

Review of protected areas and development in the four countries
of the Lower Mekong River Region

Economic Benefits of Protected Areas

**Field Studies in Cambodia,
Lao PDR, Thailand and Vietnam**

Published by: ICEM, Indooroopilly, Queensland, Australia

The PAD review publications have been made possible by funding from Danish Development Cooperation, Swiss Development Cooperation, Australian Aid, Asian Development Bank, United Nations Development Program and the Mekong River Commission.

Copyright: © 2003 International Centre for Environmental Management

Citation: ICEM, 2003. *Field Studies: Economic benefits of protected areas*. Lower Mekong Protected Areas and Development Review, Indooroopilly, Queensland, Australia. 142 + iv pp.

ISBN: 0 9750332 8X

Design and layout: Patricia Halladay

Cover photo: Iris Uyttersprot
Other photographs by Stuart Chape (pp. 14, 27, 45); Chris Flint (pp. 41, 46-63, 115); Paul Insua-Cao (pp. 19, 24, 69-98, 105, 118-136, 141); Shaska Martin (pp.15-18, 21, 30-36); WWF/Ben Hayes (pp.20); and WWF/Tran Viet Duc (pp.111-114, 137, 140)

Printed by: Kimdo Design, Hanoi

Available from: ICEM
70 Blackstone Street,
Indooroopilly, 4068, Queensland,
Australia
Telephone: 61 7 38786191
Fax: 61 7 38786391;
www.icem.com.au
www.mekong-protected-areas.org

The designation of geographical entities in this book, and the presentation of the material, do not imply the expression of any opinion on the part of ICEM or other participating organisations concerning the legal status of any country, territory, or area, or of its authorities, or concerning the delimitation of its frontiers or boundaries.

Reproduction of this publication for educational or other non-commercial purposes is authorised without prior written permission from the copyright holder provided the source is fully acknowledged.

Reproduction of this publication for resale or other commercial purposes is prohibited without prior written permission of the copyright holder.

Review of protected areas and development in the four countries
of the Lower Mekong River Region

Economic Benefits of Protected Areas

Field Studies in Cambodia, Lao PDR, Thailand and Vietnam



The PAD Partnership - 2003

The PAD Partnership

Principal government partners

Royal Government of Cambodia

Department of Nature Conservation and Protection, Ministry of Environment (lead agency)

Department of Forestry and Wildlife, Ministry of Agriculture, Forestry and Fisheries

Department of Fisheries, Ministry of Agriculture, Forestry and Fisheries

Cambodia National Mekong Committee

Government of the Lao People's Democratic Republic

Department of Forestry, Ministry of Agriculture and Forestry (lead agency)

Science, Technology and Environment Agency

National Economic Research Institute, State Planning Committee

Lao National Mekong Committee

Royal Government of Thailand

Royal Forest Department, Ministry of Agriculture and Cooperatives (lead agency)

Office of the National Economic and Social Development Board

Thai National Mekong Committee

Government of the Socialist Republic of Vietnam

Forest Protection Department, Ministry of Agriculture and Rural Development (lead agency)

Department for Science, Education and Environment, Ministry of Planning and Investment

National Environment Agency, Ministry of Science, Technology and the Environment

Department for Fishery Resources Management, Ministry of Fisheries

Vietnam National Mekong Committee

Donors

Danish Development Assistance (DANIDA)

Australian Agency for International Development (AusAID)

Swiss Agency for Development and Cooperation (SDC)

Asian Development Bank (ADB)

International technical support partners

International Centre for Environmental Management (ICEM) (lead partner)

IUCN - The World Conservation Union

United Nations Development Program

Mekong River Commission

Worldwide Fund for Nature

Birdlife International

New South Wales National Parks and Wildlife Service

Tropical Forest Trust

Introduction to the field studies

During the past decade, the size of the protected area estate in the four countries of the Lower Mekong River Region –Cambodia, Lao PDR, Thailand and Vietnam – has increased dramatically. Yet, the natural systems and resources it covers have continued to degrade through various development pressures. The underlying reason for this decline is that protected areas in the region are not regarded as development assets; they fall outside local and national economic planning. They fail to receive appropriate levels of investment to maintain the benefits they provide. The review of protected areas and development in these four countries (the PAD review) was undertaken to better understand the development benefits flowing from protected areas and to define strategies for their integration into the regional economy.

Field studies in the four countries are an important part of the review. They provide an opportunity to investigate the role of PAs in supporting development in selected study areas, identifying key issues and conducting assessments that illustrate principles and information presented in the PAD review lessons paper series. They also provide insights relevant to the four national reports and the regional report in the PAD review.

