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World Commission on Protected Areas and Southeast Asia Regional Forum Pakse, Lao PDR, 6-11 December, 1999



Volume I - Executive Summary

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THE WORLD COMMISSION ON PROTECTED AREAS, 2ND SOUTHEAST ASIA REGIONAL FORUM, PAKSE, LAO PDR, 6-11 DECEMBER 1999

VOLUME I - EXECUTIVE SUMMARY

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**IUCN Lao PDR
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Front cover;

Inset (1) (from left to right): Komodo Village, Indonesia. (Peter Mous)

Inset (2): Borneo Rain Forest Lodge, Danum Valley Conservation Area, Sabah. (Patricia Regis)

Inset (3): St. Paul's Subterranean National Park, Philippines. (Angelita Meniado)

Inset (4): Sunset over coastal Cambodia. (Noelle O'Brian)

Inset (5): Ecotourism training for PA staff at Ho Ba Be, Vietnam. (Annalise Koeman)

Back cover;

Inset (1) (from left to right): Ecotourism activities in Phou Xang He NBCA. (Iain Craig/IUCN)

Inset (2): Mount Kinabalu, Sabah. (Stuart Chape/IUCN)

Inset (3): Elephant Baci, Ban Samung, Lao PDR. (Stuart Chape/IUCN)

Inset (4): Students doing riverine ecology, Danum Valley, Sabah. (Patricia Regis)

Inset (5): Insect life in the Leuser Ecosystem, Indonesia. (Kathryn Monk)

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DEDICATION

Clive Marsh Ph.D., IUCN Senior Conservation Advisor in Lao PDR, was largely responsible for organising the WCPA SE Asia Regional Meeting in Pakse in conjunction with the Government organising committee. Unfortunately, in February, Clive fell ill with encephalitis while undertaking fieldwork in the Nam Phui protected area in Sayabouri Province in the northwest of the country, on the Thai-Lao border – an area that he believes has great potential for long term conservation. At the time of writing, Clive remains seriously ill in Britain.

The IUCN Secretariat and WCPA wish to pay tribute not only to Clive's hard work and dedication in organising the meeting, but also to his contribution to conservation and protected areas in SE Asia over the past two decades. Clive has worked for four years as advisor to the Government's Lao-Swedish Forestry Conservation Programme, and prior to that he worked in Sabah, playing a key role in the establishment of the Danum Valley protected area and field centre – many, if not most, of the participants at the WCPA meeting know Clive through his work in SE Asia. Having worked closely with Clive in Lao PDR, I can attest to his commitment to achieving effective conservation in the region. As a friend, I accompanied Clive to the summit of Mt Kinabalu in August 1999 and continued to be impressed by his knowledge and boundless enthusiasm in pointing out aspects of the ecology of that rugged and beautiful mountain. Clive is currently climbing, in a metaphoric sense, a different mountain as he overcomes his illness. We wish him well and a sound recovery, and a return to the real mountains and forests to continue his conservation work.

Stuart Chape
IUCN Country Representative – Lao PDR
June 2000



TABLE OF CONTENTS

Volume I - Executive Summary

Dedication.....	i
Group Photo.....	ii
Table of Contents.....	iii
Foreword.....	v
Preface.....	vi
Acknowledgements.....	vii
General Acronyms & Abbreviations.....	viii
 Introduction.....	 1
Session 1: Opening Session.....	5
Session 2: Keynote Speakers.....	11
Session 3: Protected Area Profiles.....	17
Brunei Darussalam.....	19
Cambodia.....	27
Indonesia.....	35
Lao PDR.....	45
Peninsular Malaysia.....	55
The Philippines.....	65
Sabah.....	75
Sarawak.....	83
Thailand.....	91
Vietnam.....	101
 Session 4: The Role of ASEAN, International Agreements and Trans-boundary Co-operation in Protected Area Management in SE Asia.....	 109
Session 5: Progress Toward Collaborative Management of Protected Area Landscapes...	125
Session 6: Southeast Asia Regional Action Plan.....	131
Session 7: The Economics of Protected Areas and the Role of Ecotourism in their Management.....	135
Session 8: The Role of Research and Monitoring in Protected Area Management.....	141
Session 9: The Role of the World Heritage Convention in Protected Area Management in SE Asia.....	145
Session 10: Working Groups.....	153

Field Excursions.....	155
IUCN Biodiversity Conservation Project.....	157
IUCN Non-Timber Forest Products and Nature Conservation.....	161
WWF: Xe Khampho.....	164
FOMACOP: Xe Pian.....	167
Session 11: Forum Close.....	171

Annexes

Forum Programme.....	176
List of Participants.....	182
List of Current WCPA SEA Members.....	189

FOREWORD

The protected areas scene in Southeast Asia is a paradox. On the one hand, there has been tremendous expansion in the number and extent of protected areas over the past 20 years or so, reflecting economic growth in the region and the world-wide trend in creating more protected areas. But alongside this growth - roughly threefold over the period - there has *not* been a corresponding improvement in the quality of protected area management. Indeed, it may sometimes appear that the rapid expansion in protected areas has exceeded the capacity of the relevant management authorities.

For example, parks across the region are exposed to pressures from wildlife poaching: while some of this meets local subsistence needs, much of it is traded, with the demands driven by urban communities living within, and beyond the region. Particularly since China took action to control illegal logging within that country, the problem has been "exported" to neighbouring parts of Southeast Asia, adding to already heavy pressures for timber extraction. Many governments face difficulties in law enforcement, and generally controlling developments in outlying regions. Heavily indebted countries are under increasing pressure to exploit natural resources for short-term economic purposes. A lack of funding and management capacity are problems which beset protected areas throughout the region. The values of protected areas are too little appreciated - both the economic values, such as those generated by tourism, and those of ecosystem services, for example, as sources of water supply or as "buffers" against extreme climatic events. Finally, too few countries have been successful in integrating protected area management into national and provincial planning and decision making.

But as the meeting in Pakse showed, all is not bad news. For example, there has been great interest in Southeast Asia in creating cross-boundary protected areas. Marine parks are attracting growing attention. Everywhere, countries are working to include local people in protected areas management - a sharp contrast with the rather authoritarian model which used to prevail. Tourism is bringing real economic benefits to some parts of Southeast Asia, and the small-scale, nature-based tourism, which relies on and supports parks, is the sector that is growing most rapidly. Donor-funded projects, training opportunities and NGO partnerships all help to build local capacity in protected areas management. And there has been a steady strengthening of the legal and administrative frameworks for protected areas within the region: in Laos, Vietnam, Indonesia, Cambodia and Sarawak, for example.

Southeast Asia is a mega-biodiversity region, with mega human populations too and some powerful world-class economies. Its cultural diversity is also immense. Yet at Pakse, it did feel like a region with a common sense of purpose as far as protected areas are concerned. The re-invigorated ASEAN framework (whose area coincides with that of the WCPA region), the shared experience of recent economic crises, even the common dangers posed by forest fires - all these may help to bring the region closer together in the care of its environment. At least in the protected area business, there are strong advantages in a regional approach. We hope that the Pakse meeting has strengthened WCPA's capacity to help deliver such a regional strategy.

In order to carry forward the WCPA's mission and achieve strategic objectives at the regional and national levels, WCPA SEA facilitated the preparation of a draft Regional Action Plan for Protected Areas in Southeast Asia, following discussions at the First WCPA SEA Regional Meeting, held in Bogor, Indonesia, May 1996. This document was reviewed and refined at Pakse.

These proceedings not only contain a record of the presentations and discussions that took place at Pakse, but also, recommendations for future action by all of us, especially in the SEA region. We are delighted that the Forum's deliberations have been captured in such detail, through the great effort of Clive Marsh, Maaïke de Lange, and others. We would like to express our gratitude to the Government of Lao PDR for hosting the Forum, and especially, to H.E. Dr. Siene Saphantong, Minister for Agriculture and Forestry. We would also like to thank all the donors who helped to make the meeting possible, as well as Stuart Chape and the staff of the IUCN Lao Country Office. Peter Shadie, WCPA-IUCN Executive Officer and Tuti Hendrawati, WCPA-SEA Secretariat, deserve particular credit for their help, both before and during the meeting.

Finally, the real success of this meeting now lies in the actual implementation of the Forum's useful ideas and strategies at the field level.

Adrian Phillips, Chair WCPA
Effendy Sumardja, Vice-Chair WCPA SEA

PREFACE

As part of its global programme, the IUCN World Commission on Protected Areas (WCPA) organises a cycle of regional meetings for its expert members and others in each of the 16 different regions of the world. The Pakse meeting was a key event in the development of WCPA work in the Southeast Asia Region, and important in laying the foundations for the region's input to the next World Parks Congress to be held in Durban, South Africa in September 2002.

The origin of the meeting lay in a decision, taken in 1996, to designate the IUCN Country Office in Lao PDR as the Secretariat focal point for WCPA in Southeast Asia, following the inaugural meeting held in Cisarua, Indonesia, in May of that year. Subsequently, it was agreed that the next regional meeting would be held in Lao PDR. IUCN is grateful to the Government of the PDR for hosting the meeting: a highly successful event that took place in Pakse, in December 1999. WCPA and the IUCN Secretariat are very appreciative of the support and co-operation provided by Government at both national and provincial levels in the organisation of the meeting.

The theme for the Pakse meeting, "Coping with the Unexpected", was very appropriate, considering the major economic problems and continuing ecological traumas, in particular forest fires, that have affected SE Asia in the period since the 1996 meeting.

Indeed, in light of the experience of the region over the past few years, there is some irony in the theme that was adopted for that previous WCPA session: "conserving biodiversity amidst growing prosperity". Little did we know then that within 18 months much of Asia would be plunged into an economic crisis that would have major repercussions on protected area management – repercussions that still continue. National resources for managing protected areas have been depleted and in some cases, national capacities reduced. Natural resources within protected areas have come under increasing exploitative pressure, as governments and local people attempt to satisfy short term economic needs. Thus there has been more forest clearance for subsistence and commercial agriculture, logging, and depletion of marine resources throughout the region. Although the numbers and extent of protected areas have increased, in most cases their integrity remains at risk.

The key issues that were discussed at the 1996 meeting remain relevant and fundamental, and were reflected again in the 1999 meeting in terms of assessment of progress and priorities:

- collaborative management with local communities;
- identification of effective financial mechanisms and the role of the private sector;
- the role of international conventions;
- integration of protected area systems into national and regional policy processes;
- identification of priorities for marine protected areas; and
- training and capacity building.

The meeting also included a number of field excursions, organised early on the agenda in order to familiarise participants with the opportunities and issues of protected area management in Lao PDR. Many of these are similar to those faced in the other countries represented at the meeting - and that, of course, is a benefit in convening WCPA meetings in the region. They provide a valuable opportunity for protected area managers, planners, administrators and financiers to share and compare experiences and knowledge – and, hopefully, contribute to better management and improved effectiveness of protected areas throughout the region.

It is with this aim that we have also structured the published proceedings. It is a challenging task to convert the large number of presentations given at Pakse into a usable proceedings document. We have therefore prepared two volumes:

- Volume 1: a stand alone Executive Summary that summarises the key elements and outcomes of the meeting and presents (as up-to-date as possible) protected area profiles for the countries in the region;
- Volume 2: the full papers presented and detailed proceedings.

David Sheppard
Head - IUCN Protected Areas Programme
IUCN Headquarters
Switzerland

Stuart Chape
IUCN Country Representative
Lao PDR

ACKNOWLEDGEMENTS

This Forum was made possible by the strong support of the Government of Lao PDR, especially the National Organising Committee, the Ministry of Agriculture and Forestry (co-sponsors of the meeting) and the Ministry of Foreign Affairs, especially Mr Khonpeng Thammavong, Head of the Division of International Organisations. Special gratitude goes to the Minister of Agriculture and Forestry, H.E. Dr Siene Saphanthong, for his leadership and opening comments at the Forum, and to Dr Parisack Pravongviengkham, for chairing the Organising Committee and participating in the Forum. Further thanks are offered to the Department of Forestry staff, namely Director General, Mr Xeme Samounry, and to Mr Sangthong Southammakot, Head of the Division of Forest Resource Conservation, for presentation of the Lao PDR Country Report and the assistance of his staff.

Local arrangements were made possible by the support of several Provincial authorities from Champassak Province. Special thanks go to H.E. Governor Onneua Phommachanh for hosting the meeting and providing opening comments to welcome the participants to Lao PDR, to the Champassak Provincial Organising Committee for making local arrangements, including paramedics on standby, and to the Provincial Agriculture and Forestry Offices of Champassak, Attapeu, Saravanh and Sekong Provinces.

A large number of partners provided the financial resources necessary to organise and hold the Forum. Special assistance was provided by: IUCN Headquarters, through the US Parks Service core grant; the UNESCO World Heritage Fund, for the participation of World Heritage site managers; DANIDA, for the support of Vietnamese participation; the Royal Netherlands Embassy (Philippines), for supporting Filipino participation; the Royal Netherlands Embassy, Bangkok, for supporting Cambodian participation; the German Federal Ministry for Economic Cooperation and Development, through the IUCN Regional Biodiversity Programme, Asia; and the ADB, for supporting Lao participants from the Science, Technology and Environment Agency (STEA), the Department of Roads, the Hydropower Office, Electricite du Laos, the State Planning Department, the National Tourism Authority, the Ministry of Culture, and the National University of Laos.

The publication and dissemination of the Forum Proceedings was made possible by donations from ADB, DANIDA and the Royal Netherlands Embassy (Bangkok). Other donors from within participants' countries also provided assistance to them to attend the Forum.

One of the highlights of the Forum was the field excursions offered by the following four project teams in Lao PDR:

- Netherlands/IUCN Biodiversity Conservation Project
- Netherlands/IUCN NTFP Project
- GEF/FOMACOP NBCA Sub-Programme
- WWF Indochina Programme

Bruce Jeffries, Klaus Berkmuller, Joost Foppes and Rob Tizard played a major role in the planning and organisation of each of these field excursions.

From the WCPA side, the Forum was honoured to have the participation and leadership of Adrian Phillips, the Global Chair, and Effendy Sumardja, the Regional Vice Chair for SE Asia. Thanks should also go to the members of the WCPA SE Asia Steering Committee and to Tuti Henderawati, assistant to Effendy Sumardja, who acts as Secretary to the WCPA Regional Steering Committee and who worked so hard to prepare for the Forum. Peter Shadie represented the IUCN Headquarters PA Program and offered presentations on the 2002 World Parks Congress and the WCPA Marine Program.

The organisers of the Forum appreciated the presence and participation of many other honoured guests, including: Apichai Suchindah from the ASEAN Secretariat; N. Ishwaran and Han Quinli from UNESCO; Kathy MacKinnon from the World Bank; and Jan Cools from the Royal Netherlands Embassy, Bangkok.

The meeting would not have occurred without the important contributions of the IUCN Lao PDR Country Office which co-hosted the Forum. Special thanks go to: Stuart Chape, Country Representative; Clive Marsh, Forum Organiser and IUCN Senior Conservation Advisor; Sisouvanh Bouthavanh, Finance Officer; Vilawan Sanasisane, Accounts Assistant; Xiong Tsechalicha, Conference Technical Officer; and Todd Sigaty and Annabelle Galt, Conference Rapporteurs. Mark Vinton, WWF Lao PDR, took on the enormous task of preparing the layout and organising the publication of the proceedings. Bruce Jeffries, FOMACOP, offered his time to co-ordinate the audio-visual portion of the presentations at the Forum. Last, but not least, Maaïke de Lange spent eight months preparing all the travel, hotel and other arrangements for the participants and managed the Secretariat office during the Forum.

We would also like to acknowledge the hard work and contributions of all the participants and speakers at the Forum, especially those who acted as facilitators and reporters for the Working Groups and the many people who provided information, comments and input after the Forum to complete the proceedings.

GENERAL ACRONYMS & ABBREVIATIONS

ADB	Asian Development Bank
AEGE	ASEAN Experts Group on the Environment
AIDE	Advice & Investigation for Development & Environment
AIS	Alien Invasive Species
AIT	Asian Institute of Technology
AMME	ASEAN Ministerial Meeting on Environment
AMMH	ASEAN Ministerial Meeting on Haze
ANC	ASEAN Experts on Nature Conservation
APAN	Asia Pacific Agro-forestry Network
APATCO	Asia- Pacific Agriculture Tourism Company
APCEL	Asia-Pacific Centre for Environmental Law
APPEN	Asia- Pacific People's Environment Network
ARCBC	ASEAN Regional Centre for Biodiversity Conservation
ASEAN	Association of Southeast Asian Nations
ASEP	ASEAN Environment Program
ASF-AMS	Association of Southeast Asian Marine Scientists
ASIT	Agricultural Systems & Information Technology
ASOEN	ASEAN Senior Officials on Environment
AUSAID	Australian Aid Agency
AWB	Asian Wetland Bureau
AWGASME	ASEAN Working Group on ASEAN Seas and Marine Environment
AWGNCB	ASEAN Working Group on Nature Conservation and Biodiversity
BIONET	Biodiversity Action Network
BMS	Biodiversity Monitoring System
BMZ	German Federal Ministry for Economic Cooperation and Development
BR	Biosphere Reserve
BZD	Buffer Zone Development
CABI	Commonwealth Agricultural Bureaux International
CBD	Convention on Biological Diversity
CBRM	Community based resource management
CDC	Conservation for Development Centre
CERED	Centre for Environmental Research into Education & Development
CGIAR	Consultative Group on International Agricultural Research
CI	Conservation International
C & I	Criteria and Indicators
CIC	International Council for Game & Wildlife Conservation
CIEL	Centre for International Environmental Law
CITES	Convention on International Trade in Endangered Species
CNPPA	Commission on National Parks & Protected Areas, prior to WCPA
COP 7	CBD Conference of Parties 7 th Meeting
COST	ASEAN Committee on Science and Technology
CRC-TREM	Cooperative Research Centre for Tropical Rainforest Research and Management, Australia
CRES	Centre for Natural Resources Management and Environmental Studies
DANCED	Danish Cooperation for Environment & Development
DANIDA	Danish International Development Association
DAP	Draft Action Plan
DED	German Development Service
EAGA	East Asian Growth Area
EAP	Experts Advisory Panel
EC	European Commission
EIA	Environmental Impact Assessment
ELC	Environmental Law Centre, IUCN
EMAN	Ecological Monitoring & Assessment Network
ESCAP	Environmental & Social Commission for Asia & Pacific
EU	European Union
EURODAD	European Network on Debt & Development

EWC	East-West Centre Environment & Policy Institute
FAO	Food & Agriculture Organisation
FFI	Fauna & Flora International
FMP	Forest Management Planning
FMU	Forest Management Unit
FORSPA	Forestry Research Support Program for Asia & Pacific
GAA	German Agro Action
GDP	Gross Domestic Product
GEC	Global Environmental Consultants
GEF	Global Environment Facility
GEMS	Global Environmental Monitoring System
GET	Global Environmental Trust Fund
GIS	Geographical Information System
GISP	Global Invasive Species Program
GNAGA	Global Network for Anti -Golf Course Action
GNP	Gross National Product
GPS	Global Positioning System
GCRMN	Global Coral Reef Monitoring Network
GRID	Global Resource Info Database
GTZ	German Agency for Technical Cooperation
HPA	Hanoi Plan of Action
HTTF	Haze Technical Task Force
IAHR	International Association for Hydraulic Research
IAMME	Informal ASEAN Ministerial Meeting on the Environment
IAP	International Association of Pteridology
IBSRAM	International Board for Soil Research & Management
ICAD	Integrated Conservation and Development
ICBP	International Council for Bird Preservation
ICDP	Integrated Conservation and Development Project
ICID	International Commission on Irrigation & Drainage
ICM	Integrated Coastal Management
ICOLD	International Commission on Large Dams
ICRAF	International Council for Research in Agro-forestry
ICRI	International Coral Reef Initiative
IDRC	International Development Research Centre
IEC	Information, Education and Communication
IEEP	International Environmental Education Program
IHA	International Hydropower Association
IHP	International Hydrological Programme
IIED	International Institute for Environment & Education
IISD	International Institute for Sustainable Development
INTERAISE	International Environmental & Natural Resource Assessment Information Service
IPAM	Integrated Protected Area Management
IPF IV	4th Meeting of the Inter Government Panel on Forests of the Commission on Sustainable Development
IRDC	International Rural Development Centre
ISBN	International Standard Book Number
ISEAS	Institute of South East Asian Studies
ISNAR	International Service for National Agricultural Research
ITDR	Institute for Tourism Development Research
ITDS	Institute of Tourism & Development Studies
ITTO	International Tropical Timber Organisation
IUCN	The World Conservation Union
IUCN PPA	World Conservation Union Program on Protected Areas
IWRB	International Waterfowl & Wetlands Research Bureau
JCBC	Joint Commission for Bilateral Cooperation
JICA	Japan International Cooperation Agency
JRC	Journalist's Resource Centre for the Environment
JTWG	Joint Technical Working Group
KSSF	The Karl Schmitz Scholl Fund (for environmental law/policy)

LA	Land Allocation
LAO PDR	People's Democratic Republic of Lao
LRFT	Live Reef Fish Trade
LUP	Land Use Planning
MAB	Man and Biosphere
MARPOL	Convention on Marine Pollution
MIDAS	Mekong International Development Associates
MoA	Memorandum of Agreement
MoU	Memorandum of Understanding
MNS	Malaysian Nature Society
MPA	Marine Protected Area
MRC	Mekong River Commission
NBSAP	National Biodiversity Strategy and Action Plan
NEBc	Net Economic Benefit
NEF	National Environmental Fund
NERI	National Environment Research Institute
NGO	Non governmental organisation
NORDECO	Nordic Agency for Development and Ecology
NORAD	Norwegian Agency for Development Cooperation
NP	National Park
NR	Nature Reserve
NRM-USAID	Natural Resource Management – United States Agency for International Development
NRMP	Natural Resources Management Project
NSF	National Science Foundation
NTFP	Non- timber Forest Product
ODA	Overseas Development Administration
ODI	Overseas Development Institute
OECD	Organisation for Economic Cooperation & Development
OEST	Organisation for Environment. Science & Technology
PA	Protected Area
PAI	Population Action International
PAP	Protected Areas Programme
PDF	Project Development Facility
PNG	Papua New Guinea
PPA	Program on Protected Areas
PRA	Participatory Rural Appraisal
PRA	Participatory Rapid Appraisal
RAC	Resource Assessment Commission
RAPA	Regional Office for Asia & the Pacific
RBP	Regional Biodiversity Program, IUCN
RDFN	Rural Development Forestry Network
RSA	Republic of South Africa
RWG's	Regional Working Groups
SAR	Staff Appraisal Report
SCOPE	The World Committee on Problems of the Environment
SEA	Southeast Asia
SEAFDEC	Southeast Asian Fisheries Development Centre
SIDA	Swedish International Development Agency
SPAE	ASEAN Strategic Plan of Action on the Environment
SSC	Species Survival Commission
STRAP	Strengthening Re-Afforestation in Asia Pacific
TBCA	Trans-boundary Conservation Area
TBPA	Trans-boundary Protected Area
TERRA	Towards Ecological Recovery & Regional Alliance
TFAP	Tropical Forestry Action Plan
TFMP	Tropical Forest Management Program
TIM-TEAM	Tourism Investigation & Monitoring Team
TNC	The Nature Conservancy
TOR	Terms of Reference

TPA	Totally Protected Area
TPZ	Totally Protected (core) Zone
UKDIFID	United Kingdom Department for International Development
UN	United Nations
UNCED	United Nations Commission on Environment and Development
UNCLOS	Convention on the Law of the Sea
UNDP	United Nations Development Program
UNEP	United Nations Environment Program
UNESCO	United Nations Educational, Scientific and Cultural Organisation
UNOPS	United Nations Office of Project Services
USAID	United States Agency for International Development
USDA	United States Department of Agriculture
USNPS	United States National Parks Service
WB	World Bank
WBCSD	World Business Council for Sustainable Development
WCED	World Commission on Environment and Development
WCF	Wetland Conservation Fund
WCI	Wildlife Conservation International
WCMC	World Conservation Monitoring Centre
WCPA	World Commission on Protected Areas
WCPA SEA	World Commission on Protected Areas for Southeast Asia
WCS	Wildlife Conservation Society
WHC	World Heritage Convention
WHF	World Heritage Fund
WHO	World Health Organisation
WI	Wetlands International
WPC	World Parks Congress
WR	Wildlife Reserve
WTMA	Wet Tropics Management Authority, Australia
WTMU	Wildlife Trade Monitoring Unit
WTO	World Tourism Organisation
WTO	World Trade Organisation
WWF	World-wide Fund for Nature
WWT	Wildfowl & Wetlands Trust

COUNTRY ACRONYMS & ABBREVIATIONS

CAMBODIA

ARA	German NGO
BZCFO	Buffer Zone and Community Management Office
DFW	Department of Forestry
DNCP	Department of Nature Conservation and Protection
MAFF	Ministry of Agriculture Forestry and Fisheries
MCFA	Ministry of Culture and Foreign Affairs
MoE	Ministry of Environment
MRD	Ministry of Rural Development
NFP	National Forest Policy
PAO	Protected Area Office
WCZMO	Wetland and Coastal Zone Management Office
WPO	Wildlife Protection Office

CHINA

XTBG	Xishuangbanna Tropical Botanical Garden
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INDONESIA

AMDAL	Analisis Mengenai Dampak Lingkungan (Environmental impact assessment)
APBN	Anggaran Pendapatan dan Belanja Negara (National Annual Budget)
BANGDA	Direktorat Pembangunan Daerah (Directorate of Regional Development)
BAPPEDA	Badan Perencanaan Pembangunan Daerah (Regional Development Planning Board)
BAPPENAS	Ministry of National Development Planning

BCN	Biodiversity Conservation Network
BII	Bank Internasional Indonesia
BKNP-LEWS	Betung Kerihun National Park – Lanjak-Entimau Wildlife Sanctuary
BLN	Bantuan Luan Negeri (Foreign donor funds)
CA	Cagar Alam (Strict nature reserve)
CAMEP	Community Awareness, Mobilization and Environment Program
CIFOR	Centre for International Forestry Research
COREMAP	Coral Reef Rehabilitation and Management Program
DG	Directorate General
DIP	Daftar Isian Proyek (approved project budget)
EMDI	Environmental Management Development in Indonesia project
FoK	Friends of Kutai
Gol	Government of Indonesia
IBBE	ITTO Borneo Biodiversity Expedition
IDT	Presidential Instruction Fund for Poor Villages
INPRES	Instruksi Presiden (Presidential instruction)
ITFP	UK-Indonesia Tropical Forest Management Program
KEHATI	Indonesian NGO
KNP	Komodo National Park
LDP	Leuser Development Program
LIF	Leuser International Foundation
LIPi	Indonesian Science Institute
LKMD	Village council
LMU	Leuser Management Unit
MoFEC	Ministry of Forestry and Estate Crops
PCC	Project Coordination Committee
PERDA	Peraturan Daerah (Local government decree)
PH	Pengusahaan Hutan (Directorate of Forest Production)
PHPA	Directorate General of Forest Protection and Nature Conservation
PKA	Directorate General of Nature Conservation and Protection
RDTRD	Rencana Detail Tata Ruang Daerah (Detailed Regional Spatial Planning)
RePPPProt	Regional Physical Planning Program for Transmigration
SK	Surat Keputusan (Decree)
SKEPHI	Indonesian Rainforest Action Group
TFMP	Tropical Forest Management Program
TN	Taman Nasional (National Park)
TNBTS	Bromo Tengger Semeru National Park
TNL	Taman Nasional Laut (Marine National Park)
WARSI	Friends of the Earth Indonesia
YCCI	Yayasan Cipta Citra Lestari Indonesia
YPMD	Rural Community Development Foundation

LAO PDR

CPAWM	Centre for Protected Areas and Watershed Management
DAFO	District Agriculture and Forestry Office
DoF	Department of Forestry
EDL	Electricite du Laos
FIPC	Forest Inventory and Planning Center
FOMACOP	Forest Management and Conservation Project
GTZ	Lao-German Forestry Team
IUCN/BCP	World Conservation Union Biodiversity Conservation Project
LAO PDR	Lao People's Democratic Republic
LSFP	Laos-Swedish Forest Cooperation Program
MAF	Ministry of Agriculture and Forestry
MFA	Ministry of Foreign Affairs
NAFRI	National Agriculture and Forest Research Institute
NBCA	National Biodiversity Conservation Area
NOFIP	National Office for Forest Inventory & Planning
NT2	Nam Theun Hydropower Project Phase II
PAFO	Provincial Agriculture and Forestry Office

PM	Prime Minister
STENO	Science, Technology and Environment Organisation
VFC	Vientiane Forestry College

MALAYSIA

BOT	Board of Trustees
DWNP	Department of Wildlife and Nature Protection
FRIM	Forest Research Institute Malaysia
IPPA	Identification of Potential Protected Areas components
JNPC	Johor National Parks Corporation
KWR	Krau Wildlife Reserve
MOSTE	Ministry of Science, Technology and the Environment
MNS	Malaysian Nature Society
NERC	Nature Education and Research Centre
TIHPA	Turtle Islands Heritage Protected Area

SARAWAK

NPWD	National Parks and Wildlife Division
SFD	Sarawak Forest Department
BKNP-LEWS	Betung Kerihun National Park – Lanjak Entimau Wildlife Sanctuary TBCA

SABAH

DVCA	Danum Valley Conservation Area
DVFC	Danum Valley Field Centre
DVMC	Danum Valley Management Committee
FMU	Forest Management Unit
IPPA	Identification of Potential Protected Area components
JCBC	Joint Commission for Bilateral Cooperation
JMC	Joint Management Committee
JMP	Joint Management Plan
JTWG	Joint Technical Working Group
PEK	Projek Ethnobotani Kinabalu
RCIS	Rafflesia Conservation Incentive Scheme

PHILIPPINES

BWF	Babilonia Wilder Foundation
CADC	Certificates of Ancestral Domain Claims
CBFMA	Community Based Forest Management Agreement
CDFs	Community development facilitators
CEP	Coastal Environment Protection
CPPAP	Conservation of Priority Protected Areas Project
CRMP	Coastal Resources Management Project
DAO	Department Administrative Order
DENR	Department of Environment and Natural Resources
Dos	Desk Officers
IBA	Important Bird Area
IPRA	Indigenous Peoples Rights Act
FPE	Foundation for the Philippine Environment
FSDI	Foundation for Sustainable Development Inc.
HNGO	Host Non Government Organisation
IIRR	International Institute for Rural Reconstruction
IPAF	Integrated Protected Area Fund
IPAS	Integrated Protected Area System
IPRA	Indigenous Peoples Rights Act
JCBC	Joint Commission for Bilateral Cooperation
JMC	Joint Management Committee
JMP	Joint Management Plan
JTWG	Joint Technical Working Group
KGB	Kanloan Green Brigades
LABB	Luntian Alyansa ng Bundok Banahaw

LGU	Local Government Unit
NIPAP	National Integrated Protected Areas Program
NIPAS	National Integrated Protected Area System
PAMB	Protected Area Management Board
PASu/PASU	Protected Area Superintendent
PAWB	Protected Areas and Wildlife Bureau
PAWS	Protected Areas and Wildlife Service
PC	Project Coordinator
PCU	Project Coordinating Unit
PENRO	Provincial Environment and Natural Resource Officer
PIU	Project Implementing Unit
PO	People's Organization
Pos	Project officers
PNOC	Philippine National Oil Company
RA	Republic Act
RAC	Regional Advisory Committee
SEP	Strategic Environmental Plan
TIHPA	Turtle Islands Heritage Protected Area
UP-SRF	University of the Philippines-Science and Research Foundation

THAILAND

MNPD	Marine National Parks Department
RFD	Royal Forest Department
TDRi	Thailand Development Research Institute.
TRF	Thailand Research Fund

VIETNAM

DLA	Department of Land Administration
EEF	Eco-tourism Entrance Fee
ESCAP	Economic and Social Commission for Asia and the Pacific
FIPI	Forest Inventory and Planning Institute
FIT	Free and Independent Travelers
FPB	Forest Protection Branch
FPD	Forest Protection Department
FUV	Forest University of Vietnam
GOV	Government
IEBR	Institute of Ecology and Biological Resources
ITDR	Institute for Tourism Development Research
LINC	Linking Hin Namno and Phong Nha-Ke Bang through Parrallel Conservation
MARD	Ministry of Agriculture and Rural Development
MOET	Ministry of Education and Training
MOF	Ministry of Finance
MOFI	Ministry of Fisheries
MOSTE/MoSTE	Ministry of Science, Technology and Environment
MPI	Ministry of Planning and Investment
NCS	National Conservation Strategy
NEA	National Environment Agency
NES	National Eco-tourism Strategy
PAFD	Provincial Agriculture and Forestry Department
PAMB	Protected Area Management Board
PARDS	Provincial Agriculture and Rural Development Services
SFE	State Forest Enterprises
SRV	Socialist Republic of Vietnam
TES	The Eco-tourism Strategy
TFAP	Tropical Forest Action Plan
VNAT	Vietnam National Administration of Tourism
VND	Vietnamese Dong

INTRODUCTION

*"The only thing in life that is permanent is impermanence – change is the only reliable variable."
(Buddhist philosophy).*

What is a Protected Area?

"IUCN defines a protected area as an area of land and/or sea especially dedicated to the protection and maintenance of biological diversity, and of natural and associated cultural resources, and managed through legal or other effective means."

This document summarises the proceedings from the Second WCPA Regional Forum for SE Asia, held in Pakse, Lao PDR in December 1999. The event was attended by 160 participants representing governments and NGOs from nine Southeast Asian countries: Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Philippines, Singapore, Thailand, Vietnam; and representatives from the international conservation and donor community. The theme of the meeting was 'Coping with the Unexpected: Problems and Opportunities for Protected Area Management in SE Asia at the Turn of the Century'. These proceedings have been compiled into two volumes. The first is an executive summary comprised of highlights of the presentations and discussions; a profile of each country's PA system is also included, together with a map, a list of protected areas, an analysis of strengths and challenges, and case studies. The second volume is an annex comprised of all the papers presented at the Forum, organised by session. Each chapter includes a topical summary in addition to a short synopsis of each paper presented during the session.

WCPA is a global network of protected area professionals. The Commission is organised regionally, under the direction of a Vice-Chair and in most cases, a Steering Committee. All of the regions come together every ten years for the World Parks Congress (next scheduled for 2002 in South Africa). Most regions have periodic meetings to strengthen the WCPA network, to share experience and to prepare for the World Parks Congress. Currently, the WCPA SE Asia region includes Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand and Vietnam. Prior to 1994, however, these countries were part of the WCPA South Asia region, along with Bangladesh, Bhutan, India, The Maldives, Nepal, Pakistan and Sri Lanka.

WCPA Mission

The mission of WCPA is to promote the establishment and effective management of a world wide, representative network of terrestrial and marine protected areas, as an integral contribution to the IUCN mission.

This Second Regional Forum built on the achievements of the First Regional WCPA Forum for SE Asia held in May 1996 in Bogor, Indonesia. The theme of the First Forum was 'Conserving Biodiversity Amidst Growing Prosperity.' A comparison of the titles of the two fora reveals the rapidly changing conditions of the region over the past few years. Both rapid growth and economic crisis pose potential adverse impacts for protected areas management, sustainable resource use and biodiversity conservation.

The objectives of the Second WCPA Regional Forum for SE Asia were to:

- Evaluate the impacts of the economic crisis on protected area systems in the region and assess prospects for the new century ahead;
- Update and refine the Regional Protected Areas Action Plan, initially drafted as an output from the First SE Asia Regional IUCN Forum;
- Identify and promote mechanisms for strengthening the role of WCPA within SE Asia;
- Promote the role of the World Heritage Convention as a mechanism which provides recognition and additional support to sites of global significance; and
- Identify themes and recommendations that can contribute to the program at the Fourth World Parks Congress to be held in South Africa in September 2002.

The Forum was divided into plenary sessions on the following topics:

- (1) PA management and co-operation across borders - international conventions and trans-boundary protected areas;
- (2) Progress towards collaborative management of protected area landscapes;
- (3) Economics of protected areas and the role of ecotourism in their management;
- (4) Role of research and monitoring in protected area management; and
- (5) Contributions of the World Heritage Convention to PA management in the region.

WCPA SE Asia Steering Committee

On December 8, 1999 the Steering Committee of WCPA-SE Asia held a meeting to address a range of important issues. Regional membership was reviewed and updated (please see Annex 3 for the list of current members). The Committee reached consensus on the need to update the protected areas database for SE Asia; there was considerable support for the regional database to be located within the Philippines and linked to the ASEAN Regional Centre for Biodiversity Conservation (ARCBC). It was noted that this process should be consistent with the database revision being carried out at WCMC and with ARCBC proposals. Other discussion topics included the roles of, and the relationships between, the IUCN Secretariat and WCPA. The role of the IUCN Lao Country Office as the focal point for WCPA within the region was noted and appreciated; however, it was emphasised that this is only an assistance and support role to the Vice Chair. Finally, it was noted that the Third WCPA-SEA Forum would need to be held in advance of the September 2002 World Parks Congress in Durban, South Africa and that this should occur before April 2002. The Philippines agreed provisionally to host the Third Forum, subject to further discussion with their government. Vietnam offered to be an alternative host in the event that the Philippines was not confirmed.

"Fred Packard Award"

On the fourth day of the Forum, a special ceremony was conducted to present the 1999 Fred Packard Award for SE Asia. This prestigious award is given each year to one person from each WCPA region in recognition of outstanding services to protected areas management. At the Forum, Adrian Philips, WCPA Global Chair, and Effendy Sumardja, WCPA SE Asia Vice Chair, bestowed the award upon Datuk Lamri Ali, Director of Sabah Parks Malaysia, in recognition of his tireless conservation efforts within the SE Asia WCPA. Paul Basintal accepted the award on behalf of Datuk Lamri Ali and Sabah Parks.



Presentation of the Fred Packard Award. (Stuart Chape/IUCN)

"The number of PAs has increased dramatically over the past decade, but while governments seem willing to declare more protected areas on paper, they seldom allocate the necessary programs or funds to manage the areas effectively. Thus, the goal of the next decade is to turn paper parks into well-managed ecosystems." (McNeely, 1999)

Setting the Context

The nature of conservation work demands that one have a sense of urgency for results, given that the threats are imminent and the consequences extreme and often irreversible (e.g., the extinction of a species). This sense of urgency is particularly acute in SE Asia, where problems such as the illegal wildlife trade, unsustainable logging and uncontrolled development are often severe. Some countries have been able to formulate extensive PA systems in stable environments, while others have emerged from histories of foreign involvement, war and rapid political and economic change. In the latter circumstances, change takes time. Too often, however, external pressures - whether they encourage economic reform or conservation - have unrealistic expectations of achieving results in a short time frame. More often than not, it is the process itself of building capacity, relationships and understanding, often over generations, that promotes long term and sustainable change. It is the element of change that must be embraced.

Within the SE Asia context, it is critically important to foster a process of sustainable change. Things worth doing well take time. This principle has a sound basis in the developed countries, where it took years to formulate and develop administrative systems, legal frameworks, civil rights and conservation programs. We must remember that the PA network in some SE Asia countries has only been in existence for less than a decade. The SE Asia context also teaches us not to be so rigid, to be able to adapt, make compromises and learn new models and ways of being and doing. Projects often restrict themselves by rigid work plans designed prior to understanding the local situation. It is difficult to adapt to local circumstances, economic crises and ecological disasters that restrict project implementation.

WCPA and the Southeast Asia Region

Prior to 1994, the countries of SE Asia were included within WCPA's South Asia region. However, a decision was then made to form a separate SE Asia region, consisting of Brunei Darussalam, Cambodia, Indonesia, Malaysia, Singapore, Thailand, Vietnam, Philippines, Lao PDR and Myanmar.¹ The rationale for forming a separate WCPA region for SE Asia included the following:

- The region's emergence in the global economy;
- SEA's globally significant biodiversity values;
- The need to integrate protected area issues into evolving regional frameworks (e.g. ASEAN); and
- The expansion of the region's protected area network – the number of protected areas in SE Asia has grown from 200 sites covering 447,000km² in the 1960's, to 900 sites covering 1,564,964km² more recently.

The following questions posed by Jeff McNeely stimulated discussion throughout the Forum:

- Is there a need for a regional approach to PA management in Southeast Asia?
- What is it - politically, culturally, geographically and economically - that justifies considering protected areas in SE Asia as a regional issue?

Although the countries of SE Asia share many common concerns and interests, each nation is also inherently distinct. Politically and economically, nations range from socialist republics, to federalist states, to kingdoms, to multi-party democracies. Some governments encourage an active civil society, while others do not. There also exists a wide variety of influential religions, from Buddhism and Animism to Islam and Christianity, among others. The range of economic systems spans a spectrum from barter systems in Irian Jaya to the wealthy capitalist economies of Brunei and Singapore. Finally, SE Asia is characterised by numerous ecological landscapes, from coral reefs and tropical islands to snow-capped mountains and expansive tracts of primary forest.

Despite this diversity, there are many common themes and issues - particularly in relation to protected areas - that bind these countries together as a region. Many of these themes were reflected in Forum presentations. For example, SE Asia has recently experienced a regional economic crisis and ecological disturbances such as forest fires, haze, drought and floods.

¹ Myanmar was not represented at the Forum. Eight of the ten countries mentioned above sent representatives to this Forum and presented a country report (see session 3). There was no country representative from Singapore, although Prof. Koh Kheng Lian from the National University of Singapore gave the opening paper for Session Four.

It is apparent that the rapid growth and development experienced over the past decade may have exceeded the region's capacity to manage change. This is reflected in the development of protected area systems, especially when the growth of a protected area network is influenced by international pressure for conservation and foreign donor funding, rather than by initiatives from within the region itself. At the same time, there is the attraction of exporting natural resources to developed nations for short-term economic gain.

"The dilemma that faces the majority of SE Asian countries is thus: two people knock on Southeast Asia's door with briefcases full of money - one can be taken on the condition that resources are conserved and used sustainably; and the second case of cash can be accepted in return for the exploitation of resources and long term growth (and often of local people)." (Sigaty, 1999)

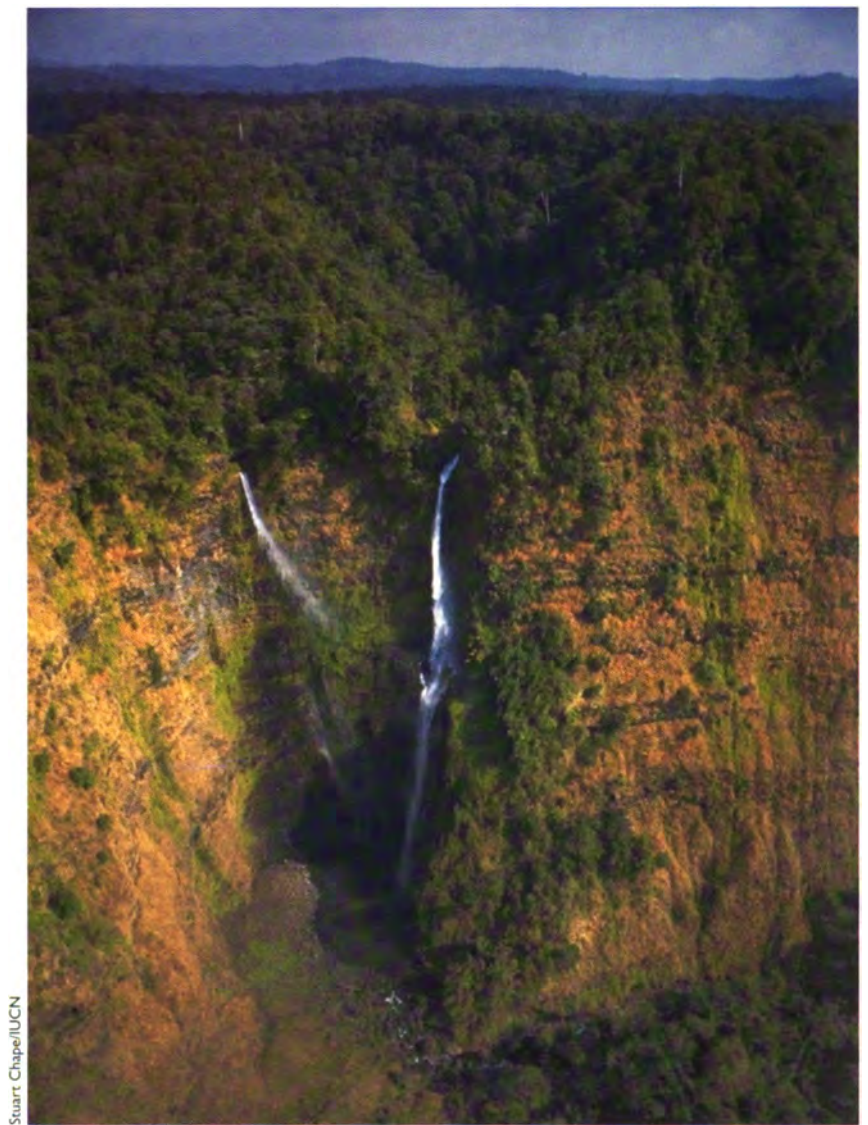
Another common theme has been for governments to establish PA systems with incomplete understanding and commitment to the responsibility inherent in the objectives of the formation of such systems. The challenge before the region is to build institutional capacity to manage protected area systems, to increase awareness, and to expand the role of civil society in natural resource management.

Among the general issues considered by the Forum were the following:

- What is the rationale for considering SE Asia as a separate region within the WCPA network?
- How can PAs face the fact that most of the decisions impacting protected areas are made outside their boundaries in national and provincial capitals by a small number of elite with far reaching impact on marginalised local communities and natural resources?
- How can the WCPA network and the global conservation community better identify the major pressures on PAs that are beyond the scope of individual site managers?
- Has the growth in the number of PAs in SE Asia surpassed the carrying capacity of government agencies or are there mechanisms to turn existing paper parks into managed ecosystems?
- How can IUCN categories IV to VI be better utilised to gazette new PAs of high importance to conservation?
- How can governments actualise the benefits from PAs including: watershed protection, tourism and carbon sequestration?
- How can PA management become better integrated into broader government and regional planning and development decision processes?

OPENING CEREMONY

SESSION I



Stuart Chape/UICN

Dong Hua Sao NBCA, Lao PDR

SESSION 1

OPENING CEREMONY

The Government of the Lao PDR officially opened the Forum with a "whole-hearted sabaidee" to the 160 participants representing most of the SE Asia nations, China and the international community.

The Master of Ceremonies (MC) Thongsuone Bouphasaysong, Director of the Department of International Co-operation from the Ministry of Agriculture and Forestry (MAF), introduced distinguished speakers from the three main parties who organised the Forum: H.E. Dr. Siene Saphanthong, Minister of Agriculture and Forestry, H.E. Sisamouth Namkenethao, Vice-Governor of Champassak Province, and Stuart Chape, IUCN Country Representative, Lao PDR.

The MC pointed out that in addition to gaining useful input from the technical sessions, a main objective of the Forum was to meet, share personal experiences and learn lessons about the difficult work of managing protected areas in the region. He closed his comments by wishing everybody a safe visit to his country, which he stated was once called *Pathet Lao Lane Xang*, the Lao Country of a Million Elephants.

The following speaker, Sisamouth Namkenethao, Vice-Governor of Champassak Province, warmly welcomed the visitors and provided an informative overview outlined below.

Champassak, Lao PDR as a model setting for PA issues in SE Asia



It was symbolic that Champassak Province hosted a meeting on protected areas for SE Asia. Despite being an area relatively unknown outside of Lao PDR, **this southernmost province is actually an exemplary microcosm of the complex situation of managing natural resources in the face of tremendous change and development pressures throughout SE Asia.**

Geographically, Champassak Province acts as a doorway to the expanding transportation and trade between neighbouring Thailand, Cambodia and Vietnam. In fact, the bridge crossing the Mekong in Pakse is near completion and road construction along the river to the south to Cambodia and east to Vietnam continues. At the heart of the Province is the Mekong River; like many other rivers in SE Asia, it embodies in its flow the daily lives of the people who depend on it for their economic, cultural and spiritual existence.



Xe Pian NBCA, Champassak Province, Lao PDR

Although sheltered for years from global markets, Champassak experienced 13% annual growth last year. However, much of the growth is based primarily on the exploitation of natural resources associated with forestry, cultivation of agricultural products (rice and coffee) and the potential for hydro development. **Lao PDR now shares the dilemma faced by other areas in SE Asia, whereby pressure upon national government exists to increase GNP and living standards often at the expense of a finite natural resource base and benefit to local communities.**

Champassak Province has embraced the concept of conservation by establishing nearly 30% of its total land base as protected areas, including three national and eight provincial parks. Although this reflects a strong commitment, **the concern in Lao PDR, as in most of Asia, is for protected areas to move beyond mere "paper parks" to reserves managed for the objectives for which they were originally established.** In fact, forums like this aim to allow participants to collaborate and synthesise experiences to find solutions to the tremendous threats facing protected areas in SE Asia. Development pressures, illegal logging, rampant trade of wildlife, low staff capacity, insufficient funding and lack of co-ordination in government planning are the most obvious examples.



Wat Phu, Champassak Province, Lao PDR

Finally, Champassak has also begun to realise the tremendous potential for eco-tourism. Within a few hours of Pakse, a visitor can witness cultural and scenic wonders, such as Wat Phu, Xe Pian NBCA and Khone Phapeng Falls. In fact, during the two days of forum excursions many participants visited these sites and had the opportunity to take elephant rides, visit traditional villages and take part in cultural *baci* ceremonies (See Field Excursions).

His Excellency Dr. Siene Saphanthong, Minister of MAF, greeted distinguished participants and welcomed them to southern Lao PDR, "home" of the richest biodiversity and protected areas in Lao PDR. Indeed, he pointed out that *Lao PDR is one of the few countries in the region that still maintains a relatively rich endowment of natural resources and variety of species.* He highlighted the models and schemes of community-based forest management located in the area, in which different systems of decentralised management and development of natural resources are being tested in order to generate sustainable systems to be replicated elsewhere in the country.



Khone Falls, Champassak Province, Lao PDR

His Excellency summarised the 'focal site' approach to sustainable forest management employed in upland areas where the country's poorest people are found. This approach strongly advocates people's participation in forest management and protection and socio-economic development, to go hand in hand with sustainable use of forest land and resources. Dr. Saphanthong outlined the improvements that have been made to policy frameworks to facilitate implementation of the focal site approach. These involved the evolution of a legal environment and structure of governance based upon holism (complexity), spatial variations (diversity) and recognition that it is necessary to work with the local communities and through existing local institutions.

His Excellency then focused on trans-boundary co-operation, since Lao PDR is linked to five countries, and there are many areas of high biodiversity along these borders. Projects and dialogue with neighbouring countries regarding management of adjoining lands, wildlife trade, staff exchanges, eco-tourism and related issues are increasingly taking place and require co-ordination at the central level.

"Our Lao understanding with regard to the needed strategy to address sustainable management of forest and protected areas is to combine decentralisation of forest resources management along with a focus on integrating development and conservation intervention efforts in order to be able to fully respond to the dual need of poverty alleviation and conservation."

(Dr. Saphanthong, Minister of MAF, Lao PDR)

His Excellency concluded by assuring that government has the ability to make flexible adjustments to the on-going process of decentralisation in rural development and natural resource management, based on lessons and experiences learned from other countries in the region and in the world. Gradual institutional changes for strengthening the capacity of local government units and village organisations, prioritising an 'area-based livelihood systems approach' to development of forest land and resources will play a pivotal role in ensuring long-term stability of decentralised forest management.

To conclude the session, Stuart Chape, as the Country Representative for Lao PDR, greeted participants, after two years of preparation for the Forum. He reflected how in 1996 he had suggested holding the meeting in Lao PDR so that WCPA members could witness firsthand the Lao PDR Protected Area (NBCA) system, one of the world's newest and most comprehensive protected area networks. Furthermore, Lao policy makers and technical staff together with colleagues from other parts of SE Asia could share protected area experiences and insights in the Lao context.

He highlighted the field excursions to NBCAs and successful project sites, due to start the following day, which would give visitors the chance to experience the beauty emanating from the nature and

In 1993, Lao PDR established a Protected Area system which now comprises 20 National Biodiversity Conservation Areas (NBCAs) covering over 3 million ha or 13% of the total land area of Lao PDR.



Stuart Chape/IUCN

Nam Kading NBCA, Khammouane Province, Lao PDR

people of Lao PDR. He encouraged participants to capitalise on the opportunity for informal discussion of protected area issues, before returning for three more days of plenary and working group sessions, pointing out that many of the issues they would observe in Champassak, Salavan and Attapeu Provinces may reflect issues from their own countries.

As the final speaker of the session, Stuart Chape set the tone for the forum and expanded the theme "Coping with the Unexpected." He pointed out that **protected area planners and managers need to be prepared for rapid and unpredictable change and impacts; nevertheless, we should not lose sight of the very real, critical issues that are already known about, and whose causes we have recognised for some time. The prime example is the wildlife trade and its far-reaching impacts, which are undermining the whole concept of sustainability even before practical approaches to sustainable use have the chance to be implemented.**



W.G. Robichaud/WCS

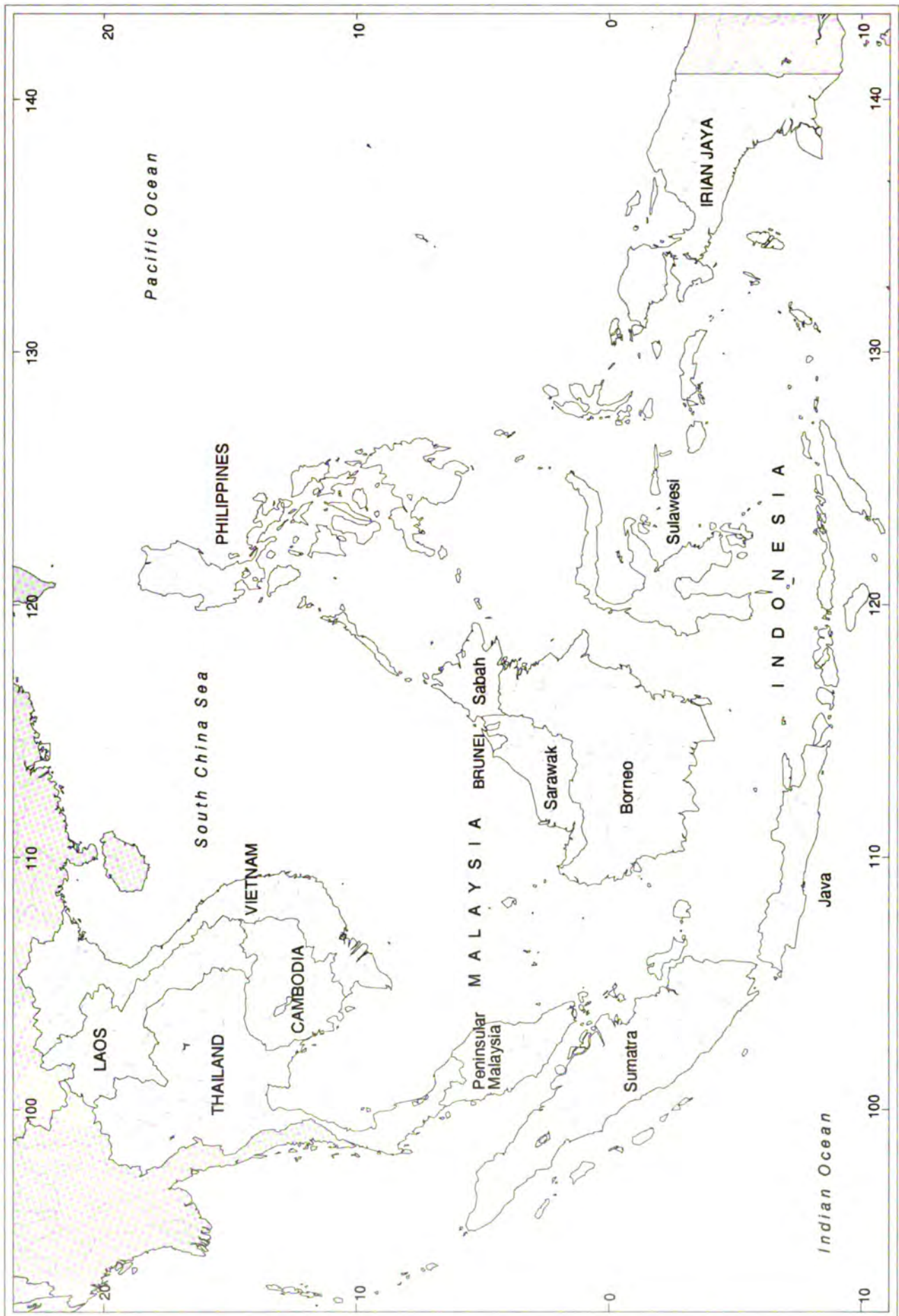
This lone hunter was carrying a smoked gibbon carcass and 20 Indochinese Box Turtles. Nam Theun Extension PNBCA, June 1998.



J. Compton/WWF Indochina

Rhesus Macaque for sale in the market at Lak Sao, Khammouane Province, Lao PDR. 1998.

REGIONAL MAP SHOWING LOCATION OF ALL SOUTHEAST ASIAN COUNTRIES DISCUSSED AT THE FORUM



KEYNOTE ADDRESSES

SESSION 2



Ho Ba Be National Park, Vietnam

SESSION 2

KEYNOTE ADDRESSES

CO CHAIRS: DR. PARISAK PRAVONGVIENGKHAM AND JEFF MCNEELY

The session was chaired by Dr. Parisak Pravongviengkham, Deputy Permanent Secretary, Ministry of Agriculture and Forestry, Lao PDR and Jeff McNeely, Chief Scientist, IUCN Secretariat, Gland, Switzerland. The first three keynote speakers provided a comprehensive and unique in-depth perspective on the current challenges facing protected areas based on their personal experiences in the region. The first keynote address was given by Effendy Sumardja, WCPA SEA Vice Chair, followed by Jeff McNeely, co-chair for this session, and Dr. Somsak Sukwong, Director of the Regional Community Forestry Training Centre (RECOFTC), Bangkok. The final presentation was a summary and update on the Fifth World Parks Congress to be held in Durban, South Africa in 2002, for which this forum is a precursor.

The following issues were highlighted in keynote speeches of this session:

"Most of the decisions impacting protected areas are made outside of the PA by a small number of elite with far reaching impact on marginalised local communities and the natural resources."
(McNeely, 1999)

There is not a direct correlation between the tremendous increase in the number of PAs in SE Asia since the 1982 Parks Congress and an improvement in PA management or conservation of these areas;

Despite improvements in PA management, many decisions and activities are beyond the control of PA managers and are determined by external factors, development pressures and illegal activities; Many PA systems are in urgent need of sustainable funding, an increase in staff, capacity training and integration of the management issues into the broader national and regional development and planning agendas; and

PA professionals must make other sectors (e.g. local people, government, urban centres, etc.) aware of the multiple benefits of protected areas, namely watershed protection, carbon sequestration, eco-tourism and sustainable resource management.

Effendy Sumardja - Challenges and Prospects

As the WCPA Vice Chair for SE Asia, Effendy Sumardja began the session with a summary of WCPA's progress in the region and a synopsis of the status of PAs in each country (see Session 3 Country Profiles for more specific information). The Vice Chair expressed his hope that the Forum could build on the accomplishments of the First WCPA Regional Forum, held in Indonesia in 1996, specifically by updating the Regional Action Plan for use at the Fourth World Parks Congress to be held in South Africa in 2002.

In response to the theme of this Forum, "Coping with the Unexpected: Problems and Opportunities in SE Asia at the Turn of the Century," the Vice Chair offered the following point to address the challenges faced by protected areas in the region:

How can WCPA devise an operational Action Plan for SE Asia?

How can WCPA assist efforts to address marine protected areas?

How can the capacity of protected area managers be improved?

What can be done to raise awareness of PAs in all sectors of society?

How can we strengthen the regional WCPA network?

The Vice Chair summarised the key issues and developments from each country represented at the Forum and highlighted the need to use this Forum and the WCPA regional network to update and complete the SE Asia Regional Action Plan. The Action Plan should be presented by the region at the IUCN World Conservation Congress to be held in Amman, Jordan in October 2000. The Vice Chair concluded by offering the following recommendations:

Explore new funding mechanisms for PAs (e.g. debt for nature swaps, management concessions, privatisation, regional biodiversity trust funds, rescue funds);

Establish a SE Asia Marine Working Group and undertake a regional study on marine PAs;

Develop a revised SE Asia PA Directory and make available to broad sector audience;

Continue to move towards actualising innovative and collaborative PA management;

Use email, internet and new forms of information to improve regional network;

Integrate the ASEAN policy on PAs into trade forum agendas; and

Co-ordinate with ASEAN Working Group on Nature Protection to develop a regional PA policy.

Jeff McNeely - Coping with the unexpected

Jeff McNeely began by reminding everyone that a myth has prevailed that SE Asia contained large tracts of primary forest that had never been occupied or used by people. On the contrary, local people in the region have a long history of interaction with the land and this remains true today for many rural populations. However, recent times have brought changes, which have added pressure on the natural resource base of each country. In response, the international community has assisted SE Asian nations with the need to establish protected areas.



"Each country in SE Asia has its own specific challenges in establishing and managing its protected area systems to meet the unique needs of its society. Protected areas are created by people across unique landscapes, so they are expressions of culture and serve as models of a specific human relationship with the natural environment."
(McNeely, 1999).

Kathryn Monk/Leuser Management Unit

A snap shot of Leuser National Park

McNeely pointed out how actors in PA management in SE Asia continue to face many challenges and have learned many lessons. For example, the involvement of local people (many of whom live within the protected areas) in planning and management remains a major issue and is an area which needs improvement in the region. Further improvement could evolve from expanding the scope of sectors and stakeholders involved in the establishment and management of PAs. Finally, protected areas need to be viewed as vital parts of a larger bioregion, including buffer zones, corridors and ICDPs which provide benefits to local people.

Tremendous advances have been made in the SE Asia PA network. A major event for the region was the hosting of the 1982 Third World Parks Congress in Bali, Indonesia, which was the first such global event held in a developing country. Several working groups, regional manuals and research materials originated from this meeting, including the Corbett Action Plan and the Review of the PA system in the Indo-Malayan Realm. Although a Regional Action Plan has never been completed, a draft exists and is scheduled for completion this year.

