

# **Darwin Initiative Annual Report**

## **Darwin Project Information**

Project Ref Number	14-046
Project Title	Sustainable tourism supporting species conservation in the Srepok Wilderness, Cambodia
Country(ies)	Cambodia
UK Contract Holder Institution	IIED
UK Partner Institution(s)	WWF-UK
Host country Partner Institution(s)	WWF Cambodia
Darwin Grant Value	£172,619
Start/End dates of Project	<i>May 2005-March 2008</i>
Reporting period (1 Apr 200x to 31 Mar 200y) and annual report number (1,2,3..)	<i>1 May 2005-31 March 2006; Annual Report no. 2</i>
Project Leader Name	<i>James MacGregor</i>
Project website	<a href="http://www.iied.org">www.iied.org</a> ; <a href="http://www.panda.org">www.panda.org</a>
Authors, date	<i>James MacGregor and Nick Cox, 30 April 2007</i>

### **1. Project Background**

The purpose of this project is to secure community access to benefits generated through sustainable wildlife tourism in the Srepok Wilderness Area (SWA), within the Mondulkiri Protected Forest (MPF) in Cambodia (see map), based on the long-term viability of key species. The dry forests in the Srepok Wilderness Area (SWA) of Cambodia contain some of Southeast Asia's last significant populations of iconic animals such as Asian elephant, tiger, and gaur. A serious decline in species populations in the last few decades due to unsustainable harvesting and habitat loss has prompted urgent action from the Government, WWF, and other local partners to address this trend. In conjunction with IIED, these groups have identified high-value low-impact wildlife ecotourism as a means of securing the future of these species and their ecosystem through generating financing for conservation activities and supporting local livelihoods as well as ensuring the financial sustainability of the protected area.

### **2. Project Partnerships**

There have been three visits to Cambodia by UK partners funded through the Darwin Initiative project to design project methodology and strategy, discuss project progress, and to conduct research.

In addition the wider project team based in Cambodia – which includes eight partners – have been meeting on an ad hoc basis regularly, keeping each other informed of progress, discussing and debating ideas and potential solutions to funding and resource gaps. No specific discussions have been held with government to assist with capacity building for meeting CBD commitments, however WWF has been requested to provide support in preparing the country report for CBD COP9 in Germany in 2008.

In addition to enduring collaboration between the project team and national partners in the conservation and development field, the following new collaborative relationships have been helped by the Darwin Initiative funding:

- National:
  - Collaboration has continued with a Darwin-funded M.Sc. Biodiversity course project hosted by Fauna and Flora International (FFI) at the Royal Agricultural University in Phnom Penh. The first student is currently on placement with the SWA project working on developing and upgrading the MIST protected area management database system.
  - The project part-funded another annual training course on biodiversity monitoring and ranger training which was organised in collaboration with Conservation International (CI) and the Wildlife Conservation Society (WCS).
  - Conservation international (CI) sent six rangers from their Cardamom Mountains project to receive law enforcement ranger training in the MPF.
- UK: The SWAP welcomed new relationships with two UK universities as researchers came to conduct research for formal qualifications:
  - University of East Anglia – Megan MacInnes conducted three months of field work with the Community Rangers surveying on fire and livelihoods.
  - University of Durham – Julia Chase-Grey conducted two months of intensive camera-trapping as a pilot to research being conducted in South Africa and Cambodia.
  - UK Project Trust volunteers – two volunteers are spending one year working with the ranger teams in the MPF to build capacity in English language and are helping with camera-trapping systems development.
- International:
  - There continues to be a strong link with the WWF Namibia team cooperating on the MOMS applicability and training during the visit, and project teams are planning for one of the Namibian staff to visit Cambodia in FY08 to provide follow-up support to the first phase of the process to roll out the MOMS system in the SWA project in Cambodia.
  - University of Gothenburg, Sweden – two Economics researchers spent three months in Cambodia conducting a willingness-to-pay study on tourists for the SWA tourism feasibility project.
  - National Museum, Bloemfontein, South Africa – conducted the first small mammal study in MPF and Cambodia

### **3. Project progress**

**Summary** - During the second year of this project, our methodological approach to securing sustainable tourism in the Mondulkiri Protected Forest (MPF) has built on two core aspects developed during Year 1: developing baseline information and assessing the local replicability of best practice from international experience. In Year 2, the project has moved from assessment to implementation. The assessments have enabled us to refine our implementation strategy to ensure continuing progress.

**Baseline information** – In Year 1, the project began socio-economic surveys as an essential component for the SWA project to guide management approaches to complex socio-economic and environmental problems. The information collected in Year 2 of this project has built on the conclusions and recommendations from the year 1 data, and includes: tourism feasibility, socio-economic structure of neighbouring indigenous and recently-settled communities, and ranger-based biodiversity monitoring.

**Local replicability** of the southern African “model” of protected area management has been the fundamental methodology since 2004 for this project. Funding from the Darwin Initiative has provided input from recently developed “best practice” methodologies in community-based wildlife management MOMS – Management Oriented Monitoring System – a system first developed in Namibia. In order to assess the applicability of MOMS for MPF, the project conducted a feasibility study in Year 1; in Year 2 key members of the project team participated in a three-week study tour to Namibia to observe first-hand the success that has been constructed through active empowerment of local communities to monitor ‘their’ natural resources in and around protected areas.

**Implementation** – a major activity in Year 2 was the start of the process for developing a comprehensive management plan for the Mondulkiri Protected Forest (MPF). Results from the community surveys conducted in Year 1 and the first half of Year 2 provided the basis for consultations on developing a zoning plan for the protected area; the zoning plan is a critical element of the management plan that requires extensive involvement of, and buy-in from local communities. The first steps towards the implementation of the MOMS system have been completed, and will be rolled-out fully to all community ranger teams in Year 3.

#### ***3.1 Progress in carrying out project activities***

##### **Output 1 – Core protection zones, conservancies, co-management agreements**

##### **Mapping and 3D modelling of two community clusters**

One of the key outputs of the community survey component of the SWA project is to facilitate resource planning in communities through the development of 3D models of the MPF and surrounding communes. It was originally envisaged that current project staff would do this work. Given the contacts of the projects Community Extension Team Leader (Philippines), the project sought out the pioneer and active practitioner of 3D modelling from the Philippines in April 2006. Darwin Initiative funding leveraged the hiring of this consultant. Significantly, this added extra capacity building element to the project enabling training of local trainers to replicate the 3D modelling activities in a number of additional communes in the near future (next FY). In addition to this initial ‘train the trainer’ activity, two further workshops have enabled the production of two other 3D models that have assisted with community NRM and land use planning activities during FY07.

Overall, this activity has surpassed initial expectations and has yielded much more useful information and community participation than was originally anticipated. This activity has delivered in excess of expectations and remains on-track.

## **Protected Area Management Plan and Awareness Raising**

The results of the model activities have provided invaluable information for the management-planning component of the project slated for completion by end of July 2007. This planning activity is a little behind schedule (<3 months) although it is expected to have little negative impact. The extra time has been used to work more closely with the national and provincial planners and importantly with the communities. Draft zoning progress is depicted in Annex 5.

As part of the community awareness of the protected area's zones, meetings have been conducted with key communities, and information signs placed in critical areas (see Annex 5).

## **Output 2 – Biological data collected, analyzed, and with community participation**

### **Namibia study tour (see Annex 12)**

In January 06, the project brought over one of the designers and implementers of MOMS and a key player in the Namibian community-based natural resource management field to conduct a MOMS feasibility study in the MPF. During his visit, the community rangers expressed a wish to learn more about the southern African system – being equal parts perplexed and intrigued by the approach, methodology, underlying ethos and operationalization of the MOMS approach. The project team successfully leveraged Darwin Initiative funding to access additional funds for a month-long in-depth learning exchange between WWF Cambodia and WWF Namibia.

Six staff from the SWA project ranger team and CNRM unit travelled to Namibia in June/July 2006, and were hosted by WWF Namibia's LIFE Programme. This activity was financed with matching funds from Habitat, Darwin Initiative, and WWF International.

Staff were exposed to community-based natural resource management practices as well as government managed protected areas (Etosha NP, Caprivi, and Waterberg NP and conservancies). The study tour allowed for the investigation of the Management Orientated Monitoring System (MOMS) that assists communities and governments in the management of natural resources.

The SWA project team and WWF Cambodia's CNRM Unit are working together to develop this system for use in Mondulkiri Protected Forest. It will also be used in conjunction with MIST. The advantages of this are as follows:

- MIST on its own has a limited focus and cannot answer more in-depth questions which may be needed by Protected Forest managers.
- MIST reports are limited in their focus (number of patrols, patrol length, patrol route, species encountered, etc) and the software is protected so adapting it to suit the Cambodian context is not easy, however it is still an effective tool for measuring patrol effort and measuring results.
- MOMs, on the other hand, is 'owned' by the field staff and during development it is important that the staff get to assist in its development (see Annex 10).
- It extracts information from the data collected and entered into MIST datasheets. Community rangers, Forestry Administration and Border Police staff will be able to analyze data using simple graphs and therefore visually illustrate their efforts and show trends for key parameters such as fire incidents, poaching incidents, and wildlife sightings.

## **Research**

The SWA project has hosted placements for the following researchers conducting work that contributes to the core baseline information gathering activities:

- Leopard research feasibility study, Durham University (UK) – This three month survey was designed to assess the feasibility for undertaking a long-term (two years+) study into the ecology and conservation importance of the leopard and other carnivores in the MPF;
- Small mammal study, National Museum, Bloemfontein (South Africa) – The first study of it's kind in the MPF.

In addition the SWA project ensures that all researchers play a full and productive role in the community of rangers, police, and other staff at the MPF Headquarters in Merouch. Tangibly this includes providing on-the-job training for rangers and support staff.

As part of this expanded research component, the Darwin Initiative funding secured the following ancillary and training aspects crucial for the functioning of visiting researchers to the MPF. This included:

- A camera-trapping expert spent 5 days training rangers in camera trap management techniques – including setting, monitoring, maintenance, and trouble shooting. This fed directly into the leopard research.
- English language development among Khmer staff – UK Project Trust volunteers have provided some English training to staff as a component of their work in Merouch (see Annex 11).

### **Output 3 – Capacity Building in Managing Biodiversity and Ecotourism**

The project has maintained regular contact with provincial and national government counterparts in the key agencies, particularly with respect to developing joint strategies to solve problems associated with illegal logging, illegal encroachment and forest clearing either for agriculture or land speculation, and in-migration to sensitive areas on the borders of the MPF.

WWF has been requested to provide technical assistance on ecotourism planning at the provincial level and we now have this capacity since hiring a Tourism Technical Advisor in March 07 – the TA will lead the next phase of tourism development in the project during year 3, including the completion of a detailed tourism plan and tourism management board.

The project has been actively seeking opportunities to provide Cambodian M.Sc. students with placements on the project on subjects that are mutually beneficial. A student from Cambodia's first international standard Biodiversity M.Sc. course (Darwin-supported project managed by FFI) joined the project in March 07 to support the implementation of the MIST database.

Annual ranger training for government and community rangers has continued to develop skills in recording wildlife monitoring data. Since 2006, these training courses have included grading of rangers as part of the continuing process to professionalize the protected area staffing policy and ensure that this project recruits, trains, and holds on to local community and government staff.

Keo Sopheak, the senior Cambodian government officer on the project has secured a place on a personalized one-to-one six-week wildlife and tourism management training course at the Wildlife College in South Africa. Sopheak is the first Cambodian ever to undergo such training and will benefit from capacity building in protected area and wildlife tourism management. This course is being designed specifically for Sopheak and for the MPF context and will result in an internationally-recognised Diploma in Conservation Management – expected completion date is July 07. Sopheak also joined the Namibia study tour (Output 1) in 2006.

## **Outputs 4 and 5 – Socio-economic Analysis, Ecotourism Planning**

The SWA project Community Extension team (CET) collected data for the socio-economic profile in 15 villages covering 8 communes around Srepok area. Work carried out by the CET includes the following:

- 593 households or (73%) of the targets were surveyed;
- Focussed Group Discussions (FGD's) were conducted in 12 villages participated in by a total of 296 community members, 39% of which were women, and an average number of participants of 30 per FGD;
- 38 key informants from the different communities, provincial, and district government offices were interviewed for the socio-economic data needed by the project;

The findings have enabled the project to decide which communities are in the most need for assistance. It is now clear where in each of the 'community clusters' the SWA project will be concentrating its community extension efforts. (See Annex 7 for summary report of socio-economic surveys).

As an add-on to the formal socio-economic surveys, the project supported a UK-based M.Sc. research analysis of the role fire plays within the livelihoods of indigenous groups in Monduliri province, strategies employed to ensure its safe and effective utilisation, its socio-cultural importance, the perception of fire-environment dynamics and existing fire-related legislation. Following this, suggestions were made regarding policy opportunities and future research directions within a longer-term goal of strengthening local natural resource management and livelihood security. (See Annex 8 for summary of recommendations).

A tourist Willingness To Pay (WTP) survey was completed in November 06 by Environmental Economics M.Sc. students from Umea University, Sweden. These results are important inputs to the overall tourism feasibility study and action plan for the SWA project. (See a summary of conclusions in Annex 9). Tourism operators in Cambodia (national and international) have been interviewed as part of tourism feasibility study development, and input provided on investor climate and future needs for the Cambodian ecotourism sector. A local community and business workshop was held in Monduliri province to gauge interest and gather feedback on developing tourism in the MPF, including private sector expectations for developing tourist facilities and activities. The Tourism feasibility study has been completed and will input into the next steps of developing the tourism action plan.

## **Output 6 – Project Communications**

The project has had good coverage in the local and international press this year, including several articles in the Cambodian news, and a feature photo story on the BBC World Service Website. (See Annex 4).

Recent training materials produced include:

- In partnership with an international environmental education NGO, Live and Learn, WWF produced a set of community awareness flipcharts for use in conjunction with the community extension work being undertaken in the communities surrounding MPF. In addition to biodiversity and environmental awareness topics, the flipcharts also cover health and education issues;

### ***3.2 Progress towards Project Outputs***

**Output 1** - Overall, this activity has surpassed initial expectations and has yielded much more useful information and community participation than was originally anticipated, furthermore, the

project has been able to organize more mapping workshops than planned and is expected to achieve greater community capacity building in resource planning than in the original proposal. One other relevant indicator for this output is the number of 3D models produced. The assumption that communities and local government can understand and identify boundaries, and support co-management are still relevant.

**Output 2** - Progress towards this output is clearly illustrated by the successful development of: the MIST database; camera trap photographs; ranger training activities; and the study tour to Namibia. Indicators are still valid for this output. The assumption that MOMS is an acceptable tool for communities to use should now reflect the fact that the goal is to pilot this approach through the community rangers currently working for the project, as opposed to general community members affected by, but not employed by, the project.

