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Promoting Transformations
by Linking Nature, Wealth and Power

Case Study:

Tmatboey Community-based Ecotourism Project,

Cambodia

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TransLinks is a 5-year Leader with Associates cooperative agreement that has been funded by the United States Agency for International Development (USAID) to further the objective of increasing social, economic and environmental benefits through sustainable natural resource management. This new partnership of the Wildlife Conservation Society (lead organization), the Earth Institute of Columbia University, Enterprise Works/VITA, Forest Trends, the Land Tenure Center of the University of Wisconsin, and USAID is designed to support income growth of the rural poor through conservation and sustainable use of the natural resource base upon which their livelihoods depend.

The program is organized around four core activities that will be implemented in overlapping phases over the life of the program. These are:

1. **Knowledge building** including an initial review, synthesis and dissemination of current knowledge, and applied comparative research in a number of different field locations to help fill gaps in our knowledge;
2. **Identification and development of diagnostic and decision support tools** that will help us better understand the positive, negative or neutral relationships among natural resource conservation, natural resource governance and alleviation of rural poverty;
3. **Cross-partner skill exchange** to better enable planning, implementing and adaptively managing projects and programs in ways that maximize synergies among good governance, conservation and wealth creation; and
4. **Global dissemination** of knowledge, tools and best practices for promoting wealth creation of the rural poor, environmental governance and resource conservation.

Over the 5-year life of the program, TransLinks aims to develop a coherent, compelling and, most importantly, useful corpus of information about the value of, and approaches to, integrating Nature, Wealth and Power. To do this, TransLinks is structuring the work around two core issues – 1) payments for ecosystem services and 2) property rights and resource tenure.

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Case Study

Tmatboey Community-based Ecotourism Project, Cambodia

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Ministry of Environment, Cambodia
and WCS Cambodia Program

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Cover photo: Sam Veasna, © E. Briggs

Acronyms

ATT	Ang Trapeang Thmor Sarus Crane Reserve
CPA	Community Protected Area
DNCP	Department of Nature Conservation and Protection of the Ministry of Environment
GT-CR	Globally Threatened – Critical (IUCN red-list)
GT-EN	Globally Threatened – Endangered (IUCN red-list)
GT-VU	Globally Threatened – Vulnerable (IUCN red-list)
IUCN	International Union for Conservation of Nature
IFBAs	Integrated Farming and Biodiversity Areas
MAFF	Ministry of Agriculture, Forestry and Fisheries
MoE	Ministry of Environment
NGO	Non-Governmental Organisation
NT	Near-threatened
PA	Protected Area
SVC	Sam Veasna Center for Wildlife Conservation
WCS	Wildlife Conservation Society

Executive Summary and Lessons Learned

The Northern Plains of Cambodia is an area of exceptional importance for biodiversity conservation due to the unique assemblage of endangered wildlife found in the deciduous dipterocarp forests. Local people live in small scattered villages and depend heavily on rain-fed rice field agriculture and natural resources for their livelihoods.

Two of the wildlife species present – the Giant and White-shouldered Ibises – are amongst the rarest birds in the world and are highly sought after by international bird-watchers and naturalists. Combined with the Northern Plains' accessibility from Cambodia's main tourism destination of Angkor, at Siem Reap, this makes the area of high potential for ecotourism. Encouraged by a high initial level of demand, WCS has supported a community-based ecotourism project since 2004 at Tmatboey village in Kulen Promtep Wildlife Sanctuary.

The Tmatboey Ibis Project aims to conserve the globally threatened large waterbirds found at Tmatboey, using the ibises as 'flagships', by establishing a local community-based tourism enterprise that directly links revenue received to long-term species conservation. This link is provided by the agreement between the government, WCS and the community. All site-based tourism services are organised by the community, with facilitation and training provided by WCS and local NGO partners. Tourist visits directly demonstrate the value of wildlife to the villagers both through donations to a development fund and through individual payments for services, such as food, drink, local guides, cooks and accommodation. This has encouraged the villagers to view wildlife as an important resource that should be conserved. As a consequence, the community has become a partner in nature conservation and has begun to actively protect the ibis species.

The Tmatboey Ibis Project has been remarkably successful from a tourism, community development and wildlife conservation perspective.

The project has achieved a number of successes with respect to tourism:

- Bookings are increasing by 36% each year.
- The site has proved very popular and is now promoted by a number of specialist birdwatching travel agencies in the UK, USA, Europe and Australia. It seems likely that demand will increase in the short-term. Developing long-term relationships and even contracts with these agencies helps to guarantee

bookings. These agencies tend to be higher paying, have larger groups and are easier to schedule than walk-in or customized group bookings.

- Competent guides are available and have been trained by the Sam Veasna Center (a Cambodian NGO located in Siem Reap).
- Tourists' presence is sufficient by itself to reduce illegal activities and pressures on the birds (as is the case in other countries).
- A continual flow of skilled birdwatchers has yielded valuable ecological data on both ibis species, which has proved crucial for management.
- Transferring the responsibility of dealing with tourists to a local partner (the SVC) was more efficient and reduced WCS's legal exposure in case of accidents.
- SVC is soon expected to make a profit from the tourism business, ensuring that its staff can continue to provide long-term support to community-based conservation enterprises and site-based conservation.
- Lessons learned from the project so far have allowed SVC to recommend further improvements, such as: running more efficient scheduled tours during the high season, when demand increases; and running tours for larger groups, which are more profitable.

In terms of village economic development results have been mixed, but generally positive:

- Tourists provided >$3,500 to the village fund in the 2007-08 season. This money has been used to fund community development projects, including agricultural support, road improvements and the construction of fish ponds and new wells.
- Over 90 individuals (10% of village inhabitants) were involved in providing tourism services in the 2007-08 season, of which 33 individuals were employed on a part-time permanent basis as guides, cooks, guesthouse managers, etc. These individuals each received an average of $20/month (for 5-6 months), and the community received >$8,000 total in service payments. This income is significant in a remote forest community with few other sources of cash income.
- The community committee decides who provides tourism services, which can lead to jealousy. The committee is learning how to respond to these claims and to improve awareness within the local community. It is not clear to what extent benefits should operate at the community scale versus the individual (and what impact this has on individual motivations).

- The community can increase the revenue received by increasing the number and quality of services provided (thereby allowing them to raise prices). This requires significant investment in capacity-building by WCS and SVC. For example, the village has now built a new guesthouse complex, funded mainly by WCS (>$40,000) but with some contributions (~$2,000) from villagers. The new guesthouse will allow the villagers to charge higher prices and capture greater revenue from tourism.
- Villagers are clearly proud that foreign tourists are visiting and staying in their community and understand the benefits they have received. They are particularly keen on the visitors being able to see 'their' birds (from a survey conducted by SVC in 2007). As yet there have been no instances of undesirable side-effects (begging, stealing, etc.).

For conservation, results have also been mixed, but generally positive:

- There have been major decreases in hunting and the wild bird trade. Villagers clearly understand that key species are of tourism value and should be protected. Initially, WCS invested heavily in increasing local awareness; the committee now undertakes its own awareness-raising sessions.
- The population of nesting White-shouldered Ibis has increased from a single pair in 2002 to the current 4-6 pairs Populations of other large waterbirds, such as Giant Ibises, Adjutants and Sarus Cranes have stabilized or are increasing.
- However, villagers have not given up land conversion, because agriculture is more lucrative than tourism or hunting. As villagers gain more confidence in the tourism operation, and as revenues continue to increase, more people are expected to limit subsistence farming and make a livelihood switch to tourism (i.e., treat tourism as alternative rather than additive income). The problem of land clearance has been locally managed by reaching land boundary agreements with the government that include sufficient land for agricultural and residential expansion. The committee is also responsible for allocation of this reserve land. However, some land encroachment is occurring outside these boundaries. This is a difficult question: should villagers be compensated for not participating in an illegal activity? Currently WCS's approach is that they should not. Compensating for not doing an illegal activity would also remove ownership of the wildlife and forests from the local community, which is one of the key successes of the program so far.
- Monitoring is achieved relatively simply, through a single paid local ranger who regularly counts the number of nesting ibis

pairs and provides information on wetland encroachment and hunting incidences.

- Potential to replicate is low: tourists only need to see one bird of each species in order to be satisfied – developing new sites would require additional attractions (e.g., new or unique species).

Critically Endangered Bird Species in the Northern Plains of Cambodia

The deciduous dipterocarp forests that once spread across much of Indochina and Thailand were formerly home to the greatest aggregation of large mammals and waterbirds that existed outside the savannas of Africa. The deciduous dipterocarp forests have largely disappeared from Thailand and Vietnam, due to rapid expansion of rural populations and widespread conversion to intensified agriculture. The Northern and Eastern Plains of Cambodia form the largest remaining contiguous block of this unique and critically important habitat.

The Northern Plains is one of the poorest and most remote regions in Cambodia, located in Preah Vihear province, to the northwest of Siem Reap and the temples at Angkor, and along the country's northern border with Thailand and Laos. Much of the province is still covered in intact habitat – extensive areas of deciduous dipterocarp forest, with scattered seasonal wetlands (called trapeangs in Khmer) and large grasslands (veals), which flood during part of the wet season (June-October). Dense evergreen forest is found along water-courses and in the more fertile soils of the upland regions.

The first biological surveys of the Northern Plains in the late 1990s, after the cessation of conflict, revealed the continued presence of an assemblage of threatened species unparalleled anywhere in the world, and perhaps the richest remaining example of deciduous dipterocarp forest avifauna. The area is either a last refuge for, or maintains a key population of, 15 Globally Threatened and 6 Near-threatened bird species, including five listed as Critically Endangered on the IUCN Red List. Two of these are the Giant Ibis *Pseudibis gigantea*, for which the Northern Plains supports probably the largest remaining population, and the White-shouldered Ibis *Pseudibis davisoni*, for which the area contains one of the only known nesting sites in Asia. These two ibises are amongst the most endangered bird species in the world (Collar et al. 2004).

The Northern Plains is of global importance for the conservation of

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White-Shouldered Ibis

Asian vultures (White-rumped Vulture *Gyps bengalensis*, Slender-billed Vulture *Gyps tenuirostris* and Red-necked Vulture *Sarcogyps calvus*). In the Indian Subcontinent, populations of these three species have declined by over 96% since 1992 (Prakash et al. 2007) and are now facing imminent extinction. All three species are listed as Critically Endangered by the IUCN, the highest level of global threat status. Research has revealed that these declines are caused by livestock owners' use of the drug diclofenac, a non-steroidal anti-inflammatory drug (NSAID) similar to ibuprofen or Tylenol (Oaks et al. 2004). The drug is so toxic to vultures that even small quantities cause rapid death by renal failure. Outside of the Indian subcontinent remnant populations of all three species exist in Cambodia, where diclofenac is not used, and Myanmar. The Northern Plains populations are therefore considered to be irreplaceably globally significant, representing one of the best opportunities for survival of these species in the wild.