Too much growth too quickly poses considerable challenges to SE Asia's developing countries, which are reflected within PA networks. For example, in 1993 Lao PDR established 17 (now 20) NBCAs covering nearly 12 % of the country. This was a monumental step; however, many of the protected areas are still without trained staff, funding and management plans. Similar to many protected areas in SE Asia, tremendous gains in the PA system in Lao PDR have been made this past decade, yet there must be a commitment to continue turning these paper parks into managed ecosystems that are benefit conservation values and local people.

CBD AND PA GUIDELINES

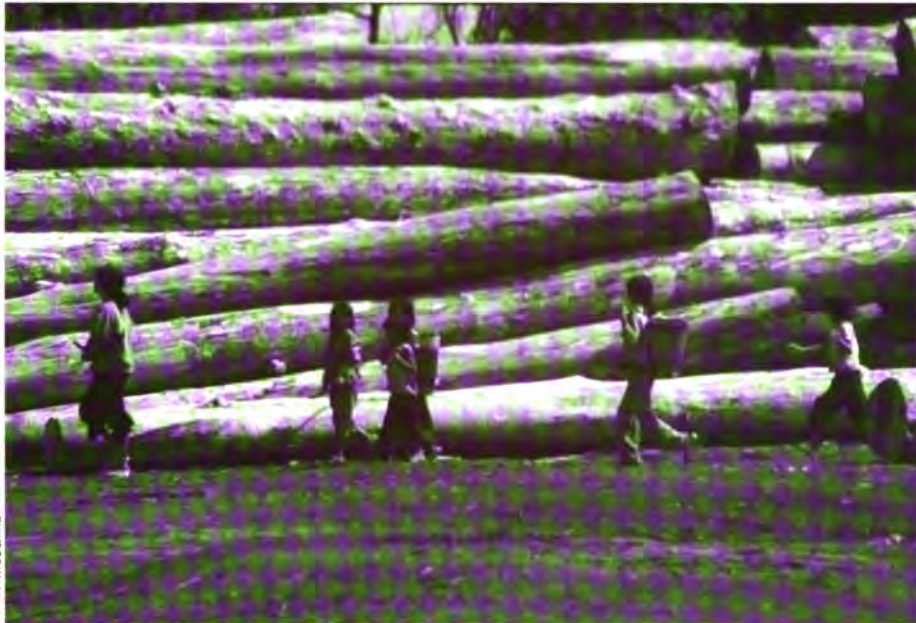
Signed in 1993, the CBD has been ratified by each country in SE Asia except for Thailand. Article 8 of the convention requires each country to:

- Establish a PA network;
- Develop guidelines for selection, establishment and management of PAs
- Promote sustainable development in buffer zones; and
- Generate financial support for PA s.

McNeely praised SE Asia for its advances in PA designation, yet cautioned everyone about the carrying capacity of the system. He observed that in 1960, all the site managers for the 200 PAs at that time could have fit in the meeting room of this WCPA Forum, whereas today, there are over nearly 1,000 PAs in SE Asia covering 1.6 million sq. km or 6% of the land. In fact, Lao PDR, Thailand, Indonesia, Brunei and Cambodia have designated over 10% of their total land as protected.

The growth of PAs in the region has primarily occurred in terrestrial areas. More emphasis must be placed on watershed protection and marine conservation. Despite containing an enormous amount of the world's marine resources and biodiversity, the development of marine conservation has been difficult in the region due to various challenges, including territorial disputes and accessibility. A solution to these issues has been the establishment of the Turtle Island Trans-border Protected Area between the Sabah and Philippines (See Annex, session 4).

Many SE Asian countries have now ratified various international conventions and regional agreements regarding conservation, but the Convention on Biological Diversity (CBD) is the most comprehensive international mechanism to assist countries in the establishment and development of a protected area network.



WWF Indochina

Logging in Cuc Phuong National Park, Vietnam

"The single over-riding issue for PAs in SE Asia is how to balance living in harmony with nature with the need to exploit resources to fulfil human needs. Conflicts from this dilemma have arisen due to the emergence of the global market, which have overturned the need to fulfil local needs in favour of exploiting resources to generate capital from exports. PA managers must not overlook the broader local socio-economic factors of communities within and surrounding the PA. There is a need to adopt a national plan which requires a firmer governmental commitment to PA management and the forging of alliances with other stakeholders." (Jeff McNeely)

In SE Asia, governments have been willing to establish PAs and to co-ordinate with international donor projects, but they have seldom allocated the necessary funds and commitment to manage the areas effectively. Previous statistics show that the mean staffing for the region only amounted to 15 people per 100,000 ha, budgets amounted to only \$60 per 100 ha. It is no longer a matter of mere lack of central or local government funds. *PAs need to be viewed as important resources with economic benefits for the local community and the government rather than as areas that restrict growth and do not deserve investment.* The values of PAs include tourism, watershed protection, reduction of flooding, support for irrigation systems and the protection of local access for subsistence purposes. McNeely recommended that the region continue to increase the number of PAs, especially for marine areas and to utilise more of the IUCN categories. Existing PAs should be worked into broader strategic plans and management practices improved.

Dr. Somsak Sukwong - Bridging Barriers between Scientific and Local Knowledge

Forest degradation has become a local, national and global concern and thus the challenges need to be addressed and tackled at each level. The challenge for PA management in SE Asia is how to balance forest and biodiversity conservation with rapid development and social equity. Too often, science, technical expertise and mathematical formulas have overshadowed the knowledge and viewpoint of local communities living within or near a PA. In fact, today as populations are expanding and large forest areas diminishing, local people's co-operation becomes more important and their 'value' as active partners is undeniable.

In many ways, the old dogma of western conservationists and even IUCN has had to adapt to meet the needs of PA management in the developing world, especially SE Asia. For example, it has taken years in this region to recognise the participatory role of local villagers in establishment and management of PAs rather than only seeing them as a threat encroaching on the resources. Often, the local community has tenure and access rights for generations which may not even be legally recognised. Although, villagers and population increase have put pressures on PAs, the real threat has come from the development activities of the government and private interests often resulting in fragmented forest areas. There has been a tremendous growth in awareness and funding in conservation in SE Asia over

the past twenty years, but it has occurred in parallel to even a higher growth and pressure for economic development and prosperity.

Putting a stop to the relentless deforestation and conserving PAs goes beyond the work of one project, a single new donor concept, a single government agency, a new law or the efforts of the village living within the park - it is the collaboration of each of these stakeholders and factors along with focussed attention of government and developers of the land use designation of protected areas.

We have been successful in increasing the number of PAs in SE Asia, especially in areas of expansive primary tropical forest and key wildlife habitat. But, protected areas are often designated in areas of tremendous resource extraction - where the total protection and buffer zone are more akin to a war zone, where local people are the ground troops of poachers and businessman.

It appears that Lao PDR has taken the approach of collaboration with local villagers. They have remained within the protected areas, with user rights and a role in the land use and protected area management.

Fast growth has changed the situation in SE Asia so quickly in the recent past. Economic growth, development and even the increase in the number of PAs is faster than the growth in capacity to maintain the system.

"It is not important to be a Tiger. The most important thing is to be able to maintain ourselves and have a self-sufficient economy. It means that one is able to support oneself." (The King of Thailand on his birthday in 1997)

The power of a strong civil society and involvement of local communities has kept some stability as the economic balloon has burst and other crises have occurred. In fact, many local villages whose practices are agriculturally sustainable did not suffer greatly from the crisis. Their ability to grow food, to save and to manage their resources sustainably keeps them afloat.

In summary, the human base of PA management must be as important as the technical base. Laws and documents should not just present vague rhetoric about involving local communities in decision-making and processes, but should be instruments which require action from responsible parties and easily enforced once a government has achieved the administrative capability. There is always time to change and we must continue to change and evolve.

"Successful action is a teacher, mistakes can also be a teacher. If we have several mistakes, then several teachers we'll have." (Thai proverb).

The final presentation of the keynote session was an overview and update by Peter Shadie, IUCN-Secretariat, on preparations geared towards the Fifth World Parks Congress, to be held in Durban, South Africa in 2002. This regional WCPA Forum in Pakse is a precursor for the Fifth World Parks Congress, which is held every ten years and hosts over 2,000 PA professionals. Information on the World Parks Congress and contact details are listed in the paper Peter Shadie delivered and attached to Session 2 in the Annex.



Ban Pasong - Banana Leaf Village, Hin Nam No NBCA, Khammouane Province, Lao PDR

Sharon London/WWF Lao PDR

*"While the governments in SE Asia seem willing to declare more protected areas on paper, they seldom allocate the necessary programs or funds to manage the areas effectively."
(Anon)*

Questions and Discussion

Questions to Lao PDR:

1) Do you intend to classify the protected areas in Lao PDR based on the IUCN guidelines?

Maybe. We think Category II (National Park) might be the most appropriate, but we have not reviewed enough information yet to make a final decision.

Note: the new Protected Area Decree due to be signed in 2000 should address this issue, as the current NBCA system has been classified as Category II in the Draft Decree. Furthermore, this Decree lists Category I, V and VI as potential categories for protected areas in Lao PDR, but it is unclear when the government will reclassify existing protected areas or use these categories for protecting new tracts of land.

2) What are the priorities for PA management and conservation along the Lao PDR and Vietnam border?

The highest priority is to strengthen the Lao protected areas, by building capacity to effectively manage Lao protected areas. Formal agreements with the Vietnamese government are a parallel first step due to the requirements of funding from both governments. Then we should focus on certain areas for trans-boundary work.

3) Are there any plans on how to fund and sustain the protected areas in Lao PDR, especially when most of the major conservation projects finish in 2000?

Article 47 of the Forestry Law permits the establishment of a Trust Fund. We are working on agreements with hydropower consortiums and electric companies on this topic. We hope to charge a certain percentage to the private sector for many projects near protected areas. Also, we believe ecotourism can offer a big boost in certain areas. We are also trying to gain local funds from coffee plantation owners in Huang Xai NBCA.

Note: there are several hydro-development projects that are or will be located at the periphery of protected areas and it is the hope of Lao PDR that revenue from these projects through the establishment of a Trust Fund can be used for conservation purposes. For example, currently Phou Khao Khouay NBCA has an agreement with EDL (Electricite du Laos) to receive 1% of annual revenue from the neighbouring dam.

4) In Thailand we have learned many lessons from working with shifting cultivation communities, so what has Lao PDR learned?

Shifting cultivation can be a sustainable form of land-use if the fallow period is at least seven years, but in the north especially, studies have shown that fallow periods are only two or three years. These fallows are unsustainable; therefore, we need to allocate land to local households for farming in villages. The problem is that we can only give a land certificate to households for degraded land, so upland areas inside PAs may not be formally allocated. These areas are managed under a village use agreement.

5) When is local participation inappropriate for PA management?

PA managers have the mandate to involve local people in the management and decision-making process, however, there are circumstances where they must be moved or their access restricted. In those cases they would need to be compensated for loss of benefits in the protected area.

General question to the floor:

6) What is the role of carbon offset programs in SE Asia PA management?

Carbon offset programs have the dual impact of sustaining funding for the protected area whilst maintaining carbon levels at a desired global level. There have been a few good examples with the Netherlands in Malaysia and a US power plant in Sabah specifically.

COUNTRY REPORTS

SESSION 3



Noelle O'Brian/IUCN

Local fishermen in Coastal Cambodia.

SESSION 3

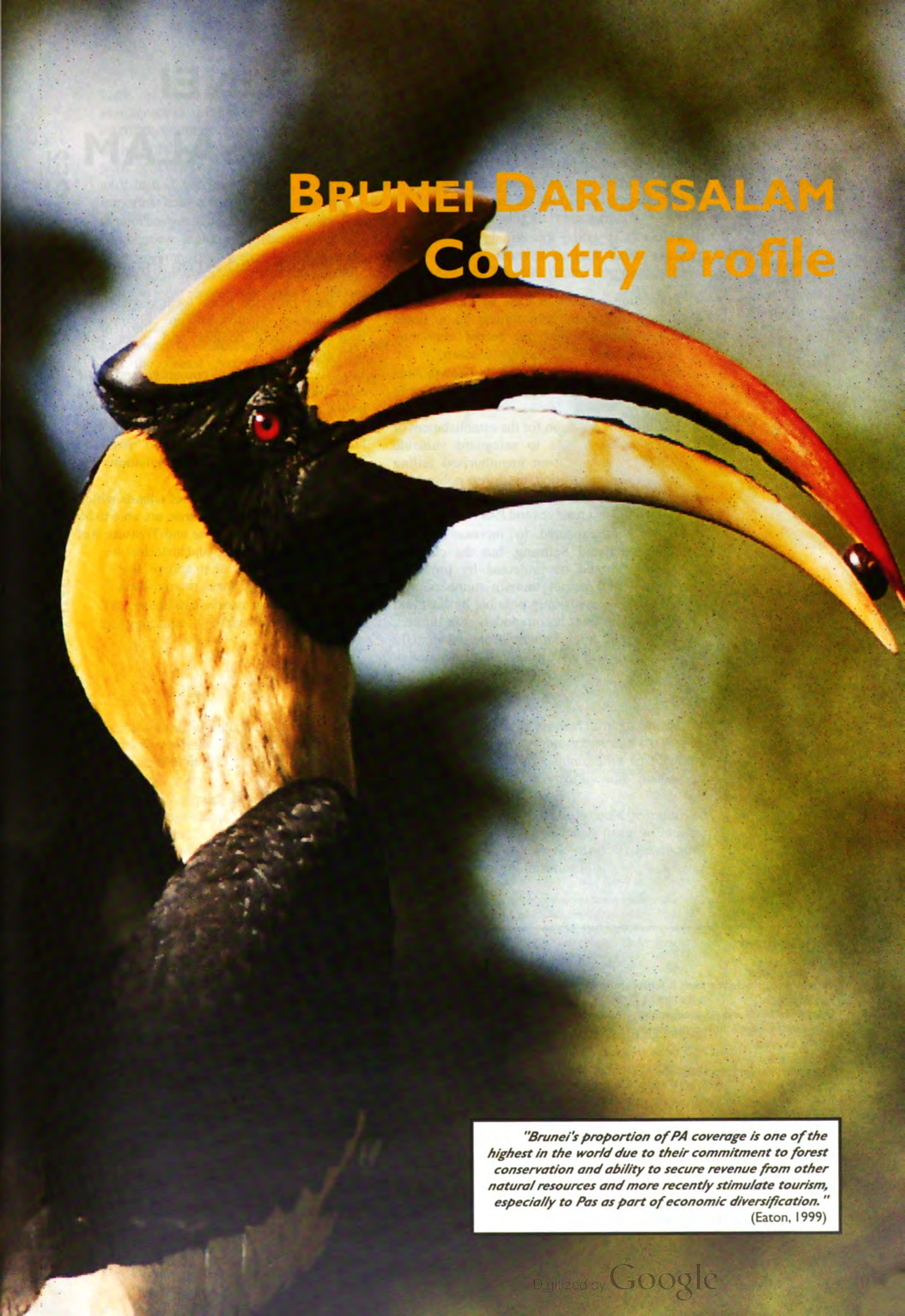
COUNTRY REPORTS

CO-CHAIRS: EFFENDY SUMARDJA AND KATHY MACKINNON

There were ten presentations for Session 3, which provided participants with a background to the current status and issues in each country in the Southeast Asia region. These country reports can be found in the Volume II document, session 3. It was interesting to hear about the progress made with individual PA systems and the attainment of goals since the First WCPA Regional Forum. Furthermore, from these presentations it became clear that the countries face similar threats, challenges and future tasks, despite their unique political, cultural and economic situations. It was evident that every country could benefit from regional cohesion in improving PA management.

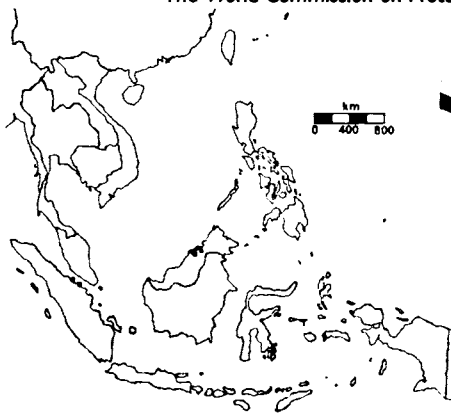
Since many of the Country Reports did not follow the uniform guidelines set by the Forum organisers, we felt it would be beneficial to provide everyone with a more complete overview of the PA statistics and issues in the region. A particular discussion at the Steering Committee meeting focused on the need for each country to update the PA information that they should be sending to the World Conservation Monitoring Centre (WCMC) to include on their PA database and web site. Furthermore, with the establishment of the ASEAN Regional Centre for Biodiversity Conservation (ARCBC) in the Philippines, the need to establish a systematic regional reporting system is even more evident. Therefore, IUCN Lao PDR country office offered to begin the process of information gathering to stimulate the contacts within each country and the passage of data on PA issues. For the proceedings, we decided to compile the information which had been gathered to date and formulate a "Country Profile" for each country in SE Asia, except Myanmar and Singapore who were not present at the Forum.

Note: These country profiles are preliminary drafts based only on information presented at the Forum and sent by the participants. It is the hope of the IUCN Lao PDR country office and the WCPA Steering Committee that the information in these profiles will be reviewed, updated and forwarded to WCMC (www.wcmc.org) and ARCBC (arcbe@laguna.net) and made available on the WCPA and other regional web sites. Protected Area and wildlife regulations were also collected and a review of these is being sent to the IUCN Environmental Law Commission (ELC) and the Asia Pacific Environmental Law Centre (APCEL).



BRUNEI DARUSSALAM Country Profile

"Brunei's proportion of PA coverage is one of the highest in the world due to their commitment to forest conservation and ability to secure revenue from other natural resources and more recently stimulate tourism, especially to Pas as part of economic diversification."
(Eaton, 1999)



BRUNEI DARUSSALAM

Status of Protected Area Program

STRENGTHS

Proportion of PAs is high by international standards due to commitment to a forest conservation policy and recent economic diversification through oil and tourism

Formation of ASEAN East Asia Growth Area may increase tourism and provide support to PAs

The original intention for the establishment of forest reserves was to safeguard valuable timber resources from unauthorised felling and shifting cultivation, but forest policy now reflects a broader realisation of the different values of forest reserves and PAs

Tourism is expected to increase in Ulu Temburong and Selirong, but the carrying capacity should be protected by proactive measures to restrict tourism numbers. For example, access is only possible by boat and not by road, boat accommodation is limited, and a single track railway proposed for Ulu Temburong will serve to maintain restrictions.

PAs have provided some local employment through work on infrastructure construction, boat hire, field centres and other park activities.

Proactive steps in Ulu Temburong and some other PAs include latrines, garbage in and out policy, walkways and steps to facilitate visitor movement prevent erosion, and Forest Department guides hired to provide information and ensure that regulations are followed

Pelong Rocks, small coral reef islands which provide breeding sites for terns, are able to be protected under Antiquities and Treasure Act as an ancient monuments and historical site

"If the statutory safeguards for the Ulu Temburong NP appear to be insubstantial the status and management of Brunei's other park, Tasek Merimbun, is even more ambiguous" (Eaton, 1999).

A 1984 report by Anderson and Marsden recommended that forest reserves be classified into production, protection, conservation and recreation forests. Although 50% of the reserve area has been placed into the last three categories, these recommendations have never been formally endorsed and there still exists no new legislation.

Size and Population:

5765km

Ethnic minorities:

Various groups including Ibans in forest areas

Economics:

Dominated by oil and gas production for export, bringing considerable wealth little pressure to exploit natural resources. No logging exports.

Forest Cover:

Tropical rainforest covers 80% of the total land area

Biodiversity Values:

N/A from country sources

PA Totals:

25 PA's covering 2,260km (39% of total land area)

PA Budget:

N/A from country sources

People in Parks:

N/A from country sources

Types of PAs:

National Parks (2)

Protection Forests (5)

Conservation Forests (11)

Recreational Forests (8)

Management Authority:

Forestry Department

Manages Ulu Temburong NP and forest reserves

Brunei Museum

Manages Tasek Merimbun NP

Legislation:

Forest Act, ch. 46 covers establishment and management of forest reserves. Wildlife Protection Act contains provision for the establishment of sanctuaries

International Conventions signed:

CITES (1990), Law of the Sea (1997), ASEAN Agreement on the Conservation of Nature and Natural Resources (1985), ASEAN Declaration on Heritage Parks and Reserves (1984)

Front cover photo: Hornbill. Anon

CHALLENGES

Lack of specific PA regulation or any management plans limit the ability to establish, maintain or improve the PA system
Selirong Island is the largest forest recreation park covers over 2,566 ha of largely undisturbed mangrove forest, which is an important habitat for proboscis monkeys

Brunei has yet to become a party to the Ramsar Convention, making it difficult to assist with the three important wetlands identified in the Directory of Asian Wetlands (Scott, 1989)

Entry to most recreational parks is unrestricted during the hours of daylight making it difficult to monitor, even though the Forest Department has powers to control and limit visitor access and the Forest Act prohibits trespassing, clearing land, fires, hunting, fishing and NTFP collection

The Forest Department and the Museum are limited by inadequate administrative capacity to undertake necessary tasks of conservation management, interpretation and enforcement, despite available financial resources.

Current fragmentation of administrative responsibilities for PAs is an obstacle to their effective planning and management

Even though forestry policy is flexible and pragmatic, reserves do not have statutory safeguards against future logging without proper regulations

Timeline for
PA Development

- 1962 Unsuccessful rebellion resulting in ban on ownership of all firearms
- 1984 Tasek Merimbun declared as an ASEAN Heritage Site
- 1990 Annual production of logs was halved to 100,000m³



Rufous-necked Hornbill

THREATS

Illegal logging in Sungai Ingei Conservation Forest from across the border with Sarawak
The potential of tourism numbers beyond the carrying capacity of the Pas

Further specific legislation and management plans for individual specific PAs are needed if management of PAs is to be more efficient and effective.

The special report on Wildlife Conservation and Management (Farmer *et al.*, 1986) recommended a new Wildlife Conservation Act in place of "the inadequate and unenforced Wildlife Protection Act" (Eaton, 1999). The new legislation should contain provisions for the establishment of NPs, WSs and NRs and identify potential areas

Fragile ecosystems of coastal regions, where most population and development are concentrated, are priority areas for protection measures. This is confirmed in an ASEAN and US coastal Resources Management Project (Silvestre *et al.*, 1992), which identified 31 out of the 33 small islands and mangrove swamps as being especially important for protection as conservation areas

Brunei Bay has been suggested for trans-boundary collaborative management involving Brunei, Sarawak and Sabah (Caldecott and Farmer, 1987). Sungai Ingei Conservation Forest would be another possible area for international co-operation, as this borders a proposed extension to Gunung Mulu NP in Sarawak.

Enhance public awareness through formal and informal education programs and by greater collaboration with communities in planning and managing environmental protection projects.

Staffing and training needs could be improved through external assistance from within the ASEAN framework and from wider international organisations

"The inclusion of national parks and conservation within forestry is the model which has been adopted in several Southeast Asian countries and would represent the type of evolution of functions which is most practical under present administrative structures" (Eaton, 1999)

Fragmentation of administrative responsibilities for PAs could be overcome via the creation of a new government agency to manage all protected areas, as recommended by the report on Wildlife Conservation and Management (Farmer *et al.*, 1986). Alternatively, the present Parks and Recreation Section of the Forestry Department could be reorganised to have jurisdiction over all parks and reserves

RECOMMENDATIONS

ULU TEMBURONG NATIONAL PARK

In 1991, the Forestry Department took initiative and announced that the Batu Apoi conservation forest reserve, an area of 480km², would be developed into a National Park. A budget of B\$5 million (equivalent to just under US\$3.5 million) was allocated for the development of the park under the Sixth National Development Plan (1991-1995), and a further B\$18.95 million (US\$13 million) under the Seventh National Development Plan (1996-2000). This park is being developed within EAGA to accommodate tourism growth.

Human Impact

In the past, human impact on the area has been limited due to inaccessibility, topography and protected status as a forest reserve. There has been no recent permanent settlement and there is little evidence of shifting cultivation. No commercial logging has ever been authorised, although some illegal logging and collection of the fragrant *gaharu* (*Aquilaria* sp.) wood has been carried out from across the Sarawak border. There is some collection of non-timber forest products, hunting and fishing by Ibans from nearby longhouses in Brunei, but this is for subsistence purposes and does not seem to have a significant effect on wildlife resources (Eaton and Susilawatiniah, 1992). Whether these local subsistence activities will be allowed to continue is uncertain as **no management plan or by-laws have yet been drawn up for the park.**

Biodiversity Values and Research

The rich bio-diversity of Ulu Temburong has recently been documented by the following surveys:

First survey identified 420 tree species in a relatively small area near the confluence of the two main rivers (Ashton, 1964)

A 1984 joint military and civilian expedition recorded 48 mammal and 105 bird species in a three-week period (Bennett, Caldecott and Davison, 1987)

More long-term research was carried out under the Brunei Rainforest Research Project during 1991 and 1992, jointly organised by the Royal Geographical Society and the University of Brunei Darussalam

Research on a variety of biological and geographical projects was performed in a fifty square km section of the park (Cranbrook and Edwards 1994; Edwards, Booth and Choy 1996) finding 325 species of butterfly within a 1km radius of the centre (Orr and Hauser 1996: 127) and 198 species of birds (Mann 1996:102). Since the end of the expedition in 1992, the centre has remained under university management and is used for environmental education and research.

Zoning

The zoning system of the Park includes:

Scientific research and education area

Low intensity use wilderness zone where conservation is the main objective

International border zone where access is restricted, partly to protect the high altitude flora in the mountain areas from disturbance and elsewhere for security reasons

Intensive use administrative zone where Park development and visitor amenities are located

Medium intensity use zone up the Temburong river.

Tourist Facilities

Present development within the Park has been focused on tourism within the intensive and medium use zones and has taken the form of the following:

Nature trails, which include seven kilometres of wooden walkways connected by two suspension bridges across the Temburong River

A 50m high canopy walkway, which gives both scientists and tourists a unique opportunity to examine the upper layers of the forest

Four camping sites within the park and chalets near the entrance

A park headquarters and information centre are being constructed

Since access is limited to a slow longboat at this time, it is proposed that the Forestry Department build a short single-track railway from the road-head at the nearest longhouse, Batang Duri.

HOW HAS BRUNEI RETAINED ITS FOREST COVER?

As the rest of SE Asia has witnessed the degradation of nearly all of its original forest cover, Brunei Darussalam has been able to retain nearly 80 of its tropical rainforest. Reasons for this include:

- Ability to create wealth from oil resources have lessened reliance on timber as natural resource
- The relative unimportance of agriculture has meant that there has been limited deforestation due to shifting cultivation or conversion to other types of land use
- Population densities are generally low, averaging 55 people per km²
- Concentration of population and development in the coastal region has left much of the interior sparsely inhabited and its forests and uplands untouched
- Hunting of wildlife is limited by the ban on the use and ownership of firearms
- Predominantly Muslim population do not eat wild pig, monkeys or other animal species considered unclean

(Eaton, 1999).

Half of Brunei's 18,418ha of mangroves have been proposed for conservation or protection.

Brunei Darussalam has the financial ability to adequately support its PA program. For example, the government has appropriated over \$15 million (US) for the establishment and management of Ulu Temburong National Park.



Mika Epprecher/WWF

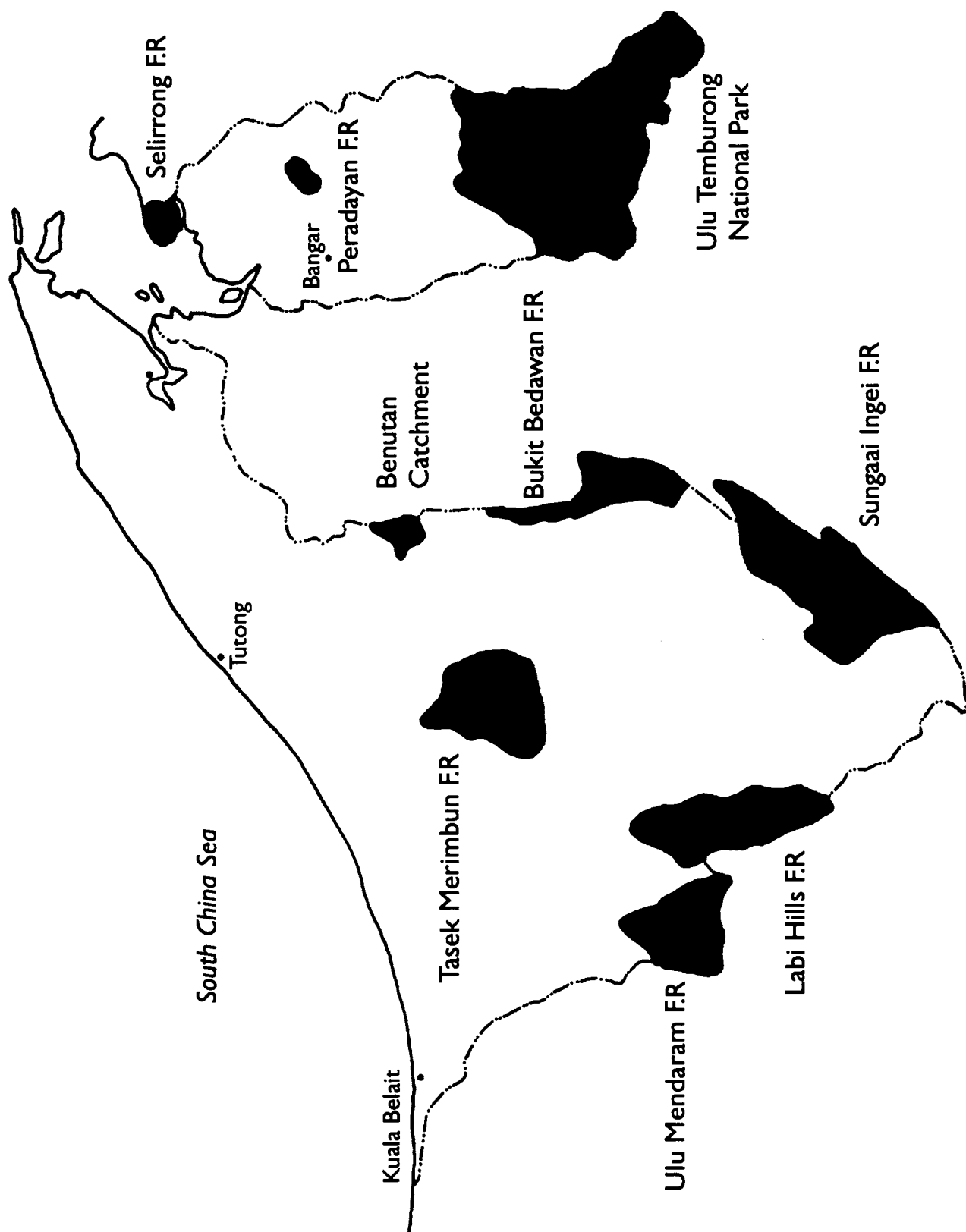
A canopy walkway can be used as a good vantage point to observe wildlife and study the flora and fauna, like this walkway in Attapeu Province, Lao PDR.

LIST OF PROTECTED AREAS IN BRUNEI DARUSSALAM CORRESPONDING TO IUCN CATEGORIES

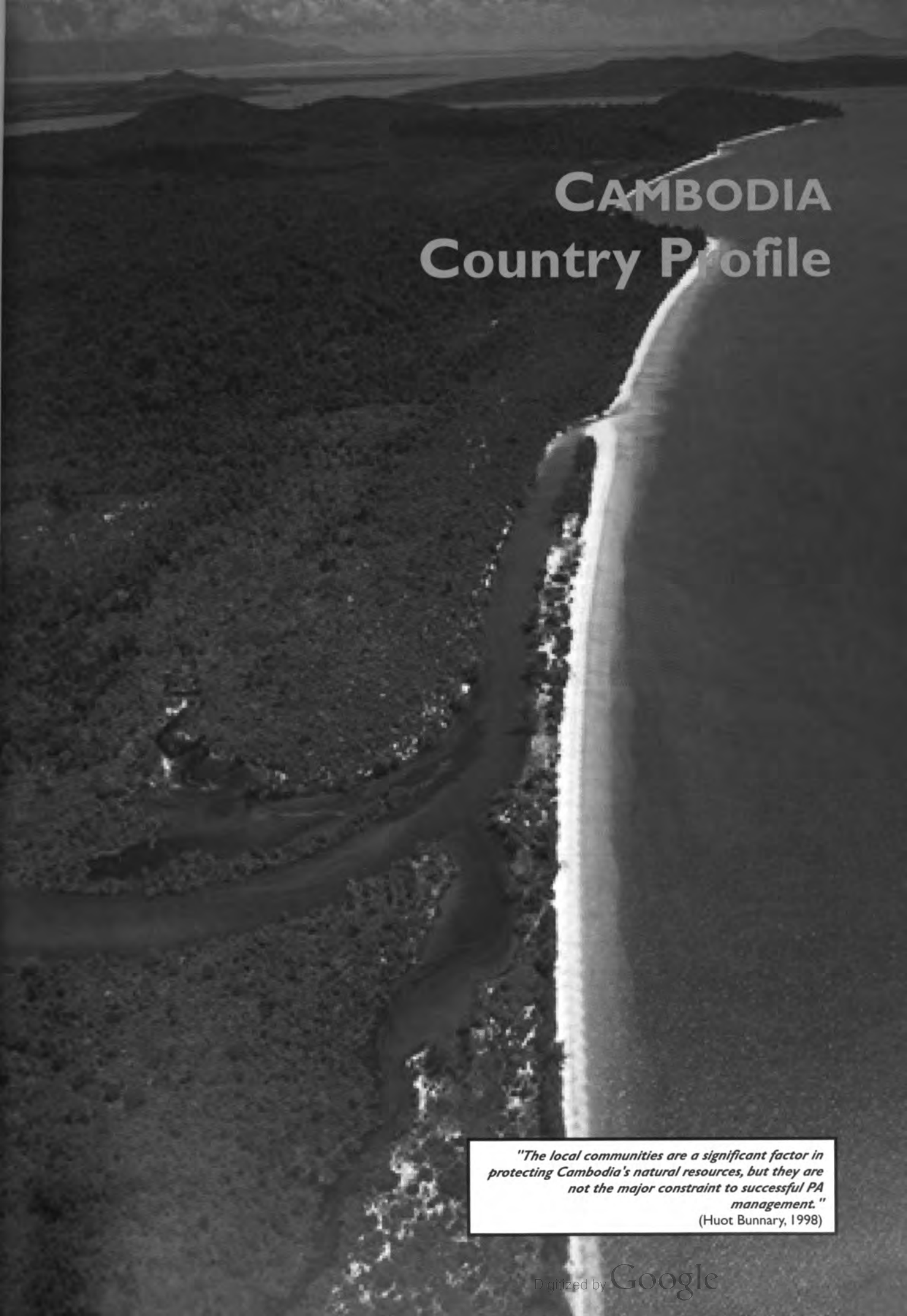
Name of Protected Area	Size (Hectares)	Year Inscribed
NATIONAL PARK – IUCN CAT II		
Ulu Temburong	48,859	1991
Tasek Merimbun	7,800	
PROTECTION FORESTS – IUCN CAT IA		
Bukit Teraja	6,825	1947
Buki Bau Patam	921	
Bukit Ulu Tutong	251	
Benutan Catchment	2,932	1950
Bukit Bedawan	7,633	1950
CONSERVATION FORESTS		
Anduki	917	
Andulau	746	
Bada	76	
Belait PSF FRR	1,492	1982
Berakas FRR	149	
Bukit Biang	2,730	1987
Bukit Sawat	486	
Keluyoh FRR	77	
Sungai Ingei	18,491	1947
Ulu Badas FRR	443	
Ulu Mendaram	6,170	1982
RECREATIONAL FOREST		
Sungai Liang	66	
Berakas	199	
Luagan Lalak	275	
Peradayan	997	
Subok Hills	15	
Bukit Shahbandar	234	
Selirrong	2,566	
Sungai Lumut Arboretum	200	

Source: Brunei Darussalam Forests Department, 1996

PROTECTED AREAS IN BRUNEI DARUSSALAM

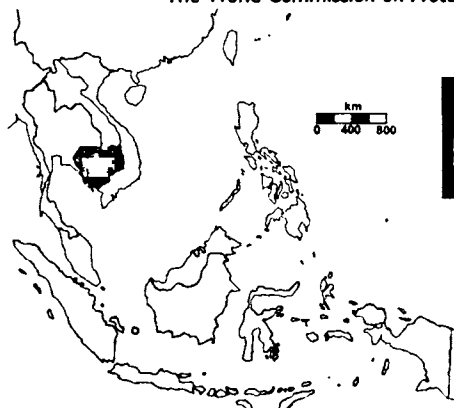


Map Note: Areas over 1000ha², but does not include smaller recreation and conservation reserves, or proposed areas.



CAMBODIA Country Profile

"The local communities are a significant factor in protecting Cambodia's natural resources, but they are not the major constraint to successful PA management."
(Huot Bunnary, 1998)



CAMBODIA

Status of Protected Area Program

STRENGTHS

Recent Ramsar nominations include Boeng Chhmor (portion of Ton Le Sap), Koh Kapik (mangrove area on island within Peam Krasop WS) and middle stretches of the Mekong River

MOE's eagerness to build capacity and receive external support to develop the PA system
Government interest to emphasize village forestry and collaborative management in PAs
Opportunity to utilize traditional knowledge and guardian principles of local people living near PAs

The budget to MOE for PA management is only 0.1% of the total amount allocated to ministries

Largest ratio of PAs to total land in SE Asia (19%), so potential conservation value is high

One third of Cambodia's PA boundaries border a neighbouring country

Protected areas need to be managed as components in the broader region of which they are a part; greater cooperation across national boundaries is needed (Phillips, 1999).

CHALLENGES

Lack of legal framework and inadequate number of field staff, resources and capacity to support management

Ability of MOE to manage PA is strained by powerful individuals, neighbouring communities and logging companies who have control and access to exploit the natural resources

Local people living near PAs have high dependence on resources and incentive to clear land to claim ownership under current policies

Low understanding of conservation and benefits of PAs by local people and government

Many PAs are vulnerable to illegal wildlife trade and difficult to manage and patrol due to remoteness and vicinity to borders or the coastline

The relationship between PAs and broader land use and development planning is vague

Size and Population:

Total land base is 1.8 million ha (WCMC, 1997)

11 million people (1998)

2.5% growth per annum and doubled since 1965

Ethnic minorities:

85% of people subsist off the natural resource base

Economics:

1993, 1998 reforms to base growth on natural resource base

7 million ha of forest or 40% of land under forest concession

Forest Cover:

10 million ha, 55% of country (1997)

50% has substantial economic value

Biodiversity Values:

N/A from country sources

PA Totals:

23 PAs covering 3.3 million ha or 19% of total land base

Only 2 NP (Ream and Kirirom) and Snoul WS have been officially inaugurated for DNCP management

People in Parks:

N/A from country sources

Types of PAs:

National Park (7)

Wildlife Sanctuary (10)

Multiple Use Area (3)

Protected Landscape (3)

Proposed new category - Protected Forest for Biodiversity Conservation and Watershed Protection

Management Authority:

Ministry of Environment (MOE)

National Parks and Wildlife Sanctuaries

Planning, Development, Management and Enforcement

Dept. of Nature Conservation/Protection

Draft decrees and policy

* PA Office

* Wetland and Coastal Zone Office

* Buffer Zone & Community Forest Office

MOE, MAFF, Min. of Arts & Culture and Min. of Water Resources

Protected Landscapes and Multiple Use Areas

Dept. of Forestry and Wildlife (DFW)

Manage forest areas and wildlife outside of PA's

In total, 125 staff manages 5 NPs and 4 WS

Legislation:

1993 Royal Decree on PAs; Wildlife Decree in Draft form

International Conventions signed:

RAMSAR (1999); CITES (1997); CBD (1995); Climate Change (1996); MARPOL (1996)

Front cover photo: Cambodia Coastline. Stuart Chape/IUCN

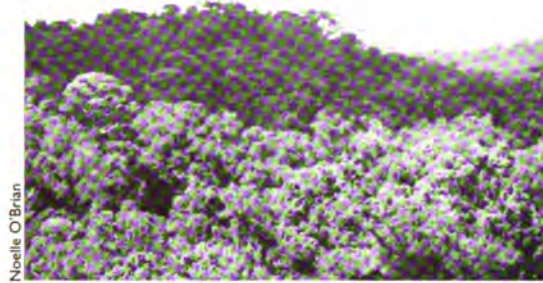
THREATS

Unsustainable and illegal logging
15 of the 23 PAs have valuable commercial resources and are under high threat from illegal activities

Impact on natural resources from rapid economic development, market oriented policies and increased standard of living and demand for wildlife and logs throughout SE Asia and China

Encroachment on PAs has increased due to population growth and needs of indigenous communities and refugees

Policy incentive for local people to clear forest land and plant crops in order to receive tenure rights



Noelle O'Brian

Forest cover as viewed from the Giant Buddha, Phnom Kulen

Timeline for PA Development

- 1960's Forest reserves established and managed by the Ministry of Agriculture
- 1970's Extensive forest areas and NP tourist centres are destroyed by bombing and defoliation
- 1970 - 1975 Khmer Rouge ends international relations and expels foreigners
- 1975 - 1979 Forestry and conservation professionals exterminated under Pol Pot's genocidal policy
- 1979 Vietnamese defeat the Khmer Rouge
- 1987 Fisheries Law enacted
- 1992 IUCN began support Government effort to implement biodiversity conservation
- 1993 General Election held
- 1993 Establishment of MOE with authority for PA management
- 1993 Royal Decree on establishment of PA system 23 PA's listed
- 1996 Law on Environmental Protection and Natural Resource Management
- 1996 First Forest policy assessment conducted by World Bank/FAO/UNDP
- 1996 First five year socio-economic plan mentions environmental protection
- 1998 General Election held
- 1998 National Census conducted
- 1999 Government cancelled 12 logging concessions from 9 companies for 2.1 million ha of forest
- 1999 Snoul Wildlife Sanctuary inaugurated
- 1999 Forest crime monitoring program established by with independent team
- 2000 Sub-Decree on PA management (drafted by DNCP)
- 2000 DFW, MOE, Concern and UNDP/FAO drafting Sub-Decree on Community Forestry
- 2000 100 new rangers recruited from local communities to manage PAs
- 2000 Drafting National Forest Policy emphasising village participation and revising laws

IMMEDIATE

MOE and DFW need to improve coordination with planning and management of forest resources

MILITARY MUST CEASE ALL ILLEGAL LOGGING IN PAs

MID TERM 1-3 years

Establish legal policy framework to support reforms and PA system, namely to complete revision of PA, wildlife and village forestry laws

Implement joint enforcement capability with MAFF < DFW and MOE and local communities

Introduce tough and enforceable penalties for illegal practices in forestry sector

Initiate participatory planning, management and monitoring of PAs with local people living within PAs and the buffer zones

LONG TERM

Use military to strengthen patrol and enforcement of PAs

Cambodian population needs to improve awareness of link between sustainable use of resources and long term economic growth, human intervention to PA's (large scale and local people)

OTHER

Need to protect buffer areas that feed into protected wetlands (Tonle Sap) from unsustainable development

Need to improve links with MAF, MARD, and the Ministry of Woman's Affairs

To improve integration of economic and spatial planning, PAs

Map the boundaries of the PAs and relation to villages and forest concessions

Research the land tenure and NTFP extractive rights in the PAs

Prepare management plan guidelines and draft plans for each PA

RECOMMENDATIONS



Noelle O'Brian

Wet season in Rattanakiri Province

Box 1

ILLEGAL LOGGING

The government cancelled 12 logging concessions for nine companies covering two million ha of forestland due to the inability of the companies to follow procedures and pay royalties to government. The government intends to add these areas to the protected area network. The forest cover in Cambodia is dwindling due primarily to illegal logging by military units and companies.

The government has been unable to enforce against these activities which are costing the government an estimated \$100 million per year in lost revenue (1996). 4.2 million cubic metres were cut in 1997 and at that rate, the forest cover may be lost in the next five to ten years (Global Witness). Cambodia is seeking \$1.3 billion in donor aid so aid should be tied to sustainable logging practices.



Resin tree, Siem Reap

If managed properly, sustainable logging could fuel economy for next 30 years

Forestry department focuses more on concessions than to the forestry needs of local people

Government policy is that forest resources are the main source of income for the state

Military and local strongmen in forest areas near PAs conduct illegal logging

Phnom Penh, Cambodia: The government has been unable to enforce against these activities which are costing the government an estimated \$100 million per year in lost revenue (1996).

Forestry Department claims that local people are main cause of deforestation and therefore restricts NTFP gathering and local use; however, the government approves large logging concessions

31 concessions were issued for nine companies for two million ha of forest (1996)



Illegal chainsaw workers in Phnom Kulen

Government lost nearly \$60 million last year to illegal logging



Pine forest on Bokor Plateau



DONOR INVOLVEMENT & INTERNATIONAL ASSISTANCE FOR PAS

MOE urgently needs four things to achieve its mandate:

Donor assistance for capacity building and inputs in the fields of planning, technical inputs, monitoring, administration, and scientific research such as flora and fauna surveys and habitat analysis. Also support for improvement of infrastructure and facilities.

Follow up activities to the termination of current PA projects to be provided by donors

Increased understanding of complex issues involved in PA management

Review and reform of laws and policies

Support for PAs: IUCN, WWF, FFI, UNDP, World Bank, UNESCO, GEF, EU/SPEC, CEMP/USAID, WI, WCS

In 1996, the WB, FAO, and UNDP published the following recommendations which the Government pledged to implement:

Reform Forestry Law and improve enforcement

Revise Forest Concession Agreements

Establish Forest Concession Management and Control System

Proposals

DNCP has proposed a Wildlife Corridor between Bokor NP and Kirirom NP.

WWF Sub-regional project has proposed to enlarge the buffer zone in Virachey NP

IUCN has devised a national biodiversity strategy naming seven areas as biodiversity priority areas

Training on participatory vegetation field surveys supported by IUCN/BMZ

Capacity building for the assessment of plant resources in Reem and Bokor NPs via IUCN Netherlands

Mekong River Basin Wetland Biodiversity Conservation and Sustainable Use Program by GEF/UNDP/IUCN



Noelle O'Brian/IUCN

Mangroves at Ream National Park

FUTURE ROLE OF IUCN IN PAs

Facilitate development in the four national parks comprising the southern cluster

Expand flora assessment

Promote suitable management in core areas of Tonle Sap Biosphere reserve

Facilitate technical inputs to develop a National Biodiversity Action Plan, reviewing fauna and flora in Appendices I and II of the Red Data Book

Develop biodiversity management regional planning

(For more information see Cambodia Country Report - Volume II, Session 3)

LIST OF PROTECTED AREAS IN CAMBODIA CORRESPONDING TO IUCN CATEGORIES

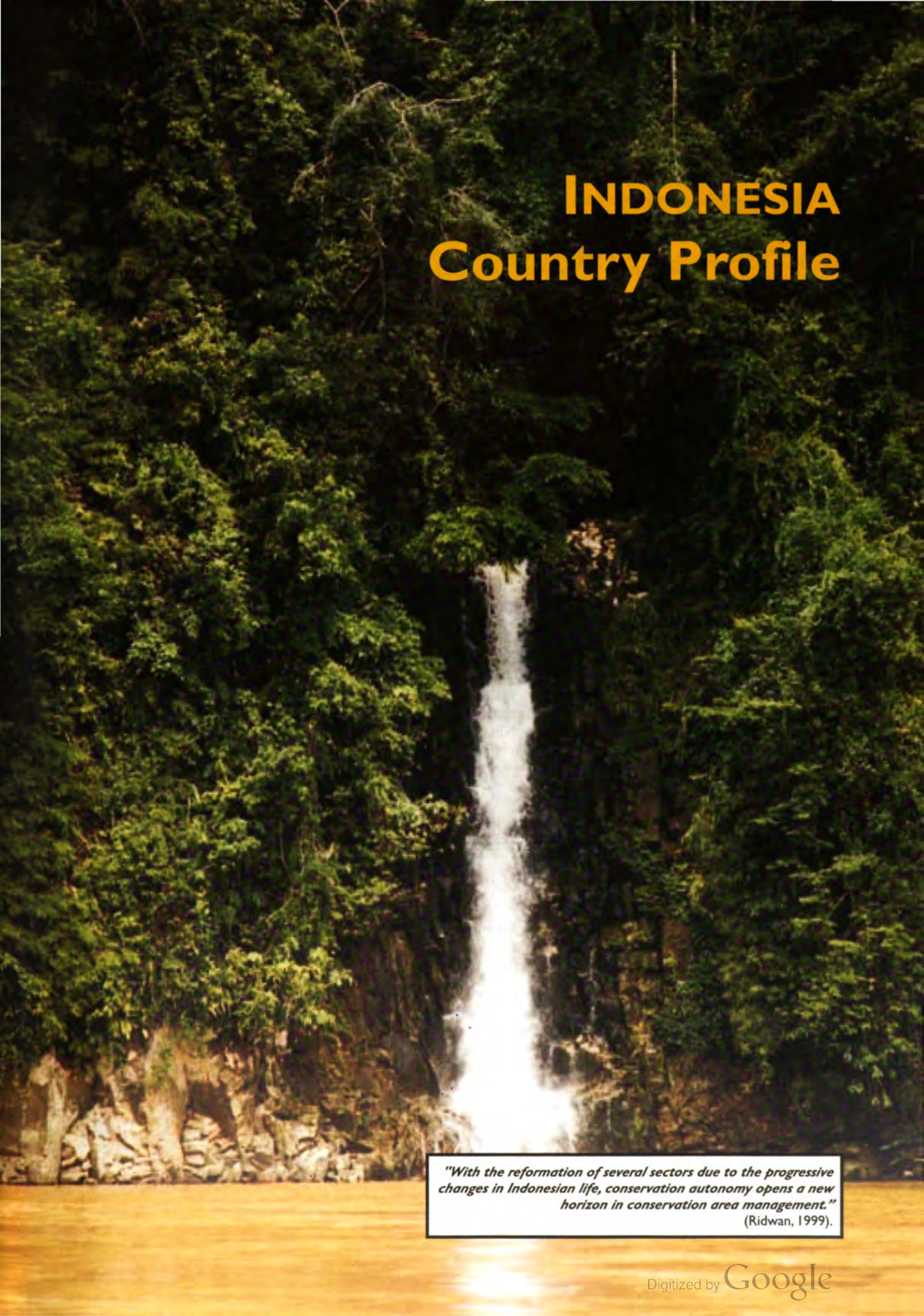
Code	Protected Area Name	Size (Hectares)	Year Inscribed
	NATIONAL PARK – IUCN CAT II		
1.	Virachey	3,337.232	1993
2.	Phnom Bokor	1,426.980	1993
3.	Kiriom	282.015	1993
4.	Botum Sakor	1,769.829	1993
5.	Phnom Kulen	365.243	1993
6.	Kep	27.254	1993
7.	Ream	181.111	1993
	WILDLIFE SANCTUARY – IUCN CAT II		
8.	Lomphat	2,506.832	1993
9.	Phnom Prich	2,207.349	1993
10.	Phnom Nam Lyr	540.183	1993
11.	Snoul	750.900	1993
12.	Peam Krasop	261.375	1993
13.	Phnom Aural	2,578.529	1993
14.	Phnom Samkos	3,326.481	1993
15.	Ron Lern Daun Sam	1,739.698	1993
16.	Beng Per	2,485.564	1993
17.	Kulen Promtep	4,027.998	1993
	PROTECTED LANDSCAPE – IUCN CAT II		
18.	Preah Vihear	35.789	1993
19.	Banteay Chmar	847.466	1993
20.	Angkor	137.864	1993
	MULTIPLE LAND USE AREA – IUCN CAT II		
21.	Dong Peng	289.915	1993
22.	Samlaut	593.872	1993
23.	Tonle Sap	5,956.704	1993

PROTECTED AREAS IN CAMBODIA



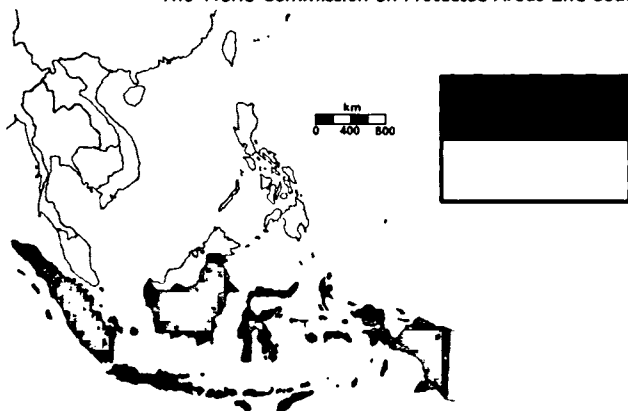
-  National Park
-  Wildlife Reserve
-  Protected Landscape
-  Multiple Land-Use Area

CAMBODIA - COUNTRY PROFILE



INDONESIA Country Profile

"With the reformation of several sectors due to the progressive changes in Indonesian life, conservation autonomy opens a new horizon in conservation area management."
(Ridwan, 1999).



INDONESIA

Status of Protected Area Program

STRENGTHS

Political commitment to support global environmental agreements and agendas, particularly biodiversity conservation, yet need to improve implementation

From 1992 to 1998, government institutions supporting PA management in the field increased from 45 to 66 and conservation project budgets doubled to nearly \$30 million

Conservation awareness enhanced by national universities, research centres (Indonesian Science Institute - LIPI, and numerous international NGOs. Further, there are now over 50 national NGOs, including KEHATI, WARSI, ICEL and PKBSI, focusing on awareness, education, development, ecotourism, etc.

Formal partnership between PHPA and private companies (i.e. Friends of Kutai NP) provide support for management of PAs and a forum for discussion and co-ordination between sectors

Future additions to PA system will include Aketajawe-Lalobata NP (Maluku), Sebuk-Sembakung NP (E. Kalimantan), Sembilang NP (S. Sumatra) and Dieng NP (Central Java)

Revocation of some logging concession licenses by Ministry of Forestry relieved some pressure on PAs, but existing license agreements and practices remain a major threat. Buffer village guidance conducted in 1,800 villages with activities such as cultivation of plants for traditional medicine, honey bee management, animal husbandry, eco-tourism and fisheries.

Establishment of TNC regional Coastal and Marine Conservation Centre in Bali, April 2000, which will accommodate a multi-disciplinary team focusing on i) effective PA management, ii) control of destructive fishing and iii) strengthening capacity for biodiversity conservation.

Detailed priorities have been identified for marine reserves

In Indonesia, 128 mammal and 104 bird species are currently under threat, including the critically endangered Sumatran rhinoceros, clouded leopard, sun bear, proboscis monkey, Sumatran tiger, and orang-utan. In all, the wild population of these species has fallen by 50% in the last ten years.

Size and Population:

1,919,445 km² total land and >200 million people

Ethnic minorities:

N/A from country sources

Economics:

Rapidly expanding economy based on natural resource extraction over past two decades hindered by SE Asian crisis

Forest Cover:

10% of world's remaining tropical forest (100 million ha), yet losing 2 million ha per year - only 28% original cover remaining

Biodiversity Values:

World's Second most biologically diverse country after Brazil. 10% world's plants, 12% world's mammals, 16% of world's reptiles and amphibians, 17% of all birds and 25% of all fish, one eighth of the world's coral reefs at more than 85,000km

PA Totals:

374 PAs covering 22 million ha or 11.6% of the total land 34 marine PAs cover 4.5 million ha

PA Budget:

US \$22 million (1999) 20% donor funds

People in Parks:

N/A from country sources

Types of PAs:

National Parks (37)

Wildlife reserves (48)

Nature reserves (176)

Grand forest parks (11)

Recreation forests (89)

Hunting parks (13)

Management Authority:

Ministry of Forestry, Estate & Crops

Management over all forest and agricultural land

Forest Protection & Nature Conservation (PHPA)

Administer and manage protected areas

Regional Offices for Nature Conservation

Manage nature reserves, wildlife reserves, natural recreational parks and hunting parks

National Park Offices on site

Technical management unit at site level (not yet in every NP)

Current PA Legislation:

Forestry Law No. 41 (1999) has sections on Protected Areas

Act No.5 (1990) Conservation of Living Natural Resources and their Ecosystems

International Conventions signed:

CITES (1978); World Conservation Strategy (1980); World Heritage Convention (1989); RAMSAR (1991); CBD (1994); ASEAN Declaration on Heritage Parks & Reserves (1984); ASEAN Agreement on the Conservation of Nature & Natural Resources (1985)

Front cover photo: Gunung Leuser Waterfall. Kathryn Monk

CHALLENGES

Immense pressure to exploit resources and established system of illegal logging creates conflict with conservation objectives
 Low awareness and inconsistent implementation among of government staff of legal policies, most of which are top-down
 Lack of co-ordination between central management policies and implementation in the field adding to insufficient training and budget allocation
 Difficulty to reach consensus on physical demarcation of PA boundaries
 Some citizens view PAs as wasted lands because they gain no direct financial benefits

Some root causes of deforestation include: poor socio-economic conditions of rural populations, lack of secure land tenure, inability to cultivate marginal soils, lack of means to improve agricultural production, lack of adequate forest protection measures

THREATS

Logging of tropical forest, especially illegal logging, particularly in Leuser NP, Kerinci Seblat NP, Bukit Barisan NP, Meru Betiri NP, Alas Purwo NP and Tanjung Putting NP
 Population pressure from local people, transmigration and expanding urban areas on outskirts of PAs causing an increase in pollution and a demand for land
 Encroachment: especially in Java and Sumatra from the cultivation of food crops; and in Sumatra, Kalimantan and Sulawesi for cash cropping. The greatest encroachments have been observed in Kerinci Seblat NP (cinnamon), Meru Betiri NP (food), and Bukit Barisan NP, Way Kambas NP and Kutai NP (food, coffee, cocoa).
 Over 70% of coral reefs have been damaged or are in critical condition due to destructive fishing methods including dynamite and

Over 70% of the original forest in Indonesia have been cut which continues at an unsustainable rate of over 2 million ha per year. Even more alarming is the fact that annual production from illegal logging (32 million m³) has surpassed legal commercial logging (29 million m³)

RECOMMENDATIONS

Improve the land tenure and use rights of local people and provide formal and informal education that is adapted to the conditions, abilities and culture of the local community
 Limitations or quotas adopted for fishing, especially reduction of fleets by 50% are vital in the Arafura Sea shrimp fishing industry (Djohani, 1999)
 The work of Lembaga Ekolabel Indonesia (LEI), Consultative Forestry Council, on certification of sustainable production forest management should be extended to ensure the compliance of the timber industry on ecological and social criteria and to expose illegal timber practices
 Establish technical units for PAs and build capacity of protected area staff in ecology, biology, zoology, wildlife veterinary, etc.

and cannot use the land for agriculture or extraction
 Government alone cannot establish and maintain a MPA system due to economic pressures.
 Conservation issues have gained increasing attention but in general are not seen to be as important as economic and political issues, to which they should be integrally related.
 Local populations reside in even the most isolated PAs, creating a challenge and opportunity

cyanide fishing and uncontrolled coastal development, particularly in Komodo NP, Wakatobi NP, Takbonerate NP and Kepulauan Seribu NP.
 Major involvement of the military in legal and illegal exploitation of forest resources, contradicting their own obligation to protect the laws and environment
 Forest fires (e.g. Kutai NP, where approximately 70% of the natural forest has burned (Suharto, 1999)
 Conversion of forest for transmigration, plantation agriculture (Kutai NP), logging (Tanjung Putting NP), large infrastructure projects and mining.

Central government should allocate budgets and set macro policy and permit more autonomy to local governments and communities in PA management and benefit sharing
 Develop sustainable financing mechanisms, including increasing role of private sector, to ensure the long-term sponsoring of enforcement, awareness and alternative livelihood programs
 PA management should involve all sectors of society in planning and development activities and must include interests and opinions of local community to gain optimum outputs.
 Prosecute the violators of laws protecting the natural resources

Timeline for PA Development

- 1889 First nature reserve, Cibodas, established under Dutch colonial administration
- 1945 Constitution of Indonesia enacted
- 1945 Established 113 conservation areas, covering a total area of 2.2 million ha
- 1967 Passed Basic Forestry Law No.5 becoming first milestone of forest conservation
- 1967 PHPA became an agency member of IUCN
- 1977 UNESCO Man & Biosphere (MAB) Reserves: Cibodas, Tanjung Putting, Lore Lindu & Komodo NPs
- 1981 UNESCO MAB Reserves designated for Gunung Leuser and Siberut Island NPs
- 1982 Bali hosted 3rd World National Parks Congress, where Indonesia's first ten NPs were announced
- 1982 Ministry of Agriculture Decree No. 736 officially declared first 10 NPs
- 1984 National Marine Protected Areas (MPA) System Plan was prepared, forming the basis for selection and establishment of MPAs and providing a framework for marine conservation activities.
- 1989 Ujung Kulon and Komodo NPs designated as UNESCO World Heritage Natural Sites
- 1990 Enactment of Conservation of Living Natural Resources and their Ecosystems Act No.5
- 1991 Preparation of the Biodiversity Action Plan
- 1992 Bandung Forestry Conference direct outcome was agreement between EC and Gol to collaborate to conserve the Leuser Ecosystem
- 1994-1995 Introduction of concept of buffer village guidance in PAs by PHPA
- 1995 Presidential Decree gave management concession for Leuser Ecosystem to the Leuser International Foundation (LIF), a private NGO for a thirty year term
- 1996 Indonesia hosted the Conference of Parties to the CBD and The 1st WCPA SEA Regional Forum
- 1997 Enactment of Management of Living Environment Law No. 23
- 1999 MoFEC Decree No. 245/Kpts-II/1999 reforms protected area management
- 1999 Gunung Lorentz NP (Irian Jaya) designated as World Heritage Natural Site
- 1999 Enactment of Forestry Law No. 41 after years of attempted participatory input (covers protected areas)

Box 1

BIODIVERSITY CONSERVATION IN IRIAN JAYA

With an area of over 416,000 km², Irian Jaya is the largest province in Indonesia and has some of the planet's most important tropical forest wilderness areas and biologically diverse and pristine coral reefs. Irian Jaya contains nearly one half of Indonesia's total biodiversity, with at least 20-25,000 species of vascular plants, 164 species of mammals, 329 reptiles and amphibians, some 650 birds, about 250 freshwater and 1200 marine fishes, an estimated 150,000 insects and many hundreds of other freshwater and marine invertebrates. Over 250 different ethnic groups live in Irian Jaya, each with rich cultural traditions, languages and sets of inter-relationships with their environment.