**Output 3** - This year, the project has begun to provide the opportunity for talented young Cambodian conservationists to join the project with the aim of conducting mutually beneficial research. Ranger training has also continued as planned; it is now clear that an indicator on increasing ranger competence standards would have been useful for this output. The assumptions are still valid and remain extremely important. As long as the project is funded in the long term, community members and government agencies will see the benefits of investment of their time and not consider opportunity costs of the alternatives of working for the project (which for some would include a return to hunting and other illegal activity!).

**Output 4** - The socio-economics survey component of the project has been very successful, with results far more comprehensive than expected. Progress towards the tourism activities of this output has been slightly slower than anticipated; this is a reflection of the lack of capacity generally in Cambodia for promoting and building capacity in ecotourism development. Nevertheless, the feasibility study is back on track following completion of tourist surveys and stakeholder workshops. Original indicators for the tourism outputs were rather optimistic given the variables associated with being able to achieve buy-in from communities, the private sector, and the government in a short period. The output assumption is still applicable.

**Output 5** - Indicators for this output reflect the ambitious objective of securing private sector interest and investment in the MPF in the short term (see output 4). In hindsight, it would have been sensible to combine Output 5 into Output 4. The assumption about commitment of private sector still holds true, and furthermore it should be added that there needs to be similar government commitment.

**Output 6** - Project communications have progressed as expected; opportunities to give presentations on the project have been created, and a number of press articles and features have stimulated interest locally and internationally. The assumption is valid, and it would have been prudent to also consider the capacity of the project to produce the planned communications outputs.

### 3.3 Standard Output Measures

**Table 1** *Project Standard Output Measures*

Code No.	Description	Year 1 Total	Year 2 Total	Year 3 Total	Year 4 Total	TOTAL
6A	8 day wildlife ranger training course	25	35			60
6B	Number of Training weeks	2	2			4
7	Number of training materials (community awareness flip chart)		1			1
8	IIED project team staff time and visits to project (number of weeks)	3	5			8

	<i>visits to project (number of weeks)</i>					
9	<i>Number of management / action plans (Annex 6 –leopard survey)</i>	1	3			4
12B	<i>Input to MIST – national wildlife and wildlife crime database</i>	1	1			2
14A	<i>Meetings with stakeholders</i>	3	4			7
14B	<i>Conferences / seminars attended (Crocodile specialist group meeting, France; WWF regional seminar, Indonesia)</i>		2			2
15A	<i>Press release and feature stories, WWF newsletters, WWF website, IIED website, (see links in Annex 4)</i>	3	9			11
15C	<i>Press releases in UK (see annex 4)</i>	1	1			2
18A	<i>National TV programme (SWA DVD)</i>		1			1
19B	<i>National radio feature in UK (BBC World Service, BBC Radio 4)</i>	1	2			3
20	<i>Computers and printers</i>	2				2
20	<i>6 Digital Camera traps for monitoring wildlife</i>	6				6
22	<i>Number of permanent field plots established (monitoring transects)</i>		5			5
23	<i>Funds from Habitat Grup Empresarial (Spain), USFWS, WWF Netherlands, WWF Namibia, WWF International, USAID, Project Trust (UK), Durham University (UK), Umea University (Sweden), University of East Anglia (UK)</i>	US\$320,000	US\$515,000			835,000

**Table 2 Publications**

<i>Type *</i> (e.g. journals, manual, CDs)	<i>Detail</i> (title, author, year)	<i>Publishers</i> (name, city)	<i>Available from</i> (egg contact address, website)	<i>Cost £</i> (if applicable)
<i>Flip chart</i>	<i>The Community Environmental Awareness Flip Chart</i>	<i>Live and Learn, WWF Cambodia, Phnom Penh</i>	<a href="mailto:Teak.seng@wwfgreatermekong.org">Teak.seng@wwfgreatermekong.org</a> WWF Cambodia	<i>Freely available</i>
<i>DVD</i>	<i>Making of a Protected Area in Cambodia – Mondulkiri Protected Forest</i>	<i>WWF, Phnom Penh</i>	<i>As above</i>	<i>Freely available</i>
<i>Local articles</i>	<i>Number of articles in WWF Greater</i>	<i>WWF, Phnom Penh</i>	<i>As above</i>	<i>Freely available</i>

	in WWF Greater Mekong newsletters – <i>Mekong Messenger</i> and <i>WWF Bulletin</i> .			
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### **3.4 Progress towards the project purpose and outcomes**

### **3.5 Progress towards impact on biodiversity, sustainable use or equitable sharing of biodiversity benefits**

The second part of the project purpose - securing community access to benefits through sustainable wildlife tourism - is a long term aim that is significantly dependent on the first part – protecting threatened key species in the MPF. Nevertheless, important steps have been taken during the first two years of the project to ensure communities are more aware of the importance of biodiversity in the MPF, and of the economic potential of protecting this biodiversity for maintaining and enhancing current livelihoods. Developing ecotourism in order secure community benefits is an experiment in so much that there are no guarantees of success. It is a risky activity that is associated with raised expectations; expectations that must be carefully managed over time. One strategy employed by the project is to provide employment opportunities for local community members, well before tourism commences in the MPF. By employing community rangers in the project, the community overall becomes more aware of the objectives of the project, and the aims of involving communities as much as possible. Evidence suggests the project has started to achieve a higher level of awareness and understanding in key communities on the boundaries of the MPF.

The overall aim of securing, and increasing, key species in the MPF is also a process that can only be verified over many years. Yet, evidence from camera trap photographs and direct ranger observations suggest the project team has achieved a remarkable amount of success in securing the core area of MPF, and in so doing, create the environment required by large mammals such as tiger, leopard, elephant, and wild cattle to reproduce. This recovery of species is essential not only for ensuring the conservation of the globally significant biodiversity of the Dry Forests, but also for the development of international standard tourism that will help to sustain local communities and continuing conservation efforts. Though there are many notable events and achievements from year 2 of the project, three significant events in FY06/07 particularly illustrate the project’s impact on biodiversity:

- 1). On several occasions, forest rangers on daytime patrol on elephant-back have observed leopard at close quarters. Such behaviour indicates a declining fear of elephant (which historically are used for hunting), as reflects reduced hunting pressure inside the core area of MPF.
- 2). Camera trap photograph of female leopard with two cubs is direct evidence of breeding among one of the top predators – this also indicates a general positive picture of prey species availability.
- 3). Camera trap photograph of female elephant and calf is more direct evidence of recruitment into the small population of this very slowly reproducing mammal – this landscape is one of the last strongholds of the Asian elephant in Cambodia, and the wider Dry Forests Ecoregion.

## **4. Monitoring, evaluation and lessons**

Apart from the monitoring and evaluation methods already described above, the main M&E lesson to be learned from project year 2, is that we should continue to do what we are doing in

measuring outcomes, and ensure we maintain a review and refine mechanism as we move towards achieving the overall project purpose by end of year 3.

#### **5. *Actions taken in response to previous reviews (if applicable)***

#### **6. *Other comments on progress not covered elsewhere***

One of the major enhancements of the project has been the opportunity that was created for project team members to visit Namibia to observe the MOMS in action (see Annex 12). First hand experience counts for so much more when it comes to being able to visualise how the MOMS system can be adapted for implementation in the SWA project, as well as for catalyzing the enthusiasm, and creating the local 'champions needed to see it through.

With respect to risks, it has been vitally important in the short term to manage the expectations that communities, government, and the private sector have of the potential for tourism development in the MPF.

#### **7. *Sustainability***

The profile of the project continues to increase and there remains positive interest by the local and international media. One of the communications highlights of the year was the recent feature photo story on the BBC International news website (front page on day of release, and two other pages).

The aim of offering research opportunities to some of Cambodia's up and coming conservationists was realised with the first student joining the project to assist with the MIST wildlife and law enforcement monitoring database.

The project has secured funds beyond FY07/08 that will enable continuation of the project goals, and as such no specific exit strategy is being considered at this time except for the ongoing strategy to build capacity to the extent that less international protected area *management* support will be needed as time progresses. The WWF team is also developing a sustainable financing strategy as part of the next phase of the project.

#### **8. *Dissemination***

A number of activities have been undertaken this year to disseminate project activity information. Several informal presentations have been given to government agencies and NGOs on project activities, and team members have also taken advantage of opportunities at international meetings to present the overall project aims and progress, e.g. meeting at WWF International headquarters in Switzerland in June 06, a communications workshop for Asia-Pacific conservation professionals in Indonesia in Nov 06, and at the IUCN Crocodile Specialist Working Group meeting in France in June 06.

As mentioned above, project funds are secured until FY09 and further fundraising is ongoing, and therefore dissemination will continue indefinitely.

#### **9. *Project Expenditure***

**10. OPTIONAL: Outstanding achievements of your project during the reporting period (300-400 words maximum). This section may be used for publicity purposes**

*I agree for ECTF and the Darwin Secretariat to publish the content of this section*

**1. Wildlife monitoring** captures first images of a female leopard with cubs, and elephant with calf in the MPF, (02/07, and 03/07) illustrating critical success in securing the protected area to the extent that key species are reproducing (see Output 2 and Annex 5).

**2. Participatory 3-Dimensional Modelling (P3DM)** (See Annex 5)

As reported in the last annual report an output of this training was that the participants assembled the 3-Dimensional model of the Mondulkiri Protected Forest (including the adjacent Phnom Prich Wildlife Sanctuary).

During the past six months (wet season) the SWA Project's Community Extension Team have continued working on this 3D model of the landscape. The following has been achieved:

- community members from the three community clusters have been invited and supported to attend workshops where they have indicated traditional use areas (within the draft sustainable use, community, conservation and core protection zones)
- eight communal boundaries now depicted on map
- information on map digitized into GIS
- 3D model map used as exhibition and information tool when visiting delegations visit WWF Cambodia's office in Sen Monorom (capital of Mondulkiri Province).

**3. Study tour to Namibia** (28 June to 18 July) - six staff from SWA project Ranger Unit and CNRM Unit travelled to Namibia, and were hosted by WWF Namibia's LIFE Programme. This activity was funded with matching funds from Habitat, Darwin, and WWF International (see Annex 12).

Staff were exposed to community-based natural resource management practices as well as government managed protected areas (Etosha NP, Caprivi, and Waterberg NP and conservancies). The study tour allowed for the investigation of the Management Orientated Monitoring System (MOMS) that assists communities and governments in the management of natural resources; this system is now being prepared for adaptation for the local situation in the MPF.

## Annex 1 Report of progress and achievements against Logical Framework for Financial Year: 2006/07

Project summary	Measurable Indicators	Progress and Achievements April 2006 – March 2007	Actions required/planned for next period
<p><b>Goal:</b> To draw on expertise relevant to biodiversity from within the United Kingdom to work with local partners in countries rich in biodiversity but constrained in resources to achieve</p> <p>The conservation of biological diversity,</p> <p>The sustainable use of its components, and</p> <p>The fair and equitable sharing of the benefits arising out of the utilisation of genetic resources</p>			(do not fill not applicable)
<p>Purpose</p> <p>Threatened key species in the Srepok Wilderness Area protected, and community access to benefits through sustainable wildlife tourism secured in the MPF in Cambodia</p>	<p>Benefits to 2 communities from improved management of wildlife and other biodiversity ensured through establishment of clear benefit sharing and management framework by 2008</p>	<ul style="list-style-type: none"> <li>- Socio-economic surveys completed for 593 households (73% of target)</li> <li>- Three 3-dimensional model maps produced; one for Mondulkiri Protected Forest and Phnom Prich Sanctuary combined, and one each for two of the three community clusters</li> <li>- Consultations completed on preliminary zoning for tourism in the MPF</li> </ul>	<ul style="list-style-type: none"> <li>- Community resource mapping planned May-June 07;</li> <li>- One more 3D model map planned at commune level in key community</li> <li>- P3DM manual and training video to be produced</li> <li>- Soc-ec survey report to be peer reviewed</li> </ul>
	<p>Wildlife tourism and community benefit-sharing policies developed and influenced by 2008</p>	<ul style="list-style-type: none"> <li>-Tourist willingness to pay survey completed in November 06</li> <li>-Tourism feasibility study completed (March 07)</li> </ul>	<ul style="list-style-type: none"> <li>- MPF management plan will be completed by July 07;</li> <li>- Tourism study and plan will be fully integrated and reflect priorities for community benefits</li> </ul>

	Community empowerment ensuring foundations for sustainable tourism in place by 2008	<ul style="list-style-type: none"> <li>- Additional 3D model mapping exercises conducted in priority communities</li> <li>- Tourism Technical Advisor hired</li> </ul>	<ul style="list-style-type: none"> <li>- Activities planned to facilitate elections for community leaders to join Community Tourism Committee</li> </ul>
	Globally significant biodiversity restored to the extent that surveys clearly indicate higher numbers of gaur and Eld's deer, and at least constant numbers of elephant and tiger by 2008	<ul style="list-style-type: none"> <li>- Community rangers are reporting consistent elephant numbers, as well as wild cattle species.</li> <li>- Camera traps continue to record indicator species including tiger and leopard. A Darwin Initiative-sponsored camera captured the recent picture of leopard with cubs, and elephant with calf (Annex 5).</li> <li>- The adapted version of Namibian MOMS system will be used to record and monitor key species</li> </ul>	<ul style="list-style-type: none"> <li>- New camera traps to be purchased (with project co-finance), and will include a new video camera trap to help increase communications opportunities</li> <li>- Start of pilot implementation of MOMS for all community rangers</li> <li>- Increase in wildlife research and establishment of monitoring transects</li> </ul>
Output 1. Core protection zone and surrounding conservancies' boundaries established; co-management agreements endorsed by communities and local government	At least 2 mapping workshops held by end yr 1, and zoning boundary maps and information signs produced and community conservancies established by middle yr 2;	Overall, this activity has surpassed initial expectations and has yielded much more useful information and community participation than was originally anticipated, furthermore, the project has been able to organize more mapping workshops than planned and is expected to achieve greater community capacity building in resource planning than in the original proposal. Other relevant indicator for this output is # 3D models produced.	
Activity 1.1; Training and mapping workshops;		<p>The project team have conducted a total of three 3D model preparation trainings, and 2 zoning workshops. Three 3D models have been produced one combined model for Mondulkiri Protected Forest (MPF – SWA project), and the adjoining Phnom Prich Wildlife Sanctuary (PPWS);</p> <p>Information signs have been placed in key areas to designate certain key zones (Annex 5);</p>	

