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**INTEGRATING WATERSHED AND BIODIVERSITY MANAGEMENT IN
CHU YANG SIN NATIONAL PARK, VIETNAM**

PROJECT SUMMARY

PROJECT IDENTIFIERS	
<p>1. Project name: <i>Integrating Watershed and Biodiversity Management in Chu Yang Sin National Park</i></p>	<p>4. Country eligibility: <i>CBD ratification: 16 November 1994</i></p>
	<p>5. GEF focal areas(s): <i>Biodiversity</i></p>
<p>2. GEF Implementing Agency: <i>World Bank</i></p>	<p>6. Operational program/Short-term measure: <i>This project falls within the Forest Ecosystems Operation Program.</i></p>
<p>3. Country or countries in which the project is being implemented: <i>Vietnam</i></p>	
<p>7. Project linkage to national priorities, action plans, and programs:</p> <p><i>BirdLife Vietnam is a lead agency assisting the Vietnamese government to build on the foundation of systematic conservation planning contained in the Vietnam Biodiversity Action Plan (hereafter BAP). The government's Forest Inventory and Planning Institute and BirdLife have together planned a systematic expansion of the protected area system in a 1999 document titled "Expanding the protected areas network for Vietnam for the 21st century: an analysis of the current system with recommendations for equitable expansion". The BAP and BirdLife/FIPI review together identify 13 priority protected areas for conservation of biodiversity in Vietnam. Seven of these have existing donor-assistance management projects. BirdLife is currently developing management assistance projects at three of the six remaining priority areas, one of which is Chu Yang Sin National Park</i></p> <p><i>In 1998, Decision 661 of the Government of Vietnam set an overall objective of reforesting and rehabilitating five million hectares of forest by the year 2010. It is termed the 'Five Million Hectare Program' (5MHRP) and is a major effort of the government towards sustainable forest management in the light of the "Rio Declaration" and Agenda 21. On 12 November 2001 BirdLife together with 18 other governments, donors and NGOs signed the Memorandum of Agreement (MoA) on the Vietnam Forest Sector Support Programme and Partnership. The objective of this MoA is to put in place the arrangements for continued collaboration in support of the Forest Sector on the basis of agreed policies, priorities and principles of implementation. This project will provide support to Result Area 6 (sustainable forest management) and Result Area 7 (sustainable use and conservation) within the FSSP. These result areas are also being integrated into the Comprehensive Poverty Reduction and Growth Strategy of the World Bank.</i></p>	

<p>8. GEF national operation focal point and date of country endorsement: <i>Ministry of Science and Technology, signed 8 November 1999</i></p>	
<p>PROJECT OBJECTIVES AND ACTIVITIES</p>	
<p>9. Project goal and purpose:</p> <p>Goal: <i>Biodiversity attributes of Chu Yang Sin conserved in the long term within a wider framework of integrated watershed and biodiversity management.</i></p>	<p>Indicators:</p> <ul style="list-style-type: none"> ➤ <i>Decrease in encroachment within the park and in land-uses with negative impacts within 2 km of park boundary.</i> ➤ <i>Improved incorporation of park management goals and nature-based development in provincial and district planning documents, and work programmes of other relevant donor projects.</i>
<p>Purpose: <i>Build a foundation of support and management for Chu Yang Sin National Park.</i></p>	<ul style="list-style-type: none"> ➤ <i>Greater local support for CYS NP among decision makers as reflected in budgetary support.</i> ➤ <i>Increase in number of people in selected target groups holding attitudes supportive of the management goals of CYS NP.</i>
<p>10. Project Outcomes</p> <ul style="list-style-type: none"> ➤ <i>Effective control of illegal exploitation in the park achieved by patrols of park staff, supported by relevant commune and district institutions.</i> ➤ <i>Key stakeholder and the general public support the management goals of CYS National Park.</i> ➤ <i>Foundation of knowledge established to guide and engender integrated park management and integration of biodiversity conservation and watershed management in regional planning.</i> ➤ <i>Capacity for adaptive management built in the park management team.</i> ➤ <i>Better integration of biodiversity conservation and watershed management systems.</i> ➤ <i>Impact of project activities measured and evaluated.</i> 	<p>Indicators</p> <ul style="list-style-type: none"> ➤ <i>Increase in the effectiveness, frequency and areas covered by ranger patrols.</i> ➤ <i>Reduction of annual amount of forest cleared within the park.</i> ➤ <i>Improvement in public respect for community rangers and understanding of their role.</i> ➤ <i>Improvement in knowledge, attitudes and actions of selected target groups towards conservation and aims of the park.</i> ➤ <i>Improved ability to analyse management problems and formulate solutions for the benefit of CYS NP.</i> ➤ <i>Incorporation of CYS NP management goals into land-use plans and future project plans of government and development agencies.</i> ➤ <i>Regular reports showing and interpreting quantitative trends relevant to CYS NP.</i>

11. Project components to achieve outcomes 1. PDF-A 2. Enforcement & protection 4. Information & Planning 5. Public awareness 6. Capacity building of park management board 7. Monitoring & evaluation Total	Indicators and costs of each objective <i>See attached logical framework for indicators</i>
	\$ 25,000
	\$ 140,000
	\$ 344,000
	\$ 160,000
	\$ 255,000
	\$ 74,000
	\$ 998,000
12. Estimated Budget (in US\$): PDF-A 55,000 (BirdLife 30,000; GEF 25,000) GEF MSP 973,000 (GEF) Co-financing 661,000 (GOV); 50,000 (BirdLife); 30,000 (Dutch/WWF); Associated financing 4,265,000 (GOV); 7,250,000 (ADB); 330,000 (AusAID); 1,428,000 (DANIDA RWSS); 1,600,000 (DANIDA IWRP); 4,335,000 (GTZ) TOTAL: 20,977,000	

INFORMATION ON INSTITUTION SUBMITTING PROJECT BRIEF
13. Information on project proposer: <i>BirdLife International in Indochina, established in 1993 as the BirdLife International Vietnam Programme, seeks to promote the conservation of habitats, sites and species by working with government and non-government partners to: 1) provide support for improved planning and management of important habitats, sites and species; 2) introduce and advocate new ideas for integrating biodiversity conservation into planning and policy; 3) stimulate greater public interest in birds and biodiversity, and awareness of the need for biodiversity conservation; 4) develop capacity for improved management of habitat, sites and species; and, 5) provide information on biodiversity and protected areas to planners, policy-makers and other interest groups. The first phase of the BirdLife programme focused on the first of these goals and has largely been completed. The programme is making the transition to a Phase II with a greater emphasis on protected area management and regional planning. BirdLife is currently developing management assistance projects at three of the six remaining priority areas, namely: Chu Yang Sin National Park (the subject of this proposal), Ke Go Nature Reserve and Ngoc Linh Nature Reserve. A full overview of BirdLife International in Indochina, including project descriptions, staff profiles and downloadable copies of reports (.pdf format) can be found at website www.birdlifevietnam.com</i>
14. Information on executing agency (if different from the project proposer): <i>BirdLife Interna (same as above)</i>
15. Date of initial submission of project concept: <i>Submission to GEF Vietnam October 22, 1999, endorsement received November 8, 1999. PDF-A proposal submitted November 11, 1999 and updated in October 2002.</i>
INFORMATION TO BE COMPLETED BY IMPLEMENTING AGENCY

16. Project identification number: <i>P068249</i>
17. Implementing Agency contact person: <i>Tony Whitten, Senior Biodiversity Specialist, East Asia and Pacific Environment and Social Development, The World Bank, 1818 H St NW, Washington DC 20433, USA. Tel +1-202-458-2253, fax +1-202-522-1666, email: twhitten@worldbank.org</i>
18. Project linkage to Implementing Agency programme(s). <i>The World Bank in Vietnam works to assist the government alleviate poverty, achieve rational and sustainable use of natural resources, and to mainstream environmental concerns in sectoral activities. This project will address the needs of people in the project area, conserve endangered and potentially valuable biological resources, and work with local government to plan rational management. This project will assist the World Bank in implementation of the Country Assistance Strategy (CAS) 2002 goal to improve management of natural resources.</i>

INTEGRATING WATERSHED AND BIODIVERSITY MANAGEMENT IN CHU YANG SIN NATIONAL PARK, VIETNAM

Project Description

1. Rationale and objectives

The geographic focus of the project is Chu Yang Sin National Park (hereafter CYS NP), which is located in Krong Bong and Lak Districts, 60 km southeast of Buon Ma Thuat Town in Dak Lak Province, Vietnam. These districts encompass transitional landscapes between two macro-scale geomorphologies. These are the Dak Lak lowland plain and the central highlands. Mount Chu Yang Sin (2,442 m) is the highest peak on the northwest edge of the highlands and the national park covers 59,278 ha of hill and mountain forest with an altitudinal gradient of 600-2,442 m (see map in Annex 1).

Chu Yang Sin was designated as a nature reserve by statute of the Government of Vietnam (GoV) in 1986¹ following the first review of Protected Areas in the Indo-Malayan Realm.² The government prepared a management ‘feasibility study’³ in 1993 shortly after the Vietnam Biodiversity Action Plan (BAP)⁴ was completed. The global conservation importance of the area was re-affirmed by studies undertaken by BirdLife in 1994, 1996 and 1997.⁵ Although the Reserve was decreed by law in 1986, an actual Management Board (in Vietnam the term ‘board’ refers to the staff) for CYS was not formed until 1998. On 31 July 2002, the GoV upgraded CYS from nature reserve to national park status, signifying the increasing political and financial support for the protection of biodiversity at Chu Yang Sin. The rationale for this project is to follow through on these actions and establish effective management of the park.

BirdLife International has taken a lead in assisting the GoV build on the foundation of systematic conservation planning⁶ contained in the BAP. BirdLife and the Forest Planning and Inventory Institute (FIPI) have planned a systematic expansion of the protected area system⁷ and developed protected area management planning guidelines.⁸ Of the thirteen

1 Decision CT 194, 9th August 1986.

2 MacKinnon, J. and MacKinnon, K. (1986). Review of the Protected Areas System in the Indo-Malayan Realm. Gland, IUCN, CNPPA, UNEP.

3 A feasibility study is intended to enable decision-makers to decide whether a site should become a candidate for inclusion on the list of Special-use Forests (nature reserves and national parks currently being the only sub-categories for strict protected areas). If a site is deemed suitable for designation as a Special-use Forest and is approved at the provincial level, an investment plan can be prepared.

4 MacKinnon, J. (1993). Biodiversity Action Plan for Vietnam. Cambridge and Gland, IUCN.

5 Eames, J.C. and Nguyen Cu (1994). A management feasibility study of Thuong Da Nhim and Chu Yang Sin Nature Reserves on the Da Lat Plateau, Vietnam. Unpublished WWF report to Ministry of Forestry, Hanoi; MacKinnon, J. (1997) Protected Areas Systems Review of the Indo-Malayan Realm, Canterbury, Asian Bureau for Conservation and World Conservation Monitoring Centre.

6 The BirdLife/FIPI approach is consistent with principles of systematic conservation planning as defined by Margules and Pressey (*Nature* 405:243-253, 2000), namely: a) choice of indicators for overall biodiversity, b) explicit management goals (representation of biological variation), c) assessment of extent to which goals have been met in existing parks, d) simple and explicit methods for locating and designing complementary new parks; e) explicit park management objectives, together with monitoring and adaptive management.

7 Wege, D.C. et al. (1999). Expanding the protected areas network for Vietnam for the 21st century: an analysis of the current system with recommendations for equitable expansion. Hanoi, Vietnam: BirdLife International Vietnam Programme.

priority areas identified in the BirdLife/FIPI review and the BAP, seven have existing donor-assistance management projects. BirdLife is currently developing management assistance projects at three of the six remaining priority areas, one of which is CYS NP.

Establishing capacity for effective long-term management in CYS NP is consistent with two concerns of the GEF forest ecosystem operational programme (OP#3), namely promoting conservation of biodiversity (in particular of endemic species) and protection of environmentally vulnerable areas. CYS NP is a priority protected area globally because it covers an excellent representative sample of the hill and montane evergreen forests ecosystems of Indochina, and is located in the Da Lat Plateau Endemic Bird Area (EBA). The EBA is one of four centres of endemism identified in Indochina by BirdLife's award-winning Biodiversity Project.⁹ CYS NP support seven of the eight restricted-range species that define the Da Lat Plateau EBA as well as two of the three species that define the South Vietnamese Lowlands EBA.¹⁰ The global ranges of three bird species¹¹ and 25 sub-species of bird are confined to the Da Lat Plateau EBA.¹² These figures suggest that the area is a centre of active speciation. Evidence of congruence in endemism is generally deficient for other vertebrates, but in the case of the Da Lat Plateau, is shown by several species of tree and orchid.¹³ Based on current knowledge, Chu Yang Sin is biologically the richest mountain in the Da Lat Plateau EBA (see Annex 6).¹⁴

The park protects a substantial part of the largest remaining forest block in the upper catchment of the Srepok River, which is a major tributary of the Mekong River. Nearly 16.9 million people inhabit the Mekong Delta of Vietnam and Cambodia¹⁵ and protection of the Chu Yang Sin forest block is part of a wider strategy to protect the hydrological ecosystem services on which these people depend. This is reinforced by DANIDA's long-term investment in the project area, including the Water Resource Management in Dak Lak Project (1993-2001) and the Integrated Water Resources Management for the Srepok River Basin (Oct 2002-2005).

⁸ Forest Inventory and Planning Institute and BirdLife International Vietnam Programme (2000). *Guidelines for feasibility studies and investment plans for the designation of Special-use Forests*. BirdLife International Vietnam Programme, Hanoi, Vietnam.

⁹ Bibby, C. J., N. J. Collar, *et al.* (1992). *Putting biodiversity on the map: priority areas for global conservation*. Cambridge, International Council for Bird Preservation. Received the prestigious Heineken award for conservation in 1994.

¹⁰ Tordoff A.W., *et al.* (in press). *Directory of Important Bird Areas in Vietnam: Key sites for conservation in Vietnam*. Hanoi: BirdLife International in Indochina, Institute of Ecology and Biological Resources, and DANIDA.

¹¹ The bird species are Grey-crowned Crocias *Crocias langbianis*, Collared Laughingthrush *G.yersini* and Vietnamese Greenfinch *Carduelis monguilloti*.

¹² Eames, J.C. (1995). Endemic birds and protected area development on the Da Lat Plateau, Vietnam. *Bird Conservation International* 5: 491-523.