Until recently, Irian Jaya was one of the most remote and obscure areas of the world, but this is increasingly no longer the case. Irian Jaya has captured the attention of the world's scientists, business and political communities. The main threats to Irian Jaya's terrestrial and aquatic ecosystems come from forest conversion for transmigration, plantation agriculture, logging, large infrastructure projects such as dams and roads, and oil and gas exploration. Marine ecosystems are primarily endangered from fishing by bombs and toxins, siltation effects resulting from deforestation, and overexploitation of fish resources.

Conservation International (CI) and Yayasan Cipta Citra Lestari Indonesia (YCCI) have organised a program, sponsored by BAPPEDA Irian Jaya Tingkat I, LIPI, the Directorate General of PIDA and Cenderawasih University, which focuses on biodiversity conservation in Irian Jaya. A Priority-Setting Workshop was conducted in January 1997 in Biak, Irian Jaya and was funded by USAID, The World Bank, Embassy of Japan, BAPPEDA Irian Jaya and the Yayasan Kehati. Program goals identified included integrating conservation considerations into development planning to help conserve Irian Jaya's biological, natural, and cultural resources while promoting sustainable economic development and assisting the government by creating a database on biodiversity in Irian Jaya, and using this information to more effectively integrate biodiversity conservation with provincial economic development and land-use planning

Workshop Products

- A scientific assessment of the biological importance of sub-regions and sites in Irian Jaya
- An assessment of the local capacity for implementation of conservation and development plans, and a set of recommendations intended to advance development goals
- A bilingual map of priority areas for biodiversity conservation, bilingual publication of workshop reports and recommendations (in CD-ROM and report formats)

The most accurate and comprehensive scientific information on the biological resources of Irian Jaya with an established process for productive dialogue and consensus building among local, provincial, national, and international stakeholders involved in an ICDP for Irian Jaya

Recommendations towards an ICDP Strategy for Irian Jaya and SE Asia

- Conduct more biological surveys to have an adequate understanding of Irian Jaya's ecology
- Environmental education and promotion of cultural awareness is critical to improve basic knowledge and appreciation for biodiversity values in order to achieve an ICDP approach
- Mitigate negative impacts of economic development (agriculture, mining, oil, etc.) on PAs and Integrated Biological Management Areas through open consultation with local communities
- Facilitation of additional social science research can help identify the most effective and appropriate ways to successfully incorporate local people into economic development activities.
- Enforcement of existing environmental laws should be strengthened
- Expand the current system of protected areas to protect more of Irian Jaya's unique biodiversity
- Establishment of a Biodiversity Research Centre, construction of a new herbarium and facilities for zoological collections and academic training
- Sustainability of the project requires a long-term commitment (up to 10 years) from both the implementing agency and donor agencies and establishment of a Trust Fund
- The cultural and ecological diversity of the province requires "custom designed" approaches for each conservation and development project



Revered Mount Rinjani, Lombok

Rob Flynn

Box

MARINE ISSUES

"An immediate target of the Indonesian Government is to establish 10,000,000 ha of marine conservation areas by the end of 2000." (Djohani, 1999)

Indonesia includes 81,000 km of coastline and over 17,000 islands, with Indonesian waters accounting for over 360 million ha (twice the amount of the nation's dry land). At least 2,500 species of reef fish and 400 species of stony corals inhabit Indonesia's waters, but Indonesia's growth as an international economic force in the live food-fish trade is straining its extraordinary marine habitats beyond sustainable levels. Reef fish stocks are declining as a result of over-fishing and destruction of habitats. In areas where cyanide fishing has been practised intensively, the reef is mostly dead, overgrown with algae and very few animals live on it.

The live food-fish trade concentrates on a higher profit margin by organising a one-time 'clean sweep', rather than a sustainable fishery. It is in the best interests of the large-scale companies to collect entire spawning aggregations of targeted fish such as groupers. This is analogous to clear-cutting forests for a higher immediate profit. The Live Reef Fish Trade impacts the coral reef ecosystem and fisheries via destructive fishing practices (cyanide and dynamite); over-fishing of adult fish in wild populations; and depletion of stocks by collection of wild fingerlings.

The Nature Conservancy has developed the following means to diminish threats:

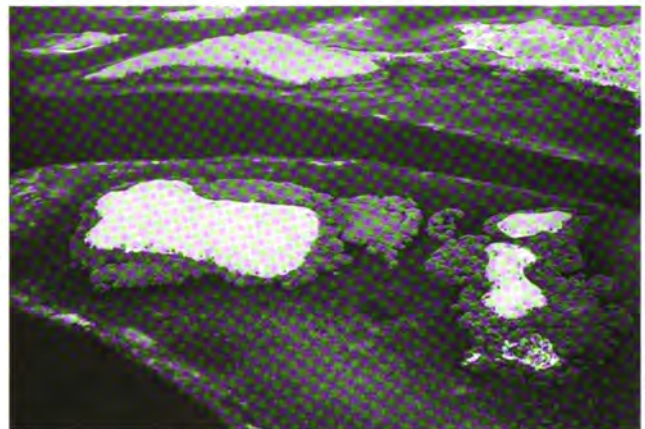
For effective on-site protection of coral reefs, alternative livelihoods have to be developed through enforcement, awareness and other campaigns if local fishers are to be persuaded to change their practices. These alternatives are preferably not to be developed in the capture fisheries on coral reefs since stocks are already over-fished

Demand for high quality fish will increase, so alternative fish sources must be developed if pressure on wild stocks is to be reduced and fish production should be developed in full-circle aquaculture

Effective hatcheries of high quality food fish have to be developed in countries (like Indonesia) where the threats, caused by the live reef fish trade, are most seriously affecting the coral reef

An economic analysis of blast fishing on coral reefs in Indonesia showed that losses, as a result of coral reef destruction are nearly US\$ 100,000 per square kilometre of reef with a net loss of US\$ 8.5 billion based on the most obvious quantifiable costs - loss of tourism, fisheries and coastal protection function.

"The wild-caught live fish trade in SE Asia has increased to over US\$ 1 billion per year (World Bank, 1999) with Indonesia being the single largest supplier, primarily to Hong Kong, with an estimated 50% market share. For each grouper that is caught and sold to a Hong Kong restaurant for US\$ 180 per kg, a square meter of coral is either poisoned, broken or destroyed" (Djohani, 1999)



Peter Mous

Komodo landscape, Indonesia



Peter Mous

Komodo Village, Indonesia

ILLEGAL LOGGING IN NATIONAL PARKS

Illegal logging in Indonesia has now surpassed the annual amount of timber legally cut. Protected areas are not immune to the epidemic. A recent EIA/Telepak study revealed that Tanjung Putting and Gunung Leuser National Parks are being logged illegally at alarming rates. Although local communities are involved, the system is orchestrated by timber barons, members of the military, police and portions of the forest department, who have profited from the alienation of local people from their land and rights to forest resources. It is recommended that the logging of the National Parks be stopped immediately in the context of the following actions:

- Closure of illegal sawmills and immediate audit of licensed sawmills in the vicinity of the Parks.
- Immediate investigations and prosecution of owners of sawmills, authorities and individuals proven to be acting illegally

- Major international donors, including the USA, the European Union, Japan, the IMF and World Bank, must be held responsible for upholding actions to stop illegal logging and reform forestry law

- Adoption of formal policies and an alternative forestry law recognising local community rights, local participation in forestry, and recognition of land claims

- Establishment of a Consultative Forestry Council with real moral authority and power to provide a medium for forestry issues to be resolved between all the stakeholders at a national, regional and local level.

- Strengthening PKPA in areas of management and establishing park boundaries through participatory mapping

TANJUNG PUTING NATIONAL PARK

Box 4

Tanjung Putting National Park is a 400,000 ha conservation area of global importance in Central Kalimantan, providing an island of biodiversity amid the rapidly diminishing forests of Borneo. It is recognised as an UNESCO Biosphere Reserve and forms the largest protected area of swamp forest in SE Asia. The park contains a number of commercial tree species and is home to a dazzling array of wildlife, including over 200 bird species, 17 reptile species and 29 mammal species, many of which are endangered including the estuarine crocodile, clouded leopard, Malayan sun bear and Storm's stork. Nine of the 13 primate species of Borneo are found in the park, such as the distinctive proboscis monkey, the agile gibbon, silvery leaf-eating monkey, and Tanjung Putting's most famous inhabitant - the orang-utan. Tanjung Putting has the longest-running scientific research project into wild orang-utan behaviour and is home to around 2,000 orang-utans.

Tanjung Putting NP is threatened by rapidly-expanding oil palm plantations, gold mining, forest fire damage and logging, leaving the viability of this protected severely threatened. The gravest danger is posed by illegal logging to valuable ramin and commercial dipterocarps. The logging, mostly at the hands of timber barons, especially local timber tycoon Abdul Rasyid, has spread into the core of the park where there are research stations, tourist lodges and the orang-utans.

The Director of Tanjung Putting National Park, Suherti Redy, believes that if the current rate of logging continues the park will be gone in five years.



Corel DRAW

Orang-utan

Box 5

GUNUNG LEUSER NATIONAL PARK

Gunung Leuser is one of the largest Indonesian National Parks covering 890,000 hectares and situated in the north of the island of Sumatra. Its biodiversity is staggering, boasting many high profile mammals such as the orang-utan, Sumatran tiger, Sumatran rhinoceros, Malayan sun bear, Asian elephant and clouded leopard. Of the 10,000 plant species recorded in the West Indo-Malayan region, it is estimated that 45% are found in the Leuser ecosystem.

A development and management project for the Leuser ecosystem was created during the Soeharto regime, designed to run for seven years and to hand over the staff, procedures and facilities to a non-profit NGO. This project, known as the Leuser Management Unit (LMU), is a joint Government of Indonesia and European Union funded project covering the larger ecosystem, in total 2.5 million hectares and two million people. (See Monk, session 5).

Logging started in the park area soon after the downfall of President Soeharto, but on a relatively small scale. It did not spread into the research station until March 1999. By July it was estimated that about 100 loggers were operating within the study area, based at 24 logging camps and using a system of 20 rails to pull the logs out. Two of the three most important food trees for orang-utans in the area have been heavily logged. It is estimated that 50-66% of the *Neesia* trees and 25-33% of *Sandoricum beccarianum* have been cut in the study area. Military and police involvement in illegal logging is well documented creating a power structure both regionally and locally which is difficult to break.

The orang-utan populations have been severely hit by partial logging of their habitat. Even prior to the illegal logging onslaught breaking out in May it was estimated that only 49% of the original habitat remains and only 48% of the estimated number of orang-utans. In total, only around 2,500 orang-utans are believed to remain in the three swamp areas of Aceh. With the current logging activities this number could be much less.

Until recently the Kluet and Singkil swamps were the last two intact swamps in the whole ecosystem. Illegal logging activities have now rapidly degraded these swamps as well. The importance of these swamps to orang-utan conservation cannot be under-estimated. Orang-utan population density maps of the area show the highest concentrations to occur where the three swamps are found.

The information on Tanjung Putting and Gunung Leuser NPs has been taken from a recent article by Dave Currey, EIA Director, entitled "The Final Cut."



Kathryn Monk

Sumatran Tiger



Kathryn Monk

Mushroom in Leuser ecosystem



Kathryn Monk

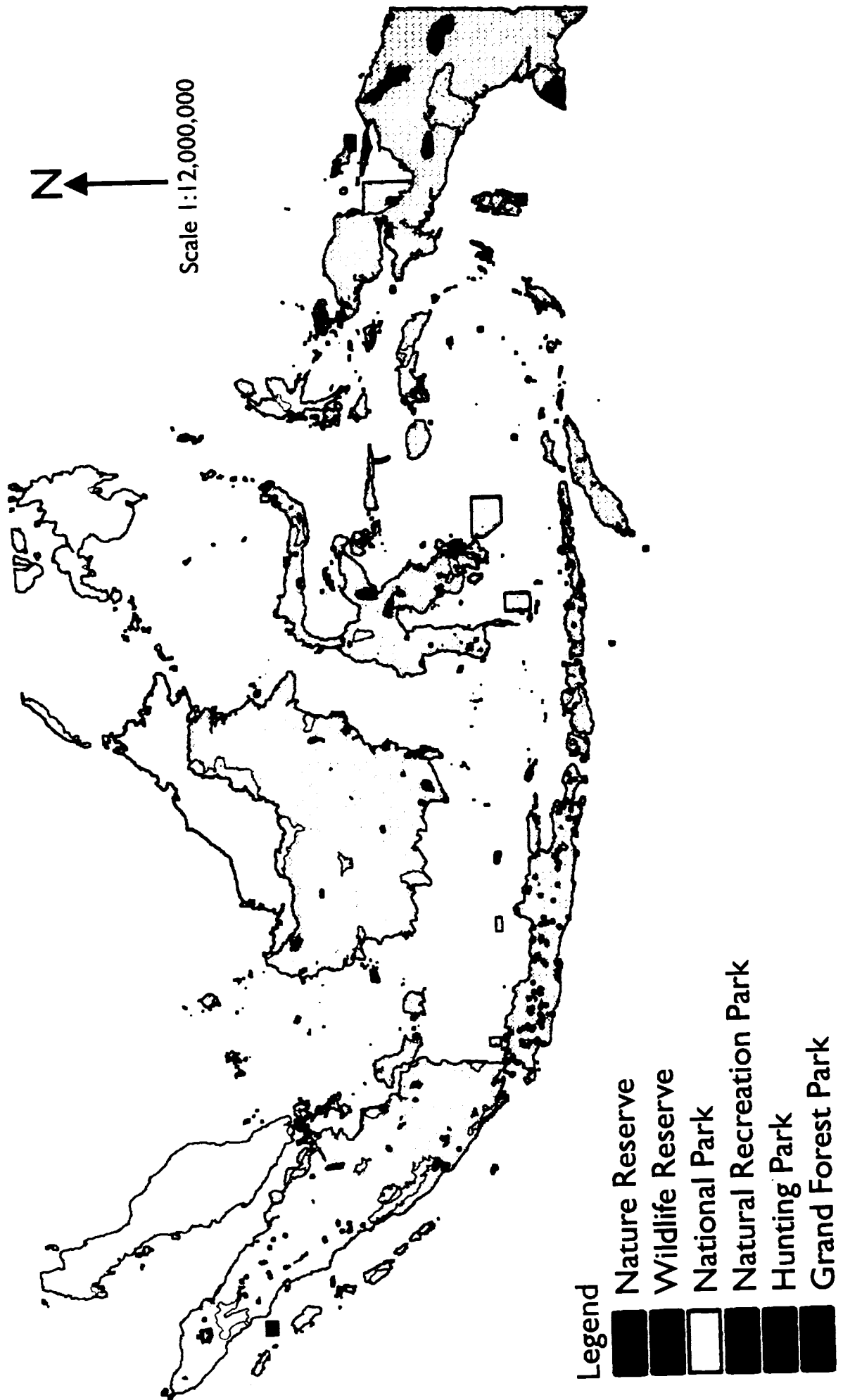
Insect activity in Leuser ecosystem

LIST OF PROTECTED AREAS IN INDONESIA CORRESPONDING TO IUCN CATEGORIES

Name of Protected Area	Size (Hectares)	Year Inscribed
BALI		
NATIONAL PARK – IUCN CAT II		
Bali Barat	77,727	1982
NATURE RESERVE – IUCN CAT IA		
Batukau I/II/III	1,763	1974
IRIAN JAYA		
GAME RESERVE – IUCN CAT IV		
Danau Bian	69,390	N/A
Foja	1,018,000	N/A
Jayawijaya	800,000	1981
Kepulauan Raja Empat	60,000	1993
Palau Dolok	600,000	1978
Sabuda Tataruga	5,000	1993
NATIONAL PARK – IUCN CAT II		
Gunung Lorentz	2,505,000	1997
Teluk Laut Cendrawasih	1,453,500	1990
Wasur	308,000	1990
NATURE RESERVE – IUCN CAT IA		
Batanta Barat	10,000	1981
Beriat	9,194	N/A
Biak Utara	11,000	1982
Enarotali	300,000	1980
Misool Selatan	84,000	1982
Pegunungan Arfak	68,325	N/A
Pegunungan Cyclop	22,500	1978
Palau Supriori	42,000	1982
Palau Waigeo	153,000	1982
Salawati Utara	57,000	1982
Wondi Boy	73,022	1992
Yapen Tengah	59,000	1982
RECREATION PARK – IUCN CAT V		
Klamonon	1,909	N/A
Teluk Yotefa	1,650	1981
JAVA		
GAME RESERVE – IUCN CAT IV		
Banyuwangi	62,000	1919
Bawean	3,832	1979
Cikepuh	8,127	1973
Dataran Tinggi Yang	14,145	1962
Gunung Sawai	5,400	1979
NATIONAL PARK – IUCN CAT II		
Alas Purwo	43,420	1992
Baluran	25,000	1980
Bromo Tengger Semeru	58,000	1982
Gunung Gede Pangrango	15,000	1980
Gunung Halimun	40,000	1992
Kepulauan Karimun Jawa	111,625	1986
Kepulauan Seribu	108,000	1982
Meru Betiri	50,000	1982
Ujung Kulon	122,956	1992
NATURE RESERVE – IUCN CAT IA		
Gunung Burangrang	2,700	1979
Gunung Celering	1,328	1989
Gunung Papandayan	6,620	1924
Gunung Simpang	15,000	1979
Gunung Tilu	8,000	1978

Gunung Tukung Gede	1,700	1979
Kawah Kamojang	7,500	1979
Leuwang Sancang	6,307	1978
Nusa Barung	6,100	1920
Palau Sempu	877	1928
Rawa Danau	2,500	1921
Tangkuban Perahu	1,290	1930
RECREATION PARK – IUCN CAT V		
Gunung Tampomas	1,250	1979
Prapat Benoa (Bali)	1,374	1992
KALIMANTAN		
GAME RESERVE – IUCN CAT IV		
Gunung Niut Penrisen	180,000	1982
Pleihari Tanah Laut	6,000	1975
NATIONAL PARK – IUCN CAT II		
Bukit Baka - Bukit Raya	181,090	1992
Gunung Bentuang	800,000	1992
Gunung Palung	90,000	1990
Kayan Mentarang	1,360,500	1996
Kutai	198,629	1982
Tanjung Puting	355,000	1982
NATURE RESERVE – IUCN CAT IA		
Bukit Tangkiling	2,061	1977
Gunung Raya Pasi	3,700	1978
Kepulauan Karimata	77,000	1985
Mandor	2,000	1937
Muara Kaman Sedulang	62,500	1976
Padang Luwai	5,000	1967
Pararawen I,II	61200	1979
Teluk Ampar	46,900	1993
Teluk Kelumpang/Selat Laut/Selat Sebeku	66,650	1981
RECREATION PARK – IUCN CAT V		
Bukit Soeharto	61,850	1991
Pleihari	1,500	1991
Tanjung Keluang	1,500	1984
LESSER SUNDRA ISLANDS		
GAME RESERVE – IUCN CAT IV		
Harlu	2,000	1993
Kateri	4,560	1981
Palau	1,000	1993
NATIONAL PARK – IUCN CAT II		
Gunung Rinjani	40,000	1990
Kelimutu	5,000	1992
Komodo	173,500	1980
NATURE RESERVE – IUCN CAT IA		
Gunung Langgaliru	15,639	1992
Maubesi	1,830	1981
Tanah Pedauh	544	1975
Tujuh Belas Pulau	11,900	1987
Watu Ata	4,898	1992
Way Wuul/Mburak	3,000	1985
Welo Tado, Ngedo Nalo Merah, Siung	4,017	1992

PROTECTED AREAS IN INDONESIA



LAO PDR Country Profile



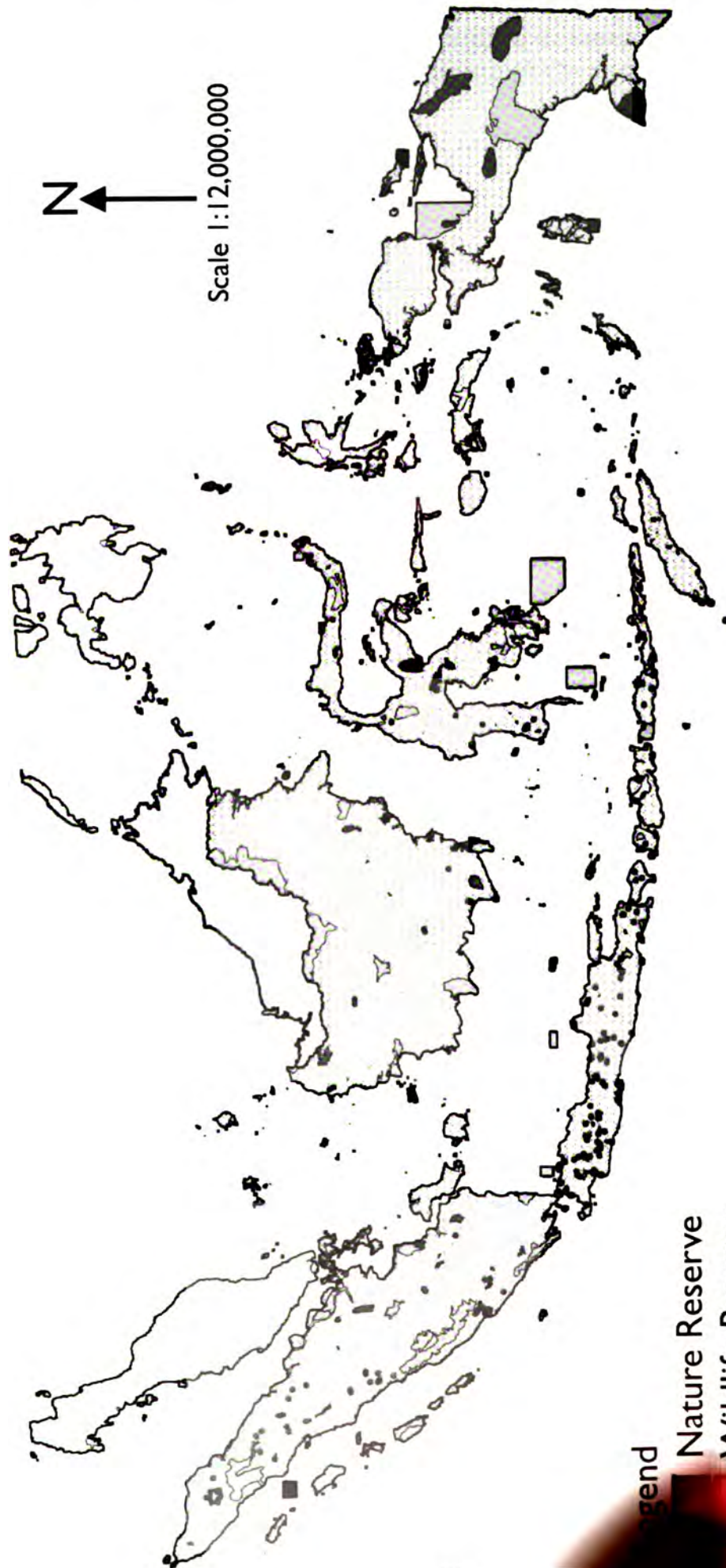
*I entrust myself to earth; earth entrusts herself to me;
I entrust myself to Buddha; Buddha entrusts herself to me;*

*Water flows from high in the mountains;
Water runs deep in the earth;
Miraculously, water comes to us and sustains all life.*

*Water flows over these hands;
May I use them skilfully to preserve the planet.*
(DoF presentation)

INDONESIA - COUNTRY PROFILE

PROTECTED AREAS IN INDONESIA



Legend

Nature Reserve

Wildlife Reserve

National Park

Natural Recreation Park

Hunting Park

and Forest Park

LAO PDR Country Profile

to earth, earth entrance, here, I'm not
to Buddha, Buddha entrance
Water flows from high, in the mountains
Water runs deep in the mountains
Incredibly, water comes
Water flows over the mountains
May I use them in the mountains
Water flows over the mountains
May I use them in the mountains



LAO PDR

Status of Protected Area Program

"The selection of sites for inclusion in the NBCA system was designed to provide representative coverage based on forest cover, type and altitude, key species and biogeographic region, while minimising the inclusion of villages, roads and agricultural land (Klaus Berkemüller, 1995).

Valuable forest reserves still remain in comparison to other areas in Asia, providing the potential for further development of the PA system if the government committed to such

Some form of PA management has begun under donor funded projects in 70% of the NBCAs, with significant progress in field management made in Dong Hua Sao, Phou Xieng Thong and Phou Khao Khaouy NBCAs

Trans-boundary co-operation on PA management and cross border trade of endangered species has occurred between Lao PDR and Xishuangbanna Prefecture, Yunnan, China and between Lao PDR and Vietnam via the UNDP/WWF Sub-regional Biodiversity Conservation Forum Project

Co-ordination between foreign advisors and DOF/DFRC staff regarding conservation and protected area projects in Lao PDR through biannual meetings of a Technical Advisory Group

Examples from two NBCAs located adjacent to dam sites, show potential to fund conservation programs from revenues from hydro development projects (one site has agreed to 1% annual fund)

"Since 1995, donor funded protected area projects have worked with the government in over 1000 villages in and around the 20 NBCAs, providing small, yet beneficial inputs to 10% of the country's poorest communities."

Awareness of wildlife issues raised through the publication by IUCN of the Wildlife Status Report (Duckworth et al, 1999) and by the legal declaration of Wildlife Awareness Week each July 13 to coincide with Buddhist Lent (when wildlife is supposed to be protected from hunting)

National land use planning and allocation program prioritises involving local communities within NBCAs in an effort to stabilise shifting cultivation, improve agricultural extension and protect conservation forest

Involvement of local villages in NBCA management and enforcement through establishment of guardian villages, setting PA boundaries, and developing Rules and Agreements at the district level

Co-operation between NBCAs and military field staff is being developed, namely in Nam Phui NBCA and Phou Khao Khaouy NBCA, which borders sensitive international boundaries and the army effectively reduces encroachment from surrounding villages, as it maintains camps throughout the PA

"If livelihood initiatives are to have benefits for conservation they must be preceded by an extended process of village problem analysis that links together identified problems, proposed solutions and the idea of development as a substitute for dependency on biodiversity resources." (DoF, 1999).

STRENGTHS

"The term National Biodiversity Conservation Areas has been used as the English equivalent from the Lao Pa Sanguan Heng Saat (literally, National Reserved Forest Complex)

Size and population:

236,800 km²; only 5 million people, but 2.5% growth rate (83% live in small villages)

Ethnic Minorities:

47 ethnic groups comprise nearly 45% of the population, namely Khmu 11%, Phutai 10% and Hmong 7%

Economics:

7% growth rate in 1990's, but 140% inflation in 1998

Average income \$362 p.c. (1997)

Main revenue is Tourism (\$90 million/yr.), Hydro, foreign aid Wood products are top export at \$125 million/yr.

Forest Cover:

Estimated at 47% (DoF, 1992), but nearer to 40% at present

Biodiversity Values:

High flora and fauna endemism and diversity. Limited surveys have identified over 250 species of regional or international significance and 20 bird and 14 mammal species that are endangered or vulnerable, including the recently discovered Saola (*Pseudoryx nghethingsis*) and Giant Muntjac (*Megamuntiacus vuquangensis*)

PA Totals:

20 NBCAs covering 33,136 km² (13.9% total land area)

People in Parks:

1,100 villages located inside or within 5 km of NBCAs

Types of PAs:

National Biodiversity Conservation Areas (NBCAs) (20)

(NBCAs equivalent to IUCN Category VI)

Conservation/Protection Forest areas (276)

Management Authority:

MAF, DoF - Policy development, co-ordination between projects and international cooperation.

Department of Forest Resource Conservation (DFRC) (formerly CPAWM) - PA management and Policy

Science, Technology and Environment Agency (STEA) - Provides cross-sector co-ordination on environment issues; oversees EIAs of major proposed projects and Lao PDR participation in International Conventions (e.g. CBD)

PAFOs/DAFOs - Implement PA projects at field and local level

Protected Area Budget:

US \$1.5 million (1996)

Legislation:

PM Decree 164 (1993) [new draft 2000]; The Forestry Law (1996)

International Conventions signed:

CBD (1996), WHC (1987), FCCC (1995).

CHALLENGES

Presence of increasing human element with over 1,000 villages located inside or within 5 km of the 20 NBCAs. Most of these villages face extreme poverty and struggle with land and food security issues

Unstable economy, especially since the regional economic crisis in 1997, which has led to nearly 200% inflation and devalue of the currency over 1,000% increasing the need to exploit resources to raise short term capital

Legal framework and system in infancy stages and difficulty with monitoring and enforcement

Cultural practice to hunt wildlife for subsistence (Wildlife comprises up to 80% of protein of rural households) and trade at unsustainable levels to meet the insatiable demand in China and Vietnam

Most NBCAs are de facto multiple use zones due to their population base, presence of resource extractive activities and lack of

infrastructure and staff (only one staff per 15,000 ha)

Insufficient standard of capacity and professional training of staff at all levels and lack of budget, commitment and co-ordination between government sectors on activities and issues within NBCAs

Lao PDR is not yet party to CITES, the Ramsar Convention nor the ASEAN Agreement on Conservation of Nature and Natural Resources

Lack of transparency in system often makes it difficult to co-ordinate on planning and activities

"Eleven of the 20 NBCAs are located on international borders so provide excellent opportunity for trans-border relations, yet are under threat from incursions by foreigners who poach resources. For example, the China Laos border study concluded that 100 illegal species (including 47 mammals and 31 reptiles) are traded across the Lao-China boundary."

Timeline for PA Development

- 1975 Establishment of "The Lao Peoples' Democratic Republic" and present government
- 1986 Fourth Party Congress adopted the "New Economic Mechanism" with market reforms
- 1989 First National Forestry Conference resulted in conservation recommendations and the National Tropical Forestry Action Plan (TFAP).
- 1989 DoF and IUCN started a systematic survey to locate the best remaining forests
- 1990 Government adopts centralised quota system to control unsustainable logging practices
- 1991 Constitution enacted stating that every citizen has right to protect environment (art. 17)
- 1993 Prime Ministers Decree No.164 declared 18 National Biodiversity Conservation Areas and thereby established a national protected area system
- 1993 Conservation Unit established in DoF and STENO established under the Prime Minister's Office
- 1994 Earliest initiatives with Land-Use Planning and Land Allocation (LUP and LA) in NBCAs began in Nam Phui NBCA, Sayabouly Province, leading to replication in other areas
- 1995 Addition of Xe Sap NBCA to the PA system
- 1995 PA status report provides data and recommends additional 10 NBCAs
- 1996 The Forestry Law No.1/96, enacted, setting policies for all aspects of forestry, including conservation forests
- 1996 Addition of Dong Phou Vieng NBCA to the PA system raising total number of NBCAs to 20
- 1996 Formal policy gave MAF responsibility for the "promotion of forest conservation in combination with land-forest allocation policy," whereby NBCAs are priorities for LUP and LA programs
- 1997 Enactment of the Land Law
- 1999 Nam Ha NBCA, Luang Namtha Province, was expanded to 222,400ha to become contiguous with the Shangyong Nature Reserve, Xishuangbanna Autonomous Prefecture, Yunnan, China
- 1999 Passing of Prime Minister's Decree 198 on implementing the Forestry Law
- 2000 Work on a National Biodiversity Strategy and Action Plan was due to begin
- 2000 Regulations being drafted for the implementation of The Forestry Law in regard to wildlife, protected areas and village forestry



Suart Chape/IUCN Lao

Phou Khao Khouay NBCA

Unsustainable commercial logging, accelerated by the need for Lao PDR to raise capital from exports combined with neighbouring countries increase in demand for wood since many countries in region have enacted logging and timber export bans

Wildlife hunting for consumption and trade. Wildlife comprises up to 80% of protein of rural households and major portion of income from internal and international trade. Each year an estimated 10,000 mammals, 7,000 birds and 4,000 reptiles are sold in markets in Vientiane (capital) alone.

Hydropower development is an important source of national export income, but may be detrimental to forest, wildlife and cultural values despite mitigation by portion of revenue for NBCA management

Gaps in technical capacity at policy and management levels and instability at the political and administrative system

Shifting cultivation and shrinking fallow periods due to expanding population and cultural preference thereby stunting forest regeneration, decreasing soil fertility, altering cropping patterns and changing NTFP collection practices., however, government

has national program to reduce practice and provide agricultural extension

Wildlife and NTFPs provide vital sources of subsistence and cash income for an impoverished, marginalised and widely dispersed rural population.

Inherent vulnerability of management of PA system created by financial dependency.

Development priorities and activities including road construction, logging, peat, commercialisation of agriculture and large scale farming with pesticides, which require increased availability of suitable land, may lead to direct and indirect negative impacts on PAs.

Road construction and the accompanying infrastructure development, is accelerating the exploitation of natural resources, which is exacerbated by uncoordinated planning.

"Increases in market demand, widening income disparities between rural and urban areas and the lack of alternative income generation opportunities have led to an increase in unsustainable hunting practices and illegal trade of regulated and unregulated forest products and wildlife" (Tizard et al. 1999)

THREATS

RECOMMENDATIONS

"Even if projects are successful in building capacity, budget support for continuing activity usually ends with the project. Thus, sustainability comes to be seen in terms of a continuing series of projects, which is why the development of trust funds and agreements with utility sector for annual contributions from the dam projects needs to be pursued further (Phou Khao Khaouy NBCA has agreement with EDL utility for 1% of the annual revenue from the dam to be utilised for conservation activities)." (DoF, 1999)

Approve and implement draft decrees, namely land use planning and allocation decree and protected area and wildlife decree. Actively implement existing laws, policies and regulations regarding logging, hunting and trade in timber, wildlife and NTFPs.

As field management is strengthened, consider using broader range of protected area categories that are included in the draft protected area decree.

Follow Article 25 of the 1996 Forestry Law which requires that logging take place forest identified as production in a management plan.

Perform systematic evaluation and mapping of provincial and district Conservation Areas, in order for them, to take the place of former NBCAs and become IUCN Category VI PAs.

Need to increase and provide budget and train minimum staff required to effectively manage and patrol NBCAs. This would require "a stable and well trained team of 6-12 staff who would co-ordinate with larger District staff and local villages on responsibility for the NBCA as a whole" (DOF, 1999).

It is essential to establish an NBCA management team as a physical entity in the field, which regularly visits stakeholder villages.

Village women should be involved in all stages of LUP and LA and indeed, participatory management of PAs, as they have much to contribute to forest and land resources

management. Facilitation of this requires the involvement of female staff (Sawathvong, 1999).

Village level progress would benefit from being integrated into wider development planning at provincial and national levels. "PA needs must be taken into consideration when other plans are made, e.g. for irrigation schemes, roads and timber harvesting. Top level support from the Provincial Government is essential."

Long term commitment is needed from government and donors. From experience it can be seen that in order to sustain progress in staff training, consultation, design and implementation of projects at the scale of an individual PA, it is necessary for project duration to be greater than 5 years and have the commitment of the respective government agencies and partners.

Establish system for Conservation or Forest Trust Fund, like other countries in the region, outlined in the Forestry Law and draft of new protected area Decree. Funds potentially derive from hydro and other development activities, to provide a source of funding for conservation activities.



Stuart Chapel/IUCN Lao

NBCA staff on patrol duty in Nakai-Nam Theun NBCA

"Local people play a vital role in sustainable resource management and development. Therefore it is imperative that village agreements and conservation rules contain management activities which local communities understand and can manage, as well as activities which support government policy and objectives." (Sawathvong et al., 1999).

For more information on trans-boundary issues and recommendations for Lao PDR see Session 4 Executive Summary and the Vietnam Country Profile.

DONOR AND INTERNATIONAL NGO SUPPORT

After Lao PDR adopted the New Economic Mechanism in 1986, it began to open its doors to the outside world during the 1990's. Along with private sector investment came several international donors and NGO's interested in biodiversity conservation, especially after the Rio Summit and Convention on Biological Diversity was signed in 1992. By 1993, a protected area system had been legally established in Lao PDR, followed by numerous donor projects and NGOs who have carried out activities and set up some form of management in over 70% of the NBCAs.

"Biodiversity conservation efforts in Lao PDR have a relatively short history, mostly stemming from the late 1980s, but as you can see we have come a considerable way in a relatively short time" (Southammakhot, 1999).

The two largest support programs for protected areas are the IUCN-implemented Conservation SubProgram of the Lao-Swedish Forestry Co-operation Programme (LSFP) and the Global Environment Fund (GEF) through the World Bank for the Forest Management and Conservation Project (FOMACOP). The Netherlands/IUCN Biodiversity Conservation Project has also been active in two NBCAs in the south. These three projects are jointly preparing a manager's guidebook summarising techniques used to implement ICAD principles in Lao PDR. All three projects are due to end by September 2000.

Other main partners that have been supporting and assisting government conservation objectives over the past decade have been the Netherlands Biodiversity Conservation Project, World Conservation Union (IUCN), Wildlife Conservation Society (WCS), World Wide Fund for Nature (WWF), DANIDA, European Union, BMZ, German Agro Action (GAA), Care International, German Volunteer Service (DED), the International Development and Research Centre (IDRC), Wetlands International and the Mekong River Commission (MRC).

A. Participatory management

Land allocation procedures have been adapted for use in villages within or adjoining NBCAs and linked to the participatory development of local management "rules" and "village agreements". This is the key first step in establishing a framework for participatory management and includes the following steps:

Village classification and selection

Village resource use surveys

Boundary delineation

Zonation

Negotiation of local rules

Village conservation activities

Monitoring

LSFP has only completed this process in a small sample of villages, but the IUCN/Netherlands Biodiversity Conservation Project, by contrast, has worked in numerous villages establishing protected area boundaries and developing Rules and Agreements at the district level, whereby, the land-use planning and zonation components are dealt with separately by the District Land Use Planning and Land Allocation Committees.

B. Resource inventory, monitoring and protection

This more traditional aspect of management remains an essential function of protected area staff, in conjunction with villagers. Key elements include:

Resource inventories and surveys. These rely heavily on local knowledge to establish the location, abundance and movements of key wildlife species, and to identify habitat types. WCS and IUCN have undertaken basic surveys of mammals, birds and habitats of most of the NBCAs. FOMACOP have developed a similar methodology called "Rapid Biodiversity Appraisal".

Resource monitoring. This is the follow up designed to monitor changes. Traditional "patrolling" by protected area staff, can be supplemented by examination of satellite imagery, and following-up reports from the field. Besides controlling hunting and NTFP collection (under participatory management zoning agreements), monitoring and prevention of forest fires during the late dry season (March-April) is needed in many areas.

Law enforcement. Even under a strongly participatory regime there remains a need for legal action against serious infringements or those by "outsiders" that can not be dealt with by village authorities. Checkpoints on roads that enter protected areas are an important tool.

C. Livelihood development and conservation education

The Government's highest priority in protected area management is to promote development of alternative livelihood opportunities in key villages around NBCAs as a strategy for reducing dependence on forest products. Village surveys consistently rate "food security" as the number one problem, with many families reporting rice deficits of up to 10 months in the year. These deficits are currently made up by collection and trade in NTFPs (e.g. Foppes, 1997). If livelihood initiatives are to have benefits for conservation, they must be preceded by an extended process of village problem analysis that links together identified problems, proposed solutions and the idea of development as a substitute for dependence on biodiversity resources. Practical measures incorporated into protected area or development projects include:

Raise agricultural productivity through extension via promotion of wet rice cultivation, where suitable conditions exist, improved water supplies, introduction of improved crop varieties and fruit trees, fish pond development and the promotion of cash crops). Small grants, village savings groups and formal rural credit can all play a useful role in financing these initiatives.

Diversify income sources through better marketing of cash crops, handicraft development and ecotourism projects. Potential products and markets have been identified in several NBCAs (e.g. PKK, NPI, NHA, PXH, DHS and XPN), and in one or two cases projects have been initiated).

Sustainable use of NTFPs by developing local collection rules, cultivation and adding value through processing and marketing.

Box 2

FOREST AND LAND USE MANAGEMENT PLANNING IN PROTECTED AREAS

Following the adoption of a common procedure for forest and land use management planning (FLUMP) by the government in 1996, donor funded projects have assisted in further developing approaches, procedures and methods specifically tailored to the needs of protected areas. FLUMP is a process of resource management with the ultimate aim of achieving a secure and sustainable system of land and resource use, which meets both conservation objectives and community livelihood needs. The system and the rules, regulations, roles and responsibilities which it embodies are defined in formal agreements developed at the community level, ratified with district authorities and monitored and supported on an ongoing basis by protected area staff. It has the following objectives: -

Stabilising forest and land use patterns under a sustainable management system.

Ensuring equitable access to forest and land resources for all community members and formalising land use rights within the existing legal framework.

Establishing resource use and conservation co-management agreements with local communities.

Developing a partnership between villages and government for the joint management of community development and conservation activities.

The Forestry Law, Prime Minister's Decree 164 regarding protected areas and relevant sections of the Land Law provide the legal framework for conducting FLUMP in NBCA's. Taken together, these laws provide for: -

Establishing distinct zones within and adjacent to NBCA's, namely, Totally Protected Zones (TPZ), Controlled Use Zones (CUZ) and Corridor Zones (CZ)

Identifying and zoning village-use land into 5 forest categories and 2 agricultural land types.

Developing local rules and regulations with villages in relation to the management and permitted uses of the above land categories including the establishment of penalties for improper use.

Providing legal land use right certificates to individual families in those zones set aside for agricultural production.

Current government policy emphasises land use planning as a means of controlling forest encroachment and stabilising shifting cultivation. Policy also places a high priority on FLUMP in and around protected areas to promote biodiversity conservation and to ensure sustainable natural resources management.

"Land use planning and land allocation which allows local people's participation is an essential tool for planning and implementing NBCA management programs and activities" (Sawathvong et al., 1999).

"...only three staff out of 253 that were assigned to conservation duties in DoF or the provinces in 1998 have any postgraduate training (DoF, 1999). Another 33 had college-level education, but in a wide variety of fields, which often have little relevance to their present duties" (DoF, 1999).

"A recent analysis, based on distribution records for mammals and birds has shown that much of the country's species diversity can be understood in terms of three biogeographic components, representing the North, the South and the Annamite mountains most of which are adequately captured in the existing system (Ling, 1999)" (DoF, 1999).



Viewing agricultural plots near to Nakai-Nam Theun NBCA

Box 3

PARTNERSHIPS

The following is an excerpt from The Lao PDR Country Report (DoF, 1999)

Hydropower

Partnerships of a different kind are evolving with the hydropower industry. Lao PDR is committed to the expansion of hydropower both for domestic use and export to neighbouring countries as the industry represents one of the most promising sources of revenue for development. Some of the current and proposed projects lie close to or within NBCAs, which presents a dilemma. Although the projects themselves can have substantial environmental impacts, the developers have a vested interest in maintaining the integrity of upstream watersheds and can also provide a sustainable source of funding. Thus, for example, the ADB has proposed that a Trust Fund be established for the Nam Ngum watershed, which includes part of Phou Khao Khaouy NBCA. The fund would help support management of the NBCA. In 1996, GoL and the World Bank and GoL, commissioned IUCN to produce an Environmental and Social Management Plan for the Nakai-Nam Theun Catchment and Corridor Areas (IUCN, 1997). If implemented, funding of the plan would be linked to a loan guarantee for the proposed NT2 hydroproject, and constitute a form of compensation for the environmental impacts of the dam. Difficult as these trade-offs are to assess, they have brought the role of protected areas in Laos into the mainstream of economic debate.

Ecotourism

The regional growth of ecotourism in Southeast Asia presents a further opportunity to provide support of protected areas and sustainable development to adjacent communities. Tourist arrivals to Lao PDR have been increasing by 15% pa in recent years exceeding 500,000 for the first time in 1998. While most of these are visitors were from neighbouring countries, 78,000 visitors came from farther, higher yield destinations. With receipts of US\$80 million in 1998, tourism is now the No. 1 source of revenue to the country, exceeding garments, timber and hydropower sales (National tourism Authority, 1999). Appropriately, 1999/2000 has been designated Visit Laos Year.

At present most tourist itineraries are confined to established cultural attractions, such as Louang Phabang, Wat Phou and the Plain of Jars. Government policy now aims to promote greater use of protected areas, while keeping a tight rein on inappropriate development and attempting to ensure benefits to rural communities. Although lacking major wildlife spectacles, many of the protected areas in Lao offer outstanding scenic and forest attractions, combined with rich cultural traditions and great ethnic diversity. Modest lodge plans are currently being developed in several parts of the country.

"Besides the inherent vulnerability created by financial dependency, strategic objectives tend to become subordinated to the requirements of short-term project outputs. Indeed, entire departments can become broken up into isolated projects, each with its own equipment, advisers and counterpart staff and accountable to a donor with its own cycle of deadlines and evaluations. Senior staff find themselves locked into an endless schedule of visiting missions, each with only a limited understanding of the 'big picture'" (DoF, 1999).



Nam Leuk hydro-power project, Bolikhamxai Province

Dick Wadding/IUCN

Box 4

COMMUNITY-BASED NATURE TOURISM IN LAO PDR

It is now widely accepted that local stewardship of resources plays an important role in sustainable resource use. The participation of local communities in the management of biodiversity not only promotes conservation but can also help to achieve rural economic development goals. Community-based eco-tourism is one such participatory activity, which is gaining in popularity throughout the world and is seen as having high potential in Lao PDR.



Community-based tourism in Phu Xang He NBCA

Quite unlike conservation initiatives in many other countries, Laos is committed to developing a partnership with the local people who live in and depend on the natural resources in the conservation areas for their daily livelihoods. Savannaket Provincial Forestry Office's nature tourism program contributes to this goal through three closely related objectives.

The program takes tourists to Phu Xang He National Biodiversity Conservation Area and gives them the opportunity to see some of the most beautiful and remote areas in rural Laos, observe a variety of interesting plants and experience life in rural communities.

Each 5-day tour takes a maximum of 12 tourists on treks through the protected area between villages in and around its borders where they spend the nights, sleeping in tents or villagers' houses. The tours are organised by the protected area Authorities and all are accompanied by Park Rangers. Local villagers act as paid guides, cooks and cleaners. They also benefit by charging for accommodation and from the sale of food and local produce.

Objectives

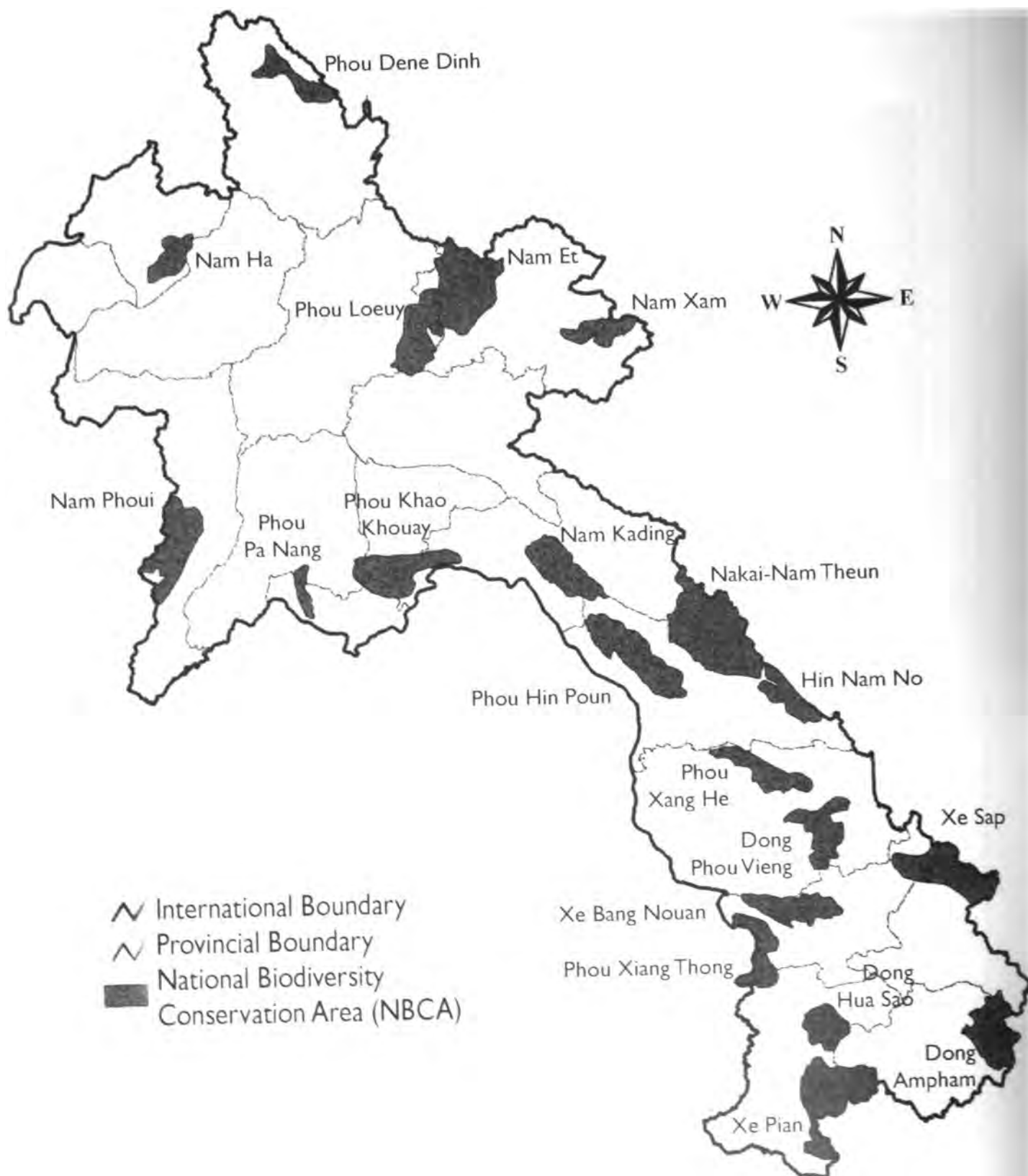
- Provide an alternative source of income to local communities in order to reduce their reliance on protected area resources.
- Give local communities an economic stake in the protected area.
- Generate a modest income for use in protected area management and conservation activities.
- Give foreign visitors the opportunity to visit the country's protected areas.

"We found that it was essential that the management team critically evaluate their mandate, expertise and capacity to address the threats and select their area of intervention accordingly. Where inappropriate for them to take action, appropriate partners or co-ordination should be sought or encouraged. Easier said than done, this lack of delegation and co-ordination is found at the root of many failed protected area projects and ICDPs (Brandon, 1997; Wells et al., 1998), who are compelled to single-handedly solve all of the problems of a site in an effort to achieve conservation." (Johnson, 1999).

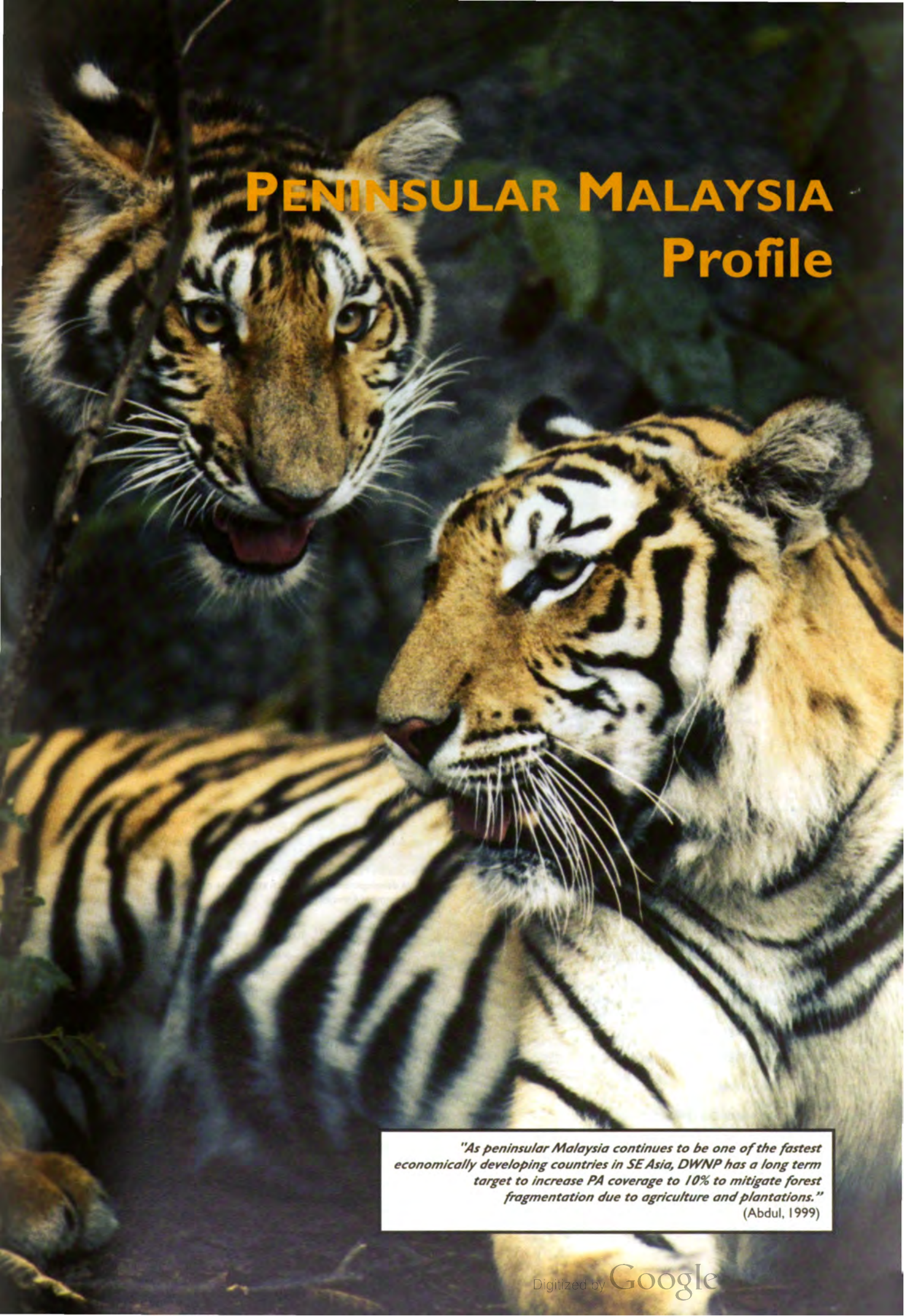
"Several other agencies are potential users of the protected area system and thus stakeholders in it. These include the National Tourism Authority, the Department of Roads, Electricity du Laos, the Hydropower Office of the Ministry of Industry and Handicraft, and the National University of Laos" (DoF, 1999).

LIST OF PROTECTED AREAS IN LAO PDR CORRESPONDING TO IUCN CATEGORIES

Code	Protected Area Name	Size (Hectares)	Year Inscribed
	NATIONAL BIODIVERSITY CONSERVATION AREA – IUCN CAT VI		
1.	Xe Piane	266,500	1993
2.	Dong Hua Sao	110,000	1993
3.	Xe Sap	133,500	1993
4.	Xe Bang Nouan	150,000	1993
5.	Phou Xieng Thong	120,000	1993
6.	Dong Ampham	200,000	1993
7.	Phou Pha Nang	70,000	1993
8.	Nam Kading	169,000	1993
9.	Phou Khao Khouay	200,000	1993
10.	Nakai Nam Theun	353,000	1993
11.	Phou Hinboun	150,000	1993
12.	Hin Namno	82,000	1993
13.	Phou Xang He	109,000	1993
14.	Dong Phou Vieng	50,000	1993
15.	Phou Loey	150,000	1993
16.	Nam Et	170,000	1993
17.	Nam Xam	70,000	1993
18.	Nam Phoui	191,200	1993
19.	Phou Dendin	200,000	1993
20.	Nam Ha (East)	69,000	1993

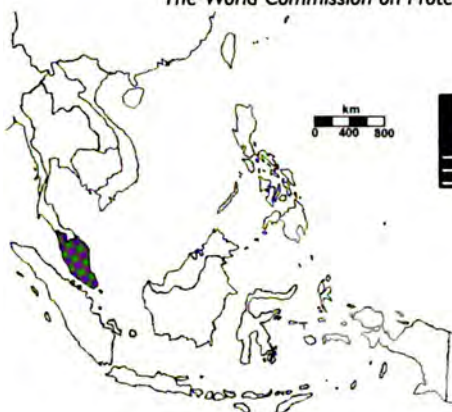


(SOURCE: NOFIP 1993)

A close-up photograph of two tigers in a forest. The tiger in the foreground is looking towards the right, with its mouth slightly open. The tiger in the background is looking towards the camera, also with its mouth slightly open. The background is dark and out of focus, showing some green foliage.

PENINSULAR MALAYSIA Profile

"As peninsular Malaysia continues to be one of the fastest economically developing countries in SE Asia, DWNP has a long term target to increase PA coverage to 10% to mitigate forest fragmentation due to agriculture and plantations."
(Abdul, 1999)



PENINSULAR MALAYSIA

Status of Protected Area Program

STRENGTHS

Protected area system has been upgraded with the recent addition of Belum Forest State Park
Government Wildlife and PA agencies have funds and capacity to manage the PA system
Positive aspects of colonial administration legacy include early establishment of PA system compared to other SE Asian countries, research (baseline data) and educational institutions

Experience in integrating coastal zone management, planning and islands and seas into the PA system (i.e. Pahang, Tioman)

Strong civil society participation, voluntary practical involvement in PA's, namely the role of the Malaysian Nature Society and other NGOs

Captive breeding programs for Timor deer, Sambar deer, river terrapins, Sumatran rhino

If Peninsular Malaysia had not degazetted a number of PAs in the past, they would have well over 1 million ha of PAs at this time.

CHALLENGES

Complex relationship and cross-management responsibilities between federal and state government and environment and land use agencies on issues relating to land and PAs

PA boundaries often unclear since the state FD and DWNP gazette and degazette the same protected areas (e.g. 14 current PAs (20% of PA land) have been gazetted twice) and the state FD classifies forestland without proper mapping or sending information to DWNP.

Difficulty designing and managing PAs due to habitat conversion which has left forest

fragments and species isolated in remnant vegetation

Current land development policies create incentives to convert wetlands, which are in critical condition comprising only 7% of total land area, and to degazette PAs to convert to other uses

Insufficient research exists regarding the relationship between local communities and their use and economic significance of forest products in and around the PA.

Size and Population:

13.2 million ha total land; 19.4 million people (1999)

Ethnic minorities:

Indigenous Orang Asli 45,000; Bumiputras total 9 million

Economics:

Rising GNP in 1990s reliant on natural resources: oil, timber, rubber, palm oil; forest products form >10% exports.

Forest Cover:

1.6 million ha, 47% of total land (1990), but 90% is fragmented due primarily to plantations which cover 27% of total forest land

Biodiversity Values:

Ranked 12th in countries with highest biodiversity

138 threatened fauna species: 216 mammals (81 bats), 625 birds, 247 reptiles, 93 amphibians, 386 freshwater fish (38 endemic), 8,000 flowering plants (30-50% are endemic),

PA Totals:

40 PAs covering 956,806 ha or 7.3% of the total land (1999)

PA Budget:

US \$6.5 million (1996)

People in Parks:

Less than 500, mostly Orang Asli

Types of PAs:

National Parks (1)

National Wildlife Reserves (35)

Virgin Jungle Reserve pockets within Production Forests

State governments also have Protection Forest

Management Authority:

Dept. of Wildlife & National Parks (DWNP):

Manages National Parks and Wildlife Reserves through newly created Protected Areas Division

Town & Country Planning Department:

Prepares development plans, which impact use of land in PAs

State Government Agencies:

Manages State Parks

Fisheries Department:

Manages all 38 marine parks

State Fishery and Marine Agencies:

Manages freshwater & coastal resources (mangroves, sea turtles)

Current PA Legislation:

National Park Act (1980) - National Parks

Wildlife Protection Act (1972) - Wildlife Reserves

National Land Code (1960) - permits states to establish PAs

Fisheries Act (1985) - Marine Parks

National Park Corporation Enactment (1989) - passed by Johor State to establish Endau-Rompin State Park

International Conventions signed:

CITES (1974), CBD (1994), WH (1988), RAMSAR (1995), Convention on Climate Change (1994), Law of the Sea (1997)

Front Cover Photo: Two tigers, captive in Thailand. A. Lynam/WCS

THREATS

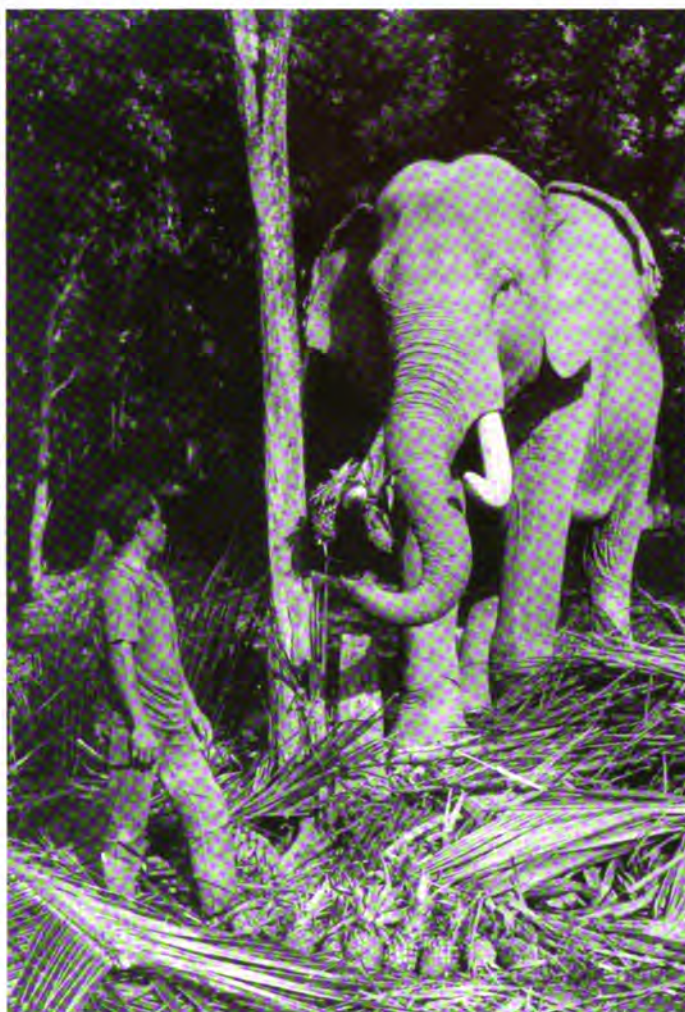
Logging occurs at unsustainable rates in several areas

Habitat destruction from forest conversion is the top reason for loss of biodiversity and species extinction. The lowland dipterocarp forest (<100m) is under extreme threat from conversion posing a major threat to the 81% of mammal species who live in this habitat

Key species, esp. Sumatran Rhino, on brink of extinction from poaching and loss of habitat

Direct relationship between the increase in oil palm plantations and the decrease in forest cover

PA system falls short on three parameters corresponding to: number of areas, size and inter-connectedness (Master Plan, 1996)



Asian Elephant

RECOMMENDATIONS

Increase the PA system to cover 10% of the original extent of ecosystems and to cover biodiversity hotspots and corridors linking fragmented PAs

Need to improve classification system to protect wetlands and lowland dipterocarp forest as most of them have been converted to other purposes, especially in the states of Perak, Selangor and Johor

Develop a Protected Areas Policy which attempts to co-ordinate policies, objectives, planning and management to clarify confusion between state and federal boundaries for the purpose of integrated biodiversity management

Improve conservation status of threatened species through a full investigation of possible PA sites and maximum co-ordination on PA planning and management between top levels of Federal and State Governments, especially the FD, which manages 90% of forested land

Integrate recognition of PAs in the planning and policies of other sectors, such as agriculture, recreation and urban development.