		The results of the zoning workshops involving local communities have been incorporated into the revisions for the MPF zoning (core protection zone. Conservation zone, etc.) and subsequent management plan development (including designing co-management arrangements).
Activity 1.2; Management Plan preparation		General recommendations for Species Management Plans included in the Draft Protected Area Management Plan (April 06) – international PA management plan consultant hired January 2007; final plan due to be submitted to government July 2007.
Output 2. Baseline biological data collated and analysed; Communities, Gov't institutions and CBOs participate in wildlife surveys	Local version of MOMs monitoring system is set up for MPF; in addition to ongoing community, camera trapping, and field monitoring: at least 3 surveys conducted by end yr 2. At least 20 community members trained by WWF/local community rangers in wildlife monitoring by end yr 2.	Progress towards this output is clearly illustrated by the successful development of: the MIST database; camera trap photographs; ranger training activities; and the study tour to Namibia. Indicators are still valid for this output.
Activity 2.1. Camera trapping surveys; Monthly, biannual and annual field survey progress reporting; Inputting monitoring data into MIST database system.		Camera trap surveys have continued and results show positive indications of recovery of certain key species;  Data collected by community and government ranger teams has been inputted into MIST database since the beginning of 2006 (see example in Annex 3).
Activity 2.2. Training community rangers and government staff in wildlife monitoring; developing MOMS community wildlife monitoring system		Law enforcement training provided to rangers in May 2006, and annual ranger training in January 2007 (including joint training with CI and WCS);  Leopard research feasibility study completed March 07; Small mammal survey completed July 06;  Community and government project staff participated in a three-week

		study tour to Namibia in June/July 2006, following which these project staff have conducted training for rangers and developed the required materials for implementing an adapted version of MOMS in the MPF project.
Output 3. Community institutions and Gov't capacities for biodiversity management and wildlife tourism improved	Community Tourism Council established in yr1; At least 5 training courses organised by yr 3; Cambodian national studying Tourism M.Sc. in South Africa or UK by yr 2	This year, the project has begun to provide the opportunity for talented young Cambodian conservationists to join the project with the aim of conducting mutually beneficial research. Ranger training has also continued as planned; it is now clear that an indicator on increasing ranger competence standards would have been useful for this output.
Activity 3.1.	Building local government capacity in protected area management and in developing and managing ecotourism	<p>Extensive regular stakeholder consultation with provincial government on best management options for the protected areas in the province – will continue and be scaled-up in year 3;</p> <p>WWF has been requested to provide technical assistance on ecotourism planning at provincial level; capacity to provide this support has been increased since a Tourism Technical Advisor hired for the project in March 07 – the TA will lead the next phase of tourism development in the project during year 3, including the completion of a detailed tourism plan and tourism management board (delayed until protected area management plan is finalized in July 07);</p> <p>Consultation with Cambodian University Biodiversity M.Sc. course organisers about providing research opportunities in the MPF for Cambodian students: M.Sc. student joined project in March 07 to support the implementation of MIST. The project is seeking other Cambodian wildlife research students to work on the project in year 3.</p>
Activity 3.2.	Building capacity to manage protected areas, and to develop and manage site-based wildlife	Annual ranger training for government and community rangers has continued to develop skills in recording wildlife monitoring data. In year 3, more specific training will be provided for community rangers who will

	tourism in the MPF	<p>begin implementing the local version of MOMS.</p> <p>Keo Sopheak, the senior Cambodian government officer on the project has secured a place on a personalized one-to-one six-week wildlife and tourism management training course in South Africa in the first quarter of FY06/07. This course will provide Sopheak with a Diploma in Conservation Management and runs until July 07. Sopheak will be the first Cambodian ever to undergo such training and will benefit from significantly improved capacity in protected area and wildlife tourism management.</p>
Output 4. Socio-economic status established; Tourism economic feasibility study completed; MPF Community Tourism Council established; MPF tourism plan developed and endorsed	At least 3 socio-economic surveys by middle yr 1; MPF tourism feasibility study completed by end yr 1; At least 2 workshops held, tourism plan endorsed by end yr 2;	The socio-economics survey component of the project has been very successful, with results far more comprehensive than expected. Progress towards the tourism activities of this output has been slightly slower than anticipated; this is a reflection of the lack of capacity generally in Cambodia for promoting and building capacity in ecotourism development. Nevertheless, the feasibility study is back on track following completion of tourist surveys and stakeholder workshops. Original indicators for the tourism outputs were rather optimistic given the variables associated with being able to achieve buy-in from communities, the private sector, and the government in a short period.
Activity 4.1.	Conducting comprehensive socio-economic surveys in the key communities around the MPF	<p>Socio-economic surveys conducted in three key communes neighbouring the MPF. Sample size 500 households.</p> <p>Research study into local community use of fire as management tool completed Feb 07;</p>
Activity 4.2.	MPF project tourism feasibility study	<p>Tourism feasibility study research ongoing; final report April 07.</p> <p>Economic study completed September 06, and WTP surveys in November 06.</p>
Output 5. SWA tourism business	At least 2 investor visits and	Indicators for this output reflect the ambitious objective of securing private

development portfolio produced, and private sector agreements finalised	workshops organised by end yr 1; Business portfolio produced and distributed to investors by end yr 2; Agreements by end yr 3	sector interest and investment in the MPF in the short term. In hindsight, it would have been sensible to combine Output 5 into Output 4.
Activity 5.1	Tourism sector visits and workshops	Tourism operators in Cambodia (national and international) have been interviewed as part of tourism feasibility study development; input provided on investor climate and future needs for Cambodian ecotourism sector;  A local community and business workshop was held in Mondulhiri province (Mar 07) to gauge interest and gather feedback on developing tourism in the MPF, including private sector expectations for developing tourist facilities and activities.
Output 6. Project successes communicated nationally and internationally	Training materials including “training trainers” available yr1; locally-relevant versions of monitoring and conservancy establishment tools available yr2; Number of reports, articles, press releases, presentations given by yr 3	Project communications have progressed as expected; opportunities to give presentations on the project have been created, and a number of press articles and features have stimulated interest locally and internationally.
Activity 6.1	Production of training materials for increasing community awareness and understanding	In partnership with an international environmental education NGO (Live and Learn: <a href="http://www.idea.org.au/liveandlearn/activities/cam_proj.asp">http://www.idea.org.au/liveandlearn/activities/cam_proj.asp</a> ), WWF produced a set of community awareness flipcharts for use in conjunction with the community extension work being undertaken in the communities surrounding MPF; topics include biodiversity and environmental awareness, as well as health and education issues.
Activity 6.2	Reports, articles, press releases	Number of articles in WWF Greater Mekong newsletters <a href="http://www.panda.org/about_wwf/where_we_work/asia_pacific/our_solutions/greatermekong/index.cfm?uNewsID=95040">http://www.panda.org/about_wwf/where_we_work/asia_pacific/our_solutions/greatermekong/index.cfm?uNewsID=95040</a>

		<p><a href="http://www.panda.org/about_wwf/where_we_work/asia_pacific/our_solutions/greatermekong/publications/index.cfm?uNewsID=98840">http://www.panda.org/about_wwf/where_we_work/asia_pacific/our_solutions/greatermekong/publications/index.cfm?uNewsID=98840</a></p> <p><a href="http://www.panda.org/about_wwf/where_we_work/asia_pacific/our_solutions/greatermekong/publications/index.cfm?uNewsID=100460">http://www.panda.org/about_wwf/where_we_work/asia_pacific/our_solutions/greatermekong/publications/index.cfm?uNewsID=100460</a></p> <p>As well as other press releases and web articles (See Annex 4)</p>
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## Annex 2 Project's full current logframe

<b>Project summary</b>	<b>Measurable Indicators</b>	<b>Means of verification</b>	<b>Important Assumptions</b>
<b>Goal:</b>			
<i>To draw on expertise relevant to biodiversity from within the United Kingdom to work with local partners in countries rich in biodiversity but poor in resources to achieve the conservation of biological diversity, the sustainable use of its components, and the fair and equitable sharing of benefits arising out of the utilisation of genetic resources</i>			
<b>Purpose:</b>			
<i>Threatened key species in the Srepok Wilderness Area protected, and community access to benefits through sustainable wildlife tourism secured in the SWA in Cambodia</i>	<i>Benefits to 2 communities from improved management of wildlife and other biodiversity ensured through establishment of clear benefit sharing and management framework by 2008</i>	<ul style="list-style-type: none"> <li>-Community co-mgm't agreements</li> <li>- Workshop/meeting minutes</li> <li>- 'SWA Community Tourism Council' reports</li> <li>- Number of communities involved in pilot activities</li> <li>- Monthly and annually technical reports</li> </ul>	<ul style="list-style-type: none"> <li>-Continued community support and awareness</li> <li>-Continued Gov't support and will to cooperate</li> <li>-Adequate staff and resources for wildlife conservation</li> </ul>

	<p><i>Wildlife tourism and community benefit-sharing policies developed and influenced by 2008</i></p>	<p><i>-SWA tourism plan clearly stating no. of communities in plan</i></p> <p><i>-Number of gov't agencies in plan dev't</i></p>	<p><i>-Continued community support and awareness</i></p> <p><i>-Continued Gov't support and will to cooperate</i></p> <p><i>- Inter-ministerial cooperation takes place. Project recommendations included in policy and enforcement strategy.</i></p> <p><i>-Effective project communication</i></p>
	<p><i>Community empowerment ensuring foundations for sustainable tourism in place by 2008</i></p>	<p><i>- Democratic community based organisation (CBO) promulgated. – CBO constitution</i></p> <p><i>- CBO meeting reports</i></p> <p><i>- community member employed in trainee management role in tourism enterprise</i></p> <p><i>- conservancies established as legal entities</i></p> <p><i>- PRA assessment reports</i></p>	<p><i>- CBO constitution</i></p> <p><i>- official support for the CBO</i></p> <p><i>- legislative possibility to establish conservancies</i></p> <p><i>- tourism enterprise(s) established</i></p> <p><i>- legislative possibility to bestow de facto rights to CBO</i></p>

	<i>Globally significant biodiversity restored to the extent that surveys clearly indicate higher numbers of gaur and Eld's deer, and at least constant numbers of elephant and tiger by 2008</i>	<ul style="list-style-type: none"> <li>- reports on surveys of wildlife by communities and Darwin project partners</li> <li>- Number of gov't plans using SWA models</li> <li>-Annual 'SWA wildlife census' reports</li> </ul>	<ul style="list-style-type: none"> <li>- transferability of MOMS monitoring from southern Africa to Cambodia</li> <li>- Uncontrollable external factors do not increase in SWA</li> </ul>
<b>Outputs:</b>			
<i>1. Core protection zone and surrounding conservancies' boundaries established; co-management agreements endorsed by communities and local government</i>	<i>At least 2 mapping workshops held by end yr 1, and zoning boundary maps and information signs produced and community conservancies established by middle yr 2;</i>	<i>Maps, workshop reports; PRA assessment reports; Species Management Plans;</i>	<i>Communities and local gov't understand and can identify boundaries; they continue to support co-mgm't</i>
<i>2. Baseline biological data collated and analysed; Communities, Gov't institutions and CBOs participate in wildlife surveys</i>	<i>Local version of MOMS monitoring system is set up for SWA; in addition to ongoing community, camera trapping, and field monitoring: at least 3 surveys conducted by end yr 2. At least 20 community members trained by WWF/local community rangers in wildlife monitoring by</i>	<i>Field survey reports, GIS maps; Database of biodiversity and socio-economic data; Participants attendance and assessment records</i>	<i>Trained personnel remain in position and committed to long term participation MOMS is an acceptable tool for local communities to use</i>

	<i>end yr 2.</i>		
<i>3. Community institutions and Gov't capacities for biodiversity management and wildlife tourism improved</i>	<i>Community Tourism Council established in yr1; At least 5 training courses organised by yr 3; Cambodian national studying Tourism M.Sc. in South Africa or UK by yr 2</i>	<i>CBO constitution; Training materials; Workshop reports; Degree certificate</i>	<i>Trained personnel remain in position/commit to sharing skills</i>
<i>4. Socio-economic status established; Tourism economic feasibility study completed; SWA Community Tourism Council established; SWA tourism plan developed and endorsed</i>	<i>At least 3 socio-economic surveys by middle yr 1; SWA tourism feasibility study completed by end yr 1; Community Tourism Council established by yr 1; At least 2 workshops held, tourism plan endorsed by end yr 2;</i>	<i>Workshop reports; Feasibility study report; Meeting minutes; Community Tourism Council TORs; Tourism plan document</i>	<i>All relevant stakeholders willing and able to participate in process to establish Community Tourism Council and plan.</i>
<i>5. SWA tourism business development portfolio produced, and private sector agreements finalised</i>	<i>At least 2 investor visits and workshops organised by end yr 1; Business portfolio produced and distributed to investors by end yr 2; Agreements by end yr 3</i>	<i>Visit reports; Workshop reports; Business portfolio document; Agreement documents</i>	<i>Private sector committed to sustainable tourism development approach</i>
<i>6. Project successes communicated nationally and internationally</i>	<i>Training materials including "training trainers" available yr1; locally-relevant versions of monitoring</i>	<i>Publications in national and international media; Presentations; Reports to Darwin</i>	<i>Communications effectively reach target audience</i>

	<i>and conservancy establishment tools available yr2; Number of reports, articles, press releases, presentations given by yr 3</i>		
<b>Activities</b>		<b>Activity Milestones (Summary of Project Implementation Timetable)</b>	
<i>Community-based wildlife management (relating to outputs 1 and 2).</i>		<ul style="list-style-type: none"> <li>▪ <i>Training needs assessment conducted in early year 1;</i></li> <li>▪ <i>Development of local or Cambodian version of the MOMS monitoring system;</i></li> <li>▪ <i>Training from southern African experts on local version of MOMS monitoring system;</i></li> <li>▪ <i>3-D modelling workshops for SWA by yr 1; 3-D modelling workshops for SWA by yr 1;</i></li> <li>▪ <i>Wildlife census, enforcement , camera-trapping and community-based monitoring training by yr 1;</i></li> <li>▪ <i>SWA zoning workshops by yr 2;</i></li> <li>▪ <i>Co-management/conservancy meetings; wildlife surveys by yr 3</i></li> </ul>	
<i>Sharing of benefits from tourism with local communities (relating to output 4)</i>		<ul style="list-style-type: none"> <li>▪ <i>Socio-economic surveys by yr 1;</i></li> <li>▪ <i>3D modelling w/shop; PLUP (participatory land-used planning) w/shop by yr 1;</i></li> <li>▪ <i>Participatory GIS and community mapping by yr 1;</i></li> </ul>	

	<ul style="list-style-type: none"> <li>▪ <i>PRA</i>s, yr 1-yr 3;</li> </ul>
<p><i>Wildlife tourism management framework and capacity building</i> <b>(relating to outputs 4, 5 and 6)</b></p>	<ul style="list-style-type: none"> <li>▪ <i>Training (local, regional, national) on conducting visitor surveys by yr 1;</i></li> <li>▪ <i>Conduct visitor surveys with local gov't by yr 1;</i></li> <li>▪ <i>Engage tour operators, conduct feasibility studies for SWA tourism yr 1;</i></li> <li>▪ <i>Training w/shops (business tools, negotiation, financial management) yr 1;</i></li> <li>▪ <i>Establish SWA Community Tourism Council (Y1), and run CTC meetings (all yrs)</i></li> <li>▪ <i>Develop Tourism action plan by yr 2</i></li> <li>▪ <i>Scholarship for a Cambodian national by yr 2</i></li> </ul>
<p><i>Communicating successes</i> <b>(relating to output 6)</b></p>	<ul style="list-style-type: none"> <li>▪ <i>Inform Dry Forest Coalition; Communications, advocacy and publicity, all yrs</i></li> </ul>

### **Annex 3 Example data from MIST database**

Table 1 - indicates direct evidence of hunting or logging during the last 6 months.