¹³ Endemic plant species include *Pinus dalataesis*, *P. krempfii*, *Rhododendron langbianense* and several species of orchids, including *Agrostrophyllum breviceps* and *Bulbophyllum everardii*.

¹⁴ Eames, J.C. (1995). Endemic birds and protected area development on the Da Lat Plateau, Vietnam. *Bird Conservation International* 5: 491-523.

¹⁵ Duong Van Ni, Safford, R. and Maltby, E. (2001). Environment change, ecosystem degradation and the value of wetland rehabilitation in the Mekong Delta. In: Kelly M., Adger, N. and Nih, N.H. eds. *Living with Environmental Change*. London, Rutledge.

The context of management for CYS NP has seven important dimensions:

1. Krong Bong and Lak Districts are undergoing major social transformation as a result of the change from subsistence to market-driven agricultural economies and influx of new peoples;
2. Since five years ago, approximately six thousand people of H'mong ethnicity have spontaneously migrated into Krong Bong district from northern Vietnam. The settler's need for land and immediate income sources may lead to a new phase of forest encroachment and natural resource exploitation;
3. Local government currently lacks the human and financial capacity to enforce controls and regulations in relation to biodiversity and forest protection;
4. Nature conservation as a concept has little meaning to the majority of people living in the vicinity of the park;
5. Key decision-makers by-in-large remain ignorant of the total economic value of forest ecosystems, thereby undermining the sustainable development process by given token support to protected forests and strong support to competing interests such as roads and dams;
6. A newly-established park management board comprises a cadre of inexperienced yet well-educated staff, posing an opportunity for long-term investment in human capital at the park; and
7. Bilateral donor projects of DANIDA and GTZ and a multilateral loan of ADB in the project area are developing integrated watershed management and forest protection as part of the wider Mekong River Commission agreement.¹⁶

At present there exists a unique opportunity to establish effective management of the park, because: institutionalised mismanagement (which characterises many older protected areas in Vietnam) has not yet become established; habitats in the park are still in good condition (unusual in Vietnam); and goals and activities of six major donor initiatives active in the districts surrounding the park (see Section 2.6) are complementary to those of the present project. Also, unlike for certain other protected areas in Vietnam, there are no known development or infrastructure plans which would compromise the integrity of CYS NP.

The overall goal of the project is **to conserve the biodiversity attributes of Chu Yang Sin in the long term and developing integrated watershed and biodiversity management at a broader scale**. On the basis of BirdLife's experience in Asia it is concluded that protected-area development entails three phases of inputs over ten years, and that an organisation should be willing to commit to a site for this length of time and plan accordingly. The phases overlap, but are broadly: a) establishing management capacity and public support for a protected area; b) implementing a targeted programme of work to address key threats to and/or develop services of the park; and c) consolidating and institutionalising park management practice.

¹⁶ An inter-governmental organization established at the signing of the Agreement on co-operation for sustainable development of the Mekong river basin, on 5 April 1995 by the current four member countries, namely Cambodia, Lao PDR, Thailand and Vietnam.

The present project is primarily concerned with the first two phases. A time frame of 5 years is proposed on account of the complex and dynamic nature of buffer zone districts, the limited knowledge base of management related information, and the newness of the CYS NP management board.

The purpose of this project is **to establish public support and effective management for Chu Yang Sin National Park** by stabilising the interface between natural and agricultural landscapes; protecting the integrity of key biodiversity attributes; promoting integrated approaches to watershed and protected area management in the wider forest block; and informing realistic and sustainable development options for the park.¹⁷

To this end, the project will pursue the following six objectives:

1. Establish effective enforcement and forest protection to prevent encroachment and illegal exploitation of natural resources in the park;
2. Establish the foundation of biological, landscape and socio-cultural knowledge to guide and inspire integrated park management and the improved integration of biodiversity conservation and watershed management objectives;
3. Generate public and stakeholder support for conservation and the management goals of CYS NP;
4. Build capacity for adaptive management within the management team;
5. Integrate CYS NP into wider conservation, socio-economic and watershed management development strategies; and
6. Monitor the impact of project activities.

The project model and approach has excellent potential for replication under the government-donor Forest Sector Support Programme (FSSP - section 2.7) and through the activities of the Mekong River Commission. This is because the project presents a strategic goal—integration of biodiversity conservation with watershed management—and the donor agencies involved (BirdLife, ADB, AusAID, DANIDA, and GTZ) are active players in policy development of the above named national programme and political forum. At the operational level, the project will develop a number of specific models for national park establishment and management that are new to Vietnam. In particular, the application of social marketing, adaptive management techniques and the development of a community based-rangers service are all innovations in Vietnam which, if successful, could be replicated elsewhere.

2. Current situation

2.1 Biodiversity conservation context

A central concern of the post-W.W.II conservation movement has been establishment of a worldwide network of protected areas that represent within their boundaries the variety of

¹⁷ These include integrated watershed management; creating a positive and unique regional profile and marketing image; and capitalising on the growing domestic demand for outdoor recreation and nature-based tourism among Vietnamese people.

ecosystems, habitats and species living on earth. To this end IUCN prepared a protected area strategy for the Indo-Malayan Realm, including Vietnam. This adopted a hierarchical framework of bio-geographic areas and proposed establishment of a park in each area to meet representation. The Da Lat Plateau is classed as a distinct bio-geographic unit (Bio-unit) within the South Annam bio-geographic province.¹⁸

In Vietnam, montane forest is distributed in three regions: the Da Lat Plateau, the Annamite range of central Vietnam, and the Hoang Lien ranges in Northern Vietnam. This major habitat type is characterised by marked regional variation and high levels of endemism, particularly on the Da Lat Plateau. The Da Lat Plateau is recognised a centre of bird and plant endemism at the global scale. The plateau supports two natural montane vegetation types: mixed broad-leaf evergreen forest and coniferous forest. Most widespread is the coniferous forest, which is dominated by *Pinus kesiya*. However, it is the mixed broadleaf evergreen forest which supports the highest levels of endemism and species diversity, for example of the five endemic bird species, four are confined to this vegetation type and just one, Vietnamese Greenfinch *Carduelis monguilloti* occurs in the conifer forest.¹⁹ Moreover, the pine species endemic to the plateau (*Pinus dalatensis* and *Pinus krempfii*) are found in the mixed broad-leaf evergreen forest.

Chu Yang Sin was identified as a priority protected area because it captures the greatest possible intact altitudinal gradient (600 m - 2,440 m) and best examples of mixed broadleaf forest in the Da Lat Plateau bio-unit. An adjacent and equally large (72,573 ha) nature reserve (Bi Doup-Nui Ba NR) located in Lam Dong Province to the south was identified to represent the conifer forest type. There are no other significant areas of montane broad-leaf evergreen forest in the Da Lat Plateau bio-unit. As a consequence, CYS NP is irreplaceable within this global strategy to conserve biodiversity.

2.2 Landscape setting of Chu Yang Sin National Park

The CYS NP covers a range of deeply folded hills embedded in a larger forested landscape. The transition between these highlands and the lowland plain to the northwest is a complex of rolling hills, narrow tablelands, and flat-bottomed valleys. Lak District is a large, enclosed flat valley, while Krong Bong District is a complex of the three landscape units at smaller scales (Figure 1 of Annex 7). The mountain range is a primary forest landscape. The lowland plain is an anthropogenic²⁰ landscape dominated by plantation agriculture, notably coffee. The transitional landscapes of Krong Bong and Lak Districts appear to have been derivative natural landscapes up until the late 1970s. They are now anthropogenic landscapes, characterised by a mix of irrigated wet rice and diverse upland cropping.

The landscapes of Krong Bong and Lak Districts have undergone major changes since the end of the American War in 1975. Before this time extensive dipterocarp forest and abundant big

¹⁸ Systematic conservation planning frameworks at the global scale employ hierarchies of planning units. Conservation planning in the Indo-Malayan realm is based on the Dasmann-Udvardy biogeographic framework, namely a spatial hierarchy of biogeographic realm, biogeographic province and biogeographic unit (biounit).

¹⁹ Figures up-dated from Stattersfield, A.J. (1999). Endemic Bird Areas of the World: Priorities for biodiversity conservation. BirdLife Conservation Series No 7. Cambridge, BirdLife International.

²⁰ Terminology follows the classification of Milanova, E.V. and Kushlin, A.V. (1993). World Map of Present Day Landscapes: an explanatory note. Moscow: UNEP and Moscow State University reproduced in Annex 7. A primary landscape is not discernibly affected by activities of humans. Derivative landscapes maintain a primary character but have been modified by human activity. Anthropogenic landscapes are created by human activity.

game (e.g. deer, elephant, gaur, and tiger) populations characterised the lower hill slopes and valleys. Indigenous M'ngong and Ede people inhabited the area, subsisting on rain-fed rice in the valley floor and swidden agriculture on higher ground and hillsides. Their impact on forests and wildlife was limited because they lacked saws and guns.

After the American War there was a general movement of people down from the hills into the valleys. Irrigated wet rice and animal husbandry was introduced to the region by the government, and as part of this process, Kinh (ethnic-Vietnamese) people from the Red River Delta moved into the region. Commercial-scale logging of the dipterocarp forest started in 1978 and continued until 1994.

Cropping activities were further concentrated following the 1993 land law, which banned shifting cultivation and granted land-use certificates (red books) to villagers, based on a 50-year lease. As a result, hillside swiddens have been abandoned and farmers are adapting to sedentary lowland farming. In many areas of Krong Bong District, a homogeneous band of bamboo re-growth now separates the forest of the Chu Yang Sin hills from agricultural areas.

2.3 Socio-economic context and root causes of biodiversity loss

The social composition of the park buffer zones is in flux. A traditional subsistence society of M'ngong and Ede ethnic groups is rapidly transforming into a multi-ethnic and market-driven agricultural society. The human population of Krong Bong and Lak Districts is 72,250 and 45,390 respectively,²¹ comprising four main ethnic groups: M'ngong, Ede, H'mong and Kinh.

Fifty-four ethnic groups have been identified in Vietnam, grouped into three language families. The M'ngong, are part of the Mon-Khmer group within the Austro-Asian language family, and have lived in the southern central highlands for centuries. Presently, roughly 67,000 people are concentrated in the region between the towns Buon Me Thuot and Da Lat. M'ngong society is generally matrilineal, but village affairs are organised by a male chief. The M'ngong are probably best known for their skills (in the past) as elephant hunters and as creators of the lithophone.²²

The Ede, are part of the Malayo-Polynesian group within the Austronesian language family. The majority of 195,000 Ede people live in Dak Lak province. Traditionally, the Ede lived in long houses with up to a hundred families residing in a single house, under the authority of the oldest or most respected woman. The Ede, in particular, suffered displacement during the phase of coffee and rubber estates development during the late 19th and early 20th centuries.²³ In Krong Bong and Lak Districts, the ratio of M'ngong to Ede villages is approximately 6:1.

Most village communities, of both ethnicities, have made a recent transition from lowland and swidden cropping of rice and vegetables, to sedentary cropping of rice, vegetables and plantation crops notably, coffee and cashew. The GTZ's Rural Development in Dak Lak Province, and its preceding Sustainable Management of Resources (SMRP) project (see Annex 10) tested the ability of M'ngong to make this transition in Dak Phoi Commune. They found that many people were finding adoption of the more sophisticated sedentary

²¹ The annual 'natural' growth rate (excluding in-migrants) is 2.6% (Krong Bong District) and 2.4% (Lak District) figures from Office of District People's Committees 3rd Quarter 2000.

²² A kind of stone xylophone thought to be among the world's most ancient instruments

²³ Information summarised from Dang Nghiem Van et al. (1993). *Ethnic minorities in Vietnam*. Hanoi, The Gioi Publishers.

agricultural techniques difficult and that the communal decision-making structures associated with swidden systems were breaking down due to sedentary agriculture being household-bound. Moreover, many people in the commune were, as recently as 5 years ago, still dependent on the forest for food (rhizomes and herbs) in the two months prior to harvest.²⁴

In the last five years, agricultural productivity and incomes have generally moved beyond subsistence levels. For example, fewer people now suffer food shortages, tiled-roof houses are increasingly common, and hundreds of hand tractors are sold in the districts each year compared with an average of ten just three years ago. Road access is currently being upgraded. For example, Lak District, located along a national highway between Da Lat and Buon Ma Thuot, was recently improved with a hard asphalt surface. The secondary road to Krong Bong is partially hard-surfaced as far as the town of Krong Bong; beyond this it is a dirt road that is difficult to pass in the rainy season.

In line with improving agricultural incomes and road access, many people of the dominant Kinh ethnic group are moving into Krong Bong and Lak Districts to find livelihoods in the expanding small business and government sectors. Kinh people are gradually being elected to leadership roles in communes because the ethnic minorities believe Kinh people better understand the government and new agricultural systems.

Since 1995, nearly six thousand spontaneous migrants of H'mong ethnicity from northern Vietnam have settled in Krong Bong District. The H'mong migrated into northern Vietnam from China in the 19th century and have become one of the largest and most under-privileged ethnic groups in Vietnam. They practice swidden agriculture and are skilled hunters. The H'mong have a reputation for unsustainable exploitation of natural resources, although this may in part be because they settled marginal land in densely populated northern Vietnam. In Krong Bong District, this migration event has increased demand for the already-limited land resources and has disrupted existing means for allocating and controlling land use (see Annex 7). The latest government statistics put net annual in-migration into Krong Bong at 0.8%, but this figure alone is not evidence that this wave of settlement is over.²⁵

The dynamic and transitional character of Lak and Krong Bong Districts may render as temporary the positive trend for forest protection and biodiversity conservation described in the last section. Without an appropriate balance of controls, incentives and alternatives, the combination of need, opportunity and material aspiration might lead to the emergence of illegal and 'grey' economies based on resource extraction and even land trading. The number of H'mong in-migrants has increased demand for land, and an abundance of willing and cheap labour in the region. Without action, the future trend could become one of reclamation of the abandoned hillside swiddens, followed by degradation and encroachment of forests up the hillsides.

In short, the root causes of biodiversity loss and major threats in and around the forests of CYS NP are considered to be:

²⁴ Pers. comm. Michael Gluck, Technical Advisor, GTZ Sustainable Management of Natural Resources in the Lower Mekong Basin project. Oct 11, 2000.

²⁵ There could be at least four explanations of this figure: 1) in-migration has stopped because of government controls; 2) in-migration has stopped because all people of a H'mong clan have now moved into the area; 3) there has been a temporary cessation in settlement for unknown reasons; 4) H'mong settlers do not report to the authorities and therefore do not appear in these statistics.

