

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

Lessons learned in Cambodia, Lao PDR, Thailand and Vietnam

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1. Introduction

1.1 Background

A first step in the PAD national reviews was to look back at the past decade or more of experience in the four countries with protected areas and their links to development. The goal of this work was to define the key lessons learned in terms of achievements and remaining challenges, which could provide the agenda for discussion and strategic thinking through the review process. Background papers were prepared and round table meetings involving all key sectors and levels of government facilitated this national analysis of lessons. The four chapters in these pages are the result of this assessment and debate. They provided the basis for the more detailed work by inter agency PAD core groups on the national reports which set out frameworks of policy options for action by the four governments.

The focus of the PAD Review is on the protected area – development interface. It is not an evaluation of PA management and planning except where important components of it influence the evolving relationship between development and conservation objectives. As pointed out in a number of the following chapters, they look out from the PA boundaries and explore linkages with the wider development landscape rather than just looking inward at the detail of conservation management requirements.

From a political and economic point of view, Thailand stands apart from its three neighbours in important ways. It is around six times more developed in terms of GNP/capita, has a thriving private sector and now a relatively strong democratic political system. It is classified as a Newly Industrialised Country with the industry sector making up well over 40 percent of GDP. Agriculture contributes a modest 11 percent, while in Lao PDR and Cambodia it is over 50 percent with Vietnam still high at one quarter of GDP (Table 1). Yet, the challenges Thailand faces in managing its protected areas are consistent with those identified in the other countries. All have largely rural populations with a concentration of poor communities increasingly dependent on forest products and other natural resources found in protected areas. All have rapidly growing economies with sectors, such as energy, tourism, agriculture, fisheries and industry drawing on the services and products provided by protected areas.

Table 1. Lower Mekong Countries: Key socio-economic indicators

	HDI 2002 ¹	Population 2001 ('000)	Population growth rate 2001-2 (%)	Population density people/km ²	GDP/capita 2002 US\$ pa	Agriculture % of GDP	Industry % of GDP
Cambodia	130	12,265	2.5	65	290	51	17
Lao PDR	143	5,403	2.5	22	310	53	23
Thailand	70	62,900	0.9	120	2,160	11	41
Vietnam	109	79,526	1.35	235	367	26	33

Sources: ADB, *Key indicators 2002*; UNDP, *2002 Human Development Report*; World Bank, *2002, World Development Indicators*

¹ The Human Development Index is a United Nation's measure of development combining life expectancy, education achievement and real income. The Index ranks the development status of 174 countries. Cambodia, for example, is ranked 130th in development achievement of the 174 countries.

1.2 The national protected area systems

The region stands out for its commitment to protected areas as a form of land tenure. Cambodia, Lao PDR and Thailand have national PA systems each covering over 21 percent of their territory and a large part of their remaining natural forests and major watersheds. These are some of the most extensive PA systems in the world as a proportion of national area – and they are expanding, with the three countries aiming to have 25 percent under protected areas over the next five years. Vietnam has a smaller, though by global standards still significant, national system covering 8 percent of the country, but about to expand by another 5 percent if proposed additional terrestrial and marine areas are included. Their systems embrace areas established by central government and an increasing range of PAs set up at local level. The growth of local PA initiatives is a strong trend in Lao PDR and Vietnam and to pick up rapidly in Cambodia once regulations are in place to guide and facilitate the process.

There are a number of important underlying reasons for this large scale adoption of different types of protected areas as a way of managing areas of land, sea and fresh water. Key driving forces worked as follows:

1. The main growth in PA systems took place during the 1990's - a period of widespread, poorly controlled and inequitable natural resource exploitation leading to community and political concern and calls for action.
2. Protected areas were an internationally accepted and widely tested form of tenure which provided an "off the shelf" model to impose tighter control over the use of remaining natural systems.
3. The systems evolved from earlier forms of forest reserves and so existing staff capacities and institutions could readily take on PA functions without substantial change in structures and budgetary commitments.
4. The international community was prepared to provide technical and financial support to their establishment and management.

Each country has its own distinctive PA history with these common themes. In Cambodia and Lao PDR, their "modern" PA systems were born in the early 1990's with 18 and 14 percent of the countries set aside respectively based on systematic scientific appraisals supported by IUCN. In Thailand, the development of the PA system has been a more gradual and consistent process over many decades. In Vietnam, with the greatest number of people and population densities, the system did not really take off until the late 1980s with the establishment of large numbers of forest reserves.

