ROYAL GOVERNMENT OF BHUTAN (RGoB)

GLOBAL ENVIRONMENT FACILITY (GEF)

UNITED NATIONS DEVELOPMENT PROGRAMME (UNDP)

TERMINAL EVALUATION

OF THE PROJECT

Linking and Enhancing Protected Areas in the Temperate Broad-Leaved Forest Eco-Region of Bhutan "LINKPA"

PIMS 1366

Alan Rodgers
Yeshey Dorji

Final Version

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ANNEXES

Acknowledgements

Alan Rodgers would like to start by acknowledging the great amount of support and help and advice and friendship, from his national counterpart Yeshey Dorji. It was good fun, Thanks Yeshey.

Both of us would like to thank the UNDP Country Office in Bhutan and the Regional Technical Advisor for UNDP GEF Biodiversity based in Thailand, Dr Sultana Bashir; for putting forward our names for this consultancy. Thanks to the Royal Government of Bhutan for accepting our candidature and giving us the honour to work in such a spectacular and important conservation site. It was a privilege.

Everybody we met was courteous and helpful, and imbued with a strong sense of conservation action – from the Minister downwards to the newest Forest Guard! People were passionate about Nature and Nature Conservation, and equally passionate and articulate on the need to support people alongside conservation – through Integrated Conservation and Development Programmes. We thank the Hon'ble Minister and the Secretary, Ministry of Agriculture, for the opportunity to meet with officials from ICIMOD and share experiences of integrated conservation.

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Both consultants were struck by the strong relationships and partnerships in place around both Park and overall Division level management. The partnership between UNDP, Government and WWF in the co-funding and co-management of this project was a perfect case in point. Thanks to Mr. Mincha Wangdi, Programme Officer, who was a great companion in the field.

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ACRONYMS AND ABBREVIATIONS

Acronym, Abbreviation, Local Term	Meaning
CGI (ci)	Corrugated Galvanised Iron (roof sheets) (corrugated iron)
CNR	College of Natural Resources
C/W BLF	Cool Warm Cool Broadleaved Forest
Dzongkhag	The District
EE	Environmental Education
GEF	Global Environment Facility
Geog	A Sub-District Administrative Unit
HWC	Human Wildlife Conflict
ICD (ICDP)	Integrated Conservation and Development
LINKPA	This Project " Linking Protected Areas"
M and E	Monitoring and Evaluation
METT	Monitoring Effectiveness Tracking Tool
MSP	Medium Sized Project
MTE	Mid Term Evaluation
NCD	Nature Conservation Division
NEX	National Execution Modality
NP	National Park
NTFP	Non-Timber Forest Produce
PCC	Project Coordination Committee
PA	Protected Area
PG	Post Graduate
PIR	Project Implementation Review = a GEF process
PMU	Project Management Unit
ProDoc	Project Document
PSC (NPSC)	Project Steering Committee (National PSC)
RTA	Regional Technical Advisor
RCU	Regional Coordination Unit
RGoB	Royal Government of Bhutan
TE	Terminal Evaluation
TNP	Thrumshingla National Park
TOR	Terms of Reference
TRA	Threat Reference Analysis
UNDP (UNDP CO)	United Nations Development Programme (Country Office)
WWF	World Wide Fund for Nature

EXECUTIVE SUMMARY

This is the Terminal Evaluation for a Medium Sized GEF – UNDP – Government Project, following Evaluation Guidelines from both GEF and UNDP. This was a participatory three week process involving an external Evaluator and a Bhutanese Forest Conservationist.

The project followed NEX modalities, with Government being the Executing Authority and Nature Conservation Division (NCD) of Department of Forests, MoA doing the Implementation. Whilst this was an MSP from GEF (790,000$), real co-finance from WWF and RGoB (all project salaries) raised the actual finances to over 2 million$ - equalling a small Full Sized Project. The project was a close consortium of the three partners, with UNDP entrusting project management to WWF Bhutan, a process which worked well.

Project design followed from a much earlier draft (WWF – Government, seeking GEF funding via UNDP) that proposed supporting all potential corridors in Bhutan. Final design focused on one new National Park and corridors linking that park to south and west. A detailed Mid-Term Evaluation – MTE (in mid 2006) refocused what was still an extremely ambitious project, giving priority to ensuring sustainability of the Park (which is an essential anchor for the corridors). Corridor work was restricted to ensuring the policy and legislative environment was in place for later management of corridor areas. The Terminal Evaluation (TE) team agreed with these findings.