1. Weakening of traditional village-based mechanisms of natural resource management;
2. In-migration of ethnic H'mong with livelihood systems based on forest clearance, hunting and exploitation of timber and non-timber forest products;
3. The shift from an isolated, subsistence economy to a free-market economy; and
4. Population increases and the arrival of speculative entrepreneurs and traders, particularly in rare wildlife and economically valuable timber species.

Society in Krong Bong and Lak Districts orientates around three institutions, each of which having different roles. These include: a) the commune administration, which is elected by commune members and has authority in areas such as land allocation and land-use planning (small scale), prosecution of offenders, social development, and forestry; b) local branches of the various Mass Organisations (e.g. Women's Union, Farmer's Union, Fatherland Front Veteran's Union, Youth Union), which function as conduits for dissemination of information, community mobilisation, and social meetings at the neighbourhood/household; and c) traditional village structures which arbitrate disputes at the village-level and maintain cultural traditions. Consensus building is central to the decision-making process, and the role of a leader is primarily by arbitration. Informal institutions, such as coffee shops, *bia hoi* (beer shops) and after-work gatherings in village long houses are central to this process. Many agreements are discussed, debated and concluded in these informal settings, and later formalised at commune meetings and government sponsored workshops.

In addition to these site-level issues, a myriad of governmental policies directed from the central level (e.g., land tenure, agricultural subsidies, tariffs, and major infrastructure projects such as roads, dams, etc.) directly impact socio-economic development and poverty alleviation in the project area. Investment plans, developed by the Ministry and Planning and Investment (MPI) in Hanoi and administered through provincial-level departments and Provincial People's Committees, bear significant influence on the fate of natural forests. For example, a road build inside a national park would create easier access to forest by illegal loggers, hunters and illegal settlers, while a the construction of a hydroelectric dam in northern Vietnam may force the relocation of tens of thousands of people into the Central Highlands. These policies (which in general are held in higher esteem in comparison to environmental protection) also influence household-level decisions toward forest resources and private investor's preferences toward purchasing and converting natural forestlands for lucrative cash crops such as coffee.

2.4 Legislative context

Decision CT 194, dated 9 August 1986 of the Prime Minister, proposed establishment of 73 new protected areas, to bring the national total to 86. Decision 1171/QD of the Minister of Forestry, dated 30 December 1986, defined the three main forest categories, and the regulations and objectives of sub-categories. National Park is a sub-category of Special-use Forest. Because the orientation of the Ministry in 1986 was towards production and protection forest, less thought went into defining the purpose and regulations of different Special-use Forest categories.

To clarify the management objectives of Special-use Forests (i.e. national parks, nature reserves and cultural/historic areas), Protection Forests (i.e. community forests and watershed

forests) and Production Forests (i.e. State Forest Enterprises), the GoV enacted Decision 8/QD-TTg, dated 8 January 2001, on the Management of Special-Use Forests, Protection Forests and Production Forests. While Decision No. 8 may be criticized for containing some ambiguities, it nevertheless provides a clearer framework and definition of restrictive and managed uses within Special-use Forests (e.g., Article 13 lists forbidden activities within strictly protected zones, such as “a) activities (that) change the natural environment; and b) activities that have negative impact on natural habitat for wildlife.”). Decision No. 8 also provides limited guidance for management boards with regards to the promotion of nature tourism and recreation within Special-use Forests. However, the Decision falls short of addressing the conflict between regulations that strictly prohibit the use of forest resources by local communities living within and around Special-use Forests and the reality of such people subsisting off forest resources to support their livelihoods, particularly during droughts. MARD will shortly issue an Implementation Circular for Decision No. 8 and it is anticipated that this will provide for more flexibility for sustainable use of forest resources inside Special-use Forests on the basis of forest-use agreements.

In Vietnam (as in many countries) there is a difference between the letter of regulations and application in practice. Provinces have great leeway in setting regulations, even where these may conflict with strict interpretations of national law. The issuing of land use certificates on forestland with standing trees in Dak Phoi Commune, Lak District is a good example (see Annex 10). The very newness of the latest regulations creates an important opportunity for the present project to help interpret the new decision in a manner appropriate to the local context, and generate lessons and ideas of more general value to national park management in Vietnam.

2.5 Current status of the Chu Yang Sin National Park

The establishment of a staffed management board for CYS NP is part of the overall expansion of government services in the area. Since 1998, 28 staff members were recruited and a further 10 were appointed in FY2001. With the exception of the three senior managers, all the park staff are young (24-25 years old), well educated (50% with Bachelors degrees in forestry), applied for the post by choice, and intend to settle into the job in the long term. The 25 park staff members (rangers) are based at guard stations in each of the five buffer zone communes.

Since establishment of the management board the park has been allocated a budget on an annual basis. This has covered staff salaries, activities under the “661 programme”²⁶ (management of forest protection contracts and reforestation activities) and essential new infrastructure. The 10-year investment plan was approved in 2001 (see Annex 9 for details of proposed budget). In practice this will simply set the annual level of budget for 661 Programme activities for the next five years. Budget allocation for all other activities will still be reviewed on an annual basis and depend on the priority that MARD and the Provincial People’s Committee (hereafter PPC) afford to the park.

The PPC has funded construction of a park headquarters building, which was completed in 2001, and for the construction of two one-room guard stations. The park has a very limited equipment budget. At present, staff members travel on foot or by limited public transport services. It is extremely unlikely that the park will receive sufficient budget to meet minimum

²⁶ GoV Programme 661, superseded by the 5 Million Hectares Reforestation Programme (5MHRP). This 10-year national programme aims to protect existing forests and reforest other areas over the period 2000-2010.

infrastructure, transport and equipment needs in the next five years and the chance of attaining significant funding for training, research or public awareness activities is virtually nil (See Annex 8). Based on this assessment it is unrealistic to expect that the park staff can contribute in a meaningful way to the protection or development of CYS NP without outside donor assistance.

According to official sources, no households are currently settled within the park boundaries. Based on discussions with commune leaders and villagers, most people living in the buffer zone appear to know of the existence of the park, but the vast majority only understand the designation as meaning a 'restricted area'. There is very limited knowledge of the reasons for conservation, and a preliminary assessment suggests that people are not aware that nature is limited, that human actions can cause extinction of species, and that different species are found in different places. These concepts are fundamental for the development of stewardship and conservation ethics within civil society.

2.6 Current forest protection activities in the buffer zone area

The CYS NP is part of a much larger forested landscape divided into special-use, protection and production forestlands. The Ho Lak Cultural and Heritage Reserve (see map in Annex 1) covers Lak Lake and three additional areas of Special-use Forest, two of which adjoin the boundaries of the Chu Yang Sin National Park. In Krong Bong District, on the northern flank of the park are approximately 15,000 ha of production forest under the management of a State Forest Enterprise (SFE). Two management compartments of the SFE were excised from the SFE and incorporated within the boundaries of CYS when the protected area was expanded in 1996. The remainder of the forested landscape is a mix of protection and production forest.

GTZ's Sustainable Management of Resources in the Lower Mekong Basin Project (SMRP) project, which ended September 2002, piloted an experimental scheme in Dak Phoi Commune (Lak District) to issue forest land-use certificates to families in a remnant block of dipterocarp forest. A land-use certificate means that a person has legal title to the land. The forest remnants in Dak Phoi are badly degraded and the underlying assumption behind this scheme is that local ownership will help restore the forest and promote sustainable exploitation in the long-term. Apart from this scheme, the principal approach to forest management is Forest Protection Contracts (FPC). Under this system, which was established by Decision 327 of 1993, individuals or groups are paid a fee to replant and/or protect forests on a contract basis. Extractive use of forest resources from land covered by FPCs would, under the current regulatory framework, constitute a breach of management regulations. In reality, however, such regulations are often ignored and fuelwood and other non-timber forest products are collected. In 2002, an AusAID/DARD Rural Development project (see section 2.7) will conduct follow-on activities with the 688 households of Dak Phoi Commune (90% of which are M'ngong indigenous ethnicity), which are located adjacent to CYS NP.

In 2002, CYS NP has been allocated financial resources to issue 10,000 ha of FPCs (covering roughly 17% of the total area of 59,278 ha). The older Ho Lak Cultural and Heritage Reserve has been managing a quota of 2,000 ha of FPCs since 1995. Under the 327 Programme, the Krong Bong SFE issued and managed 2,000 ha of FPCs, but these were not extended under the 661 Programme. Current implementation of the FPC system in Chu Yang Sin appears less than ideal. For example, payments to households are small (roughly US\$3 per ha per year), while technical knowledge for restoring or managing forest is limited and compliance with obligations under the contracts appears to be largely based on trust.

Apart from management of FPCs, the main activities of park staff include coordinating with commune officials on forest protection issues and general patrolling. The expectation of district and commune leaders, the local forestry department and State Forest Enterprise, is that the newly-established CYS NP Management Board team will contribute to the overall strengthening of forest protection and management, particularly in the areas of enforcement, community liaison and conservation awareness.

2.7 Other initiatives in the project area

A number of on-going and planned initiatives in the project area provide programmatic synergy to address the root causes of biodiversity loss and achieving the goal of the project. Government initiatives include the national 1,715 Poorest Communes Programme (135 Programme), which is working in communes in the buffer zone to reduce poverty and improve rural livelihoods; the national Five Million Hectares Reforestation Programme²⁷ under which funding is available for social forestry activities including the Forest Protection Contract (FPC) system (see Annex 9 for details on 661 Programme and FPCs);²⁸ and support for upland cultivation and integrated pest management, the latter of which is supported technically by a national FAO programme.

Several overseas development assistance (ODA) initiatives focus on poverty alleviation and livelihood support to poor households in the buffer zone of CYS NP. The largest among these is the US\$70 million ADB Forest for Livelihood Improvement in the Central Highlands Project (2004-2010),²⁹ which is currently in the planning phase. The project is expected to comprise a central-level component and an investment component focusing on the three Central Highland provinces including Dak Lak. The central-level component will provide financial support to the Forest Sector Support Programme (FSSP), a sector-wide, government-led partnership between key government forest management institutions and a range of donors and non-governmental organizations (NGOs). The investment component will include support to improve local livelihoods and promote sustainable forest management, particularly with regards to State Forest Enterprise (SFE) reform and piloting commune-level forestry cooperatives.³⁰

The Royal Danish Government, through DANIDA, has provided significant development assistance in the project area focusing on integrated watershed management/land-use planning and development of water supply and sanitation systems to the districts surrounding CYS NP. DANIDA's Integrated Watershed initiative has included a Phase I project entitled Action Plan for Water Resources Development in the Upper Srepok Basin (1993-1997), which was implemented by the Mekong River Commission Secretariat (MRCS), and a Phase II project entitled Support to Water Resources Management in Dak Lak (1997-2001). The latter project

²⁷ Following Decision No. 661-QD/TTg of the Prime Minister dated 29 July 1998.

²⁸ Under this system, local households are issued contracts for the protection of designated forest areas on an annual basis, for which they receive a payment of around US\$3 per hectare. Currently, the management board of CYS NP manages the issuance of FPCs to households in the project area.

²⁹ Asian Development Bank. Technical assistance for preparing the Forests for Livelihood Improvement in the Central Highlands Project. TAR: VIE 34341. Dec 2001.

³⁰ Pers. comm. Mr. Ernst Kuester, Team Leader, ADB Forest Sector Project and Mr. Bart Dominicus, Consultant and former Team Leader, ADB Forest Sector Project, 1 April 2002; pers. comm. with Cornelius Huienza, Consultant/PPTP Team Leader, ADB Forest for Livelihood Improvement in the Central Highlands Pre-project Phase. 4 April 2002.

involved irrigation reform and forest rehabilitation components.³¹ Starting in October 2002, DANIDA is implementing a Phase III US\$1.6 million project entitled Integrated Water Resources Management for the Srepok River Basin (2002-2005).³² The project will provide support for the establishment of a river basin planning management agency (RBPMA) for the Srepok River Basin (including Dak Lak, Lam Dong and Gia Lai Provinces), an important institutional development that will facilitate a more integrated and effective approach to water resources management at the landscape level. The wider goal is to protect the hydrological services of the upper catchment upon which down-river societies and economies depend.³³

The MARD/DANIDA Water Sector Programme Support (WATERSPS) is also implementing the Rural Water Supply and Sanitation (RWSS) in Dak Lak Province Project (2001-2005).³⁴ The US\$1.4 million DANIDA project aims to establish a sustainable institutional framework for provision of water supply and sanitation services including access to credit facilities and competent staff; establish community managed water supply and sanitation facilities based on user demand and reflecting the needs of women and the poor; and increase awareness of the linkage between improved hygiene and sanitation and health and improved hygiene practices. Additional support for RWSS activities comes from the Japanese International Cooperation Agency (JICA), which since 2001 has primarily focused on investigating groundwater sources in 7 districts in Dak Lak, and UNICEF. Since 1993, the number of rural water supply schemes has gradually expanded in Dak Lak, due to increased funds from UNICEF, GoV, as well as financial and in-kind contributions from villagers. As a result of these efforts, the provincial CERWASS estimates that 510,000 people have access to clean water, accounting for 32 percent of the total population of Dak Lak Province.

GTZ activities under the Sustainable Management of Natural Resources in the Lower Mekong Basin Project (SMRP) Phase II project (closed Sept. 2002) are currently being scaled up under a new project entitled Rural Development in Dak Lak (see Annex 10 for more details on GTZ's SMRP project).³⁵ GTZ's Rural Development in Dak Lak project is expected to start in January 2003 with a commitment of US\$2.6 million for the first 3-year phase of a 7-year project.³⁶ This project will take over the field activities of SMRP in Lak District. It will focus on upland areas and aims to assist with the following: coordination of rural development programmes in upland areas of Dak Lak with special account for ethnic minorities; improvement of upland farming systems; strengthened forest management planning at the district, commune and hamlet levels; development of community organisations to support natural resource management; development of service systems for extension, marketing and procurement of agricultural inputs; and promotion of participatory land-use planning and land allocation. Synergies exist between these activities and the need for CYS NP to stabilise boundaries and strengthen forest protection through the system of issuing forest protection contracts to households.

³¹ Pers. comm. Mr. Lars Skov Andersen, CTA, MARD-DANIDA WATERSPS CPMU, Hanoi, 4 September 2002.