The landscape also supports a breeding population of Greater Adjutant Storks *Leptoptilus dubius* (GT-EN) – the only other nesting site in Southeast Asia is at Prek Toal on the Tonle Sap – in addition to White-winged Ducks *Cairina scutulata* (GT-EN), Lesser Adjutants *Leptoptilus javanicus* (GT-VU), Oriental Darters *Anhinga melanogaster* (NT), Black-necked Storks *Ephippiorhynchus asiaticus* (NT), Woolly-necked Storks *Ciconia episcopus* and Sarus Cranes *Grus antigone* (GT-VU). The latter is well-known for its dry season aggregations, particularly at Ang Trapeang Thmor (ATT); however, during the wet season it nests in the Northern and Eastern Plains. With breeding populations of 9 Globally Threatened

large bird species, the Northern Plains are of exceptional importance for wildlife conservation.

The Giant Ibis is Cambodia's national bird, a must-see species for avid bird-watchers, and, because of its endangered status, an important target for conservation investment. The Giant Ibis was only known from a handful of previous sightings. In 2000, surveys by WCS revealed its continued existence in the Northern Plains. These last breeding populations are now known to be widespread in the area, with 30 pairs monitored in 2007/2008. In 2003, WCS staff discovered a small breeding population (now 6 pairs) of a second Critically Endangered Ibis species, the White-shouldered Ibis, at Tmatboey village in Kulen Promtep Wildlife Sanctuary in the Northern Plains. At the time, this was the only known breeding site for this species in mainland Asia.

Engaging Communities in Conservation: Community-based Ecotourism as an Example

Effective protected areas (PAs) are often viewed as the cornerstone of conservation (Bruner et al. 2001). Creating and maintaining effective PAs, however, poses considerable challenges, including financing (Wilkie et al. 2001), management capacity and engagement of local communities in conservation. Though in some countries protected areas (or private/NGO wildlife refuges) are well-funded, a great many PAs in developing countries lack sufficient funding ('paper parks') and are home to substantial human populations whose resource access and use rights may or may not be recognised. Bruner et al. (2001) showed that seventy per cent of a non-random sample of PAs contained people, and the majority (54%) contested the ownership of some percentage of the PA area.

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Environmental education

Kulen Promtep Wildlife Sanctuary (KPWS) conforms to this latter scenario and is typical of many Cambodian PAs. At 4,025km^2 it

is the largest protected area in Indochina. However, it was only established in 1993 and it contains 35 legal villages (>20,000 people) in addition to several illegal settlements[1] founded since 2001. Local people depend on the forest, wildlife and fishery resources for their livelihoods, and either farm small permanent rice paddies in lowland areas that seasonally flood or practice upland shifting cultivation. In 2004, the park had only 25 rangers and a director, who were paid between US$12.50 and US$40 a month. These few park staff had no transportation or infrastructure to support management activities, so the sanctuary was effectively a 'paper park'. The high biodiversity value of KPWS, and high level of forest cover (around 92%) is a result of its inaccessibility and 25 years of conflict and civil war, not active protection. Although Cambodia has a relatively well-developed legal framework for protected areas, which includes zonation of PAs for core conservation, community development and sustainable activities (such as ecotourism or forest product management), implementation has been very limited. Hunting, habitat destruction and human disturbance – by residents and, particularly, by temporary or permanent immigrants – are the major and urgent threats to biodiversity conservation. Conservation strategies in KPWS must therefore explicitly consider the needs of people living in the sanctuary and how to engage them in conservation efforts.

Past Efforts to Engage Local People in Protected Area Management

Approaches to engaging communities in conservation have a mixed history. In the 1980s and '90s, Integrated Conservation and Development Projects (ICDPs) were a popular methodology for combining the needs of local communities with conservation, both inside and outside PAs. However, there is very little evidence of conservation success (Wells et al. 1999; Chape 2001; Ferraro and Kiss 2002). Specific problems found in many community-based conservation projects include (Kiss 1999):

- Linkages between project activities and biodiversity conservation are often weak and are typically dependent on subsidies, so are seldom sustained when donor funding ends and the project closes.
- Many projects aim to help communities develop alternatives for livelihood necessities (food, fuel, building materials, income etc.) to reduce their dependency on unsustainable exploitation of biological resources. However, unless this is linked to restrictions on access to and use of these resources, most people will treat the alternatives as an addition to their livelihoods

[1] Illegal settlements are not recognised by the Ministry of Interior as official villages.

rather than a substitute for wild harvested goods.

- Projects usually have two objectives: biodiversity conservation and improving local livelihoods. The imperative to generate economic returns in the short term often undermines the desire to conserve plant and animal populations over the long term.
- Unless explicit and clear links are maintained and understood by all actors at every step of the project, ICDP activities tend to favor one objective over the other (i.e., either livelihood improvements or biodiversity conservation) and rarely achieve both simultaneously. Evaluations of ICDPs generally fail to demonstrate biodiversity conservation success, let alone the co-benefits of improved livelihoods and sustainable natural resource management.

Given the problems with ICDPs, Ferraro and Kiss (2002) proposed that community conservation interventions would be more effective if they concentrated on initiatives that provide a more direct link between provision of economic benefits and the conservation outcome. Proponents argue that, in addition to being more effective at delivering the conservation objective, they may actually be simpler to implement and therefore more efficient, cost-effective, sustainable and deliver more substantial development benefits, in comparison to ICDPs. 'Direct payments' and 'conservation easements' provide the clearest link between benefits and conservation outcome; these are commonly used approaches in developed countries (e.g., set-aside payments under the EU's Common Agricultural Policy and property tax reductions for wetlands conservation in the USA). Other methods that have a clear link include ecotourism within community-managed wildlife areas.

Community-based ecotourism aims to link conservation and poverty reduction, using revenue from ecotourism as an incentive for local communities to protect and manage wildlife. Local ownership of ecotourism can take many forms, from nature tourism that only employs local guides, to partial or full community ownership of the whole ecotourism enterprise. However, reviews suggest that ecotourism is only successful at achieving these aims in a minority of cases (Kiss 2004). Criticisms of community-based ecotourism projects include:

- Many proposed ecotourism sites are not viable, because they are either too remote or lack guaranteed wildlife viewing.
- Too little revenue is generated, mostly benefiting a small number of local people within the community, providing only a modest supplement to local livelihoods and therefore not leading people to abandon forest or wildlife exploitation.
- Success of an ecotourism business is only weakly dependent

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Tapping resin from dipterocarp trees

on achieving conservation outcomes because the tourist experience does not rely on the continued existence of biodiverse and intact ecosystems (e.g., canopy ziplines or white-water rafting).

- Community-based ecotourism projects operate at a much smaller geographical scale than is required for the conservation of large animals and wilderness areas.
- It is difficult for local people to be able to operate in the highly competitive and specialised tourism industry without continued long-term external support and considerable capacity-building.
- There is a lack of long-term monitoring data which demonstrates that the projects are generating the desired outcomes.

Initiation of Bird-watching Tourism in Cambodia

Cambodia has one of the fastest growing tourism industries in the region, with numbers of tourists increasing by over 20% annually; more than two million visitors came in 2007. The vast majority of tourists visit the temple complex at Angkor Wat, in Siem Reap province, and stay an average of 2.5 days in the country (data from the Ministry of Tourism). Despite this, Siem Reap province is one of the three poorest provinces of Cambodia; the tourism boom has not led to improvements in the livelihoods of the poorer sections of the communities, or stimulated pro-poor growth. Moreover, since most tourists only stay 2-3 days in the country and do not leave Angkor, tourism has not encouraged development at other sites within Cambodia. Until recently, very little information was

available about tourism sites beyond Angkor. This is now changing, as new road developments are being undertaken that link Angkor with other major temple complexes in Preah Vihear province, such as Koh Ker and Preah Vihear temple. Tmatboey is located between these two temples, close to the main road; it was therefore an ideal location for tourism development.

During the late 1990s and early 2000s, WCS had established a reputation as the best source of information on Cambodian birds and birdwatching sites within the global conservation and birdwatching community. WCS was the most bird-focused of the international conservation NGOs working in the country and had authored the Cambodian Important Bird Areas (IBA) report for BirdLife International. In addition, WCS had publicised information internationally about birdwatching sites in Cambodia and rediscoveries of iconic species, such as the Giant Ibis, both in popular nature magazines and through a regular publication, edited by WCS staff, called Cambodia Bird News (CBN). Increased international awareness of unique birding opportunities in Cambodia led to a number of birdwatching visitors in 2001 who were provided with logistical assistance and advice by WCS. As Giant and White-shouldered Ibises are amongst the most endangered bird species globally, there is considerable interest from avid birdwatchers and naturalists in getting a glimpse of them in the wild. There is thus considerable potential for bird tourism in northern Cambodia.

Starting in 2002, international bird tourism companies had picked up on this information and initiated commercial trips to Cambodia. These trips focused on the three sites closest to Siem Reap (Prek Toal, the Ang Trapeang Thmor Sarus Crane Reserve and the

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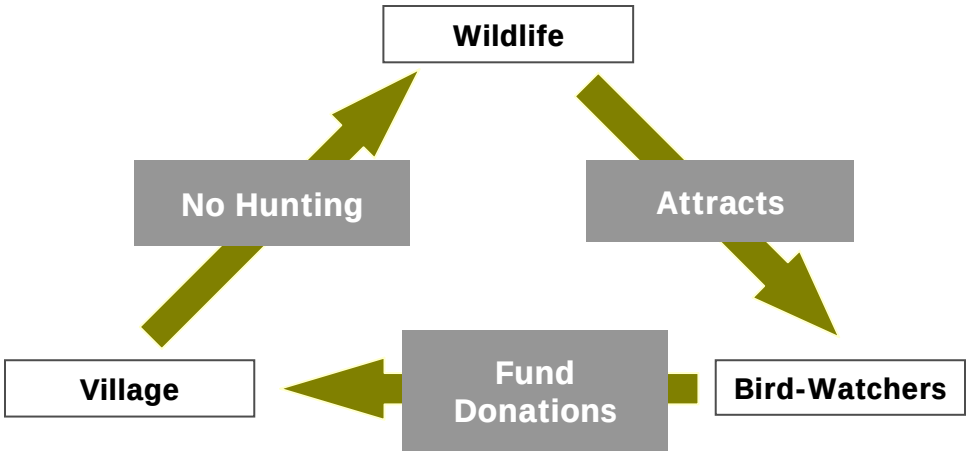
Bas relief of Sarus Cranes from the Bayon temple at Angkor

Bengal Floricans in Kompong Thom) and the Northern Plains, with Giant and White-shouldered Ibis as the primary target species. WCS acted chiefly as an information source, providing details on the locations of individual species, and occasionally as a free travel agent arranging logistics for visitors and friends. This represented both an opportunity and a threat. The opportunity was the prospect of bird tourism contributing to local development and conservation. The threat was that if this was improperly organised, local communities could be marginalised and tourism might actually cause more disturbance to the birds than it was contributing to their protection. Moreover, security at some Northern Plains birdwatching sites was poor, and although WCS was not technically responsible for birdwatching trips, any criminal incidents would probably have had adverse repercussions for WCS's reputation both with the Government and internationally. In 2003, WCS discovered that both Giant and White-shouldered Ibises nested at Tmatboey. Unlike the previously known birdwatching sites for these species, Tmatboey was much closer to established roads and mainstream tourism sites, was safer, and there was only a single village present in the area. It therefore represented a unique opportunity to establish a community-based ecotourism project.