Observation	Observation code	Count	Gear Confiscated	<i>Number</i>
Direct evidence	Hunting	3	None	
Direct evidence	Logging	5	Chainsaw	5

Table 2 - shows field observations of indicator species, and compares actual sightings versus track observations. Note this does not include species caught on camera trap.

Observation	Observation code	Total
Asian Elephant	Footprint	189
	Sighting	0
Banteng	Footprint	1447
	Sighting	73
Gaur	Footprint	273
	Sighting	14
Wild water buffalo	Footprint	35
	Sighting	0
Eld's Deer	Footprint	6
	Sighting	9
Leopard	Footprint	30
	Sighting	2
Tiger	Footprint	2
	Sighting	0



## **Annex 4 Web-based news, press releases, and articles**

### **1. BBC news website – 24 Apr 2007**

*Darwin project leader James MacGregor, WWF staff member Nick Cox, and local BBC journalist Guy Delauney, ventured into the Mondulkiri Protected Forest on mountain bikes, encountering leopard tracks and forest rangers along the way.*

[http://news.bbc.co.uk/2/shared/spl/hi/picture\\_gallery/07/asia\\_pac\\_biking\\_through\\_cambodia0s\\_jungle/html/1.stm](http://news.bbc.co.uk/2/shared/spl/hi/picture_gallery/07/asia_pac_biking_through_cambodia0s_jungle/html/1.stm)

### **2. IIED website – 10 Apr 07**

Spotted and snapped: first photos of leopard with young in Cambodia. The first ever photographs of a wild leopard with young in Cambodia show that a pioneering project is helping to conserve wildlife and support local livelihoods there.

<http://www.iied.org/mediaroom/releases/070410cats.html>

### **3. WWF International website - 19 Dec 2006**

Throughout September and October, the Srepok Wilderness Area Project (SWAP) team conducted a series of workshops with around 50 local community representatives, informing and exchanging information about the different land uses, vegetation, physical structures, and commune boundaries in the Mondulkiri Protected Forest (MPF).

[http://www.panda.org/about\\_wwf/where\\_we\\_work/asia\\_pacific/our\\_solutions/greatermekong/dry\\_forests\\_ecoregion/news/index.cfm?uNewsID=90641](http://www.panda.org/about_wwf/where_we_work/asia_pacific/our_solutions/greatermekong/dry_forests_ecoregion/news/index.cfm?uNewsID=90641)

### **4. WWF International website – 11 Sep 2006, also Press release in Cambodia Daily - Sep 06**

Five Cambodian community and government conservationists from the WWF-supported Srepok Wilderness Area Project (SWAP) project recently returned from Namibia, having spent three weeks learning how their southern African counterparts are successfully involving local communities in conservation for the benefit of biodiversity and local livelihoods.

[http://www.panda.org/about\\_wwf/where\\_we\\_work/asia\\_pacific/our\\_solutions/greatermekong/dry\\_forests\\_ecoregion/news/index.cfm?uNewsID=80200](http://www.panda.org/about_wwf/where_we_work/asia_pacific/our_solutions/greatermekong/dry_forests_ecoregion/news/index.cfm?uNewsID=80200)

## **Annex 5 Recent Project Images**

*First camera trap photo from MPF (and Cambodia) of Leopard with cubs (Feb 07)*



*First camera trap photo from MPF of elephant and calf (Feb 07)*



*Information sign showing elephant corridor zone between MPF and PPWS (Mar 07)*

QuickTime™ and a  
TIFF (uncompressed) decompressor  
are needed to see this picture.

*Gaur in MPF*



***Draft Zoning map for MPF***



## **Annex 6 Leopard Survey Summary**

Ecology and conservation of the Indo-Chinese leopard (*Panthera pardus delacouri*) in the Srepok Wilderness Area, Mondulkiri Protected Forest, Cambodia – Julia Chase-Grey.

### Conclusions

This pilot study provided information on the static spatial location of five individual leopards on the project site and also provided evidence that Indo-Chinese leopards are currently breeding in the Srepok Wilderness Area, which is a baseline positive indicator of the biological validity of this population.

The pilot study was hampered in part by problems with theft of cameras, which caused a loss of data and resources. This problem was mediated in the second camera trapping session by placing cameras away from roads utilised by local residents and using cameras singly rather than in pairs. A new law enforcement plan with increased patrols on the project site and an increase in dedicated law enforcement staff should prevent this from happening in the future.

### Further work to be undertaken

This pilot study has shown that there is a breeding population of leopards in the Srepok Wilderness Area. The next step would be to undertake a full population density estimate of the Indo-Chinese leopard using capture/recapture methodology in order to obtain a valid estimate of the population status of this animal on the project site. This would assist greatly in establishing the conservation status of the leopard in Cambodia in order to develop any required management and conservation strategies

An investigation into the level of threat posed by the poaching of leopards and their prey also needs to be undertaken as no data currently exists on this issue. Initial work with the WWF Community Extension team during the pilot study suggests that hunting of leopards on the project site is not common but human wildlife conflict with leopards occurs and local residents do hunt leopard prey frequently. As the population density of carnivores is strongly correlated to that of their prey, there may be a negative effect of prey poaching on leopard populations (Karanth et al. 2004).

## Annex 7

### Summary of socio-economic surveys conducted for selected villages around the Mondulkiri Protected Forest – Amy Maling

#### Introduction

The Mondulkiri Protected Forest (MPF) declared as a important areas for genetic conservation by the Ministry of Forestry, Fishery and Agriculture is located in the province of Mondulkiri specifically in Pech Chenda and Kon Nheaek Districts. There are eight communes located adjacent to the protected forest; these were grouped into three strategic clusters (see table below)

To better understand the socio-economic situation of communities living around the MPF and their level of dependence to its natural resources, the WWF through its Srepok Wilderness Area Project (SWAP) conducted a rapid baseline survey in these three community clusters. The study included focus group discussion in 14 villages, interviews among key informants from the communes and villages and individual household surveys to 568 households<sup>1</sup> representing 43% of the total households in sampled villages.

The output of the Survey will be used in designing entry points and approaches in identifying community partners for the community development component of the SWA project. The result also attempted to establish benchmarks for future project evaluation.

Table showing the clustering of 8 communes around MPF and areas covered by the study.

Cluster, District, Commune	Village	HH # (2005)	Resp.	SI (%)
Southern Cluster – Pech Chenda District				
Krang Teh	Krang The	59	18	31
Bu Chri	Bebai, Putang	266	96	36
Western Cluster – Kaoh Nheaek District				
O Buon	O Buon Leu	130	68	52

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<sup>1</sup> Households here referred to families (can be more than 1 family) living together in one roof and sharing food and in economic activities.

Roya	Roya	97	49	51
Sokh Sant	Klang Le; Ou Agnor	153	26	17
Srae Huy	Srae Huy; Chol	183	108	59
Srae Sangkom	Serei Rot	58	36	62
Northern Cluster – Kaon Nheaek District				
Nang Khi Loek	Peam Chi Miet; Nang Buo; Kaoh Moueleu; Kaoh Meul Krom	389*	167	43
Total	14 villages		568	43

## Summary of Findings

### *Demographic profile*

#### *Population size and settlement*

As of 2005 there are about **16, 983** individuals comprising **3, 542** families in the eight communes around the MPF. These families mostly live in thatch roofed houses lining the roads along the villages. Communes with the highest as well as the lowest population are found in the western clusters. Sre sangkom, which is the centre of economic activities in Kon Nheaek district has the highest population at **4, 152** followed by Nang Keh Leok. Srae Huy has the lowest population at **1,324** individuals or 258 households.

Comparing across clusters, western cluster comprising five communes have the highest population followed by southern cluster with 10,597 and 3,772 individuals, respectively. The total population in the three clusters comprises about 36% of the total Mondulhiri population in 2005.

The population is relatively young where higher percentage of the population belongs to the age bracket 0-14 years (45%) and 15-64 years (51%). This will have implications on the increase of population in the area and consequently with the resource use in the future.

### **Ethnicity**

Eleven groups comprise the population in the study area with Bunong comprising the majority at 45%. The other major groups are Khmer (33%) and Lao (13%) the latter mostly residing in the northern cluster; the most diverse commune having 8 different ethnic

groups). Southern and western clusters, on the other hand, were originally peopled by Bunong people until early 80s when the Khmer people started moving in these areas in search for land to cultivate and for better livelihood opportunities. Because of the perceived availability of lands in these areas it has remained to be the major pull factors up to present. This and the increasing accessibility of the area with the road improvements has also made it attractive to other groups like Cham.

### **Population growth rates and trends**

Factors contributing to the population growth such as fertility rate, migration rate and health status were also studied to a limited extent because of unavailability of some data.

**Population control prevalence.** In the absence of fertility rate, proxy indicator such as the prevalence of birth control was looked into. The family size is large at an average of 6.2 members with 21 as the highest. More are have bigger families than the average and are mostly extended especially among Bunong where new couples need to stay for 2-3 years with their parents before allowing them to live in separate house. This is mainly for cultural reason but has also economic dealing because of the need for more labour in farming. There is however an apparent change attitude towards number of children as can be gleaned from interviews. Where in the past most parents want to have more children to provide additional labour for economic activities, now majority of the parents interviewed (61%) don't want additional children due to financial difficulty. Unfortunately, only 20% of them are using either natural or artificial birth spacing methods mainly because of inadequate knowledge despite the presence of family planning programs in most communes. Education is also major factor related to openness of most couples to do birth spacing.

**Migration trends.** Khmer and Cham people started migrating in these areas as early as 1970s for reason stated earlier. The social unrest in the 70s also forced some people to move in some villages and even after the war through government assisted settlements. Migration rate however was very slow until the last three years especially in 2003 which saw the highest entry of migrants in Bu Chri and O Boun Leu where 76% are migrants. The western cluster where there is more land available for contribution received the highest number of migrants. Although most migrants came from other provinces, there is also a high circulation within the province (i.e. people moving from one commune to another or creating new groups<sup>2</sup>/villages).

Entry of migrants also unintentionally pushed the IP groups further to the forests resulting to opening of more areas for agriculture and settlements.

The intense migration and population growth (which increases by 16% from 2002 to 2005 or nearly 800 individuals every year is now resulting to denser population around MPF.

The three clusters have an average population density of 4 persons/sw.km. at present which is higher than the provincial record of 2 persons per square kilometre (FFI and NGO Forum, 2006). O boun leu, is the densest area with 13 person/sq.km. This figure though is much lower when computed against the actual usable (alienable) areas for settlement, agriculture and institutional structures are not available. For example, when compared

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<sup>2</sup> Sub group is the smaller political/administrative unit next to village.

against the available rice farms there appears to be a land scarcity problem especially in Southern cluster which registered a high density at 1020 person/sq.km. in Krang teh and 868 person/sq. km. in Bu Chri.

Using the existing population data, the density in community zones and sustainable zones are 51 and 24 person/sq.km, respectively. Given these benchmarks, further study on the carrying capacity of these zones especially in lands which can be cultivated or used for settlement need to be studied further to determine the allowable population density which is within the regenerating capacity of the resources in these zones. Considering the current rate of migration, plans for regulation population growth (both from natural increase and migration) should be considered in future planning. Systems on regulating and monitoring of occupants especially among migrants inside the protected forest should be put in place.

### **Access to Social Services**

Access to basic social services is relatively low in the areas studied as a result inadequate facilities and poor service quality.

**Access to clean water.** Streams and rivers remains to be the major source for domestic water use due to limited number of pump wells. One pump well is servicing an average of 20 houses.

**Access to education.** While there are primary schools in all villages, data shows a shortage of classrooms and teachers in more remote areas of northern and western clusters, thus resulting to multi-grade classes. This and apparent lack of interest among parents to send children to school and lack of financial capability contributes to the low literacy level at 4% (ICC study 2003) for Mondulkiri province.

**Access to health services.** Only 53% are accessing health posts/centres services albeit irregularly because of poor services, irregular reporting of health post staff, distance and financial. Majority still resort to traditional medicine of self treatment.

### **Economic Profile**

#### ***Production Activities***

Farming (96%) and fishing (81%) is considered the principal livelihood but also most people especially among the tribal communities are highly dependent on forest for their economic survival. As agricultural and fish catch (average of 2.8 kg per fishing time) continue to dwindle more and more non tribal people though are engaged in collecting forest resources to augment cash income. Almost all households interviewed (92%) gather forest products either for trading or household use. The most important non –timber forest products collected to augment their cash income are resin, wildlife, honey and orchids and sleng seeds. Wild vegetables and fruits, fuel wood, thatch, bamboos and wood for house construction are other products collected for non commercial purposes.

In addition to farm and resource - based production activities, several households are also involved in other income generating activities in form of merchandise/trading within the village, hiring out services (skilled labour) or additional work in both formal and non formal labour sectors.

**Labour Force.** Family members are the main labour force in every household economic activity where the male spouse and male offspring play major role especially in fishing, hunting, resin collection and hiring labour services. Animal-raising is the domain of female spouse but also contributing significantly to farming activities.

**Agriculture** production is low and most respondents (58%) claimed not having sufficient production even if farm size is relatively big at 1.5 hectares because of big family size. Most of the families who experienced production shortage have more than 6 members. Not considering other factors, it can be deduced from those who have enough production that to have sufficient production a family this size should have at least 2.5 or more hectares of rice farms and should be coupled with improvements on agricultural technologies such as irrigation and soil and pest management systems.

All farms are rain fed that is why cropping is observed only once a year. Respondents also reported the following factors related to low production are pest (insects, weeds and wildlife), lack of labour and farm implements, poor soil condition and lack of agricultural technologies.

In addition to cropping, a majority of the households (92%) also raised farms for home consumption or sale to the market to compensate insufficiency in rice production.

Three types of farms are being used for farming; rice farm which are mainly used for planting lowland variety of rice, and the non permanent and permanent chamkar which are mostly for growing vegetables and fruit trees. Upland rice is also planted in these areas but by only a few families. Use of lowland rice variety is becoming more popular among the farmers because of higher yield and shorter gestation period.

**Fishing.** All villages are engaged in fishing and highest in Roya, Srae huy and Nang Keh Leok which are proximate to the major streams or Srepok River. Except for the 19% of respondents who claimed fishing as fulltime activity most are part-time fishers meaning they don't fish for most part of the year and mostly for family consumption. Most favourite fishing areas are the O Chbar (71%), O Rove (21%) and O te'(17%); the major tributaries to the srepok river. Ponds are also important fishing areas for 15% of the fishers.

The use of traditional fishing gears like t'nor, tru are no longer largely practice by the respondents. More have resorted to the more modern technologies like gill and cast nets and even to the extent of using destructive.