³² MARD-DANIDA WATERSPS. Draft Inception Report: Water Sector Programme Support Sub-component 3.1 – Integrated Water Resources Management for the Sre Pok River Basin, Vietnam. 104.Vie.814-7. February 2002.

³³ The Chu Yang Sin National Park lies within the watershed catchment of the Srepok River, which is a major tributary of the Mekong River.

³⁴ MARD-DANIDA WATERSPS. Draft Inception Report: Rural Water Supply and Sanitation 2.1 RWSS in Dak Lak, Vietnam. 104.Vie.814-4. November 2001.

³⁵ GTZ. Short Description: Rural Development in Dak Lak Province project. 1998.2078.9. 15 September 2001.

³⁶ Pers. comm. Ms. Kristina Kurths, GTZ, Hanoi, 3 September 2002.

The Australian Government, through AusAID, is supporting follow-on integrated participatory watershed management activities of the GTZ SMRP project in Dak Phoi Commune.³⁷ Large natural population growth of ethnic minority M'ong communities in the buffer zone of CYS NP has placed an increasing demand on land-use and caused degradation of forest cover, having adverse impacts on the ecological functions of the forest in terms of providing watershed protection and a habitat for wildlife. The AusAID Rural Development project, a US\$ 330,000 2-year initiative, aims to assess the optimal agricultural land-use for diversified agricultural crops and livestock, assess the value of marsh land, assess appropriate and sustainable farming practices, and produce a map of potential land uses. Farmers' interest groups, agricultural extension and demonstrations of SALT techniques for upland field terracing will also be introduced. These integrated rural development activities will be linked to the conservation objective by raising the awareness of forest values and increasing the overall GOV effort to alleviate poverty and promote forest protection in the CYS buffer zone.

The ADB, DANIDA, and AusAID projects are working directly with the Dak Lak Provincial Department of Agriculture and Rural Development (DARD) and within the wider framework of the Mekong River Commission for Sustainable Development; the GTZ project works with the Dak Lak Department of Planning and Investment (DPI). Dak Lak DARD is the same governmental authority that oversees and manages the CYS NP Management Board. The project will support these initiatives by raising awareness of provincial decision-makers to the biodiversity values of the forest and thereby encouraging environmentally sound decision-making vis-à-vis land-use planning and infrastructure development in the project area.

Moreover, these ODA projects directly address key areas identified in the Chu Yang Sin problem tree and root causes of biodiversity loss (see Annex 11). In Lak and Krong Bong Districts, the DANIDA, GTZ and AusAID projects are addressing issues such as land-use planning, irrigation reform and water resources management. The GTZ SMRP project has assisted district-level forest and land-use planning in Lak District, conducted preliminary studies on community use of forest resources, and piloted village forest protection regulations. The project also facilitated formation of a provincial level Inter-agency Working Group on Forest Land Allocation and Joint Forest Management. Current DANIDA, GTZ and AusAID projects support poverty alleviation and efforts to relieve pressure on forest resources. The GEF project can benefit greatly from the foundation of co-management knowledge, experience and collaboration developed by these projects.

In addition to these major initiatives in the buffer zone of CYS NP, the project will be enhanced by activities under the planned World Bank/ADB/Netherlands/GEF Forest Sector Development Project (expected 2003-2008), which aims to improve the legal framework for sustainable forest development, support the SFE reform process and establish a sinking trust fund for improving the management for protected areas of high biodiversity value.³⁸ The conservation trust fund could support the establishment of Bi Doup-Nui Ba NR, located south and adjacent to CYS NP in Lam Dong Province. The project will also benefit from lessons of the \$6 million Netherlands/IUCN Sustainable Utilisation of Non-Timber Forest Products (NTFP) Phase II project, which will begin in 2003.

³⁷ AusAID/Dak Lak PPC/DARD. Project proposal: Rural Development Project at Dak Phoi Commune – Lak District, Dak Lak Province, Vietnam. July 2002.

³⁸ The World Bank/ADB/GEF project, which will directly support the project goal, cannot qualify as co-financing for other GEF projects.

The GEF project will also benefit from activities of the Dutch WWF Cat Tien Conservation Project, which has recently been revised to under the Phase I implementation to incorporate a landscape-level strategy (FSSP Result Area 3) for conservation in the South-east Agro-ecological Zone, a socio-political area that overlaps the Southern Lowlands of Vietnam Endemic Bird Area. Activity 3.3 of this project will provide support for forest conservation activities to Special-use Forest management boards within the agro-ecological zone. Bi Doup-Nui Ba Nature Reserve, located southeast and adjacent to Chu Yang Sin NP, is located within this zone, which includes in Lam Dong Province. Specific activities to be undertaken during 2003 include the development of a reserve management plan, guard training and capacity building. Due to the limited capacity of WWF, BirdLife will be sub-contracted to conduct these activities, totalling approximately \$30,000.

3. Expected project outcomes

The project outputs will be generated through five integrated components, namely: **capacity building, enforcement and protection, information and planning, public awareness, and monitoring and evaluation**. The main activity groups of these components are summarised below while a more detailed description of activities are in Section 4. In addition, a one-year project mobilisation component will establish the conditions for optimal implementation of project activities. Summary budgets for each component and incremental costs are included under sections 7 and 10.

Component A: Enforcement and protection

This component aims to deliver effective on-the-ground enforcement and protection through establishment of an active community-based ranger service. The aim is to deal with problems (e.g. encroachment, hunting) before they become serious. To this end this component will mobilise park staff (who are based at the guard station) to expand the area, frequency and scope of patrols. The scope of patrols will be widened to comprise a blend of community liaison, public awareness, checking and monitoring of high-risk boundaries, maintenance of park infrastructure (e.g. boundary signs) and when necessary, warnings or firmer action against offenders.

The project will develop and institutionalise patrolling systems and protocol (e.g. routes, incident reporting, action response decision criteria). In the buffer zones patrol systems will be based on the use of trail bikes, whereas within the park, the system will be foot patrols.

The project will strengthen two aspects that are critical for effective enforcement. These include: a) the active support and involvement of district forest protection departments, who have the power to arrest and prosecute offenders; and (b) the communication of intelligence on high-risk areas and potential offenders. The project will put in place a radio communication system to link rangers out on patrol with their work-base and the park headquarters, and develop rapid response systems with the three agencies having similar forest protection responsibilities (the Forest Protection Department, the State Forest Enterprise and Lak Reserve). Jointly with these agencies, the project will produce public awareness materials to support the enforcement strategy.

Component B: Information and planning

This component will deliver three groups of outputs: a baseline of knowledge and information required for effective park management; field-tested local-level park management approaches,

including co-management; and integration of park management goals into land-use and development plans at various administrative levels. In all these areas of work, the GEF project will seek close collaboration with the DANIDA, GTZ and AusAID initiatives.

A. Knowledge and information outputs will establish the basic socio-cultural and ecological frameworks for park management. A socio-cultural and landscape assessment will establish the inter-relationships between and among different ethnicities, the landscape and the park. These relationships are presently dynamic. Current information is that the national park is uninhabited so resettlement questions are not an issue. Based on rapid assessments conducted under PDF preparation, no indigenous rights will be contravened. Indeed, the intention is to incorporate existing cultural use with the park management framework. Ecological assessments will establish the type, abundance and distributional patterns of key biodiversity attributes (e.g. habitats, threatened and endemic species) using landscape ecology frameworks. Put together these outputs will identify priority areas and species for the field focus of enforcement and community liaison activities.

B. Local-scale park management approaches will integrate customary use of forests and local land use planning with management goals of the park. These outputs will draw on the above assessments and aim to establish: simple and robust forest protection and management techniques to help Forest Protection Contract user groups manage forests towards desired states (e.g. tall forest, species diversity); lasting resolutions to the apparent conflict between customary use within the parks (e.g. collecting forest foods) and the exclusionary sentiments expressed in some wording of national park regulations; and community (or user group³⁹) agreements on forest boundaries, including instigation of cropping patterns in the buffer zone that will enhance the ecological integrity of park boundary areas.

C. Integration of Chu Yang Sin National Park goals into land-use and development plans is a part of the overall project strategy, because the Vietnamese structure of governance means that such plans are usually followed and enforced. The outputs under this heading will be: a brief national park management plan;⁴⁰ a nature-based development strategy for the wider Chu Yang Sin landscape; and integration of these documents into local land-use plans, using participatory planning approaches.

Component C: Public awareness

This component will establish public support and interest for CYS NP by promoting discussion on the values and ethics that underpin conservation. The project will commission a marketing and awareness strategy from an established Vietnamese marketing company. This strategy will establish the baseline situation of knowledge and attitudes in buffer zone communes and Buon Ma Thuot concerning conservation and the park, and identify steps to change public attitudes and practice.

The strategy will guide a public awareness programme that will be implemented by project and park staff working together. It is expected that the project will conduct a traditional-style community awareness programme, combining illustrated talks by rangers to village unions

³⁹ A grouping of people defined by different forms of use of an area/facility and through which human use of an area can be characterized, managed and measured.

⁴⁰ This will be a 16-24-page document that states the management objectives of the parks and the main actions required to achieve these goals. It is not intended as a detailed management plan with management prescriptions and implementation plans.

with a poster and media campaign. The programme will build local pride and interest in the various landscapes, biodiversity and cultural attributes of Chu Yang Sin, and use these as examples to promote discussion on conservation and stewardship ethics. At the provincial level (in Buon Ma Thuot) the project will aim to create a public image of CYS NP as a beautiful and interesting area and somewhere to drive out to at weekends. This image will be constructed through a general media campaign focusing on the aesthetic and recreational values of the national park.

Additionally, the project will establish widespread appreciation of the park's potential contribution to regional development goals among decision-makers and technical staff working in relevant fields. This will be achieved through a programme of briefings and seminars. Emerging interest in the area will be developed and consolidated with a programme of public events (i.e. guided walks, exhibitions, nature camps) in and around CYS NP.

Component D: Capacity building

This component supports all other components. It will establish a motivated and professional park staff with strong capabilities in adaptive management, and the essential infrastructure and equipment to enable them to put this into practice. Adaptive management recognises that systems are complex and evolving over time and therefore aims to make practitioners more responsive to change. This human resource output will be achieved through a 'guided self-learning' model combining practical study tasks and English language training using materials chosen to introduce concepts from the wider conservation and park movement.

This component will establish a ranger service that can collectively generate knowledge of their local area, recognise problems and opportunities and turn these into effective on-the-ground action. Specifically it will establish a ranger service that: possesses wide-ranging knowledge and experience of park management and protection techniques; comprises individuals with a broad range of practical and professional skills, but who each have their own particular specialisation; and comprises individuals who can speak and read English and ethnic languages, and thereby empowered to access outside knowledge.⁴¹

In addition, the project will develop capacity of senior staff in project and personnel management and of park staff to communicate in minority languages, conduct Rapid Rural Appraisals (RRA), and operate relevant computer software techniques through a programme of short courses.

The project will upgrade and construct five guard posts to a standard compatible with effective day-to-day operations of the park and successful implementation of this capacity-building programme (staff will need space to discuss and work on learning tasks). At present, all park staff are living and working in sub-standard or rented accommodation (see Annex 8).

Component E: Monitoring and evaluation

This project will prepare a detailed monitoring and evaluation plan that lists specific methods and indicators and is integrated both with the survey and assessment activities under Component B and the monitoring programmes of other donor projects active in buffer zone

⁴¹ For example, English-speaking park managers can access a growing amount of technical park management information over the Internet. Within the project life span, fast Internet connections should be available in Buon Ma Thuot.

districts. The project will aim to ensure that park staff are proficient in the execution of monitoring requirements, either directly or by contracting outside parties.

4. Activities and financial inputs

Start-up Phase

BirdLife experience in Vietnam is that the pace of project start-up is slow and that one-year should be allocated to the following activities to support smooth project implementation.

Establish project steering and advisory committees

The project will seek to establish a provincial-level steering committee and a district-level project implementation committee, and to optimise linkages between these committees, the Inter-agency Working Group on Forest Land Allocation and Joint Forest Management, and similar management structures supporting the DANIDA and GTZ-funded projects. See Section 2.6 for more details.

Develop collaboration and conclude project implementation agreements

The project will secure all the necessary agreements and undertakings for effective and collaborative execution of project activities.

Establish project office and field office

A project office will be established in Buon Ma Thuot, which is located one hour by road from the park. It is hoped that DARD will allocate the project an office in the same building as other donor projects as this will promote inter-agency and project collaboration, including sharing of knowledge and resources. A field office will be established in the small park headquarters, as project staff will conduct most activities in and around the park.

Explore and agree collaboration with other projects in Dak Lak and other regional programmes

Donors, such as GTZ and DANIDA are considering new projects in Dak Lak Province to build on the foundation of integrated watershed management established by their existing projects. The present project will proactively seek to agree joint activities in areas such as community-based forest management and land use planning in Krong Bong and Lak Districts.

Hire project personnel and procure equipment

Key project personnel (see Annex 5) will be hired to manage and coordinate project activities. These project staff will procure essential equipment such as vehicles and motor bikes during the project mobilisation phase.

Component A: Enforcement and protection**GEF contribution: \$140,000****A.1 Provide a radio communication system**

The project will procure a radio system to specifications determined by the needs assessment. It is expected that the chosen system will be similar to that recently installed in Cat Tien National Park. Once installed, the project will develop and institutionalise a protocol for its use.

A.2 Establish trail-bike patrolling in the buffer zone

The project will procure a fleet of trail bikes and bring in an experienced trainer to teach off-road and safe riding skills. Trail bike routes in the buffer zones will be mapped and systems and approaches for patrolling on bikes will be developed and institutionalised.

A.3 Establish foot patrols within Chu Yang Sin National Park

The project will involve villagers in mapping trails in the national park. This information will be used to develop patrol trail networks, to feed into the recreation study, and also to build an understanding of the linkages between existing communities and the Chu Yang Sin forest (e.g. old villages or sacred areas). The project will provide staff with field equipment and training in forest-patrolling techniques.

A.4. Develop improved inter-agency collaboration

Several government agencies are involved in forest protection in the wider Chu Yang Sin landscape. The project will build coordination within these agencies. It will look at means of strengthening information sharing and initiate joint field training exercises in different enforcement situations.

A.5 Conduct forestry extension programme

The project will collaborate with the Forest Protection Department and local State Forest Enterprise(s) on the design, production and dissemination of public awareness materials for forest protection.