1.3 Key trends in governance affecting protected areas

While the foundations of the current PA systems were being set in place, four fields of governance reform have been changing the way PAs are planned and managed. They are decentralisation, "democratisation" as it is called in Vietnam (i.e. providing more opportunities for non-government groups and individuals to influence how natural resources are used), institutional innovation and reinforcing the rule of law.

Decentralisation is a major force in governance reform in the four countries. It entails delegating greater responsibility and authority for development decisions to local government. It involves transferring to local levels certain powers over budget management and even potential for local taxation and raising revenues. Combined with expanding legal frameworks for establishing tenure, ownership and rights of access to land and natural resources, these reforms shift the weight of development planning and decision making closer to where resources are used. This trend in governance has far reaching implications for PA institutional arrangements, planning and management and the potential for innovative financing mechanisms and revenue-raising associated with specific protected areas. It also has the effect of more clearly distinguishing between government and private sector responsibilities and obligations at the local level.

Democratisation has three important elements - more transparent and open government; easier access to information (e.g. in PA planning processes, environmental assessment and State of Environment Reporting); and community participation in planning and management. All three linked aspects of governance are being promoted in the lower Mekong countries through laws and policies but the expanding role for communities and non government organisations is the driving force for more openness and information sharing. Community participation, co-management and equity in natural resource use are urgent and rapidly evolving issues confronting PA managers in the region who have more experience in relatively non-participatory, closed and centralised approaches.

New natural resource management institutions. Over the past decade, the four countries have each gone through one or two waves of major reform to the organisations managing natural resources and protected areas, most recently in Thailand and Vietnam which have new amalgamated ministries of natural resources and environment. Agencies have been set up at central and local levels bringing a reorientation and consolidation of staffing and budgets to focus on new priorities and approaches and, it is hoped, greater cross-sectoral integration.

The rule of law. The institutional change has been accompanied by major law reform. New laws are being introduced to:

- clarify tenure and land use rights;
- delegate authority for detailed planning and investment decisions;
- introduce integrated planning for natural resource regions such as river basins (in Thailand and Vietnam);
- develop systems for the resolutions of conflicts in land and natural resource use; and,
- provide national legal frameworks for protected areas.

Cambodia and Thailand are drafting national PA laws and, following the introduction of a raft of PA regulations, Vietnam and Lao PDR are considering doing the same. As a first step, the government in Vietnam is now finalising a National Protected Areas Strategy. This is a critical period for PA policy development in all four countries including devolved management authority and structures, greater emphasis on outreach and involvement of local communities and governments, and more clarity in management controls, procedures and rights under the law.

A key challenge has been enforcement of new legal regimes, particularly in controlling the use of protected areas and the regions surrounding them. This remains a critical issue as the development and population pressures mount.

1.4 Development sectors influencing protected area use

In the following chapters, the assessment of lessons explores the links between PAs and the main development forces that have influenced their use. The relationship has been most pronounced in the conventional sectors of forestry, energy, water management, agriculture and tourism, and where entrepreneurs have exploited and marketed PA products. Subsistence uses by local communities living in and around PAs, while extremely important, have not had the same level of impact as commercial activities involving trade and distant markets. In most cases PA products and services are regarded as free. Laws in the four countries prohibiting their use have not encouraged agreements promoting sustainable management practices and the development of fair prices and markets.

Forestry and NTFP trade

By far the most significant economic activity affecting PAs over the past decade has been the extraction of timber in and around them. Logging within PAs was illegal but has continued none the less. The impact on forest systems became so dramatic and widespread that Thailand and Vietnam imposed a moratorium on the logging of native forest and Cambodia cancelled all forest concessions pending adequate environmental plans. While welcome, the moratoriums were not wholly effective and led to more intensive logging effort in Lao PDR and Cambodia. The result in the region was a major degradation in the forest estate overall in terms of coverage and quality, and an eating away of forests along PA boundaries and in expanding pockets within PAs. In the worst cases, natural systems under protection were significantly reduced in size and complexity, and areas not protected but of international biodiversity importance were lost. On the positive side, there is no doubt that the legal designation of PAs meant that forests within them ended the decade in much better condition than most of those outside. In other words, even in the absence of PA staff to patrol and enforce regulations within boundaries, the protection tenure had a significant restraining effect on illegal activities – at least while resources outside satisfied demand.

