information on coastal and marine species and habitats.
PHASING:	Phase III
PROJECT DURATION:	three years (initially)
JUSTIFICATION:	The application of database to store scientific information is extremely premature and requires lots of technical support for its development. A marine biodiversity database system is essential for information flow and analysis, often necessary for decision making on site selection and conservation measures.
SCOPE:	<p>This project may be integrated into the National Biodiversity Database Project (No.G1).</p> <p>In addition to the distributions of all known species in various ecosystems, hydrological data and fisheries productions may be incorporated to predict trends, especially of heavily exploited and indicator species. Library collections of local and foreign literature should be entered and constantly updated and made available to various institutes. Basic training on database management will be provided.</p>
LEAD AGENCY:	NCNST
RESPONSIBLE AGENCIES:	IOC Vietnam and various Institutes (HIO, RIMP, IEBR, IOG, IOOC, SIEBR, University of HCM, Hue, etc.)
LOCATION:	Hanoi, Haiphong, Nha Trang, HCM
BUDGET:	Medium
CONVENTION ON BIODIVERSITY ARTICLES:	17 and 12

PROJECT CONCEPT No. C12

TITLE: Biodiversity of the Ke Bang Karst

AIMS: To carry out research on the status, the distribution of species and the conditions of wildlife habitat.

PHASING: Phase III

PROJECT DURATION: five years (initially)

JUSTIFICATION: The large karst area of Ke Bang (Quang Binh Province) is the last ecological region in Vietnam where the natural and socio-economic conditions - including the biodiversity - are unknown up to this day.

SCOPE: To collate data concerning biodiversity in this large area through linking ground-truth survey explorations and aerial plus remote sensing analysis.

All the data collected will be treated by informatic and automatic cartography with the help of the application of a reliable GIS.

To make the study, assessment and forecasting environmental changes due to human activities as well as the changes of other natural processes for suggesting different ways of rational use of natural resources, environmental and biodiversity conservation.

LOCATION: Hanoi, Dong Hoi (Quang Binh Province)

RESPONSIBLE AGENCIES: Association of Vietnamese Geographers (A.V.G.), Institute of Geography (National Centre for Natural Sciences and Technology), Department of Geography in Hanoi State University, Forest Inventory and Planning Institute, Institute of Ethnic and Minorities (National Centre for Social and Human Sciences).

BUDGET: Medium

CONVENTION ON BIODIVERSITY ARTICLES: 7 and 8

PROJECT CONCEPT No. C13

TITLE: Public Awareness & Education on Marine Environment and Resource Conservation

AIMS: To advertise fisheries regulations and promote resource protection concepts to fishermen.

PHASING: Phase I

PROJECT DURATION: 6 years

JUSTIFICATION: Numerous questionnaires and interviews have revealed the lack of public awareness as being a major constraint to biodiversity conservation. Limitations in management capacity call for local support in almost all kinds of conservation projects.

SCOPE: Activities will largely involve visits and promotional tours round fishing villages and popular fishing grounds and shelters by special "Awareness Promotion Teams" formed under the Fisheries Resource Protection Department. Such activities may be incorporated into the existing duties of patrol guards and marine police and be strengthened prior to and during the protected (spawning) seasons of important fisheries species. Topics on nature conservation should be added to existing school curriculum especially in coastal provinces and villages.

LEAD AGENCY: Ministry of Fisheries

RESPONSIBLE AGENCIES: Fisheries Resource Protection Department in provinces
Department of Education
Local schools

PRIORITY LOCATIONS: Pilot provinces/villages to be selected.

BUDGET: Medium

CONVENTION ON BIODIVERSITY ARTICLES: 13

PROJECT CONCEPT No. C14

TITLE:	Biodiversity Public Awareness Campaign
AIMS:	Promote greater understanding and appreciation for biodiversity.
PHASING:	Phase II
PROJECT DURATION:	five years (initially)
JUSTIFICATION:	The protection and conservation of biodiversity largely depend on political will and institutional base. Development of such protective social systems requires both formal and informal education to raise awareness.
SCOPE:	<p>The project will have three main thrusts:</p> <ol style="list-style-type: none">1. Formal education - New materials will be introduced into school curricula at all levels as well as some university courses.2. Use of mass media - television, radio, public notice boards, newspapers, magazines and newsletters.3. Extension programme - awareness-related works in villages by extension teams to demonstrate the benefits that villagers gain by protecting forest resources. NGO participation will be encouraged.
LOCATION:	Hanoi and all provinces
RESPONSIBLE AGENCIES:	MOSTE to co-ordinate with other ministries including Ministry of Education and Ministry of Culture and Information
BUDGET:	Medium
CONVENTION ON BIODIVERSITY ARTICLES:	13

PROJECT CONCEPT No. C15

TITLE:	Development of Biodiversity Awareness Centre for Decision Makers and Planners
AIMS:	Increase the understanding of the importance of biodiversity conservation among senior government leaders and decision makers.
PHASING:	Phase II
PROJECT DURATION:	5 years
JUSTIFICATION:	Awareness among senior government leaders and decision makers about the importance of biodiversity conservation remains low. Although they are aware of global conservation, busy schedules permit them little or no time to learn more. Alternatively, they may overcome such deficiency through study tours and weekend short-visits to natural areas. These senior personnel have a great potential to contribute to conservation in decision making by experiencing biodiversity first hand.
SCOPE:	<ol style="list-style-type: none">1. To establish three regional centres in attractive natural recreational sites (inside accessible parks or reserves) to provide effective awareness programmes and optimal exposure on nature conservation.2. To develop suitable awareness materials, audio visual programmes, displays, courses and talks.3. To hold periodic short seminars or weekends for senior leaders. The location and schedule must be attractive and recreational to attract busy officials from their normal duties for a few days. It is hoped the officials will absorb new ideas about the importance of biodiversity conservation. Courses would involve discussions led by skilled educators.
LOCATION:	Cat Ba, Bach Ma, Nui Ba
RESPONSIBLE AGENCIES:	Ministry of Forestry, MOSTE, Ministry of Fisheries, Ministry of Agriculture, Ministry of Health
BUDGET:	Medium
CONVENTION ON BIODIVERSITY ARTICLES:	6 and 13

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