The MTE asked for changes in the logframe (focusing on the Park) and in indicators. This was done, but the changed indicators were all process oriented, a reaction to excessively complex indicators in the pro-doc (eg changes in tiger numbers and changes in tree basal area). The TE therefore assessed change against a Response Matrix looking at all MTE recommendations and, with the Project Team, recast indicators.

Evaluation Findings were in three sets (chapters 2, 3, 4) looking at management, impact and lastly sustainability and M and E issues. Overall the Project was rated SATISFACTORY, with some components marked as Highly Satisfactory (HS), and others as Marginally Satisfactory (MS) or (for some M and E inputs) - Marginally Unsatisfactory (MU).

The National Park is much better in its status (as evidenced by METT scores which rose from 44.5 to 74.5). Staff numbers doubled, no encroachment, poaching is insignificant. Grazing impact is reduced, although this could have been better. Government commitment continues and WWF provide financing for activities not fully completed. Royal Government of Bhutan argues articulately for the need for Integrating Conservation with Development (ICDP), where a large proportion of the rural population are dependent on forest resources. ICD inputs in this project were of mixed results, but did provide a necessary spring board to engage people in conservation debate. There was considerable buy-in to such AIG activity from district government partners – who, often, were ICDP intermediaries. NCD now has an ICDP cell at HQ, with formalised ICDP guidelines and monitoring protocols. A new Management Plan is under development.

The corridor concept has gained widespread acceptance, and policy and legislation have been developed. Corridor management will be the mandate of territorial foresters, with technical support from Nature Conservation Division. (Much of the land is under territorial forestry, and the objectives are those of conservation!). Like all corridors there are bottleneck areas, where roads and possible ribbon development impact, or major rivers may block movement. These fragile sites need especial management.

Our conclusions were very positive. The training inputs have greatly increased capacity. There is a strong morale and confidence in activities. There are good partnerships. The challenges are also high, maintaining a PA system of >50% of the forest cover (itself over 70% of Bhutan) is going to be difficult are populations increase and resources are reducing in availability. Bhutan is well advanced in conservation thinking, exploring PES and carbon processes. New focus must be on reducing human-wildlife conflict – both man eating as well as crop / livestock impacts.

1. INTRODUCTION

This is the Terminal Evaluation for the Medium Sized GEF – UNDP – Royal Government of Bhutan Project[1]: LINKPA, or Linking and Enhancing Protected Areas in the Temperate Broad-Leaved Forest Eco-Region of Bhutan. This was a participatory three week process involving an external Evaluator and a knowledgeable Bhutanese Forest Conservationist; interacting with national stakeholders, and implementing partners.

1.1 Background

1.1.1 Conservation in Bhutan: "The Global Biodiversity Values".

The Eastern Himalayas have been identified as a global biodiversity hotspot, and counted among the 234 globally outstanding eco-regions of the world in a comprehensive analysis of global biodiversity undertaken by WWF (1995 – 97). The Kingdom of Bhutan is a small, landlocked nation nestled in the southern slopes of the Eastern Himalaya. To its north lies the Tibet Autonomous Region of China and to the west, south and east lie the Indian states of Sikkim, Bengal, Assam and Arunachal Pradesh. The terrain is some of the most rugged in the world, characterised by huge variations in altitude. Within the 220 kms between the southern and northern borders, Bhutan's elevation rises from 150 to more than 7,500 metres. This geographical diversity combined with diverse climate conditions, contributes to Bhutan's outstanding range of biodiversity and ecosystems.

The wetter tropical lowland and hardwood forests in the south have tiger, one horned rhino, golden langur, clouded leopard, hispid hare and the sloth bear. In the temperate zone, tiger, common leopard, goral and serow are found in mixed conifer, broadleaf and pine forests. Fruit bearing trees and bamboo provide habitat for the Himalayan black bear, red panda, sambar and barking deer. The alpine habitats of the Great Himalayan Range in the north are home to the snow leopard, blue sheep, marmot, Tibetan wolf and Himalayan musk deer. Flora and avi-fauna have more than 4,500 plant species and 770 species of bird known throughout the kingdom.