Component B: Information and planning**GEF contribution: \$344,000****B.1 Socio-cultural assessments**

The dynamic nature of society in Krong Bong and Lak Districts and thus social assessments will be conducted early in the project to provide a picture of the social setting of CYS NP. These assessments will build on the rapid assessments conducted in 5 communes under the PDF and other studies undertaken by GTZ and others. The assessments will aim to: a) determine changes and trends in the broad socio-economic composition of the two districts; b) characterise different user groups in relation to the park; c) establish whether swidden cropping still exists within the park and the dependence of this and forest products for basic food security; d) map old village sites and associated customs that require access rights; and e) understand the potential impact of the recently-arrived H'mong on the globally-significant biodiversity. A suite of techniques will be employed, including PRA, landscape assessment,

and review of hard copy satellite images to identify historic and present areas of cropping in the park.

These assessments will feed into most other activities of the project, but in particular to the marketing and awareness strategy, design of patrolling protocol, the brief management plan, and the monitoring and evaluation plan. The socio-cultural assessments, funded separately by BirdLife co-financing,⁴² will be conducted during the first year of the project in parallel to start-up phase activities.

B.2. Biodiversity assessments

This activity will design the spatial management frameworks for the park (vegetation and landscape maps) including classification systems and survey monitoring methodologies. The only representations of the park currently available are topographic maps overlaid with old forestry compartments. This activity will conduct overview surveys to classify and map vegetation and landscape units.

Assessments of at least four taxonomic groups will be conducted as part of the project. Provisionally, it is expected that these will cover endangered and endemic mammals, birds, freshwater fish, reptiles, amphibians, butterflies and vegetation for the following reasons:

- (1) Mammals/birds: Chu Yang Sin harbours globally significant endemic bird populations and a baseline of knowledge of mammals and birds is present from previous BirdLife surveys;
- (2) Freshwater fish: Chu Yang Sin is potentially important for conservation of this highly-threatened group because of its extensive stream system (note: Lak Lake is not within the project area);
- (3) Reptiles and amphibians: there is a good chance that the area supports undescribed species, thereby generating a national and international profile for the park;
- (4) Butterflies: Chu Yang Sin includes rare and endemic butterfly species and could contain butterfly species not yet described by science; and
- (5) Vegetation: the endemic conifers are threatened, but knowledge of their distribution in the park (especially valuable and hence vulnerable specimen trees) is lacking.

B.3 Local regulations governing public access and use of Chu Yang Sin NP

There is uncertainty about local implementation of national law (decisions) governing national parks. This activity will develop local regulations and agreements on public access and use of the national park that rationalise national law with the site-specific biodiversity and socio-cultural considerations. The project will review and interpret legislation concerning parks, protection forests and land use planning. It will compare these with findings of the various assessments conducted under B.1 to identify conflict areas. Discussion will be held

⁴² BirdLife International in Indochina has committed US\$50,000 over 5 years in co-financing. These funds, presently unsecured, are expected from the US Embassy, Hanoi and/or other bilateral donor agency.

with community leaders to seek potential solutions⁴³. The various options will be discussed at village meetings and district level workshops with the view to agreeing local regulations which have a consensus of local support. These will be integrated into project activities (e.g. patrolling, FPC management, land use planning) or piloted in specific areas. As appropriate the project, through the Provincial Steering Committee, will seek official endorsement of agreements by District or Provincial Peoples Committee(s).

B.4 Improved forest management in zones managed under the Forest Protection Contract system

The National Park's quota of Forest Protection Contracts (FPC) has been issued. Owners of FPCs constitute a new and distinct forest user group within village communities. This activity will bring together this user group with national park and FPD staff to collaboratively develop simple forest mapping methods and management prescriptions that can be applied by the FPC user group with guidance from park, or FPD staff.⁴⁴ This reflects the evolving development of community forestry in Vietnam. Several projects in Vietnam are newly active in this area. The present project will seek to develop activities in this field jointly with the GTZ project and apply knowledge from elsewhere (e.g. India⁴⁵ and Nepal) to protect and/or restore tall forest in degraded areas within the park. The project will conduct a biological assessment of forest quality to define future forest management goals for biodiversity conservation in areas covered by FPCs.

B.5 Feasibility study for developing hiking routes

Demand for outdoor recreation is growing in line with rising urban incomes and improved transport infrastructure. The wider Chu Yang Sin landscape has good potential for nature-based recreation. The Lak valley is an area of outstanding natural beauty. It is only a one-hour drive from Buon Ma Thuot, which has daily flight connections with Ho Chi Minh City and is itself only 5-6 hours distance by surfaced road. Recreational planning currently has low priority in provincial and district development planning, yet building the park's potential as a destination for single and multiple day hikes would help diversify provincial and local economies and build support for the national park. This feasibility study will aim to stimulate discussion on nature-based recreation in the area, while managing its development so that unplanned, Asian-style tourism characterized by heavy infrastructure development and large-scale changes to the nature landscape value is managed sustainably. An obvious first step would be to develop a trail linking the popular Krong Bong waterfall and Lak Lake via the Chu Giang San ridge. Establishing this trail would be the focus of the feasibility study. Relating to activity B.2, the activity will clarify if hiking routes are permitted within parks under existing regulations.

⁴³ A possible compromise between the exclusionary tone of the new legislation and the need to respect traditional access rights, might lie in early European perceptions of nature reserves as places for contemplation of nature (aesthetic, cultural and scientific aspects). This interpretation would permit activities associated with "quiet contemplation of nature" including, visits to sacred and cultural sites in a natural setting, bird-watching, nature-study and low-level hiking, yet exclude mass tourism and resource exploitation which appears to be the intent of current legislation.

⁴⁴ This supports Recommendation 12.1.5. In Gilmour, D. (1998) Options and approaches for community partnerships in the management of watershed/forest resources in Dak Lak Province. GTZ.

⁴⁵ See Poffenberger, M. *et al.* Field Methods Manual. Volume I. Diagnostic Tools for Supporting Joint Forest Management Systems. Joint Forest Management Support Programme, Society for Promotion of Wastelands Development, New Delhi.

B.6 National park management plan and nature-based development strategy

This activity is based on the recognition that the province conducts major land use planning within the framework of national policy and has great latitude over the location and pattern of, for example, roads, plantations and new economic zones. The project will conduct a study that moves up a spatial scale and considers the wider development and environmental context within which CYS NP is embedded. The study will synthesise the various studies, assessments and learning of the project, consider linkages with other protected areas in the area (i.e. Ho Lak and Thuong Da Nhim NRs) and the general landscape and development context of the region. Two publications will result from this study: 1) a national park management plan; and 2) a nature-based development strategy. Both outputs will be attractively produced advocacy documents accessible to a wide audience. The purpose of the national park management plan is twofold: to present the overall management vision and objectives of the park to guide adaptive management in and around the park, and inform the district and provincial budgetary and planning processes. The purpose of the nature-based development strategy is to incorporate environmental and biodiversity considerations into investment planning, particularly with regards to infrastructure development such as roads, dams, etc. Prior to publication, drafts of both documents will be discussed with interested parties at informal meetings, and then at a provincial level workshop.

B.7 District and commune land-use planning

Armed with a park management strategy and results of various assessments, the project will initiate a series of participatory planning workshops to revise, or formalise, local land use plans in a manner that will integrate park management objectives with the wider development needs and aspirations of the commune. This activity will be most effective if it is implemented and integrated with activities of DANIDA's new integrated watershed management project.

Component C: Public awareness

GEF contribution: \$160,000

C.1 Prepare a marketing and awareness strategy

The project will commission an established Vietnamese marketing company to prepare a marketing and awareness strategy in conjunction with project and park staff. This will include a baseline knowledge and attitude survey of target populations in buffer zones districts and Buon Ma Thuot (which will form the basis of future monitoring). The strategy will identify key messages, priority villages, user groups and stakeholders and appropriate awareness media.

C.2 Establish a resource collection of photographs, artwork and other images

The project will commission professional-standard photographs of the landscapes, wildlife and people as a resource for the awareness programme. Where appropriate, artwork will also be commissioned. Appropriate systems of storing images and other awareness material will be developed. The project will also facilitate the design of a logo for the national park.

C.3 Conduct a community awareness programme

Within the framework of the marketing and awareness strategy, the project will work with park staff to refine and develop awareness messages appropriate to the various ethnic and

other user groups. The project will support park staff to conduct a programme of talks to branches of mass organisations and other village institutions. It is expected that this will be a two-way process. The talks will stimulate stories and other inputs from the audience, which can be incorporated into future presentations and shared between communities. These events will also be designed so as to create opportunities for stakeholder feedback and input on park management. Various awareness materials (e.g. posters and notebooks) will be produced to support the activity. A second attitude and knowledge survey will be conducted at the time of the mid-term review. On the basis of assessment of the results, the approach and messages of the awareness programme will be modified as required.

C.4 Buon Ma Thuot public awareness programme

In the framework of the marketing and awareness strategy, the project awareness staff will collaborate with local newspapers and radio stations, and generate press releases and media stories about the national park. Seminars, briefings and discussions will be organised in relevant government and civil society agencies. The project will also seek to organise public exhibitions of photographs and artwork to promote the national park and respond to interest in the park by organising a programme of public events (e.g. guided walks, nature-camps) in and around the park.

Component D: Capacity building

GEF contribution: \$255,000

D1. Provide technical and advisory support to park managers

The project will provide general technical and advisory support to the director, vice director and section head in all aspects of park management.

D.2 Conduct guided self-learning programme

The project team leader and project officer will conduct guided-self learning throughout the project period. The model (Figure 1) is a variation on action research⁴⁶ and has two elements: 1) English language training that uses natural history videos, writings on conservation and technical papers as teaching materials to introduce concepts from the wider conservation and park movement; and 2) practical study tasks to develop the capacity to translate learning into action. This model is not conceived as a programme of academic training. It mostly comprises on-the-job training and is designed to develop ranger services that can turn problems and opportunities into effective on-the-ground action.

It is believed that this guided self-learning model will be suitable for Chu Yang Sin because the park staff are newly recruited, young, well educated and keen to learn. There are several strengths to this model, by being sensitive to the Vietnamese situation, positioning an expatriate with years of field experience in other contexts as a mentor and advisor, providing the time and enabling environment for consensus-building discussions of issues, and facilitating discussions among people of different interests, abilities and experience.

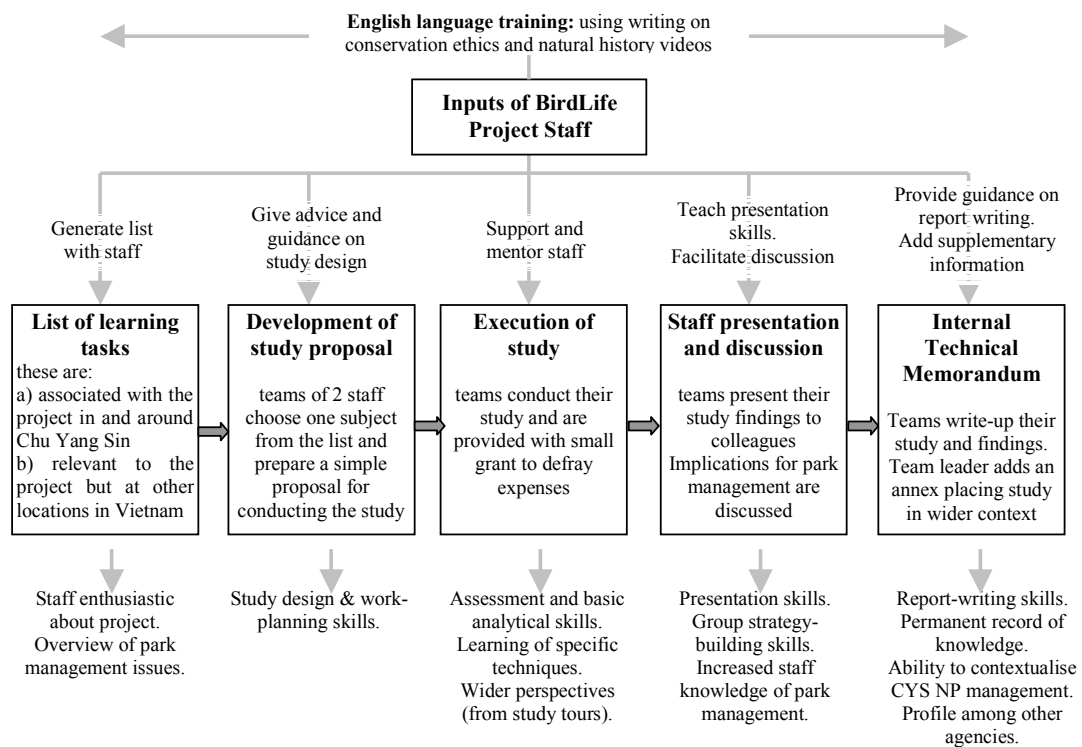
⁴⁶ Action research is a process of learning to act more effectively and generating insights relevant to similar situations. See Kemmis, S and McTaggart, R eds. (1988) *The Action Research Planner (Third edition)*. Deakin University, Australia. It has been proposed as a means to establish collaborative parks management (see Fisher, R.J and Jackson (1998) Action research for collaborative management of Protected Areas. Paper presented at Workshop on Collaborative Management of Protected Areas in the Asian Region, Sauraha, Nepal, 25-28 May, 1998).

The 30+ park staff will choose from a range of potential learning tasks within the project activity programme. For example, participating in a biodiversity survey, designing guard stations, developing family management plans, or designing awareness materials. In the first year (year 2 of the project) these learning tasks will be located in and around CYS NP. In the second year, the programme will extend to targeted study tours to other conservation and GEF-funded projects in Vietnam, such the UNDP-GEF/Gia Lai PPC/TFT/BirdLife project at Kon Ka Kinh and Kon Cha Rang NRs in neighbouring Gia Lai Province. Learning tasks will be identified that build skills relevant to current management needs and/or promote the active participation of park staff in studies and assessments contracted to third parties. The final structure and timing of the training (including English language) will be decided during project mobilisation and will take into account other project and management commitments and logistical considerations during the rainy season.

D.3 Conduct in-service training programme

A programme of short, in-service courses will be integrated with the above programme. Training will be in many key skills, such as computing, RRA, structured problem analysis and minority languages. Trainers are available in Buon Ma Thuot and the preference will be to bring in these people as this will also help build relations between the park and other agencies and individuals in the province.

Figure 1. Schematic Representation of a Guided Self-learning Model



D.4 Establish guard stations

The project will fund the establishment of guard stations. The first step will be to conduct a needs and options assessment. It is expected that the activity will involve construction of new guard posts, extensions of the small, recently built guard stations, and modification or extension of existing buildings to be rented from other departments. Consideration will be given to incorporating traditional architectural influences.