Community-based Ecotourism at Tmatboey: Project Overview

Project Philosophy

The Tmatboey Ibis Project, initiated in 2004, aims to conserve the globally threatened large waterbirds found at Tmatboey, using the ibises as 'flagships', by establishing a local community-based tourism enterprise that directly links revenue received with species conservation over the long-term. This link is provided by an agreement between the government, WCS and the community, which stipulates that access to tourism revenue is conditional on villagers

agreeing to manage habitats and protect large waterbirds and key mammal species. Land-use around the village is guided by a land-use plan that was developed through a two-year participatory process with the community. It specifically sets out which areas can be used for agriculture, residential land and the sustainable exploitation of wild resources, and it includes provisions such as fines for violations of national law and local by-laws.

At Tmatboey, tourism services are organised by the community, with facilitation and training provided by WCS and local NGO partners. All tourism promotion, guide training and bookings were initially managed by WCS, but these are now undertaken by a local Non-Governmental Organisation (NGO) partner, Sam Veasna Center for Wildlife Conservation (SVC), based in Siem Reap.

Tourist visits directly demonstrate the value of wildlife to the community at Tmatboey both through donations to a village development fund and through individual payments for services, such as food, drink, local guides, cooks and accommodation (see price list on opposite page). Each tourist is required to donate $30 to the community if they see Giant or White-shouldered Ibis and $15 if they do not. All tourism activities in the village are managed by the locally elected Community Protected Area (CPA) Committee. The committee is responsible for maintaining a community guesthouse, providing cooks, guards for the guesthouse and local guides. It also organizes payments from the village fund for local development projects, which have been chosen by the community. A signboard in the village lists the income and expenditure from the fund. These mechanisms help to ensure that income is transparently and equitably shared among households, and to maximize the number of villagers directly involved. Tourist visits are typically four days with three nights in the village (i.e., two travel days and two full days in the village, with three mornings spent birdwatching). A four day tour is the minimum due to the site's remoteness and to guarantee that both of the key species are seen.

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Rice winnowing

Area Description and Tourism Seasons

Tmatboey[2], together with the Kui village of Kralapeas (to the east),

Tmatboey Local Prices

Prices are valid from the 2007 season.
Earlier prices are indicated in brackets.

Local guide (per day per person)	$5.00

1 to 2 tourists	1 Expert Guide
3 to 5 tourists	1 Expert Guide + 1 Local Guide
6 to 10 tourists	1 Expert Guide + 2 Local Guides
11+ tourists	1 Expert Guide + 3 Local Guides

Guesthouse (per night, per person)	$10.00

($4 prior to 2007)

Food (including cook's fee, transport and food; per day, per person)

1 to 2 foreign tourists	$8.00
3 to 5 foreign tourists	$6.00
6 to 10 foreign tourists	$5.00
Food for Cambodians	$3.00

($3 per person prior to 2007, with cooks paid from guesthouse fee)

Transport from the road junction to Tmatboey (per trip)

1 ox-cart	$2.50

One ox-cart can carry 2 tourists with their luggage

1 motorbike	$2.50

One motorbike can carry 1 tourist with luggage

Refreshments (with ice)

1 can of beer	$1.50
1 can of soft drink	$1.00
1 bottle of pure water	$1.00

Other Items

Cambodia Bird News	$6.00
T-shirts	$5.00
Video CD of Ibises	$15.00

Contribution to the Community Development Fund (per person)

if see both ibis species	$30.00
if see other species but not the ibis	$15.00

forms the commune of Pring Thom, in the district of Chaom Ksan, Preah Vihear province. There are 203 families (881 people) in the village (2005 data, Department of Planning). The traditional area used by the village for fishing and collection of forest products covers 25,780 hectares, although the total land cleared for paddy rice fields is only 615 hectares. The traditional area is defined through participatory processes whereby neighbouring villages discuss competing land and resource use claims. The village is located entirely within KPWS and has participated in WCS pilot programs to define land-use zones and boundaries and establish community norms or regulations for restricting agricultural expansion and illegal uses of the forest (such as hunting or commercial logging). WCS therefore already had an existing relationship with the community at the inception of the ecotourism project.

Cambodia has two main seasons: a wet season that starts in mid-May until late October or early November, and coincides with the monsoon rains, and a dry season that starts in mid November and continues until the following May. Within the dry season there is a cool period, from November to mid February, when average daytime temperatures can be in the mid-20s°C (~75°F), and a hot period from late February or early March until May, when temperatures can reach as high as the upper 30s°C (~100°F). The wet season can similarly be divided into a hot period, from May to September, and a cool period, between late September and November. The main bird-watching tourism season was initially thought to correspond to the start of the hot-dry season when Giant Ibis are easier to see, because they concentrate at a few semi-permanent wetlands, and White-shouldered Ibis are nesting. However, this is

[2] The name Tmatboey is a combination of Khmer and minority Kui words: *Tmat* means vulture in Khmer and *Boey* means 'washing-place' in Kui. The full name of the village is Thoeun Krasiang Tmatboey. Minority Kui villages are still found in many areas of the Northern Plains.

also one of the most unpleasant times of year to visit and later research showed that both species can actually be seen year-round, although Tmatboey can be inaccessible in August and September after heavy rains. Today, birdwatchers typically arrive during the cool-dry period and visit between November and January, though some choose to visit in the wet season.

Giant Ibises are threatened primarily by conversion and disturbance of critical wetland habitats and, as a consequence, tend to be found in areas remote from villages. White-shouldered Ibises, by contrast, are found much closer to villages, where they appear to be reliant upon short-sward grassland habitats beneath the deciduous dipterocarp forest canopy, maintained today by heavy grazing from domestic livestock but formerly by wild ungulates. Their closeness to human settlements may have made them particularly vulnerable to hunting. The species alternate their breeding times: Giant Ibis nest during the wet season (June-October) and White-shouldered Ibis during the dry season (December-March).

Legal basis

The local village management authority is called the Community Protected Area (CPA) committee (see Appendix 1). The CPA committee is elected and was given responsibilities over management of natural resources within a designated area (the Community Protected Area) by *prakas*[3] of the Ministry of Environment in 2004. In Tmatboey the CPA is a 1,722 hectare area of natural habitat for local management of forest and wildlife resources within the Wildlife Sanctuary. In addition, the same CPA committee was given responsibility for management of a further 2,668 hectares for local agriculture (called the Community Zone) by agreement with the Ministry in 2006. Rules and regulations for management of the Community Zone were approved by a local Commune Council by-law in 2008. Effectively, this means that the CPA committee is responsible for management of 4,390 hectares of the 25,780 hectares in the village traditional area. The remaining land is managed by the Wildlife Sanctuary, although the community also helps to monitor this area. The current legal basis for the tourism enterprise in Tmatboey is an additional agreement between the community, WCS and KPWS authorities signed in 2005 (see Appendix 2). The 2008 Commune Council by-law also approved rules and regulations for operation of the community ecotourism site. The Ministry approved the construction of a community-managed tourism guesthouse in 2007.

Early Years: 2004 & 2005

Birdquest (www.birdquest.co.uk) was the first company to start tours in Cambodia in 2002, and have returned every year since.

[3] A Ministerial-level decree or order.

They initially visited the site where Giant Ibis was first rediscovered by WCS (in Chep, Preah Vihear Protected Forest), but switched to Tmatboey in the dry season of 2004 – attracted by the site's easier access, the additional presence of White-shouldered Ibis and the overall goal of developing a sustainable birdwatching tourism site. In total, 13 tourists from three groups visited in February-March 2004, the remaining two groups being friends or visitors associated with WCS (see Table 1 and Figure 1). Tourists made payments to the village fund and paid for local guides, cooks and village home-stays (i.e., tourists are accommodated in the homes of local families), but food was purchased from outside the village and the entire process was managed by a staff member of WCS. Guides and cooks were decided based on soliciting volunteers and choosing those that successfully passed training courses. The village made a total of $498, an average of $10 paid per tourist for services and $30 for the village fund.

Although facilities were basic, these three "practice" visits appeared to be very successful and generated considerable positive feedback. Several trip reports were placed on well-known birdwatching websites, which are widely used by birdwatchers to plan

Table 1. Numbers of visitors to Tmatboey each year. WCS basically arranged all tours in 2004, 2005 and 2006, although private companies provided logistics (transport, hotel bookings, etc.) to the majority of tours. Starting in 2007, the SVC took over responsibility for managing site bookings at Tmatboey, operating as a responsible tourism agent – helping to promote the site, arrange logistics for its own tours ('SVC Direct') and crucially reinvesting revenue in supporting the local community. WCS has continued to take a few visitors – mainly donors and other WCS staff. Since the establishment of the SVC as a responsible tourism operator, the market share of the private companies has fallen rapidly, from 76% in 2006 to 20% in 2008.

Year	Groups	Total Visitors	WCS Direct[2]	Private Agency[3]	SVC Direct[4]	WCS Arranged[5] (Direct + Agency)	SVC Arranged[6] (Direct + Agency)
2003[1]	(1)[1]	(8)[1]		(8)[1]			
2004	3	13	5	8		13	
2005	20	51	13	38		51	
2006	21	72	17	55		72	11
2007	26	78	10	33	35	10	68
2008	37	127	7	25	95	7	120

Notes:
[1] Commercial bird tours had been ongoing since 2002 in Cambodia, but not visiting Tmatboey.
[2] Refers to tours for which logistics were provided directly by WCS
[3] Refers to tours for which logistics were provided by a private sector company
[4] Refers to tours for which logistics were provided directly by SVC
[5] Refers to tours that were arranged by WCS, even if logistics were provided by a private company
[6] Refers to tours that were arranged by SVC, even if logistics were provided by a private company

trips, and these began to generate significant interest for the 2004-5 season. The most immediate lesson learned was that WCS should not be directly handling logistics for tours (e.g., car hire, hotel bookings) for both practical and legal reasons. One potential private sector partner existed – the local ground agent in Siem Reap used by Birdquest, the only international bird tour company visiting Cambodia at that point. However, this agent expressed very limited interest in helping to develop the Tmatboey model and therefore an alternative partner was sought from a list of potential candidates. WCS preferentially referred enquiries to this second partner for the 2004-5 season, although prospective visitors were given contact details of both agencies.