1.1.2 Conservation in Bhutan: The Protected Area Network

Bhutan is seen as a model for proactive conservation initiatives, and the Kingdom has received international acclaim for its commitment to the maintenance of its biodiversity. This commitment is reflected in the decision to maintain at least sixty percent of the country land area under forest cover, to designate almost half of its territory as national parks, reserves and other protected areas[2], and most recently to identify nine percent of land area (mostly forested land) as biodiversity corridors linking the protected areas. Environmental conservation has been placed at the core of the nation's development strategy. It is not treated as a sector but rather as a set of concerns that must be mainstreamed in Bhutan's overall approach to development planning and to be buttressed by the force of law. Bhutan has a comprehensive, if complex, Protected Area Network with several individual areas, under different categories and with differing legislation. Figure 1 shows this network, and Thrumshingla NP) and its network of "connectivity corridors" that is the focus of this GEF – UNDP project. Table 1 lists the three highest categories of Protected Areas: National Park, Wildlife Sanctuary and Strict Nature Reserve

Table 1: List of Wildlife Protected Areas in Bhutan

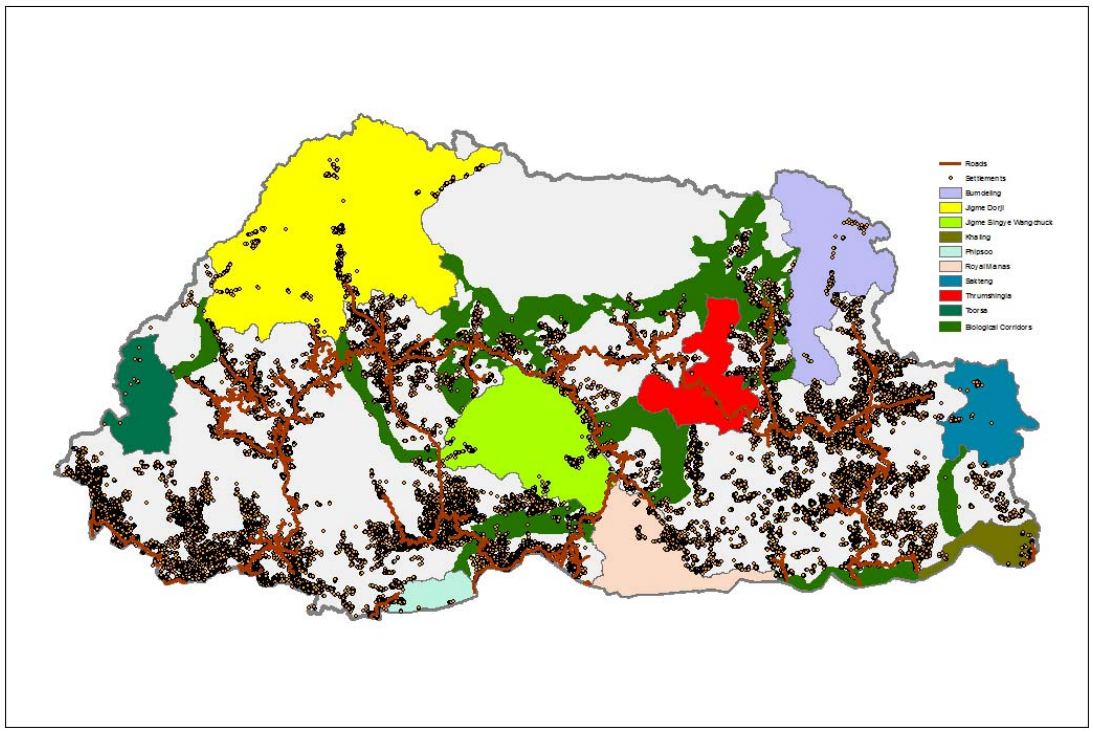
No	Type	Name	Area (sq km)	Date First Gazetted
1	NP	Jigme Dorji	4316	1993 (WLS 1974
2	NP	Jigme Singye Wangchuk	1723	1995
3	NP	Thrumshingla	905 (768)	1998
4	NP	Royal Manas	1023	1993 (WLS 1966)
5	WLS	Bomdeling	1487	1995
6	WLS	Sakteng	650	2002
7	WLS	Phibsoo	278	2002
8	WLS	Khaling	273	1995?
9	SNR	Toorsa	644	1995?
10	NP	Wangchuck Centennial Park	3736	2008
		TOTAL	**15,035 Km^2**	

[1] PIMS 1366

[2] The latest figure is 49%, including the new Centenary Park on the far northern border, within 72% forest cover.