The methods, approach and results of the field studies are designed to assist policy-makers and planners by demonstrating that PAs are productive economic assets and that there is a need for appropriately managing them so as to realise the greatest benefits for the community.

The field studies have more specific objectives:

- to identify, assess, establish value (where possible) and demonstrate in practical terms the environmental products and services provided by PAs to support development in the study areas;
- to apply and demonstrate rapid assessment methods as a basis for economic appraisal and valuation of the relevant benefits. In field situations, with limited time, research resources and budgets, people responsible for development planning often need quick and easy assessments of the economic roles and values of PAs. Concepts and techniques have been developed in recent years within the discipline of environmental economics that meet this need;
- to review the existing institutional, administrative and funding arrangements for PA management and economic development in the context of socio-economic and spatial planning and natural resource management in the study area. The field studies aim to identify the difficulties that face more effective PA planning and management; and
- to involve national and local PA managers and economic development planners in the process of undertaking the field study as a means of assisting capacity-building in applying economic concepts and assessment methods to achieve integrated planning of PAs and sustainable development.

Cambodia

The field study for Cambodia focuses on the economic benefits provided by four national parks, collectively termed the South-West Cluster Protected Areas: Phnom Bokor, Preah Suramarit Kossamak (Kirirom), Preah Sihanouk (Ream) and Kep. The parks were selected by the Ministry of Environment as field sites because of their conservation significance, accessibility and high level of development pressure. The study investigates the contribution of these four protected areas to local and regional economies in the towns, villages and communes in Sihanoukville, Kampot and Kompong Speu provinces. The field study also explores the following topics:

- the economic value of Ream National Park for local communities;
- the contribution of tourism in Bokor National Park to the Kampot provincial economy; and
- the economic value of Bokor and Kirirom national parks for hydro-electric generation.

Lao PDR

This field study concentrates on the economic benefits yielded by two national biodiversity conservation areas (NBCAs): Nam Et and Phou Loie (NEPL). The study investigates the contribution of these two protected areas to the following:

- surrounding villages, i.e. the household value of forest products in Vienthong District;
- surrounding provinces, including the downstream value of forest watershed catchment protection for energy and agriculture sectors in Houaphan Province;
- the national economy, including the economic potential associated with future options for developing and using NBCA goods and services; and
- the global economy, i.e. the value of forest carbon sequestration and climate services.

Thailand

The field study for Thailand focuses on two provinces, Rayong and Chanthaburi, in the Eastern Region. A profile of the region and provinces is provided, including PAs, other natural resources and socio-economic characteristics. Connections between PAs and economic development are demonstrated using three site-specific examples:

- a river sub-basin containing Khao Chamao-Khao Wong National Park, with a focus on tourism and water supply and quality;
- a near-shore marine environment, involving marine protected areas along the southern boundary of Rayong Province and Koh Samet National Park, with an emphasis on fisheries and tourism; and
- a terrestrial-coastal development (the Kung Krabaen Royal Project), featuring shrimp production, oyster production and fisheries, and its interaction with PAs and the natural environment.

Vietnam

The field study was conducted in the province of Thua Thien Hue in Central Vietnam. Following a regional profile, a number of site-specific cases are used to identify connections between protected areas and the economy, address related protected area management issues, and demonstrate methods of economic appraisal in conditions of limited time, data and research resources. The cases cover the following:

- the potential contribution of the proposed Tam Giang and Cau Hai Lagoon protected area to fishery production. The PA would protect the nursery function of mangroves, seagrass beds and other nursery habitat for shrimp and fish species;
- the Ha Truoi reservoir's contribution to irrigation production, by protecting the watershed function of the intact primary forest in the core protected zone of the Bach Ma NP, and the potential contribution of improved management of the ecological rehabilitation zone within the park;
- the flood protection provided by Special Use Forests and Protection Forests to the major rivers of the province (the O Lau, Bo and Huong), which may ameliorate normal flooding regimes and may have important implications for infrastructure and production in the low-lying areas of the province;
- the sustained contribution to local livelihoods by wildlife and other non-timber forest products (NTFPs) under a managed system of use and zoning in the Phong Dien Nature Reserve;
- the contribution to tourism and local livelihoods that Bach Ma NP will make as tourism services are expanded and the park's tourism assets are further enhanced; and
- the support to water supply treatment plants offered by the Watershed Protection Forest in the Huong River catchment (Huu Trach and Ta Trach Rivers)

The field studies demonstrate that in all four countries PAs make significant contributions to socio-economic development, from specific sites up to the global scale. The studies adopt a common approach in assessing the economic value of these contributions, first tracing the physical and other connections between PAs and economic activities, then deriving estimates of economic values of dependent activities, using methods described in one of the lessons papers prepared as part of the PAD Review (*The Use of Economic Valuation for Protected Area Management in the Lower Mekong*).