Again as a result of population growth, more people are engaged in fishing. This and the rampant use of electric and grenade in fishing, and perceived decrease of water level in streams and rivers, fish catch was significantly reduced in the last three years pushing more and more people to spend more time collecting forest resources.

**Hunting and resin collection** Hunting is a secondary source of income for 35% of the households interviewed where dog chase is the most popular method used for 93% of the hunters. The most common species hunted are water monitor, tortoise and civet. A few

respondents also admitted to hunting key species like munjac, gaur and dhole were also admitted by a few respondents. Majority of respondents who admitted hunting are from Roya 65% and Nang Keh Leok (50%). Hunting is done all year round but peaks during the early rainy season (April to June).

Another important forest – based economic activity for 45% of the respondents is resin tapping especially among villagers from Roya (100% are tapping), Krang teh (88%) and Bu Chri (74%). These villages live near the areas where resin trees thrive. There is a clear existing ownership system of resin trees among the local and each owns an average of 113 resin trees. This is true for tree species *D. alatus* and *intircatus* which are used for collecting liquid resin. Tree species for collecting solid resins on the other hand (which have lower price are 500 Cambodian Riel (or .02 US dollar) are not normally owned.

## **Community perception and status of natural resource management**

### **Existing social structures related to natural resource management**

The village chiefs and communes councils play important role in disseminating relevant laws about NRM. From the commune council there is also an existing NRM committee in every commune composed of some commune council members and representatives from police and military.

Another informal structure in the area is the livelihood groupings. Economic activities like fishing, resin collecting, honey gathering and in limited extent hunting is mostly a social activity especially among the Bunong people where a group of 5-6 families usually do fishing, resin tapping or honey hunting together. They usually spend 3-6 days in the forest or fishing areas. The produce is then divided equally among the members. It can be gleaned from this livelihood system strong community cohesion especially among the indigenous groups.

The project can bank on this existing social capital in its organizing work so as not to disrupt existing systems in the community.

Engaging the more formal structure (i.e. NRM committee within council) is also important to get higher cooperation and support from the political leaders both at commune and district levels.

Presence of Indigenous Knowledge Systems and Practices (IKSP) related to natural resource management.

The study also attempted to identify presence of IKSP among the indigenous communities but there is no apparent presence of traditional forest management in the past perhaps because of perceived abundance of resources. The indigenous peoples however have strong forest based culture as indicated by the practice of spirit forest. These forests served as venue for them to renew links/relationship with their ancestors and are therefore highly respected thus creating indirect positive impact on forest conservation. Unfortunately, the entry of migrants which do not possess strong relationship with these forest and often see use it in more extractive nature show very little respect to this custom.

Apparently, the areas of spirit forest have been reduced through time also decreased over time.

In terms of awareness on laws related to natural resource management, there is an average awareness among the respondents with only 57% claiming to know some laws. Bu Chri is the highest in terms of awareness which is understandable because of its proximity and among the eight communes this is where WWF has been working for a longer time. Knowledge though is general and are confined to the following:

No cutting of trees in the forest (73%)

No hunting (66%)

No illegal fishing (26%)

There is very limited knowledge of land laws with only 2%

Commune chief and village chief plays significant role in disseminating laws about NRM as most of the respondents claimed them as main sources of information. Other sources are NGOs (WWF) government agencies (MoE), broadcast media (radio and TV), word by mouth (neighbors, relatives)

On whether these laws are being effectively communicated, only 39% said yes and 43% said not because of inadequate knowledge on laws and poverty which is aggravated by presence of wildlife traders offering lucrative price. Disrespect of the law especially among people with connections was also cited by quite a number of local communities.

Among the 39% who said laws are effectively implemented, presence of rangers and conservation initiatives from NGOs and concerned departments were identified as contributory factors. People are now beginning to understand the importance of forestry law and protection forests and believed that they play important roles in protecting their forest resources.

Through a guided resource assessment activity with several community members using set of indicators on sustainable resource management resource the communities realized that the current mode of extraction becoming unsustainable. They are aware of the impacts of these to their livelihood but admitted to having insufficient experience to engage in more sustainable forest resource management.

Identified major threats to biodiversity loss were:

Use of unsustainable methods (e.g. illegal gears in fishing, gun in hunting) in resource utilization

Decrease in water level in streams, rivers – see if they have answer why decrease in water

Development projects like the hydro power in Vietnam

Increasing population resources can no longer cope with the increasing population (more fishers, more hunters)

Poverty aggravated by presence of traders

Destruction of wildlife habitat, cutting and burning

### **Conclusions and recommendations**

The following recommendations are put forward for protected forest management consideration.

High density in agricultural areas at an average of 336 persons/sq.km. suggests possible expansion and opening up of more forest in the future if not properly regulated. Thus, the growing population and increasing density in the area should be considered in deciding the actual size of community zones which are available for settlement and agricultural activities and plans for settlement expansion.

A more intensive study on the carrying capacity both in the community and sustainable zones should also be carried out to provide benchmark in regulating migration or settlements and ensuring that use are within the regenerating capacity of resources found therein.

Regulatory measure can be more effectively done by providing concrete tenure systems within the bounds of the MPF to counter the perceived open access to lands around these areas taking careful consideration on traditional tenure systems.

On the social side, investment on social services should be strengthened like plans for regulating population growth through improved educations and health service system focusing on reproductive health to avoid land scarcity environmental stress which is starting to be felt at present. This is one aspect that can be considered in ploughing back benefits from ecotourism activities.

Specific actions needed to address some problems identified in the study will be processed with the community in coming up with shared action plans to reduce the identified threats to biodiversity loss and in improving their socio-economic conditions.

## Annex 8

### Summary of Recommendations for Utilising Local Knowledge and Understanding of Fire Management for the Purposes of Biodiversity Conservation in Mondulkiri – Megan McInnes

Approaches for decentralising fire management Community Based Fire Management (CBFiM)<sup>3</sup> and Integrated Forest Fire Management (IFFM) can range from state-orientated planning with limited local involvement such as the recruitment of local volunteer ‘fire-fighting’ teams, to co-management which combines locally prescribed regimes with scientific modelling, to management planning and implementation coordinated primarily according to local requirements (Goldammer et al. 2002, Rakyutidharm 2002). Given the evident resource and capacity restrictions of the Cambodian government for effectively managing fire in remote areas such as the Eastern Plains, four issues were identified by the research team which provide opportunities for decentralising fire management.

There appear to be considerable complementarities between the Bunong people’s understanding of fire-environment dynamics and the scientific understanding and approaches suggested by conservation agencies for fire management within DDF landscapes.

Despite the current dominant ‘fire suppression’ policy, there are several areas of current national legislation which have the potential to increase local involvement:

The Forestry Law gives provision to the FA to prescribe fire for ‘forest maintenance’ (see Box 4.1), which is similar to the conceptualisation of the Bunong of ‘using fire to manage fire’ through fuel load control. Local communities could provide considerable support to this process due to their existing fire-management knowledge and also because they live in the remote areas which the FA currently lacks the capacity or resources to reach,

The ‘Declaration’ (Prakas) related to fire which is intended to support the implementation of the Forestry Law has not yet been issued and interviews with national authorities indicated that it had not yet even been drafted. There is therefore the opportunity for policy-level discussions about detailed content of the ‘Declaration’,

The research indicated that the ‘Forest Fire Fighters Committees’ have not yet been established, which again provide potential opportunities for increased local participation in their organization and operation.

A CBFiM approach for MPF would complement the broader CBNRM methodology which WWF-Cambodia are using within their SWA Project, and would reflect the generally sympathetic view of SWAP’s Community Rangers to local fire use within the MPF. Given the ‘sustainable’ nature of some Bunong fire regimes in terms of ecosystem dynamics, the provision for ‘sustainable traditional NTFP harvesting’ within MPF’s conservation and sustainable use zones (according to MPF’s Provincial Regulations<sup>4</sup>) could be expanded to

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<sup>3</sup> Also known as Community Based Forest Fire Management (CBFFM), but not used in this paper as its forest specificity is not appropriate for the grassland-savannah areas of Mondulkiri.

<sup>4</sup> Mondulkiri Protected Forest Provincial Regulations, 2<sup>nd</sup> February 2006.

include community managed fire regimes. Strengthening the involvement of the Bunong and other indigenous groups in fire management would further enable improved tenure security which has been proved internationally to enhance overall governance of resources (Dolsak and Ostrom 2003, Rakyutidharm 2002). As has been shown in Thailand “managing the forest with the full involvement of community members is more effective for managing fire if it is an entrenched social responsibility in the first place” (Makarabhirom et al. 2002:12).

Recognition of the value of Bunong fire-knowledge and its formal inclusion within prescribed fire management would help limit broader loss of indigenous environmental knowledge and oral history. ‘External’ recognition of indigenous traditional practices could help to legitimise local knowledge and increase the respect it is given by younger generations who tend to have externally-oriented role models and aspirations.

However, it is important to note two areas of policy-development which could prove problematic. The first is the role of CBFiM in the ‘core zones’ of protected areas such as MPF in which all access is prohibited except for staff activities and scientific research, but which still require prescribed fire regimes in order to maintain a mixed DDF landscape. The second is the role of local communities, the state, civil society and the private sector in fire management in landscapes outside designated conservation zones. The savannah grassland of the Haut Chhlong Plateau is a good example; there is confusion as to which government agency is responsible for its management as it falls between recognised ‘forest’, ‘agricultural’ or ‘protected area’ categories which are automatically managed by the FA, MAFF and MoE respectively. The allocation of this area as economic concessions to private companies has also come into conflict with traditional local burning regimes for forage management for domestic livestock, and led to the only known arrest of a Bunong person for ‘intentionally’ setting fires which destroyed an area of industrial pine plantation. The opportunity of ‘Community Forestry’ providing a framework for decentralised fire management should also be further investigated for these ‘in-between’ areas.

### 3.2 Areas for future research

This study only begins to explore the complexities of human-fire-biota dynamics in the northeast of Cambodia. Therefore, before specific recommendations can be made beyond the opportunities for policy development outlined above, further research is required. Experience from this study suggests that in future the scope should be expanded to include Indigenous communities across the Eastern Plains and an interdisciplinary approach be used, comprised of the following:

Replication of the qualitative methodologies used within this study in selected Bunong and other indigenous communities which can expand and validate these results. This should be supported by household-level quantitative surveys to assess broader behavioural trends. At this larger scale, traditional and changing use of fire could be assessed both within the range of ‘biodiversity protection’ zones located in the area, and in the unprotected zones in-between.

Establishment of a long-term framework of bio-physiological study sites across the landscape, potentially including:

Controlled fire site plots to measure short and long term impacts of varying fire regimes (frequency, seasonality .... ) and fire types (temperature, intensity, speed ... ) on flora, fauna and soil biodiversity

Further exploration of historical fire frequency through an expansion of Maxwell's study of lake-deposited pollen-core samples, or tree core-samples, depending on suitable sites

Relating Cambodia's historical fire trends within the 'El Nino Southern Oscillation'-orientated regional fire prevention and control programmes such as Project FireFight South East Asia, CIFOR/ICRAF research projects, ICUN/UN-ISDR<sup>5</sup> Inter-Agency Task Force Working Group 4 on Wildland Fire and initiatives within ASEAN.

Mapping of historical fire regimes and land-cover changes through the analysis of available aerial imagery (aerial photographs, satellite images etc.).

In line with the overall objective of strengthening indigenous livelihood security a further recommendation from this study is that the Bunong, and other targeted indigenous groups, are recognised as integral participants in any further research project on anthropogenic fire in northeastern Cambodia. Experience from Thailand shows that exploration of multidisciplinary issues relating to natural resource management, biodiversity conservation and indigenous knowledge and practice, in areas with differing understandings of 'environmental change' and 'values', can most easily be understood using a 'hybrid approach' (Forsyth 1996). This integrates scientific and 'local' (or 'traditional') approaches and methodologies during each of the research phases.

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<sup>5</sup> United Nations International Strategy for Disaster Reduction

## **Annex 9**

### **Summary of Conclusions from Tourism Willingness To Pay (WTP) Study**

*Fact remains that more respondents contribute to a more accurate study and in this case we would suggest that another study on high-income tourists was conducted in order to get a more correct estimation of the behaviour of this group. An interpreter that speaks Khmer is the only way to reach the Cambodian tourists and we would suggest that a new survey is conducted on this group specifically. An over all feeling was that first after approximately 80 conducted surveys or 14 days we had somewhat fully information about the project and with more time in the country we had wanted this part of the study to amount to at least 100 interviews.*

The roads to Sen Monorom are at this point in a quite bad shape. The roads are not paved which makes the journey very uncomfortable and in some parts of the year not even accessible by bus. The travelling time varies with the season between 7 and 14 hours, which makes the trip uncertain and difficult to plan. At the time we left the country big improvements in the roads to Sen Monorom were planned. Hopefully these improvements last longer than a heavy rain season and if they do, this can make it easier for tourists to reach the area. Time and availability were two of the main reasons on question 49 about reasons for not doing as much nature based activities as wanted, why improved infrastructure indicates more tourists to the area even though this was difficult to explain from the WTP result.

An important aspect already suggested by the Lincoln International (2003) is that the wildlife population must increase eventually since this is a big attraction to tourists. In this study you can see that the most important aspect for tourists to visit the area is to learn about and photograph wildlife. The scenario presented to the respondent is more or less promising a rich animal and bird life which might draw tourists interest to the area even though it does not say that it is guaranteed that these animals will be spotted. In fact we met a couple of disappointed travellers recently back from Sen Monorom who had hoped to see more wildlife than they did. The attraction might get a bad reputation if not marketed in an honest way since there at this time are many other areas in SEA with rich wildlife. This concludes that as long as the animal populations are small in the area, this study is not applicable.

The demand for the budget packages is prominent larger than the demand for the luxury experience. On the other hand the SWA project is a low impact tourism site, which demand only a small amount of tourists. Hopefully the small group of luxury tourists cover this demand. The fact that the budget travellers are so many may perhaps contribute to more commune home stay programmes if the pilot shows to be successful, which can help even more local people to an alternative livelihood. A reason for the low demand for the luxury package in Cambodia might be that people have a tendency to adjust very fast to the countries current prices. Since a luxury lodge like this is not to be found in Cambodia, 250\$US might seem to be rather expensive compared to other attractions in the country. At least that was the feeling we got when interviewing tourists in the country. They are simply in Cambodia to enjoy low prices because this is what the country is known to offer. This comment came from high-income tourists as well as from budget tourists. In fact,

some of the respondents who were not willing to pay for the luxury experience had enjoyed similar activities in other countries (mostly African) to much higher prices than what we suggested. This leaves the project leaders with the fact that this new Asian product must be promoted in a proper way so that tourists eventually also think Cambodia when talking about safari. On the other hand we observe that even though tourists on average spend more when going on vacation in general which is understandable they do not spend as much as 250\$US per day on nature based activities. The data is weighted to give the characteristics of the high-income tourists more weight but it might be that the budget travellers' behaviour (spending) outweighs the high-income travellers since they are still a smaller group.