It is against this extensive Protected Area Network, enshrined in the constitution, in the laws and in past Royal Proclamations that one must see the other cornerstone of Bhutan's Conservation Philosophy, and that is the firm belief in the need for an "Integrated Conservation and Development" approach to the maintenance of biodiversity and wildlife values. Simplistically Bhutan is still a relatively poor country, with many of its rural people within a subsistence livelihood, without external trade and cash economies. Rural livelihoods are based around their use of land and agricultural, livestock and forest resources (note – rarely wildlife resources, the great religious beliefs of Buddhism forbid much of the hunting that is seen for example in more animist Arunachal Pradesh in adjacent India). Steep terrain, greatly different seasons and a huge altitudinal gradient have all led to a great dependence on a variety of natural products – for food, medicine, fodder, energy and shelter – through intricate traditional technologies. As government forestry and nature department personnel argued so very eloquently – "If the state is to remove areas from people's use, and declare them as Protected Areas for Biodiversity (satisfying both global and local requirements), then the state must compensate those people through alternative development scenarios". It is not a question of "should one do ICD projects?" It is a question of "HOW should one do ICD projects?" This present project has a sizeable ICD component.

Figure 1 The Protected Area Network with Biological Corridors of Bhutan.



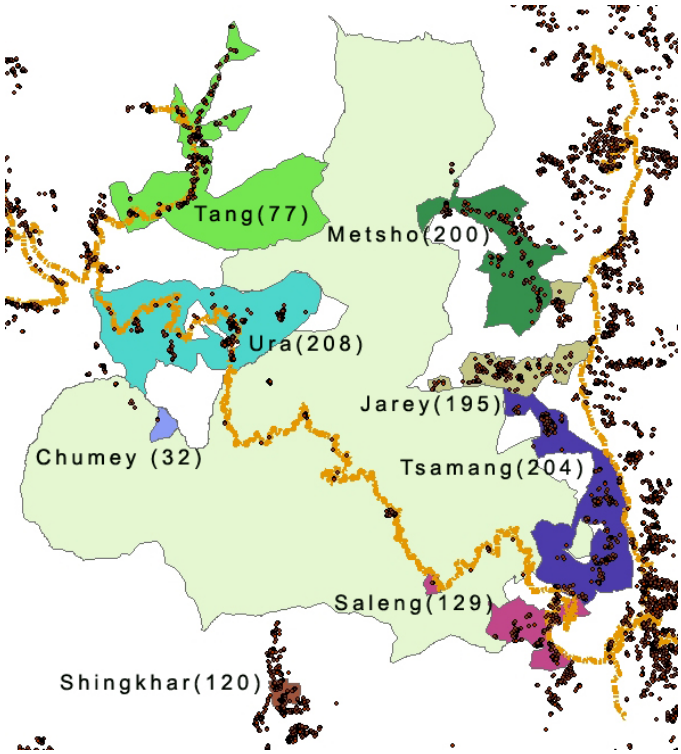
Bhutan has been able to attract donor support to this PA network, including UNDP and WWF. WWF has new funding coming on stream for Royal Manas National Park, has funding finishing for Sakteng WLS, and has new funding for the Corridor that was started by this project). UNDP, SNV and DANIDA have funded Protected Area Support Programmes in the past. GEF contributed with the Bhutan Trust Fund in 1992 - 94,

TNP Thrumshingla National Park

This is a recent PA created out of Reserved Forest land in 1998, with a total area of 905 sq km (slight increase from initial 768), and an altitudinal range of 700 to 4500 m asl. Over 50% of the Park is above 3000m in altitude; over 66% is steeply sloping. The altitude range provides habitats from warm closed broad-leafed forest (and drier blue-pine forest) at lower altitudes, through cool broad-leaved forest, and to mixed coniferous forest, then through a set of different coniferous forest types to high altitude scrub and grassland.

The Park is accessible as it lies astride National Highway 2, the Park HQ is at Ura village on the Park border, on the Highway. There are 2,384 households (hh) within 5 km of the Park boundary and 175 hh within the Park or on the border which create real and potential pressure.

Figure 2 Thrumshingla National Park and Surrounding Villages (Figures in brackets are number of households in each geog under park jurisdiction)



The Corridors The corridor concept, providing "permanent" connectivity between the major Protected Areas was gifted to the world by Her Royal Highness the Queen on behalf of the people of Bhutan. The Forest Department has been operationalising the concept of improving connectivity between separate protected areas. This was to start with policy and legislation, and decisions on the management of the corridors. There were to be 10 distinct corridors, totalling 9.5% of the country land area.