In many instances, more robust estimates of economic benefits could be made with additional time and resources, but even these rough estimates provide important information for development planners in setting budget priorities and shaping programs. They should make economic development planners and managers of protected areas more aware of the valuable contribution of PAs as productive assets in the economy. For sound economic as well as ecological reasons, such assets require strong investment and effective, ongoing management and protection.

The PAD review team

The PAD review team is led by Jeremy Carew-Reid with David James heading the team's sub-group on economists (Bruce Aylward, Lucy Emerton and Nicholas Conner). Review country coordinators are Nguyen Thi Yen, Mao Kosal, Piyathip Eawpanich and Emily Hicks. Thematic and country specialists are Kishore Rao, Graham Baines, Kol Vathana; Tran Quoc Bao, Chanthakoumane Savanh, Charlie Firth, Robert MacKinnon, Dick Watling, Andrew Mittelman, Ross Hughes, Craig Leisher, John Parr, Shaska Martin, Scott Poynton and Paul Insua Cao. Sector specialists on the team also included Jason Morris, Guy Marris, David Lamb, Don Gilmore, Gordon Claridge and Alison Allcock.

In all four field studies, official agencies, organisations and research personnel helped conduct the research and report the results. These inter-sectoral field study task forces demonstrated the approach that needs to be taken to the main clusters of protected areas throughout the four countries. Detailed economic information on the close connections between PAs and development should be fed into the annual (and longer term) budget process both within each sector and nationally if PA benefits are to be maintained and enhanced.

The Cambodia field study was carried out in Phnom Penh by Ros Seilava (Ministry of Economy and Finance), Heng Pearith (Cambodia National Mekong Committee), Hang Chuon Naron (Ministry of Economy and Finance), Kol Vathana (Ministry of Environment) and Mao Kosal (PAD review national coordinator) and Lucy Emerton (IUCN), with important inputs from a range of local and central government sector experts.

The field study in Lao PDR was carried out by Oudamsack Philavong (National Mekong Committee Secretariat), Kaisorn Thanthatap (Environmental Research Institute of the Science, Technology and Environment Agency), Chanthakoumane Savanh (Department of Forest Resource Conservation, Ministry of Agriculture and Forestry), Chris Flint (Nam Et-Phou Loei Integrated Conservation and Development Project), Emily Hicks (PAD review national coordinator) and Lucy Emerton (IUCN). Information obtained from the NEPL ICAD Project formed a key part of this study, including a community livelihoods analysis of NBCA villages in Viengthong District carried out by Gregoire Schlemmer. The field study also relied heavily on data from a socio-economic survey carried out by Viengthong District Office in June 2001.

The field study in Thailand was carried out by Piti Kantangkul (Faculty of Economics, Kasetsart University), Sapon Naruchai Kusol, Supavadee Meenapa, Atthakorn Suntornwat and Alisara Narksakun (Graduate students from Kasetsart University Faculty of Economics), Piyathip Eawpanich (PAD review national coordinator) and David James (Senior Economist for the PA Review). Personnel from various local and central government agencies actively participated in field study visits and contributed to the field study.

The Vietnam field study was carried out by Nguyen The Chinh (National Economics University), Tran Quoc Bao (Forest Protection Department, Ministry of Agriculture and Forests), Nguyen Thi Yen (PAD review national coordinator), Mai Ky Vinh (WWF), and Bruce Aylward (PAD review team). Detailed data for the case studies was provided by the District FPD and Bach Ma National Park office, the Department of Fishery Office, Hue Water Supply and Drainage Company and the provincial office for the Steering Committee of Flood and Storm Resistance. For the Phong Dien Nature Reserve case study a partnership with Birdlife International, WWF's Indochina Program and the PAD Review team involved the production of a more comprehensive report by FIPI and FPD staff led by Le Trong Trai.

The governments of Cambodia, Lao PDR, Thailand and Vietnam conducted the Review of Protected Areas and Development in a broad partnership with financial support from the governments of Australia (AusAID), Denmark (DANIDA) and Switzerland (SDC), the Asian Development Bank and the Mekong River Commission. Technical support is provided by ICEM – The International Centre for Environmental Management (ICEM), IUCN – the World Conservation Union, World Wide Fund for Nature (WWF), Birdlife International, United Nations Development Program, New South Wales National Parks and Wildlife Service and the Tropical Forest Trust. The Mekong River Commission is the technical partner at the regional level.