In total, 51 tourists visited Tmatboey in the 2004-5 season, with 20 different groups (see Table 1 and Figure 1). Visits started in November, much earlier than in the previous season, and finished later (in April). Success rates of sightings of both ibis species were very high, around 95%. Nine of the groups (38 people) went with one of the private sector agencies; the remainder were either backpackers, friends of WCS or evaluators from international bird tour companies. Both international bird tour companies that under-

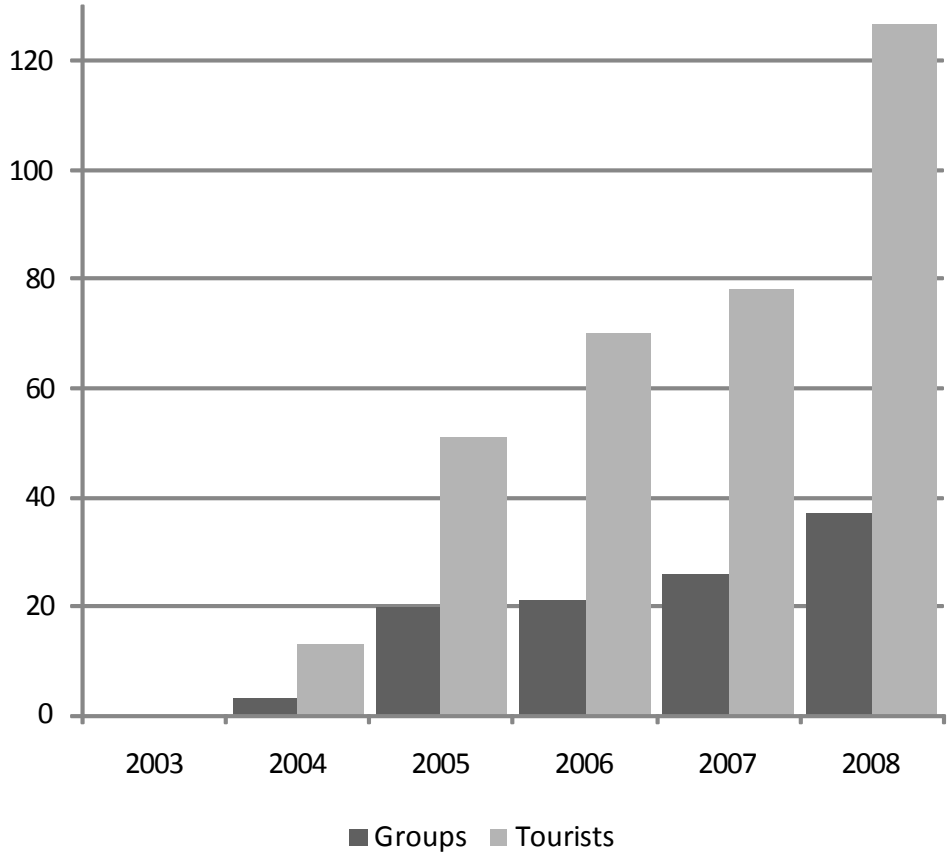

Figure 1. Number of visitors per year. The number of tourists has increased by 36% on average each year since 2005. The rapid increase in 2008 is probably due to the start of the SVC marketing campaign.

took evaluations in 2005 have returned annually with groups since. Although arranging logistics for the backpackers and other visitors was sometimes a distraction for WCS, the former were a key early market for the site. Positive reports placed on personal and bird-watching websites by some of the most well-known Asian bird-watchers and tour leaders were a critical – and free – form of advertising. Tourists made payments to the village fund and paid for local guides, cooks and village home-stays, but as in 2004, food was purchased from outside the village and the entire process was managed by a member of WCS staff who was present during every trip. The village made a total of $2,588, an average of $21 paid per tourist for services and $30 for the village fund. Prices for services to tourists were greatly increased over the 2004-5 season, which accounted for the rise in overall tourism revenue.

These initial visits helped WCS to understand the practical and logistical challenges associated with establishing a community-based ecotourism program, including:

Business model. Due to the small number of very rare birds at Tmatboey, WCS decided not to develop a high-volume tourist site. The underlying Tmatboey business model was therefore based on a minimum of 100 and maximum of 200 relatively high-paying tourists per year. If average local spending during a trip was $30 for the village fund and $100 per tourist for food, accommodation, guiding, drinks and other services this would net a minimum of $3,000 for the fund and $10,000 in service fees paid to villagers. Given that the level of Government spending in the Commune is approximately $4,000 per year and average annual family incomes are $300-450, this would represent a significant level of cash revenue for the village. Note that although the amounts paid locally seem low, due to the high cost of transport and English-speaking tourist guides in Cambodia, (~ $75-150/tourist/day, depending on the number of people in a group), the total daily expenditures by birdwatching tourists is comparable with those at other mid-range ecotourism destinations.

Target tourists. Initially, most of the birdwatchers visiting Cambodia were adventurous backpackers on a relatively tight budget or friends of WCS staff, neither of whom were willing or likely to pay high costs. Unless a tourism site can accommodate a very large number of visitors, backpackers are not going to provide a particularly high level of cash-flow and profit margins will be low – and WCS had already decided not to develop a high-volume site. The target market was therefore mid- to high-range visitors who would be willing to pay the moderately high prices charged to see the unique wildlife species at Tmatboey, in a way that supported conservation and local development. This required investment in infra-

structure and services (e.g. food) to ensure a sufficiently high quality experience, allowing higher prices to be charged. Supporting backpackers who wanted to visit was still an important activity, and would be continued for several years, as a way of generating advertising through positive trip reports.

Advertising/marketing. Achieving 100-200 visitors per year would require understanding the characteristics of the target tourists, and then investments in advertising and marketing. Fortunately, given the experience of WCS staff with the global birdwatching market, this expertise already existed.

Improvements in infrastructure and capacity. The initial budget backpackers and friends of WCS staff were ideal because they had moderately low expectations and were tolerant of poor conditions. The target market, however, would require a certain minimum level of comfort and tourism services, particularly in terms of accommodation, food, and guiding.

Ensuring maximum equitable disbursements of benefits in the village, including targeting the poor. Tourism often benefits those most able to invest and who have the greatest capacity and experience of foreign cultures. In comparison to people in Cambodian towns, the local villagers in Tmatboey have little ability to invest in infrastructure and capacity development, and have low knowledge and experience of tourism. This required some services (e.g. cooks or food) to be brought in from outside, which obviously subtracted from the potential revenue villagers could earn. Even within the community, significant differences in capacity and

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Ibis tourists

ability to work exist and there was a risk that a disproportionate share of the benefits could be captured by the wealthier or more able members of the village. For example, the village home-stay program required a minimum level of housing quality and therefore necessarily benefited the richer members of the village, some of whom were even happy to invest in improved services. Poorer families could only participate if a village guesthouse was built. There were also other concerns. For example, was it appropriate to train one of the poorest families to cook for tourists on a budget of $8 per person per day, if they themselves could only afford two basic rice meals a day? From an ethical perspective the program wanted to provide alternative opportunities for at least some of the poorest. WCS understood that this would require significant investments in capacity building and tourism infrastructure.

Achieving local management. During 2004 and 2005, a member of WCS staff was present throughout each tourist trip to provide Khmer-English translation, arrange cooks, food and guides and ensure that appropriate payments were made by visitors. This substantially limited local ownership of the ecotourism enterprise, primarily because the WCS staff member was thought to be benefiting from tourist trips and therefore was not seen as neutral. The community had no real understanding or experience of how a tourist trip is managed, the chosen guides and cooks were perceived to be friends of the WCS staff, and the community had no control over the financial benefits generated since accounts were kept by the provincial WCS office. Directly running tours caused internal problems within WCS as well; tips from tourists to staff created jealousy and generated requests from other staff who also wanted to work with tourists. Moreover, the overall goal of linking village income to the maintenance of bird populations was not being achieved. A total of >$2,500 was received in 2005, but as the community had no overall management responsibility, the local perception of revenue was very different. Significant reforms were required.

Achieving improved incomes. Average per-tourist payments for services were only $21 in 2005. The low value was because many services were brought in from outside the village and because of the basic level of facilities available locally. Improving facilities and allowing villagers to move up the ‘value chain’, taking over responsibility for delivery of services previously brought in, were required if villagers were to receive significant incomes from tourism. An important aspect was ensuring that sufficient profit from tourism was made by the village to pay the elected committee for their work as overall managers.

Achieving sustainability. The entire tourism project was initially de-

pendent on a substantial subsidy from WCS. WCS advertised the site internationally, through websites and magazine articles (e.g. Clements *et al*. in Birdwatching Asia 4, December 2005), provided free advice on where to see birds, directly arranged logistics or passed enquiries to private companies (who then needed training to develop itineraries), paid a member of staff full-time to be present in the village to manage tourist trips, and kept accounts on behalf of the community. The number of sites was also growing, as tourists were interested in visiting Tmatboey as part of a 1-2 week circuit through Cambodia. WCS was working at the majority of these sites and was providing similar free services at all sites. At the same time, the local private sector companies who were arranging local accommodation and travel in Cambodia were making profits of up to $1,000 per person per full tour which involves visiting all sites, including Tmatboey). As a business model, then, WCS held all the intellectual capital, was the internationally credible certifying agency, directly managed all local aspects and carried a substantial share of the risk, yet was in fact bearing a loss while others profited. A different approach was required if Tmatboey, or any other ecotourism site within WCS's purview in Cambodia, was to be sustainable.

Achieving conservation. The pilot phase demonstrated that tourism demand existed, local people in Tmatboey could provide sufficiently good quality tourism services if trained, and some revenue could be generated for the village. However, this was not sufficient to ensure conservation. Hunting of key wildlife species had been stopped or reduced, either by using direct financial incentives generated from ecotourism or by raising awareness and local pride associated the presence of foreign tourists in the village. Achieving conservation would require more people to be brought into the program, establishing an active local management authority, strengthening links between benefits and conservation action through this authority, and using part of the local tourism revenue to support conservation activities (such as community patrolling).