1.2 The Project.

It is against this backdrop of extreme biodiversity value, and a successful history of past GEF support for the conservation of biodiversity in Bhutan (starting with the Trust Fund in 1992), that this project was prepared. Project planning started in 1999 when a GEF MSP project proposal titled "Linking and enhancing protected areas (LINKPA) in Bhutan" was prepared by WWF Bhutan, in partnership with the Nature Conservation Division of the Royal Government of Bhutan (RGoB) and UNDP/GEF. The proposal aimed to initiate conservation action in biological corridors at a national scale. The project proposal was then revised to have a more limited geographical focus in the temperate broadleaf forest eco-region, which was identified as a major conservation gap in Bhutan.

The project was to ensure long-term conservation of the forest and mountain ecosystems and viable population of species of global biodiversity significance in Bhutan through maintaining a network of protected areas and linking corridors. The stated goal of the finalised project (in 2003)[3] was:

[3] This is taken from the signed Project Document for the Project (BH85 –G) of 2003.

"To ensure long-term conservation of the forest and mountain ecosystems and viable population of species of global biodiversity significance in Bhutan, through maintaining a network of protected areas and linking corridors".

To achieve this goal, the project objective was:

"To strengthen effective landscape management of protected area network and biological corridors in the broadleaf forest eco-region".

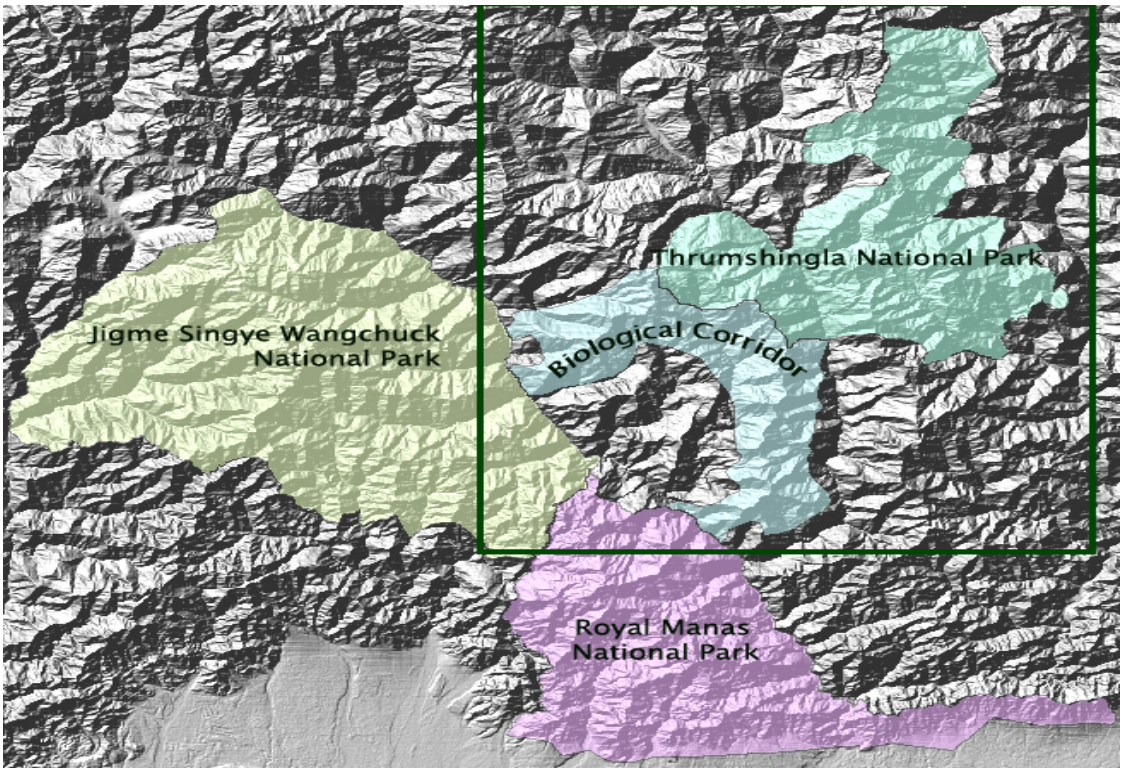
This was to be achieved through the following three outcomes:

- Developed conservation and management guideline, regulatory framework, and capacity for biological corridor management.
- Developed model initiatives for biological corridor management and conservation by the local authorities and communities in selected critical sites.
- Strengthened conservation and sustainable use of biological resources in the Thrumshingla National Park as a 'lynch pin' of the biological corridors.