Component E: Monitoring and evaluation

GEF contribution: \$74,000

E.1 Prepare monitoring and evaluation plan

The project will prepare an operational monitoring and evaluation plan based on indicators defined in the logical framework and results of the detailed planning of biodiversity and social assessments conducted under Component B.1. This plan will provide the overall framework and work plan for the four monitoring themes below.

E.2 Conduct knowledge and attitude surveys

This will be integrated with the preparation of marketing and awareness strategy. It will be conducted at the beginning of year 1 and the end of year 3. The survey will be designed on the basis of pilot surveys and discussions and in practice the survey may be sub-divided into three studies sampling buffer-zone communities, the general public in Buon Ma Thuot and government staff (including park staff).

E.3 Biodiversity and landscape monitoring

Monitoring approaches will be defined and baselines will be established under activity B.1. Within the five-year project it is not possible to measure changes in, for example, populations of species or forest quality. However, key landscape-level indicators such as stability of park boundaries, extent of encroachment within the park, can be monitored simply and cheaply using vantage-point monitoring techniques and comparison of hard-copy satellite imagery.

The DANIDA project is establishing hydrological monitoring systems in the catchment (e.g. river flow, turbidity). The project will use this data to monitor the ecosystem function values of the national park.

E.4 Capacity building

The development of professional and adaptive management skills will be monitored through continuous assessment. Project success in terms of establishment of physical infrastructure will be monitored via inventories of buildings and equipment.

E.5. Community feedback

A key theme of this project is adaptive management. This requires an ability to receive and respond to community feedback. The project will integrate monitoring with regular staff duties such as patrolling, meetings with commune staff, and village presentations. In terms of project and longer-term monitoring, the participatory workshops associated with the land use

planning activities provide a more formal means of monitoring community reaction to the project goals.

E.6. Mid-term project review

The project will organise an independent mid-term review towards the end of year 3. This will evaluate progress with activities, the findings of the various monitoring studies, and work with project staff, partners and stakeholders to revise and define activities for the final two years. In particular, the mid-term review will develop and finalise the approach and activities for district and commune land-use planning sub-component.

5. Sustainability and risk assessment

Prospects for sustainability are good. Ecological sustainability is enhanced by linking biodiversity and protected area management with wider watershed management goals and, through this, to two major policy initiatives - the FSSP and Mekong River Commission. This also benefits financial sustainability. As a critical watershed, the project focal area will receive continued government and donor assistance. Prospects for financial sustainability are further enhanced by the awareness and marketing strategy that aims to develop support for CYS NP among leaders of the Provincial and District People’s Committees, and also by BirdLife’s long-term commitment to the national park.

Current donor project are investing heavily in strengthening and capacity building of government institutions in Buon Ma Thuot and in government and civil society institutions in Krong Bong and Lak Districts. This ‘modernisation’ of the project institutional setting will ensure sustainability of capacity building investments in CYS NP. Social sustainability will be developed through building local pride in the natural heritage of Krong Bong and Lak Districts, developing a constituency of support for the National Park and associated management regulations, and by developing livelihood alternatives to forest exploitation. The latter is being addressed by projects of GTZ and DANIDA.

In terms of effective park management, sustainability will require meeting the following four conditions: a) presence of an effective enforcement and protection presence; (b) a national park management board comprising a cadre of professional and motivated staff with a clear understanding of management goals and challenges; (c) strong public and government support for the national park in Krong Bong and Lak Districts and Buon Ma Thuot; and d) continued support and interest of the international conservation community. The project design aims to deliver the first three conditions. BirdLife’s general conservation advocacy work will deliver the fourth.

A summary of assumptions made and potential risks associated with the project strategy and proposed solutions are given in Table 1.

Table 1. Assessment of risks and proposed solutions associated with the project

	Assumptions/ risks	Assessment/Mitigation
Project Goal		
Conserve the biodiversity attributes of Chu Yang Sin in the long	Vietnamese authorities have the interest and will to protect nature Local people will be interested in wildlife and natural landscapes and be willing to	Largely outside project control; targeted awareness programmes Awareness programme creating linkages with culture and history. H’mong settlers

term and develop integrated watershed and biodiversity management at a broader scale	<p>conserve</p> <p>Population growth and in-migration does not overwhelm conservation efforts</p> <p>Policies and commitment of government to forest protection and land stabilisation remains strong</p> <p>Changes in agricultural commodity prices (or policy) will not create an unmanageable drive for land conversion</p> <p>Resources for long-term monitoring will be available</p>	<p>have least cultural attachment to the area but pose biggest risk of negative impacts. Outside project control. Therefore enforcement and land-use planning essential.</p> <p>Expected to be the case considering the recently signed MoA between the government of Vietnam and donors. Most of Chu Yang Sin is unsuitable for plantation crops</p> <p>Development of simple methodologies</p>
Project purpose		
Establish public support and effective management for CYS NP	<p>People are culturally receptive to the conservation messages</p> <p>Raising awareness/building 'sense of place' will underpin enforcement and planning</p> <p>Park staff will share in the project vision</p> <p>Park will fully integrate the project into its activities</p> <p>Other projects will minimise the need for people to participate in activities that degrade the national park</p>	<p>Awareness strategies based on attitude assessments</p> <p>Reasonable assumption</p> <p>Guided self-training programme</p> <p>As above, programme of seminars, joint development of management goals</p> <p>Reasonable assumption, but will take some years and depend on levels of population growth</p>
Objectives / Results		
1. Build capacity for adaptive management in the park management team	<p>Critical mass of park staff committed to training programme</p> <p>Senior park management supportive of developing a learning organisational culture in the park</p> <p>The system will reward knowledge and motivation</p> <p>Improved understanding and technical capacity will translate into more effective management</p> <p>Dak Lak people will accept northern Vietnamese as park managers and project staff</p> <p>Government funding levels maintained at least at current levels</p>	<p>Design of guided self-learning, small grant incentives</p> <p>Focused senior manager training</p> <p>As above</p> <p>Holistic design of training</p> <p>Train staff in minority languages and where possible recruit and develop project staff from Dak Lak Province</p> <p>Park image building and targeted awareness activities in Buon Ma Thuot</p>
2. Establish effective enforcement and forest protection to stop illegal exploitation and encroachment in the park	<p>Offenders will be apprehended and prosecuted</p> <p>Resource exploitation and encroachment can be effectively monitored with project resources</p> <p>Rangers will complete log books</p>	<p>Liaison with district and commune authorities</p> <p>Selection of simple methods</p> <p>Good management supervision</p>
3. Establish the foundation of knowledge to guide and inspire integrated park management	<p>Adequate knowledge of biodiversity, ecological processes and socio-economic aspects can be gained</p> <p>Permission will be granted to foreigners to participate in assessments</p> <p>Other agencies receptive to study and assessment findings</p>	<p>Design of overall assessment plan</p> <p>Moderate risk, but outside project control</p> <p>Seminars and workshops in a framework of general public-awareness activities</p>

4. Generate public and stakeholder support for conservation and among stakeholders and the management goals of CYS NP.	Building positive public image creates the enabling environment for enforcement and planning Raising awareness/ building 'sense of place' will address potential threats Critical mass of support can be established People not forced to exploit forests by extreme poverty	Reasonable assumption Part of a package of activities, including enforcement and policy Reasonable assumption considering relatively small project focal area (2 districts) Reliant on activities of other government initiatives and projects
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Primary risks for the project are identified as follows:

- Park staff lack commitment to participate fully in the capacity-building programme.* A lack of commitment is unlikely because all the park staff members are young, well educated and keen to develop their knowledge. Moreover, park staff have not yet got involved in other activities to supplement their meagre salaries, which would limit their time available for learning. However, to guard against this eventuality, small grants will be made available for self-learning tasks and studies. A related risk is that senior park staff will thwart some activities because they feel threatened by a learning culture in the organization. This risk will be addressed through a specially designed training programme and one-to-one advisory support.
- Communities may not comply with park management and forest protection or respect the authority of park staff.* To reduce this risk an awareness programme will be conducted to build stakeholder support for the park and nature conservation and to promote the importance and legitimacy of the ranger role. This strategy will be self-reinforcing because public respect and support for a position helps to generate work pride and motivation of post holders.
- The influx of H'mong settlers will initiate a wave of unregulated land appropriation and resource extraction within the national park.* This risk is difficult to assess from current knowledge. The worst-case scenario is that vacant land in the valleys is insufficient for the number of immigrants and this will cause some to seek land within the park. This risk will be addressed by creating an effective enforcement presence that can respond rapidly and flexibly to problems before they become established.
- Biodiversity and social surveys fail to provide a robust foundation for decision making and monitoring.* Park management requires the development of spatially nested classifications and frameworks that have cross-disciplinary meaning. Few Vietnamese scientists are trained in the fields of landscape ecology, which this approach requires, so the project will bring in international experts as required. There is a risk that foreigners will be refused permission to work inside the park because the peak of Chu Yang Sin has military significance and the potential of civil unrest in the greater Central Highlands. The project will reduce this risk through transparency and confidence building, but it is ultimately outside project control.
- The park will lack funds for key activities after project completion.* The level of future budget for the national park will depend on the political will and importance afforded to the park when the provincial budgets are set. The project, through the awareness component, will seek to ensure that the park has a high profile among decision-makers. Furthermore, an established protected area harbouring globally significant assemblages of

wildlife should be able to attract additional funding from the international donor and conservation communities.

6. Stakeholder involvement and social assessment

This project document has been developed with the full participation of key stakeholders. Project preparation included: a) meetings and interviews with relevant government agencies and donor projects at provincial, district and commune level (five communes were visited); b) informal discussions with villager elders, young people, shop-owners, and farmers in their houses, fields, in the forest-edge and in coffee and beer shops; c) a ‘needs’ assessment workshop with park staff; d) a ZOPP workshop; and e) reviews of relevant reports and statistics on incomes and agricultural productivity (1995-1998). The summary social assessment presented under the ‘Current Situation’ section (Section 1.2.4) informs the project’s concept and specific activities.

The target-orientated planning (ZOPP) workshop was conducted in the hall of the Krong Bong People’s Committee. The 2-day workshop was attended by agencies marked with a “*” in Table 2 as well as the vice-chairmen of five communes bordering the park. Participants were asked “*What obstacles limit our ability to protect and develop Chu Yang Sin National Park?*” Responses were grouped in eight themes, namely:

1. Limited capacity of park staff (knowledge, equipment and funds);
2. Illegal settlement by in-migrants;
3. Illegal logging and hunting;
4. Low living standard of people in buffer zone;
5. Local people’s lack of understanding about conservation and law;
6. Enforcement and implementation of law in the buffer zone;
7. Land use planning; and
8. Help to enable local authorities to pay more attention to the park (comply with national laws);

These concerns were elaborated through participatory construction of a problem tree (Annex 11). In response, two new activities concerning review and interpretation of regulations (Component B.2) and inter-agency collaboration on forestry extension (Component C.4) were included in the project design, and greater overall emphasis was given to the field enforcement and patrolling components.

The project is based on a partnership between BirdLife and the management board of CYS NP, which is under the management of Dak Lak DARD but will involve a wide range of agencies in various activities (Table 2).

The project will seek to establish two committees. A ten-person provincial project steering committee comprises representatives of provincial-level departments (e.g. DARD, DOSTE⁴⁷), the Vice-Chairmen of Krong Bong and Lak Districts and other prominent people, to provide overall guidance to the project and forward proposed policies relating to the national park to

⁴⁷ In July 2002, a new Ministry of Natural Resources and Environment (MNRE) was decreed. Presently, the MNRE comprises the Environment bureau of the former Ministry of Science, Technology and Environment (MOSTE) and the Land Planning Bureau of the Ministry of Planning and Investment (MPI). It is anticipated that the Forest Protection Department, which is the forest conservation body of the GoV, will eventually be split from MARD and become a part of MNRE.

the Provincial People's Committee. A Project Implementation Committee comprises representatives of the agencies with whom the National Park will work on a day-to-day basis (see Table 2) to promote effective and co-ordinated execution of project activities. The committee will meet at least three times a year and provisions will be made to allow representatives of provincial departments to be called on to this committee as required.

The above committees are consistent with government guidelines. It is recognised that such committees do not devolve any real decision-making power to non-government stakeholders, and that the interests of ethnic minorities and women may be under represented. The combination of detailed social and cultural assessments, presentations and stakeholder workshops will provide a range of forums for the perspectives of all groups to be heard and incorporated in park management.

Table 2. Expected collaborating agencies

Executing Agencies		
BirdLife International in Indochina and Chu Yang Sin National Park Management Board	In collaboration with: Provincial People's Committee	Assisted by: Department of Agriculture and Rural Development (Department of Forest Development)
Collaborating agencies		Expected area of collaboration
District People's Committee of Krong Bong* District People's Committee of Lak* Department of Forest Protection, Dak Lak Province Department of Forest Protection, Lak District* Department of Forest Protection, Krong Bong District* Department of Science, Technology and Environment, Dak Lak Province*		Land use planning, public awareness, forest protection, enforcement Forest protection, law and regulations, production of extension materials Forestry extension, development of patrolling and patrol routes, special operations Public awareness activities
Department of Land Management, Lak District* Department of Land Management, Krong Bong District* Lak Forest Enterprise Krong Bong Forest Enterprise Lak Reserve Management Board* Mass organisations, e.g. Youth Union, Women's Union		Land use planning and park boundaries Forestry extension and protection Patrolling activities, management of FPC Awareness activities
Concerned departments of the province and districts e.g. education, culture and communication, investment and planning Central Highland University ADB project* AusAID project* DANIDA project* GTZ project* Netherlands/WWF/BirdLife project*		Planning and education activities Training, biodiversity and social assessments Community forestry and SFE reform Integrated rural development pilot schemes Watershed management Rural development and land-use planning Strengthening protection of Bi Doup-Nui Ba NR

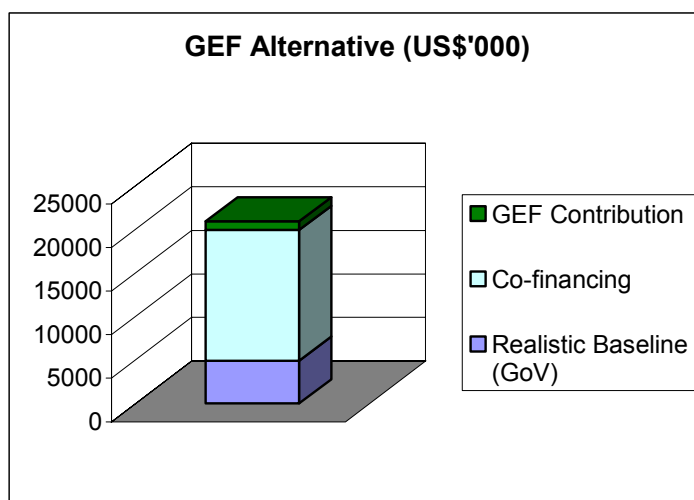
7. Incremental cost assessment

Remote sensing data indicates that only 2 million hectares of primary forest remains in Viet Nam. Despite GoV's efforts to improve rural livelihoods while protecting forests and biodiversity, upwards of 100,000 ha of primary forest are lost annually. These rates of habitat conversion and loss of biodiversity are difficult to control at current levels of government intervention. Overseas development assistance (ODA) in the Central Highlands, a region containing roughly 30 percent of remaining natural forest area in Viet Nam, addresses forest sector reform, community development, and to a limited extent, capacity building for forest protection. Nevertheless, current levels of investment in biodiversity conservation are simply inadequate given the magnitude of threats and the complex challenges of mitigating roots causes of biodiversity loss. The Dak Lak authorities, with support from ADB, DANIDA and GTZ are developing capacity in integrated rural development and watershed management, which includes forest protection. Although these international donor assistance projects are essential to the long-term conservation of Chu Yang Sin, none of them directly aims to conserve biodiversity or strengthen the management of CYS NP.