Resist changing the status of PAs once they have been designated, except for some compelling higher public interest

Each PA should be required to complete a management plan. Only Endau-Rompin NP, as of 1996, was enacted requiring a management plans and regulatory instruments

Timeline for PA Development

- 1902 Wild Animals & Birds Protection Enactment covered Game Reserves until 1955
- 1903 Established Chior Game Reserve as first game reserve
- 1927 All four states had established at least one protected area
- 1932 Wildlife Commission Report of Malaya by T.R Hubback, early guide for PAs
- 1939 Taman Negara established as first National Park (joined three state parks)
- 1940 Malaysian Nature Society established as the first local NGO
- 1948 - 1989 PAs were classified as security areas, causing land use conflicts
- 1954 Aboriginal People Act enactment for advancing rights of the indigenous people of Malaysia
- 1955 Wild Animals & Wild Birds Protection Ordinance enacted by federal government to clarify state PA laws
- 1960 Land Acquisition Act; Land (Group Settlement Areas) Act
- 1965 National Land Code section 62 - allowed states to establish PAs
- 1968 Stevens Report on Wildlife Conservation of Wildlife in W. Malaysia guided PA establishment
- 1972 Federal government gained jurisdiction from States over wildlife but not land management
- 1972 Protection of Wildlife Act No. 76 - covering establishment of wildlife reserves
- 1980 National Park Act passed, covering establishment of National Parks
- 1993 Amendments to National Forestry Act
- 1993 Natural Resources & Environment Section of Economic Planning Unit (EPU) of the Prime Minister's Department established to place more emphasis on environmental issues
- 1993 National Conservation Strategy prepared
- 1995 National Ecotourism Plan drafted
- 1996 PA Master Plan designed funded by DANCED comprehensive assessment, inventory and recommended actions for 39 PAs
- 1998 MOSTE briefed Federal Cabinet on findings of PA Master Plan
- 1998 MOSTE launched National Policy on Biological Diversity giving DWNP large mandate for PA management
- 1999 Taman Negara was nominated for World Heritage status
- 1999 The 100,000ha Belum Forest was proposed as State Park

RECOMMENDATIONS FOR POTENTIAL PA PROPOSALS, JASMI ABDUL, DIRECTOR DWNP

There remain unprotected areas, which are suitable for designation as national parks or reserves. Proposals for potential Pas (prepared, for example, by DWNP, WWF or MNS) should be submitted to the State Government taking into account the following considerations:

Integrated surveys must be undertaken involving Federal Government, State government and in situ NGOs. Priority must be given to local scientists and researchers to survey and prepare management plans for the proposed site of the protected area

A complete survey report and findings should be submitted to the State Government. Reports must be submitted to all the relevant State Government agencies such as the State Economic Planning Unit, State Development Authority, the Land Office and the State Legal Adviser.

Interested parties should send proposals for PA establishment through the correct channels of State Government. These channels are accessed via state departments or agencies concerned with land, development or legality as above.

Public awareness is very important in order to ensure that the State Government will finally agree with the proposal to create a PA.

In any negotiation or discussion between the interested parties and the State Government, both parties should aim for a win-win agreement. After all, the creation of PAs is to ensure positive benefits for generations now and to come.

SCIENTIFIC CONSERVATION EXPEDITIONS

Malaysia has a legacy of researching and classifying information on natural resources, laying a foundation for the development of quality education with established institutions and public interest in nature, wildlife and conservation. It is a strength that civil society and NGOs are not only actively undertaking research but also using this information as a tool to raise awareness among government and other sectors of the need to protect Malaysia's natural resources.

In 1985, the Malaysian Nature Society organised a 13 month expedition for Malaysian scientists to Endau Rompin Park. This 80,000 ha area contains some of the last remaining lowland primary forest. Over 70 scientists contributed expertise and more than 1200 public volunteers including university and college students and school children assisted with surveying the stock of flora and fauna. Unusual and interesting habitats were noted and 41 rare species and more than 15 new and endemic species recorded. The expedition fuelled public concern, leading to declaration of the Johor State portion of Endau Rompin as a State Park in 1984. The Pahang section of Endau Rompin is protected under the Pahang State Government's National Land Code (1965).

In 1993, His Majesty the IX Yang diPertuan Agong, Sultan Azlan Shah, officiated the Malaysian Heritage and Scientific Expedition to Belum Forest Reserve in order to survey and document flora and fauna biodiversity. A second expedition in 1998 accumulated similar data from the northern section of Belum. The baseline information from both of these expeditions was used by the State government as justification for the establishment of Belum Forest State Park.

Research Recommendations

Need more mapping of the ecosystems (tropical rainforests) since last vegetation map was compiled in 1962

Research Officer positions for each NP should be established

Box 3

TAMAN NEGARA NATIONAL PARK

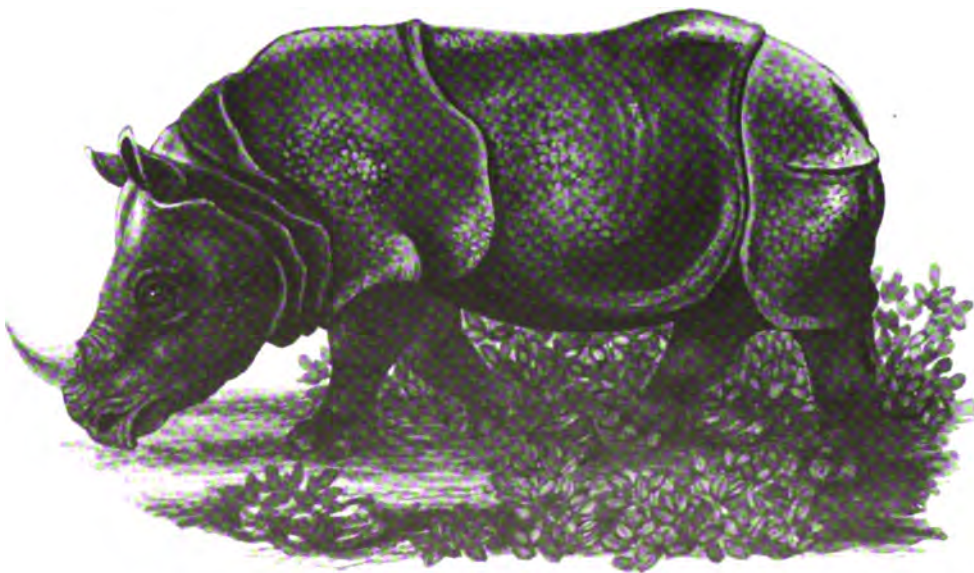
Established in 1939, Taman Negara National Park is the most notable PA, comprising nearly 50% of the total protected area base of Peninsular Malaysia (434,000 ha in 3 states). Taman Negara NP is rich in wildlife and is home to a large number of the country's endangered species including the Crested Argus Pheasant (*Rhenertia ocellata*), Masked Finfoot (*Heliopais personata*), Sumatran Rhinoceros (*Dicerohinus sumatrensis*), Indo-Chinese tiger (*Panthera tigris coberti*), Malayan Gaur (*Bos gaurus hubbackii*) and Asiatic Elephant (*Elephas maximus*). The World Heritage Committee of UNESCO is currently reviewing the Government of Malaysia's nomination of Taman Negara for a World Heritage Site.

Over its lifetime the park has provided tremendous benefits to the local people, namely in the habitat to support hunting and subsistence livelihoods of Orang asli communities. Furthermore, in recent years tourism attracted to the park has given a new focus for livelihood opportunities. Local people are employed as rangers, labourers and provide lodging in a village at the park entrance. Also, the Ministry of Culture, Art and Tourism (MOCAT) has completed an ecotourism course and licensed 50 local guides, who are registered with park administration to lead trips into Taman Negara. A co-ordinating committee meets monthly with local people and guides to set up trip schedules and plan garbage collection and trail maintenance. Only Taman Negara NP has legal provision for the appointment of permanent staff, including Superintendents, park rangers and casual workers, for its management. However, outside of this process, the local people do not presently participate in any other aspect of park planning and management.

A private ecotourism company, Pernas, manages six ha within the park, which have been zoned for tourism. The Government, PA management and Pernas signed an agreement giving a lease of 20 years to the company and setting out rules and regulations for its operations. This agreement included the following stipulations:

- Minimise impacts
- Reinvest revenue directly to construction of tourism infrastructure
- Pay a 1.5% levy to the state government to be channelled back into management of Taman Negara NP

Pernas revenue totals US \$3 million annually, \$45,000 of which subsidises PA management. However, the operations of the company have lead to overcrowding due to the large influx of tourists over the last few years. These impacts are now mitigated through the intervention of PA management.



Sumatran Rhinoceros. Emma Jones/WCS

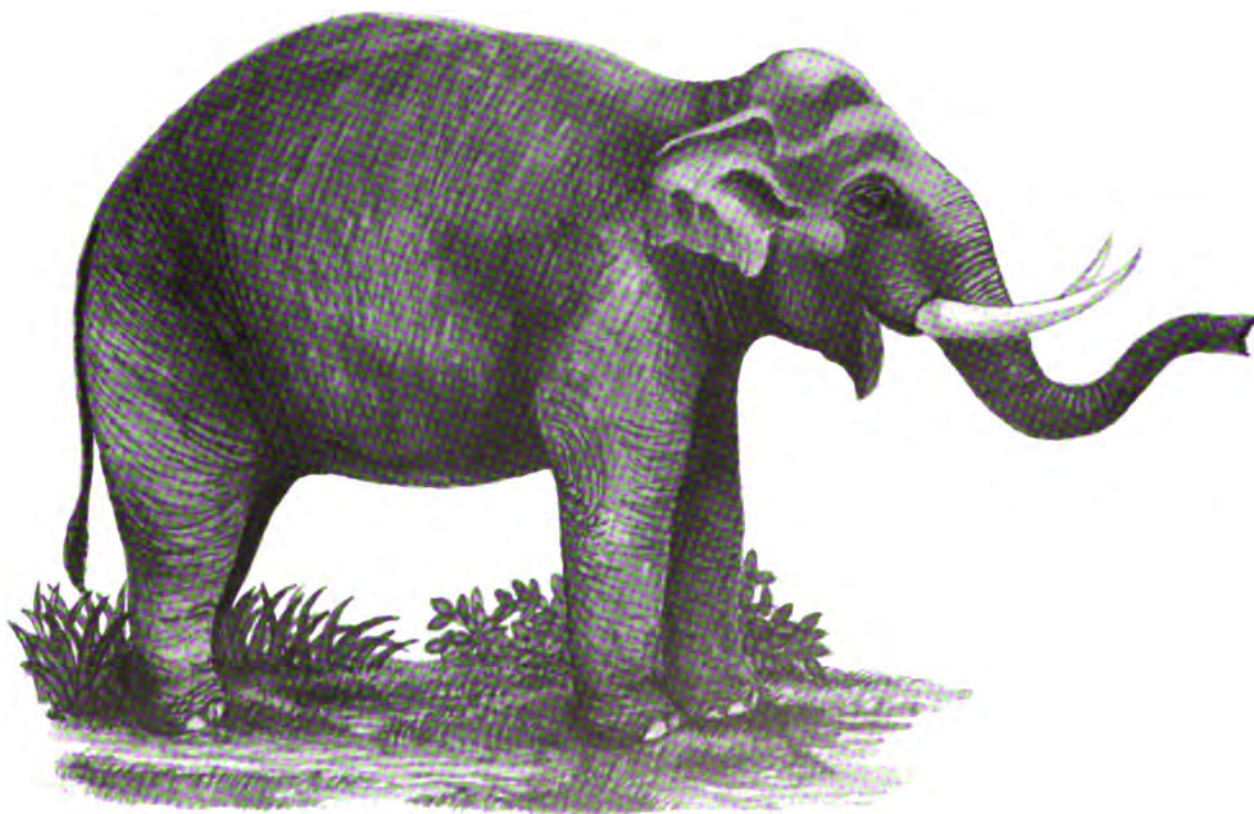
Box 4

BELUM STATE PARK

Proposals to designate Belum Forest as a State Park began in 1968 (Steven, 1968). This unusual area located in the State of Perak, bordering Thailand has been unexplored since 1948 due to national emergency and security problems. In 1991, a large portion of Belum Forest was gazetted as a Forest Reserve under the 1984 National Forest Act. The East-West Highway was built in 1975 and, along with the Temenggor Dam, served to reduce insurgent activities along the border.

Surveys on vertebrate biodiversity were undertaken by the Department of Wildlife and National Parks (DWNP) and other NGO's, such as the Malaysian Nature Society (MNS), in 1993 and 1994. The DWNP covered most of the northern region of Belum and found this area to be rich in large mammals such as elephant, tiger, rhinoceros, bear, tapir, sambar deer and barking deer. In 1993, the MNS was given permission by the State Government to set up a study camp at Sungai Singor in the lower Belum region. More than 70 scientists found numerous new species of plants.

On November 8, 1999, the Menteri Besar of Perak made an historical visit to *Sira Papan* (Papan Salt lick) in the upper Belum region. He was accompanied by several politicians, senior government officials and the media. On the same day, the Chief Minister announced that the Belum Forest Reserve was to be established as a State Park, incorporating approximately 100,000 hectares of virgin tropical rain forest. It will ensure that not a single tree in Belum State Park will be cut. Any development for tourism activities will occur outside of the protected area. (Abdul, 1999 page 4)



Asian Elephant. Emma Jones/WCS

LIST OF PROTECTED AREAS IN PENINSULAR MALAYSIA CORRESPONDING TO IUCN CATEGORIES

Key to Abbreviations/Symbols:

G - gunung (mountains)

P - pulau (island)

Sg - sungai (river)

* - Terrestrial protected areas on island

+ - Combination of terrestrial and marine protected areas

- Marine protected areas, i.e. waters surrounding island at distance of 2 nautical miles seawards from the outermost points of the island

@ - Marine protected areas, i.e. waters surrounding island at distance of 1 nautical mile seawards from the outermost points of the island

x - Status uncertain; possibly alienated/excised from the protected area -further investigation needed

NA - data not available

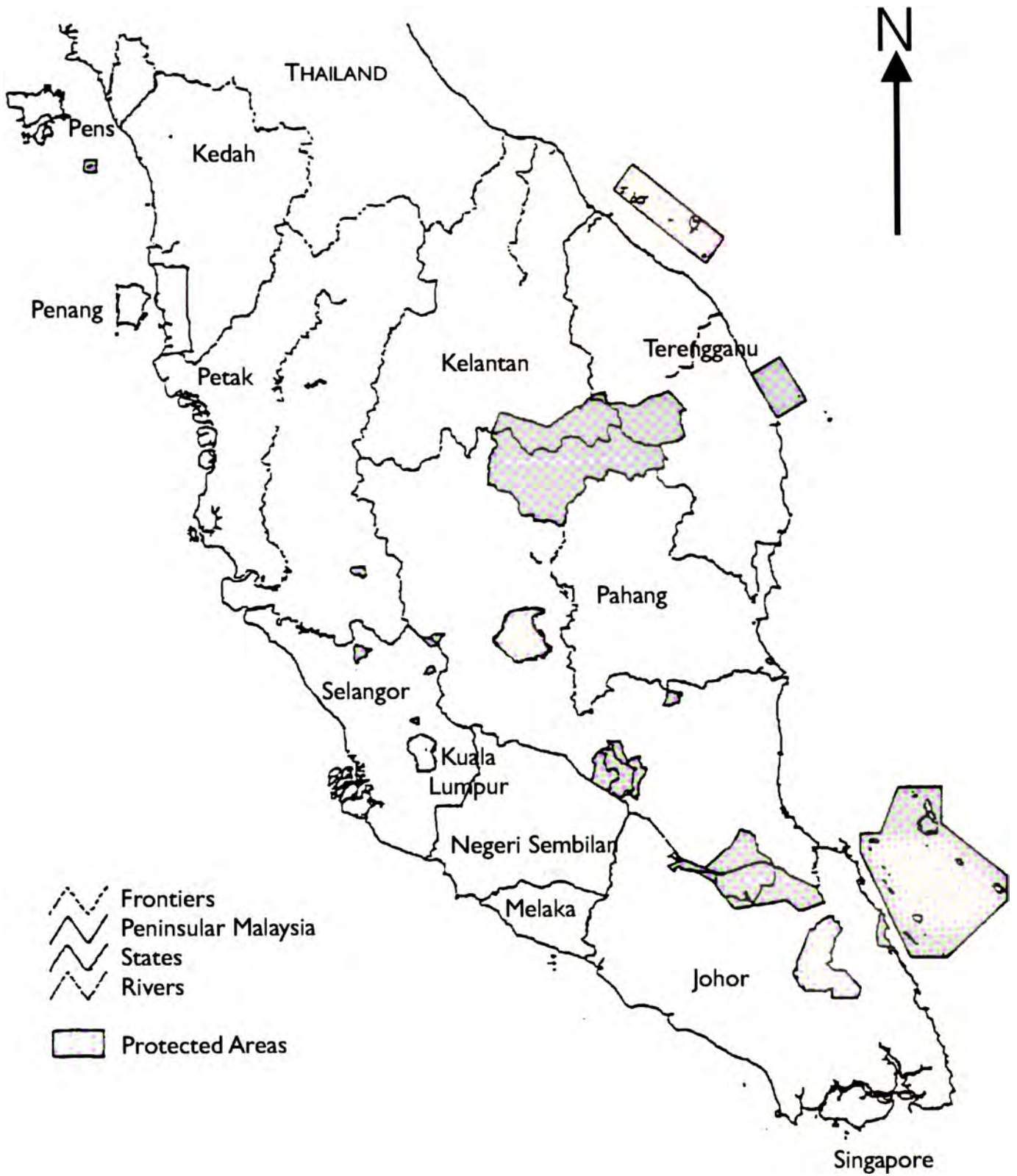
** Based on DWNP/DANCED 1996. A Master Plan on Capacity Building and Strengthening of the Protected Areas System in Peninsular Malaysia. DWNP, Kuala Lumpur.

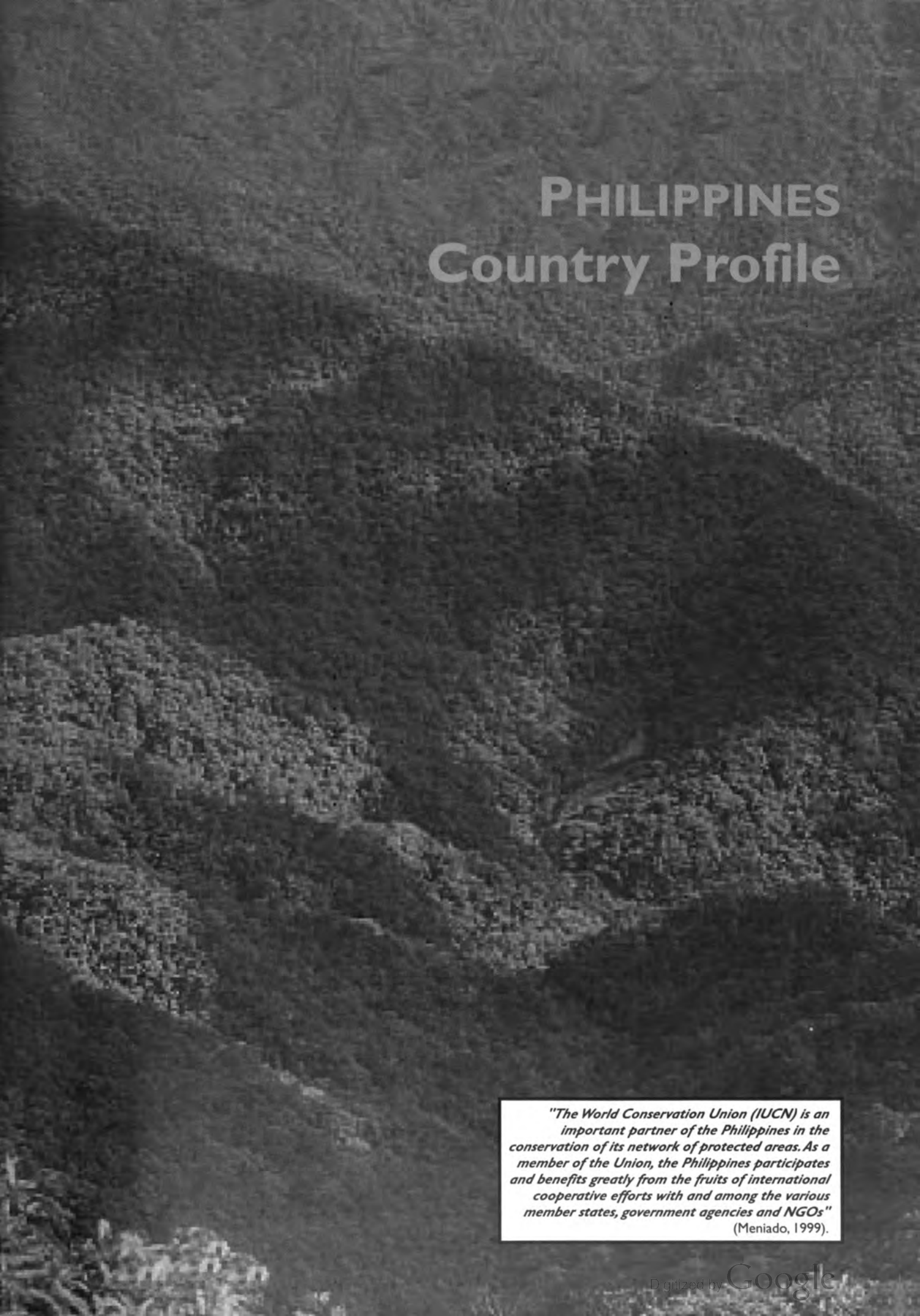
@@ Both the land and the sea around the islands are part of the protected area.

Name of Protected Area	Size (ha)	Year Inscribed
VIRGIN JUNGLE RESERVES (VJR) – IUCN CAT I		
Berembum	3,214	1959
Bukit Larut	2,744	1962
G. Jerai	1,579	1960
G.Ledang	1,134	1969
WILDLIFE RESERVE – IUCN CAT IA		
Krau Wildlife Reserve	62,395	1923 **
Tioman Islands Wildlife Reserve +	9,455	1972**
Sungkai Wildlife Reserve	2,468	1921**
WILDLIFE RESERVE – IUCN CAT IB		
Sungai Dusun Wildlife Reserve	4,330	1964**
NATIONAL PARK/STATE PARK MARINE PARK – IUCN CAT II		
Taman Negara National Park		
i) Pahang State portion	248,121	1939**
ii) Terengganu State portion	103,082	1939**
iii) Kelantan State portion	80,250	1939**
Endau-Rompin (Johor) National Park	48,905	1993**
Endau-Rompin (Pahang) Wildlife Reserve	40,197	1986**
P Redang MP#	NA	1994
P Ekor Tebu MP#	NA	1994
P Pinang MP#	NA	1994
P Lima MP#	NA	1994
P Lang Tengah MP#	NA	1994
P Perhentian Kecil MP#	NA	1994
P Perhentian Besar MP#	NA	1994
P Susu Dara MP#	NA	1994
P Kapas MPL@	NA	1994
P Labas MP#	NA	1994
P Sepoi MP#	NA	1994
P Gut MP#	NA	1994
P Tokong Bahara MP#	NA	1994
P Tioman MP+	NA	1994
P Chebeh MP+	NA	1994
P Tulai MP+	NA	1994

P Sembilang MP#	NA	1994
P Seri Buat MP#	NA	1994
P Tinggi MP#	NA	1994
P Aur MP#	NA	1994
P Pemanggil MP#	NA	1994
P Goal MP#	NA	1994
P Mensirip MP#	NA	1994
P Harimau MP#	NA	1994
P Rawa MP#	NA	1994
P Hujung MP#	NA	1994
P Tengah MP#	NA	1994
P Besar MP#	NA	1994
P Sibu MP#	NA	1994
P Sibu Hujung MP#	NA	1994
P Mentinggi MP#	NA	1994
P Kaca MP#	NA	1990
P Lembu MP#	NA	1990
P Payar MP#	NA	1990
P Segantang MP#	NA	1994
P Kuraman MP#	NA	1994
P Rusukan Kecli MP#	NA	1994
P Rusukan Besar MP#	NA	1994
WILDLIFE RESERVES – IUCN CAT III		
Wang Pinang Nature Reserve	68	1984**
WILDLIFE RESERVES – IUCN CAT IV		
Bukit Sungai Puteh (Kuala Lumpur) Wildlife Reserve	4	1932**
Bukit Sungai Puteh (Selangor) Wildlife Reserve x	36	1932**
PROTECTED LANDSCAPE/SEASCAPE – IUCN CAT V (A)		
Task Bera Ramsar Reserve	38, 446	1995
Tasik Cini Nature Reserve	5,085	1989**
Kuala Selangor Nature Park	296	1989
Port Dickson Islands Wildlife Reserve@@	na	1921**
Tanjong Tuan Wildlife Reserve	61	1971**
Four Islands Wildlife Reserve*	na	1954**
CONSERVATION AREA – IUCN CAT VI (A)		
Endau Kluang	52,453	1933**
Endau Kota Tinggi (East)	8,660	1933**
Endau Kota Tinggi (West)	36,921	1933**
Segamat Wildlife Reserve	12,216	1937**
Pahang Tua Wildlife Reserve	1,335	1954**
Bukit Kutu Wildlife Reserve	1,943	1922**
Klang Gate Wildlife Reserve	130	1936**
Fraser Hill Wildlife Reserve	2,979	1922**

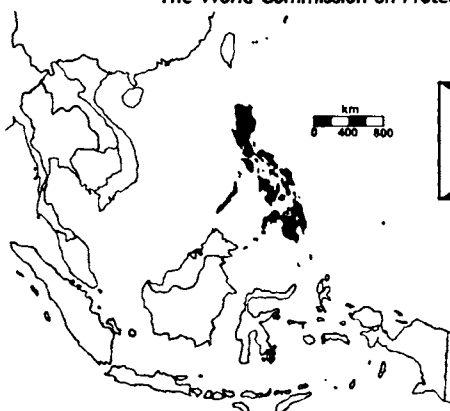
PENINSULAR MALAYSIA PROTECTED AREAS





PHILIPPINES Country Profile

"The World Conservation Union (IUCN) is an important partner of the Philippines in the conservation of its network of protected areas. As a member of the Union, the Philippines participates and benefits greatly from the fruits of international cooperative efforts with and among the various member states, government agencies and NGOs"
(Meniado, 1999).



PHILIPPINES

Status of Protected Area Program

STRENGTHS

Highlights of the NIPAS Act (1992) are the recognition of tenure, the prohibition of destructive activities, a public participation mechanism and a multi-sectoral management body

Marine system plan in preparation [part of Integrated Protected Areas System (IPAS) program]. Tubbataha Reefs National Marine Park established in 1988 became the first WH site in the country in 1993 and Puerto Princesa has recently been granted WH status

Coastal Environment Program (CEP) - community based coastal resource management and integrated coastal zone management to rehabilitate, protect, conserve and sustainably manage coastal zones in fifteen regions

Trans-boundary co-operation with Sabah, Malaysia over the Turtle Islands Heritage Protected Area, where more than 1,000 turtles nest annually (Trono, 1993), provides a model

for international management of marine resources over international borders

Strong civil society participation: self-initiated lobbying; representation on site-specific Protected Area Management Boards (PAMBs); local people volunteer as Natural Resource Officers, Field Officers and form Forest Protection Groups to patrol PAs

Some organisations/government parties are making real progress in implementing international commitments at the national and local level, e.g. FPE. Highly significant contribution of NGOs in assisting government with ecosystems and habitat protection and conservation

Institutionalisation of monitoring system, capacity building and awareness raising at different administrative levels via World Bank/Nordic Agency for Development and Ecology (WB-NORDECO) Biodiversity Monitoring System project in 17 Pas

The number of Philippines threatened endemic species exceeds any other country on a hectare per hectare basis (Luna, 1999)

Size and Population:

30 million ha; 77 million people

Ethnic minorities:

More than 100 ethnolinguistic groups. 12 million are marginalised indigenous communities¹

Economics: last qtr. 1999, GNP 5.1 %; GDP 4.9%; First Qtr. 2000 GNP 3.4% and GDP 3.4%

Forest Cover:

5.5 million ha² - 800,000 ha old growth dipterocarp

Biodiversity Values:

Among top 12 countries with highest densities of biodiversity and endemism on a per unit area basis³

PA Totals:

36 PAs established under NIPAS by Presidential Proclamation.

Meniado: 209 PAs considered as initial components of NIPAs covering 2.6 million ha (11.3% total land area).

McNeely: 10,301 km² (3.43% total land area)

People in Parks:

more than 70,273 households (318,795 individuals)

Types of PAs:

Old Categories (Initial components)

- National Parks, National Marine Parks and Reserves
- Wilderness Areas
- Watershed Forest Reserves
- Mangrove Swamp Reserves
- Game Refuges & Bird Sanctuaries

New Categories under NIPAs

- Strict Nature Reserve
- Natural Park
- Natural Monument
- Wildlife Sanctuaries
- Protected Landscapes and Seascapes
- Resource Reserve
- Natural Biotic Areas

Management Authority:

Department of Environment and Natural Resources (DENR), Protected Areas & Wildlife Bureau (PAWB)

Control and administration of PA system

Environmental Management & Protected Areas Sector

Regional management of PAs

85 Protected Area Management Boards (PAMBs)

Site management of PAs

Protected Area Offices with 40 PA Superintendents

Site management of PAs

Protected Area Budget

P47 million for PAWB and Regional offices (1999). [US \$816,000 (1987)]

Legislation:

NIPAS Act (1992) classifies and administers all designated PAs

International Conventions signed:

CBD (1994), Ramsar (1994), CITES (1981), WHC (1985), Climate Change (1994), Law of the Sea (1994)

¹Environmental Science for Social Change. (1999). The Decline of the Philippine Forest. Anteneo de Manila University Campus Loyola Heights, Quezon City. The Bookmark Inc, Makati City.

²As above.

³Mittermeier, R.A. et al. (1998). Megadiversity: Earth's Biologically Wealthiest Nations. CEMEX.

CHALLENGES

Implementation of NIPAS and consequent conservation of The Philippine's remaining bastions of biodiversity is hampered by lack of government funding and human resources

Only the 10 PAs under the Conservation of Priority Protected Areas Project (CPPAP) and the 8 PAs under National Integrated PAs Programme (NIPAP) have the financial resources to fully utilise their PAMBs

No protected area has been through all the necessary steps for its full inclusion in the system

Conflicts among management entities, e.g. in Penablanca Protected Landscape and Sagay Marine Reserve, due to desire of local government units (LGUs) to acquire entrance fees and revenue from use of facilities. In Palawan clashes occur between supporters of NIPAS Law and those of the Strategic Environment Plan (SEP) Law of Palawan.

Recently, many of the gains of NGO advocacy have been reversed by the current administration's policies (Luna, 1999)



Patricia Regis
Puerto-Princesa Subterranean River National Park entrance

THREATS

Rapid pace at which PAs are being degraded and their biosources exploited arising from three main issues: widespread onslaught of human activities on the environment as a whole, considerable number of resource-dependent communities within PAs, and weak management capacity and conservation efforts in most sites

No PA boundary has been clearly demarcated on the ground and generally, only interim protection activities are occurring in PAs

Even though a proportion of settlers in PAs are indigenous people adhering to conservation principles, many are 'mainstream', profit oriented people with practices which are not supportive of conservation

The government (particularly DENR and LGU) issues permits for mining, treasure hunting, logging, NTFP collection and sawmill operations in PAs - this is in opposition to the NIPAS Law.

DENR and LGU employees themselves are sometimes involved in illegal and environmentally destructive activities.

Dynamite and cyanide fishing, notable in Agoo-Damortis National Seashore Park, Bataan NP, Mt. Samat National Shrine, Juban-Magallanes Watershed Forest Reserve, Mt. Isarog NP, etc.

Processing of applications for Ancestral Domain Claims have not been completed, sometimes attributable to municipal mayors

Silent response of DENR is a barrier to the development of the proposed Community Based Forest Management Agreement for Protected Areas

Infrastructure development within PAs is a common source of conflict between park personnel (usually against the proponent of the development) and local people (want facilities and jobs)

Conflicts between the military and insurgents deter the conduct of NIPAS activities in certain sites, such as Liguasan Marsh and Siocon Resource Reserve

Fake land titles issued by unscrupulous individuals for areas within NPs e.g. Bataan NP, Libmanan Cave NP, Bulabog-Putian NP and the Hundred Islands NP

Prevalence of fish pens in Paoay Lake NP, Bulusan Volcano NP, Taal Lake Protected Landscape and Naujan Lake NP.

Illegal logging financed by wealthy individuals occurs particularly in Sibonga Watershed, Mt. Kalatungan, Mt. Kitanglad NP and Mt. Malindang Northern Sierra Madre NP

Small-scale mining and treasure hunting proposed in Mt Palay-Palay Mataas na Gulod NP

Proliferation of religious facilities and infrastructure development by resort owners, e.g. in Mt. Banahaw-San Cristobal NP and El Nido Managed Resource PA

Great potential of PAs for energy exploration. The Philippine National Oil Corporation has proposed oil and geothermal exploration of Alibijaban Wilderness Area and Mt Kanlaon NP

Forest fires, exacerbated by phenomena such as El Nino and the lack of fire fighting equipment

Drought, causing high mortality rates especially in restoration sites.

Severe population pressure

People flock to PAs to make a living from the abundant resources they contain employing damaging practices

Timeline for PA Development

- 1521-1889 Spanish colonization: large land grants awarded to favored Spaniards and indios
- 1898 Laws passed under US legislature which granted equal access to colonizers and Filipinos
- 1910 First national park established (Executive Order No.33)
- 1932 Act 3915 "An Act Establishing National Parks" established old PA system
- 1946-1966 Attempted land reform program
- 1966-1986 Marcos was President
- 1971-1972 Martial Law was imposed by President Marcos
- 1950s-1970s Logging was a nationally prioritized industry
- 1969 The Philippines application for membership to IUCN is ratified
- 1986 President Marcos overthrown
- 1986-1989 Military Coups plagued the Philippines
- 1987 Haribon Foundation and DENR-PAWB launched Integrated Protected Area System (IPAS) project, through a WWF-US Debt-for-Nature Swap
- 1989 Military coups
- 1991 Republic Act 7160, Local Government Code, extends jurisdiction of Local Government Units (LGUs) to 15km off the coastline with implications for MPAs
- 1992 Foundation for the Philippine Environment established: currently the only NEF in the Philippines and it was one of around 40 established worldwide in the 1990s
- 1992 Enactment of Republic Act 7586, "An Act Providing for the Establishment and management of the National Integrated Protected Areas System" (NIPAS Act)
- 1992 UNCED proposed Agenda 21, clearly promoting sustainable development as the global development strategy. The Government consequently develops Philippine Agenda 21
- 1993 Administrative Order No.19 formed Coastal Environment Program (CEP)
- 1994 7 year CPPAP established, US \$ funded by GEF with a 10% counterpart fund (US \$2.87 million) from the Government
- 1994 Philippine Ecotourism Code of Ethics prescribed Guidelines for Ecotourism Development
- 1995 NIPA, a Consortium comprising 12 NGOs, began operations on behalf of CPPAP
- 1995 Philippine Mining Act enacted, which prohibits mining operations in areas under NIPAS
- 1996 Governments of the Philippines and Malaysia established the Turtle Islands Heritage Protected Area (TIHPA), the first trans-frontier marine PA in the world dedicated to protect marine turtles that abound the area.
- 1997 Passing of Indigenous Peoples Rights Act (IPRA) gives indigenous people full control of their ancestral domains and the use of resources therein
- 1998 Hanoi Plan of Action adopted by ASEAN leaders Philippine ASEAN Heritage Parks and Reserves were a focus
- 1998 Fisheries Code passed pertaining to marine NPs and Reserves
- 1998 ASEAN Regional Centre for Biodiversity Conservation (ARCBC) established in Laguna
- 1999 Creation of the National Ecotourism Development Council in charge of formulating the National Ecotourism Strategy and National Ecotourism Program
- 1999 Puerto Princesa World Heritage Site declared
- 1999 Draft "Guidelines and Principles in Determining fees for access to and sustainable use of resources in PAs"

RECOMMENDATIONS

A new role for the Central bureaucracy should be to monitor and advise, rather than directly manage PAs. Decisions of the local management body should be respected and not substituted with Central decisions.

Generate more political support for ecological considerations in decision-making

Advocate policy and institutional reforms and appropriate site-specific PA laws. Strengthen political will of the government to implement the different environmental laws and CPPAP systems

Only indigenous people whose practices are ecologically sound and consistent with the long-term objectives of biodiversity conservation and sustainable use should have freedom to manage resources in PAs and buffer zones (Merrado, 1999)

Build capacity of DENR staff as community development workers, not only enforcers of laws, rules and regulations

Continue to develop sustainable financing mechanisms to ensure continuous implementation of PA programs

Generate more support for biodiversity conservation from LGUs and civil society in surrounding areas of PAs

Ensure secure land tenure, facilitate the design and implementation of workable models for community-based PA management, and develop and implement various livelihood systems appropriate to PAs

Promote strong public and external support for PA management

Awareness raising, information dissemination, education and communication programs need to begin with real investigation into existing systems, norms, beliefs, fears and aspirations specific to each locality, instead of assuming understanding of traditional characteristics.

Continuous training, education and exposure of people, especially locals, to improve knowledge and skills in PA management

Project plans and designs must be flexible and adaptable as assumptions made at the start of a project will need adjusting. Adaptive management should be promoted and more baseline data gathered to support this.

Build capacity of PA managers through tailor-made, comprehensive and responsive programs

Document and publish processes for other groups and countries interested in community-based PA management to reference

Work to continue what is begun; work to co-ordinate efforts with as many groups of people as possible; and work to learn from personal experience and the experience of others (Mesina, 1999)

"The exploration of options and the respect and primacy given to the aspirations and historical perspectives of the broad spectrum of community residents should be a prerequisite to decision-making" (Lunn, 1999)



Andres Soriano Jr.

DPLEM-Cuyo Island

Box 1

CONSERVATION OF PRIORITY PROTECTED AREAS PROJECT (CPPAP)

The Conservation of Priority Protected Areas Project (CPPAP) is a seven-year intervention activity pilot-testing the implementation of the Philippines primary strategy for biodiversity conservation, the NIPAS law (1992), in ten priority PA sites and experimenting the viability of partnership between the government and non-government organisation in the conservation of biodiversity. The four project components involve PA planning and management, biodiversity conservation, tenure security improvement, and livelihood systems development.

Vision

"We envision these ten priority protected areas to be sustainably managed by empowered local communities and indigenous peoples, with firm tenure over the resources whose men and women ensure the conservation of biodiversity, prevent human-caused species extinction, engage in non-destructive livelihood practices and are supported by government and a public which has internalised conservation values and respects cultural integrity."

The WB-GEF funded CPPAP is being implemented through a partnership between government and its counterpart NGO, the National Integrated Protected Area, Inc. Challenges at the start of the Project centred on differing cultural perspectives. However, this situation was overcome by the creation of a co-ordinating unit composed of government and non-government personnel at the national level, and replicated at the field level with implementing units composed of a Protected Area Superintendent (PASu) and staff including the site-based NGO counterparts.

Current problems encountered include:

- Limited number of community organisers in relation to size of PAs and scope of work
- Absence of CPPAP Community Organising and Community Development (COCD) framework
- Conflicting government environmental policies and implementation
- Delay of CPPAP's livelihood project implementation

Features

Via CPPAP local communities participate in the PA planning process, particularly in zoning or protection activities

A site-specific management plan is an expected output of CPPAP project, which will prescribe different activities and development projects that shall be allowed or prohibited inside the PA, and will contain specific roles and responsibilities for each PA stakeholder to play in the management.

A livelihood fund has been established to provide support for non-destructive livelihood activities

Recommendations

CPPAP host NGOs need to build their own capacity in conflict resolution and in designing livelihood programs that will complement site-specific biodiversity conservation

Central government should exert pressure on LGUs so they do not resist entry of CPPAP in areas under their jurisdiction.

For specific information on CPPAP see Volume II, Session 5.

"It is estimated that about 50% of national parks are no longer biologically important. Biodiversity has been declining rapidly. Forest cover has dwindled from a high of 18.7 million hectares in 1920 to around 6 million hectares in 1990, of which only about 800,000 hectares are old-growth dipterocarp forests. Only 5% of the country's coral reefs remain in excellent condition, while 30-50% of seagrass beds in the last fifty years and 80% of mangroves have been lost in the last 75 years." (Anon)



Andres Soriano Jr.

DPLEM - A lake within a lake

Box 2

1. Integrated Protected Areas Fund (IPAF)

The NIPAS Act provides for the creation of IPAF for sustainable financing of protection, maintenance, administration and management of the PA system.

Background and Objectives

To date there are 89 PAs with established IPAFs, totalling P37 million

Seventy five percent (75%) of all fees, fines, endowments, grants, donations, and other revenues generated by a protected area is retained at the area for its development and maintenance and contributing the remainder to the Central IPAF to subsidise the operations of other protected areas that earn little or no income at all

The Fund is administered by the Integrated Protected Area Fund Governing Board, which decides on fund allocation among the protected areas, while the PAMB manages the fund at the protected area level

The ingenuity and resourcefulness of protected area managers is required to generate as much funding as possible for the conservation and development of their areas.

Note

Draft Guidelines and Principles in the Determination of Fees for Access to and Sustainable Use of Resources in Protected Areas have been developed and are being pilot-tested in a number of protected areas. This document sets forth the procedures in determining fees for access to and sustainable use of resources in PAs for subsistence, recreation, extraction, commercial and other purposes. With the assistance of the Environment and Natural Resources Accounting Project (ENRAP) of the DENR, it is expected that the application of market-based instruments in protected areas will generate adequate income for the management of protected areas.

2. Foundation for the Philippine Environment (FPE)

The Foundation for the Philippine Environment, an NGO funding mechanism, has been providing support to projects directly and/or indirectly related to biodiversity conservation, employing habitat ecosystem protection strategies. Persistent lobbying by Philippine and US NGOs lead to rich rewards in the form of an initial capital base for FPE of US\$ 21.8 million. This came from a debt-for-nature swap between the Philippine and US Governments. Despite the source of its initial funding, FPE is an NGO with a multi-sectoral representation in its highest governing body.

The constitution and governance structure of FPE were finalised after a series of consultations that lasted almost two years and saw the participation of more than 300 NGOs, POs, academic institutions, and environmentalists throughout the country. The entry of a Philippine NGO to partner with WWF in the management of FPE's 2-year interim program was occasioned by the insistence of Philippine NGOs. Furthermore, the lively and contentious debates that led to the creation of FPE would not have taken place had not the administration of President Aquino given civil society the space to do so.

Types of Programs

CBRM Program in the sites provides financial and technical support to NGOs and people's organisation (PO) initiatives in biodiversity conservation through community-based resource management approaches.

Action grants are small grants for short-term initiatives intended to create avenues for visible and swift responses to specific needs, and generate deeper and broader information gathering, education and action.

FUNDING

Proactive program supports initiatives that strengthen and consolidate multi-level approaches or strategic impact on the greatest possible number of groups, institutions and communities involved in environmental protection.

"In many Asian countries, NEFs, especially those managed by NGOs can also enable local communities to participate meaningfully in protected area management" (Mesina, 1999).

Features

FPE promotes national and international co-operation among communities, NGOs, POs, business groups, government agencies and foreign funding organisations to enhance support for local conservation action.

80 % of FPE's income goes to conservation programs (only 20% to administration expenses).

Screening of the investment portfolio of its fund managers to make sure that the resources of the Foundation are not placed in companies whose activities compromise the environment.

Indications that FPE's assistance has had significant impacts on the ground and its networking has attracted bigger funds into its priority sites.

3. Donor Support

WB-GEF funded project Conservation on Priority Protected Areas (CPPAP), which covers ten priority sites

National Integrated Protected Areas Program (NIPAP) (1995-2000), which cover eight priority sites

Danish-WB funded Technical Assistance for Biodiversity Conservation Project, which seeks to establish a Biodiversity Monitoring System in seventeen protected areas

Dutch funded assistance to El Nido Managed Resource Reserve and Palanan Wilderness Area

UNDP-GEF funded Samar Island Biodiversity Conservation Project, which adopts an integrated biodiversity management approach to three protected areas

CEP receives foreign funding for the implementation of specific activities

Olango Island Wildlife Sanctuary as RAMSAR site

Tubbataha Reef National Marine Park and Puerto Princesa listed under UNESCO's World Natural Heritage List

Turtle Island Heritage Protected Area receives funding as the first trans-border bilateral management of marine turtles between Malaysia and the Philippines.

Palawan Island and Puerto Galera Biosphere Reserves supported under the Man and Biosphere Program



Paul Heideman

DPLST - Phileagle

NIPAS

NIPAS Law has overturned the prohibition of occupancy and squatting stipulated by old laws, such as Act 3915 and the PD 705. The NIPAS Law provides that qualified tenured migrants within PAs shall be granted tenure over the land they have actually and continuously occupied and to which they are solely dependent for subsistence and shall be eligible to become stewards of a portion of land within the multiple-use or buffer zones for subsistence.

Indigenous Peoples Rights Act (IPRA)

IPRA Law grants full powers to indigenous communities over their ancestral domain in PAs, but the goals and objectives of the NIPAS Act must be upheld

In the case of conflict between the NIPAS and IPRA Law provisions, the latter should be upheld, only as far as indigenous people adhere to sustainable traditional practices.



DPLEM-Bulusan Lake NP

Tenure in Philippine Protected Areas

Ipat Luna (Volume II, Session 5) discusses the general public mistrust of the legal system, which arises because it contains out-of-date

LAW

colonial concepts and does not assist the poor. Law is often seen as irrelevant and is routinely disregarded.

Government initiatives relating to public lands are seen as threats by forest occupants. Even community-based forest management programs have been interpreted as a means to evict local people from the land that they rely on for subsistence.

"In one area I visited, local people would not believe that they have been granted tenure under the law unless they heard the Secretary of Environment himself saying it on the radio. Despite progressive legislation in the last few years, including the Indigenous Peoples' Rights Act and the policy shift from commercial extraction to community based forest management, there remains a scepticism that genuine reforms have been achieved" (Luna, 1999).

Even though the NIPAS Act recognises indigenous peoples' rights and awards tenure, Luna identifies the obstacles, which make it difficult to address the issues that the progressive provisions intended.

Rights granted are not specific.

The NIPAS Law prohibitions for PAs are vague and unrealistic and do not support prosecution of offenders, especially the financier of the illegal operation.

The history of disenfranchisement and continuing threat of eviction has led to scepticism among upland dwellers, which has strengthened their resistance to government and resolve to stay in their lands.

"Cronyism has bred a culture of corruption that has been extremely difficult to control. The mechanisms of lawmaking continue to be dominated by the landed class that has interests to protect"
(Luna, 1999).



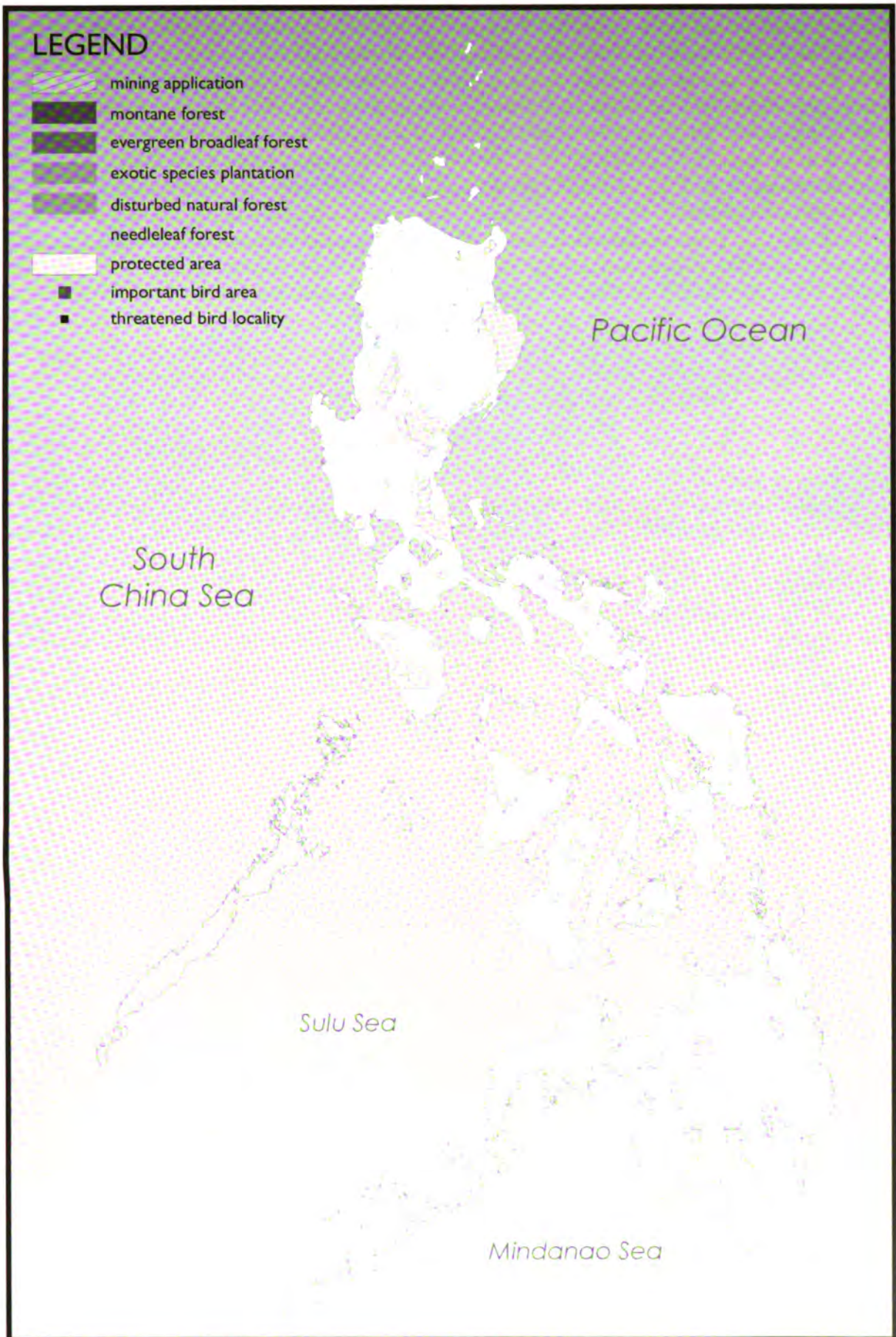
DPLEM - Taklong island

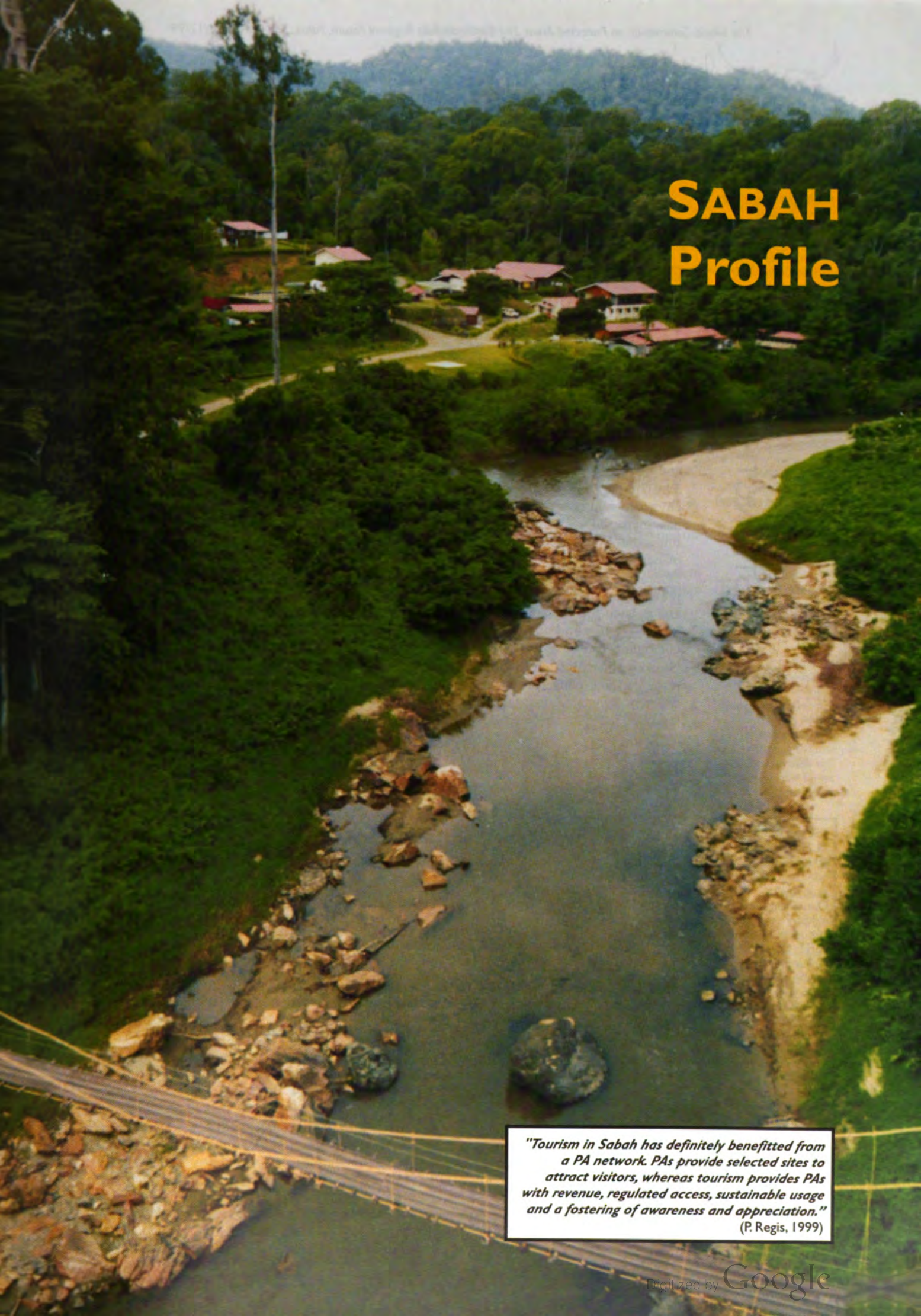
LIST OF PROTECTED AREAS IN THE PHILIPPINES CORRESPONDING TO IUCN CATEGORIES

Since the enactment of the NIPAS Act in 1992, 36 PAs have already been proclaimed by the President under the System (21 of which are additional areas). A Presidential Proclamation however, is just the first step towards the final establishment of PAs. The proclamation gives immediate protection to PAs from destructive activities while waiting for the final act of Congress that will allow for demarcation of the protected area. To date, the finalization of the site-specific draft congressional bills for the 36 sites is finalized. The draft bills, once passed by the Congress, will institutionalize these protected areas. On completion of the draft bills, stakeholders will be consulted and legislators lobbied (Meniado, 1999).

Code	Protected Area Name	Size (km ²)	Year Inscribed
	MARINE RESERVE – IUCN CAT IA		
1.	Masinloc & Oyon Bay	7,568	1994
2.	Palau Island	7,415	1994
	NATIONAL PARK – IUCN CAT II		
3.	Apo Reef	11,677	1996
4.	Mount Apo	72,113	1996
5.	Mount Guiting-guiting	15,265	1996
6.	Mount Kitanglad Ranges	29,617	1996
7.	Northern Sierra Madre	319,513	1997
	PROTECTED LANDSCAPE/SEASCAPE – IUCN CAT V		
8.	Apo Island	691	1996
9.	Batanes	213,578	1994
10.	Guiuan	60,448	1994
11.	Mount Matutum	15,600	1995
12.	Penablanca	4,136	1994
13.	Pujada Bay	21,200	1994
14.	Sagay	28,300	1995
15.	Sarangani Bay	215,950	1996
16.	Siargao	278,914	1996
17.	Taal Volcano	62,292	1996
	WILDLIFE SANCTUARY – IUCN CAT IV		
18.	Agusan Marsh	89,359	1996
	NATURAL PARK – IUCN CAT II		
19.	Bataan	18,325	
20.	Mt. Kanlaon	24,558	
	MARINE SANCTUARY		
21.	Turtle Island		

PROTECTED AREAS IN THE PHILIPPINES





SABAH Profile

"Tourism in Sabah has definitely benefitted from a PA network. PAs provide selected sites to attract visitors, whereas tourism provides PAs with revenue, regulated access, sustainable usage and a fostering of awareness and appreciation."

(P. Regis, 1999)

Box 1

DANUM VALLEY CONSERVATION AREA

Protected Status

In 1995, the Sabah Legislature upgraded the 43,800 ha of Class II commercial production forest within the Sabah Foundation timber concession as Class I Forest Reserve, thereby establishing the Danum Valley Conservation Area (DVCA). In May 1999 it was gazetted as a cultural heritage conservation site for additional protection, which protects both the above and below ground resources. The management model of multiple non-consumptive use for Danum Valley is being similarly applied for the 39,000 ha Maliau Basin Conservation Area, a slightly larger area, which by design has also been set aside for conservation purposes from the 900,000 ha Sabah Foundation timber concession area.

Research Function

The Danum Valley Field Centre (DVFC) is a 70,000 ha selectively logged forest strategically located at edge of the DVCA to provide access to the conservation area and the base to perform other functions of the area. The other functions are based on its primary conservation objectives including research, education, training, recreation and tourism. Research is the main thrust and DVCA is a leading site for tropical forest ecology in SE Asia, with more than 140 studies being published to date. It acts as an international environmental field laboratory where research has helped to develop various techniques to improve forest management practices, thus providing management models for other conservation sites. The Sabah Nature Club, Malaysia's largest environmental NGO frequently carries out educational programs within the PA.



The Borneo Rainforest Lodges

Collaborative management

An inter-agency management committee, the Danum Valley Management Committee (DVMC), was established comprising 11 members including government officials, Sabah Foundation staff, the Royal Society SE Asia Rainforest Research Program and representatives of Malaysian higher education institutions.

"Danum Valley Conservation Area is the leading research site for tropical forest ecology in SE Asia, with more than 140 studies being published to date."

The value of such collaborative management is perhaps best reflected in the various ways the respective agencies contribute towards the development and management of DVCA and the pooling of the resources for more effective management. Each collaborating agency brings its own area of expertise, capacity and funding, which contribute towards the objectives and support of DVCA. The committee regulates research and oversees the overall concept of development, guided by a 5-year management plan (1996-2000), that will come under review this year.

Funding

The establishment of a clear management framework and the capacity of its vested agency, the Sabah Foundation, a semi-government institution with commercial functions, have led to the success of DVCA. The Sabah Foundation presents an ideal institutional structure that lends itself to the support and implementation of the necessary operational aspects of day-to-day management and maintenance of the conservation area.

Still, any income from other sources such as tourism activities helps justify its conservation objectives. Tourism initiatives have generated other derivative services for the Foundation, which through its commercial arm has extended operations to cover various tours and travel activities. Another source of income has been from various fees, imposed directly at entry, for conservation, and for various types of filming and photography activities, as well as visitor services.

Apart from funding contributions from the Malaysian collaborators, international collaboration continues to provide an invaluable source of external funding to support research and conservation efforts. The established international reputation of Danum Valley has also attracted donations from local and international companies in cash and kind.



The BRL Chalets

Ecotourism

DVCA has established an international reputation for the ideal condition for the development of tourism in a protection forest and has become one of Malaysia's most important ecotourism sites and is being actively promoted as an exclusive eco-tourism destination, targeting the select high end of the international tourism market. The pristine rainforest features and outstanding biodiversity contain the necessary elements for developing wilderness recreation facilities.

The benefits of tourism development in Danum Valley are captured using a dual approach to domestic and international tourism. The Borneo Rainforest Lodge is established within the conservation area operating under two-tier pricing conditions, which enables Malaysians to enjoy these facilities and appreciate the value of conservation. The field research station (DVFC) remains principally a facility for researchers and participants of environmental education programmes, but it also provides limited accommodation and related facilities for Malaysian visitors, which are subject to availability. This preferential treatment for Malaysians is a deliberate policy to raise environmental awareness amongst Malaysians.

Box 2

PROJECT ETHNOBOTANY KINABALU (PEK)

Mt. Kinabalu NP is the most famous protected area in Sabah for various reasons. True it is the highest point in SE Asia, and yes it is the top tourist site in Sabah, and it has even been nominated as a World Heritage Natural Site, but more importantly the Kinabalu protected area is home to a vast array of herbal and medicinal plants that are vital to the livelihood of the local Kadazan Dusun people. In 1992, the Projek Ethnobotani Kinabalu (PEK) began 1992 with small grants from WWF, UNESCO, the USDA-Forest Service, and the NSF, followed by full funding from the John D. and Catherine T. MacArthur Foundation. It was created by Sabah Parks under the People and Plants Programme (WWF-UNESCO-Kew Initiative) with the following objectives:

Conduct ethnobotanical research on patterns of the Kadazan Dusun people;
Classification of plants and their use before they are lost;

Increase capacity of park staff to assess the ecological, cultural and economic importance of locally-used botanical resources and strengthen link with the Kadazan Dusun;

Improve environmental education by providing training opportunities for students for interpretative exhibits offered to the 200,000+ annual park visitors; and

Improve community management of unprotected forests in Kinabalu's buffer zones.