Based on these important lessons, the tourism program was substantially reformed in 2006. These changes were primarily undertaken by two of the authors – AJ, who was hired by WCS in early 2006 as the Community Conservation Management Advisor, and KN, who was hired in mid-2006 as the Ecotourism Development Coordinator. As a consequence, 2006 was the last year for which WCS both directly managed tourists in the village and arranged itineraries and bookings for visitors.

Transforming Tmatboey: 2006-2007, Establishing Community Management

Tourist numbers increased by >40% between 2005 and 2006, with a total of 72 people (21 groups) visiting between November and April. Logistics for the majority of these tourists were arranged by private sector companies, although WCS continued to manage visits to the village. Tourists made payments to the village fund and paid for local guides and cooks but, as in 2004, food was purchased from outside the village. One of the largest and most attractive houses in the village was hired for the season and adequate toilet and washing facilities were installed. The village made a total of $3,553, an average payment of $21 per tourist (unchanged from 2005) for service payments and $30 for the village fund. Prices were unchanged because the quality of the tourism service was not thought to have increased.

Starting in early 2006, a comprehensive training program for the village committee was initiated, with the aim that they would take over responsibility for all aspects of tourism management for the 2007 season. This training included book-keeping, development of rules and regulations for the committee, establishing rules for deciding expenditure and criteria for recruitment of villagers to tourism positions. The roles of different tourism providers were redefined as follows:

- *Committee*: 9 people (2 women), with a further 4 advisors and 1 Commune Council member. Responsible for overall tourism management, including collection of the accommodation fees and management of the guesthouse.
- *Guides*: 4 expert guides and 11 local guides. Expert guides are responsible for finding the target bird species and knowing the forest, and rotate with every group. Local guides help by carrying water and food and rotate on a daily basis. The number of guides is dependent on the size of the tourist group.
- *Cooks*: 5 cooks (all women). Responsible for buying food, either locally or in local markets (if required), and for cooking all meals. Prices are set on a tiered rate, dependent on the number of tourists in a group, to reflect the high initial cost of procuring food and paying for the cook's time. A minimum of two cooks are present for each group, but the number varies depending on the size of the group. The head cook (Choem Sokhy) also has a telephone and was therefore initially responsible for receiving notice of bookings and informing the committee, before a telephone was bought by the committee in 2007.
- *Women's group:* 3-4 people (all women). Responsible for operating the community shop and selling drinks, snacks, books and gifts to tourists. They also carry water to the guesthouse.
- *Guesthouse cleaners*: 4 people (all women). Responsible for cleaning the rooms and common areas, and laundering linens and towels for each group.

In addition, other people provide assistance as required (e.g., washing clothes, bringing firewood or carrying water) and are paid for their service, either from the Guesthouse fee or directly by guests (e.g., for laundry). Appendix 3 gives the roles and responsibilities of each of the committee members for managing the tourism groups.

As a consequence of these changes, the community took over responsibility for tourism management (previously performed by WCS) and for procuring food (i.e., the village had moved up the 'value chain'). In addition, a number of new groups had been formed, particularly the Women's Group, and so the overall range of services available had increased. Income therefore greatly improved in the 2007 season. Although tourist numbers increased only by 8% to a total of 78 visitors (26 groups), total revenue increased by 68% from $3,553 to $5,961. The per tourist contribution to the village fund contribution remained unchanged at $30/tourist, but the total service payments increased from $21/tourist to $47 (+124%). This increase was entirely due to the villagers capturing a greater percentage of the money paid, because they controlled more of the value chain and had diversified the range of tourism services available. 2007 was the first season in which service payments were greater than contributions to the village fund (see Figure 2).

The committee directly received $770 of the total income from the accommodation fee. Much of this was spent on renting the building and cleaning and providing water, but excess funds remained. The committee was therefore able to award themselves a payment for their own work in managing the tourists: $97.50 to the 9 committee members ($7.50/person), $37.50 to the 4 advisors and 1

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Typical oxcart used for village transport

commune council member ($7.50/person), and $37.50 to the 10 Krom[4] Chiefs ($3.75/person). As this was the first time the committee had received any monetary benefit for their work on behalf of the community, it was interesting to see how little they chose to reward themselves (see next page for 2007 breakdown).

In total, the cooks received $1,444.50, the majority of which was used to buy supplies from outside the village, although some products (like rice) were bought internally. The cooks made a total profit of $336.03, which they shared among them. Interestingly, the cooks chose to buy some food from within the village, where it was available, and this emerging local market encouraged chicken, vegetable and meat production by farmers in future years. The guides received a total of $500, although expert guides received a disproportionate share of this. An additional $26.25 was paid directly by tourists to 8 women (4 cooks) for washing their clothes. In total, about 90 villagers (families) of the community received some sort of benefit from the tourism.

Under the revised management structure, the committee was also responsible, and accountable directly to the community, for deciding how to spend money from the village fund. The rate of fund

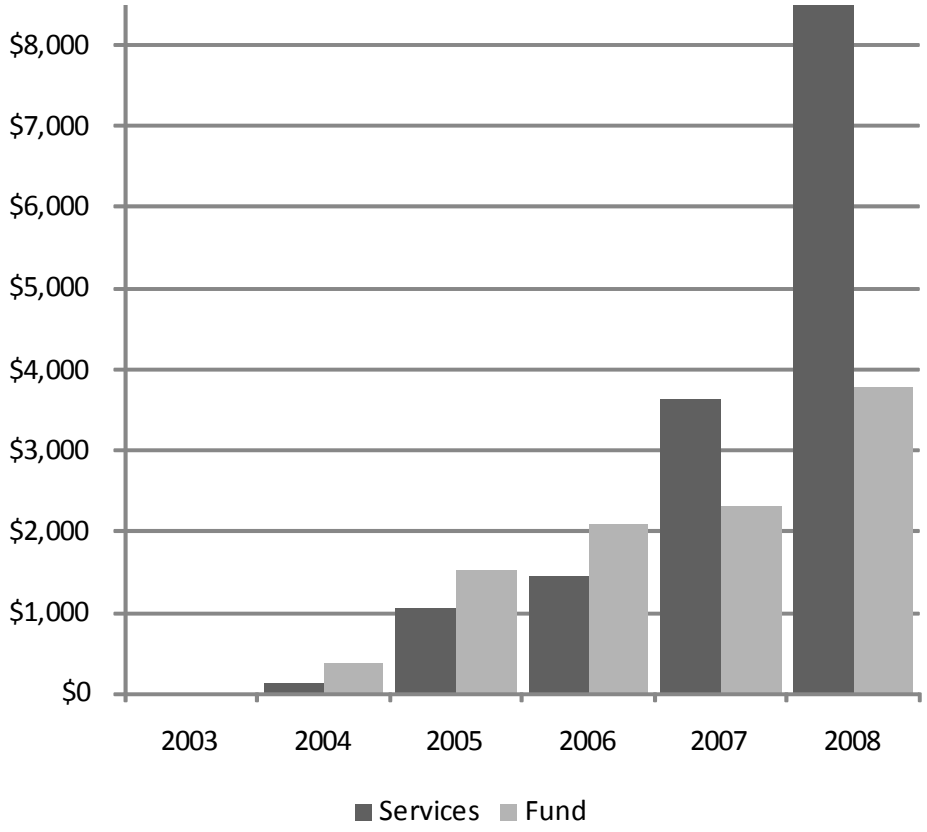

Figure 2. Village income per year. Average service payments per visitor have increased steadily as the community has improved their capacity, diversified the range of services available and improved the quality.

[4] Krom = Group in Khmer. The Krom chiefs are responsible for each of the 10 groups in the village.

Breakdown of Tmatboey Tourism Income, 2007

Seventy-two tourists visited the village, plus six visiting dignitaries, a total of 78 people.

Excluding the earnings of the Women's Group the Community was paid $4,960.75 of which:

Community Funds:	$ 2,220.00
Paid to cooks:	$ 1,444.50
Guest house payment:	$ 770.00
Tourist Guides:	$ 500.00
Washing clothes:	$ 26.25

In addition the community committee organised two events to host visiting dignitaries, which earned them around $300, and the women's group is thought to have earned around $700 (total income: $5961)

Of the $1,444.50 paid to the cooks, this money was spent as follows:

Purchase of outside items:	$ 916.23
Buying 220kgs of rice in the village:	$ 66.00 (from 7 families, 3 of whom were cooks)
Buying vegetables in the village:	$ 6.25 (from 3 families)
Buying chickens in the village:	$ 50.00 (from 11 families)

This left a remainder of $336.03 to be shared between the 5 cooks.

Of the $770.00 guesthouse fee, this money was spent as follows:

House rental:	$ 210.00 (to owner, $35/month)
Buying bottled water from outside:	$ 107.65
Carrying 17,025 litres of water:	$ 158.90 (to 19 women, 2 from the women's group)
Charging batteries:	$ 90.00 (to 3 villagers)
Supplying Firewood	$ 10.00 (to 4 villagers)
Committee members:	$ 97.50 (to 9 members, $7.5 each)
4 Advisors and Commune Council:	$ 37.50 ($7.5 each, one Commune Council member)
Krom (village group) Chiefs:	$ 37.50 ($3.75 each, 10 people)

The $500 for guiding was shared between 4 Expert and 11 Local Guides.

The $26.25 for washing clothes was shared between 8 women (including 4 cooks).

The total amount earned by the village, deducting external payments for food and water and excluding the women's group, was $3,936.88; about 79.36% of the amount paid by tourists.

A total of about 90 members (families) of the community benefited from the tourism in Tmatboey.

disbursement increased significantly as a result. Relatively little had been spent on community projects in 2004-2006, mainly because the procedures for deciding how money should be spent were unclear (frequently it was facilitated by WCS). There was therefore a large surplus available in 2007 and the committee was able to spend more than was earned in that year. Finally, because the committee was responsible for deciding who received employment, a system was established for complaints from community members to be received and adjudicated.

Investing in Tmatboey: 2007-2008, Guesthouse Construction

Despite significant improvements made in 2007, one major constraint was still the poor state of the available accommodation. Tourists slept dormitory-style in a wooden house inside the village, which was rented from one of the wealthier families. Basic washing and toilet facilities had been constructed. These arrangements had several drawbacks. Firstly, a disproportionate share of the benefits was going to a single wealthy family (who owned the accommodation facility), with little opportunity for others to receive employment. Secondly, the limited quality of the accommodation meant that prices remained low. In addition, many tourists left as soon as they had seen both ibis species, even if they had booked to stay for longer, and others were discouraged from booking at all. A significant problem for some tourists was the local custom of holding large (and very noisy) wedding parties in the village during the dry season, precisely at the peak tourism season.