The results show that the tourists that visit other SEA countries during the same trip spend more days doing nature-based activities outside Cambodia. This also indicates the importance of good marketing, especially for those who do not notice the difference between this project and other wildlife parks in South-east Asia.



**Mind Map poster (for border police)**

**វិទ្យាសារពារខេត្តមណ្ឌលគិរី**  
**Mondulkiri Protected Forest - SWAP**

**ផែនទីសម្រាប់កងកម្លាំងព្រំដែន**  
**Mind Map For Border Police**



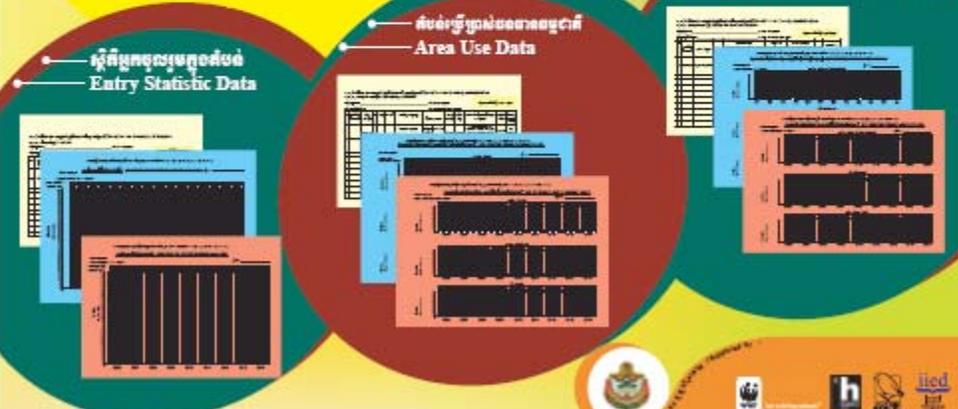
- កត់ត្រាលីកន្លែង (Record location (UTM))
- កត់ត្រាសម្បទាន (Record the animal tracks)
- កត់ត្រាចរាចរណ៍ (Record law enforcement data recorded)
- កត់ត្រាស្ថិតិចូលរដ្ឋបាល (Record entry statistic)
- គ្រប់គ្រងការប្រមូលផលធនធានធម្មជាតិ (គ្រប់គ្រង ប្រមូលផលធនធានធម្មជាតិ) (Control collection and gather data)

- ការកំណត់ត្រាប្រហារប្រាសាទ (Prevent people entering the prohibited area of MPF)
- ត្រួតពិនិត្យទិន្នន័យក្នុងតំបន់ (Verify field data)
- ត្រួតពិនិត្យតំបន់ប្រមូលផលធនធានធម្មជាតិ (Patrol the area for NTFP collection)
- ផ្ទេរព័ត៌មានពីសៀវភៅលឿងទៅសៀវភៅខ្មៅ (Transfer information from yellow to blue book)

**ស្ថិតិចូលរដ្ឋបាល**  
**Entry Statistic Data**

**សម្រាប់ប្រើប្រាស់ធនធានធម្មជាតិ**  
**Area Use Data**

**ការប្រើប្រាស់ធនធានធម្មជាតិ**  
**Natural Resource Use Data**




## **Annex 11**

### **My time in the Mondulkiri Protected Forest**

*Rory Kettles, UK Project Trust volunteer (2007), SWAP*

My time in the Mondulkiri Protected Forest, situated in the north-east of Cambodia has been, by far, the most exciting and interesting four months of my life! As a volunteer for WWF I went into the MPF with limited knowledge of conservation, the forest or the Khmer people. After working alongside people like Martin Von Kaschke, the technical advisor to the project from South Africa and a very knowledgeable conservationist and men like Lean Kha, an ex-poacher turned head ranger, his knowledge of the forest is second to none and this is evident in the respect he commands from all who know him, I have been able to learn great deals about each of these things. From a young eighteen year old coming from a busy town in England I'm incredibly pleased to have the opportunity to learn skills and enjoy experiences so different from those back home. I can now easily identify not only a range of Cambodian wildlife when i see the in the wild but also identify their tracks.

Every morning I get the chance to wash in a fantastically beautiful river surrounded by brilliant Cambodian forest, along with the half dozen khmer's that are also stationed at the camp, something I'm pretty sure I will only experience in a place like Cambodia.

My Khmer language has come on leaps and bounds since being based at the Merouch out post and is now at a stage where I can easily communicate about subjects in the field as well as socially conversing with everyone back at the out post. My time in the MPF has had a great effect on me, so much so that I am now going to be studying conservation at the University of Kent when I return to England.

The most exciting experience I have had whilst being in Cambodia was when I was conducting a patrol along with a policeman, which was carried out on elephant. That day we had seen an especially high amount of wildlife. A fantastic moment was seeing thirty to forty wild pigs raging through long dried grass after they were spooked by the elephants huge presence. That day we also saw red munjack and on two occasions, herds of banteng, but the sighting to top it all off happened just as we were entering semi-evergreen forest to the sound of a munjack's alarm call, the mahout informed us that the elephant was scared and just as he did so a leopard bolted and fled from the shade of the tall, green grass. It was fantastic, for the next half an hour I continued to remind the policeman of our sighting, much to his amusement! We were both in high spirits and spent the remainder of the trip laughing, joking and learning the english words for leopard, frightened, attack and eat. A brilliant day!

I have six months left working in Cambodia and am very excited about the opportunities that are continually presenting themselves. In April I shall spend fifteen days in a P'hnong village situated to the north of the MPF, working with the Community Extension Team, where I will have the interesting challenge of teaching the children of the village about sanitation and the best way to use water from the river. Quite a difficult assignment but I'm really looking forward to finding some creative ways to get the message across.

I've also got opportunities to teach English at ranger outposts which I hope would be very beneficial given that in a few years these rangers will begin to have more and more interaction with tourists. Living with the rangers at Merouch has been a brilliant time for me, I've learnt a lot about the culture and also the language but also I feel that I've established friendships with them, I try to work as hard as I can in the field and feel that I've earned their respect to a certain extent but in the evenings I'll watch and play cards, teach a bit of informal English or just simply have a bit of a laugh and a joke with them, giving me a well rounded experience of not only a great work experience opportunity but also the chance to see the social side of the Khmer people.

I also have the chance to continue a two month long camera trapping survey which has just finished in the area. I had the chance to learn how to use the new digital camera's in December during ranger training. The survey was very successful, although it was primarily for assessing the presence of leopards we also acquired pictures of gaur, civet, wild dog as well as male and female leopards, one of which was accompanied by two cubs! I shall hope to extend the survey however to incorporate wild elephant and concentrate more on the area's where wild dog's and other animals may be present.

I feel very lucky to have the opportunity to work in Cambodia and am really looking forward to the remainder of my time here, the friendliness of the people, the beauty of the area and the knowledge and enthusiasm of those working with WWF have all contributed to me having a fantastic experience so far and I am sure it will continue. I look forward to pursuing a career in conservation inspired by my time spent on this project.

## Annex 12

### Namibia study tour, April 2006

1. From WWF Cambodia's Bulletin, April-June 2006:

#### Cambodian Conservationists take lessons from Namibian Communities

By Nick COX, Dry Forests Programme Coordinator  
All photos by Nick COX

Five Cambodian community representatives and government conservationists travelled to Namibia in Southern Africa, in June, to learn how their African counterparts are successfully involving local communities in conservation for the benefit of both biodiversity and local livelihoods.

All participants of the visit, are part of the Srepok Wilderness Area Project (SWAP) - a partnership between WWF and the Cambodian Forestry Administration - in Monduliri Protected Forest, Monduliri province. The project itself is based on the principles underlying the successful Southern African model of sustainable use of wildlife. This learning exchange was supported by WWF, the UK government's Darwin Initiative and the UK based, International Institute for Environment and Development (IIED).



Cambodians learning from Namibian communities



The SWAP team's visit was designed to facilitate the transfer of valuable community conservation lessons learned in Namibia to rural Cambodia. The team observed members of local communities in the northern Caprivi region of Namibia, where a community-based wildlife monitoring system has

been successfully developed during the past 13 years. "This visit to Namibia was a vitally important part of the joint WWF-government effort to ensure local communities are fully involved in conservation activities in Monduliri Protected Forest in Cambodia. The team saw with their own eyes how previous disempowered community members have been employed as community rangers, have gained a voice in the community, and are helping to direct revenue from tourism back into communities", said Nick Cox, WWF Dry Forests Programme Coordinator and organizer of the visit.



Under the community-managed wildlife monitoring system used in Namibia, local communities monitor wildlife populations and patterns of natural resource use in order to support improved local livelihoods in community-managed areas called 'conservancies'. Conservancies (the Cambodian equivalent being Community Protected Areas) are now well known throughout Namibia as a grassroots tool for promoting sustainable use of natural resources through cooperation and improved management. The monitoring system has proved so successful it is now used in some Namibian national parks.



WWF intends to continue working closely with the Cambodian government and its agencies to develop a similar monitoring system which it will implement in Monduliri province with communities living around the Monduliri Protected Forest.

for a living planet

April-June 2006 • Progress of Activities bulletin

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## 2. Report:

## **Bringing African Community-Based Wildlife Monitoring to Asia**

### Learning from the Namibian Experience



Report on Study Visit  
to Namibia, 28 June-18 July 2006

Prepared by Nick Cox

WWF Greater Mekong – Cambodia Country Programme

August, 2006



*for a living planet*<sup>®</sup>

11.

12.

12.1

12.2

12.3 WWF TECHNICAL PROGRESS REPORT

**12.3.1** *Project Title: Bringing African Community-Based Wildlife Monitoring to Asia  
Learning from the Namibian experience*

12.3.2

12.3.3 *International Project Number: 9Z1389.01*

12.3.4

12.3.5 *Reporting Period: April – July 2006*

- 1) **Global Thematic Programme, Ecoregional Targets or Global Policy Initiatives:**  
Which targets/ milestones does the project contribute to?

GTPs: Forests 1.4; Species 1.1, 1.2, 1.5; Freshwater 3.2,

LMDFE Targets:

- Obj. 1 Conserving species and habitats; Target 1 on monitoring of flagship species;  
*- Observation of methodologies in action during bi-annual audit; adaptation of materials used in Namibia for use in LMDFE (Srepok Wilderness Area (SWA) of Mondulkiri Protected Forest); the SWA Project team benefit from capacity building on data collection and data analysis.*
- Obj. 2 Sustainability of livelihoods; Target 5 on improving CBNRM - *Site visit to communities - SWA team observe MOMS methodology being implemented at the site-level. Examples of issues and threats at site level discussed and sharing of lessons learned.*
- Obj. 4 Building capacity Target 8 on building capacity of institutions and empowering communities to make decisions on NRM - Methodologies from Namibia observed to assess opportunities for use in LMDF (SWA) context. *The visit to the Parks, incl. Etosha NP, improve understanding of how the MOMS approach is utilized within government structures. SWA staff work with WWF LIFE team to develop materials for use in Cambodia.*
- Obj. 4 Building capacity; Target 9 on sustainable financing – *Participants observe the operation of tourism facilities and services; increasing the understanding of the key issues for developing tourism in the SWA; increased awareness of why tourism and benefit sharing is key to success in SWA, and how this could be replicated in other PAs/landscapes in the Dry Forests.*

## 2) **Project Successes:**

The study visit was an overwhelming success

Following is a diary of activities and appropriate highlights (see map in Annex 1 showing sites visited:

### **ACTIVITY ONE: PRESENTATION TO WWF LIFE ON SREPOK WILDERNESS AREA CONSERVATION PROJECT IN CAMBODIA, TOURISM DISCUSSION**



- Study visit participants spent a morning in the WWF-LIFE offices in Windhoek discussing the SWA project progress so far, and plans for future activities including the introduction of a wildlife monitoring system for use by community rangers, as well as planned tourism development
- The WWF-LIFE team included Chris Weaver - WWF-LIFE Chief of Party, Greg Stuart-Hill – Technical Advisor and MOMS system designer, Andee Davidson – Business and Tourism Advisor
- Also joining the discussion was James MacGregor – IIED, UK, Environmental Economist, and team leader for the Darwin Initiative-funded component of the SWA project
- Conclusions from the meeting regarding direction for the SWA project included:
  - Need for a clear management plan for CBNRM activities in the landscape
  - For ecotourism to be successful, local communities need to be *truly* involved
  - Capacity building of staff in Cambodia must include ecotourism training

## **ACTIVITY TWO: VISIT TO ETOSHA NATIONAL PARK**

The group spent three days in Etosha National Park over a weekend experiencing the typical African-style game drive. The group was very fortunate to see a lot of wildlife in a short period, including: mating lions; hunting lioness; stalking cheetah; hyena; and a pair of

rare black rhino. Apart from the clearly high abundance of wildlife, the following is a summary of the main observations made by the project's field staff, particularly related to tourism:

- No local people seen around or inside the national park
- Wide variety of accommodation options for tourists, though large proportion are self-contained, i.e. camping



- Large number of artificial waterholes created to provide easy opportunities for viewing wildlife from vehicles; no tourists allowed on foot in the national park
- Good signposting for tourists while inside the national park
- National park staff not very visible (possibly due to fact we were there at weekend)
- Conclusions from the experience Etosha include:
  - In comparison to Cambodia, Etosha tourism facilities are quite high quality
  - Management of tourism contracted to government-owned company that

appears not to be reinvesting in tourism infrastructure, rather it seems to be focused on profit

- This kind of mass tourism not appropriate for SWA in near future, although many lessons learned on the kind of wildlife viewing experiences that will be need to be provided in the SWA



Signpost warning tourists of dangers (A few years previously a lone tourist decided to sleep overnight at the waterhole, the next morning NP rangers discovered the parts of him in his

Black rhino at a floodlit waterhole

### **ACTIVITY THREE: VISIT TO THE CAPRIVI STRIP**

The main focus of the three-week visit was the week spent in Caprivi, in the northeast of Cambodia, and the main site for implementation of the 'Monitoring Oriented Management System' (MOMS), or 'Event Book System' and 'Incident Book System' in community conservancies and government protected areas. The visits and meetings in Caprivi were organized by Richard Diggle, WWF's Small Enterprise and Business Advisor in Caprivi. The group experienced two nights in a privately-owned lodge on the Kwando River, and the rest of time enjoyed the basic pleasures of camping under the stars.