Outputs have included:

Collection and recording of nearly 9000 herbarium specimens;
500 GPS points and GIS coverage of topography, hydrology, landscape, roads, and settlements;
Specimens for the inventory of the vascular plants project by J.H. Beaman; and
Published book with names, uses and preparations for 82 traditional medicinal plants

The main activities in the next phase will be:

Two-volume Kadazan Dusun Ethnoflora identifying the 5,800 remaining collections;
More ethnobotanical knowledge of Kadazan Dusun, distribution of plants and variation in naming and use in villages;
Document plant distribution and publish results of survey and distribute the ethnoflora without compromising intellectual property rights.



Mount Kinabalu

Stuart Chapel/UCN

LIST OF PROTECTED AREAS IN SABAH, MALAYSIA CORRESPONDING TO IUCN CATEGORIES

Key to Abbreviations/Symbols:

G - gunung (mountains)

P - pulau (island)

Sg - sungai (river)

* - Terrestrial protected areas on island

+ - Combination of terrestrial and marine protected areas

- Marine protected areas, i.e. waters surrounding island at distance of 2 nautical miles seawards from the outermost points of the island

@ - Marine protected areas, i.e. waters surrounding island at distance of 1 nautical mile seawards from the outermost points of the island

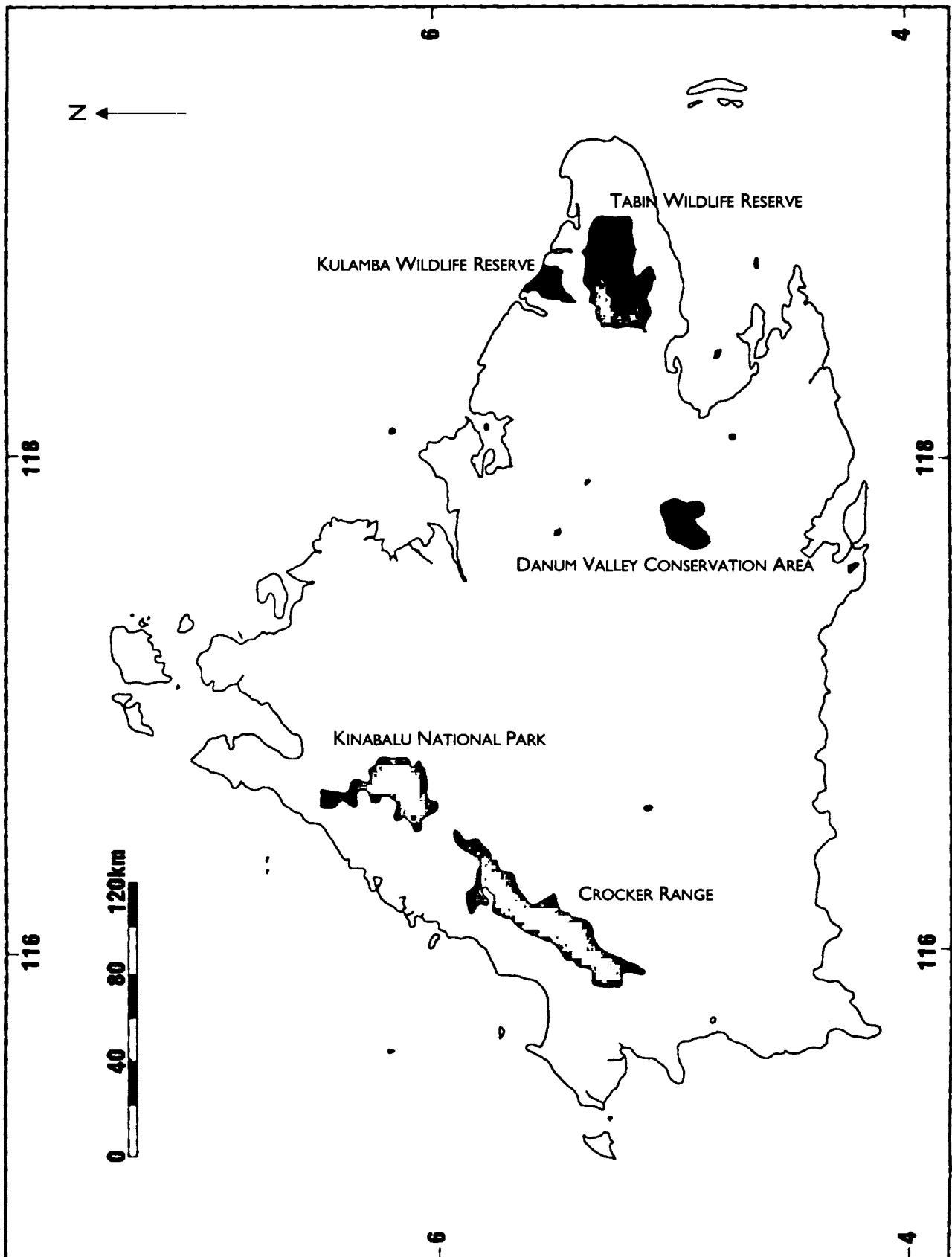
x - Status uncertain; possibly alienated/excised from the protected area - further investigation needed

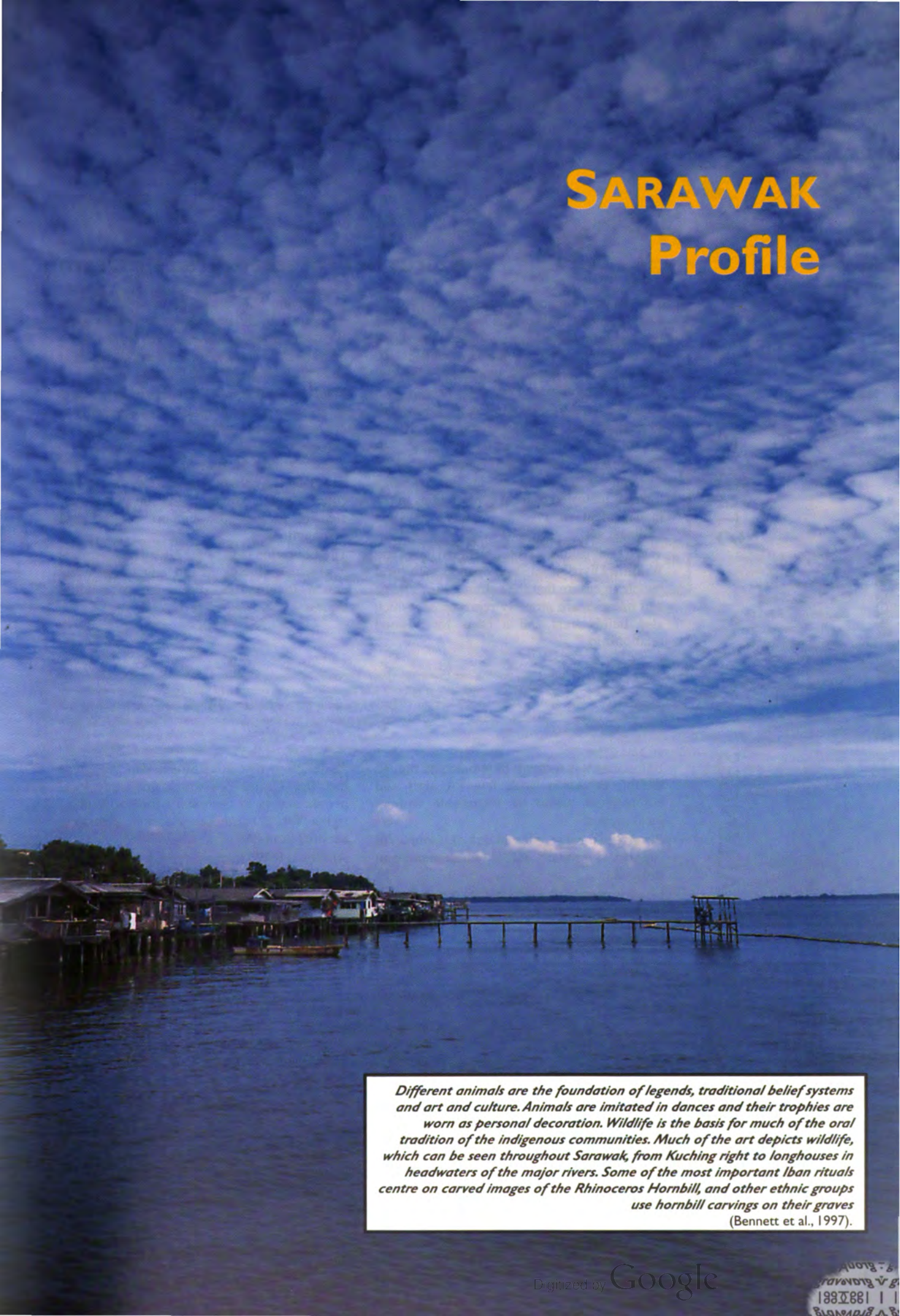
NA - data not available

Name of Protected Area	Size (ha)	Year Inscribed
VIRGIN JUNGLE RESERVES (VJR) – IUCN CAT I		
Brantian-Taulit	4140	1984
Crocker Range	3279	1984
Gomangton-Materis-Bod Tai-Keruak-Pangi	1816	1984
Kabili-Sepiok	4294	1931
Kalumpang	3768	1984
Lungmanis	6735	1984
Madai-Baturong	5867	1984
Maligan	9240	1984
Mengalong	1008	1984
Milian-Labau	2812	1984
Pin Supu	4696	1984
P Batik	353	1984
P Berhala	173	1984
P Sakar	760	1984
Sepagaya	4128	1984
Sepilok (Mangroves)	1235	1931
Sg Imbak	18113	1984
Sg Kapur	1250	1984
Sg Lokan	1852	1984
Sg Siliawan	2136	NA
Sg Simpang	1149	1984
Tabawan-Bohayan-Maganting-Silumpat Islands	1009	1984
NATIONAL PARK/STATE PARK MARINE PARK – IUCN CAT II		
Crocker Range	139,919	1984
Bukit Tawan Hills	27,972	1979
Kinabalu	75,370	1964
Palau Tiga MP	15,864	1978
Turtle Islands (Palau Penyu) MP	1,740	1974/1977
Kota Belud-Tempasuk Plain Bird Sanctuary	12000	NA
P Sipadan Bird Sanctuary	1.1	NA
P. Mantanani Bird Sanctuary	NA	NA
Tunku Abdul Rahman MP	4,929	1979
WILDLIFE RESERVES – IUCN CAT IV		
Kulamba WR	20,682	1984
Tabin WR	120,521	1984

Source: MOSTE 1997

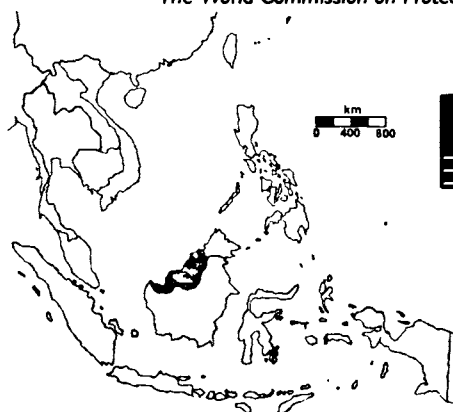
PROTECTED AREAS IN SABAH, MALAYSIA





SARAWAK Profile

Different animals are the foundation of legends, traditional belief systems and art and culture. Animals are imitated in dances and their trophies are worn as personal decoration. Wildlife is the basis for much of the oral tradition of the indigenous communities. Much of the art depicts wildlife, which can be seen throughout Sarawak, from Kuching right to longhouses in headwaters of the major rivers. Some of the most important Iban rituals centre on carved images of the Rhinoceros Hornbill, and other ethnic groups use hornbill carvings on their graves
(Bennett et al., 1997).



Sarawak

Status of Protected Area Program

STRENGTHS

The government goal is to achieve 10% of the total land area in PA status and in furtherance has begun legal establishment of legal establishment of three new NPs already, which will increase the total PA coverage to 4,568km² or 3.7% of the total land area

Sarawak Forestry Department (SFD) intends to include the 24,000ha Batang Ai NP in BKNP-LEWS Trans-Boundary PA

The formation of the NP and WS Special Committees confirms the trend to move towards inclusion of local communities in co-management of PAs as outlined in 1998 Ordinances

When establishing a PA the National Parks and Wildlife Division must co-operate with local people to ensure that the communities' claims and interests are properly represented, which also builds trust and a basis for a good relationship

By banning only the trade in wildlife taken from the wild and not subsistence hunting, the Wildlife Protection Ordinance actually benefits local communities by increasing their ability to hunt at sustainable rates

The New Ordinances tie economic benefits to local communities from PAs to their ability to use resources in a sustainable manner based on agreements

Conservation education experience in LEWS and Batang Ai NP in Sarawak has shown that conservation education is an important element to gain the support of the local communities

The Education Unit of the NPWD has worked hard with rural villages and longhouses, using drama to stimulate discussion of wildlife issues.

"People living in the buffer zones now perceive conservation as a positive initiative because of the many benefits that come with PAs: clean water, clean air, flood control, NTFPs and availability of fish and wild meat. Those living in areas affected by the logging industry are generally deprived of these luxuries." (Chai & Soewartano, 1999). In fact, two buffer zone communities have requested the government to include forest under their customary rights as part of the LEWS NP extension so they can benefit from the assurances and protections granted in the New Ordinances.

CHALLENGES

Enforcement is difficult in remote and rugged terrain, especially with few PA staff and enforcement would be impossible without local support

Poverty of local people and lack of resources to support PA staff make implementation difficult

Much groundwork is needed to convince local people to move away from trading in wildlife products and to only hunt wildlife for subsistence purposes

Assumption that government will recognise the New Ordinances which guarantee local people access to customary forests, hunting rights for subsistence use and economic benefits from PAs

Ability of SWD to monitor the ban on hunting wildlife for trade while permitting subsistence use

Size and Population:

124,968km

Ethnic minorities:

>25 groups e.g. Iban

Economics:

N/A from country sources

Forest Cover:

Estimated at 50% of total land area

Biodiversity Values:

N/A from country sources

PA Totals:

13 covering 2,900km (2.3% total land area)

People in Parks:

N/A from country sources

Types of PAs:

National Parks (11)

Wildlife Sanctuaries (2)

Management Authority:

National Parks and Wildlife Division (NPWD)

Legislation:

National Parks and Nature Reserves Ordinance (1998)

Wildlife Protection Ordinance (1998)

International Conventions signed:

WHC (1988); CITES (1992); CBD (1994); FCCC (1994); RAMSAR (1995); Law of the Sea (1997); ASEAN Agreement on Conservation of Nature and Natural Resources (1985); ASEAN Declaration on Heritage Parks and Reserves (1984).

Front cover photo: Sarawak fishing village. Stuart Chape/IUCN

"The goal in the establishment of the Special Committees and collaborative management is not to hand over complete management to the local communities. It has often been shown that if that happens, the goal of conservation is lost and the area becomes exploited" (e.g., Redford, 1989)

THREATS

Habitat loss and degradation, e.g. due to spread of oil palm and other plantations

Hunting and other unsustainable use of resources that is no longer sustainable due to an increase in access to forest areas, rise in use of shotguns and the commercialisation of wildlife in trade

Research in Batang Ai NP, Lanjak-Entimau WS and Mulu NP has shown that hunting levels by people with privileges are unsustainable, even if the law is fully enforced
Illegal and legal logging

UNSUSTAINABLE HUNTING

Factors why hunting has increased and become unsustainable in Sarawak include (Bennett et al., 1997, 1999):

New roads, greatly increasing access to forest areas for hunters to areas previously unreachable. They also allow rural people easy access to markets to buy technologies such as shotgun cartridges, flashlights and vehicles, and also to markets to sell wild meat from the forest.

An increase in the number of shotgun cartridges used, as restrictions on the sale of cartridges have been lifted since the unrest of the 1950s and 1960s

An increase in the commercial sale of wildlife, especially in urban areas

Hunting by logging workers as the timber industry spreads throughout the interior.

Loss of forest cover concentrates wildlife and hunting pressure into smaller areas.

In short, rural people have been hunting more - using more shotguns and cartridges - selling wild meat to urban people - and hunting when they were working in logging camps - all leading together to a loss of the wildlife on which they and their communities depend.

Many ethnic groups wear hornbill feathers in their hats and use them for traditional dances. Part of the uniqueness of Sarawak is that the wildlife a vital part of so many areas of life. If the wildlife, which defines the culture, disappears and young people never see the animals on which their legends, dances and art are based, then the culture will slowly fade away" (Braken Tisen et al., 1999).

"An average of 29% of all meals eaten by rural people throughout the interior contain wild meat, which can range up to 70% in remote parts of the Highlands (Bennett et al., 1999). WCS and SWD estimate that to replace wild meat with domestic meat would cost nearly **US\$ 50 million per year**, therefore, wild meat has an enormous indirect economic benefit to rural people in Sarawak and forms a major subsidy to rural economies by providing a vital source of protein" (Braken Tisen et al., 1999).

RECOMMENDATIONS

Upgrade the professional skills of staff and government support for NP management and continue to strengthen the department as a whole

Continue to encourage and form agreements with local communities to phase out unsustainable extractive uses in exchange for benefits from projects compatible with conservation

Continue implementation of the New National Park and Wildlife Ordinances

Attempt to monitor illegal logging and work with local people on enforcement mechanisms

Further develop sustainable tourism in PAs, including the 5 sites not yet open to tourism

Maintain inventories of biological resources in

each PA similar to the one began in BKLE Trans-Border Park in 1997

Implement conservation education activities in local communities as a vital long term management goal to support the government conservation effort.

Form agreements with local communities on how to distribute park fees in an equitable manner

To help combat legally unsustainable hunting levels, a role for the Special Committees would be to consider decreasing hunting in PAs, perhaps by connecting communities' tourism and other PA income to their willingness to relinquishing hunting rights.

REVENUE SHARING UNDER THE NEW ORDINANCE

The New National Park and Wildlife Ordinances require revenue sharing with local communities from funds received by the PA. Further guidelines could be drafted, but currently, revenues from entrance fees and tourist accommodation may go to the local people, but the questions remain: What portion of the funds goes to who? and what are the factors to consider? In all cases, revenues received by the local community can be tied to agreements to reduce resource use in the PA.

Example 1: "Bako National Park complies with nearly everyone's rights and already brings benefits jobs as boat drivers, canteen operators, etc. Bako hosts many visitors, providing a valuable source of revenue, **therefore a larger proportion can be shared with the government.**"

On the other hand:

Example 2: "Batang Ai National Park has many communities who are directly dependent on the park resources, who have traditional land rights inside, and who need considerable incentive to support protection of the area. The total number of visitors is relatively small, so **a far greater percentage should go to the local communities and not the government in order for the value of the benefits to be realised.**"

"Wildlife is an integral part of indigenous culture"
(WCS and SFD, 1996).



Sarawak fishing village

THE 1998 WILDLIFE PROTECTION ORDINANCE

The 1998 Wild Life Protection Ordinance has carried forward the provisions of the 1990 Protected and Totally Protected Animals and Plants Ordinance, but includes new sections regulating the trade in wildlife and wildlife parts. The new Ordinance includes a number of measures to improve the protection of wildlife, especially within PAs, including the following:

All Village Chiefs and other community leaders have been appointed Honorary Wildlife Rangers which allow them to assist staff of NPWD in monitoring and enforcing the law and keeping the Division informed on the situation in the field

A total ban on the trade in wild meat as well as live animals and trophies, however, hunting for subsistence use (consumption) remains legal as the ban aims to prevent the depletion of wildlife by hunting for sale in urban areas

Several species have been added to the lists of Protected and Totally Protected Species in view of recent declines in their populations. For example, the Straw-headed Bulbul has disappeared from most of the State in recent years, due to capture for the live bird trade and is now Totally Protected under Sarawak state law

CITES has been incorporated into local law and species listed in CITES appendices I and II are now legally protected under the Wild Life Protection Ordinance.

NOTE: This new Wildlife Ordinance has received strong support from local community leaders as it does not ban *hunting*, but prohibits *sale* of wildlife. Attached to this country profile is a list of relevant questions and answers prepared by WCS and SWD to explain in a simplified manner the provisions of the law.

Sarawak's National Parks and Wildlife new Wildlife Protection Ordinance came into effect on 1st October 1998. The new ordinance carried forward the provisions for Protected and Totally Protected Animals and Plants formerly included in the 1990 Ordinance and new sections regulating the trade in wildlife and wildlife parts.

Frequently Asked Questions

1. Can I still hunt?

Yes, if it is not a totally protected or protected species. But you cannot sell what you hunt.

2. Does the trade ban only include protected species?

No. It includes all mammals, birds, reptiles and amphibians (frogs).

3. Does the trade ban include fish?

No.

4. Does it include species from outside Sarawak?

Yes. It includes all wildlife from anywhere in the world.

5. Can I hunt for food?

Yes. The only limits are:

- (1) you cannot hunt totally protected or protected species, and
- (2) you cannot sell what you hunt.

6. Can we buy wild meat in restaurants?

No, unless the meat is from animals bred on a licensed farm. To sell this, the restaurant must have a license. Before you buy wild meat, check the restaurant's license. If it does not have one, you are breaking the law by buying the meat and can be fined.

7. Does the trade ban include turtle eggs?

Yes.

8. Does the trade ban include birds' nests?

No. Birds' nests can still be collected and sold under a license in the same way as before.

9. Does the trade ban include honey?

No.

10. Does the trade ban include animals used in traditional medicines?

Yes.

11. What do we do with antlers or other animal parts which we already have?

If they are from unprotected species like deer, you can keep them. But you cannot sell them or buy more. If they are from protected species, you need to get a license from the Forest Department to keep them.

12. What do we do about dangerous animals such as crocodiles?

For unprotected species, you can hunt them. For protected species such as crocodiles, you must get a license from the Forest Department to hunt them. This has not changed under the new law.

13. What do we do about pest animals such as squirrels and flying foxes?

For unprotected species, you can hunt or trap them. For protected species, you must apply for a license from the Forest Department if you want to hunt them. Whether the Department issues a license depends on how rare the animal is, and how bad your pest problem is. This has not changed under the new law.

14. Can the new law be enforced?

Yes. The main enforcement needed for the trade ban is in restaurants, markets and shops in towns. The Forest Department staff know the main outlets, and will work with others (e.g. councils, Police) to educate people and then enforce the law at those places. The help of the public is also needed to make this work.

15. What about items for culture such as hornbill feathers?

Under the old law, these could not be sold. This has not changed. Soon, the Forest Department will start a program to register all old feathers which people can keep for cultural use. They will also provide substitute feathers to people so that nobody needs to hunt hornbills for new feathers.

16. What will rural people do for money if they cannot sell wildlife any more?

One reason for the trade ban is to protect wild animals as food for rural people. So they need less money to buy their food. If they sell wild meat, the supply will soon dry up and they will not be able to sell it anyway. So they should sell other things, e.g. vegetables, fruits, fish from ponds, handicrafts.

17. Can we buy meat if it is from farms?

Yes, if the farm has a license from the Forest Department. Anyone who sells meat from the farm must also have a license saying where the meat is from. Before you buy the meat, check the seller's license. If they do not have one, you are committing an offence by buying the meat, and can be fined.

18. What sort of animals can be bred in farms for meat?

At present, only deer and crocodile farms have licenses. After two years, the Forest Department might consider licensing farms for other species such as bearded pigs.

19. How do I apply for a license to run a deer farm?

You apply to the Forest Department. It will send officers to inspect your farm, and see if it fulfils a list of criteria. These include how long the farm has been running, the species kept, animal welfare and other conditions. If your farm fulfils the requirements, it will give you a license.

20. For farmed animals, can they also sell antlers as well as meat?

Yes. The conditions are the same as for wild meat. The farm must have a license from the Forest Department. Anybody selling anything from the farm, including antlers, must have a license saying where the item is from. Before you buy the item, check the seller's license. If they do not have one, you are committing an offence by buying the item, and can be fined.

21. How do we know if the meat we are buying is legal?

Ask the seller to show you their license. If they cannot, the meat is not legal.

22. What do we do if we see somebody selling wild meat without a license?

Report it to the nearest Forest Department office, Council Enforcement officer or the Police. Or phone this number at Forest Department Headquarters: (082) 319126.

BENTUNG KERIMUN LANJAK ENTIMAU TRANS-BOUNDARY BIODIVERSITY CONSERVATION AREA

The establishment of the one million ha trans-boundary Biodiversity Conservation Area comprising Betung Kerihun National Park (BKNP) in West Kalimantan, Indonesia and Lanjak Entimau Wildlife Sanctuary in Sarawak marks an important step and a serious commitment by both countries to work together to achieve the full potential of the biodiversity conservation of Borneo through cross-border co-operation. BKNP-LEWS was inaugurated by the Malaysian and Indonesian governments in 1994 and is believed to be the first trans-boundary wildlife reserve in the tropical world - certainly the first in Asia.

Management plans now exist for the two Protected Areas, each divided into different use zones to facilitate effective resource protection and integrated development. Collaborative management strategies need to be developed in order to achieve the objectives of the trans-border initiative. For collaborative management to be effective, a set of guidelines need to be developed with priorities on protection, bilateral research and sharing of information, and active local community participation in management which favours biological conservation objectives.

A number of other ITTO member countries are set to embark on a similar plan to establish trans-boundary co-operation, e.g. Peru and Ecuador, Thailand and Cambodia. Besides catering for conservation needs, the alliance will have the additional mandate of meeting other interests of the local people and governments.

"The concept of collaborative management between two countries across borders in BKNP-LEWS Trans-boundary Biodiversity Conservation Area represents a changing trend in sustainable management of the tropical forest resources. Orang-utans, birds dispersing forest seeds and many other animals are known to migrate across the border of the two PAs, providing a prime example for the management staff to follow" (Braken Tisen et al., 1999).

BKNP-LEWS was inaugurated by the Governments of Malaysia and Indonesia in 1994 and is believed to be the first trans-boundary wildlife reserve in the tropical world - certainly the first in Asia.



Stuart Chapel/UCN

Entrance to caves in Sarawak

LIST OF PROTECTED AREAS IN SARAWAK, MALAYSIA CORRESPONDING TO IUCN CATEGORIES

Key to Abbreviations/Symbols:

G - gunung (mountains)

P - pulau (island)

Sg - sungai (river)

* - Terrestrial protected areas on island

+ - Combination of terrestrial and marine protected areas

- Marine protected areas, i.e. waters surrounding island at distance of 2 nautical miles seawards from the outermost points of the island

@ - Marine protected areas, i.e. waters surrounding island at distance of 1 nautical mile seawards from the outermost points of the island

x - Status uncertain; possibly alienated/excised from the protected area -further investigation needed

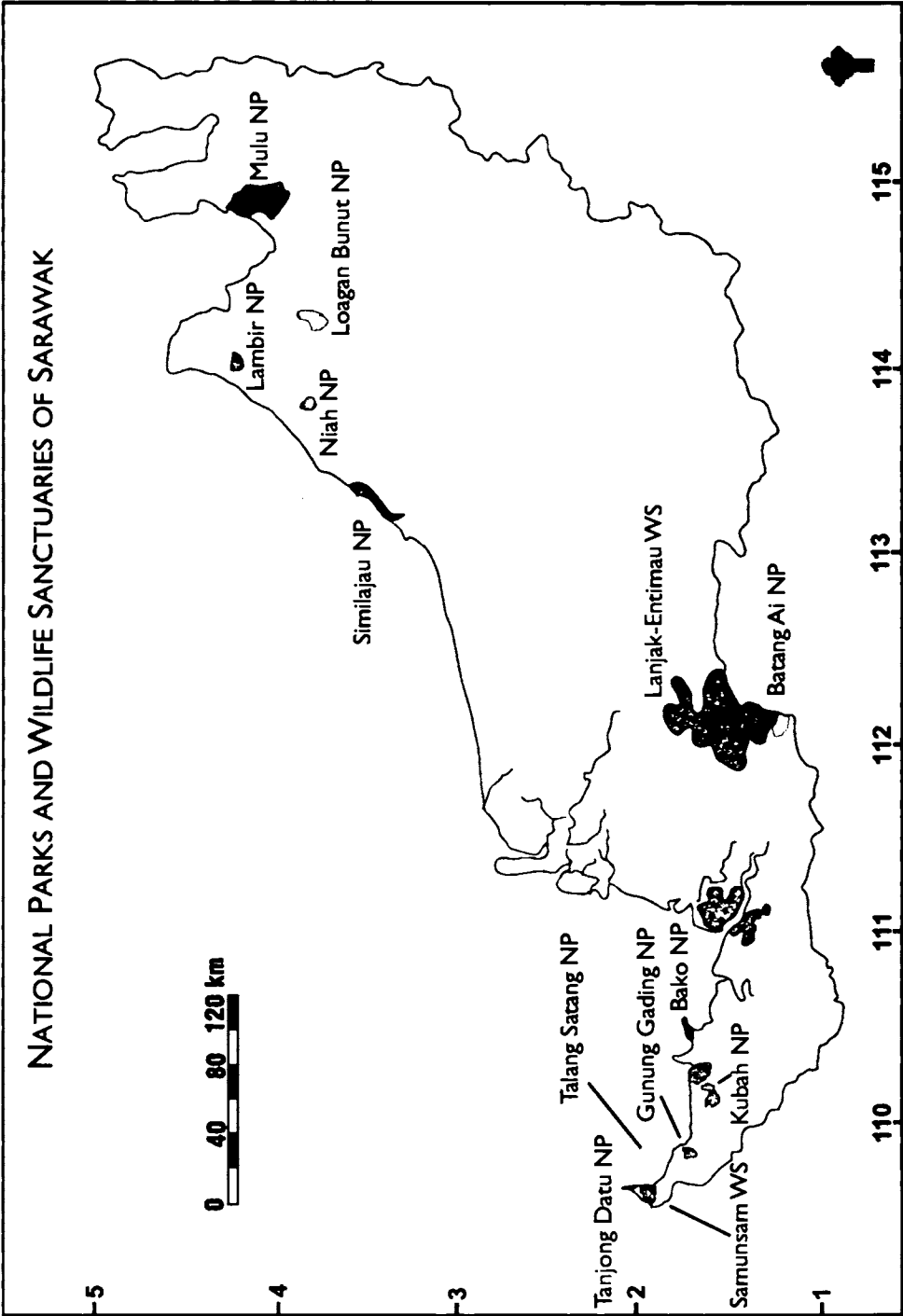
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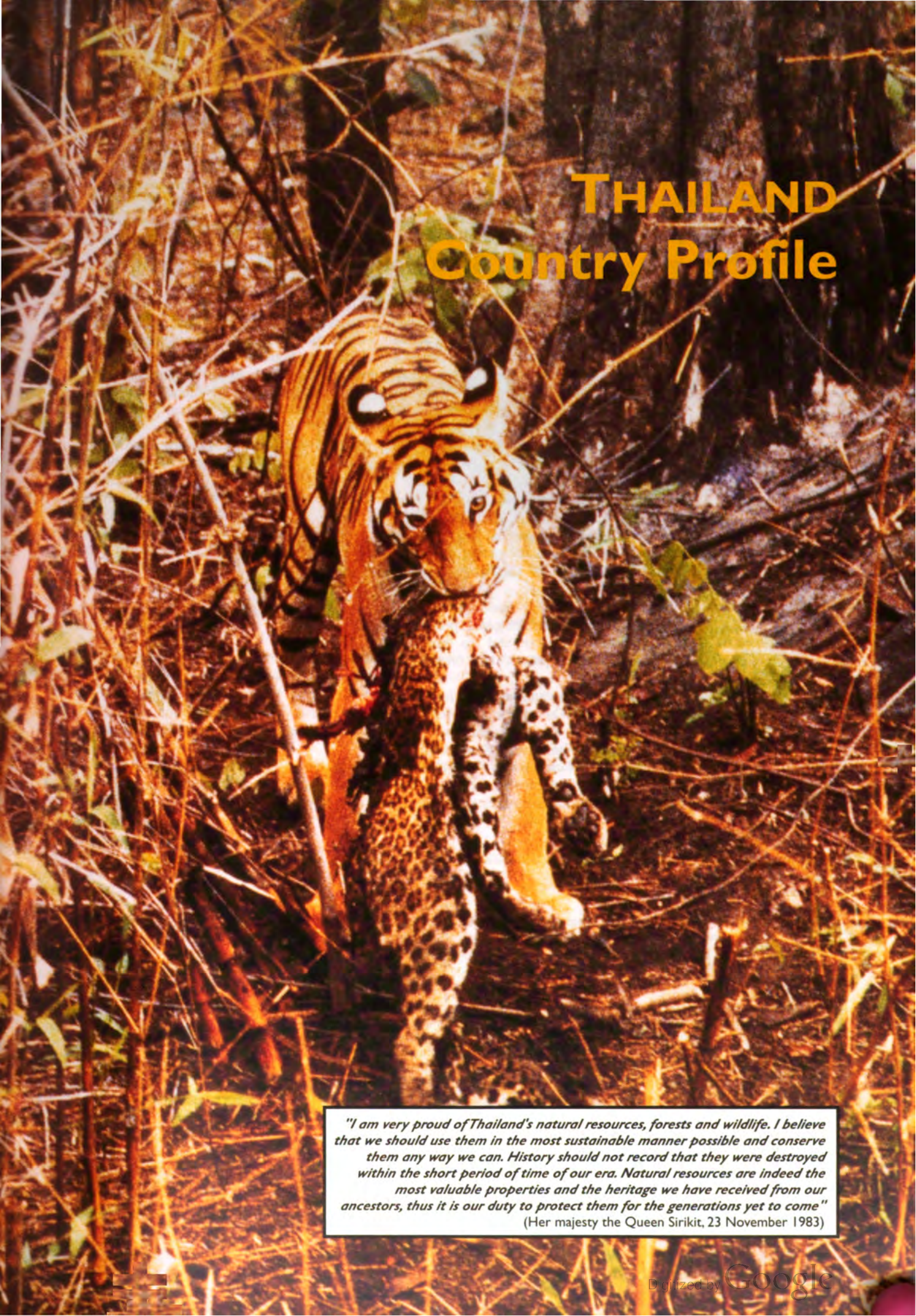
Name of Protected Area	Size (ha)	Year Inscribed
VIRGIN JUNGLE RESERVES (VJR) – IUCN CAT I		
None (The category does not exist/is not defined in the Sarawak Forest Ordinance 1954)		
NATIONAL PARK/STATE PARK MARINE PARK – IUCN CAT II		
Bako	2,728	1957
Batang Ai	24,040	1990
Gunung Gading	4,106	1983
Gunung Mulu	52,865	1974
Kubah	2,230	1988
Lambir Hills	6,952	1975
Loagan Bunut	10,736	1990
Niah	3,140	1974
Similajau	7,067	1976
Tanjong Datu	1,379	1994
Talang Satang MP	19,400	1999
WILDLIFE RESERVES – IUCN CAT IV		
Samunsam WS	6,092	1979
Lanjak-Entimau WS	168,758	1980

Source: MOSTE 1997

SARAWAK PROTECTED AREAS

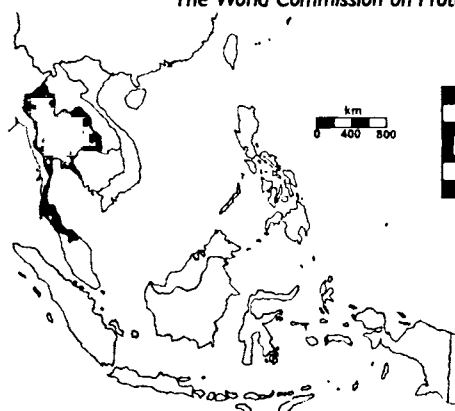
SARAWAK - PROFILE



A tiger is walking towards the camera through a dense forest. The ground is covered with dry, brown grass and branches. The tiger has orange fur with black stripes and is looking directly at the viewer.

THAILAND Country Profile

"I am very proud of Thailand's natural resources, forests and wildlife. I believe that we should use them in the most sustainable manner possible and conserve them any way we can. History should not record that they were destroyed within the short period of time of our era. Natural resources are indeed the most valuable properties and the heritage we have received from our ancestors, thus it is our duty to protect them for the generations yet to come"
(Her majesty the Queen Sirikit, 23 November 1983)



THAILAND

Status of Protected Area Program

STRENGTHS

Involvement of ASEAN Working Group on Marine and Coastal Environments, which has determined TOR and a strategy plan of action (1999-2004) to protect valuable coastal resources.

The goal of the National Forest Policy and the Eight National Economic and Social Development Plans (1997-2001) is to have 25% of total land area to be protected and forested. By 1999, an area of 17.07% had already been established under PA system.

Many PAs are adjacent to each other and form PA complexes. RFD has been learning by doing to shift its management strategy from boundary approach to ecosystem approach. The best example is the western forest complex project.

Enforcement of CITES has assisted in a reduction of exports of endangered species and wild animal products and to promote assessment of the impact of trade on wildlife populations.

Public involvement and participation from people and NGOs (both national and international) are steadily increasing. Seub Nakasathien Foundation, Wildlife Fund Thailand and World Wide Fund-Thailand Programme are examples of the active and supportive NGOs for Thai's PAs system.

Thailand is the only SE Asia country not to have ratified the CBD, but it has made significant progress in implementation of CBD provisions. Beyond the traditional in-situ and ex-situ conservation, Thailand has:

- formulated the first National Biodiversity Policy, Strategies and Action Plans 1998-2002,
- established a project called Biodiversity Research and Training (BRT) in 1996 to support funds for basic science research and increase public awareness and co-operates research data into its management regime.
- established the national clearing house institution called Thailand Biodiversity Centre in 1999.

Country Size and Population:

513,115 km²; 61 million people (1998)

Economics:

Increasing GDP (8%) in 1990's based on diverse economy utilizing natural resources and tourism

Forest Cover:

25.28 % of total land area in which 17.07% is under Protected Area System (RFD, 1999).

Biodiversity Values:

916 bird species, 265 mammal species, 405 reptile and amphibian species, 1450 species of fish and 15,000 vascular plant species (including 450 medicinal species) (Lekagul & McNeely, 1977; Dept. Fishery, 1997)

PA Totals:

existing 266 PAs - 87,696 km² (17.07% of total land area)

Another 57 PAs are proposing for a new PA, covering the area of 24,610 km² (RFD, 2000)

People in PAs:

Limited in PAs, but increasing population in buffers

Types of PAs:

National Parks (75)

Forest Parks (67)

Wildlife Sanctuaries (48)

Marine National Parks (21)

Non-Hunting areas (55)

Management Authority:

Royal Forest Department (RFD): 3 Divisions under the Natural Resources Conservation Office (NRCO):

1. National Park Division - Gazette and manage national parks and (some) forest parks
2. Wildlife Conservation Division - Gazette and manage wildlife sanctuaries and non-hunting area
3. Marine National Parks Division - Gazette and manage MPAs

PA Legislation:

Forest Act (1941), Wild Animals Reservation and Protected Act (1960 amended in 1992), National Park Act (1961); National Forest Reserve Act (1964)

International Conventions signed:

CITES (1983); WHC (1987); RAMSAR (1998)

PA funding:

Annual budget in 2000 for PAs = 15,228 Baht per km² (including staff salaries)

Front cover photo: Tiger eats Leopard in dry season after fire in Huai Kha Khaeng. WWF Thailand.

CHALLENGES

Thailand is not a party to the CBD so it is limited to GEF funds

Economic crisis in 1997 has stimulated and increased threats to PAs and its resources

The rapid expansion of PA system has occurred but with limited qualified staff and improper budget allocation system

Human population in the buffer areas has increased and the need for alternative sources of incomes has also increased

The current PA system should expand to represent wider ecosystem type, particularly those in flat land such as wetland, lowland forest, peat forest, riverbank flood forest and beach forest



Lady's Slipper

THREATS

Government infrastructure development projects (e.g. roads, dams and gas pipelines) and tourism development

Habitat loss, poaching of threatened and endangered species for trade and international markets

Conflicts arising from levels of fishing within and around marine protected areas

Ineffective tourism management in NPs and MPAs

"Management plans for PAs must be crafted and implemented with a systematic PA policy to provide information and analysis necessary to rationalize PA system designations and provide justification for adjustments in management emphasis and approach" (Nunong, 1999)

RECOMMENDATIONS

Train PA staff in natural resource and wildlife management, ICDP management, design and planning of management strategies, EIA, techniques for ecological and socio-economic studies, remote sensing, GIS, conflict resolution, computing, database compilation and data analysis

Build on extensive experience of planning integrated coastal zone management to give urgent protection to the marine environment

Increase inter-ministerial co-ordination, especially with the Ministry of the Interior, Ministry of Defense, Ministry of Education, Ministry of Science, Technology and Environment

Provides function for public consultation and participation for PAs management

More effective patrolling and enforcement system of PAs needs a clear and accepted demarcation of PA boundaries

Lack of skilled personnel to prepare management plans, but plans are urgently needed

Knowledge and understanding on PAs resources (both raw information and database) are still lacking, but the demand for its utilisation has increased rapidly

Hill tribes and local community, either inside or outside PAs, increase complexity of PA management. Therefore we need extra management strategies for people and community participation

Impact of fires on forest cover and natural vegetation

Degradation of mangroves due to human settlement, aquaculture and human usage of the environment

Destruction of coral reefs by tourism, commercial fishing and pollution

Over-fishing, especially by illegal use of destructive equipment and methods

Establishment of a forum for periodical discussions for Thailand and its neighboring countries which share PA borders to encourage the development of trans-boundary PA complexes, programs and funding

Compile databases on biological resources for each PA to include information on species composition, abundance, geographical location, distribution, habitats and threats

Wildlife research in PAs should focus on species diversity and populations; habitat restoration; its socio-economic value; and pests and diseases in natural communities; and on impact from environmental changes, such as forest fire and shifting cultivation

Provides sustainable fund for social research on human impact, threats and utilisation of PAs to solve its management problems

Timeline for PA Development

- 1960 Enactment of Wild Animals Reservation and Protection Act (WARPA) B.E. 2503/1960
- 1961 Enactment of National Parks Act B.E. 2504 for the establishment and management of national and forest parks
- 1962 Khao Yai NP established as Thailand's first NP
- 1965 Salak Pra Wildlife Sanctuary gazetted as Thailand's first WS
- 1966 Khao Sam Roi Yot NP established as Thailand's first MPA
- 1975 The first non-hunting area was established, Pa Pru Non-hunting Area in Narathiwat Province
- 1975 Enactment of the Enhancement and Conservation of National Environmental Quality Act B.E. 2518
- 1976 Establishment of the first three Biosphere Reserves in Thailand: Haury Tak Teak Reserve, Mae Sak-Kok Reserve and Sakaerat Environment Research Station
- 1981 Cabinet directive stated that 50% Thailand's land area should be forested
- 1982 Khao Yai NP and Tarutao NP were recognized as ASEAN Natural Heritage Sites
- 1985 National Forest Policy draft approved by Thai Cabinet, reaffirming standard policy to maintain at least 40% total forest cover in which 15% is protected forest and 25% is productive forest
- 1988 Government imposed logging ban due to land slide and flood in the South (Kratooon and Kiriwong Villages)
- 1989 Two Royal Decrees passed to amend and supplement the Forest Acts, providing for nationwide logging ban and nullifying many logging concessions
- 1992 Cabinet approval for the National Forest Land Zoning, comprises of Zone E (Economic Forest), Zone A (Agricultural Forest) and Zone C (Conservation Forest)
- 1992 Amendments to Wild Animals Reservation and Protection Act (WARPA) as B.E. 2535 to provide for species protection and establishment of wildlife sanctuaries and non-hunting areas
- 1992 Amendment to the Enhancement and Conservation of National Environmental Quality Act as B.E. 2535 to enforce the implication of EIA for a concerned development project
- 1992 Thungyai and Huai Kha Khaeng Wildlife Sanctuaries designated jointly as the first Natural World Heritage Site on mainland SE Asia
- 1997 Eighth National Economic and Social Development Plan restates the goals of the National Forest Policy (1985) to have 25% as protected forest and 15% as productive forest
- 1997 RFD forms the Western Forest Complex Conservation (WEFCOM) Management Unit to imply the concept of ecosystem management into the adjacent 17 PAs in the West, in order to strengthen the effectiveness of the existing management boundary approach
- 1998 Thale Noi Non-Hunting Area is designated as the first RAMSAR site in Thailand
- 1999 - 2004 Compliance with ASEAN Working Group on Marine and Coastal Environments TOR & Strategy Plan of Action

THAILAND'S MARINE PROTECTED AREAS (MPA'S)

Thailand's expansive coastline and marine environment provides key habitat for at risk marine populations as well as economic benefits for locals from fishing and international tourism. Protection of these and other values is the goal of Thailand's marine protected area system, which has the following characteristics:

- Four MPAs in the Andaman Sea (namely: Tarurao, Mu Koh Similan, Mu Koh Surin and Ao Phang-nga) have been nominated for World Heritage status;
- Portion of Khao Sam Roi Yot NP is being proposed as a Ramsar site; and
- Portion of Mu Ko Payam MPA (a proposed MPA) was designated as UNESCO MAB program in 1997.



Ta Pu Island - Phong Nha

Siriwat Phaowongsa (1999), Marine National Park Division, points out the main challenges facing the MPA management in Thailand:

21 MPAs covering 5,811 km² with an additional three new sites proposed: Hat Kha Nhoam - Mu Ko Thalay Tai, Num Tok Tharnsadet and Mu Ko Payam;

Inadequate management plans for MPAs;

Lack of an integrated action plan to co-ordinate management among related agencies;

Lack of an effective management system due to inappropriate budget system and human resources;

Lack of database system to support efficiency, information dissemination and management; and

Inappropriate legal regulations among related agencies.

ROYAL FOREST DEPARTMENT ADMINISTRATION POLICY

Under the eighth NESDP (1997-2001), the Royal Forest Department is to emphasise the following activities;

- Forest land zoning
- Allocating parts of disturbed national forest reserves to farmers
- Promoting participation of local people/NGOs and increasing local awareness of conservation
- Managing forests for conservation and strengthening forest protection
- Promoting reforestation by local communities and the private sector
- Rapid rehabilitation of mangrove forests
- Promoting research and application of GIS for forests monitoring
- Improving manpower capability
- Decentralising authority
- Improving cooperation with international agencies for technical support

Source: Nootong (RFD, 1999)



Wild elephants come out of the forest near cultivated area at Kui Buri National Park

"The elephant population of Thailand has dwindled to less than 2000. This is alarming considering that their habitat is being lost at extreme rates and nearly 300 have been reported as killed since 1975 and most of the poaching does not get reported."

Box 3

WILDLIFE RESEARCH IN HUAI KHA KHAENG WILDLIFE SANCTUARY

Huai Kha Khaeng Wildlife Sanctuary, covering 2,780 km² in western Thailand, was established in 1972. Along with the Thung Yai Naresuan (3,647 km²) both of them were declared as the UNESCO World Heritage Site in 1992. The Sanctuary has traditionally been famous for its high populations of large mammals, which still exist within the area. This is attributable to the large size of the Western Forest Complex, of which the Sanctuary is a part, where the damaging effects of forest fragmentation are avoided and the area is able to sustain viable populations of remarkably diverse resident species. The complex supports at least 155 mammals, 400 birds, 42 amphibians, 107 freshwater fish species and a total of 21 endangered and 65 threatened species, namely elephant, tiger, bear and tapir. (Nitaya, 1999).

Recent Management History

The death of the respected Superintendent Seub Nakhasathien in 1990, brought media and public attention to Huai Kha Khaeng WS. Following Seub's death, his successor continued his attention to relocate some villagers to areas outside the Sanctuary. This relocation allowed forest restoration of degraded area of the Sanctuary. Intense patrolling was undertaken around the sanctuary, resulting in less poaching. This made the Sanctuary a safer place or home for wildlife. In 1996, Seub's successor was transferred back to RFD Bangkok Office. One year later he became a team leader for the Western Forest Complex Conservation Management Unit.



Dr. Pilai Poonswad working on Rufous-necked hornbill in Huai Kha Khaeng WS

Another major result from his death, is the formation of The Seub Foundation in 1991. This Foundation became another major Thai national conservation NGOs, like the Wildlife Fund Thailand, which formed in the early years. These two Thai NGOs along with WWF have played a very important role in assisting the Sanctuary staff in its management and community participation. Their supporting roles and activities include conservation, education and community monitoring projects.

Impacts on Wildlife

Wildlife research conducted by Srikosamatara in 1992-1998 resulting in the following findings:

Strong protective measures result in ability of the two large cats, tiger and leopard, to move freely from compression area and increase availability of prey and increase populations even faster than the prey

When poaching pressures were intensely controlled after 1991, most large herbivores moved from a 'compression area' to nearby areas, as confirmed by monitoring since 1992

The migration of large herbivores may be due to the degradation of vegetation, as one of the study areas was heavily overgrazed and food was more plentiful in other areas

Another possible explanation for migration may be to flee areas of higher human impact

As poaching was reported in 1998 and 1999 and if it continues, it is likely that the wildlife will be forced to return to the compression area

Although these surveys are useful management tools, they are often seen as a low priority job for WS management. Since WS staff must be allocated to other tasks. This limitation occurs even in Khao Nang Rum Wildlife Research Station. At present time, there is no real monitoring program to evaluate the effectiveness and success of the WS management or even the Wildlife Research Station. (Srikosamatara, 1999)



Field Research on leopards in Huai Kha Khaeng WS



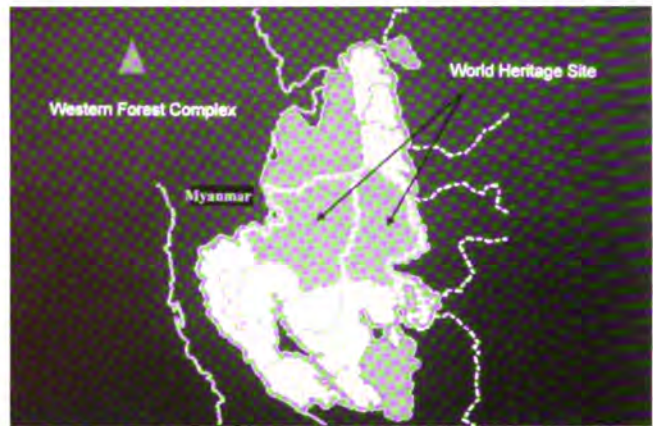
Banteng and Gaur in Huai Kha Khaeng WS

Box 4

IMPORTANCE OF PA COMPLEXES

With many of the PAs in SE Asia being forest fragments, the protected area system in Thailand is unique since many of the parks and reserves are adjacent to each other and thus form protected area complexes. The largest of these is the western forest complex, which encompasses 11 NPs and 6 WSs covering an area of 18,730km². This includes the Thung Yai - Huai Kha Khaeng Wildlife Sanctuary, the only natural World Heritage Site of Thailand. (See discussion of this complex in Volume II- Session 8 and 9).

Large mammal conservation benefits from large blocks of forest because many of these species require extensive areas to support viable populations. For a variety of administrative reasons these complexes are under different jurisdictions. However, from a landscape or ecosystem perspective, the western forest complex encompasses a variety, variability and uniqueness of biodiversity that can be measured in terms of range of habitats or uniqueness of genes, species and the ecosystems. The protected areas in these complexes need to be managed as components of larger ecological units including the matrix of forestlands surrounding them. This was evident even at the early stages in the development of Thai conservation. (Pattanaivibool, 1999)



Map of Thailand Western Forest Complex with the World Heritage Site at the core.

"To shift the PA system management from boundary approach to area or ecosystem approach was the idea of many former DGs but it never came to implementation. This was because it requires major restructuring of the RFD and it was also contrary to the country's governing structures: central, regional and local. I, as an ecologist and the DG of RFD, also strongly envision the benefits from this ecosystem approach. Now, let the Western Complex Forest Project shows us all."

Due to the RFD history, staff of RFD has acquired the sense of owning forest resources. We, as the Royal servant, must remind ourselves that our ownership are shared with other Thai citizen. Except for it is our duty to protect it on behalf of the people. We have to listen to other owners as well as talk with them, share the views and make agreement upon the maximum benefit for the nature and our nation."
(Dr. Plodprasop Suraswadi, Director General, 13 December 1999)

"Twenty-seven important Thai protected areas (national parks and wildlife sanctuaries) are located along common boundaries with Malaysia, Cambodia, Lao PDR and Myanmar, highlighting the importance of trans-border PA discussions between Thailand and its neighbours." (Naotong, 1999)



Reintroduced elephants in Doi Pha Maung Wildlife Sanctuary, Lampomg Province



Tiger caught by a camera trap in Huai Kha Kheng WS

"The Indo-Chinese tiger is probably disappearing faster than any other sub-species of tiger - every week at least one is trapped, shot or poisoned. Based on the current trends we can anticipate that of the 37 PAs in Thailand which reportedly still have tigers today, only Huai Kha Kheng and Phu Khieo WS will still be able to support them in the near future." (Anon)

LIST OF PROTECTED AREAS IN THAILAND

	Protected Area Name	Size (Km ²)	Year Inscribed
WILDLIFE SANCTUARIES – IUCN CAT I			
1.	Salak-phra	85,855	1965
2.	Khlong-nakha	53,033	1972
3.	Phu-khieo	156,000	1972
4.	Khao-soi-dao	74,502	1972
5.	Huai-khakhaeng	278,014	1972
6.	Lum-nam-pai	118,111	1972
7.	Thung-yai-naresuan	364,720	1974
8.	Khao-khieo Khao-chumphu	14,470	1974
9.	Khlong-saeng	115,530	1974
10.	Phu-luang	89,694	1974
11.	Phu-wua	18,650	1975
12.	Khao-banthat	126,696	1975
13.	Yod-dome	22,535	1977
14.	Khao-ang-runai	103,000	1977
15.	Phu-miang-Phu-thong	69,651	1977
16.	Ton-ngachang	18,195	1978
17.	Maenam-phachi	48,931	1978
18.	Mae-tuen	117,300	1978
19.	Chiang-dao	52,100	1978
20.	Salawin	87,500	1978
21.	Phanom-dong-rak	31,600	1978
22.	Khlong-phraya	15,358	1980
23.	Doi-pha-chang	57,108	1980
24.	Doi-pha-maung	38,312	1983
25.	Omgoy	122,400	1983
26.	Doi-luang	9,700	1984
27.	Khao-sanampriang	10,100	1985
28.	Mae-Yuam Fang Kwa	29,200	1986
29.	Sub-lungka	15,500	1986
30.	Umphang	259,085	1989
31.	Phu-si-tan	25,000	1990
32.	Huai Sala	38,000	1990
33.	Chalerm Pra Kiate Somdei Prathep Rattana Rachasuda	20,100	1991
34.	Khlong Yan	48,800	1992
35.	Khao Pra-Bangkram	15,632	1993
36.	Prince Chumphon Park (The North Section)	66,499	1994
37.	Prince Chumphon Park (The South Section)	31,500	1994
38.	Huai Tabtan-Huai Samran	50,200	1995
39.	Tung Raya-Nasak	33,864	1996
40.	Hala Bala	43,316	1996
41.	Dongrai	31,278	1996
42.	Maelao-maesae	51,400	1996
43.	Ta Boao Huai Yai	65,393	1997
44.	Wiang Lor	37,100	1997
45.	Mae Jarim	66,000	1998
46.	Klong Krue Whay Chalerm Prakiate	56,527	1998
47.	Kuen Mae Yay Mhon	4,640	1999
48.	Phu Pha Daeng	23,495.2	1999
MARINE NATIONAL PARKS – IUCN CAT II			
		Marine Area (Total Area) (km ²)	
49.	Khao Sam Roi Yot	21 (98)	1966
50.	Tarutao	1,264 (1,490)	1976
51.	Thaleban	2 (196)	1980
52.	Mu ko Ang Thong	84 (102)	1980
53.	Ao Phangnga	347 (400)	1981
54.	Mu ko Surin	103 (135)	1981
55.	Sirinath	68 (90)	1981
56.	Khao Laem Ya – Mu Ko Samet	123 (131)	1981
57.	Had Chao Mai	137 (231)	1981
58.	Mu Ko Similan	124 (140)	1982
59.	Mu Ko Chang	458 (650)	1982
60.	Laemson	267 (315)	1983
61.	Had Nopparatthara – Mu Ko Phi Phi	326 (388)	1983
62.	Mu Ko Petra	468 (494)	1984
63.	Khao Lam Pee – Had Thai Muang	0 (72)	1986
64.	Mu Ko Lanta	109 (134)	1990
65.	Khao Lak – Lam Ru	0 (125)	1991
66.	Had Vanakorn	15 (38)	1992
67.	Tarn Boke Koranee	0 (104)	1998
68.	Mu Ko Chumphon	266 (317)	1999
69.	Lam Nam Kraburi	64 (160)	1999

	NATIONAL PARK – IUCN CAT II		
1.	Khao Yai	2168.635	1962
2.	Phu Kradung	348.122	1962
3.	Thung Salaeng Luang	1262.4	1963/72
4.	Nam Nao	966	1972
5.	Doi Inthanon	482.4	1972
6.	Phu Phan	664.7024	1972
7.	Khao Luang	570	1974
8.	Doi Khuntan	255.29	1975
9.	Namtok Phlew	134.5	1975
10.	Erawan	550	1975
11.	Khao Chamao - Khao Wong	83.68	1975
12.	Khao Khitchakut	58.6992	1977
13.	Lansang	104	1979
14.	Phu Rua	120.84	1979
15.	Chaloem Rattanakosin	59	1980
16.	Ramkhamhaeng	341	1980
17.	Sai Yok	500	1980
18.	Khao Sok	738.74	1980
19.	Tat Ton	217.18	1980
20.	Doi Suthep-Pui	261.06	1981
21.	Si Satchanalai	213.2	1981
22.	Khao Sam Lan	44.57	1981
23.	Kaeng Krachan	2915	1981
24.	Khao Phanombenja	50.12	1981
25.	Mae Ping	1003.7536	1981
26.	Kaeng Tana	80	1981
27.	Wiang Kosai	410	1981
28.	Namtok Mae Surin	396.6	1981
29.	Khaoen Si Nakarin	1532	1981
30.	Thap Lan	2235.8	1981
31.	Taksin Maharat	149	1981
32.	Pang Sida	844	1982
33.	Khao Pu-Khao Ya	694	1982
34.	Khlong Lan	300	1982
35.	Phu Hin Rong Kha	307	1984
36.	Phu Kao - Phu Phan Kham	322	1985
37.	Mae Yom	454.75	1986
38.	Phu Chong - Na Yoi	686	1987
39.	Mae Wong	894	1987
40.	Namtok Chat Takan	543	1987
41.	Si Phang Nga	246.08	1988
42.	Huai Had	828.56	1988
43.	Chae Son	592	1988
44.	Mukdahan	48.5	1988
45.	Si Lanna	1406	1989
46.	Doi Luang	1170	1990
47.	Khlong Wang Chao	747	1990
48.	Namtok Yong	205	1991
49.	Khao Nam Khang	212	1991
50.	Khao Laem	1497	1991
51.	Aob Luang	553	1991
52.	Kaeng Krung	541	1991
53.	Namtok Huai Yang	161	1991
54.	Phu Wiang	325	1991
55.	Phu Pha Man	350	1991
56.	Tai Rom Yen	425	1991
57.	Pha Tam	340	1991
58.	Phu Sa Dok Bua	231	1992
59.	Sai Thong	319	1992
60.	Salawin	721.52	1994/78
61.	Na Haew	117.16	1994
62.	Khun Chae	270	1995
63.	Huai Nam Dung	1,252.41	1995
64.	Tapraya	594	1996
65.	Khao Pra Wiharn	130.00	1996
66.	Phu Teuy	317.78	1996
67.	Lam Nam Nan	999.15	1998
68.	Taad Mhok	290.00	1998
69.	Mae Maye	185.28	1999
70.	Doy Phu Kha	1,704.00	1999
71.	Bang Lang	261.00	1999
72.	Kui Buree	969.00	1999
73.	Nam Tok Ngaow	668.00	1999
74.	Budo-Su-Ngai-Badee	341.00	1999
75.	Nam Tok See Kheed	145.00	1999

WETLAND SITES – IUCN CAT IV			
76. *	Phu - khieo	156,00	1972
77. *	Talay – noi	45,700	1975
78. *	Bung – borapet	21,280	1975
79. *	Papru	16,000	1975
80. *	Nong-mng-chong	6,150	1975
81. *	Bangphra Reservior	1,856	1976
82. *	Talay – sap	36466	1976
83. **	War Pailorm	11	1978
84. **	Koh-libong	47000	1979
85. *	Huai-jaw-rakhemag	620	1980
86. *	Sanambin	570	1980
87. *	Huai-talad	70	1980
88. *	Niong-waeng	17	1980
89. *	Bung-kong-long	1094	1982
90. *	Bung-Chawag	320	1983
91. *	Klong-lam-chan	5400	1984
92. *	Parang-gai	25	1984
93. ***	Palane-pak panang	5672	1984
94. *	Nong-hua-koo	11	1985
95. *	Talesarp-nong-bong-kai	433	1985
96. *	Nong-nam-kao	57	1985
97. *	Pru-kapg-kow	7	1986
98. *	Lampao	3375	1988

Remarks:

Year in slash means Re-gazetted

Source:

National Parks Division & Wildlife Conservation Division

Natural Resources Conservation Office

Royal Forest Department

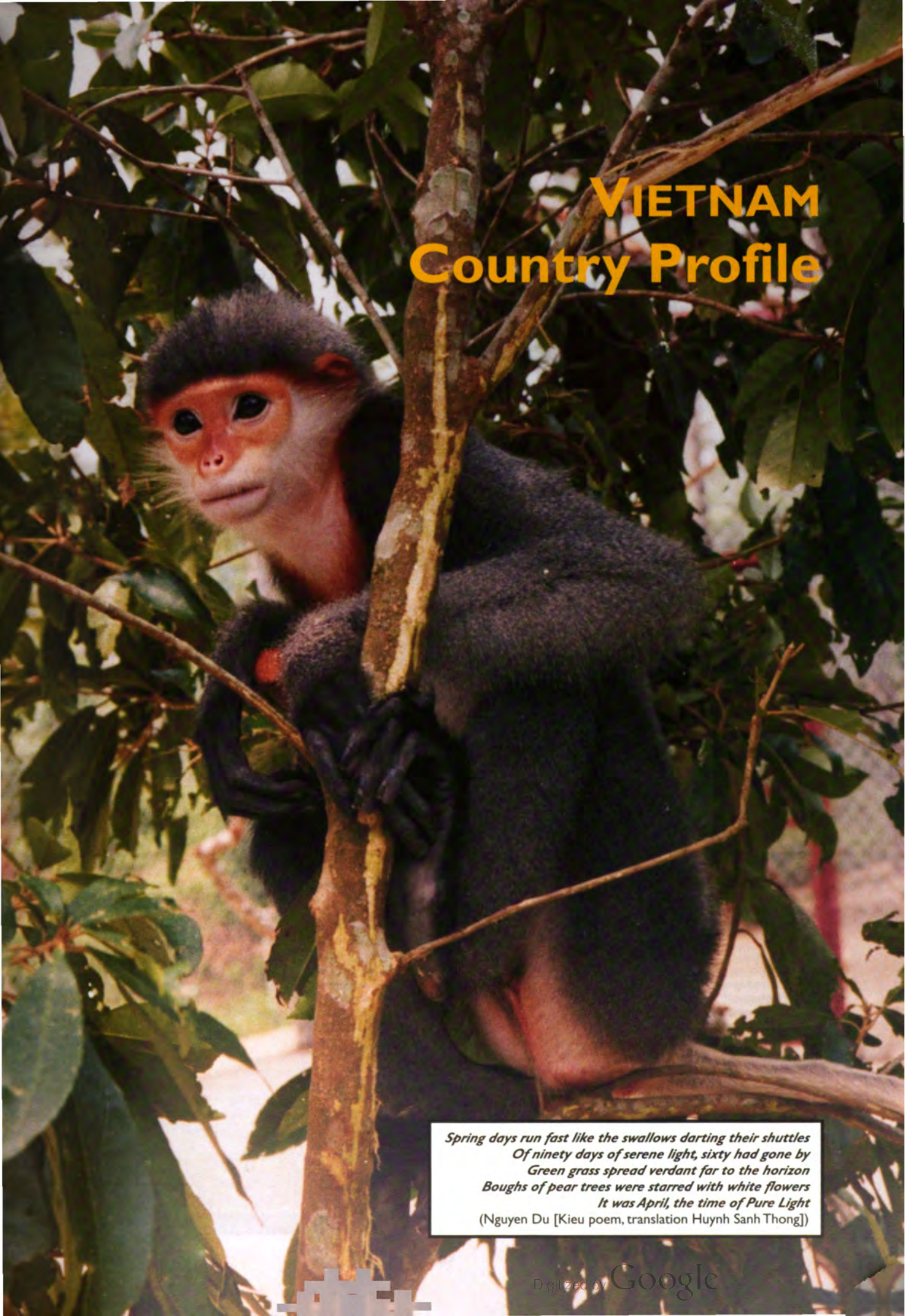
Dated:

10 April 2000

***Mangrove-Mudflat

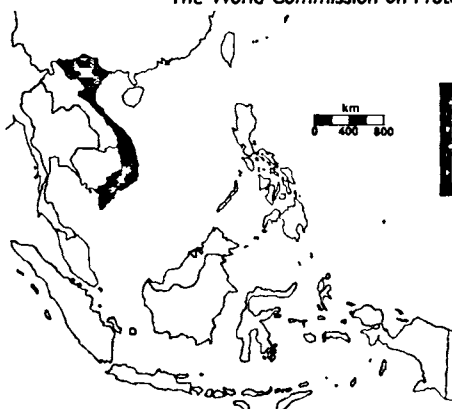
**Island

*Freshwater Wetland



VIETNAM Country Profile

*Spring days run fast like the swallows darting their shuttles
Of ninety days of serene light, sixty had gone by
Green grass spread verdant far to the horizon
Boughs of pear trees were starred with white flowers
It was April, the time of Pure Light
(Nguyen Du [Kieu poem, translation Huynh Sanh Thong])*



VIETNAM

Status of Protected Area Program

STRENGTHS

Establishment of FIPI (technical) and FPD (management) under MARD, collaborating with MPI (planning) has improved co-ordination of national PA management
New WWF project to work with FPD on strengthening the national PA system
Increased capacity due to WWF project that trained over 2,000 park staff on patrolling and biodiversity awareness
Operation of Primate Rescue Centres and captive breeding centres in different regions of country. Cuc Phuong National Park has an Endangered Primate Rescue Centre, a Turtle Conservation and Ecology Centre and an Owston's Palm Civet Captive Breeding Centre
Existing tiger and elephant conservation

programs are conducting surveys and training
Implementation of twelve ICDP projects since 1994 has given FPD experience with collaborative management

Birdlife International Vietnam Programme, in collaboration with the Forest Inventory and Planning Institute (FIPI) has initiated a project "Expanding the Protected Areas Network in Vietnam for the 21st Century"

"Management boards established for all NPs and 35 Nature Reserves, but 50% of PAs suffer from lack of investment and degradation"

"If we do not focus our efforts to stop degradation of the environment . . . then it will be very hard to develop the country and improve people's living and health standards." (Dang Huu, Minister of MOSTE)

CHALLENGES

Poor inter-ministerial and cross sector collaboration
Excessive government bureaucracy and unclear legal framework leads to uncertainty about who has authority over certain PA issues (e.g. who should improve infrastructure, charge entrance fees, etc.).
Compounded by competition within government for control over resources (e.g. tourism resources)

Insufficient budget and commitment from government to support expanding PA system
Overpopulation within PA's and buffer zones despite efforts to relocate local people
Vietnam is a major producer, corridor and consumer for wildlife trade
Current data on flora and fauna in PAs is out of date; no biodiversity monitoring program and little research

Size and population:

33 million ha (330,900 km²); 76 million people (1999), 235 people per km²

Ethnic Minorities:

54 ethnic groups; 87% Kinh

75% live in rural or mountainous areas

Economics:

Over 8% annual growth in GNP in recent years

Emergence of industrial sector (over 12% annual growth and 25% of GNP, yet still far behind agriculture sector) (1997)

Forest Cover:

9.3 million ha or 28% of country (1995)

14.3 million ha or 43% in 1943

Current rate of forest loss is 100,000ha p.a.