In 2007, WCS received a $15,000 grant to construct a guesthouse in Tmatboey, which was augmented by a further $6,000 from other sources. The guesthouse was built at the far side of the community rice fields, about 1km from the village itself, and just on the edge of the best White-shouldered Ibis forest habitat. This meant that it is close enough for tourists to still experience village life – and be seen by community members – but also sufficiently distant to provide some privacy and a buffer from loud party music. The guesthouse initially consisted of three 2-bedroom en-suite bungalows (see top photo, opposite page) and a large dining room and kitchen (see bottom photo, opposite). Power is provided by a solar photoelectric array, which is sufficient to run lights, fans and other appliances. The complex is being extended to a total of four en-suite 2-room bungalows, and a separate building and bathroom for staff under a second $20,000 grant received in 2008. In addition, solar water-heaters are being installed to provide hot water to every bungalow. The total facility has cost >$40,000 and is sufficient to accommodate up to 16 tourists at any time with eight sup-

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Bungalow at Tmatboey

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Dining room at Tmatboey

porting staff (e.g. guides, drivers and cooks).

The community committee made nearly $2,000 available in co-financing, mainly in the form of village labour, land and timber sourced from the CPA area. WCS is considering treating a proportion of future investments as low-interest loans, which would be repaid by the community over the next 15-20 years. This is important if the community is to perceive that they have ownership of the project.

Accommodation prices were increased to $10/person/night (from $4) for the 2008 season, to reflect the improved quality, and will rise again to $15/person/night for 2009 because hot water will be available. As a consequence, tourism income increased significantly in 2008; while the total number of visitors increased only by 63% to a total of 127 visitors (37 groups), revenue increased by 93% from $5,961 to $12,271. The village fund contribution remained unchanged at $30/person, but the total service payments increased from $47/tourist to $67 (+43%). This increase was due to the greater charges for accommodation, representing an initial return of $2,286 ($18 extra per person × 127 visitors) against the initial investment of >$20,000 in the construction of the Guesthouse. It is important to note that, if the Guesthouse construction had been funded by a low-interest loan of <10%, the return in the first year would have been sufficient to service the loan. Given that tourism numbers (and profit) are expected to increase in future years, this suggests that investment in the community-based guesthouse is actually an attractive business proposition. (See Figure 2 and Table 2 for more detail on each year's income.)

As a consequence of the increased tourism revenue, the committee decided to pay themselves a monthly wage of $10 each to cover the cost of their work. This was funded for the first year by a

Table 2. As the community has diversified the range and improved the quality of services available, they were able to raise prices and capture a greater proportion of the overall money spent by tourists by moving up the value-chain. The greatest costs are transportation to the village, hotel bookings, and English-speaking guides, and these account for the remaining tourist expenditure.

Year	Total	Services	Fund	Average Service Payment/Tourist	% of overall revenue captured by the village
2003	$0	$0	$0		
2004	$498	$128	$370	$ 10	11.4%
2005	$2,588	$1,058	$1,530	$ 21	14.1%
2006	$3,553	$1,453	$2,100	$ 21	14.1%
2007	$5,961	$3,641	$2,320	$ 47	19.9%
2008	$12,271	$8,491	$3,780	$ 67	23.9%

small grant from a local Cambodian donor, which will then be replenished annually from tourism profits from the guesthouse fee on a revolving fund basis. Two committee members additionally receive $1.5 for every night tourists are present in the Guesthouse, for their work providing security and arranging the various tourism providers. The committee members present at the guesthouse rotate regularly so that all receive this benefit.

Significant increases can be expected again in 2009 as the income from the guesthouse continues to improve. Further training for local tourism providers will also take place before the start of the 2008-09 season. Other opportunities exist for villagers to move further up the value chain. Currently all groups are accompanied by an English-speaking tourist guide who is paid up to $30 per day. If the villagers can learn sufficient English, they could command much greater daily rates for guiding and it would remove the need for external guides to come to the village.

Transforming Tourism Management: 2006-2008, Establishing SVC

Sam Veasna Center (SVC) was established in 2003 by employees from WCS, as a legacy to Sam Veasna, a pioneering Cambodian conservationist who discovered many of the most important sites for conservation in Northwest Cambodia. Sam Veasna tragically contracted malaria and died in 1999. The Center's original mission was broad: to promote wildlife conservation awareness and education in Northwest Cambodia. This included supporting wildlife research, establishing a library and setting up the Sam Veasna Fund for Cambodian students. The Center was built on land belonging to Sam Veasna's widow, for which the SVC pays her a monthly rental fee.

The Center initially received a number of small grants, but by early 2006 the majority of these had ended and SVC's financial prospects were dire. At the same time, the Center's founder and first director decided to leave the position, passing the management responsibility on to an expatriate volunteer. In 2006 SVC still had no legal status as an organization – it was not registered as an NGO in Cambodia. The management changes and financial insecurity offered an opportunity to propose a new direction for the Center, with the aim of achieving financial stability and a clear management vision.

The lessons learned from the first two years of work at Tmatboey had convinced WCS that for the ecotourism program to become

sustainable, an alternative mechanism for promoting, marketing and managing bookings to the site had to be found. This would effectively reduce the large WCS subsidy that was supporting Tmatboey and other ecotourism sites and hopefully lead to the initiative being sustainable in the long-term. During 2005 and 2006 WCS had tried to engage private sector partners to take over some of these functions. The relationship with the private sector partners was difficult, as they did not necessarily share the same aims (supporting local development and conservation) as WCS. Moreover, it was obvious that these private sector partners were making substantial profits from the tours, and yet were still reliant on WCS for site information and appeared only moderately willing to invest themselves. If managed properly, there was an opportunity over the long-term for a responsible organization to act as a bookings agency and reinvest the profits from tours in the community-based ecotourism sites (WCS had identified more than 5 potential sites) after funding its own operations.

In 2005-6 WCS proposed that SVC evolve into a responsible ecotourism agency. SVC was ideally placed to fulfill this role given its location in Siem Reap, the primary tourist destination in Cambodia, with over 2 million visitors to the temples at Angkor in 2007. SVC had previously achieved some recognition as a source of information on ecotourism, and the Center had already trained some guides and operated the occasional private tour. WCS therefore re-committed to helping SVC and funded a team of Haas business scholars from the University of California, Berkeley, to write a business plan for the new SVC ecotourism operation. In addition, WCS provided grants ($39,098 between 2006 and mid-2008) and funded an Ecotourism Development Coordinator based at SVC from mid-2006 to mid-2008 in order to set up the business. WCS also invested some managerial and technical advisory time to help the Center.

SVC was formally registered as a local NGO in Cambodia in November 2006 with the Ministry of Interior. Hong Chamnan, a WCS counterpart from the Ministry of Agriculture, Forestry and Fisheries responsible for ATT (Ang Trapeang Thmor Sarus Crane Reserve) and the IFBAs (Integrated Farming and Biodiversity Areas in Kompong Thom province) and Sam Veasna's friend, was appointed as the Executive Director. SVC's first board of directors comprised: WCS Cambodia Director as Chairman (initially Joe Walston, then Mark Gately), Colin Poole (former Director of WCS Cambodia and current Director of the WCS Asia Program), Tan Setha (MAFF and WCS project manager in the Northern Plains), H.E. Vann Sophanna (MAFF) and Im Sok Rithy (Apsara Authority). Osmose, a local development NGO who had shared the Center's space with the SVC staff, vacated the premises in 2006.

The SVC's role in the tourism program is to:

- operate a non-profit, responsible travel agency that offers up-to-date, good quality information about wildlife tourism sites in Cambodia (particularly those where WCS has a presence);
- manage tourist bookings to all sites where WCS supports Government agencies with local conservation projects;
- directly arrange logistics for the majority of tours to these sites, including providing an English-speaking tour guide, transfers and hotels, informing the local villagers, ensuring that correct prices are paid in the villages, and educating the community about the importance of responsible tourism practices (e.g., not disturbing tourists);
- evaluate sites for ecotourism potential and formulate strategies for their development/improvement (e.g., construction of bird hides);
- provide training and capacity-building to community tourism service provider groups (e.g. training cooks, guesthouse cleaners, arranging study-tours, etc);
- make available investment capital as required to improve or maintain infrastructure at the village level;
- reinvest surplus revenue from tourism in conservation, through the Sam Veasna Fund;
- provide feedback to WCS and MoE on issues identified at the site level (e.g. hunting of wildlife species, corruption in village committees);
- collect comments from tourists and provide instant feedback to village committees on issues related to tourism at the local level (e.g. unclean sheets, etc.); and
- collect information on bird records from tour groups.

By March 2008, the SVC's situation had changed considerably.

© A. Michaud

Giant Ibis

Grant income rose from $10,898 ($6,098 from WCS) in 2006 to $25,820 (all WCS) in 2007 and $43,175+ ($7,175 from WCS) in 2008. SVC is now attracting its own donor grants, without WCS support. Tourism numbers increased from 51 people in the 2006 season (all facilitated by WCS) to 127 people in 2007 (SVC operation) and 266+ (the season is not yet over) in 2008 (all SVC). Net tourism revenue (surplus after the cost of tours) for SVC rose from $13,626.64 in 2007 to $37,416.77+ in 2008. Although SVC has yet to achieve full financial sustainability from tourism revenue alone – the Center costs $50,000+ annually to run against >$37,000 revenue – it now has a healthy operational surplus due to the large amount of grant money raised, and at the current rate of growth would be expected to achieve full sustainability by 2009.

Furthermore, the SVC has learned some valuable lessons about tour management, and this has led them to recommend further improvements, such as running scheduled tours (e.g., 5- or 10-day tours departing on the weekend and mid-week) during the high season and running tours for larger groups (>4 people and preferably >6). As demand increases, scheduled tours, rather than bookings tailored for each group, are more efficient and easier to manage than customized bookings, while profit margins on larger groups are much greater, both for SVC and the community.

Achieving Conservation?