The transition from purely subsistence use of PA non timber forest products to their wholesale export to domestic and increasingly, to distant markets represents the beginning of a downward spiral in forest condition, especially in areas close to international borders. Those products include, for example, medicinal plants, orchids, resins and an array of wildlife to feed markets in China, Vietnam, Thailand and beyond. The trade has led to the "empty forest syndrome" where a one way process of degradation in many areas adjoining the four countries is set in train. This loss has far reaching negative impacts on local economies and on the capacity of PAs to contribute to development.

Energy

The energy sector is both a major threat and opportunity to sustaining the national PA systems. Fuelwood remains the primary energy source in Cambodia, Lao PDR and Vietnam, and demand in the former two countries will continue to increase before alternatives become available. In Thailand, already a large-scale shift from fuelwood to electricity and natural gas has occurred. Unless joint management regimes are introduced for sustainable use of fuelwood within PAs, gathering will continue to have negative and uncontrollable impacts. Recently, the Cambodia Prime Minister announced a commitment to set aside 10 to 30 percent of each protected area for joint management arrangements of this kind.

Hydropower is a growing source of electricity in the region increasingly linked to protected areas. Cambodia's first two schemes, one on tap and another in advanced feasibility stage, fall within national parks, and at least eleven more associated with PAs are in the pipeline in Vietnam, Cambodia and Lao PDR. In 2002, Vietnam commenced development of a large scheme within the Na Hang Nature Reserve, which protects primates and other biodiversity of international significance. Lao PDR is dependent on Thailand as the main customer of its hydropower, so the four countries and their national PA systems are closely linked in strategies for hydropower development.

These projects have extensive direct effects on PAs and multiplier impacts through subsequent development that they generate. Impacts can be upstream or downstream and cross international borders as in the case of the Se San River project in the Central Highlands of Vietnam which local communities in Cambodia claim has polluted waterways and devastated fish populations.

Yet, both fuelwood and hydropower projects also point the way to future PA-development linkages that bring conservation and economic benefits. Lao PDR has piloted hydropower levies which support the management of protected areas affected and various projects have demonstrated the mutual benefits to be gained through fuelwood harvesting on a sustainable basis and jointly managed by local communities and PA authorities.

Agriculture and water management

All protected areas in the region have suffered from various forms of encroachment, many through subsistence, small scale market gardening and commercial agricultural activity. In Cambodia, for example, commercial agricultural concessions have been allocated on lands falling within Bokor, Ream and Kep National Parks, in apparent ignorance of the exact boundary location. Most agricultural encroachment on PAs throughout the country is associated with subsistence and small scale market gardens and often follows forest clearing for timber. With few exceptions, encroachment has effectively reduced the size of PAs in Cambodia by around 5 percent with the most serious cases such as Ream and Kep National Parks, closer to 25 percent. In Cambodia, Thailand and Vietnam, migration and resettlement programs have been a major cause of clearing and subsequent agricultural land uses.

At the same time, communities and agriculture development agencies have appreciated the benefits flowing from PAs to the sector. Irrigation systems including dams and canals have been constructed with their regular and clean water source in PAs - in Bach Ma National Park and Na Hang Nature Reserve in Vietnam, for example, where the dams within the park will serve both irrigation and hydropower schemes. In Thailand, the 17 PAs within the Western Forest Complex provide irrigated water to surrounding agricultural lands which supply produce to Bangkok.

During the 1990's, forests were the main focus of debate and policy action in the natural resources field. More recently the closely linked issue of water management has begun to receive attention with PAs taking on the key role in safeguarding water catchments. Cambodia, Thailand and Vietnam have suffered serious and repeated droughts impacting on agricultural, fisheries and industrial production. Forest loss and poor watershed management practices have reduced water quality and natural water regulation and supply, and led to sedimentation of irrigation and power dams. Those trends have been a central argument for the expansion of national PA systems and a key motivating force for the establishment of PAs at local level. Protected area forest coverage reflects their growing importance in water management. In Cambodia and Lao PDR, PAs now include around 40 percent of the remaining natural forests, and in Thailand 73 percent. The figures are even higher for coverage of the most important watersheds. In Thailand it reaches around 85 percent and in Cambodia, well over 50 percent.

Tourism

Tourism to the lower Mekong countries grew at around 12 percent each year during the past decade with more than 12 million international arrivals in the year 2000. Nature based tourism is now the fastest growing category within the sector. There is an intimate and growing relationship between tourism development, protected areas management and community development. Yet, often the nature and scale of tourism development has damaged the services PAs provide to the sector and left local communities more dependent on PA natural resources. As is the case for other sectors benefiting from PAs, there has been little investment by users in maintaining and enhancing those benefits. A positive sign in each country is increasing collaboration between tourism and PA management authorities. This takes the form of joint tourism – protected areas strategies at national level of the kind being discussed in Cambodia, permanent tourism staff at protected areas now common in Thailand and Vietnam, and tourism development strategies including expanded interpretation facilities for specific protected areas.