Experiencing a tourist lodge and the other end of the accommodation scale

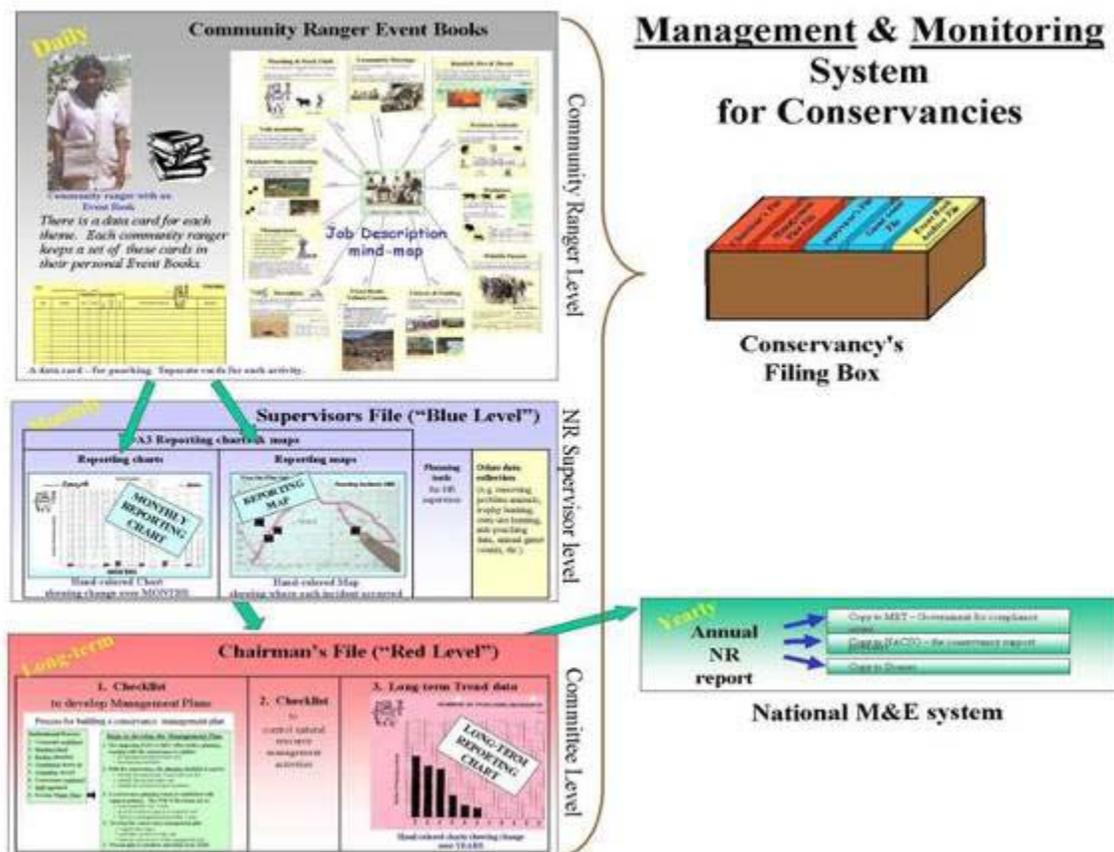
### ***Conservancies and the Event Book System (EBS)***

During the week, several presentations, meetings and discussions were given by a number of different conservancies. The following observations were made:

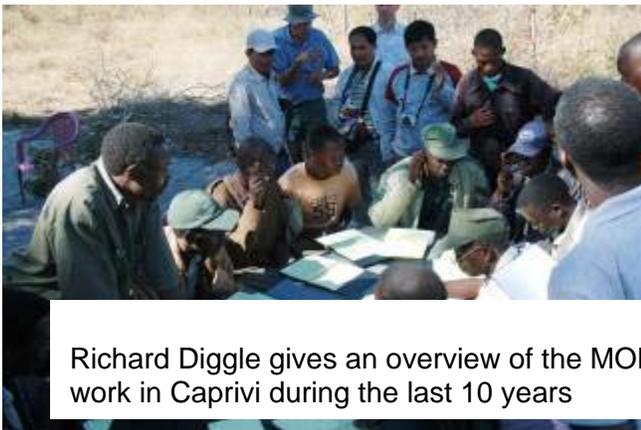
- Each conservancy is required to have a management plan and business plan
- Each conservancy consists of a Committee, and a number of community game guards, all of whom are from the local communities inside the conservancy
- The conservancy management plans are focused on monitoring wildlife, and do not include any aspects of research or monitoring of major ecological changes
- The EBS includes the “Ten Commandments” for community game guards to adhere to while going about their daily duties
- All committee members and game guards receive a salary and are full time employees; there are also opportunities for promotion
- Conservancies have recently started using new teams called Resource Monitoring Teams. These teams are made up of women members and their main task is to collect information about community use of natural resources such as grasses, medicinal plants, resin, etc.
- The game guards are responsible for collecting and recording their data in their own personal Event Books. They carry them with them at all times in a ‘hand bag’, and the data is collated once a month by the senior game guard

The group spent significant time learning the details of how information is collected, recorded, collated, and analyzed. The system is quite simple, and has evolved into its current form after more than ten years of implementation.

The visit to Namibia was timed to coincide with the mid-term audits of the EBS in the conservancies in Caprivi. This valuable experience provided an opportunity to see the process of cross-checking data to ensure accuracy. The group learned how there is a formalized competition between conservancies to see which produces the least mistakes during the mid-term, and annual audits.



Poster explaining the EBS – not the colour coded files: yellow = daily; blue = monthly; red = annual, or long term. The top left of the poster also shows the 'mind map' produced by the community showing what data they believe is important to collect. and who should collect. it



Richard Diggle gives an overview of the MOMS work in Caprivi during the last 10 years



the

The Event Book System mid-term audit in action in Kwando Conservancy. The facilitators are from other conservancies, which ensures that the local conservancy pay attention when verifying the accuracy of



An example of how the data is stored; it is colour coded and stored in a box file. Every conservancy has

### ***National Parks and the Incident Book System***

The group also took the opportunity to spend some time with government rangers in a local national park where they are using a slightly adapted version of the Event Book System. The following main observations were made:

- The Ministry of Environment and Tourism (MET) saw how well the EBS was working the conservancies and decided to adopt a version of the system for some of their national parks
- Park rangers use almost exactly the same system as the Conservancies; the main difference is that they collect more information and more information that is specific to management of the park (based a mind map – see photo below); also they call it the Incident Book System (IBS)
- Rangers use a small yellow personal diary to record daily incidents, and at the end of the day this information is transferred into an office register; in turn the chief warden compiles all this information into a monthly file
- The national park rangers and conservancy game guards often carry out joint patrols in areas where the national park and conservancy are adjoining

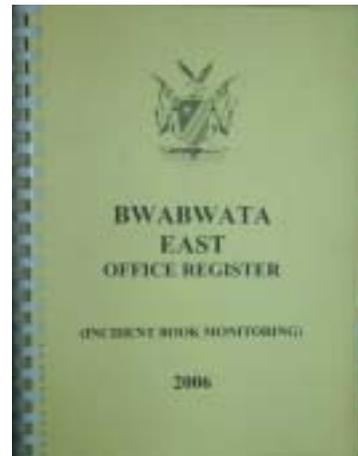
- Similar to the conservancies, quotas are issued for wildlife off take based on the data collected and recorded in the IBS
- The one national park we visited, Bwabwata East NP, has allowed a private lodge to build and operate inside the NP; the NP also run a campsite
- The NP is divided up into blocks to allow for easier management of patrolling teams and also for clear identification of location of incidents
- MET rangers provide law enforcement training to conservancy game guards
- Roads exist in the core areas of the park for tourism and management access – for similar future development and use in the SWA, clear guidelines must be in place



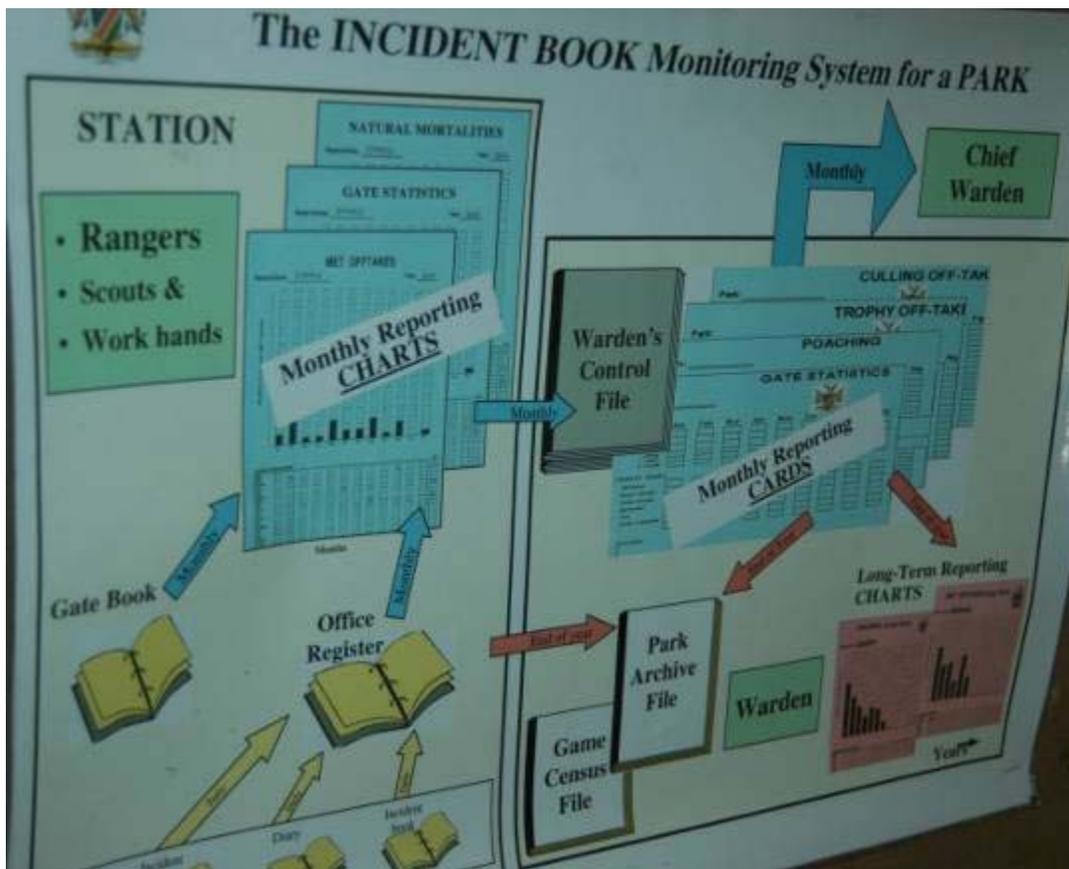
Mind map for Bwabwata East NP showing the data they want to



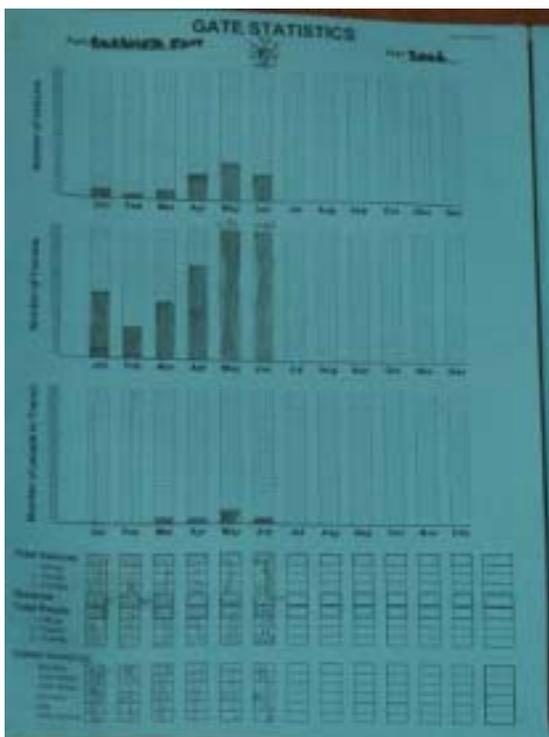
**Ranger Personal Diaries** (left) in which all incidents are recorded;



**Office Register** (right) which records all incidents



ster (yellow), to



An example of how data is recorded on monthly reporting charts, in this case on the walls of the park office for all staff to

The group concluded the visit to Caprivi with a meeting with community members in a village in Kwando conservancy to hear their views on what impact the establishment of a conservancy had had on their lives. An important point highlighted by the Cambodian group was that communities still had conflicts with wildlife and that while the conservancy has had a positive impact, it cannot solve all the problems. Some members also complained that the promises of benefits of tourism had yet to materialize. The lesson learned from the latter point was that we need to be very careful about managing expectations about future benefits from ecotourism development in Cambodia.

#### **ACTIVITY FOUR: VISIT TO WATERBERG PLATEAU NATIONAL PARK**

The last main destination during the visit was to Waterberg Plateau Park (WPP) a national park about 3 hours north of Windhoek.

The group was fortunate to be guided around the park by the Chief Warden for four days, including experiencing rhino tracking and wilderness camping. The following main observations were made:

- An important function of this national park is to produce excess wildlife to sell to other protected areas and hunting areas in Africa
- The park is divided up into large blocks for burning; each block is burned at least every six years, or earlier if there is excess build up of fuel wood; natural fires caused by lightning are allowed to burn
- Tracking black rhinos – the field team spent two days learning about tracking methods; the team decided to try out some new techniques in Cambodia, and picked up some rhino tracking tips that could be applied for elephants
- The park also uses carries out vulture restaurants for monitoring, and for tourist activities; at least one animal (kudu) is provided for the vultures per week
- The park has number of artificial salt licks and water holes; these are used in conjunction with observation hides similar to at the vulture restaurants and are useful for monitoring
- Could build similar wildlife watching camp in SWA, Merouch (but must provide shower and toilet facilities)
- The dry season is longer in Namibia which therefore makes it easier to see wildlife





WPP Chief Warden explains the block system in the national park, and shows the group an

#### **ACTIVITY FIVE: FOLLOW-UP DISCUSSION WITH WWF-LIFE TEAM IN WINDHOEK**

During the last two days of the study visit, the group had final discussions with the WWF-LIFE technical team in Windhoek, and developed a preliminary mind map for data collection. The following key next steps were identified for the process of development and implementation of the first stage of an adapted version of MOMS in the SWA project:

#### **NEXT STEPS:**

- 1). Create Mind map with input from all SWA field staff in Cambodia:
  - Sopheak and KS will meet FA Aug 1, community rangers Aug 2, Police 3
  - Write up in Khmer, and explain terminology
  - Present findings from tour of Namibia
  - Prepare 3 separate mind maps, one for each user group, *by August 18*
  
2. Draft job descriptions for different staff:

- MvK, OKS, and KS to draft job description for each user group by *August 18*
- 3). Information flow diagram – i.e. where data will go to:
- MvK, OKS, KS to complete *by August 25th*
- 4). Design charts and other materials: a). blue charts for gate register, b). yellow and blue forms for MIST
- MvK, OKS, KS + communications unit, to *complete draft by end September*
- 5). Make field materials: event book forms, diary books, hand bags, posters, job descriptions, folders, folder box
- MvK + communications unit finish materials *by end of October*
- 6). Train field staff to use materials:
- MvK, OKS, KS *by end November*
- 7). Analyse old Goodman/MIST data and enter into blue/red charts:
- MvK, KS, and HK, *by end December*
- 8). Draft an implementation manual:
- MvK, OKS, KS *by end of December*
- 9). Prepare the management blocks in MPF:
- MvK, KS, HK to draft criteria for dividing up into blocks for easier patrol management and recording; *draft completed by end of September*

## **BEGIN DATA COLLECTION AND RECORDING JANUARY 1<sup>ST</sup> 2007**

### **3) Communications/ Stories**

See Annex 2 for press release, and follow-up story.