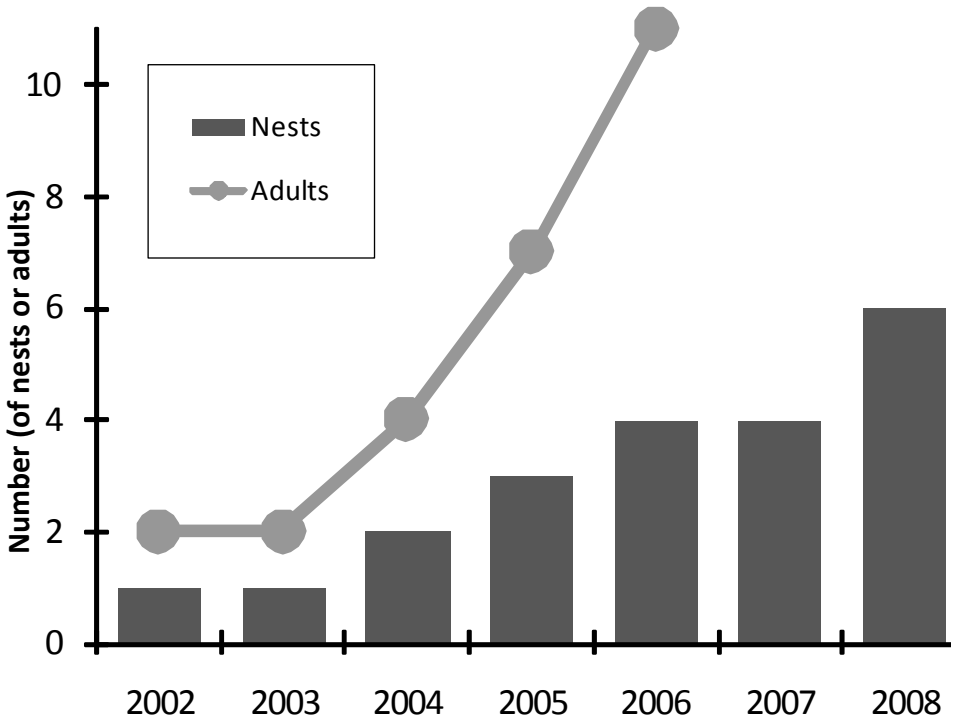

Figure 3. Wildlife population trends: White-shouldered Ibis (*Pseudibis davisoni*).

Ecotourism at Tmatboey provides a direct link between the conservation of two Critically Endangered species and local village revenue. Evaluations have shown that the majority of villagers understand that birdwatchers are visiting the village to see these birds, and the fund donations ($30/$15) are explicitly linked to sightings of the ibises. There is growing recognition on behalf of the community that tourists are interested in many other bird-species, such as Pale-capped Pigeon *Columba punicea* (GT-VU), White-rumped Falcon *Polihierax insignis* (NT), Vultures, Adjutant Storks and Sarus Cranes. Eld's Deer *Cervus eldii*, an endangered cervid species, is returning around the village and would potentially be an additional target species for tourists. All these species (and many others) are covered by a village hunting ban, which is locally enforced in the community. Note that the majority of these species have little value in the commercial wildlife trade, the notable exceptions being Sarus Cranes, Eld's Deer and, to some extent, Adjutant Storks. The rapid increase in species numbers (e.g. White-shouldered Ibis, see Figure 3) may be due to a widespread reduction in persecution and hunting on behalf of the community. The villagers are clearly proud that foreign tourists are visiting and are particularly keen on the visitors being able to see 'their' birds. This growing sense of ownership and pride may be an important factor in self-enforcement in the community – i.e., achieving a cultural shift so that wildlife is viewed as an important asset to be tolerated and conserved rather than a pest or a target for hunting.

As tourism revenue has increased, the committee has begun to reinvest some of the income in conservation. In every year since

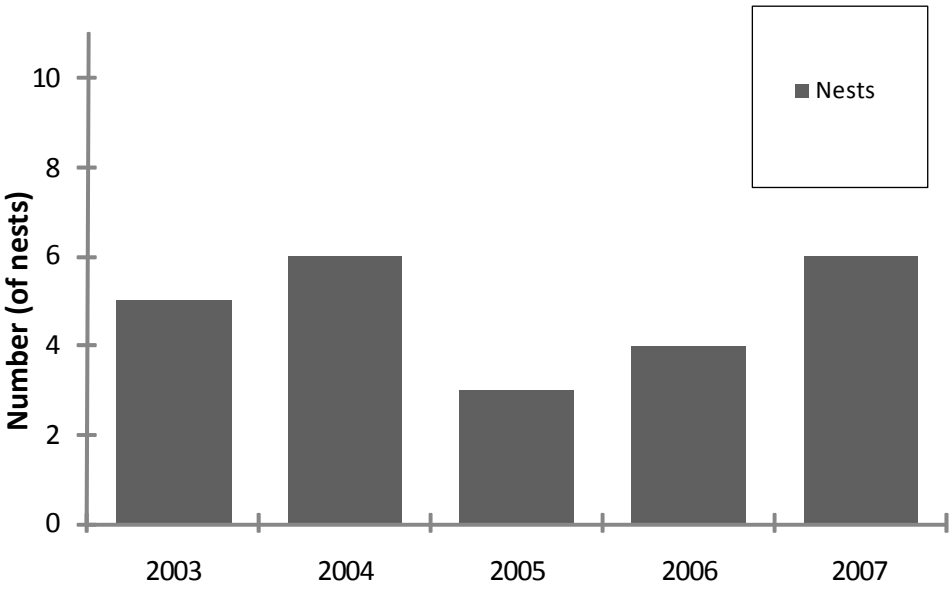

Figure 4. Wildlife population trends: Giant Ibis (*Pseudibis gigantea*).

2003, WCS has operated an annual bird nest protection program across the Northern Plains landscape in order to locate, monitor and protect nesting sites for Globally Threatened large bird species, focusing on species of conservation concern and particularly those that are actively hunted. Although work was initially undertaken by WCS staff, the program is increasingly being operated at the community level, as local people can be much more effective at locating nests and protecting them. Under the program, local people are offered a reward for reporting nests, and are often employed to monitor and protect the birds until the chicks successfully fledge. In Tmatboey, the committee has taken over responsibility for operation of this program in the village area since early 2008, funding payments to villagers from the tourism income. This also doubles as a community monitoring program, providing the committee (and the village) with a simple annual monitoring system to measure their own success at increasing populations of these Globally Threatened species. In addition, the committee has begun to support some low-level patrolling activity by requiring the village guides to monitor the key bird species regularly and prevent illegal activities. Encouraging the expansion of these local conservation activities is a priority for future activities.

Though the link between ecotourism and species conservation is clear to the community, the association between these species and the habitats upon which they depend is much less obvious. Pressure on land resources and particularly wetland habitats is increasing, driven by both internal population growth and pressure from immigrants who want to settle in the village. Land prices across Cambodia have more than doubled in some areas over the past two years, and widespread land-grabbing without Government control is leading to the attitude “if I don’t grab it, someone else will”. Pressure on remote forest wetlands around Tmatboey is greatest, because these areas are the most fertile for paddy rice field expansion. General deforestation is of concern for all wildlife species, but conversion of wetlands to agriculture has a disproportionate effect due to the removal of feeding habitats for ibises and other water dependent species. The income received from tourism – c. $4,000 to the fund and $8,000 shared between up to 90 families (c. 450 people) – is relatively small in comparison with the marginal returns from claiming more land. Moreover, only a proportion of villagers benefit from the tourism and this income is not linked to habitat protection in the same way it is linked to nest and adult bird protection. Controlling land grabbing is now the principal challenge to conservation.

The village traditional use area contains a large amount of state-owned land (>21,000 hectares), which is classified by law as state

public property where land grabbing is illegal. However, these laws are poorly understood at the local level and, moreover, conflict with traditional land clearance practices which recognize 'Dei Kreav' or marked land parcels that may be claimed by families but not cleared. As land clearance has accelerated elsewhere in the country a greater number of families have marked large areas of land to prevent grabbing by outsiders. Given that clearance of these parcels is actually illegal, it would be extremely challenging, both financially and ethically, for a positive incentive program to fully compensate villagers for the opportunity cost of not clearing these plots or claiming additional ones. Local and Governmental punitive controls are probably the only viable regulatory mechanism, although financial incentives could also still be offered to villagers who did not grab land in any year (these would necessarily be low in comparison with the opportunity cost). At Tmatboey, the basic regulatory mechanism is the land-use plan, which identifies a Community Zone of 2,688 hectares within which clearance for agriculture is allowed if permission is granted by the village committee and the PA authorities. Clearance outside this boundary – which includes the most important wetland areas and nesting habitats for the birds – is illegal. Local regulatory control, then, rests with the village committee, who can authorize clearance within the zone and have a responsibility to report violators to the PA authorities. The ecotourism program is therefore particularly important in providing a source of revenue to pay wages to the committee members for their work (managing both the tourism and the land-use plan) and funding community patrolling. The effectiveness of these control mechanisms was demonstrated by the recent (November 2007) expulsion by the community of 61 immigrant families that had tried to settle outside the Community Zone but within the village traditional user area – the first such recorded incident in the Northern Plains landscape.

Although these activities will probably have some success at reducing habitat loss, stronger controls will undoubtedly be required. This will necessitate:

- establishing an regular 'land-use plan audit' to be conducted by PA authorities together with the village committee;
- strengthening local awareness of the links between species conservation and their habitats, so that villagers understand the implications of continued habitat loss on species populations;
- further building the capacity of the village committee to implement the land-use plan;
- exploring the feasibility of using modest incentives for families that abide by the land-use plan; e.g., through buying agricul-

tural products at a higher price ('wildlife friendly products'); and

- instituting stronger enforcement on behalf of the PA authorities against land grabbing by immigrants, so that the Tmatboey community does not feel unfairly discriminated against.

Evaluation of Progress Towards an Effective Community-Based Ecotourism Enterprise

The literature on community-based conservation and ecotourism suggests that a successful community-based ecotourism project leading to effective wildlife conservation must satisfy at least six conditions:

1. The site must be viable for ecotourism, and tourism must not damage the biodiversity resource or local culture.

A number of criteria have been proposed for sites to be potentially viable (Wilkie and Carpenter 1999). These criteria include the following (those met by the Tmatboey site are marked with a √ ; those where Tmatboey needs improvement are marked with a ?) :

- Contains charismatic species √
- Guarantees wildlife viewing √
- Is close to an international airport/major tourist centre √
- Offers easy (short), comfortable and safe access…?
- Provides internationally acceptable standards of food and accommodation…?
- Is close to other tourist attractions such as cultural features √
- Offers unique landscapes √
- Is moderately inexpensive √

Most of the criteria are met by the Tmatboey site, except for access and quality of food and accommodation. Tmatboey is relatively close to a major international airport (Siem Reap) and a cultural attraction that has more than two million visitors a year (Angkor). The site offers guaranteed viewing of some unique and extremely rare species in a threatened landscape, which cannot be seen anywhere else in the world. The landscape also has additional cultural features (such as remote forest temples), which are bringing more tourists annually, and is only moderately expensive to visit. Even the two criteria where Tmatboey currently scores poorly are improving, as roads are built and continued investments in accommodation and food are made at the village site.

2. The community must have management authority over the wildlife and resource in the tourism area, and locally own the tourism

enterprise (i.e., encouraging responsibility).

Initially, WCS carried most of the responsibility for local management of tourists, and the village had limited authority over wildlife and forest resources. Since 2006, this has substantially changed. The village committee, elected by the village every five years, now has legal (from the Government) and practical (from WCS) responsibility for all aspects of tourism management. The same committee has also been given authority by the Ministry of Environment over the 1,722 hectare CPA and the 2,688 hectare Community Zone (for agriculture), and they have a co-management responsibility for the village traditional user area. The committee also organises its own species protection programs and community patrolling. Further investments in capacity-building at the community level are required; however, the basic structure and responsibilities of the local village authority are now clear.