Under the GEF alternative, an expanded conservation programme would be implemented, focusing on activities that generate global benefits to biodiversity. These include initiatives to strengthen the protected areas management system in Dak Lak; improve the legal framework for community forestry and forest protection contracts; and promote sustainable forest management within blocks of natural forest under SFE management. GEF funds will support the establishment of CYS NP through a public awareness campaign, strengthened enforcement and community support for conservation; skills training for park staff; a knowledge base; and an ecological monitoring programme. By coordinating with other donor projects (i.e. ABD, AusAID, DANIDA, Dutch and GTZ), the GEF project will seek to ensure that biodiversity considerations are incorporated into land-use planning systems for the wider landscape and that future development, particularly roads and dams, is compatible with the conservation of the biological resources of CYS NP.

An incremental cost calculation separates the cost of programmes aimed at achieving national goals (known as the 'baseline') from those aimed at achieving environmental and sustainable development benefits (known as the 'alternative'). The GEF only funds those incremental (additional) costs of the alternative scenario that secure global environmental benefits. The estimates of the baseline, alternative and GEF contribution are depicted below in Figure 2.

Figure 2. Incremental costs associated with achieving global environmental benefits



The total cost of the baseline (GoV) activities is estimated at US\$4,926,000. The cost of the GEF alternative is US\$15,996,000, including an incremental cost of US\$1,053,000—about 92 percent of which (or US\$973,000) will come from the GEF and the remainder contributed by and BirdLife International and the Royal Netherlands Government. BirdLife co-financing, presently unsecured, is expected from the US Embassy, Hanoi. The estimated annual budgets for initiatives in the project area are listed in Table 3.

Table 3. Estimated annual budgets for initiatives in the project area (est. 2003-2007)

	Year 1	Year 2	Year 3	Year 4	Year 5	Totals
GEF	101,000	294,000	340,000	194,000	44,000	973,000
BirdLife Co-financing	10,000	10,000	10,000	10,000	10,000	50,000
Dutch/WWF Cat Tien NP	30,000	0	0	0	0	30,000
Project Activities at Bi Doup-Nui Ba NR						
ADB Forests for Livelihoods Project in DK	1,450,000	1,450,000	1,450,000	1,450,000	1,450,000	7,250,000
AusAID Rural Development Project	110,000	110,000	110,000	0	0	330,000
DANIDA Rural Water Supply and Sanitation Project	570,000	508,000	350,000	0	0	1,428,000
DANIDA Integrated Water Resources Management	680,000	640,000	280,000	0	0	1,600,000
GTZ Rural Development Project	867,000	867,000	867,000	867,000	867,000	4,335,000
CYSNP Management Board	196,000	75,000	75,000	75,000	75,000	496,000
GoV 661 Program administered by CYSNP	33,000	33,000	33,000	33,000	33,000	165,000
Dak Lak DARD	300,000	300,000	300,000	300,000	300,000	1,500,000
Dak Lak FPD	300,000	300,000	300,000	300,000	300,000	1,500,000
GoV 135 Program in Lak and Krong Bong Districts	209,000	209,000	209,000	209,000	209,000	1,045,000
DARD Fixed cultivation in Lak District	44,000	44,000	44,000	44,000	44,000	220,000
Totals	4,900,000	4,840,000	4,368,000	3,482,000	3,332,000	20,922,000

Table 4. Incremental Cost Matrix

	Baseline	GEF Alternative	Increment
Domestic Benefits	Continued loss of primary forest due to shifting cultivation and conversion to cash crops, resulting in the loss of biodiversity.	Strengthened legal framework and financial incentives for forest management and protection, and increased incomes and living standards.	Sustainable development and improved social and economic conditions for the people of Vietnam and the conservation of biological resources for future generations.
Global Benefits	Progressive decreases in abundance of economically-valuable tree species and populations of rare and endemic wildlife, resulting in local extirpations and possible extinctions.	Globally-significant biodiversity conserved through mitigation of main threats.	Conservation of forest ecosystem contributes to carbon sequestration, regional watershed management, and survival of critically endangered and endemic flora and fauna.
Component A: Enforcement and protection	Less than adequate levels of enforcement to protect forest and wildlife within CYS NP. \$5,000	Strengthened enforcement and protection of forest and biodiversity at CYS through strengthened communications, coordinated patrolling, increased community involvement and vigilance of park boundaries. \$160,000	\$175,000 of which: GEF: \$140,000 GoV: \$5,000 BirdLife: \$10,000 Other: \$10,000
Component B: Information and planning	Decision-making favours short-term profit over long-term economic, social and environmental gains. Moreover, decisions are made with inadequate social and biological information. \$165,000	Decision-makers informed of the environmental values of natural forests, which ultimately changes both attitudes and behaviours of unsustainable practices and reverses the loss of globally significant biodiversity. \$364,000	\$529,000 of which: GEF: \$344,000 GoV: \$165,000 BirdLife: \$10,000 Other: \$10,000
Component C: Public awareness	Local communities believe that nature is an infinite resource and that plants and animals found in CYS occur everywhere. Eventually, the integrity and biological attributes of CYS are lost. \$5,000	Communities empowered to assist conservation goal, thereby contributing to the social sustainability of GoV's forestry initiatives and support for forest protection by local communities. \$170,000	\$175,000 of which: GEF: \$160,000 GoV: \$5,000 BirdLife: \$10,000
Component D: Capacity building	CYS NP staff are under-trained and ill-equipped to undertake forest and wildlife protection duties, leading to the continued loss of biodiversity. \$481,000	Strengthened institutional capacity of CYS NP to protect forest and conserve biodiversity through training, provision of key equipment, and increasingly more effective patrolling. \$275,000	\$756,000 of which: GEF: \$255,000 GoV: \$481,000 BirdLife: \$10,000 Other: \$10,000
Component E: Monitoring and evaluation	CYS NP managers remain unaware of which conservation actions work and which do not. Limited financial resources fail to achieve conservation goal.	CYS NP staff trained and able to monitor status of key species and infringements. CYS NP managers and decision-makers are informed, building long-term conservation support for the	\$89,000 of which: GEF: \$74,000 GoV: \$5,000 BirdLife: \$10,000

	Baseline	GEF Alternative	Increment
	\$5,000	conservation goal. \$84,000	
Totals	\$661,000	\$1,053,000	\$1,714,000 of which: GEF: \$973,000 GoV: \$661,000 BirdLife: \$50,000 Other: \$30,000

8. Budget

A detailed breakdown of proposed expenditure is included in Annex 4. Estimated costs by budgetary component are listed in Table 5 below.

GEF funds will be supplemented by BirdLife contributions representing the time of BirdLife senior management (i.e. Head of Asia and Indochina Programme Manager) to manage and administer the project and liaise with MARD in Hanoi. In addition, the revised Dutch-funded WWF Cat Tien Conservation Project will provide support for the strengthening of Bi Doup-Nui Ba NR, located southeast and contiguous to CYS NP. BirdLife will be sub-contracted to conduct these activities, which are complimentary to objectives of the GEF project and include development of a reserve management plan, ranger training and capacity building.

Table 5. Estimated breakdown of GEF project costs by budgetary component

Component	GoV	BirdLife	Dutch/WWF/ BirdLife	GEF	Totals
PDF-A	0	30,000	0	25,000	55,000
Personnel	248,000	30,000	10,000	540,000	829,000
Sub-contracts	0	0	10,000	87,000	97,000
Capacity building	0	10,000	10,000	86,000	106,000
Equipment	248,000	0	0	101,000	381,000
Travel	0	0	0	35,000	35,000
Civil works				33,000	
Evaluation	0	0	0	13,000	13,000
Publications and media	165,000	10,000	0	71,000	253,000
Miscellaneous	165,000	10,000	0	7,000	253,000
Totals (PDF + project costs)	661,000	80,000	30,000	998,000	1,769,000

9. Implementation plan

As proposed, project activities will be undertaken directly by staff from BirdLife International and the Chu Yang Sin National Park Management Board, with technical inputs from national and international consultants. The Chu Yang Sin Management Board is under the management of the Dak Lak Department of Agriculture and Rural Development (DARD), which is ultimately managed by the Dak Lak Provincial People's Committee (PPC). A detailed implementation plan is included as Annex 3.

The first year will be concerned with project mobilisation, including planning of the training, infrastructure improvements and procurement of equipment. The socio-cultural assessment

will be conducted midway through the first year and the baseline attitude and knowledge survey and social marketing strategy commissioned towards the end of the first year. The transition between the first and second years will be devoted to putting the foundations of the project in place, namely the start of self-guided training, the biological overview assessments, construction of guard posts and installation of the radio communication system, and establishment of key protocols for patrolling.

In years 2 and 3, the project will emphasise knowledge building and mobilisation of rangers on routine enforcement and monitoring patrols and community awareness activities. In year two of the project the biodiversity, social assessments and trail mapping will be conducted, the FPC approach will be assessed and developed, and the awareness component will commence activities in Buon Ma Thuot.

In year 4, the project will start to consolidate the patrolling, enforcement, community awareness and liaison initiatives into routine park management activities, and embark on the process of integrating biodiversity conservation and park management goals within the wider policy and planning processes at the commune, district and provincial levels. In participation with stakeholders, the project will test and develop improved forest protection under FPCs, generate and discuss a recreation plan and a wider landscape management strategy, and work to incorporate park management needs and opportunities in commune and district land use plans. The project will also develop and seek funds for a follow-up phase.

10. Monitoring and evaluation plan

Monitoring will be conducted at the provincial, landscape and local (district and commune) scales. It will focus on biological, social and organisational measures. Specific monitoring indicators will be identified in tandem with the detailed design of biodiversity and social assessments under Component D, and formalised in a detailed monitoring and evaluation plan.

Terrain and time-scale will preclude detailed monitoring of biological attributes, such as species and habitats, using quantified methods. However the project will establish baselines for future monitoring, and it may be possible to construct indicative population trends for some species. Within the project time scale, it should be possible to monitor the stability of the interface between the forest and agricultural landscapes, and to compare trends within the project focal area with those in the wider landscape. ‘Vantagepoint monitoring’ will be developed for the first purpose, and simple assessments (e.g. manual measurement of areas of forest blocks and encroachment) of hard copy satellite images will be conducted for the second. Monitoring of the hydrological functions of the forest block of which CYS NP is part is being developed by the DANIDA project.

Social monitoring in buffer-zone communes will combine three broad approaches: results of independent knowledge and attitude surveys; reports (training studies and logbooks) of park staff; and assessment/feedback sessions built into the various commune-level workshops proposed. The extent to which the Chu Yang Sin National Park gains a social reality in Buon Ma Thuot and among provincial government departments, will be monitored using attitude surveys and a review of plans and promotional materials. The impact of the project will be quite easy to monitor because of the newness of the park and the fact that public knowledge concerning its existence is currently very limited.

The same point relates to monitoring the project's impact on the CYS NP Management Board. Because this is newly formed, the baseline situation is relatively easy to establish. Indicators are expected to include organisational measures such as results of continuous staff assessments, frequency and extent of patrolling. There will also be an assessment of whether or not any improvements are being translated into real changes. Indicators of this may include: the number of issues successfully resolved; the public image of park staff; the status of trade chains related to the park; and the amount of development/settlement near vulnerable boundaries.