Outcome One was to focus on the development of policy framework for biological corridor management, while the latter two outcomes would focus on its implementation.
Outcome Two was to focus its activities within the connecting corridors, which is a pilot initiative to provide a model and to be replicated in other areas.
Outcome Three was to focus in the newly established Thrumshingla National Park and the corridors connecting TNP to the Royal Manas and Jigme Singye Wangchuck National Parks.

The project was expected to run for five years, considering the capacity of the stakeholders to initiate new initiatives in the biological corridor, and gradually develop capacity to achieve successful project outcomes.

Figure 3: LINKPA Landscape (Corridor connecting TNP with JSWNP & RMNP)



1.3 The Evaluation Mission

1.3.1 Evaluation Objectives and Terms of Reference

This evaluation was commissioned by the UNDP Country Office in Bhutan, with the support of the Regional Technical Advisor from UNDP's Regional Coordination Unit in Bangkok, Thailand. The TOR followed the procedures laid down by GEF and UNDP as the GEF Implementing Agency for the Project. The detailed objectives of this Terminal Evaluation are to be found in the Terms of Reference in Annex 1. The operative objectives of the evaluation, based on the Terms of Reference, are as follows:

1. Assess overall performance and review progress towards project objectives and outcomes
2. Analyse implementation arrangements, identify strengths/weaknesses in project design and implementation
3. Assess the sustainability of results
4. Make recommendations on measures that could have increased the likelihood of success
5. Make recommendations on the design of future projects of a related nature
6. Identify and document the successes, challenges and lessons learned
7. Evaluate the level of sustainability of the project and the use of M and E processes.

1.3.2 Mission activities

Work on this evaluation commenced on Friday 15 August 2008 with Rodgers travelling from home-base in Nairobi, and reaching Bhutan on Sunday 17 August 2008, via Bangkok where he was able to discuss the TOR with Dr Sultana Bashir the RTA for this project. The Sunday arrival allowed the meeting with the focal point in the UNDP Country Office (Tashi Dorji) and National Consultant, Yeshey Dorji, before the Monday meetings with Government. On Tuesday 19 August the consultants travelled to the National Park HQ in east central Bhutan (see Annex 2 on itinerary).

After the field trip the consultants spent a further five days holding consultations with key stakeholders and undertook the first drafting of the Evaluation Report. A presentation of findings was made to the Project Steering Committee and other stakeholders on 29 August 2008. By end September the consultants were to provide a first draft of the Evaluation Report to UNDP (this was delayed).

The Evaluation Report was finalized after comments from Stakeholders (Novemberr 2008).

1.4 Methodology of the Evaluation

1.4.1 The approach adopted

Guidance on terminal evaluation methodologies was provided by the UNDP Handbook on Monitoring and Evaluation[4], and from the Office of Evaluation in GEF (Guidelines August 2007). The evaluators based their approach on these documents together with the ToRs, in consultation with UNDP Bhutan. This has been a participatory evaluation, and opinions / information were obtained through the following activities:

- Desk review of relevant documents and websites
- Discussions with UNDP staff, and past and present project staff from the Forestry Department and Nature Conservation Division.
- Consultation meetings with stakeholders and partners in capital/districts/forest sites, including villagers.

As this is a terminal evaluation of an MSP, it would not normally be expected to go *back in detail* to the original formulation stages of the project; especially as there was a detailed Mid Term Evaluation which looked at project design. This Terminal Evaluation has focused particularly on the period following the MTE *i.e.* post 2005. However as there was some confusion over the revision of the Logical Framework (particularly Indicators) following the MTE, this Terminal Evaluation reviewed some of the earlier process and concepts and log-frame, looking particularly at the M and E Framework.

[4] *Handbook on Monitoring and Evaluating for Results* (2002) United Nations Development Programme Evaluation Office

The evaluators were provided with an initial list of documents by UNDP and the Project Team. The evaluators sought additional documentation to provide the background to the project, insights into project implementation and management, a record of project outputs, etc. The list of documents reviewed by the team is in Annex 3.

Consultations by the evaluators took place mainly in Thimphu the capital city, in the two main District Headquarters (Dzongkhag), and in and around the main park block of Thrumshingla National Park. In all the TE team consulted 45 individuals in detail and a further 30 villagers and school scholarship holders in three separate village meetings. People consulted came from a wide spectrum of sectors associated with the project – from within UNDP, Government organizations, NGOs and community organizations.

Most meetings followed the same pattern, namely, a brief introduction on the purpose of the mission followed by an identification of the relationship that the consultee had with the Project, if any, and his/her views on the Project. There would usually be a number of specific questions on aspects of the project. A full list of persons met and consulted by the evaluation team is to be found in Annex 4.