3. Benefits from tourism for local communities, be they spiritual, cultural or financial, are sufficient to encourage participation in wildlife conservation, and are distributed as equitably as possible with equal opportunity for all members to participate.

In 2008, the community received nearly $4,000 in the village fund and $8,000 in tourism service payments to members. The village fund is used to support activities that benefit the entire community, such as investments in roads, schools, water pumps and ceremonies. The tourism service payments are primarily shared between 33 families, who receive regular employment of around $20/month, although another 60 families receive minor benefits. Therefore, only a proportion of the 203 families in the village are receiving benefits – although this proportion is relatively high and mechanisms such as the women's group and guesthouse cleaners ensure that revenue is not being captured by the local elite. All villagers technically have the opportunity for receiving employment, by requesting participation through the committee, although in practice it is likely that some will be excluded for local political reasons. In summary, therefore, whilst ecotourism can never benefit every family in the village, the revenue received is significant and is dispersed in a way that ensures that a large number of people benefit. Although the amount of income is clearly much greater than the opportunity cost associated with not hunting the birds – most of which have a relatively low commercial value – it is insufficient to compensate for potential benefits received from clearing more land (which is illegal). However, the village committee does receive enough income from tourism to support local activities that better manage land resources and to undertake some patrolling. Village income will continue to rise as capacity improves and more tourists visit the site.

4. Benefits from tourism for the local communities directly depend on the maintained presence of the unique wildlife species.

The ecotourism benefits are clearly linked to maintenance of the key wildlife species, which seems to have led to a widespread reduction in hunting and persecution – this may be why populations of some birds have increased dramatically since 2002. However, the link between wildlife conservation and habitat protection, although it may be obvious to wildlife ecologists, is unclear to the local community. Protecting the remaining habitat is the most significant remaining challenge. Given the high value of land, a fully compensatory incentive program would be prohibitively expensive and legally dubious, as land clearance is already prohibited by law. One possible mechanism that is being investigated is to provide low/moderate incentives ($10-$50) per year to each family that abides by the land-use plan. This could be funded both from tourism and through sales of village agricultural products under a 'wildlife-friendly' label.

5. An integrated monitoring system exists to ensure that these objectives are being met.

Local monitoring by the committee, the PA authorities and WCS is necessary to ensure that objectives are being met, and this monitoring must be done at the community level if the results are to be accepted and owned by the committee. WCS already monitors the annual location of bird nests, data recorded by PA ranger patrols, verification of deforestation rates by satellite analysis, and financial monitoring of ecotourism benefits at the local level. These monitoring systems have produced the results discussed in this report. Two of them – the bird nest protection and financial monitoring – have already been handed over to the community committee. A key remaining challenge is to set up a system for annual or regular verification of the land-use plan by the committee, with support from the PA authorities.

6. A sustainable mechanism exists to support the community-based ecotourism site(s), to allow the local people to compete and be viable in the international tourism market.

Initially, WCS was responsible for promoting Tmatboey internationally, training the villagers in acceptable international tourism standards and providing regular support when problems or conflicts arose. None of these three roles is appropriate for WCS over the long term and, moreover, exposes WCS to liabilities associated with directly promoting tours. The involvement of SVC since

2006 has provided a potentially sustainable mechanism to continue to support Tmatboey. SVC manages bookings, generates revenue from tours and uses this revenue both to cover its core operational costs as a responsible tourism agency and to support the community through continued training and facilitation as required.

Remarkably, in a little over 4 years the Tmatboey community-based ecotourism enterprise fulfills the majority of these criteria. Key remaining challenges include strengthening land management systems to halt illegal land-grabbing and initiating a community-owned monitoring system to regularly evaluate the success of the program.

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Sarus Crane in flight

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TRANSLINKS

Case Study:

Tmatboey Community-based Ecotourism Project, Cambodia

Appendices 1-3

Appendix 1. Community Protected Area Committee Members and Advisors

Appendix 2. Tmatboey Ecotourism Agreement

Kingdom of Cambodia
Nation Religion King

Agreement

Between

Tmatboey Villagers

And

Kulen Promtep Wildlife Sanctuary

And

Wildlife Conservation Society (WCS)

Establishment of Agreement for Cooperate and work together

Goal 1: Conservation of wildlife, forest and natural resource to get the benefit from natural resources through ecotourism.
Goal 2: To use the benefits from ecotourism for village development and improved livelihoods in a manner which does not harm the culture, forest, wildlife and other natural resources in the area.
Goal 3: To Educate the villagers to understand the importance of the forest, wildlife natural resources, and participate in conservation resources.

Benefit

1.Village Development Fund is to get from tourists to see the wildlife around the village.

- Money tourists will contribute to village development fund is $30 in each person if they see Giant Ibis or White shoulder ibis.
- Money tourists will contribute to village development fund is $15 in each person if they see one or two species such as green peafowl, adjutant, darter, sarus crane, woolly necked stock, black head stock.

2.Income for villagers in the village is to get from Local guide, accommodation, and other services... etc.

- Local guide will get $2.5 per day and $2.5 for their food.
- Money tourists will contribute to home stay is $2 in each person and $0.5 in each person for cooking.

3. All of the expenditure for village development fund got from tourists have to agree from team leader of Community Protected Area (CPA), committee of CPA, and adviser of CPA or mostly villagers supporting and facilitate from WCS facilitate team.

Responsibility

In order to achieve the goals of this agreement, all parties are responsibility as following:

Tmatboey villagers agree to undertake the following:

1.To advise to next generations look after, love and conserve wildlife.
2.When see the eggs and chicks nest will provide information to local authority or ranger.
3.To provide information about the illegal activities such as logging, hunting and fishing (electro fishing or poison fish) to Kulenprumtep Wildlife Sanctuary authority.
4.Do not cut tree or tree tapping that birds have eggs and chicks.
5.Do not disturb when birds make the nest
6.Do not hunt or use the trap
7.Do not collect eggs and chicks for eating or selling
8.Do not poison the wildlife
9.Do not buy or sell wildlife
10.Do not feed all species of wildlife
11.Do not to be guide for outsiders come to hunt or electro fishing or poison fish.
12.Do not stay permanent at the paddy, Trapeang that is the habitat or place where wildlife finds the food.
13.To forbid the outsiders and villagers electro fishing or poison.
14.Welcome to tourists.

Kulen Promtep Wildlife Sanctuary agrees to undertake the following:

1. To patrol in the area to curb the illegal activities are happening in Kulenprumtep Wildlife Sanctuary.
2. Intervention or curb illegal activities directly when get information from villagers.
3.To co-operate with Wildlife Conservation Society organization conduct to survey, wildlife data collection and other natural resources in the area for extension about this resources and attractive tourists.
4. To co-operate with Wildlife Conservation Society organization have the training course for local guide about method of bird-watching, and how to be guide for tourists.

Wildlife Conservation Society organization agree to undertake the following:

1. Facilitate to bring more tourists to the village.
2. To keep safely the village development fund.
3. Facilitate to expend the fund for transparency.
4. Facilitate to train the local guide.
5. Facilitate to do the guideline for tourists.

Enforcement of this Agreement:

1. By signing this Agreement all parties to undertake the responsibilities assigned to them, if which party don't undertake the responsibility, other parties can invite these party have a meeting to discuss and resolve the issue.

2. In case, villagers or outsiders infringe of responsibilities as outline in this agreement have to fine by CPA regulation or catch them to Kulenprumtep Wildlife Sanctuary authority for law enforcement about Environment protected.

3. Committee of CPA or all villagers in the village must get strictly punishment on offenders that undertake by regulation of CPA or provide identify about offenders to Kulenprumtep Wildlife Sanctuary authority.

Changes to the Agreement

This agreement is valid from singing. Can changes this agreement after 1 year later if any parties requested.

Date

Signature,
Chief of CPA
Tmatpeouy Thoueng Krasang

Signature
Boss of Kulenprumtep
Wildlife Sanctuary

Signature
WCS organization

Signature
Village chief Tmatbeouy

Signature
Krum leader 1

Signature
Krum leader 2

Signature
Krum leader 3

Signature
Krum leader 4

Signature
Krum leader 5

Signature
Krum leader 6

Signature
Krum leader 7

Signature
Krum leader 8

Signature
Krum leader 9

Signature
Krum leader 10

Signature
Commune chief of Pringthom

Appendix 3. Committee Roles and Responsibilities (2008)

Mr. Deb Kimoun (Chief): responsible for laundry of linen for the Guesthouse, including mosquito nets, blankets, mattress covers, pillow cases, hammocks, and preparing beds for tourists.

Mr. Mat Lut (Vice-Chief): responsible for fuel wood and sweeping of the Guesthouse.

Mr. Kang Ron: responsible for organising drinking water and water for washing.

Mr. Hum Loet: responsible for Guesthouse security.

Mr. Yin Theang: responsible arranging ox-carts and motorcycles.

Mr. Deb Kimoun: (Chief): responsible for guides

Senior local guide:

1. Mr. Deb Kimoun (Chief) Team leader
2. Mr. Run Kroeum
3. Mr. Yin Sary (Committee member)
4. Mr. Dep Vuth

Junior local guide:

1. Mr. Srey Ol
2. Mr. Chan On
3. Mr. Mak Chem
4. Mr. Tim Khum
5. Mr. Yim Somkean
6. Mr. Meas Thim
7. Mr. Oung Savuth
8. Mr. Him Saroeum
9. Mr. Soem Soeun
10. Mr. Sang Kheat

Ms. Choem Sokhoeung: responsible for the women's group that sell drinks, books and T-shirts.

Women's group:

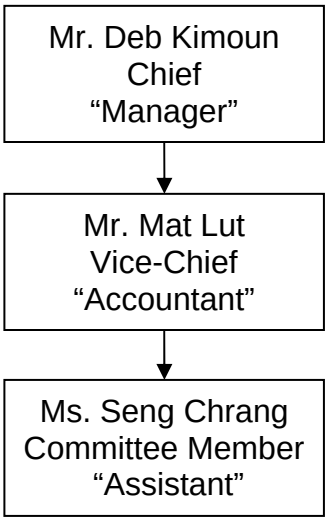
1. Ms. Choem Sokhoeung (Committee member) Team Leader
2. Ms. Srey Oun
3. Ms. Kim Long

Ms. Choem Sokhy: responsible for the cooks.

Cook team:

1. Ms. Choem Sokhy Team leader
2. Ms. Lan Thin
3. Ms. Eng Roeng
4. Ms. Chan Poun

Financial Management Structure



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