### **4) Progress on Activities and related financial issues.**

See attached progress markers sheet in Annex 3.

The finance for the study visit were funded by WWF International Support to Ecoregion Action Programme Small Grants, and the Darwin Initiative through IIED, UK.

### **5) Problems and Constraints.**

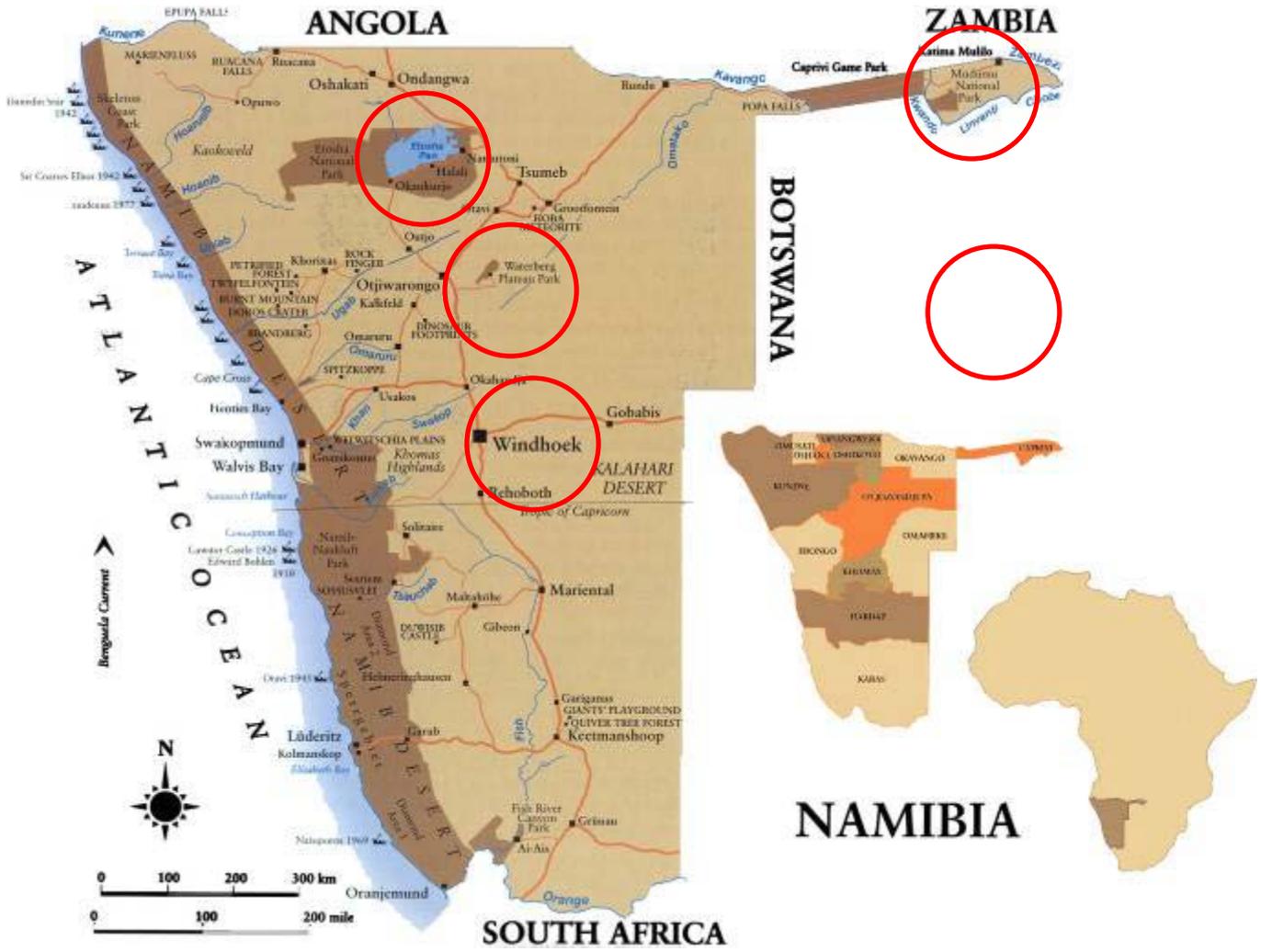
No major problems were encountered during the study visit.

### **6) Learning and Sharing.**

Some of the follow-up activities for sharing the experience with other national and field staff in Cambodia are described in section two, activity five, and in the follow-up story in Annex 2.

<b>Report completed by:</b>	
<b>Name</b>	<b>Nick Cox</b>
<b>Position/ Title</b>	<b>Dry Forests Programme Coordinator</b>
<b>Organisation</b>	<b>WWF Greater Mekong – Cambodia Country Programme</b>
<b>Date</b>	<b>31<sup>st</sup> July 2006</b>

# Annex 1 – Namibia Map



## Media Release

For immediate release – 28<sup>th</sup> June 2006

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### **Cambodian Conservationists take lessons from Southern African Communities**

Phnom Penh – Five Cambodian community and government conservationists travel today to Namibia in Southern Africa to learn how their African counterparts are successfully involving local communities in conservation for the benefit of both biodiversity and local livelihoods.

This 'learning exchange' is supported by WWF – the global conservation organization, the UK government's Darwin Initiative and the UK based, International Institute for Environment and Development (IIED).

All participants of the visit are part of the Srepok Wilderness Area Project (SWAP) - a partnership between WWF and the Cambodian Forestry Administration - in Mondulkiri Protected Forest, Mondulkiri province. The project itself is based on the principles underlying the successful Southern African model of sustainable use of wildlife.

The SWAP team's visit is designed to facilitate the transfer of valuable community conservation lessons learned in Southern Africa to rural Cambodia. In particular, the group will be observing members of local communities in the northern Caprivi region of Namibia, where a community-based wildlife monitoring system has been successfully developed during the past 13 years by Namibian NGOs with the assistance of WWF through the USAID-funded Namibia Project LIFE (Living In a Finite Environment), and more recently by the Namibian Ministry of Environment and Tourism.

Under this system, local communities monitor wildlife populations and patterns of natural resource use in order to support improved local livelihoods in community-managed areas called 'conservancies'. Conservancies (the Cambodian equivalent being Community Protected Areas) are now well known throughout Namibia as a grassroots tool for promoting sustainable use of natural resources through cooperation and improved

management. The monitoring system has proved so successful it is now used in some Namibian national parks.

Cambodia is developing the same approach and WWF intends to continue working closely with the Cambodian government and its agencies to develop a similar monitoring system which it will implement in Monduliri province with communities living around the Monduliri Protected Forest. The innovative SWA project is also looking at the potential for revenue from ecotourism to sustainably finance the conservation of the Monduliri Protected Forest and generate income for local communities.

**For further information:**

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**Notes for editors**

- WWF has worked in Cambodia since the mid 1990's and is part of the WWF Greater Mekong Programme. WWF Cambodia's Mission is to ensure that there will be strong participation and support from all peoples to conserve the country's rich biological diversity. Through the encouragement of sustainable use of natural resources, WWF Cambodia will promote new opportunities for the benefit of all people, enhancing local livelihoods and contributing to poverty reduction in the Kingdom of Cambodia.  
<http://www.panda.org>

- IIED is an international policy research institute and non governmental body working for more sustainable and equitable global development. IIED provides expertise in achieving sustainable development at local, national, and global levels. In alliance with others, we want to change a future that ends global poverty and ensures fair and sound management of the world's resources. <http://www.iied.org>

- The Darwin Initiative is a small grants programme that aims to promote biodiversity conservation and sustainable use of resources around the world. The Initiative is funded and administered by the UK Department for Environment, Food and Rural Affairs, (Defra).  
<http://www.darwin.gov.uk/>

## **Namibian communities show Cambodians how to benefit from conservation**

### **12.4**

Five Cambodian community and government conservationists recently returned from Namibia in Southern Africa, having spent three weeks learning how their Namibian counterparts are successfully involving local communities in conservation for the benefit of biodiversity and local livelihoods.

All participants are involved in the Srepok Wilderness Area (SWA) Project - a partnership between WWF and the Cambodian Forestry Administration - in Monduliri Protected Forest (MPF), Monduliri province. The project itself is based on the principles underlying the successful Southern African model of sustainable use of wildlife. This learning visit was supported by WWF, the UK government's Darwin Initiative, and the UK-based, International Institute for Environment and Development (IIED).

The SWA project team's visit was designed to facilitate the transfer of valuable community conservation lessons learned in Namibia to rural Cambodia. The visit also provided a once-in-a-lifetime opportunity for the Cambodians to see a vast number of charismatic wildlife.

The tour began with three days in Namibia's flagship wildlife conservation area – Etosha National Park. The time spent there was special for many reasons, not least of which was the amazing abundance of wildlife and the opportunity to see rare black rhino, mating lions, and cheetah on the hunt, as well as experiencing the vastness of the landscape. An added bonus for Martin von Kaschke, the SWA project's South African born technical advisor, was to see his old home at Etosha's Namutoni camp, where he grew up in the 1970's. This was his first visit back in 30 years.

Afterwards, the team spent a week in Namibia's northern Caprivi region learning about a community-based wildlife monitoring system which has been successfully operating for the past 13 years.

WWF's Dry Forests Programme Coordinator and organizer of the visit, Nick Cox, said the trip was a vitally important part of the joint WWF- Cambodian government's effort to ensure local communities were fully involved in conservation activities in MPF. "The team saw with their own eyes how previously disempowered community members have been employed as rangers, have gained a voice and are helping to channel revenue from tourism back into their communities," he said

Under the community-managed wildlife monitoring system used in Namibia, local communities monitor wildlife populations and patterns of natural resource use in order to support improved local livelihoods in community-managed areas called 'conservancies'. Conservancies (the Cambodian equivalent being Community Protected Areas) are now well known throughout Namibia as a grassroots tool for promoting sustainable use of natural resources through cooperation and improved management. The monitoring system has proved so successful it has been adopted by the Namibian Ministry of Environment and Tourism (MET) and is now used in several national parks.

While in Caprivi, the WWF Cambodia team spent a week talking with communities who over the past ten years have become increasingly involved in monitoring wildlife and collecting data on the use of natural resources by local communities. The team met community and government representatives in a number of conservancies and challenged them with difficult questions about the effectiveness of local conservation initiatives, and importantly how communities have benefited. The team left with the impression that the work with communities in Caprivi has provided a number of valuable lessons on how best to engage local communities. Initial discussions were had within the team on how the Caprivi successes could be replicated in Cambodia.

Taking the opportunity to see other national parks, the Cambodian's spent a week in Waterberg National Park under the expert guidance of Chief Warden, Boas Erckie. Taking time out from his studies on small mammals, Boas guided the team around the park showing them how Waterberg had become one of the top protected areas for producing excess wildlife for restocking other conservation areas. This allows the government to generate income from the sale of wildlife to other areas in Namibia (and other parts of Africa) to cover part of the cost of conservation.

A highlight of the Waterberg visit was two days spent shadowing Namibian park rangers as they tracked black rhinos; a skilful but dangerous activity that provided many lessons for the visitors.

"I thought I was going to die", joked Keo Sopheak, the SWA project's senior officer, climbing down from a thorny tree minutes after a black rhino had charged the group.

“Actually I just wanted a better look” he claimed!

It was also a very practical opportunity for the Cambodian team’s poacher-turned-ranger Lean Kha, to learn what to do when tracking large mammals that suddenly turn around and become aggressive. “I never used to have problem during my hunting days when faced with an angry elephant that I had been tracking in the forest” he explained.

“I would simply shoot it. Of course, we don’t do that anymore so now we need to learn how to get out of the way!” he said.

Now that the team are back in the field in Cambodia’s Dry Forests, the next few months will be spent planning the appropriate methodology and designing the materials needed to get the project’s community members involved in monitoring wildlife and local community use of natural resources.

Having seen what has been achieved in Namibia, the team is fired up and ready for action.

“What is amazing is that the conservation issues being faced in Cambodia and Southern Africa are so similar,” observed Martin von Kaschke, the SWA project’s technical advisor in Cambodia. “Equally amazing is that the approaches to solving the biggest problems are similar too, and we think we can take what has been successfully achieved with communities in Namibia, and translocate many of the methods and techniques into the Cambodia context. We are all very excited at the prospect of getting back to the Dry Forests in Cambodia and testing out a locally designed community-based wildlife monitoring system as soon as possible,” Martin said.

### Annex 3 – Progress Monitoring Matrix

Project Title: Bringing African Community-Based Wildlife Monitoring to Asia – Learning from the Namibian exp

Progress Markers	Apr 06	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan 07	
Identify / confirm project team	Blue										
Sign project contract(s)	Blue										
Prepare for Namibia Visit											
Contact WWF Namibia and partners	Blue										
Design preliminary schedule	Blue										
Agree products to be produced		Blue									
Organise passports, visas, flights		Blue									
Confirm schedule with WWF Namibia		Blue									
Book hotels, local transport, guides		Blue									
<b>Skills acquired in adapting MOMS</b>											
Observation of mid-year MOMS audit			Blue	Blue							
Discussions of techniques with WWF and communities			Blue	Blue							
Development of materials with WWF Namibia staff for implementation of MOMS in Cambodia				Blue							
Testing materials in Cambodia				Red	Red			Green	Green		1 C r c t (
Refinement of MOMS materials in Cambodia			Red			Green	Green	Green	Green		/
Share new knowledge with Cambodia project staff				Green	Green						
Begin implementation of MOMS in Cambodia				Green	Green					Green	

**Lessons learned from Tourism**

Identify key issues for community involvement and ecotourism benefit-sharing in protected areas in Namibia

Share new knowledge with Cambodia project staff

**Lessons learned from PA management**

Time spent with park rangers on patrols - discussions on similarities of approach to monitoring, law enforcement, and reporting

Report back to project staff in Cambodia

**Report produced and shared/presented to WWF GMP, and others**

		Completed								
			Planned							
		Completed	Completed							
			Planned	Planned						
				Planned						

	Completed
	Planned
	Postponed

## Checklist for submission

	Check
<b>Is the report less than 5MB?</b> If so, please email to <a href="mailto:Darwin-Projects@ectf-ed.org.uk">Darwin-Projects@ectf-ed.org.uk</a> putting the project number in the Subject line.	
<b>Is your report more than 5MB?</b> If so, please advise <a href="mailto:Darwin-Projects@ectf-ed.org.uk">Darwin-Projects@ectf-ed.org.uk</a> that the report will be send by post on CD, putting the project number in the Subject line.	
<b>Do you have hard copies of material you want to submit with the report?</b> If so, please make this clear in the covering email and ensure all material is marked with the project number.	
Have you completed the Project Expenditure table?	
Do not include claim forms or communications for Defra with this report.	