The evaluators analyzed the information obtained and presented a preliminary report for discussion and feedback, using a detailed power-point presentation and a series of hand-outs, to a sub-set of the Project Steering Committee. Following this, this report was finalized with the benefit of the input received.

1.4.2 Structure of this report

The Report is structured in three main parts. Following the Executive Summary, the first part of the report comprises an Introduction which covers the methodology of the evaluation and the development context of the project. Then Part 2 covers the "Findings" and is made up of a number of discrete but closely linked sections following the scope proposed for project evaluation reports by GEF and UNDP Guidelines, this separates project "*managemen"t* (Part 2), from project "*Impact"* (Part 3). Part 4 looks at Sustainability and M and E issues; Part 5 comprises the Conclusions and Recommendations. Annexes provide additional information.

This report is intended initially for the Government in Bhutan, and the GEF and UNDP Offices at Country Regional and HQ levels. The project was co-financed with direct cash financing through the project budget, by WWF Bhutan. WWF were happy to use the UNDP-GEF Terminal Evaluation (TE) process and this report goes to inform WWF as well. Through these major stakeholders, the TE is expected to reach the National Park staff and their Forest Department counterparts outside the National Park. It is hoped that NP staff will make the findings known to the local government and village people we met.

2 FINDINGS: A) PROJECT DESIGN, IMPLEMENTATION & MANAGEMENT

2.1 Project Design

The initial project design, as described in the Project Document (Prodoc) was discussed in detail by the Mid-Term Evaluation Team (MTE). This Terminal Evaluation read the MTE reports and discussed the findings with project proponents. The TE accepted the findings and arguments put forward by MTE, and believed that the MTE was responsible for ensuring the project was put firmly on a trajectory that would lead to a successful conclusion, by refocusing on Park sustainability. This is discussed in the next section.

2.2 The Mid-Term Evaluation

The Mid-Term Evaluation (MTE) was in May-June 2006 and the report presented in July 2006. The MTE carried out a detailed technical analysis of the Project Log-Frame, and made recommendations for its revision (see below). The MTE report was discussed in Project Management, and whilst no formal Response Matrix was prepared, discussions showed that there was a set of agreements and one minor disagreement with the MTE (recommendation 3 on fund financing). These past decisions were captured by the TE team and put into a draft matrix format and these were validated by the Project Steering Committee during this Terminal Evaluation. This later summary Response Matrix is included below:

PROJECT RESPONSE TABLE TO MTE RECOMMENDATIONS

No	Recommendation	Y/N	Response By Project
1	The project partners should as soon as possible (within two months) revise the log-frame in the light of past results and future priorities, and with a particular emphasis on developing a coherent set of results and measurable indicators.	Y	Log Frame revised by partners and approved by 5th PSC
2	Develop a set of governance options for biological corridors in Bhutan in the form of a policy paper, which examines alternatives for corridor management authorities and mechanisms with particular reference to the roles of local authorities and communities.	Y	Regulatory Framework was prepared and presented to national stakeholders' workshop. Approved and Minister Rules Issued
3	Based on background research conducted by UNDP Bhutan and a series of consultations with local and national stakeholders, a small task force among the project partners should develop an options paper reflecting international experiences with protected area finance and needs and realities on the ground. This paper should then be presented and discussed at a national seminar.	N **	Changing political realities suggested that this should wait until after new Government is in place (mid 2008). A number of short-term and longer term options are available. ** *Issues of PA finance are discussed in section on impact.*
4	Establishment of a management framework for the corridor. This would build on existing and future research and the draft "regulatory framework", and outline a set of priority issues and interventions.	Y	Management Framework is finished, a separate Biological Corridors Unit established in DoF. Executive Order on corridors issued
5	No extension of ICDP into corridors, as this would further dilute the already overstretched resources. Instead, develop a ICDP strategy as part of the management, and based on the experiences of the ICDP work in TNP.	Y	Agreed. ICDP not so extended. ICDP national guidelines approved. Corridor Management Plan policies discussed at national level.
6	The development, population and refinement of the database should continue with the understanding that it includes both TNP and corridor.	Y	Agreed. The database includes corridor issues, first on socio-economic issues and secondly on resource use.
7	For the remainder of the project, procurement and contracting should be carried out in a holistic/package manner to minimize transaction cost and to attract bidders.	Y	This was followed by partners
8	Further "exposure trips" abroad should only be considered on an incentive/reward basis for particular achievements, i.e. for establishing a self-sustaining community ICDP scheme.	Y	Agreed in general , bit also considered necessary for specialised training.
9	Explore options for recruiting experts to provide hands-on training on various rapid biological assessment and socio-economic appraisal skills as well as data analysis techniques.	Y	Yes, Dr A J T John-Singh for biological surveys and Dr Gary Forster and Mr Tempa Tshering for socio-economic assessment
10	Conduct short joint learning assignments between TNP staff, project partners, and community leaders in other protected areas of Bhutan.	Y	Project team at TNP shared project lessons to CNR Workshop and through EE processes