Annexes attached:

Annex 1: Landscape Map of Wider Chu Yang Sin Region

Annex 2: Logical Framework

Other annexes available upon request:

Annex 3: Chu Yang Sin Detailed Project Implementation Plan

Annex 4: Budget

Annex 5: Terms of Reference for Project Personnel

Annex 6: Biological Profile of Chu Yang Sin National Park

Annex 7: Landscape history of Krong Bong and Lak Districts bordering Chu Yang Sin National Park

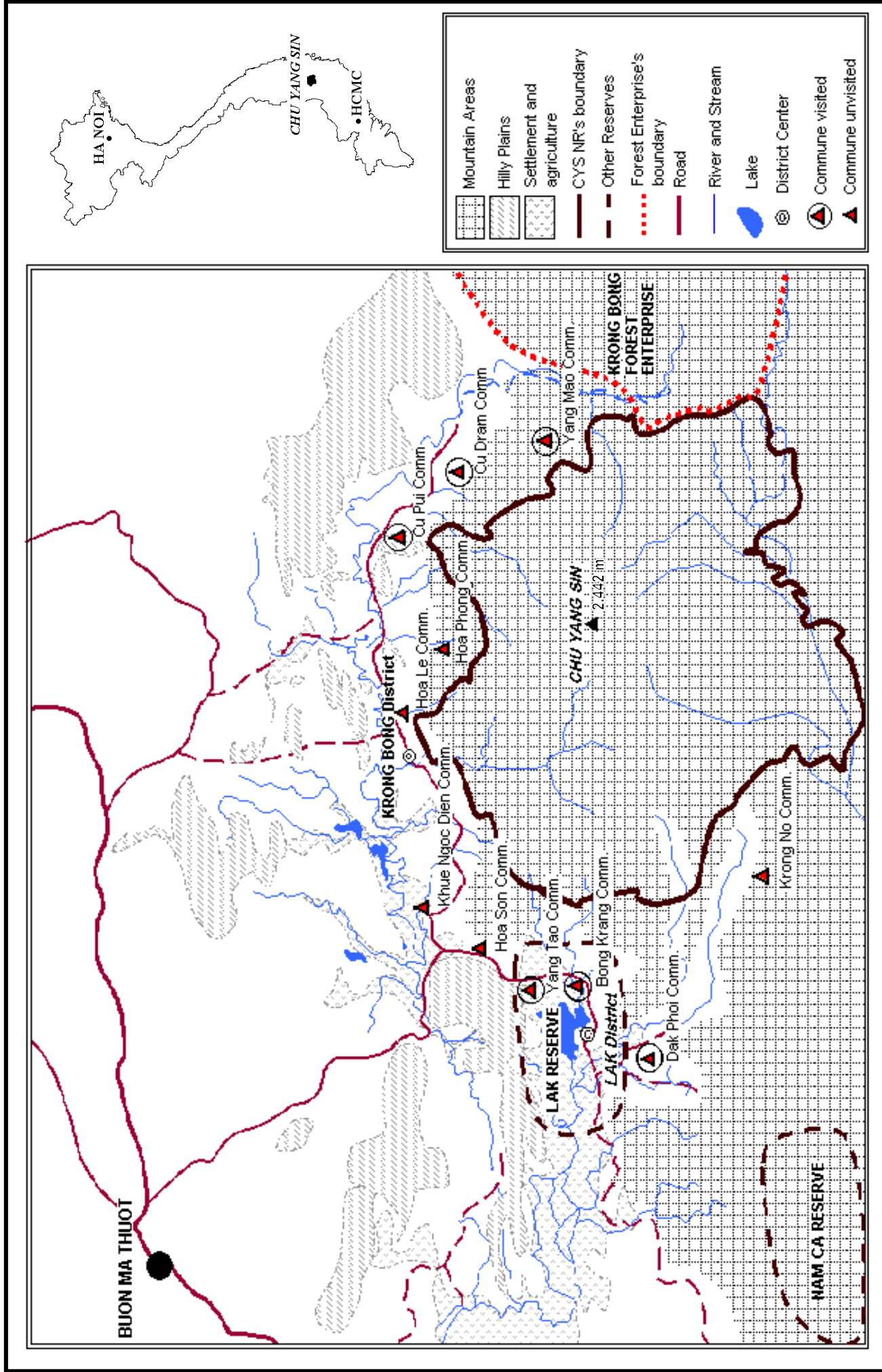
Annex 8: Assessment of management capacity of Chu Yang Sin National Park

Annex 9: Developments in Vietnamese Forest Policy and Forest Management Initiatives in the Wider Chu Yang Sin Landscape

Annex 10: Other Projects in Buffer Zone of Chu Yang Sin National Park

Annex 11: Report of Chu Yang Sin ZOPP workshop

Annex I: Landscape Map of Wider Chu Yang Sin Region



Annex 2: Logical Framework

Logical Framework	<i>Establishment of Chu Yang Sin National Park</i> <i>Country/Region: Dak Lak Province,</i> <i>Socialist Republic of Vietnam</i>		<i>Estimated project period: 5 Years</i>
Intervention Logic	Objectively-verifiable Indicators	Sources of Verification	Assumptions/Risks
<i>10.1 Project Goal</i>			
Biodiversity attributes of Chu Yang Sin in the long term and the wider development potential of the park	Stabilisation of interface between natural forest and agricultural landscape Change in forest area and quality Abundance of key indicator species Amount of settlement or potentially damaging infrastructure in vulnerable areas Level of use for recreation and research Level of consistency between planning documents and conservation of the park Level of planned activities impacting negatively on the park Profile of park in wider development visions	Vantage-point mapping or fixed-point photography Repeat surveys Visitor surveys, entrance fees Review of plans Monitoring of vulnerable areas	Vietnamese authorities have the interest and will to protect nature Local people will be interested in wildlife and natural landscapes and be willing to conserve Population growth and in-migration does not overwhelm conservation efforts Policies and commitment of government to forest protection and land stabilisation remains strong Changes in agricultural commodity prices will not create an unmanageable drive for land conversion Resources for long-term monitoring will be available
<i>10.2 Project purpose</i>			
Build a foundation of support and management for Chu Yang Sin National Park	Level of support for the National Park among decision makers Perceptions of local societies concerning the Chu Yang Sin park Profile of Chu Yang Sin NP in strategies, plans and promotional documents of other agencies Effectiveness, frequency and areas covered by ranger patrols Amount of forest clearance in the park Location of new settlements in relation to the park	Attitude surveys As above Review of plans and project documents Ranger log books and spot checks, number of infringements Remote sensing with ground truthing Ground checks	People are culturally receptive to the conservation messages Raising awareness/building 'sense of place' will underpin enforcement and planning Park staff will share in the project vision Park will fully integrate the project into its activities Other projects will minimise the need for people to participate in activities that degrade the park

10.3 Objectives/ Results			
1. Build capacity for adaptive management in the park management team	Improvement in knowledge and motivation of park staff Level of ability to analyse management problems and formulate appropriate solutions Competence in English language Public image of rangers Adoption of park operating protocol and procedures developed under project Amount of essential infrastructure and equipment	ests and continuous assessments Number and quality of technical memoranda Number of promotions in rank of park staff Knowledge and attitude surveys Stakeholder surveys and feedback Equipment inventory	Critical mass of park staff committed to training programme Senior park management supportive of developing a learning organisational culture in the park The system will reward knowledge and motivation Improved understanding and technical capacity will translate into more effective management Government funding levels maintained at least at current levels
2. Establish a foundation of knowledge to guide and inspire integrated park management	Quality and relevance of status and survey reports and feasibility studies Adaptive management is guided by new knowledge Expression of study findings in awareness activities Adoption of findings in planning and project plans of other agencies	ndependent peer-review of reports Review of management protocols and procedures Review of awareness strategy and outputs Review of documents	Adequate knowledge of biodiversity, ecological processes and socio-economic aspects can be gained Permission will be granted to foreigners to participate in assessments Other agencies receptive to study and assessment findings
3. Create an enforcement environment to stop illegal exploitation and encroachment in the park	Trends in infringements of forest protection law and regulations Level of public understanding of existence and purpose of these regulations Trend in number and type of illegal commodity chains	Log books and official records Landscape monitoring of vulnerable areas Trade chain monitoring	Offenders will be apprehended and sanctioned Resource exploitation and encroachment can be effectively monitored within project resources Public receptive to messages and have respect for authority H'mong settlers may not consider themselves part of Vietnamese society and thereby abide by rules
4. Generate public and key stakeholder support for the management goals of Chu Yang Sin National Park	Knowledge, attitudes and actions of selected target groups towards conservation and aims of the park. Public image of rangers	Knowledge and attitude surveys Review of documents Number of media articles Log books of park staff	Building social meaning creates the enabling environment for enforcement and planning Raising awareness/ building 'sense of place' will address potential threats Critical mass of support can be established People not forced to exploit by extreme poverty
5. Integrate Chu Yang Sin National Park into wider social and conservation development visions	Level of incorporation of park management into wider development plans Level of incorporation of park management goals into revised land-use plans and future project plans of development agencies Amount of new development formally approved by government in sensitive areas Level of government funding for park	Review of documents, plans and promotional materials Number of commune land-use plans revised On-the-ground assessment of new developments	Integration in land-use plans will result in better land-use planning GTZ and Danida future planning will incorporate Chu Yang Sin management goals A wider park management vision can be gained Government agencies open to integrating the park into their planning Government agencies will adopt project proposals and recommendations Plans of other agencies not too advanced to be influenced Objective 4 can be achieved

6. Monitor the impact of project activities	Programme of monitoring and evaluation is implemented	Report of assessments and surveys	Available resources are compatible with monitoring needs Institutions provide access to plans and documentation
Activities:	Specification of inputs	Outputs	Specification of costs
1. Capacity building of park management board			\$255,000
1.1 Conduct a programme of guided self-learning for park staff	Design of programme Advice, guidance and support for execution of self-learning tasks Study tours English language teaching Reference materials	Plan Staff presentations and reports Staff able to speak and read English	
1.2 Conduct a supplementary programme of short training courses in professional skills and techniques	Minority language courses Course in RRA and community liaison techniques Computer software courses Training in management and work skills Training in forest and land-use laws and regulations	Staff with basic command of language Trained staff Improved work efficiency Confident and knowledgeable staff	
1.3 Establish and upgrade a basic park infrastructure	Needs assessment for guard stations with new designs Construction/upgrading of three guard stations Provision of essential furniture and equipment	Plan Guard station	
2. Information and planning			\$344,000
2.1 Conduct baseline assessments to identify areas with high biodiversity, ecological, cultural and social values	Design of a biodiversity survey, assessment and monitoring programme Vegetation classification and distribution Landscape and cultural assessment Mammal status assessment Fresh-water fish survey Status assessment of endangered and endemic bird species Herpetological survey Assessment of potential landscapes for large mammal conservation in surrounding landscape matrix	Biodiversity survey and monitoring plan Vegetation reports and maps Landscape and cultural profile Status report Status report Status report Status report Survey report	
2.2 Conduct socio-economic assessments to establish inter-relationship between communities and park	RRA assessments of natural resource use, farming and general livelihood systems of each ethnic group Trade chain surveys Landscape and cultural assessment (see 2.1)	Study report with mobility and resource use maps Characterisation of resource use by different ethnicities Baseline assessment of trade chains Identification of vulnerable areas	
2.3 Conduct assessments and pilot studies to develop improved regulations supporting park management objectives	Review of current legal and regulatory framework Participatory workshops to analyse issues and weaknesses and propose local solutions Pilot testing of these solutions	Report Concept regulations and support of community leaders Assessments of efficacy	

2.4 Develop the potential of Forest Protection Contracts to support park management goals	Evaluation of the current approach Assessment of forest quality and restoration management needs in areas covered by FPCs Development of family forest management plans in collaboration with GTZ project Training and advisory support to NP staff and FPC holders in forest management and protection techniques	Report Report Family Management Plans Improved forest protection and management	
2.5 Conduct a feasibility study for pilot hiking route linking Lak lake and Krong Bong waterfall	Trail maps (see below) Field assessment Workshop	Feasibility study Investment plan with design guidelines for infrastructure	
2.6 Undertake a feasibility study and outline management plan for greater Chu Yang Sin ecosystem including identification and agreement of objectives for National Park management	Compilation of above studies and assessments Workshops and discussion groups National seminar on conservation values of Chu Yang Sin NP	Feasibility study Larger-scale framework to guide district and commune level land-use planning	
2.7 Integration of Chu Yang Sin National Park with land use plans of buffer zone communes	Synthesis of above assessments, surveys and feasibility studies Analysis of existing land-use plans Participatory workshop	Revised land-use plans and greater community support for park	
3. Enforcement and protection			\$140,000
3.1 Strengthen management framework	Review current system and provide advice on improvements Institutionalise patrol and incident recording system	Assessment Records of patrolling as a reference and monitoring resource	
3.2 Establish radio communications system	Needs assessment and design of system specifications Radio system Development and institutionalisation of radio protocol	System operational Improved incident reporting and response rates	
3.3 Establish trail-bike patrolling capability in buffer zone	Fleet of trail bikes and safety equipment Training in trail-bike riding and maintenance Survey and mapping of access routes and vantage points Development of patrolling routes, protocol and incentives	Skilled and safe riders Access and trail maps Increased area patrolled and more effective enforcement	
3.4 Establish effective foot patrols within National Park	Survey and status reports (see 2.1) Trail survey and mapping Essential field equipment Training in forest and rangers skills Development of patrolling routes, protocol and incentives	Access and trail maps More frequent and longer forest patrols More effective and better-targeted patrols	

3.5 Strengthen public respect for forest protection, conservation law and National Park boundaries	Patrolling activities Awareness activities (see 4) Development of co-ordinated programmes with other forest protection agencies Dissemination of materials explaining law and regulations Boundary boards and markers in vulnerable areas Regular liaison and co-ordination meetings with district and commune authorities Support for authorities to take action against serious cases	Reduced levels of illegal hunting, resource extraction and encroachment Booklets, posters Improved public understanding Improved co-operation and support for enforcement actions Prosecutions	
4. Public awareness			\$160,000
4.1 Establish a resource base to support awareness activities	Assessment and survey reports (see 2.1) Development of storage systems Commissioned wildlife photographs Commissioned landscape and cultural photographs Commission NP logo	Storage systems (hard-copy and digital) Collections of photographs	
4.2 Establish a community-based awareness programme to develop conservation ethic and pride in natural heritage	Baseline attitude and knowledge survey (see 5) Design of community awareness strategy and programme Presentations to village unions and school visits in priority areas Awareness materials	Community awareness strategy Improved community understanding and support Posters, booklets, stickers	
4.3 Build support for park and an understanding of its potential contribution to wider development objectives among key opinion makers at provincial level	Baseline attitude and knowledge survey (see 5) Development of targeted media and PR strategy Seminars Media and PR strategy Press stories and releases Commissioned press, radio and TV features and press tour Exhibitions Promotional materials	PR strategy Improved knowledge and ideas Media coverage Increased public interest Brochure, poster, screen-saver	
5. Monitoring and evaluation			\$74,000
5.1 Assess improvement in knowledge and motivation of park staff	Continuous assessment and written tests Regular spot checks of ranger posts and review of log books	Individual progress reports General monitoring reports	
5.2 Conduct knowledge and attitude surveys	Attitude survey of buffer zone villagers in years 1 and 3 Stakeholder surveys (focus groups, questionnaire) of government officers at district and province level in years 1 and 3	Report	
5.3 Peer review of reports and outputs	Establishment of a group of regular, independent reviewers Compilation and assessment of reviewer reports	Assessment reports	

5.4 Assess the ability of Forest Protection Contracts to deliver improvements in forest quality	Design and implementation of permanent plot monitoring	Reports	
5.5 Assess landscape change in forest-agriculture transitional zone	Design and initiation of vantage-point monitoring system (e.g. fixed-point photography) Establishment of permanent plots and regular monitoring	Photographs and monitoring reports	
5.6 Monitor planning and strategy documents of other agencies	Collection and review of documents, interviews with senior staff	Assessment report	
5.7 Conduct a mid-term review	Review of mission and follow-up	Report	