Biodiversity Values:

12,000 estimated plants, 260 reptiles/amphibians, and 800 birds.

Mammals: 276 species; 3 newly discovered species: Saola (*Pseudoryx nghetinhensis*), Giant Muntjac (*Megamuntiacus vuquangensis*) & Truong Son Muntjac (*Canimuntiacus truongsonensis*); two species extinct Sumatran Rhino (*Dicerorhinus sumatrensis*) and Tapir (*Tapirus indicus*); one species now extinct in the wild Sika Deer (*Cervus nippon*). Many globally threatened large mammals, primates and forest birds

PA Totals:

94 PAs: 90 Special-Use Forests covering 1 million ha or 4% of the land area

Proposal to expand the PA system to 7% of the land area and 16 MPA's

People in Parks:

250,000 ethnic people 13 people per km²

Types of PAs:

National Parks (11); Nature Reserves (47); and Cultural-Historical Sites

New Decree proposes addition of Species Reserves (16) and Protected Landscapes (18) and one additional National Park and Nature Reserve

Management Authority:

MARD - mandate for the management of PA system

FPD - management of national parks (central and local staff)

Province - management for all Nature Reserves and two Nps

Ministry of Fisheries and MOSTE - will manage Marine PAs

Management Board for each PA

Protected Area Budget:

MARD, MOF and MPI allocate budget, based on size, staff, and needs. Main donors are Dutch, EU, Denmark and GEF (WB and UNDP). In 1999, the 9 NPs received \$714,000 for research, administration/training and afforestation and another \$714,000 for infrastructure/construction.

Legislation:

1999 Decree on Special Use Forest (not yet signed)

International Conventions signed:

CITES (1994), CBD (1994), WH, RAMSAR

THREATS

Pre-1975: impact of war (chemicals, bombs) and shifting cultivation
 Excessive wildlife hunting and illegal poaching
 Development pressures, including pollution from expanding industries and urban waste water
 Logging activities in key watersheds which have negative impact on subsequent flooding

Unregulated NTFP collection
 Forest fires
 Overpopulation and rapid population growth beyond carrying capacity
 Weak or absent EIA for developments in and around PA

"25 PAs are less than 10,000 ha and not suitable for habitat protection"



Cat Tien National Park

Annaliese Koeman

RECOMMENDATIONS

Need for new projects to fully address capacity building and training to maintain expanding PA system into managed ecosystems rather than paper parks
 Improve co-ordination of sectors and promote legislative reform and enforcement
 Integrate marine and wetland systems into the PA network by establishing 16 proposed marine PA's, enacting marine PA legislation and supporting role of Ministry of Fisheries
 FPD should draft more national guidelines for PA staff to perform specific PA activities (e.g. writing management plans, monitoring, tourism projects)
 Establish PAMBs in the 30% of nature reserves that do not have one in order to receive budget
 Continue development of buffer zones, but

with a more collaborative approach, in areas where encroachment from neighbouring populations may be a threat
 Clarify special status and management of buffer zones, activities allowed, etc.
 Develop national gene banks and complete legislation on use and export of genetic resources
 Substantiate EIAs as a part of the planning process
 Given the enormity of the trade, it is generally recognised that greater capacity is needed to regulate the trade in wildlife and wildlife parts
 Compile species inventories and establish a Biodiversity Monitoring Program in each PA focussing on species, habitats and threats.
 Increase the participation of local people in these and other conservation activities



Ho Ba Be National Park

Annaliese Koeman

Timeline for
PA Development

- 1954 Independence from France
- 1959 Ho Chi Minh developed the Tet Tree Planting Ceremony
- 1961 Department of Forestry moved away from Ministry of Agriculture
- 1962 First Forest Reserve established in North Vietnam, Cuc Phuong
- 1954-1975 49 PAs were established
- 1976 Dept. of Forestry became Ministry of Forestry created Peoples Forest Protection Units
- 1977 First 10 forest reserves declared in the South
- 1985 National Conservation Strategy drafted
- 1985 Regulation on Special Use Forest (conservation) enacted
- 1986 Adoption of Doi Moi or economic renewal Policy
- 1986 Government creates PA system by establishing 87 PA's
- 1990 Tropical Forest Action Plan and review of National Protected Area System drafted
- 1991 Forest Resources and Development Act covering PA establishment and management
- 1993 Law on Environmental Protection
- 1994 Wetland sites made PAs Tram Chin Tam Nong and Xuan Thuy Ramsar Site
- 1994 Ratified CBD and CITES
- 1995 Biodiversity Action Plan approved (outlines 50 projects, lists endangered species, PAs and National Environmental Action Plan)
- 1995 MARD formed by joining Forestry with Agriculture and Water Resources
- 1995 FPD created for protection, management and law enforcement of national PAs (8000 staff)
- 1996 IUCN Red Book for Plants produced
- 1998 MOSTE proposed 16 marine PAs and draft decree for marine PAs
- 1999 Draft Decree on Special Use Forest and PA Management
- 1999 Established National Tourism Steering Committee and passed Ordinance on Tourism; proposed revision of Tourism Master Plan incorporating sustainable tourism principles (a Master Plan for Sustainable Tourism Development has yet to take place); launched State Tourism Action Plan ("Vietnam: a Destination for the New Millennium")

Box 1

CASE STUDY: WWF/UNDP BIODIVERSITY TRANS-BOUNDARY PROJECT

Trans-border issues are important for the management of several PA's in Vietnam with thousands of ha of the protected area system bordering Lao PDR and Cambodia. (See Cao Van Sung Map, Executive Summary, Session 4) For example, the WWF/UNDP Biodiversity Trans-boundary project has been working in Indochina to further development of these issues. One project site focuses on the tri-border region Mom Rey NP and Yok Don NP in Vietnam; Virachey NP in Cambodia and Dong Amphan NBCA in Lao PDR. This 800,000 ha forest complex has dipterocarp forest forming one of the biodiversity hotspots in Indochina. This area is important for other large mammals, flora and fauna, endemism, with four newly discovered mammals, and many of SE Asia's most endangered fauna.

Successes of the project include:

- conducted biological surveys and research;
- identified high priority sites for conservation; and
- produced GIS maps and trained policy makers and field staff on biodiversity conservation and technical skills.

Challenges in implementing conservation projects in the trans-border region include:

- remote, politically sensitive mountainous areas;
- majority of border population are ethnic minorities;
- awareness of conservation, land use and legislation is low and difficult to monitor;
- often extraction justified due to national security; and
- development on one side of border impacts other side and countries will not usually interfere.



Hin Nam No NBCA, Lao PDR

Threats facing the area include:

- Unsustainable logging;
- Expansion of commercial agriculture;
- Hydro-development;
- Increasing road construction;
- Swidden practices; and
- Trade in wildlife, timber and NTFPs.

Recommendations and lessons learned include:

- Attempt to actively enforce existing laws on logging, NTFPs, wildlife hunting and trade;
- Train PA staff to do participatory and buffer zone management;
- Need to translate PA materials into local language;
- Continue to promote awareness for biodiversity conservation and rules to local population and PA staff;
- Begin activities to stabilise livelihood practices of local people on each side of boundary;
- Conduct more surveys in border areas and stakeholder workshops;
- Exchange more information with other TB sites in region



Hin Nam No NBCA from Phong Nga-Ke Bang Nature Reserve

ECOTOURISM AND PROTECTED AREA MANAGEMENT

STRENGTHS

Domestic Tourism has increased and, despite potential threats, offers an incentive to protect natural resources, provide economic benefit and increase awareness of PA system and values; and

Due to the lack of infrastructure, there is an opportunity to develop tourism and infrastructure in and around PAs in an environmentally sensitive manner.

CHALLENGES

The government policy is to develop roads, access and infrastructure to PAs to develop mass tourism (often called ecotourism);

The massive growth in domestic tourism may go beyond carrying capacity of PA and threaten biodiversity;

40% of tourists in Vietnam come from China/Taiwan and Japan and add to consumption of wildlife (There are numerous popular wildlife meat restaurants, esp. in Ha Long, Tam Dao, Nha Trang, Sa Pa);

Ba Be and Ha Long NPs have long term development plans for large scale building of hotels, zoos, pools, parks and infrastructure without input on conservation objectives or from local people, which are not developed based on conservation objectives or with the input from local people;



Damian Keen/UNDP

Ecotourism in Sa Pa,

MARD has not invested in tourism previously, but Cuc Phuong NP will receive \$178,000 (US) for ecotourism development until 2005. However, there is no EIA process, and two lakes and a swimming pool are currently being built in the park with this money; and

Most of the tourism profits go to local government and outside (city-based) tour operators, rather than to local operators or local people.

THREATS

Threat to turn PAs into theme parks with large infrastructure development (including activities to 'beautify and enhance nature') and tourism numbers beyond the carrying capacity without input from PA managers and local people about the impacts on biodiversity;

Ethnic people are marginalised as passive participants in tourism (and used as marketing material), receiving only small jobs or craft sells with no input during planning and decision making;

The combination of an increase in domestic tourism, wildlife trade and consumption and increase in standard of living are difficult to separate; and

China is both the number one source of tourists to Vietnam and the number one destination for the wildlife trade.



Annalise Keenan

Ecotourism Training Course, Vietnam

RECOMMENDATIONS

Promote and publicise the value of goods and services from PA's (medicinal plants and other NTFPs, tourism, research, clean water, prevent flooding, cultural and spiritual);

Evaluate tourism in PA's and develop national action plan for ecotourism highlighting sustainable tourism activities that respect cultural and ecological principles and a participatory approach;

Each NP should contain an environmental education and interpretation centre: prioritise investment in interpretation/ education/ communication and improve and renovate the way information is portrayed, i.e. make it interesting and exciting;

"Tourism to PAs in Vietnam is simply mass tourism in a natural setting" (A. Keenan)

Need to translate into Vietnamese, guides on best management tools and best practice for ecotourism into Vietnamese and include these in the national registration process for tour operators;

Devise an accreditation system and conduct awareness programs for tour operators who visit NPs;

Give authority for tourism in PAs to FPD staff rather than local/provincial government or tour operators;

Consider requiring an EIA for larger tourism projects near and within PAs attempt to make independent EIA mandatory, no matter who is proposing the development;

Government must enact procedure to ensure that a portion of tourist revenue is directed specifically towards conservation (or towards specific conservation projects transparency issue) and the local people, and local people have a say in what their percentage of the revenue is used for; and

Keep some Nature Reserves free from any tourism as a special core zone to ensure sensitive areas won't be disturbed.



Chad Over/WWF Indochina

Ethnic minorities should play a role in ecotourism

LIST OF PROTECTED AREAS IN VIETNAM CORRESPONDING TO IUCN CATEGORIES

Code	Protected Area Name	Size (Hectares)	Year Inscribed
	NATIONAL PARK – IUCN CATEGORY II		
101	Ba Be	7,610	1977
102	Ba Vi	7,377	1977
103	Bach Ma	22,031	1986
104	Ben En	16,634	1986
105	Cat Ba	15,200	1986
106	Cat Tien	73,878	1998
107	Con Dao	15,043	1984
108	Cuc Phuong	22,200	1962
109	Tam Dao	36,883	1977
110	Yok Don	58,200	1991
112	Tram Chim	7,588	1998
	NATURE RESERVES – IUCN CATEGORY IV		
201	Ba Mun	1,978	1977
202	Bana-Nui Chua	43,327	1986
203	Ban dao Son Tra	4,370	1977
204	Bac Me	27,800	1995
205	Bien Lac-Nui Ong	35,377	1986
206	Bat Dai Son(*)	10,000	1986
207	Binh Chau Phuoc Buu	11,293	1986
208	Bidoup - Nui Ba	73,972	1986
209	Bu Gia Map	22,330	1986
211	Chu Yang Sinh	54,227	1986
212	Chu Mom Ray	48,658	1985
214	Day Hoang Lien	29,845	1986
215	Du Gia	24,293	1995
216	Dakrong	32,200	
217	Easo (Eaka) (*)	22,000	1996
218	Hang Kia Pa Co	7,091	1986
219	Hang Phuong Hoang	6,000	1991
220	Ho Ke Go	24,801	1995
221	Huu Lien	10,640	1986
222	Khe Ro	5,675	1995
223	Kim Hy	18,555	1995
224	Kon Ka Kinh	28,000	1986
225	Kong Cha Rang	16,000	1986
226	Krong Trai	22,290	1994
227	Ky Thuong	17,640	1994
228	Nam Ca	24,555	1986
229	Nam Nung	10,849	1986
230	Ngoc Linh	51,053	1986
111	Phong Nha – Ke Bang	41,132	1986
233	Phong Quang	18,379	1986
	Phong Dien (*)	33,900	
	Phu Canh	14,461	1995
235	Phu Ninh (*)	23,000	
236	Phu Quoc	14,400	1986
237	Pu Hoat (*)	67,934	1996
238	Pu Hu (*)	35,089	1995
239	Pu Huong	50,075	1986
240	Pu Luong (*)	17,662	1995
241	Pu Mat	93,400	1994

242	Song Thanh – Dakprin (*)	93,000	1996
244	Ta Dung	8,521	1995
246	Trung Khanh	3,000	1995
247	Tay Con Linh	40,344	1995
249	Thach Phu (*)	4,510	
250	Thuong Tien	7,308	1986
251	Vu Quang	55,950	1986
252	Xuan Lien (*)	30,000	
253	Xuan Nha	38,069	1986
254	Xuan Son	5,487	1986
255	Yen Tu	3,040	1986
256	Van Long (*)	3,500	
	SPECIES/HABITAT RESERVES		
302	Dat Mui	4,461	1986
303	Ea Rai	50	1994
304	Lung Ngoc Hoang (*)	6,000	1996
305	Muong Nhe	310,216	1986
306	Phong Dien (*)	33,900	
307	Rung Kho Phan Rang	16,775	1986
308	San Chim Bac Lieu	127	1994
309	San Chim Ca Mau	500	1994
310	Tat Ke Ban Bung	41,930	1994
311	Thai Thuy (*)	13,696	1996
312	Tien Hai	12,500	1995
313	Tam Quy	350	1986
314	Trap Kso	100	1994
315	U Minh Thuong	8,509	1993
316	Vo Doi	3,394	1986
317	Xuan Thuy	7,680	1995
318	Bac Son	2,416	1986
	PROTECTED LANDSCAPE AREAS		
401	Bac Hai Van	14,547	1993
403	Con Son	1,477	1986
405	Den Hung	285	1977
407	Deo Ca Hon Nua	8,876	1986
409	Ho Lac	12,744	1986
410	Hoa Lu	5,624	1996
411	Hon Chong	3,495	1986
412	Huong Son	4,355	1986
415	Nam Hai Van	10,850	1992
0	Nui Chung	600	1989
418	Pac Bo	2,784	1977
419	Rung thong Da Lat	32,051	1993
421	Tan Trao	6,633	1977
422	Thac Ba	5,000	1993
423	Yen The	1,883	1993
424	Kim Binh	1,937	1994
425	Ghenh Rang	2,616	1986

(*) Proposed Sites

THE ROLE OF ASEAN, INTERNATIONAL AGREEMENTS AND TRANS-BOUNDARY CO-OPERATION IN PA MANAGEMENT IN SE ASIA

SESSION 4



Minister's from Vietnam and Lao PDR
share an emotional moment at a Sub-
regional Biodiversity meeting

"Managing parks anywhere is a difficult enough task. Adding the complication of collaboration across a political jurisdiction, especially a national frontier, adds a substantial burden. But the conservation benefits and political advantages are worth the extra effort, and trans-border co-operation in management can provide not only better ecological models but also important models for international or interstate cooperation in other arenas of societies' aspirations"
(Hamilton et al, 1996).

SESSION 4

THE ROLE OF ASEAN, INTERNATIONAL AGREEMENTS AND TRANS-BOUNDARY CO-OPERATION IN PA MANAGEMENT IN SE ASIA

In this session, the Forum looked beyond national borders in two ways to address conservation issues in SE Asia:

First, the role of multilateral agreements ranging from the World Heritage Convention (1972) and the Convention on Biological Diversity (1992) to ASEAN regional agreements in establishing guidelines for national policies; and

Second, the use of bilateral mechanisms such as trans-boundary protected area complexes (TBPA) to improve protected area management.

Lessons have shown that incorporating both TBPA projects and international agreements into national practices in SE Asia faces enormous challenges. However, it is crucial that such work continues due to region's globally significant biodiversity and the livelihoods of local people in the face of ever increasing threats.



Stuart Chape/UCN

Orphaned tiger cub from Louang Prabang Province, Lao PDR

THE ROLE OF INTERNATIONAL AND ASEAN AGREEMENTS IN PA MANAGEMENT IN SE ASIA

Over the past 30 years, there have been numerous international agreements ratified regarding the conservation of nature. Many countries in SE Asia have been parties to these agreements and signed them into national law, however very few of them have been implemented and put into practice (See Figure 1 below). If SE Asia countries intend to integrate these broader policies into national PA guidelines, it will require a tremendous commitment of resources and time in two main areas:

- First, improve the administrative capacity of government staff at the national level; and
- Second, the international community needs to communicate to national PA managers and policy makers why these agreements are relevant to the unique economic and cultural situation of each country.

In general, ASEAN has made progress by adapting recommendations from international treaties into various ASEAN agreements on nature conservation, namely The Declaration on Heritage Parks, 1984 (See Volume II, Annex 1). However, some agreements have yet to be ratified by all of the SE Asian countries. For example, the ASEAN Agreement on the Conservation of Nature and Natural Resources, 1985 (see Box below), which includes a provision for PA management and an endangered species list, has yet to take force because it has been ratified by only three of the original signatories.

"The time is right for the remaining ASEAN nations to ratify the 1985 Agreement on the Conservation of Nature and Natural Resources" (Prof. Koh Kheng Lian)

FIGURE 1: INTERNATIONAL AND REGIONAL HARD LAW AGREEMENTS - STATUS FOR SOUTHEAST ASIAN COUNTRIES

Country	Convention on Biological Diversity (CBD), 1992	Convention on Wetlands of International Importance (RAMSAR), 1971	Convention on International Trade in Endangered Species (CITES), 1973	World Heritage Convention 1972	Framework Convention for Climate Change, 1992	UN Convention on the Law of the Sea, 1982	ASEAN Agreement on the Conservation of Nature and Natural Resources, 1985	ASEAN Declaration on Heritage Parks and Reserves, 1984
Brunei		Not Yet	1990		Not Yet	1997	Signatory 1985	1984
Cambodia	1995	Not Contracting Party 1999 – Submitted Report			1996	Not Yet	Not Yet	Not Yet
Indonesia	1994	1992	1979		1994	1994	1986	1984
Lao PDR	1996	Not Yet	Not Yet	1987	1995	Landlocked	Not Yet	Not Yet
Peninsular Malaysia	1994	1995	1992	1988	1994	1997	Signatory 1985	1984
Philippines	1994	1994	1981	1985	1994	1994	1986	1984
Thailand	Not Yet	1998	1983		1995	Not Yet	1986	1984
Vietnam	1995	Accession 1988	1994		1995	1994	Not Yet	Not Yet

Note: Areas highlighted show situations in progress or with potential for further development, eg. Accession,

FIGURE 2: SOFT LAWS - INSTRUMENTS CONCERNING PROTECTED AREAS

INTERNATIONAL SOFT LAWS	ASEAN SOFT LAWS
Stockholm Declaration of the UN Conference on The Human Environment (Principles 2 & 4), 1972	Manila Declaration on the ASEAN Environment, 1981
Rio Declaration on Environment and Development (Article 22), 1992	Jakarta Consensus on ASEAN Tropical Forestry of the Third Meeting of the ASEAN Economic Ministers on Agriculture and Forestry, 1981
Statement of Principles on Forests, UNCED, 1992	ASEAN Declaration on Heritage Parks and Reserves, 1984
World Charter for Nature, 1982 (Principle I)	Bangkok Declaration on the ASEAN Environment, 1984
Rio Declaration, 1992 (Article 22)	ASEAN Strategic Plan of Action on the Environment, 1994 – 1998 Strategy 5: Establish a Regional Framework on Biological Diversity Conservation and Sustainable Utilization of its components Strategy 6: Promote the Protection and Management of Coastal Zones and Marine Resources
UN Framework Convention for Climate Change, 1992	Hanoi Plan of Action (Sections 6.4-6.7, 6.9, 6.11, 6.12, 6.15, & Section on Ecotourism Promotion Program) 2000 – 2020
Agenda 21, 1992 (Chapters 11, 12, 13, 15 & 26)	
UNESCO Man and Biosphere (MAB) Program	

HOW CAN WCPA ASSIST WITH IMPLEMENTATION OF CBD?

Adopt a consultative approach for PAs involving the regional members
Facilitate the development of regional expertise through exchange programs (eg with Australia and IUCN offices)
Ensure members are actively involved in NBSAP development and implementation
Continue to raise awareness of the importance of PA values, targeting different sectors of society by highlighting different values
Train PA managers on current techniques, within a biodiversity conservation context, for PA design and management
Guide implementation of Article 8 of the CBD, on in situ conservation. Important issues include alien invasive species, restoring degraded ecosystems, involvement of indigenous knowledge and protection and rehabilitation of threatened species.
Assist with technical aspects of planning and establishing national PA systems, including the establishment of different categories, development of PA management objectives at national and site level, development of bioregional planning, development of criteria, and assessment of the effectiveness and design of corridors.
Promote WCPA best practice guidelines at the national level.
Guide the establishment and management of multiple use protected areas (Categories V & VI), partnerships with private sector and collaborative management techniques.
Support the development and dissemination of guidelines assessing and mitigating the impacts of infrastructure and development projects on PAs.

THE RELATIONSHIP BETWEEN ASEAN AND PAS IN SE ASIA

Furthermore, there is a need to integrate protected area issues into the broader regional and economic planning being carried out by ASEAN and other institutions (see working group on this topic).

The ASEAN Workshop on Nature Conservation held in Bali, Indonesia (1980) produced a Draft Action Plan (DAP) on the following issues:

- Establishment of a Network of Reserves, namely ASEAN Heritage Sites
- Development of principles, criteria, and guidelines for selection, establishment and management of a network of reserves
- Inventory of ecosystems, critical areas and habitats in the region
- Accession to Global Conservation Conventions and meetings of heads of agencies responsible for management of protected areas
- Species conservation
- Legislation including collation and analysis of international agreements relevant to nature conservation, ASEAN Convention on Nature Conservation, collation and analysis of National Legislation
- Research, information exchange and training

ASEAN AGREEMENT ON THE CONSERVATION OF NATURE AND NATURAL RESOURCES, 1985

In 1978, ASEAN began discussion on an agreement on nature conservation. Eight years later, with the assistance of IUCN Environmental Law Commission (ELC), the agreement was adopted on 9 July 1985 by the six countries, which were ASEAN members at that time. The agreement incorporated the ASEAN Endangered and Threatened Species Lists and included a provision on PA management. Over the past 15 years, only Indonesia, The Philippines and Thailand have ratified the Agreement, so it is not yet in force.

A report by ELC and APCEL in 1999 assessed the relevance of this agreement considering many new national PA laws and international conservation agreements and requested each country to report their opinion on ratification of the Agreement.

Other ASEAN soft law documents indicate the need for conservation to be considered in decision on planning and economic development, but they currently lack specific procedures on how to fulfill this mandate. (See Soft Law Box). ASEAN and WCPA members must attempt to increase the awareness of these policies in order to enable officials to decide how they relate to national and local practices.

Law, both soft and hard, can be used as a tool for setting policy guidelines and developing a legal basis for protected areas. The following is a list of priority issues for setting PA policy:

PRIORITIZATION OF KEY ISSUES	IDENTIFICATION OF SPECIFIC ACTIONS
Formulate policy guidelines on PAs from an empirical approach noting weaknesses and strengths	ASEAN should lead role in facilitation of the ratification of the global and regional biodiversity and protected area instruments among the member states
Focus on the operational aspects of PAs where laws exist and capacity building can occur	ASEAN Secretariat should disseminate information on ASEAN instruments related to PAs (see Appendix) and circulate key reports to relevant agencies and member states
Promote awareness of international instruments among PA managers	Publish ASEAN instruments and national laws on PAs of the member states
Promote dialogue between WCPA and relevant government agencies and NGOs on the implementation of global instruments	Compile ASEAN case studies on the application of international instruments to PAs (world heritage, Biosphere Reserves, Ramsar, CBD)
Establish regional guidelines, standards, criteria or actual plans for PA sites	Study ASEAN Agreement on the Conservation of Nature (1985) and find: a) whether it is still relevant in light of CBD, Ramsar, WH, etc.; b) whether amendments are needed; and c) the pros and cons of ratifying the agreement
	Organize "training the trainers" course on policy and laws drawing on examples from the region
	Formulate a Guiding Principle for the protection of wetlands in the Indochina countries (current project with IUCN – Hans Friederich may be working on this) for consideration by the AWGNCB

ASEAN

ASEAN was formed in 1967 primarily to improve economic relations between the nations of SE Asia, yet over the past 15 years ASEAN has expanded its portfolio to address conservation issues and protected area management in the region. Achievements include:

- 11 protected areas have been designated as ASEAN Heritage Nature Parks (SEE TABLE);
- Adoption of selection criteria, a master plan and management guidelines for ASEAN Heritage Nature Parks in coordination with training and assistance to Park staff;
- Establishment of an ASEAN Working Group on Nature Conservation;
- Section 5 of the ASEAN Strategic Plan for the Environment covers PAs'
- List of endangered species for SE Asia drafted for the 1985 ASEAN Convention for Nature Conservation, yet not in force since agreement has not been fully ratified;
- Focus on increasing TBPA establishment and management; and Development of the ASEAN Regional Biodiversity Research Center (ARCBC) in the Philippines as a focal point for training and data base and information clearinghouse.

DECLARATION ON ASEAN HERITAGE PARKS AND RESERVES

The ASEAN Declaration on Heritage Parks and Reserves was adopted at the Second ASEAN Ministerial Meeting on the Environment on 29 November 1984 in Bangkok, Thailand and signed by the six member countries at that time, namely Brunei Darussalam, Indonesia, Malaysia, Philippines, Singapore and Thailand. The Declaration was made in consideration of:

The designated heritage parks and reserves were as follows:

"...the uniqueness, diversity and outstanding values of certain national parks and reserves of ASEAN Member Countries that deserve the highest recognition so that their importance as conservation areas could be appreciated regionally and internationally".

Brunei Darussalam	Tasek Merimbun
Indonesia	Leuser National Park
	Kerinci-Seblat National Park
	Lorentz National Reserve
Malaysia	Kinabalu National Park
	Mulu National Park
	Taman Negara National Park
Philippines	Mt. Apo National Park
	Iglit-Baco National Park
	Khao Yai National Park
Thailand	
	Tarutao National Park

Source: Selected ASEAN Documents on the Environment, 1996

THE ASEAN STRATEGIC PLAN OF ACTION ON THE ENVIRONMENT (SPAEE)

The ASEAN Strategic Plan of Action on the Environment (SPAEE) was developed and implemented during the period 1994-1998. It consists of ten strategies. Strategy 5 pertaining to protected areas is summarized in the Table below.

	STRATEGIC THRUSTS	ACTION/PROGRAMS
Strategy 5	Establish a regional framework on biological diversity conservation and sustainable utilization of its components.	5.1 Promote the development of a framework for the protection and conservation of heritage areas and endangered species. 5.2 Strengthen capacities for R&D to enhance biodiversity conservation in the region.

(Source: Suchindah, 1999)

CURRENT PROJECTS OF ASEAN WORKING GROUP ON NATURE CONSERVATION (AWGNC)

Trans-border Parks and other Protected Areas for Conservation with the Greater ASEAN Region
Update Action Plan for Nature Conservation in 2001
ASEAN Turtle Conservation Programme:
MoU between Philippines and Malaysia on the establishment of the Turtle Islands Heritage Protected Area (1996)
MoU on ASEAN Sea Turtle Conservation and Protection, 1997

ASEAN WORKSHOP ON NATURE CONSERVATION, CHIANG MAI, THAILAND, APRIL 1986

The workshop exchanged information about conservation management efforts and associated problems, and the sharing of the benefits of conservation among all ASEAN countries.

Topics discussed included:

- Problems caused by people living in and around protected areas;
- Protected area management for the promotion of tourism and recreation;
- Wildlife management and methods of conserving endangered species;
- National park management problems.

ASEAN aims to complete an Action Plan for Nature Conservation by 2001 to update the previous document approved in 1980 at the Bali workshop on Nature Conservation. WCPA is also in the midst of drafting a regional protected area action plan and it is hoped that there will be collaboration with the ASEAN working group.

On a number of occasions during the forum IUCN, WCPA and ASEAN representatives urged the institutional parties and technical experts gathered at the forum to use the great opportunity to discuss ways and means on how to collectively move forward in implementing ASEAN-wide conservation activities. This would certainly provide an important boost for conservation efforts in SE Asia as we enter the new millennium. It could also very well serve as a platform for generating substantive inputs from a regional perspective for consideration at the Fifth World Parks Congress and the Rio+10 Summit, both scheduled to be held in 2002.



Stuart Chape/IUCN

Mount Kinabalu, Sabah. ASEAN Heritage Park

TRANS-BOUNDARY CO-OPERATION IN PA MANAGEMENT IN SE ASIA

STATUS OF TRANS-BOUNDARY PROTECTED AREAS (TBPAs) COMPLEXES:

TBPAs can be traced back nearly seventy years when Canada and the United States dedicated the world's first international peace park symbolically uniting Waterton Lakes and Glacier National Parks in 1992. Since then many countries have used similar bilateral agreements to improve relations and the management of protected areas meeting at their international borders.

Reasons why it is logical to manage protected areas without the limitation of national boundaries:

- the migratory nature of wildlife, because ecosystems are often shared between countries;
- the prevalence of illegal wildlife trade across borders;
- the benefits of bringing staff from two countries together for training and study tours;
- to facilitate joint PA management and cost effectiveness; and
- to improve relations between neighbouring nations.

REGIONAL TRANS-BOUNDARY PROTECTED AREAS

Currently, 11 TBPAs exist within eight countries of SE Asia, including the world's first trans-boundary marine protected area for marine turtle conservation, The Sabah-Philippines Turtle Islands Heritage Protected Area.

Rapid growth in the number of TBPAs complexes since 1988, particularly since 1995.

The number of PAs straddling the boundaries of three countries increased from 2 in 1988 to 23 in 1997.

7 potential tri-border complexes have been identified.

(Phillips, 1999)



Camera Trap - NNT, WCS/IUCN

With cooperation between neighbouring countries, species like this Clouded Leopard, stand a chance of survival

LESSONS AND FUTURE STRATEGIES FOR TBPAS

From experience to date, there are a number of emerging lessons. First are lessons that are relevant to all types of protected areas (*after Phillips, 1999*):

"The recent Peru-Ecuador Peace Accord has shown that peace parks can be 'built in' as one element of the negotiation of peaceful settlement of disputes." (Phillips, 1999)

Use the full range of protected area categories in developing TBPAs;

Involve the full range of potential managers in TBPAs;

Ensure that the full range of TBPAs benefits are identified, communicated and "factored into" decision making;

Ensure that local staff and communities are closely involved in the establishment and management of TBPAs;

Plan TBPAs integral to broader regional planning, with TBPAs developed as an inter-linked network, rather than as a series of individual sites;

Build capacity for the management of TBPAs at all levels.

In addition, there are some lessons special to TBPAs only:

TBPAs are suitable for the protection of large contiguous areas of conservation value (e.g. mountains, rivers or partially enclosed seas), enabling more effective biodiversity conservation through cooperative bilateral or multilateral management.

TBPAs are unlikely to resolve conflicts by themselves or be established in active conflict areas (Westing 1993), but they can improve co-operation between countries, especially after periods of tension or conflict.

Unifying symbols or themes assist with establishing and managing TBPAs, e.g. the Meso-American Biological Corridor theme 'Path of the Panther'.

Some trans-boundary landscapes are already World Heritage or Biosphere Reserves giving impetus to efforts to establish and manage TBPAs.

More attention should be given to the establishment of marine TBPAs (IUCN, to be published 2000).

Ecotourism can benefit from the improved security of TBPAs.

TBPAs need strong support from local staff, who should be closely involved in the management of TBPAs programs. They gain unique experience and morale is boosted.

In the case of TBPAs allies lie in organisations normally not involved in the protected areas business. For example, UNHCR, ICRC, and other organisations working with refugees; military personnel engaged in maintaining border security; and customs staff on national borders.

"Joint marketing of adjoining sites is more likely to attract tour operators, enabling more of a level playing field when dealing with the tourism industry (e.g. the Yukon/Alaska Tourism Marketing Strategy for parks in Canada and USA)" (Hamilton, 1997).

"Mountains and rivers shared by two or more countries virtually compel cooperation in their conservation, which can be a powerful unifying force." (Hamilton, 1997)



It is hoped that Dong Ampham NBCA, Lao PDR (shown above) can be linked to Virachey Nature Reserve, Cambodia and Mom Ray Nature Reserve in Vietnam to form a large trans-boundary protected area

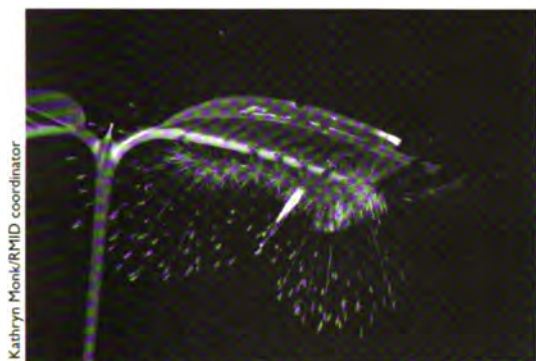
REGIONAL CASE STUDIES OF TRANS-BOUNDARY PROTECTED AREAS

CASE STUDY: BENTUNG KERIHUN - LANJAK ENTIMAU TRANSBOUNDARY PROTECTED AREA

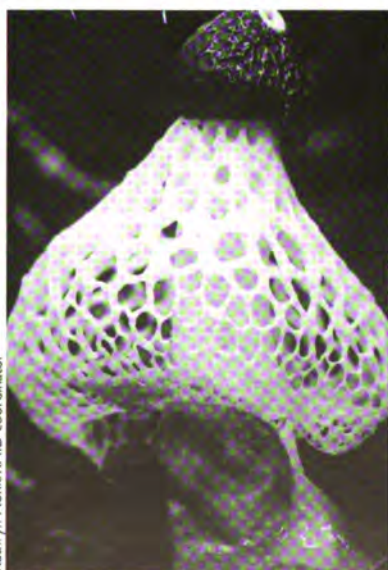
As a response to logging controversies along the Indonesian and Malaysian border in Borneo, ITTO and the respective governments joined in 1994 to form SE Asia's first transboundary reserve, Bentung Kerihun-Lanjak Entimau. This one million ha TBPA has become recognized globally as a successful model for transboundary protected areas, especially in the tropics. In fact, based on this model, ITTO has plans to establish further TBPAs in Peru-Ecuador and Thailand-Cambodia. ITTO has concluded that the following three things were essential elements in the success of the project:

- high level political commitment from participating countries;
- long term donor funding;
- sound practice of collaborative management including education, expanding awareness and benefits for the livelihoods of local people. For example, local people have been trained to raise high-value fish species and grow endemic fruits and vegetables.

Notable features of the project are that local people have been consulted and involved in the adoption of two management plans, the development of eco-tourism and the promotion of Communication & Information for sustainable forest management. The local communities have requested the inclusion of the buffer zone in the permanent expansion of the TBPA in order to secure access and benefits from the area. Also, Malaysia and Indonesia have conducted joint biodiversity surveys, the findings of which have established this as one of the richest biodiversity conservation areas in the tropical world.¹



Example of abundant insect life in the Leuser ecosystem



A large mushroom in the Leuser ecosystem



Corel Draw

Orangutan

¹The area has been recorded as harbouring 8 forest types, 12,000 species of flowering plants and a population of 3,000 species of orangutans.

Box 5

CHRONOLOGICAL DEVELOPMENT OF ESTABLISHMENT OF TIHPA

- 1976:** Proposal by Dr. Wayne King to the World Conservation Union (IUCN) Survival Service Commission
Dr. Wayne King, Director of the New York Zoological Society presented a memorandum entitled *A Proposal to Establish the First International Marine Turtle Sanctuary* recommending the establishment of the park for the protection of marine turtles.
- 1977:** Memorandum by Mr. D.V. Jenkins, Asst. Director of Sabah Parks to Datuk Thomas Jayasuriya, Chairman of The Board of Trustees of the Sabah Parks
Sabah Parks recommended the establishment of an International Marine Turtle Sanctuary to the Chairman of the Sabah Parks Board of Trustees. In the memorandum, the assistant director explained that Malaysia had started turtle a conservation program through hatchery operations since 1966, while the neighboring Philippines islands are not protected and the islanders and fishermen harvest the turtle eggs heavily. As a result, what is conserved on one side is exploited on the other side. He suggested that this is the best time to pursue the matter since the political relationship between the two countries had improved considerably.
- 1978:** Letter from IUCN Director General to the Chief Minister of Sabah
Mr. David A. Munro congratulated Datuk Harris Salleh for the initiative of the State Government of Sabah to establish the Turtle Islands Park. He also hoped that The Government of The Philippines would take similar action so that effective cooperative management and protection of marine turtles could be initiated.
- 1979:** International Sea Turtle Conference in Washington
Mr. G.S. de Silva, Park Warden of the Turtle Islands Park, discussed the International Marine Turtle Sanctuary during the session 'World Status of Sea Turtles'. The IUCN gave priority to the establishment of an International Sanctuary and agreed with The Philippines that a small working group of specialists should meet in the Philippines.
- 1981:** Technical Workshop in Manila, Philippines
A small working group of specialists met *in situ* to work out a scheme for the sanctuary. After this workshop there was no further progress with the proposal.
- 1989:** Revival of the proposal by the Governments of Sabah and The Philippines
Realizing the urgent need to conserve fast dwindling turtle resources, the governments of Sabah and The Philippines decided to set into operation a serious management program for the protection of these resources. The project would be assisted by the World Wide Fund For Nature (WWF, formerly the World Wildlife Fund) establishing the turtle islands on both sides of the international border (de Silva, 1996).
- 1990:** First Meeting of the ASEAN Working Group on Nature Conservation (AWGNC) in Kuala Lumpur
The Malaysian delegation prepared and presented a proposal on marine turtle conservation to ASEAN Senior Officials on the Environment (ASOEN). The proposal was approved and endorsed.
- 1991:** Second Meeting of the AWGNC in Manila, Philippines
The Philippines delegation, through the Pawikan Conservation Project, proposed the conduct of a regional Symposium Workshop on Marine Turtle Conservation.
- 1993:** First ASEAN Symposium-Workshop on Marine Turtle Conservation, Manila, Philippines
The first ASEAN symposium-workshop on Sea turtles held in the Philippines in 1993 identified the Turtle Islands of Sabah and the Philippines, Sipadan Island and Berau Islands to be declared as ASEAN Natural Heritage Conservation Areas. The Sabah Parks officials present at the workshop suggested that The Philippines side take up the matter through the Malaysia-Philippines Joint Commission for Bilateral Cooperation (JCBC).
- 1995:** Second Meeting of the Malaysia-Philippines Joint Committee for Bilateral Cooperation
The meeting agreed with The Philippines proposal for the establishment of the Turtle Islands Heritage Protected Area and further agreed the formation of a Joint Technical Working Group (JTWG) to study in detail the draft Memorandum of Agreement (MoA) submitted by the Philippines. The JTWG met in May 1995 and prepared a revised MoA to be signed by the Governments of Malaysia and the Republic of the Philippines in 1996.
- 1999:** Ecotourism activities in the Turtle Islands Park were highlighted in a paper *Visitors and Sea Turtles: The Case of Turtle Islands Park, Sabah, Malaysia*, presented in Bali, Indonesia upon the request of WWF Indonesia during a National Workshop on Sea Turtle Conservation last August.

CASE STUDY: THE SABAH-PHILIPPINES TURTLE ISLANDS HERITAGE PROTECTED AREA (TIHPA)

The Sabah-Philippines Turtle Islands in the Sulu Sea, together with the Berau Islands, Indonesia, form one of the few remaining major green turtle nesting habitats in the world, where more than 1,000 turtles nest annually (Trono, 1993). Turtle Island conservation began in Sabah in 1966 when an experimental turtle hatchery was established in Selingaan Island (de Silva, 1969) and later in the Philippines in 1979 following the signing of Executive Order No. 542 (Palma, 1993). Data from tag recoveries indicate that the turtles of the Sulu Sea are resources shared between Sabah and the Philippines. This situation brought about the idea of establishing an international marine turtle sanctuary. The Sabah-Philippine Turtle Islands Heritage Protected area, officially known as "The Turtle Islands Heritage Protected area" (TIHPA), was established in May 1996 when a Memorandum of Agreement (MoA) between the Government of Malaysia and the Government of the Republic of The Philippines was signed in Manila.

The TIHPA consists of nine islands that bestride the international treaty limits separating Malaysia and the Philippines. Three of these islands namely, Selingaan, Bakkungan Kechil and Gulisaan, are located within Malaysian waters; these form the original Turtle Islands Park, which was gazetted in October 1977, covering an area of 1,740 hectares. The other six islands designated by the Philippines are Boaan, Lihiman, Langaan, Great Bakkungan, Baguan and Taganak. The TIHPA is located about 40 km north of Sandakan, Sabah, Malaysia and about 1000 km southwest of Manila.

The establishment of TIHPA embodies a message for other potential protected areas, as it took many years of perseverance and patience to become a reality. It is encouraging to see that concerted efforts based on sincere conservation beliefs, initiated over a decade ago, have reached fruition. A lesson for those currently trying to establish new protected areas is to remain undeterred despite the challenges, because ultimately the effort will be worth it.

TIHPA is also a model for other projects interested in conserving turtles or other key marine species. Its strengths are primarily the results of the implementation of a joint management program between Malaysia and the Philippines, and are as follows:

- Better turtle protection through regional cooperation;
- Standard turtle tagging;
- Joint research on turtle habitats;
- Increased popularity of the park and ecotourism; and
- Improved communication through the inter-island communication system.



WWF Indonesia

Turtle laying eggs on the beach in Vietnam

Establishment of TIHPA has inspired another larger project concept: the Sulu-Celebes Large Marine Ecosystem, which may result in a sustainable financing mechanism for TIHPA and the inclusion of Indonesia in the sea turtle conservation program.

The park is also facing some challenges;

Lack of technical assistance to implement management strategies and the need to motivate and increase staff capability: the Joint Management Programs of the TIHPA requires numerous activities. For example, several fields of research and monitoring are covered, ranging from turtle population studies to environmental monitoring. At present, the capacity of the Sabah Park staff is insufficient to implement these programs due to poor qualifications and lack of training. As such, there is a need to secure technical assistance to motivate and upgrade staff capability in order to execute the program.

Abuse of inter-island communication: Inter-island communication between the Sabah and the Philippines islands has to some extent been abused. Staff can freely communicate with each other through 24 hours and unofficial lengthy talking over the radio disrupts the execution of official tasks.

Negative perceptions of Sabah Park's staff by some neighbouring islanders: some neighbouring islanders, especially people interested in turtle egg collection for commercial gain, are not receptive to the idea of the TIHPA. It is seen as the first step towards a total ban on turtle egg collection.

Siriwat Paowongsa stressed the importance of ASEAN in the protection of marine resources and livelihoods of local communities dependent on them. The ASEAN Working Group on the Marine and Coastal Environment Strategies of Action (1999-2004) have been developed to enhance co-operation among ASEAN countries in addressing marine and coastal environmental issues.



Marine Turtle

Corel Draw

SPRATLY AND PARACEL ISLANDS - CONFLICT RESOLUTION THROUGH TRANS-BOUNDARY PROTECTED AREA?

A particular problem for marine conservation has been international territorial disputes over boundaries which affect some very extensive and rich marine systems, such as the Spratly and Paracel islands and the spectacular coral cliffs of Silabukan (also called Sipadan) Island on the boundary between Malaysia's Sabah State and Indonesia's East Kalimantan Province. Jacques Cousteau has stated that this was the best dive site he knew of anywhere, stimulating dive tourism that has led to the establishment of half a dozen dive camps on just six ha of land. The camps have co-operated to buy out the traditional turtle egg collecting rights to the island. Sabah and the Philippines already cooperate over the Turtle Islands National Park, providing a model for international management of a protected area on an international border. Bi-national co-operation in establishing such a trans-national protected area could be an appropriate way to deal with territorial disputes, with a contractual relationship between the two countries to allocate costs and benefits in an agreeable manner.

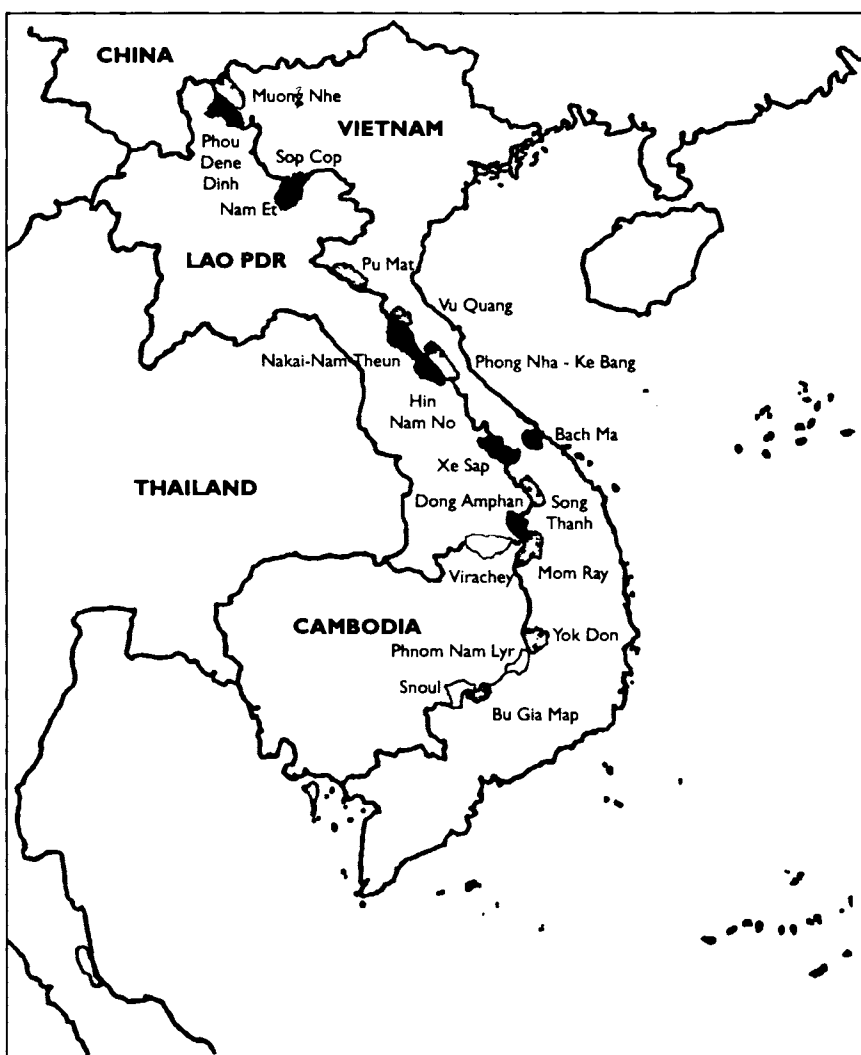
Marine Protected Areas in Thailand
Opportunities for marine trans-boundary collaboration exist in Thailand, which has an established system of 21 marine protected areas (MPAs), three more MPAs are proposed. Four of these sites are proposed as WH Sites, one is nominated as a Ramsar Site and some parts of Mu Koh Payam are joining MAB.

CASE STUDY: INDOCHINA'S TRANS-BOUNDARY PROTECTED AREAS

The need for bilateral and tri-border cooperation in conservation efforts is confirmed by presentations from the Indochina region, which highlighted the links between species protection and local communities in the international borders of Cambodia, Lao PDR and Vietnam. Pockets of forest endemism of global significance are found along these boundaries and the Truongson Mountain borders are inhabited by rich and diverse wildlife populations and act as a refuge for many of Asia's most endangered species. For example, many rare, beautiful, endemic and endangered pheasants and white-winged duck have found suitable habitats in these trans-frontier reserves, in addition to *P. tigris*, *F. temmincki*, *S. thibetanus*, *Helarstos malayanus*, *E. maximus*, *Pygathrix nemaeus*, *Hylobates gabriellae*, *Bos sauveli*, *Bos gaurus*, *B. javanicus* etc). Recently, unexpectedly high levels of local

endemism have been discovered (see Volume II, Session 4 for Appendix of newly discovered species).

THE MAIN TRANS-BOUNDARY PROTECTED AREAS OF INDOCHINA



Cambodia, Lao PDR and Vietnam are collaborating on developing a trans-boundary approach to conservation. Trans-boundary approaches, which improve management of PAs and mitigate costs, are particularly applicable in this context because of low capacity and limited finances. Furthermore, parallel border conservation networks are especially necessary for wide-ranging large mammals. Studies have identified two leading priority trans-boundary areas: the North Truongson complex, which includes typical wet and dry evergreen forests and large limestone PAs; and the Tri-border complex, containing large semi-dipterocarp forests of Moray Nature Reserve, Yok Don NP, Dong Amphan NBCA and Virachey NP.

Cao Van Sung recommends that trans-boundary conservation efforts focus on creating alternative means to improve the incomes of local people and introduce environmental and biodiversity education. Some activities have already been undertaken in this field leading to promising results. For example, rapid rural appraisal methods have been used to gain an understanding of social issues and human relationships with natural resources, thus building relationships with the ethnic minorities. Posters and leaflets have been distributed deep into remote areas. Regular awareness raising and training sessions have been conducted for field staff and local

people, particularly minority tribes, in discussions. Conflicts between reserve authorities and local communities have been reduced and indigenous people mobilized in designing and implementing the goals of conservation efforts. These activities urgently need expanding in the border regions.

INDOCHINA SUB-REGIONAL BIODIVERSITY FORUM

A major force in promoting collaborative trans-boundary conservation activities between Lao PDR, Cambodia and Vietnam has been the Indochina Sub-Region Trans-boundary Forum.

Since July 1995, government officials in Cambodia, Lao PDR, Thailand, and Vietnam have been working together on biodiversity conservation and natural resource management along their shared borders under the auspices of the Sub-Regional Biodiversity Forum. The Forum is funded by the United Nations Development Programme (UNDP), executed by the United Nations Office of Project Services (UNOPS), and implemented by the World Wide Fund for Nature (WWF) through its Indochina Programme Office.

Some of the challenges to the project are: the lack of on-the-ground biodiversity conservation and natural resource management information, due to the remote and generally mountainous nature of border areas; trans-boundary areas are politically sensitive, therefore activities that occur are subject to less scrutiny by central authorities, laws are difficult to implement and enforce, and competing initiatives are often justified in the name of "national security"; finally, border area resident communities have different livelihood practices, relationships with the resource base and quality of life when measured by conventional standards. The latter can often cause conflicts, impede cooperation, and contribute to a sense of mutual distrust with government.

PROJECT ACHIEVEMENTS

Policy makers and field-level managers, primarily from Cambodia, Lao PDR, and Vietnam, have an improved understanding of conservation and natural resource management issues. They also have a greater appreciation of the relationship between these local issues and sub-regional economic development processes.

High priority sites for biodiversity conservation along national borders have been identified, basic biological/ecological studies and GIS mapping has been undertaken in certain sites.

Indochina conservation professionals have participated in a series of training courses, study tours and workshops aimed at improving overall conservation and natural resource management capacity.

Five Integrated Conservation Development/land use planning field Projects (ICDPs) have been developed in high priority border sites and proposals submitted to bi-lateral donors.²

An improved understanding of cross-border trade in wildlife has been developed and shared broadly with policy-makers and field-level practitioners.³



Chad Oval/WWF Indochina

Logging truck coming from Hin Namno NBCA, Lao PDR into Phong Nha - Ke Bang Nature Reserve, Vietnam

Box 7

THREATS TO NATURAL RESOURCES IN INDOCHINA'S TRANS-BOUNDARY ZONES

Unsustainable logging: logging bans in Thailand and China, and tighter forest exploitation controls elsewhere, continue to increase the pressure on forest resources in Cambodia and Lao PDR. This may be exacerbated by the raw timber export ban and excess capacity in the wood products industry in Vietnam.

Commercialization of agriculture: to increase productivity, governments are emphasizing cash cropping, mono-culture and large-scale industrial farming with pesticides. These impact existing agricultural lands and may open up new agricultural lands and damage the environment.

Hydro-electric schemes: after years of isolation and political uncertainty, old plans to develop the sub-region's water resources are being revised and up-dated. Despite the economic downturn in 1997, energy consumption will continue to increase in the long-term. Countries such as Thailand, and to a lesser extent Vietnam, will remain net importers of electricity. Cambodia and Lao PDR, with excess capacity, high potential sites and a need for hard currency, have attracted the attention of both international developers and lending institutions, putting further pressure on forest areas.

Road construction: governments are building roads to improve access to remote communities and open new trade routes. While new roads improve access to markets and facilitate the provision of social services, they usually accelerate the exploitation of natural resources. The accompanying infrastructure development furthers this trend. Uncoordinated planning makes it difficult to balance competing priorities.

Marginalised swidden agricultural systems: increasing population pressures, diminishing land availability and government drives to stabilize shifting cultivation have forced fallow periods to become shorter, consequently stunting forest regeneration. This decreases soil fertility, alters cropping patterns, and changes Non-Timber Forest Products (NTFP) collection practices. This is a cyclical pattern that marginalises upland communities and can accelerate forest degradation and over-use of forest resources.

Trade in wildlife products, timber and NTFPs: increased market demand, widening income disparities between rural and urban areas, and lack of alternative income-generating opportunities have increased unsustainable hunting practices and illegal trade of forest products and wildlife.

This overall situation is compounded by population pressures: changing political, legal, and administrative systems; gaps in technical capacity at the policy and management levels; and, the trans-boundary nature of many of the major threats.

² Virachey National Park, Cambodia; Hin Nam No National Biodiversity Conservation Area (NBCA), and Attapeu Province, Lao PDR; Phong Nha/Ke Bang Nature Reserve and Yok Don National Park, Vietnam

³ "Borderline" and "Vanishing Point" assessments of cross-border trade between Lao and Vietnam were conducted in 1998.

PRIORITY FACTORS FOR THE FUTURE

The Indochina Sub-region Biodiversity Forum recommends a number of actions for the future:

Promoting awareness, among both community members and government officials, of the importance of biodiversity conservation and the laws, policies and regulations that currently exist.

Stabilizing the livelihood practices, and improving the standard of living of communities, the majority of whom are ethnic minorities living in the border areas.

Actively implementing and enforcing existing laws, policies and regulations regarding logging, hunting and trade in timber, wildlife and non-timber forest products.

Strengthening skills of forestry officials and personnel from other government agencies in participatory approaches to protected area and buffer-zone management.

Producing and using local language field guides, manuals and other training tools that will help officials to collect, use and share information more efficiently

Creating provincial-level working groups to address biodiversity and natural resource management issues and including these topics in existing meeting structures across national borders.

Keeping central government officials informed of the local situation regarding resource management and encouraging them to create new laws, policies, and regulations that are similar to those on the opposite side of the national boundaries.

"Natural reserves and other protected areas are an important short-term step. Conservation efforts should be planned at the scale of the regional landscape. Small reserves will lose their distinctive species if they are surrounded by a hostile landscape." (Folke et al, 1996)

Continuing biological, ecological, and resource use surveys in border areas and ensuring that the results are shared with officials in neighboring countries.

Promoting consistent land-use practices on adjacent sides of a national boundary.

Using international treaties and conventions, such as CITES and World Heritage, to promote conservation goals.

The Indochina Sub-region Biodiversity Forum is currently being evaluated to provide valuable information for incorporation into the design of a follow-up phase of implementation, planned to commence in the year 2001.