1.5 Investment in protected areas

Government budgets for protected area management have increased since the mid 1990's but remain very small considering the large areas involved and the contributions they have made to local and national development. For example, in 2001 protected areas in Cambodia received 0.18 percent of national expenditure. In Vietnam, the percentage of GDP allocated to PA financing has remained relatively stable over the 5 years to 2001 at approximately 0.13 percent of GDP and 0.5 percent of total government budget (IUCN 2002).

There are a number of reasons for this low level of commitment including the common views that:

- protected areas manage themselves and don't require much investment;
- they are an unproductive use of resources and do not contribute to the economy;
- they lock up resources needed by local communities; and,
- they are being held in reserve for economic developments such as hydropower schemes, transport routes and tourism projects.

Underlying these views is the lack of information on the development values of protected areas. PA managers have not generated or used the kind of information that justifies to Finance Ministries the need for increased expenditure against competing claims from "economic" sectors. In Lao PDR, Thailand and Vietnam, PA budgets have been a small part of the allocation to the forestry sector where production forests have received the lion's share of government support and there has been little incentive to reorient financial flows to unproductive activities. In Cambodia, PA management was given to the new Ministry of Environment, which has had to struggle to justify small increases to its budget overall given the nation's least developed status. In each situation, PA authorities have not been able to show revenue flowing in, so receive little priority when it comes to national expenditure.

1.6 Conclusions

A number of powerful conclusions can be drawn from the assessments of lessons learned in the evolving relationship between development and national PA systems in the lower Mekong region. They relate primarily to how PA managers and others perceive these areas functioning within the wider development landscape.

For most of the past 15 years, PAs have been viewed as areas isolated and locked away from human use for the sake of conservation, a concept which appeared to have little relevance to the massive development challenges facing the four countries. To this day, the legal frameworks governing protected areas prohibit extractive uses. In practice, communities have continued to take what they need from PAs and governments have overridden PA restrictions when faced with choices between conservation and economic developments such as roads, power and irrigation schemes and agricultural expansion. The extraordinary political commitment to establishing protected areas has not been matched by the kind of legal authority and financing needed to safeguard them from economic and development interests within and outside government.

And this is understandable, given that the tools and capacities were not available to show what was at stake in development terms when PA values were degraded. Towards the end of the period, studies commenced which began to evaluate PAs from an economic perspective. They showed that many of the sectors, which are foundations of national and local economies received services and products from PAs and that their economic worth was very significant indeed. The PAD Review field studies in each of the four countries had similar findings (ICEM 2003). That first inkling of PAs in the region as important economic assets to be managed and conserved for their development contributions has opened the way to a fundamental reorientation of how they should be planned and managed. The national PAD lessons suggest the following directions for change:

1. All PAs need to have their values expressed in economic terms which can be communicated in annual and long term budget submissions. Valuations should be part of PA management plans and any environmental assessment associated with development proposals affecting PAs.
2. Each sector needs to be made aware of the development benefits they do or might receive from PAs. Those benefits and their maintenance should be recognised in sector plans and budgets.
3. A more systematic application of the beneficiary or user pays approach in all sectors is needed requiring supporting economic policies and instruments. Pilots already carried out, for example, the Lao

hydropower levies, should be applied consistently and replicated in neighbouring countries.

4. Users of PAs need to become involved in their management and protection. New collaborative management approaches will be required relating to specific areas, resources and rights of access and to the services and products PAs provide.
5. Underlying all these new directions, is the need to build the capacity, skills and budgets of PA managers. Strong PA authorities are essential to the kind of innovation and flexibility required if PA systems are to survive. PA managers must be given the authority, confidence and resources to build working relationships with development sectors and local communities.

The chapters which follow provide a strong indication that, in future, the importance of protected areas will be measured in terms of their contribution to national and local economies. They will come under particularly sharp appraisal for their contributions to poverty alleviation. Finally, they will be assessed against the priorities which have been adopted for governance reform. All these new indicators of success in PA planning and management will require a re-expression of conservation needs in terms of the development benefits they bring. The goal would be to create a broad alliance of support for the PA systems and to open up new sources of financing leading to a better appreciation and protected of national biodiversity heritage.

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