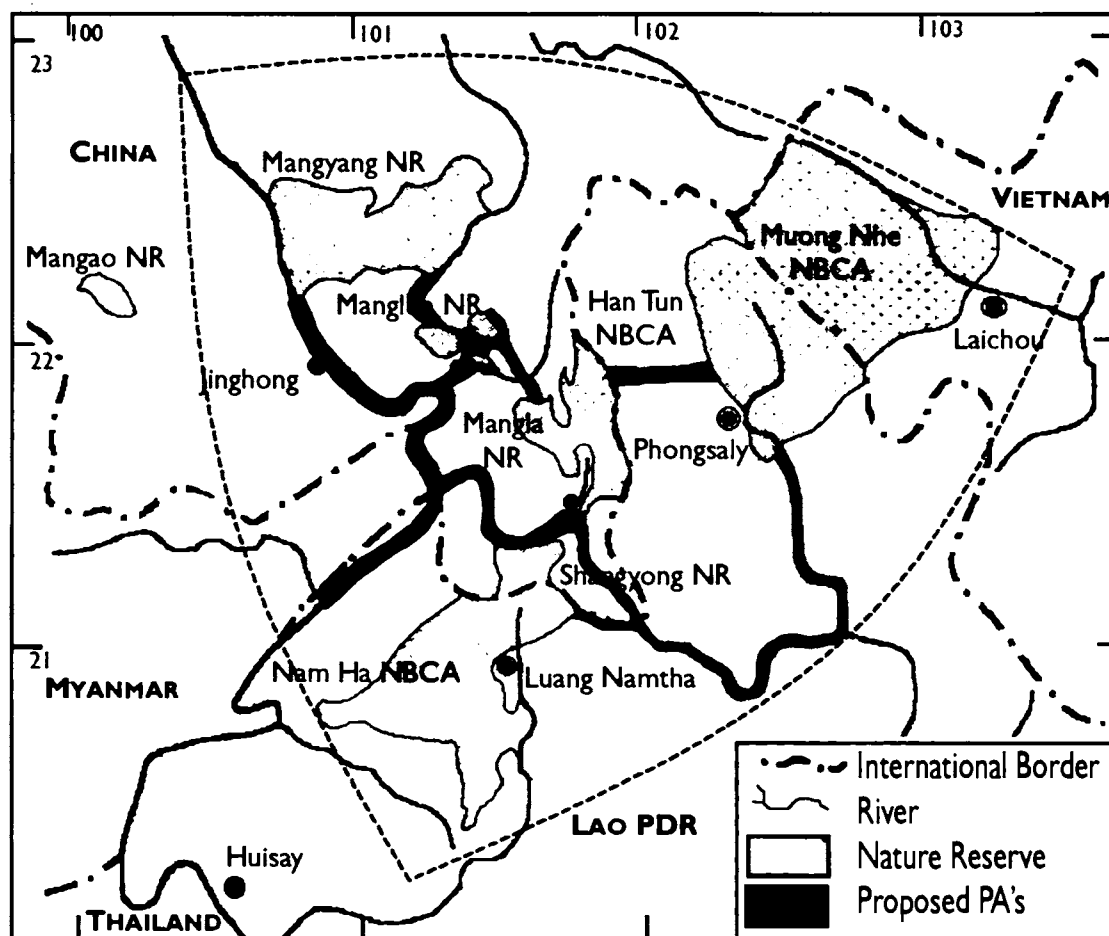
Extension activities in Ban Bua Ma - Nakai-Nam Theun NBCA, Lao PDR

TRANS-BOUNDARY CO-OPERATION BETWEEN LAO PDR AND CHINA

Until recently, bilateral collaboration between Lao PDR and China has focused mainly on food security and cash income generation. However, biodiversity management needs more attention for two main reasons: first, the border area has special ecological characteristics representing the transition from tropical to sub-tropical zones; and second, there are several severe threats.

However, some successful trans-boundary initiatives have already been established, notably between Lao PDR and Xishuangbanna Tropical Garden PA, China. Initiatives include cross-border farmer to farmer training and communication; the development of a GIS database for biodiversity and land-use; and monitoring of the destructive trans-boundary trade in forest products and wildlife. One hundred and fifty different species of wild plants and animals are traded over the Lao PDR-China border, of which 100 are illegal species, bringing extremely high annual revenues.

THE TARGET AREA AND PROPOSED NEW PROTECTED AREAS IN THE GIGANTIC GREEN-TRIANGLE PLAN



"The Gigantic Green Triangle Plan has been proposed as a regional strategic sustainable biodiversity management plan incorporating several protected areas of China and her neighbours." (Jin Chen)

For further reading, see appendices, Volume II, Session 4

Guidelines for Effective Management of Trans Boundary Parks and Reserves

Jim Thorsell

Elements that characterize effective trans-border cooperation

Lawrence Hamilton *et al.*

PROGRESS TOWARDS COLLABORATIVE MANAGEMENT OF PROTECTED AREA LANDSCAPES

SESSION 5



Jim Jarvie/IUCN

Collaborative management meeting, Cambodia

SESSION 5

PROGRESS TOWARDS COLLABORATIVE MANAGEMENT OF PROTECTED AREA LANDSCAPES

CO-CHAIRS: WIDODO RAMONO AND KRISHNA OLI

The session was opened by Kathy MacKinnon, who presented a summary of the critical review of the Indonesian experience with IDCs. As the global testing ground for IDCs, the lessons learned from Indonesia provide valuable lessons for the remainder of the region and, indeed, the world. Seven of the remaining eight speakers presented case studies of collaborative management in different parts of Southeast Asia. Three diverse studies in Indonesia were highlighted, including examples in Sumatra and Irian Jaya. One case in Sarawak, Malaysia, was highlighted, as well as three in the Philippines, with particular emphasis on IDC efforts within the context of the National Integrated Protected Area System (NIPAS). The session was closed with a discussion of efforts in the Lao PDR to establish a framework of land use planning as a foundation for community participation in protected areas.

"No matter how isolated a conservation area may be in [SE Asia], it is almost guaranteed that there is a local population residing within it. The communities' development is often seen as a conflict with the interests of conservation, making management extremely difficult. It is important to remember that often the communities have resided in the conservation area long before the area was designated. Therefore the community has a prior right to exist within the conservation area and effective management must consider the interests of all involved." (Ridwan, 1999).

Collaborative management in protected areas continues to be the dominant issue in conservation dialogue, especially in SE Asia. In fact, there may be no other region where this issue is more important, due to the high-density of population, high biodiversity values, and traditional tenure systems in this region. Conservation has been a part of traditional culture throughout history, especially in SE Asia. In many ethnic communities, these conservation beliefs are still evident in ritual, folktale and the existence of spirit forest and non-hunting areas. However, time has seen other parts of the world develop into more industrialized political and economic systems, where the relationship between humans and nature has been greatly affected. Recently land use has become an arena of constant change and exploitation of natural resources on grand scales. As a result, many local people have become alienated from their land or have not had their traditional rights to tenure, access and use of these areas recognized by government. Land and valuable natural resources has shifted from the community system to control by the State or private concessions without the input of local people or benefit to them.

"For a term that has probably been used more than any other over the past decade by protected area practitioners, it is difficult to find a single definition for collaborative management that would be accepted by everyone or applicable to protected area management in different countries." (Sigaty, 1999).

Collaborative Management (Co-management, joint management, and participatory management) is a process where some or all of the stakeholders in a protected area are involved in some way in the management process. Although the depth of involvement into the decision making process varies from country to country, it is the partnership between the people and other stakeholders that is the key element in collaborative management.



Sa Pa Community Based Tourism Planning Workshop

As a response to degradation of the natural resources, a conservation theory was born out of western developed countries in order to preserve large tracts of land from the insatiable consumption of its own society. Since the indigenous people had previously been removed from many of these areas, this conservation ethic did not aim to protect nature for the benefit of the local people, but for the inherent benefit of nature itself and recognised global values. In fact, if anything, the conservation movement

"Only when communities believe that the threats to their occupation of the land have ceased and they have stopped being the enemy from which the park needs protection will they start to become collaborators and partners in conservation." (Luna, 1999).

was moving away from human needs, evident in the deep ecology or earth first movements. Over the past few decades, however, the international conservation movement has learned lessons of the reality of protected area management that can be applied in SE Asia. This is particularly true in Asia, S. America and Africa, where local people for centuries have claimed rights and recognised values from these areas beyond aesthetics or preservation, but for daily subsistence.

"People are unlikely to support the PA if they feel they have lost some of their rights over the land with little visible return. The best way to get local peoples' support is to enlist their help in managing the area with links to benefits from the area." (Braken-Tyson, 1999).

The inclusion of the needs of local people in PA management and the consideration of the economic benefits to local people and society as a whole from conservation of the area is central to these lessons. These factors are now essential elements in PA projects in SE Asia and the main ingredient of ICDP programs. Some would say that these projects that have turned conservation on its head, with focus on economic issues of local people and natural resources rather than conservation of biodiversity. However, in SE Asia it is difficult to separate the two--they have always been inextricably linked. The message should be clearly accepted that collaborative management is an essential element in any protected area project in Southeast Asia. In many ways, conservation of the natural resource base from external and internal pressures will only be achieved by addressing the rights of local people for tenure, livelihoods and input into the management process.

"Management policies must be the result of mutual agreement and in their implementation show a positive synergy, which has accommodated various interests and needs of the community especially relating to the increase in welfare and conservation interests." (Pachia, 1999).

The true notion of collaborative management would imply that various stakeholders play a role in the actual decisions and implementation of protected area management. However, in reality, most of the local people involved in collaborative management still do not have any power, but are just passive participants in activities approved by the established government to gather input or distribute minor benefits. Certain projects have been more innovative in approaches to secure land tenure, access rights, and provide management concessions and develop of local regulations, monitoring and enforcement.

"Village women should be involved in all stages of the PA management process as they have much to contribute to forest and land resources management. Facilitation of this requires the involvement of female staff." (Savathvong, 1999).



Woman with children in Pu Mat National Park, Vietnam

The government remains the premier management body for the hundreds of PAs in Southeast Asia. As the papers in this session show, this management scheme is changing. Over the past few years, the full spectrum of collaborative and participatory management tools have been tested across the region. The papers in this session aim at addressing collaborative management in the SE Asian context and provide lessons and recommendations from projects in Indonesia, Philippines, Sarawak and Lao PDR based on the implementation in the unique context of each country.

Although every country in the region has experimented and practiced some form of collaborative management, there is no clear model or process that everyone would agree fits each country. Perhaps it is due to the distinct political, socio-economic and cultural differences in each country and the need to tailor management to these circumstances. However, there still should be some common themes and lessons that everyone can share, learn from and establish in their own setting - a sort of menu for collaborative management techniques.

"The goal of collaborative management is to achieve conservation of the biodiversity and resources whilst addressing the subsistence needs of the local people and their right to participate in the management process yet in the end, remembering that collaborative management is only one of the strategies which can contribute to effective conservation of biodiversity within protected areas." (Arton, 1999).



Harvesting of timber in Nakai-Nam Theun NBCA

Box 1

LESSONS FROM INDONESIA

Too often PA projects only involve stakeholders in the later stages of PA management. Any involvement of local people in project development is limited to mere consultation rather than active involvement and input. Local people are often intimidated by the skills, access and language required to interact with externally managed and funded activities. Finally, the lack of time and resources permitted for project development inhibits the full participation of stakeholders at the local level.



Peter Mous

Komodo National Park, Indonesia

Challenges facing PAs and ICDP projects:

- Weak linkages between conservation and development activities;
- Unsustainable resource requirements and illegal activities;
- Most threats appear to come from logging, road construction and illegal activities, not local people;
- Lack of capacity in park management and inadequate law enforcement;
- Lack of conservation awareness and public support; and
- ICDP sites are "too small and funding cycles are too short."

Most international development agencies and SE Asian governments have stated that poverty alleviation is their top priority. The connection to PA management is evident since overpopulation and subsequent reliance on natural resources has been recognised by most countries as major threats to protected areas in the region. PA managers in SE Asia must recognise more than ever the need to improve the process of collaborative management in each PA. More than merely providing an economic benefit to villages within the park, the process should integrate the knowledge and needs of the community into the management plan. The result of collaborative management should be to make local people major agents of change rather than just recipients of aid. The goal in the end is to achieve conservation of the biodiversity and resources whilst addressing the subsistence needs of the local people and their right to participate in the management process.

The opening speaker of the session, Kathy MacKinnon, presented a summary of World Bank/Government of Indonesia findings from a survey of 21 ICDP's in Indonesia (the 21 sites were the priority sites listed in the Indonesia Biodiversity Action Plan). Over the past decade, ICDPs have become Indonesia's main approach to biodiversity conservation. The study found that ICDP plans are often aimed at the wrong target since direct threats from local communities ranked well behind road constructions, mining, logging concessions, and sponsored immigration. Other problems weaken ICDPs and are compounded by a general lack of conservation awareness or support for nature conservation and PAs throughout Indonesian government and society.

The study revealed that often conservation was an incidental benefit, rather than a priority, with too much emphasis on income generation activities. Perhaps the best outcome of the ICDP's was the ability to test various models. Despite the multiple approaches used to improve livelihoods and biodiversity conservation, it was difficult to offset the challenges, which face PA management, many of which are not related to the economic status of the local community. After presenting a summary of new objectives, Ms. Mackinnon summed up with World Bank plans to address the challenges. These included testing new ideas on the role of privatization in PAs, establishing long term funding mechanisms and creating links to ecosystem services in ICDP activities.

Kathryn Monk presented the case of the establishment of a large scale ICDP in the Leuser Ecosystem, which was established under a presidential decree in 1995 to be managed by a local a NGO, the Leuser International Foundation (LIF), rather than the government. Since LIF did not have sufficient technical expertise and conditions for effective conservation, the Gol and EU jointly

funded the Leuser Development Program (LDP) for 7 years. This is truly a pioneer step in taking up a new mode of PA management in SE Asia. The goal was to overcome deficiencies in government management, namely lack of funding, commitment, legal enforcement and inability to involve local people in management. The leaders of Aceh Province actually lobbied for the establishment of this innovative management model for the Leuser Ecosystem.

The LMU has taken a realistic path by embracing as many stakeholders as possible from government to private sectors, creating awareness, providing training, and attracting them more and more into the decision processes as their skills develop. Collaboration principles have been developed gradually through the integrated participation of all stakeholders within the program. Ms. Monk closed by stating that "with increasing discussion, there has been less conflict and more contributions coming from all quarters. It is obvious that there is not only one single option here, and it is necessary to develop a system that can evolve with the increasing sophistication of all stakeholders involved and hence their increasingly direct collaboration in conservation management."

Maraden Purba presented a case study of collaborative management activities at Wasur National Park in Irian Jaya, Indonesia between the Government of Indonesia and the nearly 3,000 people from tribes who pre-date the designation as a protected area. History has management in this area must accommodate the interests of local communities who inhabit the park or live in its vicinity, especially since their traditional knowledge is vital to the survival of the PA and the community. For example, traditional burning has been turned into an instrument to prevent uncontrolled fires.

A workshop was held in February 1999 with the involvement of several related government authorities, foundations, private institutions, institutions of the indigenous people and community leaders. It drew up a 25 year management plan and recommended that:

- Traditional skills and cultural values should be used to protect the values of conserving flora fauna and their ecosystems;
- The main totems and traditions, agreed upon by various tribes in the region, should be adopted as part of the rules of management of Wasur NP;
- Existing traditional rules need to be strengthened, especially on traditional hunting practices;
- Community institutions must be involved in planning, implementation, verifying results, and developing guidelines, to guarantee that their interests are given sufficient attention; and
- The existence of the Indigenous People Institution is considered one of the most important factors in the management structure.

Oswald Tisen-Braken discussed the recent passage of the Wildlife Ordinance in Sarawak which included the involvement of local communities and has secured their access and use rights for subsistence hunting within protected areas. A Wildlife Protection Ordinance passed in 1990 in Peninsular Malaysia led to the training of thousands of villagers, who live within or adjacent to protected areas, to be honorary park rangers. Tisen-Braken stated that collaborative management is one tool to use to work with the local people in reduction of wildlife trade and consumption and for protection of key habitat, however, collaborative management in Sarawak will not be successful unless it is joined by the following:

- Education and awareness training of staff and local people;
- Establishment of a regular monitoring program with local involvement;
- Increase in PA size to address the need for shrinking wildlife habitat and resources for local people; and
- Control of development (e.g. roads, logging, plantations) within and near protected areas.

Ipat Luna's stimulating presentation examined community-based management in the Philippines in a historical and legal context. She confronted the idea people have become numb due to overuse to the terms community management and participatory decision making, evident in the continual disparity in access and use of natural resources in the Philippines. Outlining the laws such as the Indigenous People's Act and the NIPAS (1992), she analyzed the meaning and impact of each legislation on the ground using five protected areas to clearly illustrate important lessons for all those involved in PA management. More than anything else, the accounts are proof dispelling the myths that outsiders are the best proponents for sustainable and appropriate PA management systems.

Also from the Philippines, Esperanza Santos and Salve Navardez each explained how the NIPAS Act and the conservation of Priority Protected Areas project (CPPAP) have ensured that PA management has been improved through establishment of local Management Boards through the cooperation of local people, government and organizations. CPPAP is an NGO driven, 7-year, \$20 million project to facilitate implementation of community management models within 10 priority PA sites in the Philippines. Despite obstacles, key early successes have been achieved in many areas including the

recognition of local land tenure, the reduction of some illegal activities and integration of community participation in site management and decision making.



UNDP - T Renavand Explorer-UNDP Laos

Mountain Rice planted after slash and burn techniques used to clear the land in Nam Et NBCA.

The final presentation in this session by T. Leuangkhama covered the use of land use planning and allocation in protected areas within Lao PDR to further collaborative management and the livelihoods of local people residing within the 1,100 villages in the 20 PAs throughout the country. The goal is that participatory management should create a framework for an exchange of rights and obligations between government and local people, beginning with recognition of villagers' tenure and use rights in the boundary of PAs in Lao PDR.

The government aims to devolve management of PAs to the local level, integrate village land use information into the planning process and to establish a participatory approach. In furtherance of the first two steps, the government began land use planning and allocation in 1994. In an effort not to rush the process before the system is fully devised, the current program has been devising uniform guidelines to implement in each province and district and will hopefully be passed into law next year. Two recommendations from the program are to attempt to perform the land use process in a cluster of neighbouring villages and to delay formal allocation of land to households until the process has been completed. Such allocation may only occur on degraded land, whereas the remainder of the land will be managed pursuant to a village use agreement with the District Forestry Office.

LESSONS FROM THE PHILIPPINES

It has been recognised in the Philippines that community participation is an essential element in managing protected areas. However, the National Integrated Protected Area System (NIPAS), under legislation adopted in 1992, initially took a top down approach. For example, PA sites have been declared with little or no community consultation and communities have often been left unaware that they reside within in a protected area. Confusion and even resistance has occurred due to misinformation. For the system to improve, the best recourse is to implement intensive community education and information dissemination.

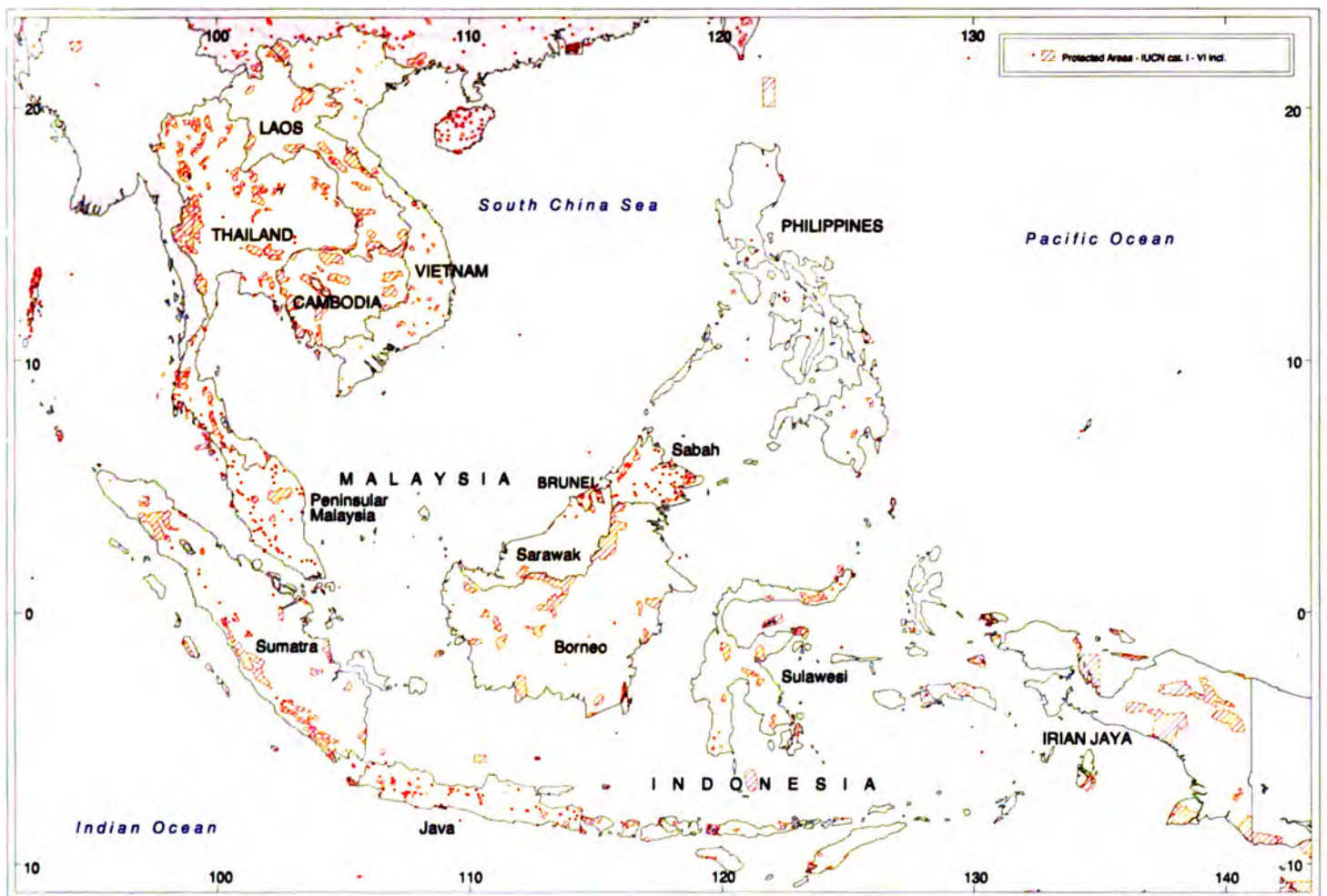
Patricia Regis



Puerto-Princesa Subterranean River National Park entrance

SE ASIA REGIONAL ACTION PLAN

SESSION 6



Southeast Asia regional map showing Protected Areas

SESSION 6

SE ASIA REGIONAL ACTION PLAN

Following the First WCPA SE Asia Regional Forum, held in 1996, the WCPA Vice Chair, Effendy Sumardja, has overseen the preparation of a draft Action Plan for protected area management in this region. The WCPA network is organized around 16 regions, many of which develop regional action plans. These are designed to implement the Global Action Plan, developed at the Fourth World Parks Congress in 1992. Each region in the WCPA network is responsible for preparing an Action Plan to bridge to more specific regional and national priorities, yet such a Plan for SE Asia has never been written. This is partly due to the fact that SE Asia was joined with the South Asia WCPA network until 1994, but also because this is only the second time that WCPA members in SE Asia have had the opportunity to meet to discuss these issues.

THE CARACAS ACTION PLAN (1992) AND WCPA STRATEGIC PLAN (1995)

In 1992, Caracas, Venezuela, hosted the Fourth World Parks Congress, where over 1,800 PA experts from 13 countries met and conducted over 150 workshops. The resolutions adopted at this meeting became the Caracas Action Plan in an attempt to implement these strategies in regional and national systems for protected areas. The objectives of the Caracas Action Plan are:

- **Integration:** to integrate PAs into larger landscape planning frameworks;
 - **Support:** to expand support for PAs;
 - **Management:** to strengthen the capacity to manage PAs;
 - **International co-operation:** to expand international cooperation in the financing, development, and management of PAs.
- In November, 1995, the WCPA network adopted a Strategic Plan to identify the role for the WCPA and the activities to facilitate preparation of Regional Action Plans. The functions of the Regional Action Plans are the following:
- Bridge between the global Caracas Action Plan and national level action;
 - Instigate regional level action and national actions which implement regional initiatives;
 - Provide a framework to secure funding for PAs from sources outside national governments;
 - Strengthen regional PA institutions;
 - Develop IUCN's PA programme in the regions.

The Vice Chairs goals for the Action Plan were the following:

- The goal is to complete a final WCPA SE Asia Regional Action Plan by October, 2000 to present at the IUCN World Conservation Congress in Amman, Jordan;
- The Action Plan should also be presented at the Third WCPA SE Regional Forum proposed to be held in the Philippines or Vietnam in early 2002 and at the Fifth World Parks Congress to be held later that year in Durban, South Africa;
- The Action Plan should include country driven recommendations for each of the five main subject headings in order that the document will be more applicable for each country in planning their own national PA program;
- Recommendations should focus on actions that are viable and realistic for the specific countries in SE Asia and not only offering the most optimum solutions;
- The Action Plan should focus on a "real operational program" and not merely be a "paper plan";
- There should be a small group of people (Steering Committee, Clive Marsh, Kathy McKinnon, Sunyaro, Angelita Meniado and others) who can coordinate work on the Action Plan;
- Since IUCN is the WCPA focal point, the IUCN-Lao Country Office should be responsible for finalizing and publishing the final Action Plan with funding from the IUCN Secretariat, WCPA or other donor funds;
- Completion and implementation of the Action Plan should coordinate with the ASEAN Regional Biodiversity Centre in the Philippines and the ASEAN Working Group on Nature Conservation who may be working on a protected area strategy plan for 2001; and
- Existing institutions and networks should be utilized to ensure full implementation of the Action Plan.

At this Forum, the Vice Chair gave each participant a draft Action Plan in order to submit comments for the final edition. Session 6 and a Working Group were also dedicated for this purpose. Kathy MacKinnon, Biodiversity Program Officer for the World Bank, chaired this session and guided an open discussion on the draft Regional Action Plan. Ms. MacKinnon began with an overview of the recommendations stated in the draft Action Plan followed by examples from specific countries that have conducted activities since 1996 related to the recommendations. Further work needs to be completed on the Action Plan before it can be finalized and presented at such forums as the IUCN Global Meeting to be held in Jordan in October, 2000 and the World Parks Congress to be held in South Africa in 2002.

The five objectives outlined in the current draft of the SE Asia Regional Action Plan are:

- To more effectively establish and manage Terrestrial Protected Areas;
- To more effectively establish and manage Marine Protected Areas;
- To strengthen the capacity of protected area managers and institutions in the region and to establish linkages with key sectors;
- To increase awareness of the value of protected areas, at all levels within the region;
- To build a stronger WCPA network within the region, including links between WCPA and regional and international organizations.



Vietnamese coastline

WWF Indochina

THE ECONOMICS OF PROTECTED AREAS AND THE ROLE OF ECOTOURISM IN THEIR MANAGEMENT

SESSION 7



Annalisa Koeman

Ecotourism training for PA staff, Ho Ba Be, Vietnam

SESSION 7

THE ECONOMICS OF PROTECTED AREAS AND THE ROLE OF ECOTOURISM IN THEIR MANAGEMENT

"Well planned and regulated tourism has the potential to be more than just a benign use but can actually contribute to the achievement of conservation objectives."
(Hitchcock, 1999)

This session was chaired by Peter Hitchcock, protected area and World Heritage consultant and prior Director of the Wet Tropics in Queensland, and Angelita Meniado, Chief of the Biodiversity Management Division of the Department of Environment and Natural Resources of the Philippines. The session consisted of eight presentations, including a keynote on the session topic by Peter Hitchcock, who opened the session with a provocative overview and discussion about broadening the term economics to address non-financial benefits in PAs. Furthermore, he discussed the process of analysing the feasibility of tourism activities in areas where conservation is the top priority. Mr. Hitchcock concluded by providing a few examples of the role of tourism in PAs in SE Asia. Three following speakers gave presentations analysing the relationship between tourism and protected areas in Vietnam, Sabah, Brunei Darussalam and the East Asian Growth Area. Finally, one presentation from Indonesia and one from the Philippines offered specific case studies on conservation trust funds, one based on private sector development projects adjacent to Kutai NP in Kalimantan and the other based on an NGO managed fund that focuses on collaborative management.

In the modern day world of globalisation, economics has become the dominant force in nearly every aspect of life in nearly every corner of the world. Protected area issues are no exception. Whether the debate is about economic benefits of protected areas or mechanisms to fund PA management, economics continues to be at the centre of the PA dialogue. In fact, the relationship between economics and PAs has been a main topic at WCPA events, including the 1992 World Parks Congress, the 1996 First SE Asia WCPA Forum and this current Regional Forum in Pakse.

ECONOMIC VALUES OF PROTECTED AREAS

"An economic analysis of blast fishing on coral reefs in Indonesia showed that losses to Indonesian society, as a result of coral reef destruction, are substantial (Pet-Soede et al., 1999). The analysis showed a net loss, in terms of net present value, of more than US\$300,000 per km² of coral reef in high value areas and more than US\$30,000 in low value areas." (Djohani, 1999)

"Wildlife is very important as a resource for rural people in Sarawak because it provides wild meat. An average of 29% of all meals eaten by rural people throughout the interior contain wild meat, and this can be almost 70% in remote parts of the Highlands (Bennett et al., 1999). It is estimated that to replace wild meat with domestic meat would cost nearly US\$ 50 million per year (Wildlife Conservation Society and Sarawak Forest Department, 1996)." (Braken-Tisen, 1999)



Tom Evans/WCS

Inornate Squirrel, Ban Lak Sao, early 1994. Many vegetable traders sell small animals as the opportunity arises.



Bryan Stuart/WCS

King Cobra *Ophiophagus hannah* killed for food in Ban Kadan, Dong Khanhthung PNBCA, July 1998. This species is usually harvested for sale to the Vietnamese and Chinese consumption trade.

Economics continue to be a major concern for PA managers today, especially in SE Asia where many national and local government budgets for staff and management are limited or do not exist at all. In fact, these issues may even be more relevant in SE Asia due to the pressure for rapid economic growth and poverty alleviation for thousands of local people living within or near protected areas. However, even with this in mind, PA managers must be reminded that conservation is the primary goal of PAs. How much should PA managers compromise conservation objectives to meet the economic needs local communities and other sectors demands for rapid development? Eco-Tourism may provide increased revenue and awareness, but each PA manager must remember that these are secondary benefits after conservation. This session reviewed the issue of economics in relation to PA's in SE Asia, especially in recent times of rapid change.

"Ecotourism should not become merely mass tourism in a protected area!" (Koeman, 1999).

During the session, a few examples were given from outside SE Asia where tourism revenues have become a means for government to enable PAs to pay for themselves. For example, in Chitwan NP in Nepal, wildlife viewing has generated enough income to fund the park budget and other costs. Also, non-timber forest products from a Peruvian rainforest produced a vastly greater economic return compared with logging - \$6,330 per hectare compared with \$490 from logging. Finally, the Galapagos Island NP, in Ecuador, earns an estimated \$4 million per year in tourism revenues, however, less than \$1 million remains to manage the park. This highlights the need for PA managers to find ways to keep the money they earn rather than losing revenue to tour operators and central government budgets.

Tourism is the most rapidly expanding economical activity in the world whose impact has been felt in SE Asia even during the recent economic crash. Tourist visitation numbers vary throughout the region as do the types of activities, but it remains a tremendous source of revenue. International tourism plays an important role in many locations, but even domestic tourism has grown in relation to improved access, transport and the development of a middle class in some countries. For example, over 50% of visitors are domestic to many PAs in Vietnam, Thailand, and Indonesia. Many of the papers in this session focus on the role of tourism in PAs of various countries, but other speakers discussed other sources of funding, including trust funds and private sector partnerships.

Tourism has become the largest industry of the world economy, with over 625 million people travelling internationally every year, accounting for nearly 11 percent of the global GDP. Despite the Asian economic crisis, tourism grew worldwide and within SE Asia, especially nature-based tourism, which now comprises over 20 percent of the market. As an example, tourism has become the main source of revenue for the Lao PDR at \$90 million per year.



Ian Craig/UCN

The first pilot group of ecotourists on a trip to Phou Xang He NBCA, Lao PDR

ECOTOURISM

There continues to be debate surrounding the definition of ecotourism. The IUCN definition is:

"Environmentally responsible travel and visitation to relatively undisturbed natural areas, in order to enjoy and appreciate nature (including any accompanying cultural features - both past and present), that promotes conservation, has low visitor impact and provides for beneficially active socio-economic involvement of local populations". (IUCN 1996).

The Malaysian National Ecotourism Plan (1997), which has adopted the IUCN definition, adds the following: "Ecotourism prevents whatever damage it can, repairs whatever damage is unavoidable, and stresses the benefits for people on the spot".

How to minimise the negative impacts of tourism:

Restrict access by issuance of a permit or quota system, registering tour operators, creating a zoning system and/or limiting the amount of accommodation facilities;
Draft, post and publicize park regulations;
Conduct environmental awareness programs, tours and information displays and centers;
Identify and monitor the impacts of tourism on the values of the PA;
Train tour operators, park staff and local people; and
Plan well and often!

Peter Eaton discussed the East Asian Growth Area (EAGA) covers 154 million ha including 165 PAs within portions of the Philippines, Brunei, Sabah, Sarawak and Kalimantan. The objective of the EAGA is to achieve economic growth through increased investment, trade and tourism. Peter Eaton points out that the EAGA may bring a surplus of revenue to PAs in the region even though many of the sectors involved base their profit on resource extraction rather than conservation (e.g. oil, logging, etc.). Since the number of tourists in the EAGA is expected to triple over the next ten years, the question arises if the tourist sector can be an instrument to improve the relationship between economic growth and biodiversity conservation in PAs? The EAGA has established a Working Group on Environmental Protection and Management, but will there be enough incentive for private oil, timber and hotel companies to monitor activities and respect the goals of PA management in the region? In this session, Peter Eaton explains how these goals are being achieved in three case studies Ulu Temburong NP, St. Paul's Subterranean River NP and Bunaken Marine NP (see Volume II, session 5).

Patricia Regis, from Sabah Parks Tourism Bureau, pointed out that Tourism in Sabah will reach 512,000 visitors this year generating over \$200 million. The increase in tourism has benefited greatly as the result of the PA network. The Sabah Tourism Master Plan (1996) has identified tourism as a top priority for private sector development as a means to lessen dependence on timber extraction with a special focus on nature based tourism. Even outside of PAs, applications to develop land for tourism has increased and the Forestry Department has established nature centres in forest reserves to attract tourists. In many of the PAs, park management has contracted services to the private sector through a licensing and revenue sharing system. Regis gave examples from case studies from tourism development in Danum Valley, Kinabalu NP and the wetlands of the Kinabatangan and the Ulu Padas, highlighting the strengths of strong legal protection, public awareness, private sector involvement and the availability of quality information.

Nguyen Van Lam and Annalisa Koeman provided an excellent and provocative presentation on the IUCN Sustainable Tourism Project in Vietnam examining the current status of the growth in ecotourism in relationship with PA management. The major points during the paper (see Annex, session 7) address the following trends in tourism in Vietnam:

- Domestic tourism is expanding and is now over 50%;
- An increase in demand for nature based tourism, including in previously remote landscapes;
- Government and private tour operators have a poor understanding of ecotourism principles;
- Planning authorities view large development outside urban areas as ecotourism;
- Local communities continue to be exploited at the hands of the tourism industry; and
- The capacity of PA management and facilities must be increased to handle tourism increases.

This presentation recommended Vietnam government to establish a national ecotourism strategy, environmental education centres, an entrance fee collection system, train tour operators and implement a national awareness raising program targeting the domestic population.

"The Foundation for the Philippine Environment experience shows that national environmental funds can be a distinct mechanism to fund biodiversity conservation in PAs. In recognition of the critical role that communities play in PA management in many Asian countries, NEFs, especially those managed by NGOs as in the Philippines, can also enable local communities to participate meaningfully in the process." (Messina, 1999).

Peter Hitchcock summarised the session with the following comments:

Tourism can benefit the economic growth of PAs, but are not able to solve the financial problems of the buffer zone or broader region surrounding the PA;

Pressure is exerted from governments and private sector for the development of tourism and ecotourism in PAs throughout most of SE Asia;

In some areas, tourism was already present before the establishment of the protected areas making it difficult to impose ecotourism principles and local perceptions;

Case studies show that visitor experiences decrease if there is not effective management;

There are many other mechanisms (private sector, trust funds) available to supplement PA budgets other than tourism (e.g. Friends of Kutai, Philippine Foundation); and

PA managers should realise the following:

A) general understanding of economics and cost benefit analysis;

B) tourism is not confined within the boundaries of the PA and has linkages beyond that may have a positive and negative impact; and

C) Conservation should be the top priority for PA management rather than tourism.



Aerial view of Komodo island

"The Nature Conservancy helped form a team consisting of the Komodo National Park's management, police, army, and fisheries. This team now works together to carry out a routine patrolling program. Since its inception in 1995, blast fishing has declined by more than 80%. Workshops, presentations, and exhibitions throughout the year help build national and provincial government and local support. Target audiences include planners, legislators, fishermen leaders, school teachers and entrepreneurs." (Djodani, 1999)

"Even well planned and regulated tourism is not a guarantee that adequate financial returns will flow direct to management of the protected area. Only the skilled protected area manager will be able to use economic analysis and marketing skills to succeed in ensuring an adequate financial return to sustainably manage the protected area." (Hitchcock, 1999)



The Lodge in the Danum Valley Conservation Area

THE ROLE OF RESEARCH AND MONITORING IN PROTECTED AREA MANAGEMENT

SESSION 8



Patricia Regis

Students doing riverine ecology as part of an environmental course, Danum Valley Conservation Area, Sabah

SESSION 8

THE ROLE OF RESEARCH AND MONITORING IN PROTECTED AREA MANAGEMENT

The session was co-chaired by Dr. Paul Chai of the ITTO Project in Sarawak-West Kalimantan and Dr. Sompoad Srikosomatara of Mahidol University in Bangkok. There were a total of nine speakers in this session. Three speakers discussed the use of or need for appropriate monitoring systems in protected areas, and two speakers discussed research on and the current status of large mammals and other wildlife in Malaysia and the Lao PDR. Ethnobotanical research in Sabah was discussed by one speaker, lessons learned from biodiversity research in Irian Jaya in another, and the participation of an NGO in protected area management in still another. The final speaker presented the plans for the Mekong Wetlands Ecosystem Biodiversity Project.

This session highlighted the importance of biological and social research in the preservation of biodiversity values in a wide range of ecosystems in SE Asia, from the wetlands of the Mekong to the highlands of Irian Jaya. Furthermore, the session emphasised the critical need to engage local stakeholders in research activities and at all other levels of PA management.

NEED FOR RESEARCH AND MONITORING OF ICAD PROJECTS

Since the late 1980s, integrated conservation and development projects have been implemented in the developing world as a method for improving biodiversity conservation in protected areas, while also addressing the socioeconomic needs of local residents. As projects have been implemented, there has been growing appreciation for the complexity of accurately designing them to conserve biodiversity over large landscapes. Analysis of these projects, and their lessons learned, has proven to be difficult since most did not have internal monitoring systems, or were not designed to systematically test if and how specific incentives effected conservation or development. (Johnson, 1999)

NEED FOR RESEARCH TO UNDERSTAND FULL VALUE OF PAS

"Worldwide, about 120 clinically useful prescription drugs are made from 95 species of plants, of which nearly 40% comes from tropical forests. Moreover, possibly as many as 70,000 plant species are used for traditional medicines in various parts of the world. It is possible that the cure for AIDS, cancer, and other diseases could be found in the forests or reefs of Irian Jaya, but much more research is needed." (Supriatna, 1999)

Dr. Supriatna gave a detailed presentation (see Volume II, session 8) on the current threats to biodiversity in Irian Jaya along with the following recommendations to address them:

- Continuance of biological surveys;
- Consultations between scientists and communities;
- Increased enforcement;
- Expansion of the current PA system; and
- Establishment of a Biodiversity Research Station and a Trust Fund for Irian Jaya.

The goal of the Conservation International project in Irian Jaya is to demonstrate that biodiversity can complement local development plans to conserve resources while promoting sustainable economic development.

A theme that runs through this session is the current lack of adequate information on the rapidly declining natural resources of Southeast Asia. As research and monitoring continues-or begins, in many cases-scientists discover that the region is a treasure chest of biodiversity, beyond all expectations even a few years ago. Irian Jaya, for example, has long been too remote and obscure to command much attention from the global community. However, recent research has found that it contains nearly one-half of Indonesia's total bio-diversity, which now appears to be the richest in the world, surpassing Brazil and Colombia. From a biological perspective, Irian Jaya is one of the most important parts of the planet. Yet despite its importance to global diversity, Irian Jaya is one of the least studied areas in Asia, contributing to inadequate understanding of the people, flora and fauna of the province. Even more disturbing is the fact that the very access now possible to rich areas of biodiversity like Irian Jaya and others throughout the region opens the door to potential exploitation as well.

The presenters of this session placed heavy emphasis on the importance of working directly with local communities in gathering of scientific and social data. Furthermore, a significant commitment must be made to build the research and monitoring capability of the people--often government personnel--directly responsible for PA management. Engaging the interest and direct, often hands-on support of the general public for conservation is an area largely ignored in many countries of Southeast Asia.

"A SUCCESS STORY FROM MALAYSIA"

"The Malaysian Nature Society, the first local non-governmental organisation in Malaysia, was established in 1940. It started as a group of expatriate volunteers interested in nature appreciation and exploration and became an organisation with a CEO heading the administration and about 25 full-time staff, both permanent and on a contract basis. The MNS has always been active in nature conservation and is now a member of the IUCN and a Birdlife International partner in Malaysia.

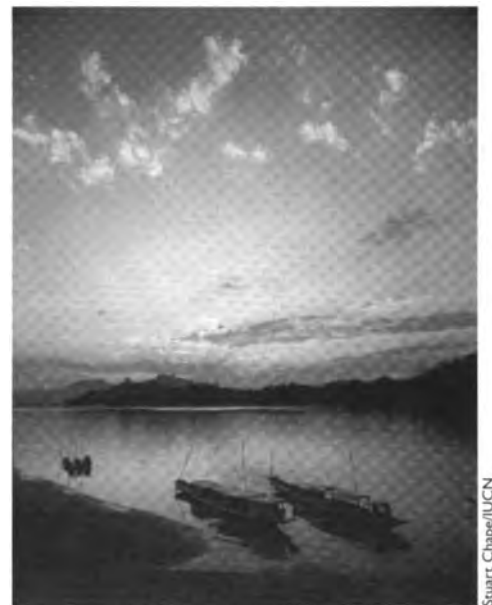
Among its major achievements was the Endau Rompin Scientific Expedition 1985-86, where it brought media coverage and public attention to the last remaining forest of the southernmost part of mainland Asia. With the support of the local people and other Malaysians elsewhere, it has promoted the local state government to declare and gazette Endau Rompin as a national park under its state legislative. The MNS prepared the Development and Management Plan for Endau Rompin National Park, which was adopted by the local state government. The area covers a total of 49,000 ha and adjoins a block of Protection Forest in the adjoining state of Pahang." (Wong, 1999)



Kinabatangan River - Sabah

*"...a recent study carried out by IUCN lists the Mekong River as one of the nine richest watersheds for fish biodiversity globally, with 298 recorded species, including the endemic giant catfish (*Pangasianodon gigas*) and the giant Mekong barb (*Catlocarpio stamensis*) and several species of giant stingray. In fact, more recent estimates raise the total to over 480 fish species." (Friederich, 1999)*

The point was made that while there is an immediate need for a dramatic increase in research and monitoring systems for biodiversity conservation, the results of existing data must be made available and presented clearly to people at the local, national, regional and international levels. Information--particularly concerning rapidly declining conservation values--is a powerful tool that must be in the hands of policy makers, students, scientists, as well as local community members and others as well. For example, Tizard's presentation on large mammals concluded that human-wildlife conflict and illegal trade are the two main threats to large mammals in Indochina which is information that must be included in a regional action plan and provided to decision makers. Then, formal regional priorities and national guidelines should be developed to address these kind of major issues. Tizard further highlighted how action to prevent extinction of large mammals would benefit other species. He further pointed out that Lao PDR had a unique opportunity to protect large mammal species since it was one of the few countries with protected areas expansive enough.



Sunset on the Mekong River. Louang Prabang.

Hans Friederich made the point that monitoring needs to be increased in wetlands, especially since there are few examples of fully protected wetland PAs in the region. A Mekong Wetlands Biodiversity Program has been established and identified pilot sites to improve in-situ conservation, sustainable practices and increase knowledge, information and institutional capacity in the Lower Mekong River Basin.

Sompoad Srikosamatara, from Mahidol University in Bangkok, gave a detailed presentation on monitoring the densities and distributions of large mammals in Huai Kha Khaeng Wildlife Sanctuary and World Heritage Site located in Western Thailand. Besides estimating the populations of Gaur, banteng, sambar and barking deer, wild pig, and elephant, his study concluded that many other factors influence the ability to implement a



Reintroduced elephants in Doi Pha Maung Wildlife Sanctuary, Lampomg Province, Thailand



Tilo Nadler

Gray-shanked Douc Langur - *Pygathrix nemaeus cinereus*

monitoring strategy, namely: the support of the park superintendent, economic situation and funding, and public involvement in management. He concluded that monitoring has been given a lower priority in the past five years, with resources allocated to other activities, and a real monitoring program should be established given this area is crucial to large mammal survival rates and a World Heritage Site.

"A LESSON LEARNED"

In Lao, the Wildlife Conservation Society has implemented a project to establish a conceptual model to be able to assess the effects of ICAD projects since many of the lessons of such projects have been lost due to an inadequate internal monitoring system. In Lao PDR, WCS worked with a multi-cultural team to depict and discuss assumptions about the relationship between conservation goals, problems, and solutions. They recommend that due to remoteness, guardian villages should be established and trained to support limited government staff and that selection of management activities to reduce threats be conducted carefully, considering the capacity and resources of the Unit. The project identified and monitored key species, habitat and threats relating to human use impact on biodiversity with the assumption that more awareness and patrolling, benefits to local people, and improved linkages would lessen the threats to wildlife and habitat. The project successfully used the conceptual model to assess how management activities are contributing to biodiversity conservation.

"The success of the [Phong Nha Nature Reserve 1998 Mammal Survey] project was that the participants had been trained in both knowledge theory and practical skill. They knew also how to prepare for a field survey and how to establish a survey line and how to describe the habitat."
(Nhat, 1999)

In Indonesia, The Nature Conservancy trained local people and staff to monitor dynamite and cyanide bombing within Komodo National Park, a World Heritage Site, resulting in an 80% drop in illegal incidents after the involvement of the foreign assistance and the training program. The program coincided with awareness raising and alternative livelihood activities. TNC noted that strict laws and enforcement by officials are an essential element to such a reduction in illegal activities.

Finally, several points were made regarding the need for increased training and a regional training centre. Some examples of training centres are RECOFTC in Bangkok and the new ASEAN regional biodiversity centre located in the Philippines where the opportunity exists now to suggest training topics and areas of focus before they set their agenda. Proper training needs financial support as it can be costly and requires language training for many participants for it to be successful and implemented in the field. Such training programs could be further divided into categories such as: simple monitoring, legal issues, social and economic factors, tourism, biodiversity, etc. It was mentioned that a travelling training seminar with results posted on the internet could be less costly and reach more people than a stationary training facility in the region.

Preserving Traditional Knowledge in Malaysia

Jamli Nais, Sabah Parks Research and Education Division, offered a presentation on their activities to respond to the disappearance of traditional knowledge of plants among communities around Kinabalu NP. Ethnobotanical research with the Kadazan Dasun people have recorded 9,000 herbarium specimens, set 500 GIS points, contributed vascular plant specimens to prior projects and published a book on names and uses for 82 local plants used for traditional medicine. Phase II of the project aims to create a foundation for additional research and community involvement in ethnobotany, including further publishing of local knowledge and protection of their intellectual property rights.

WORLD HERITAGE SITES

SESSION 9



Mount Kinabalu National Park, Sabah

Stuart Chapel/IUCN

WORLD HERITAGE SITES

BACKGROUND ON THE WORLD HERITAGE CONVENTION

The United Nations Educational, Scientific and Cultural Organisation (UNESCO) adopted the World Heritage Convention (WHC) in 1972, bringing it into force in 1975. It is the only international convention that aims to protect both cultural and natural heritage. In 1978, the World Heritage Committee inscribed the first four natural sites of "outstanding universal value" on the World Heritage List. Currently, 155 countries have ratified the WHC and the list of natural sites has increased to 142.

The international regime under the WHC includes the World Heritage Committee and the World Heritage Fund, which are managed by the UNESCO World Heritage Centre in Paris. The World Heritage Committee, established under Article 8 of the WHC, is comprised, at any one time, of twenty-one state parties to the Convention. Each year, the Committee meets to inscribe new sites, designate sites for the Danger List and authorise grants from the World Heritage Fund for protection, conservation presentation, or rehabilitation of the sites. IUCN acts in an advisory capacity to UNESCO and the World Heritage Committee regarding natural sites.



Puerto Princesa Subterranean National Park. Under the mountain (centre) is the dome of the subterranean river.

PUERTO PRINCESSA SUBTERRANEAN RIVER NATIONAL PARK, PHILIPPINES WAS INSCRIBED ON THE WH LIST IN 1999.

LOCAL GOVERNMENT MANAGEMENT OF A PROTECTED AREA

The transfer of management responsibility of the Puerto Princesa Subterranean River National Park from the DENR to the City Government of Puerto Princesa, in 1992, is a milestone in protected area management. It has the distinction of being the first PA to be devolved and successfully managed by a Local Government Unit (LGU).

PROBLEMS ENCOUNTERED

- Conflicting Government policies on environmental protection.
- Limited technical staff.

FEATURES

- Local communities and NGO's participate in development of management plans and policies.
- Establishment of a Park Trust Fund.
- Completion of a 3 year Management Plan for the Park in 1998.
- Livelihood program, based on tourism and related activities, established in buffer zone communities.

WORLD HERITAGE CONVENTION AND SE ASIA PROTECTED AREAS

It is the ability of the WHC to support and preserve cultural, natural and mixed sites that has given it such a broad appeal. In fact, the WHC has more signatory countries than any other conservation agreement in the world. To date, seven protected areas in SE Asia have been inscribed on the World Heritage List covering nearly 3.6 million ha. An additional four sites were nominated last year. The number of natural sites remains low compared to the multitude of cultural sites which have been inscribed partially due to the number of potential locations, but the low number of natural sites is also indicative of difficulties in meeting the strict criteria and standard for inscription.

TABLE 1: WORLD HERITAGE NATURAL SITES FROM SEASIA (INCLUDING NOMINATIONS)

WORLD HERITAGE SITES IN SE ASIA	COUNTRY	YEAR INSCRIBED	SIZE (HA)
Komodo NP	Indonesia	1991	219,322
Ujung Kulon NP	Indonesia	1988	76,119
Gunung Lorentz NP	Indonesia	1999	2,505,000
Puerto Princessa Subterranean River NP	Philippines	1999	22,202
Tubbataha Reef Marine Park	Philippines	1993	33,200
Ha Long Bay	Vietnam	1994	150,000
Thung Yai – Huai Kha Khaeng WS	Thailand	1991	577,464
Total – 7 current sites			3,583,307
Gunung Mulu NP	Malaysia (Sarawak)	Nominated 1999	52,865
Taman Negara NP	Peninsular Malaysia	Nominated 1999	434,351
Kinabalu NP	Malaysia (Sabah)	Nominated 1999	75,370
Phong Nha Caves NP	Vietnam	Nominated 1999	41,132
Total – 4 nominated sites			603,718
Total – 11 current and nominated sites			4,187,025

In the past, the "universal outstanding value" standard may have restricted the inscription of sites which are not category I and II protected areas or "pristine." In fact, the countries with the most WH natural sites remains Australia and the United States, however, the trend has reversed in recent times. The increase in the number of nominations from developing countries may be due to various factors, including:

- Recognition of the global importance of PAs in the tropics;
- Increased awareness of the benefits of the WHC by governments and NGO's;
- Efforts of UNESCO and partners to sponsor regional workshops and technical assistance to governments, local people and NGO's interested in the WHC;
- More focus on nominating PA's and protected landscapes in areas where the values and threats may both be high. A recent study by Thorsell and Sigaty challenged the perception of the "pristine" requirement by showing that 54% of the existing WH natural sites face threats from development (e.g. logging, mining, dams, oil, etc) and over 250,000 people live within 47 of the natural sites.

TABLE 2: SEASIAN COUNTRIES AND THE WORLD HERITAGE CONVENTION

COUNTRY	YEAR RATIFIED	NOMINATIONS
Brunei Darusallam	Not yet ratified	Not able to nominate natural sites
Cambodia	1991	No natural sites have been nominated
Indonesia	1989	Four natural sites are on the WH List
Lao Pdr	1987	No natural sites have been nominated
Malaysia	1988	Three sites were nominated in 1999
Philippines	1985	Two natural sites are on WH List
Thailand	1987	One natural site is on the WH List
Vietnam	1987	One natural site is on the WH List and one site was nominated in 1999

One basic thesis in a recent paper on the WHC and tropical forest was that the WHC will not make its maximum potential contribution to conservation if it simply awards accolades to pseudo-pristine sites that have achieved exemplary protection status. Its real potential impact lies in being an effective mechanism to help globally significant sites achieve better management. If the greatest challenge is to achieve exemplary management in sites in categories V & VI then such sites should be a target for future listing on the World Heritage Convention.

Benefits of the WHC are numerous. The nomination process itself can often provide the tremendous support for improving management of the PA. Before submitting the application, a government and often an NGO partner must provide proof of legal protection, an official mapped boundary, agreements with local people, surveys of the biodiversity richness and often a management plan. If inscribed on the WH List, the site would then be eligible to emergency funds, technical assistance, monitoring and participation in several workshops and meetings. Also, the status of World Heritage Designation often attracts donor projects and the potential for tourism development, which respects the values for which the site was listed.

One recent example was for the eight-year nomination process of Puerto Princessa Subterranean River NP in the Philippines. The WH Committee had deferred a previous nomination by the Philippine government for this site, but years of hard work by the park staff, NGO's, the local government, the local people and UNESCO, (including a re-nomination workshop in 1998) lead to inscription on the World Heritage List in December, 1999. Positive results due to the re-nomination process include: expansion and demarcation of the Park boundary; clarification of the legal framework, agreements between local government and people; a successful information and awareness campaign and the co-ordination of tourist activities.

CRITERIA FOR THE INCLUSION OF PROPERTIES IN THE WORLD HERITAGE LIST

A natural heritage property which is submitted for inclusion in the World Heritage List will be considered to be of outstanding universal value for the purposes of the Convention when the Committee finds that it **meets one or more of the following criteria:**

- i. be outstanding examples representing major stages of earth's history, including the record of life, significant on-going geological processes in the development of landforms, or significant geomorphic or physiographic features; or
- ii. be outstanding examples representing significant on-going ecological and biological processes in the evolution and development of terrestrial, fresh water, coastal and marine ecosystems and communities of plants and animals; or
- iii. contain superlative natural phenomena or areas of exceptional natural beauty & aesthetic importance; or
- iv. contain the most important and significant natural habitats for in-situ conservation of biological diversity, including those containing threatened species of outstanding universal value.

Another recent example of the impact of a nomination on conservation was the nomination of Gunung Lorentz in Irian Jaya. Both Freeport McNamara (the world's largest gold mine) and Conoco Oil had legal rights to concessions inside Lorentz since they predated the establishment of the National Park. When the companies heard that WWF and the Government were preparing a WH nomination they contacted them for negotiations due to the fear of their investors of bad public relations and conflict with the WH designation. As a result, both companies withdrew their rights to concessions within the boundaries of the site in exchange for defined borders that respected their claims outside the Park. Gunung Lorentz was inscribed on the WH List in December, 1999 at the same time as the WCPA Forum in Pakse.

GUNUNG LORENTZ NATIONAL PARK, INDONESIA (1999)

Inscribed last year on the WH List, Lorentz covers over 2 million ha representing the largest tract of pristine rain forest in Asia and a biotic richness and diversity without compare in Asia. The site covers every ecoregion in Irian Jaya from Carstenz Peak, Asia's highest point, and alpine vegetation, to freshwater swamps and coastal mangroves. Lorentz is home to 10,000 people comprised of 9 ethnic tribal groups, including the Asmat, known world wide for their wood carving. Under a WWF project in the area, the nomination was completed and received the approval of the local village chiefs and the four ministries with interests in the area (Forestry, Welfare & Culture, Industry & Mines and the Army). Further negotiations with Conoco Oil and Freeport McNamara (the world's largest gold mine) secured agreements to redefine the park boundary and release all concessions within the site.

Here follows a summary of other recent activities of The World Heritage Centre in SE Asia:

Discussions with IUCN-Vietnam, the World Bank and the Government of Vietnam about project concepts for strengthening protection of Ha Long Bay NP.

Funding for the adoption of a fire policy and action plan for Huai Kha Khaeng/Thung Yai WS in Thailand.

Co-operation with The Nature Conservancy and the Government of Indonesia in conducting activities and monitoring impacts of illegal dynamite and cyanide fishing in Komodo National Park.

International Meeting on WH and Biodiversity Conservation in Tropical Forests, held in Indonesia in December 1998. Over 70 conservation leaders from the major NGO's and government leaders representing several tropical countries met to plan a detailed strategy of how the WHC can facilitate efforts to protect the vital remaining tropical forest areas. One result of the meeting was discussions with the UN Foundation which resulted in possible support to global biodiversity sites estimated at \$30 million over 3 to 5 years.

This will provide direct assistance to WH natural sites in danger as well as fill critical gaps and promoting multi-sites approach to new nominations, possibly in SE Asia. Interest among experts working with mountain, desert, marine and karst PAs are also considering adopting the "Berastagi Approach" to understanding global overviews and themes. For example, see the paper by Hans Friederich included in this session (Volume II, Session 9) regarding a dialogue on Asian Tropical Karst Biodiversity and the WH Convention.

UJUNG KULON NATIONAL PARK, INDONESIA (1991)

This national park covers 120,651 ha of the extreme south-west tip of Java and includes the Ujung Kulon peninsula, several offshore islands and the natural reserve of Krakatoa. In addition to its natural beauty and one of the world's best examples of recent island volcanism and tropical vegetation succession - it contains the largest remaining area of lowland rainforests in the Java plain. Several species of endangered plants and animals can be found, most notably the world's last population of the Javan rhinoceros. The number of remaining rhino is estimated to be less than 60. The current WWF project is attempting to take a rhino census using foot prints and DNA testing of feces, which is a slow, labour intensive activity. The lead guide on the WWF Rhino team was formerly the most prominent poacher with 18 poachers working under him. To local villages, his participation brings credibility and respect to the Rhino conservation team.

There is a Park staff of over 100 rangers, including 85 park rangers, trying to deal with a number of threats. 19 park border villages (44,518 people) encroach on the park, clearing land for agriculture, rhino and bird poaching and extracting resources from within the park (i.e. firewood, timber, honey, algae for agar production, coral damage and fish bombing). Poachers from buffer villages enter the park daily to set nets and make small fires to capture birds for export (\$5 to \$25 per bird). Fish bombing has taken place in Ujung Kulon since the 1970's, but has escalated since 1993 due to an increase in fisherman travelling from Sumatra with larger, faster boats and armed with more advanced explosives and weapons. Although recent arrests may have deterred some fish bombing expeditions, the park staff remains inadequate to address this threat properly. The illegal fish boats are often more heavily armed than the patrol boats which deters the park staff from following or arresting fish boats. Three recent WWF surveys of certain coral locations revealed a 50 to 80% damage to the coral. Finally, oil pollution from tankers travelling north and east of Ujung Kulon remains a potential threat.

Currently, approximately 6,000 visitors per year visit Ujung Kulon. The infrastructure and management for larger scale tourism is not yet in place and improvements would need to be made in lodging, planning, setting locations for tours and treks, environmental impact assessment, and a the establishment of a procedure for permits and fees.

The following is a brief preliminary list of recommended action for Ujung Kulon National Park:

- Approve WWF or Nature Conservancy project for eliminating fish bombing and surveying damage to marine resources and coral reefs.
- Assure that the patrol boats are in good working condition, with sufficient funds for maintenance and fuel, and verify if New Zealand aid for these resources was completed.
- Support the current park staff/WWF rhino conservation project in establishing data on rhino population, diet, habitat and pressures on their environment.
- Assist park administration on improving patrol outposts and entrance/exit stations and to patrol poaching areas on a regular basis.
- Encourage park administration to adequately enforce poaching regulations and sentencing requirements.
- Improve and maintain sign boards in key tourist locations.
- Establish permit and fee system for tourist outfitters and individual tourists and promote village guest house stays, use of local guides and porters and other WWF community development projects.
- Fund study on management plan and carrying capacity for tourism.
- Provide a working radio or communication system between Labuan and Tamanjaya.
- Improve efficiency of park staff by training rangers and patrols, improve administration and staff relations, initiating a World Heritage exchange program, and training guides and patrols in English.



Peter Mous/IUCN

Komodo National Park, Indonesia

KOMODO NATIONAL PARK, INDONESIA (1991)

These volcanic islands are the only habitat for the 5,700 giant lizards, whose appearance and aggressive behaviour have led them to be called "Komodo dragons". They are of great interest for scientists studying the theory of evolution. The site is stunningly scenic with rugged hillsides of dry savannah, pockets of thorny green vegetation and white sandy beaches with blue waters surging over coral. The Nature Conservancy has had an ongoing project there to work with the park staff, local people and in response to the extreme threat of fish bombing (Volume II, Session 7).

Komodo National Park and The Nature Conservancy

A combination of enforcement, awareness and training programs, and alternative livelihood programs has proved to be a successful strategy in the abatement of destructive fishing practices in Komodo National Park. Upon request from the Department of Forestry, The Nature Conservancy and Yayasan Pusaka Alam Nusantara assists the Komodo National Park's authority with the planning and management of the marine natural resources. The intent is to establish a marine reserve that fully protects the complete natural community structure and habitat of the demersal and sedentary marine ecosystem is all its diversity (Pet and Djohani, 1996). The greatest immediate threat to the Park comes from outside fishermen who are engaged in over-fishing or illegal destructive fishing practices.



Komodo Dragon, Atlantis Zoo

The Nature Conservancy helped form a team consisting of the Park's management, police, army, and fisheries. This team now works together to carry out a routine patrolling program. Since its inception in 1995, blast fishing has declined by more than 80%. Workshops, presentations, and exhibitions throughout the year help build national and provincial government and local support. Target audiences include planners, legislators, fishermen leaders, school teachers and entrepreneurs. Fishing villages receive posters and comic books that illustrate the impact of dynamite and cyanide use.

Economic alternatives for local communities are essential to reducing destructive fishing practices. In close cooperation with outside investors and local entrepreneurs, The Nature Conservancy is helping develop eco-tourism, small-scale pelagic fisheries and mariculture. Compatible training programs are set up for communities living in and outside the Park to enhance skills and encourage participation in these opportunities.

The Nature Conservancy is currently exploring ways to work together with ecotourism developers in Komodo National Park with the following goals in mind:

- To develop mechanisms for the generation of income for park management from tourism revenues.
- To help assess and set entry limits for tourism activities in KNP.
- To help promote and market high end, nature based tourism to KNP including dragon watching and diving.
- To influence the planning and design of eco-lodges/resorts around the Park and the visitation in the Park.
- To engage tourism developers and operators in monitoring the reefs, establishing a code of conduct and informing tourists about the Park.
- To ensure the involvement and employment of local communities in eco-tourism activities.

Local entrepreneurs have already sponsored the installation of mooring buoys at popular dive spots in and around Komodo National Parks. Cruise boats and other tour operators will be targeted as well to contribute to the Park.

Finally, the WH Committee has adopted a new strategic plan, which focuses on strengthening documentation and information dissemination through GIS, trainings, field manuals, and providing sites with hardware, software and CD Roms. Reporting for the SE Asia and Pacific region is targeted to take place in 2002.

Additional useful literature;

UNESCO World Heritage sites on the internet;

<http://www.unesco.org/education/science/cms/co-index.htm>

[Http://www.unesco.org/whc](http://www.unesco.org/whc)



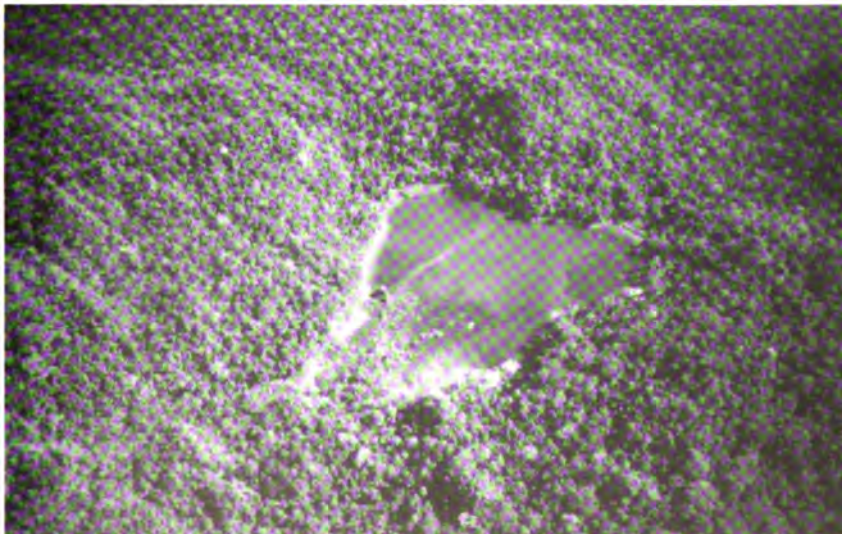
WWF Thailand

Huai Kha Khaeng Wildlife Sanctuary



THUNG YAI - HUAI KHA KHAENG WILDLIFE SANCTUARIES (1991)

Stretching over more than 600,000 hectares along the Myanmar border, these two wildlife sanctuaries contain examples of almost all the forest types of continental South-East Asia. It is home to a very diverse array of animals, including the majority of the large mammals (especially elephants and tigers), large birds and 33% of the land vertebrates to be found in this region. In total, the site is the habitat for 21 endangered and 65 threatened species in the site. A Master Plan has been completed for the area. The area is a focal point for numerous research projects. Over 10,000 people visit the site each year, the majority being domestic tourists. Threats include forest fires and encroachment from highly populated settlements in the buffer zone of the site. Poaching remains a large concern and the park employs several patrols and guards.



WWF Thailand

Thung Yai Naresuan Wildlife Sanctuary

Box 7

TUBBATHA REEF MARINE PARK, PHILIPPINES (1993)

The park covers 33,200 hectares, including the North and South Reefs, and is a unique example of an atoll reef with a very high density of marine species. The North Islet serves as a nesting site for birds and marine turtles. The site is an excellent example of a pristine coral reef with a spectacular 100-metre perpendicular wall, extensive lagoons and two coral islands.



Ha Long Bay World Heritage Site, Vietnam

HA LONG BAY WORLD HERITAGE, CAT BA NATIONAL PARK, VIETNAM (1994)

Ha Long Bay, located in the Gulf of Tonkin, includes 150,000 ha of 1600 islands and islets forming a spectacular seascape of limestone pillars. Because of their precipitous nature, most of the islands are uninhabited. The exceptional aesthetic values of this site are complimented by its great biological interest. The site is managed by the Ha Long Bay Development Corporation and is run much like a business.

STRENGTHS:

A 2 km wide buffer zone separates the site from the harbour and city.

The site has been clearly surveyed and boundaries have been defined with a detailed map.

Taiwan invested \$10 million in the beach restoration project (in a prime welcome area) and construction of a tourist boat terminal (150 boats) this has moved boat traffic out of the crowded harbour and made tourist traffic easier to regulate and control.

Tourism has increased over 300% since Ha Long Bay was listed as a World Heritage site, bringing nearly \$1 million annually into the local economy.

Japan has heavily funded a team to plan a complete a detailed long-term strategy-planning document for the area.

MANAGEMENT CHALLENGES:

Completion of major port facility with seven terminals that will entertain large tankers that must travel directly through the World Heritage Site to nearby new factories.

Coal transport - 90% of Vietnam's coal is taken from the Ha Long area.

Tourist numbers have tripled in the past three years, which increases revenues, but also increases pollution, traffic, development, etc.

Fuel leaks, pollution and site degradation from over 150 boats which currently take tourists to grottos, caves and islands within Ha Long Bay.

WORKING GROUP NOTES

SESSION 10



Noelle O'Brian

Sunset in Southern Cambodia

SESSION 10

WORKING GROUP NOTES

*"It can take one person working alone 100 days to accomplish what 100 people working together can do in just one day."
(Old Lao Proverb)*

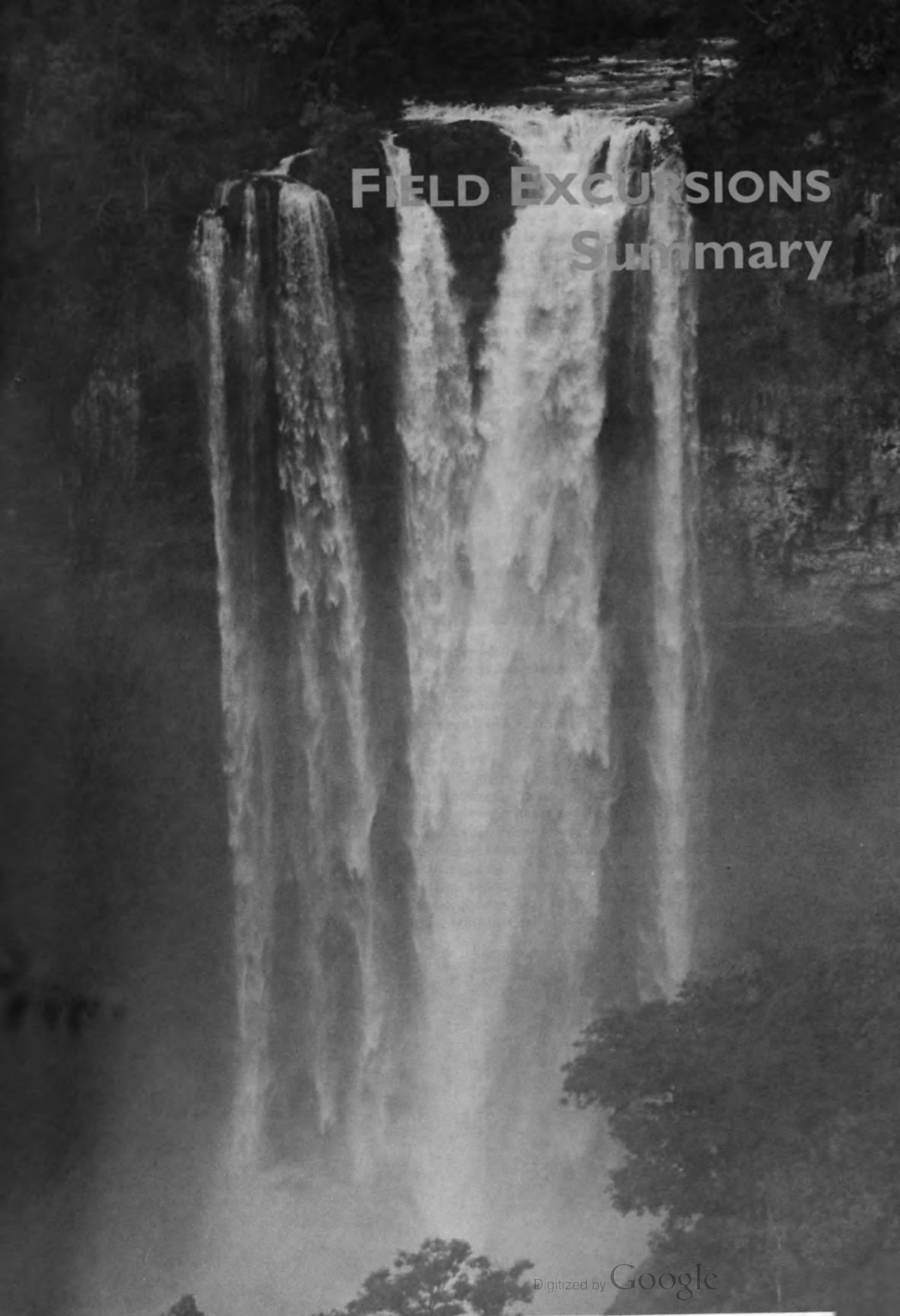
After three days of presenting papers in plenary session, Session 10 allowed participants the opportunity to interact and engage in dialogue. Participants chose eight working groups based on the various issues and topics related to PAs in SE Asia. In addition to the five main topics addressed in the plenary sessions, working groups were also established regarding the following:

The WCPA SE Asia Regional Action Plan and the 2002 World Parks Congress;
Role for Private Sector Involvement in PA Management;
Integrating PA Systems into Broader National and Regional Planning Processes;
Training and Capacity Building; and
Priorities for a Regional Marine Working Group.

Each working group chose a Facilitator to lead the discussion and a Rapporteur to present the group's findings and recommendations to the plenary session. Each group was asked to address the following questions:

What are the main issues in SE Asia facing their topic of your working group?
What are the key models and lessons learned from SE Asia protected areas?
What specific actions should be taken to address these issues?
What recommendations does your group have for WCPA members to address these issues?

The summaries provided by each working group for their presentations to the plenary session are included in Volume II - Papers presented under session 10. Many of the recommendations from the working groups have also been included in the recommendations of the country profiles within this executive summary.



FIELD EXCURSIONS Summary

The splendours of Lao PDR's natural heritage were written on the faces of the participants who returned refreshed from the field excursions. The visitors shared their experiences, observations and ideas with enthusiasm, stimulated by the firsthand experience of Lao PDR's protected areas and cultural sites. The field excursions also provided time for informal discussion outside of the plenary presentations at the Forum. The excursions were unique and one of the highlights of the WCPA program and where better to talk about share lessons about PAs than in PAs themselves?

Summaries given by representatives of each field excursion are included below along with a synthesis of comments from feedback sheets distributed at the conference. Most participants took time during the busy conference schedule to complete the feedback questionnaires, giving constructive input. The questionnaires asked for the following information:

- Their name, country and which field excursion they were on
- List of issues relating to PA management recognised on the field excursion
- What are your thoughts on the issues listed above?
- What are your recommendations, highlighting lessons from your own country and work experience?
- What did you learn from Lao PDR and its NBCAs that you did not know prior to this conference?
- What surprised you most?

Each of the four field trips are individually described in the following pages. In addition to the itineraries, photos and descriptions of each field excursion, a summary of the recommendations and participant feedback is provided based on the questions raised above. The Forum organisers appreciate the dedication of the field trip organisers, government staff, villagers and participants who took time to make this event such a success.

Field Excursion 1: Pakse and the South

Sponsored by the IUCN Biodiversity Conservation Project

The excursion takes us south to Khong district passing two national protected areas on the way, Dong Hua Sao and Xe Pian. There will be time for a briefing and a discussion at the field stations of each area. In the early afternoon we will meet the district governor before taking a thirty-minute boat ride on the Mekong river to Nangkhouat village to hear from the locals about their experience with fish conservation zones.

On day two we will first stop at the Phapheng falls before heading back north and to Saming, one of Dong Hua Sao's guardian villages for an 'elephant procession' and other events.

Locations

1. Dong Hua Sao protected area

Managed since 1996 under the Dutch funded Biodiversity Conservation Project. The only national level protected area to cover parts of the Bolovens Plateau. Well established management routines. Introduction to the management approach, discuss the coffee encroachment problem and talk to the staff.

2. Xe Pian protected area

Currently managed with GEF funding under the Forest Management and Conservation Project. The 2,400 km² reserve is one of the most



Stuart Chape/IUCN

Dong Hua Sao NBCA

important areas from a biodiversity conservation point of view. Get a briefing from the staff.

3. Khong island

Watch the Karavan puppet theatre perform 'the adventures of Noi', a forest conservation story, to an audience of local children.

4. Nangkhouat village

An encouraging example in resource management by the local people. Now continuing on its own after previous support by Canada Fund and EEC/CESVI. During a get together in the temple grounds find out about village experience with the establishment of fisheries conservation zones and their catch records now maintained for several years.



Stuart Chape/IUCN

Siphandon Islands, Khong District

5. Phapheng falls

These cataracts in the easternmost channel of the mighty Mekong form only a small part of the entire Siphandon (lit. four-thousand Islands) area. Even then, it is well worth seeing.

6. Saming village

The first Dong Hua Sao village to discuss and adopt protected area rules. Witness the formal welcoming by the village and its 17 elephants of three pachyderm newcomers. Previously carried out for newly captured animals, the ceremony is now arranged for 3 confiscated elephants given to the village. See a demonstration of conservation education in the local school. Experience Lao hospitality in a basi well wishing ceremony.



Stuart Chape/IUCN

Elephant Baci, Ban Saming

Group Presentation Notes

PA Management issues identified

- PA establishment and classification
- Boundary demarcation and management
- Monitoring and evaluation, to include socio-economic studies impact of PA on local people
- PA resource management (especially in light of hunting pressure)
- Capacity: local participation, local knowledge, role of women
- Eco-tourism

Thoughts

- PA boundaries are unclear
- No functional zoning of land in PA
- Little information on monitoring of habitats and wildlife. More consideration of impacts needed
- Local co-operation appears to be strong
- Without meaningful government support PAs are highly threatened
- Conservation education and awareness are vital
- Maintenance of trust between project field staff and community appears crucial to the success of the project
- Data on use in fish conservation zones are closely related to community effort encouraging example of traditional resource management which requires little funding

Recommendations

- Monitoring and evaluation
- Biodiversity conservation should be top priority in NBCA management
- Establish boundaries
- Set up a buffer zone to control expansion of villages within PAs
- Beyond information on wildlife, botany inventories are needed to be serious about biodiversity conservation
- Promote ecotourism but mitigate impacts and don't let it take over as the primary source of income
- Need diverse forms of funding
- Environmental education and awareness raising are imperative
- Community-based resource management (Which resources?, Extraction levels, Benefits, Marketing)
- Conflict resolution and management framework
- Formal social organisation structure for PA/local people dialogue
- Government capacity for PA management must be increased

Lessons Learned

- The extent of the PA system in Lao PDR, its importance and potential NBCA sites
- Innovative methods of environmental education regarding the establishment of a community fishery
- Remaining large mammals and their populations and the extent of hunting of wildlife

Surprises

- Low population density
- Extent of traditional village culture
- High level of conservation education activities
- Threatening hunting pressure on PAs
- Local initiatives to protect resources
- Friendliness of the villagers
- Being welcomed by elephants!

Participants' Feedback from Questionnaires

Thoughts on Issues Related to PA Management

- Pre-existing land claims and land use: "I commend the approach taken at Dong Hua Sao to identify, map and recognise pre-existing land uses and claims. This non-confrontational

approach sets a practical point of reference for future dialogue and intervention" (Joe Peters)
Hunting pressures (including snaring) the program to turn in rifles has had mixed results
Some impressive examples of co-operative management with local communities. Villagers seem to have ownership of management systems which have been established for sustainable use

Lack of enforcement to combat poaching and encroachment and lack of boundary demarcation seems to be due to the shortage of human and financial resources

Positive reaction of young people to conservation drama by the Caravan puppet theatre

PA staff participation in projects is good

Lack of functional zoning in NBCAs

Xe Pian NBCA infrastructure is impressive compared to the rest of Laos

How will a tourism increase affect the area, particularly Khong, Khon and Det Islands?

Recommendations

NBCA projects in remote areas should try to hire and train locals for extension and patrolling positions, etc.

Explicit adoption of a conflict management and resolution framework for construction of a formal social organisation structure for PA/people dialogue (Joe Peters)

Establishment of ongoing monitoring and evaluation program, with initial baseline data, to understand effects of gun surrender policy, environmental education programs and local conservation initiatives

Cultivate individual relationships. Continuity and trust of the field advisors is central to success of programs

Develop a regional inter-disciplinary, cross-sectoral approach to address the issues (Apichai Suchindah)

Develop roles of women in PA management

Develop potential spin-off activities e.g. use surpluses for processing products for sale to tourists on an open market (in a village on the river)

Consider the multiple impacts of tourism and ensure that the spin-off services and activities that tourism engenders should remain complementary to conservation of natural resources.

Develop these activities to raise household income, but make sure that tourism does not take over as the primary source of revenue

Ban Saming is a good site for ecotourism/agro tourism development, especially for home-stays

Translate plans and strategies into Lao to increase community involvement

Promote active involvement of local institutions in increasing awareness among local people and policy makers

Environmental education is essential, especially regarding biodiversity values, public hygiene and rubbish disposal. Focus on youth expand environmental education program to other schools

New approaches to capacity building in general need to be employed so capacity building targets are realistic. One area for developing capacity would be within government institutions for PA management

Confine expansion of PA villages using zoning survey to determine boundaries

Khone Phapheng needs a site plan, education boards and facilities for increasing numbers of tourists

Approximately 50% of women are illiterate if conservation efforts are to succeed ICDPs should focus on education

Studies on behaviour patterns, motivations, aspirations etc. of local people need to form the basis for conservation campaigns

GoL might recruit professionals and technicians to assist with all of the above

Lessons Learned about Lao PDR and its NBCAs

Many participants expressed that prior to this week they knew nothing about Lao PDR and PAs, so everything that they learned over the week was new

The NBCA system and its recent establishment (1993) was new to some participants

There are an array of biological, geological and cultural aspects which offer great tourism potentials

Willingness of local people to participate in PA management and related activities already clear, strong local participation

Great NGO contribution to PA management and projects

Small remaining large mammal populations

Changing conditions affecting local customs

Surprises

Initiative by local people to protect their fishing grounds

Local people live within the PA and practice shifting cultivation

High level of conservation education activities

Extent to which traditional village culture persists in Lao PDR

Current low overall population density

Welcome by villagers and elephants, especially in Ban Saming

Good working co-operation amongst villagers

"Khone Phapeng Falls is pristine, clean and without development to harness the water power for electricity to reduce it to a trickle. What will happen to this prime site after dams upstream are built?" (Ipat Luna)

Numerous kingfishers, parakeets and doves were captured in cages at Khone Phapeng Falls, waiting to be set free according to tradition

How wide and interspersed with islands the Mekong River becomes in Champassak

"PAs in Lao PDR will not survive unless government provides meaningful support to their persistence"
(Nirmalie Pallewatte)



Stuart Chape/IUCN

Xe Pian NBCA

Field Excursion 2: Non-Timber Forest Products & Nature Conservation

Sponsored by the IUCN NTFP Conservation Project

The Focus of this Field Trip

Non-Timber Forest Products (NTFP's) have a huge potential to give local people a stake in sustainable forest management and biodiversity conservation. This field trip will give you an opportunity to see many examples of NTFP based project activities aimed at integrated rural development and nature conservation.



Local communities getting involved in Protected Area management

What you will see on this tour

- Examples of the importance of NTFP's in daily village life
- Examples of linkages between food and forests
- Examples of communities domesticating NTFP's
- Examples of communities managing NTFP's in the forest
- Examples of NTFP based industrial development
- Examples of projects involving local communities in Protected Area management through NTFP activities
- Examples of integrating NTFP activities in land use planning and allocation

Champassak Province

Demonstration of NTFP Use. At the provincial tree nursery (km6), invited villagers show handicrafts and other NTFP use activities. Briefing on the importance of NTFP's by Mr. Sounthone Ketphanh, Project Director NTFP Project.

Rattan weaving, Sanamsai village. Traditionally, rattan weaving is an important source of income in this village. Presentation by Ms. Varunee Kritcharoen, Field Advisor of the NTFP Project on changes in rattan resource availability and community management options developed in project villages.

Bamboo processing factory. This is the first bamboo-processing factory of Champassak province, set up in 1999 with investment from

China. The factory produces bamboo mats, chopsticks and tooth-picks. Presentation by factory manager.

Sisiet tree gardens. In Ban Phialat, villagers specialise in planting "Sisiet" *Pentace burmanica*, to sell its bark, popular for chewing with betel.

Cardamom plantations. Villagers of Ban Quangsi have cultivated wild cardamom, which is their main source of income. Cardamom field will be visited and there is time to interact with villagers. Mr. Joost Foppes, NTFP Project Advisor, will give a presentation on the potential of cardamom in agroforestry.

Presentation on land use planning and allocation. Mr. Viloune Soybara, NTFP Field Advisor, will give a presentation on the land allocation process and its effects on village forest conservation.

Tad Lo resort. Forest resort, 85 km for Pakse on the Boloven plateau, next to the Tad Lo waterfall.

Salavan Province

Briefing on National Biodiversity Conservation Areas (NBCA's). Mr. Sinuy Phonsoupha, Chief of Forestry, Salavan Province will explain key issues of protected areas in Salavan province, e.g. community participation.



Land use map of village area management

Briefing on NTFP development at Konglu Noi. (Xe Bang Nouan NBCA, Wapi district,) Rachel Dechaineux, NTFP Field Advisor, will present lessons learned on the relationship between food security and forest use, the role of rice banks and domestication trials.

Forest walk. A brief walk into the village forest. Enrichment planting of rattans, popular for their edible shoots, in a communal dry dipterocarp forest. Interact with villagers, who can point out numerous useful plants along the trail.



Xe Pian NBCA

Presentation on Community Development Activities. (Phou Xieng Thong NBCA, Khongsedone district) Ms. Astrid and Ms. Souphany, PDI, explain how community development can contribute to forest and wildlife protection.

Presentation on Protected Area Management. Mr. Sisouk, Head of Phou Xieng Thong NBCA, explains the village co-management system developed for this protected area.



Women with NTFPs

Typical Non-Timber Forest Products from Lao PDR:

Food Products

Edible shoots of rattans/bamboos

Fish/Frogs/Wildlife/Mushrooms

Edible leaves/fruits/tubers

"Mak Tao" fruits

Arenga westerhoutii

Fiber Products

Bamboos/Rattans

"Po Sa" paper

Broussonetia papyrifera

"Toey" pandan mats

Pandanus spp.

"Khem" brooms

Thysanolaema maxima

Medicinal Plants

Cardamom

Amomum villosum

Malva nuts

Sterculia lychnophora

Orchid stems

Dendrobium spp.

"kheua hem" berberine

Coscinium usitatum

Exudates

"Nyan" benzoin

Styrax tonkinensis

"Kisi" damar resin

Shorea obtusa

"Yang" oil oleoresin

Dipterocarpus alatus

"Ketsana" eaglewood

Aquilaria crassna

"Bong" bark (incense)

Persea kurzii

Others

"Si Siet" bark (chewing)

Pentace burmanica

Live Wild Orchids

Paphiopedum &

Dendrobium

Group Presentation Notes

Observations and Lessons Learned

Great extent of local wisdom and knowledge base

Survival strategies of local communities in times of shock e.g. drought leading to scarcity of food for subsistence

- Matrilineal societies and their important impact on planning

Problems and prospects of the localities

NTFP project activities on site

Reorientation of oneself on conservation issues

Exposure to local knowledge system

Social and cultural life of Lao people

Reservoir of genetic resources including wild sugar cane, balsa, various wild vegetables, rattan, bamboo, fruits and rice varieties

Recommendations

The promotion of the NTFP Project as a major thrust of forest conservation should focus on the tremendous opportunities that lie in conservation initiative extension, using NTFP harvesting as an entry point. Wild crops could be cultivated in the village vegetation does not have to be cleared, as available fallow land can be used for cultivation under multiple cropping conditions. Focus areas could be:

The intensive and extensive production of cash crops:

- Cultivate cardamom, wild garlic (fetches high prices), onion, turmeric, coriander, cotton, bamboo (hundreds of species) and sugar cane;
- Develop orchid and mushroom farming huge potential;
- Establish a froggery, cricketery and fishery;
- Increase rice production there are many rice varieties;
- Introduce cultivation of legumes, e.g. asparagus, peas, winter beans
- Increase domestic livestock numbers; and
- Develop plantations of medicinal plant species.

All of the above would contribute to preventing hunting.

The documentation of local knowledge and resource use, especially regarding medicinal plants



Participants Feedback from Questionnaires

Thoughts on Issues Related to PA Management

Positive contribution of NTFP production to PA management

Poor awareness about the role of the market in relation to NTFPs and the ecological value of wildlife and botanical resources. Sustainable use of NTFPs will be affected by market demand. Some, e.g. orchids, may be depleted already. Some may tolerate heavy harvesting, e.g. Cardamom

Experience in Thailand shows that the market economy drives industrialisation of value added production of NTFPs. Rare NTFPs, e.g. orchids and rattan, will be searched for

Modern technology and facilities are visible, e.g. vehicles, TVs etc., therefore there is high potential for changes in livelihoods and consumption patterns

NTFP projects are beneficial. Lao people can participate in the planning and implementation of resource management. They are proud of their regulations to control usage. This is different to Thailand where the responsibility and sense of belonging of local people has been totally taken away by existing laws" (Piyathip Pipithvanichtham)

Large PA compared to number of staff to protect it

Recommendations

Manage cardamom using an open access system. Opportunity for privatisation to increase technical capacity in yield, quality and value added

Train villagers to add value to their products

Target villages should include villages further away from the NBCA for comparison monitoring

After raising awareness at school and community levels and developing crop production and animal husbandry, establish a PA plan

Emphasise collaborative management inside and outside of the PA

Establish a birth control program

Planning for infrastructure, health and education services should be included in the project design when discussing with provincial and higher decision-makers

Agreements and statutes for user rights could be considered for future management of PAs

Continue to co-operate with neighbouring countries to achieve conservation objectives

Lessons Learned about Lao PDR and NBCAs

Strong connection between orchid trade in Thailand and depletion of orchid resources near NBCAs

Indigenous knowledge system and survival strategies in the face of shocks

High birth rate

The importance of NBCAs for local people

Surprises

Good team work for NTFP studies and a strong attempt to connect the study results to PA management

Wide use of a variety of NTFPs in food and traditional medicine, especially wide variety of mammals, reptiles, amphibians, insects and leaves

Generous hospitality of the local people

Extent to which local people are involved in NBCA planning, management and monitoring



Waterfall in Attapeu

Overview

Attapeu Province is situated in the southeast corner of Lao PDR. Bordered by Vietnam to the east and Cambodia to the south. The province is primarily mountainous crisscrossed by the Xe Kong river and its tributaries. Over 75% of the province is considered to be under forest cover, however large areas are primarily second growth with several large tracts of Bamboo forest.

There are two National Biodiversity Conservation Areas in Attapeu:

Xe Pian NBCA covers a large area of lowland forest in the west of the province composed primarily of Dry Deciduous Forest on the floodplains of the Xe Pian and the Xe Kong rivers.

Dong Amphan NBCA covers a large area of hill forest in the far east of the province bordering Vietnam.

Attapeu province has one of the lowest population densities found in Lao with an average of 14 people per km². 66 % of the population is composed of ethnic Khmer groups, collectively referred to as Lao Theung.

Travel across the fertile Boloven Plateau visiting the Xe Kata waterfall, the Nong Lom wetland and the Houei Ho hydro-power project.

Travel to Ban Inti in Xanamsai District on the Xe Pian river at the base of the Bolovens Plateau. Followed by a boat trip along the Xe Pian to visit the Dong Bak District Protected Area.

Trip on the Xe Kong river from Attapeu town. Looking for Irrawady Dolphins.

Return to Pakse via Xe Kong and Xe Nam Noi rivers.

WWF staff have been working with resource managers in Attapeu since 1996 as follows:

Conducted initial biological surveys in Dong Amphan NBCA in Xanxai District, Xe Pian NCA in Xanamxai District and Nam Ghong Provincial Protected Area in Phu Vong District.

Undertaken preliminary resource use assessment in Phu Vong District.

FIELD EXCURSION 3:

XE KHAMPO

SPONSORED BY WWF

Sponsored participation for the head of the provincial forestry unit to attend a three-week training course in Participatory Management of Protected Areas at the Regional Community Forestry Training Centre (RECOFTC) in Bangkok.

Supported twelve (12) provincial agriculture and forestry office (PAFO) staff to take a two-week study tour to Thailand to develop an understanding of conservation policies and practices in use.

Planned and managed a two-day conservation workshop, attended by a wide range of organisations in Attapeu, aimed at developing a better understanding of the link between provincial conservation and development objectives.

Held a two-day dialogue meeting with provincial-level officials in the Vietnamese province of Kon Tum to discuss cross-border conservation concerns.

Undertaken preliminary socio-economic surveys in Xanxai District.

Conducted training to PAFO and DAFO staff in participatory survey techniques for gathering socio-economic and livelihood data.

Through these activities, DFRC staff and WWF staff have developed solid relationships with the people and organisations in Attapeu province and they have gained an appreciation of the existing opportunities and constraints to promoting comprehensive natural resource management in the province.



Dong Amphan NBCA, (shown above) can be linked to Virachey Nature Reserve, Cambodia and Mom Ray Nature Reserve in Vietnam to form a large trans-boundary protected area.

Group Presentation Notes

Observations

Lao PDR has many potential areas for future PA development, e.g. the fertile Bolovens Plateau (Tad Fan and Xe Kata waterfalls - ecotourism), Dong Bak District PA and Xanamsai District (Ban Inti)
Local community initiatives in PA management e.g. dolphin protection and NTFP management

Recommendations

Future co-ordination on wildlife hunting between all PA stakeholders
More central and local government support in PA management
Strengthen community forestry development
Exchange experiences through study tours between Lao PDR and other countries in the region
Careful development of infrastructure to facilitate access for local people and tourists
Laos, Cambodia and Vietnam should continue to collaborate and exchange ideas on species management e.g. Laos and Cambodia should establish a co-management program for the Irrawady Dolphins
Upgrade the ability of institutions, especially in forestry

Participants Feedback from Questionnaires

Thoughts on Issues Related to PA Management

Access to firearms is leading to great hunting pressure
Zoning of PAs for conservation and human use is an appropriate concept in this situation
Potential for nature tourism is high due to spectacular scenery e.g. on Xe Kong River
Village rangers seem willing to work even under challenging conditions to protect their forest and livelihood needs
Large impact of development on forest areas e.g. roads. With the speed up of economic development, the lifestyles of people will be transformed bringing new demands to natural areas, and increased access will facilitate rapid extraction of resources
In Xanamsai District local participation in PA protection appears to be working. However, will it function well if the area is increasingly exposed to outside influences e.g. more trade?

"The completion of highways throughout Lao PDR (connected to neighbouring countries e.g. Bangkok - Kunming Highway) should be anticipated in order to prevent the loss and destruction of natural habitat on a massive scale. Otherwise, we will never learn from the similar and typical examples experienced by various countries and just allow the existing ritual to continue, believing that natural habitat is something expendable for economic development." (Johannes Subijanto)



Women collecting NTFPs from the Xe Khampho Area.

Michael Epprecht/WWF

FIELD EXCURSIONS



Sunset in the Xe Khampho Area

Michael Epprecht/WWF



Recommendations

Immediate priorities should be to establish law enforcement and develop human resources and infrastructure. More co-operation between Laos and ASEAN and international organisations is needed to attain more outside funding, which is needed to make real progress with PA management

Develop local expertise

LUP at the provincial level is essential to harmonise conservation and development activities

Empower local communities aspirations, obligations, tenancy, education

Give PA staff incentives

More involvement needed by Environment Agency and Ministry of Tourism

Control expansion of coffee plantations which may have a negative impact on PAs in the region

PA wildlife conservation can advance by addressing living needs of local people to curb and decrease dependence on forests and wildlife

Try to make zoning effective (this is challenging). "Many NPs in Thailand have failed to use zoning where areas are overwhelmed with threats from human activities. Law enforcement is still necessary and Laos needs to develop legal instruments" (Anak Pattanavibool)

Lessons Learned about Lao PDR and its NBCAs

Availability of firearms (and their likely use for hunting) without control

Land allocation has not been completed so there may be land claims in NBCAs

Large area of intact moist deciduous forest still exists

Surprises

Extent of unoccupied and undeveloped land

Almost total absence of wildlife (heavy hunting pressure reported)

Amazing waterfalls

Friendly people

"Numerous people carrying guns for hunting wild animals can walk freely in PAs." (Anak Pattanavibool)

The modern world seems far away from Laos; indeed, the forests are relatively intact and scientists are still recording new species of wildlife.

Field Excursion 4: XE PIAN

Sponsored by FOMACOP

Xe Pian NBCA Field Headquarters.

The drive south is via the newly completed Route 13. En route we will pass the Dong Hua Sao protected area, at the foot of the Boloven Plateau, about 30 km south of Pakse.

Briefing by NBCA staff on Xe Pian protected area its values, management issues, activities to date and plans for the 1999/2000 year. These will be used as an example of the range of work that is covered in a typical operating year.

Phou Aasaa.

Discussion on significance of the site.

Phou Aasaa takes its name after a religious leader who built this temple and lived there for many years in the early part of the century. Aasaa was born in Salavan and after journeying and studying throughout the countryside eventually came to reside at this mountain site. He wore a white robe and followed the 8 precepts of Buddhism and although he was never ordained as a monk he was highly revered as a religious leader. During his years at Phou Aasaa Lao Theung people would come to learn from him about Buddhism and the history of Lao. He had many thousands of followers. At this time the King of Champassak, Tjao Maa Nooi, who was allied with the King of Siam would send parties into the countryside to capture Lao Theung and send them to Bangkok where they were enslaved. From this temple site, Aasaa planned a revolt against the King of Champassak and Siam. With an army of thousands he marched into Champassak (present day Pakse) and burnt it to the ground. In advance of the revenging Siam armies Aasaa fled to Attapeu where he was eventually caught by the new prince of Champassak and sent to his death in Bangkok.

5



Xe Pian NBCA

Today Phou Aasaa and its historical monument is revered as a sacred site in memory of the man who dared stand up to the oppressors of the Lao Theung people.



Phou Aasaa and the Stone Stupas

The most interesting feature of the site is the encircling ring of stone stupas. These would have been built as fortifications and are thought to have already been in place when Aasaa arrived. Phou Aasaa is the only site recorded in Lao where such construction has been found.

From the outcrop there are stunning views to the Boloven plateau to the north, and across the semi evergreen forest canopy of the Xe Pian protected area extending south to the Cambodian border. To the east beneath the mountain are the village, and rice fields of Kiatngong and the expansive Bung Gnai Kiatngong wetland that is also a part of the Xe Pian protected area.

Bung Gnai Kiatngong wetlands and meet with village leaders.

Bung Gnai Kiatngong wetland is a perennial peat swamp. With an area of 8 square km it is the largest wetland of a mosaic of nearby ponds and swamps that occurs over 30 square kilometres. When taken together with the other wetlands and perennial rivers further south, inside the protected area, it constitutes a wetland complex of global significance. It is particularly important for the conservation of a number of threatened and endangered wildlife species, in particular for water birds such as giant and black ibis, lesser and greater adjutant, masked finfoot, sarus crane, woolly-necked stork, painted stork, white-winged duck and oriental darter. Nationally it is highly significant for its large size, high diversity and abundance of waterfowl and other wetland bird species.



Bung Gnai Kiatngong Wetlands

The wetland is of major significance to the

subsistence of the local Kiatnong people, providing fish and other aquatic products such as tortoises, frogs and molluscs for consumption and trade, wetland margins for rice paddy, grazing for buffalo, cattle and elephant and various products such as grasses for thatching. Logging of surrounding forest areas for local use, heavy grazing of livestock deep into the wetland, and hunting of water birds, are all conservation issues that need to be addressed. However, of immediate concern is a project proposal to extract peat from the wetland for a bio-fertilizer industry.

There are important opportunities here for the conservation staff to facilitate the collaborative management of the wetland and its resources with the local community and to assist the village to further develop eco-tourism activities centred on the wetland, elephant trekking and local historical sites such as Phou Aasaa.

In the future the Bung Gnai Kiatngong wetland mosaic has considerable potential to be registered with RAMSAR as a wetland of international significance.

Xe Khampho. Short forest walks for bird watching.

The Xe Khampho river marks the boundary between Champassak and Attapeu provinces. From the campsite the river runs south into the protected area, eventually meeting with the Xe Pian river. It is a perennial river of major conservation significance to Xe Pian protected area, providing riverine habitat for otter, Siamese crocodile, green peafowl, masked fin-foot, oriental darter, white-winged duck and numerous other species which depend on it as a dry season water source.

The camp where we will be staying comprises the old field-station constructed by SIDA as part of a project to manage Xe Pian between 1993 and 1995. During this time there was little direct management of the area except for the first comprehensive biodiversity survey conducted by a Cambridge University expedition. Although, FOMACOP took over supporting management activities in 1996, there has only been an intensive field level presence in Xe Pian since early 1998.

The neighbouring village, Ban Nonghin, is a Lao Loum village that is situated on the boundary of the protected area. The IUCN/NTFP project is currently working with this community to assist it with the sustainable management of rattan and other NTFP products. There will be an opportunity to hear about this work during the time we are at Xe Khampho.

Dong Hua Sao field station for briefing by protected area staff on values, management activities and issues facing the protected area.

Meet Ministry of Information and Culture and UNESCO Project Team - Visit Ancient City of Shrestraputa and Wat Phu.

Travel to Pakse by boat up the Mekong River.

Wat Phu or the 'Mountain Temple' is a Khmer site of the same era as Angkor Wat in Cambodia. It was initially the site of an animist culture and then became a Hindu temple for almost 600 years until being abandoned in the 13th century. The oldest structures date back to before the 5th century and were possibly built by the animist Tjaam people who migrated up to Khmer in the 1st century from Indonesia. These ruins include the so called 'crocodile stone', thought to have been used by the Tjaam for human and animal sacrifices to their Gods.

In the 5th century Hinduism arrived in Khmer with traders from India, and the first Hindu temple made of brick was built on the upper level of Wat Phu in about the 7th century. In the 11th and 12th centuries, after several hundred years of inhabitation, the enormous, lower pavilion-like temples were reconstructed out of stone in the. By the 13th century a border had been demarcated south of Wat Phu, creating the modern day Cambodia and Lao national territories, and the Khmer inhabitants left Wat Phu to reside in Cambodia. For the next 300 400 years Wat Phu was left to the forest. In 1713 the King of Champassak who established a village at the modern day site of Champassak village, thus heralding the beginning of the Champassak Kingdom, renovated it into a Buddhist temple site.

Today it remains a Buddhist temple and is considered to be a globally significant historical site.



Wat Phu, Champassak Province

Group Presentation Notes

Themes: Xe Pian NBCA, Dong Hua Sao NBCA, Wat Phu, NTFP project, Mekong River

Thoughts and Observations

Where is the wildlife?

High degree of threats to PAs and Laos itself from the timber demands of neighbouring countries

In Xe Pian little conservation was reflected on the ground

The extinction of many animals is likely to occur in the near future given current situation

PAs are large and there are sizeable amounts of good forest even outside the PAs potential for future expansion of PAs (encouraging current situation compared to other countries in the region)

Community support was enlisted late in the project lifetime

High rates of deforestation given the relatively low population density

Peat mining in Xe Pian NBCA is not a complementary activity



Facade at Wat Phu

Bruce Jeffries/FOMACOP

Thoughts on Implementation of Management Activities

Strengthen enforcement of laws, regulations and policies

Building community support, trust and highlighting community experience can pave the way for committed conservation of biodiversity

Need better integration and co-ordination within management and between stakeholders

Environmental education is crucial student interest in this topic is high

Lack of adequate human resources and capacity

Links between development projects (e.g. NTFP promotion) and conservation are unclear.

Strengthening of local institutions is very important in ensuring that both conservation and development projects work together and complement each other

Sustainability is an issue requiring more focus

Improve strategies for conflict resolution e.g. between conservation and peat mining in PAs

Conservation action should be monitored. Use of BIORAP for monitoring

Need for better integration with other government policies and co-ordination with other government agencies and projects e.g. tourism; Xe Pian NBCA and the NTFP project near Xe Pian

In addition to focussing on PAs as resource providers, PAs should be exposed as providers of ecological services e.g. water

Wat Phu excellent work by UNESCO and GoL. Area under protection should be extended to include the natural area

Local people in and near Dong Hua Sao NBCA could benefit from tourism, but it has not been emphasised yet

Sustainability Issues - Challenges for Donors and GoL

Sustainability is the main challenge. NBCAs are largely externally funded and this presents some challenges both for the donors and the Lao PDR Government.

Donors: Short-term projects have a very limited influence in reality and present financial constraints to project implementation. Should funding be spread out over a longer period and focus on capacity building? How much should go to technical assistance?

Government of Lao PDR: How will the work in NBCAs and Wat Phu be sustained after outside funding is gone? Will the biodiversity conservation thrust be maintained?

Participants Feedback from Questionnaires

Thoughts on Issues Related to PA Management

Lack of experienced Lao personnel involved in project management and implementation

Lack of policies and legislation to support PA conservation efforts

Unclear framework of 'community project co-management' concept

Likelihood of success of PA conservation efforts would be remote if the above issues are not given



serious attention and action

Co-management, ICDPs, BIORAP and income generation for community sustainable resource management are all useful for PA management

Wildlife poaching needs urgent control

Recommendations

Develop comprehensive capability building programs for NBCA staff and communities

Project implementers and other international organisations should encourage the government to pass policies supportive of biodiversity conservation (Salve Navardez)

Include 'an operational framework for community co-management' in project design/documentation

"Linking of objectives of conservation and development in the minds of local people is an important characteristic of ICDPs" (Le Van Lanh)

"Make sure that the local people benefit from their participation in biodiversity conservation...." (Le Van Lanh)

Provide the local communities with alternatives and enlighten them about how to deal with plastic rubbish disposal

The extinction of many animals will occur in the next five years, therefore there is no time for a hands-off approach. A stronger effort to enforce existing laws is needed

Villagers cannot enforce laws on themselves or against outsiders of higher status. There is a need for centralised control of this aspect of the co-management scheme

The coverage of ICDPs is superficial need to focus more on linkages

Focus on the importance of rapport and trust for collaborative projects and indicate methods to develop such between projects and their target communities

Lessons Learned about Lao PDR and its NBCAs

Most (if not all) conservation projects are implemented by the GoL with international assistance

Prevalence of dumping of plastic

Unequal implementation of laws

Other ICDPs in Laos are struggling with the achieving the conservation portion of the project

Xe Pian, in particular, seems to have difficulty in getting funds released

Surprises

Accommodating attitude of Kietngong villagers with visitors

Extent of river sedimentation

There are no local NGOs

For a very modern PA system it is apparent that there is a lack of adequate manpower and poor supporting co-operation from other district and provincial government institutions



Stuart Chape/UICN

The WCPA Regional Forum group photograph

SESSION 11

FORUM CLOSE

Adrian Phillips
Chair WCPA

We are coming to the end of a very successful and enjoyable event. As so often, I am struck by the way in which WCPA members enjoy each other's company. It is a club of dedicated people with shared values.

Whilst I regret that it was not possible for Effendy Sumardja to be here at the closing session, he has left behind a well-briefed Regional Steering Committee, who have been listening to the Working Group's reports today.

A wealth of experience has been brought to this meeting from within the region: both in quality and quantity the impact is impressive. The Working Group's reports this afternoon were particularly outstanding.

I would also like to congratulate the organisers of the event, particularly the IUCN in Vientiane. The field visits seem to have been particularly well thought through in terms of their contribution to the program and the feedback session to the host country was a very useful innovation.

Thinking back over the past few days, and speaking as an outsider to this region, I have been struck by three things. These may be very evident to you, but to an outsider they are quite a surprise.

First, the great contrast between the countries of the Southeast Asian region. For example, in terms of size they range from a city-state of Singapore to what one might call the eco-giant of Indonesia. Some countries are extremely wealthy, despite the recent setbacks in their economies; others are clearly beset with the problems of Third World debt and poverty. Some countries have very largely destroyed their forests; in others much of it remains. Some countries in Southeast Asia can claim to be amongst the world leaders in terms of protected area management, and indeed with much experience which could be contributed at the international level; others are just starting out on this road.

Secondly, *I am struck by the progress made with protected areas since my first visit to the region at the 3rd World Parks Congress, which was held in Bali, Indonesia in 1982.* Many protected areas have been established since then, particularly here in the Lao PDR and the neighbouring countries of Vietnam and Cambodia. There is a real sense of public support for protected areas in a number of countries, and an influential NGO movement. The development in recent years, of a home-grown tourism market focussed on the protected areas of the region, is a particularly interesting development. There has been a lot of progress made in terms of community involvement in protected area management, as has been seen during the field trips of this conference. Some exciting tourism-conservation partnerships have been developed in parts of this region. In terms of international collaboration there are now a significant number of trans-boundary protected areas, there is a new interest in regional co-operation and imaginative use is being made of World Heritage, Man and Biosphere Reserves and other international programs and conventions. Finally, there are many more women in the protected area business than there were 15 years ago. So it is important to note the progress we have made as well as to dwell on the problems and challenges we face in the future.

My third impression is how the fate of the protected areas in this region is affected by what IUCN has called the 'drivers' of poverty: over-consumption and globalisation. Thus, in many countries in the region, protected areas are affected by encroachment from local communities seeking land and sustenance. The consumption of wildlife resources in neighbouring countries is leading to their extraction from protected areas, particularly here in this part of Southeast Asia. And the impact of globalisation is all too apparent in the way in which global markets and global information affect the context in which protected areas are managed. No wonder our job is so challenging!

Where do we go from here? And in particular, what is the role of WCPA in carrying the work forward from this conference in Pakse? I am grateful for the comments made earlier by Todd Sigaty, who explained that *WCPA is not a large remote bureaucracy but a network of volunteers and you, as existing or future members of WCPA, are part of that network. So when you say that WCPA should do this or do that, as recommended by many of the Working Groups, the finger points back at you.*

With those thoughts in mind, let me pick up some of the priorities:

The report of this meeting will assist in providing text and materials as soon as possible

The draft *Regional Action Plan* will now be reshaped into a document entitled *Protected Areas in Southeast Asia Guidelines, Recommendations and the WCPA Action Plan*. Whilst this work will be done under the overall direction of the Regional Steering Committee, I hope the IUCN Secretariat will be able to assist in taking this document to completion. It would be a sensible target to aim to produce it in time for the next World Conservation Congress in Amman, Jordan in October 2000, and to use this document to plan the regional contribution to the next World Parks Congress in September 2002.

In terms of the content of our activities, we have clear guidance from this meeting on the priorities and also a list of practical tasks. The most important of these would seem to be:

Developing a good information base on people, places and institutions.

Encouraging training and capacity development at all levels.

Stimulating exchange and sharing of experience within the region and, indeed from beyond the region.

There are real prospects that this can be done now in collaboration with the proposed ASEAN Regional Centre for Biodiversity Conservation in Manila. This potential partnership provides one of the most exciting opportunities to make the Action Plan a reality.

A Marine Working Group has been established in this region, which will work within the framework of WCPA's Global Marine Protected Areas Program.

Plans for Southeast Asia are in place for the regional contribution to the next World Parks Congress in Durban.

Looking back over the past five days, I think we can claim to have achieved a great deal. But, we have set ourselves a very busy agenda for the future.

Closing Remarks

H.E. Onneau Pommachanh

The Second Regional Forum for Southeast Asia of the IUCN World Commission on Protected Areas has been conducted from December 6 to 11, 1999. *Participants have actively contributed by presenting papers, providing comments and recommendations to determine the strengths and weaknesses, constraints and lessons to be learnt from protected area management in Southeast Asia.* From there the forum has identified ways to strengthen and develop criteria for solving constraints. In addition, the forum has proposed strategies to improve Action Plans for protected area management. These include strengthening organisational structures and mechanisms, enabling capacity building and enhancing co-operation.

This forum has succeeded in bringing together a wide range of valuable lessons and experiences from diverse contexts throughout the region. The forum has reflected on the donor's policies within Southeast Asia and their effectiveness in utilising funds for protected area management.

Once again as a representative of the provincial governing office, I would like to express my appreciation to the Ministry of Foreign Affairs, the Ministry of Agriculture and Forestry, to IUCN and international donors for giving Champassak Province the opportunity to co-host this forum.

This forum has provided a chance for all participating representatives to visit other project sites and experience aspects of the natural environment and local culture of Champassak Province and surrounding provinces. It is necessary to seek a balance between conservation and development. Therefore, we are grateful for the interest and support provided to our province and Lao PDR as well.

Currently, the international community is committed to environmental conservation, such as protected areas providing benefits to all living things. These areas of research represent the well being and beauty of nature as well as the importance of national cultures and local livelihoods. Those developing countries with diverse natural resources have the need to manage and protect those resources enhancing conservation towards national heritage. With regard to this issue, there are requirements for funds for implementation. We propose to those concerned international organisations to support and provide assistance. For Champassak Province the need to develop food production, in particular rice, is required to meet the provincial food security requirements. Also it is necessary to develop commodity production, such as coffee, cardamom and legumes, as well as make a commitment to expand various livestock activities. Forest land and production land are expanding to reduce shifting cultivation through maintaining permanent land use rights for local people. However, the main focus is on environmental protection towards sustainable natural forest resources.

VOLUME I - ANNEXES



Looking towards Sa Pa, Vietnam. (Damian Kean/UNDP)

FORUM PROGRAMME

MONDAY, DECEMBER 6

SESSION 1: OPENING OF FORUM

Thongsoune Bouphasaysong	Master of Ceremonies	Introduction
Sisamouth Namkenethao	Vice Governor, Champassak Province	Welcome by Province
H.E. Dr. Siene Saphanthong	Minister for Agriculture and Forests, Lao PDR	Official Opening of Forum
Dr. Stuart Chape	IUCN Representative – Lao PDR	Welcome to Participants

SESSION 2: CONFERENCE KEYNOTE ADDRESSES

Co-Chairs: Dr. P. Parisak Pravongviengkham and Jeff McNeely

H.E. Effendy Sumardja	WCPA-Regional Vice Chair	"The Establishment of Protected Areas in Southeast Asia: Challenges and Prospects"
Jeff McNeely	IUCN Chief Scientist	"Coping with the Unexpected: Problems and Opportunities for Protected Area Management in Southeast Asia at the Turn of the Century"
Dr. Somsak Sukwong	Director, RECOFTC, Bangkok	"Bridging Perception Barriers between Scientific and Local Knowledge: Viable Approaches towards Protected Area Management"
Peter Shadie	IUCN Switzerland	World Parks Congress 2002

SESSION 3: COUNTRY STATUS REPORTS

Co-Chairs: Effendy Sumardja and Kathy MacKinnon

Sangthong Southammakhot	Department of Forestry	"The Protected Area System in Lao PDR: Country Report."
Peter Eaton	University of Brunei Darussalam	"Brunei Darussalam."
Dr. Sunaryo	PKPA, Jakarta	"Protected Areas Management in Indonesia: Policy and Strategy."
Jasmi Abdul	Department of Wildlife and National Parks	"The Present Status of Protected Areas in Peninsular Malaysia."
Angelita Meniado	Protected Areas and Wildlife Bureau	"Country Report on the Recent Status and Issues on Protected areas in the Philippines."
Tawee Nootong	Royal Forest Department	"Wildlife Conservation: Protected Area Management in Thailand."
Meng Monyrak	Ministry of Environment	"Protected Area Management of Cambodia."
Nguyen Huu Dzong	Forest Protection Department	"Protected Areas in Vietnam."
Oswald Braken Tisen & Michael Meredith	Forest Protection Department	"Protected Areas in Sarawak, Malaysia: Status Report."

Discussion and Summary

CONFERENCE DINNER

TUESDAY, DECEMBER 7: FIELD EXCURSION

WEDNESDAY, DECEMBER 8: FIELD EXCURSION

WCPA Southeast Asia Regional Steering Committee (by invitation).

THURSDAY, DECEMBER 9

SESSION 4: ROLE OF INTERNATIONAL AGREEMENTS AND TRANS-BOUNDARY CO-OPERATION IN PA MANAGEMENT IN SE ASIA

Co-Chairs: Prof. Koh Kheng Lian and Prof. Adrian Phillips

Prof. Koh Kheng Lian	Asia-Pacific Centre for Environmental Law Singapore	"The Role of ASEAN and international instruments regarding protected area management in SE Asia."
Apichai Sunchindah	ASEAN Secretariat Area Management."	"ASEAN Initiatives in Protected
Nirmalie Pallewatta	IUCN/BMZ Regional Biodiversity Support Programme-Asia	Protected Areas and National Biodiversity Strategies and Action Plans (NBSAPS)
Adrian Phillips	Chair, WCPA	"Benefits beyond Boundaries: Taking a Broader View about the Future of Protected Areas."
Paul Basintal and Datuk Lamri Ali	Sabah Parks, Malaysia	"The Sabah-Philippines Turtle Island Heritage Protected Area (TIHPA)."
Paul Chai and Soewartono	ITTO Project: Sarawak-West Kalimantan	"Bentuang Kerimun-Lanjak Entimau Trans-boundary Biodiversity Conservation Area: Background and Strategies for Collaborative Management"
Rob Tizard	WWF Indochina Program	"The Indochina Sub-Regional Biodiversity Forum: reflections and thoughts for the future."
Prof. Cao Van Sung	Institute of Ecology and Biological Resources	"Trans-boundary Protected Areas between Lao PDR and Vietnam."
Chen Jin, Xiaobao Deng and Quing Yang	Xishuangbanna Tropical Botanical Garden, China	"China-Lao PDR Trans-boundary Biodiversity Management: Status and Strategy."
Siriwat Paowongsa	Royal Forest Department, Thailand	"Marine Protected areas of Thailand"

SESSION 5: PROGRESS TOWARDS COLLABORATIVE MANAGEMENT OF PROTECTED AREA LANDSCAPES

Co-Chairs: Widodo Ramono and Krishna Oli

Kathy MacKinnon	World Bank	"Investing in Biodiversity: A Review of Indonesia's Integrated Conservation"
Kathryn Monk and Deni Purba	EU Leuser Development	"Progress towards Programme Collaborative Management of the Leuser Ecosystem, Sumatra, Indonesia"
Wawan Ridwan	PKPA, Indonesia	"Local Community Empowerment for Strengthening Management of Conservation Areas"
Maraden Purba	Wasur National Park, Irian Jaya, Indonesia	"Community-based Management of Wasur National Park, Irian Jaya"
Oswald Braken Tisen & Michael Meredith	National Parks and Wildlife Office, Sarawak, Malaysia	"Wildlife Conservation and Local Communities in Sarawak, Malaysia."
Ipat Luna	Babilonia Wilner Foundation	"Tenure in Philippine Protected Areas"
Salve Narvadez	Nipa, Inc., Philippines	"Community Participation in Protected Area management: the Conservation of Priority Protected Areas Project Experience"
Esperanza Santos	Nipa, Inc., Philippines	"Community Participation in Resource Management: NIPA's Entry Strategies"
S. Sawathvong, T. Leuangkhamme, and P. Jones	Ministry of Agriculture, Lao PDR	"The Development of Land Use Planning and Land Allocation Approaches and Methods in Protected Areas"

Discussion and Summary

FRIDAY, DECEMBER 10

SESSION 6: WCPA REGIONAL PLANNING

Co-chairs: Adrian Phillips, Jatna Supriatna and Hans Friederich

Effendy Sumardja	Regional Vice Chair for SE Asia	"Update on WCPA Regional Action."
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Discussion of Action Plan

SESSION 7: THE ECONOMICS OF PROTECTED AREAS AND THE ROLE OF ECOTOURISM IN THEIR MANAGEMENT.

Co-Chairs: Peter Hitchcock and Angelita Meniado

Peter Hitchcock	Consultant, World Heritage	"The Economics of Protected Areas and the Role of Ecotourism in their Management."
Nguyen Van Lam, Annalisa Koeman and Le Van Lanh	IUCN, Vietnam	"The Economics of Protected Areas and the Role of Ecotourism in their Management in Vietnam."

Peter Eaton	University of Brunei Darussalam	"Tourism and Protected Areas in the East ASEAN Growth Area."
Patricia Regis	Sabah Ministry of Tourism and Environmental Development.	"Nature-based Tourism: Sabah's Approach to Protected Area Management."
Rili Djohani	TheNature Conservancy, Indonesia Program	"Sustainable Conservation and Financing Opportunities for Komodo National Park."
Sylvia Messina	Philippine Foundation for the Environment	"National Environmental Funds as Mechanism for Management of Protected Areas by Local Communities: the PFE Experience."
Ade Suharso	Kutai National Park, Indonesia	"Kutai National Park and the Contribution of Private Companies."
Retno Suratri	Protected Areas Management, Indonesia	"Partnerships in Protected Area Management in Indonesia."

SESSION 8: THE ROLE OF RESEARCH AND MONITORING IN PROTECTED AREA MANAGEMENT.
Co-Chairs: Dr. Paul Chai and Dr. Sompoad Srikosamatra

Arylne Johnson	Wildlife Conservation Society, Lao PDR	"Use of a conceptual model to design and monitor conservation effectiveness in a Protected Area"
Jatna Supriatna	Conservation International, Indonesia Program	"Biodiversity Conservation Priority Areas for Irian Jaya Province, Indonesia: a Lesson Learned."
Jamili Nais	Sabah Parks	"Community-based Research Project in Protected Areas: Project Ethnobotani Kinabalu, Sabah, Malaysia."
Sivanathan Elaguipillay	Department of Wildlife and National Parks, Malaysia	"Research Activities at Krau Wildlife Reserve, Malaysia."
Ivy L. L. Wong	Malaysian Nature Society	"Endau-Rompin National Park, Malaysia: a Non-Governmental Organisation's participation in Protected Area Management."
Sompoad Srikosomatara	Mahidol University, Bangkok	"Monitoring of Wildlife Populations in Huai Kha Khaeng Wildlife Sanctuary."
Rob Tizard	WWF Indochina Programme	Very Large Mammals in Laos: Protected Areas and Prospects
Pham Nhat	Forestry College Vietnam	Biodiversity in Vietnam and the Needs for the near Future
Hans Friederich	IUCN Regional Aquatic Ecosystems Programme	"IUCN/UNDP/GEF Mekong Wetlands Ecosystem Biodiversity Project"
Summary and discussion		

SATURDAY, DECEMBER 11

SESSION 9: CONTRIBUTIONS OF THE WORLD HERITAGE CONVENTION TO PROTECTED AREA MANAGEMENT

Co-chairs: N. Ishwaran and Chad Ovel

N. Ishwaran	UNESCO, Paris	"Current status and future implementation of the World Heritage Convention in SE Asia."
Han Quinli	UNESCO, Jakarta	"Roles of World Heritage and MAB Biosphere Reserves in Cross-Boundary Conservation Co-operation."
James Mendoza	St. Pauls NP, Palawan, Philippines	"Case Study: St. Pauls Underground River World Heritage Site, Palawan, Philippines."
Dr. Anak Pattanavibool	Royal Forest Department, Thailand	"Conservation and Management of Thailand's Natural World Heritage Site - Thungyai/Huai Kha Kaeng Wildlife Sanctuaries."
Hans Friederich	IUCN Bangkok	"Policy dialogue about Asian Tropical Karst Biodiversity and World Heritage."
Peter Shadie (On behalf of Nancy Foster)	IUCN HQ, Switzerland	"WCPA Marine Strategy"

SESSION 9: DEBRIEFING ON FIELD EXCURSIONS

Co-chairs: GoL Representative(s) and Kathryn Monk

Nirmalie Pallewatta	Group 1 - Netherlands/IUCN Biodiversity Conservation Project
Krishna Oli	Group 2 - Netherlands/IUCN NTFP Project
Cristi Nozawa	Group 3 - GEF FOMACOP project
Sameer Karki	Group 4 - Attapeu/WWF project

Discussion of protected area issues in Lao PDR

SESSION 10: WORKING GROUPS

Co-Chairs: Todd Sigaty and Nguyen Huu Dzong

Group 1: Facilitator: Rapporteurs:	WCPA Regional Action Plan and Inputs to the World Parks Congress 2002 Angie Meriado Peter Shadie and Meng Monyrak
Group 2: Facilitator: Rapporteurs:	Progress towards Collaborative Management: Models, Lessons Learned and Recommendations Le Van Lanh Ipat Luna and Klaus Berkmueller
Group 3: Facilitator: Rapporteurs:	Financing Mechanisms for Protected Areas: Models, Lessons Learned and Recommendations Dr Sunaryo Anurak Theraleertvenai and Colin McQuistan
Group 4: Facilitator: Rapporteurs:	Roles for the Private Sector in Protected Area Management: Models, Lessons Learned and Recommendations Paul Chai Chad Ovel and Esperanza Santos

Group 5:	Role of International Instruments in Supporting Protected Area Management.
Facilitator:	Koh Kheng Lian
Rapporteurs:	Nirmalie Pallewatta and Tuti Hendrawati
Group 6:	Integration of Protected Area System Needs Into Broader National and Regional Policy Processes
Facilitator:	Widodo Ramono
Rapporteurs:	Hans Friederich and Patricia Regis
Group 7:	Identifying Regional Priorities for Marine Protected Area Management.
Facilitator:	Rili Djohani
Rapporteurs:	Paul Basintal and Cristi Nozawa
Group 8:	Training and Capacity Building.
Facilitator:	Ramesh Boonratana
Rapporteurs:	Joe Peters

Reports from Working Groups and discussion

SESSION 11: CLOSING SESSION

Co-Chairs: Adrian Phillips, Widodo Ramono and Seme Samountry

Adrian Phillips	WCPA Chair	Conclusions of Forum
Widodo Ramono	Nature Protection and Conservation, Indonesia	Vote of thanks on behalf of Regional Vice Chair
H.E. Orneau Pommachanh	Governor of Champassak Province	Close of Forum

POST CONFERENCE DINNER

SUNDAY, DECEMBER 11

Departure of most foreign participants for Ubon Ratchathani

Informal discussions relating to Regional Action Plan

Departure of all remaining participants

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