11	Focus research agenda in two areas: a) Baseline analysis of critical ecosystems and species to come up with distribution and population estimates and to identify priority habitat areas for zoning and other management interventions; b) Refined threat assessments of main anthropogenic impacts (grazing, roads, timber and NTFP extraction) to inform law enforcement and ICDP activities.	Y	Rapid Assessments carried out and conservation challenges outlined. Threat assessments used in evaluation.
12	Consolidate and reduce ICDP activities after a Rapid Impact Assessment.	Y	Carried out, assessment completed
13	Prioritise IDCP activities on institution-building and alternative income generation.	Y	Yes, but no funds to do this in project, but prioritised in next generation of management plans / projects
14	Shift focus towards educational materials and fund-raisers for schools, in order to sustain activities beyond LINKPA.	Y	Attempted, but funds were finishing
15	Support current batch rural scholarships until class 10, and identify alternative funding arrangements through WWF and other partners.	Y	Alternative funding agreed through WWF to complete schooling
16	Integrate EE activities with ICDP team to harness synergies.	Y	Agreed and carried out
17	Ensure that ongoing and future activities benefit from the use of modern, interactive and holistic environmental education methodologies as developed by WWF and others, and integrate those approaches more closely with park activities.	Y	Agreed and next EE programme follows these suggestions
18	Dzongkhag sector heads should be included in the PCC meetings, to enhance information exchange and coordination between TNP and local development authorities.	Y	Done.
19	In the log-frame revision exercise, develop a set of intermediate outcome indicators that go beyond activities and outputs.	Y	Outcomes established with preliminary indicators
20	Establish an M&E cell in the research section of TNP to monitor and analyse project results in a more independent and detached manner.	Y	This was done by incorporating M and E as a mandate within Research cell tasks and responsibilities

The MTE conclusions on project design are worth repeating, as it was these conclusions that led to their recommendations above to focus on the Park, and to restrict corridor development issues to the creation of an Enabling Environment for corridor management more broadly.

"LINKPA has had a complex history, resulting in an uneasy compromise between an earlier RGoB and WWF focus on park management and ICDP[5], and later priorities on biological corridors. While this has led to a rather ambitious MSP, the project concept is nevertheless highly relevant to Bhutan's conservation paradigms.

Firstly, the emphasis on a systems approach goes hand in hand with the country's holistic approach to PA management. Secondly, the concept acknowledges that corridors without sound nodes in the form of functional parks are not effective. Thirdly, the emphasis on ICDPs takes into account Bhutan's commitment to a participatory and inclusive approach to biodiversity conservation.

As a result of the hybrid nature of the project – corridor and park – the project scope is somewhat ambitious for a MSP. It might have been more realistic to focus on park management plus ICDP for TNP, or a corridor initiative. But, at the same time, the project approach allows the partners to deal with the conservation challenges in a more integrated manner and at a wider landscape level. As far as the components are concerned, it is not clear why there are two separate components on corridor management. They can be easily consolidated into one, reflecting more adequately the two overall outcomes of a strengthened TNP and a basic management regime for the corridor".

We, in the Terminal Evaluation, agreed with the sentiments and conclusions of the MTE. The most critical issue to be done was the re-casting of the Log-Frame. As the MTE stated:

"***Logframe:*** *LINKPA's logframe is not a suitable basis for results-based management as required by the GEF and UNDP. Despite several revisions, it is inconsistent in terms of outcomes, outputs and activities. By way of illustration, Output 1.1 and 1.4 are outputs, whereas 1.3 is an outcome, and output 1.2 is an activity. In*

[5] ICDP – Integrated Conservation and Development Projects, an integral and essential part of Government of Bhutan's conservation philosophy.

addition, many indicators are either unrealistic or inappropriate: For example, the success of Output 3.5. (Environmental education) is to be measured through "awareness of park boundaries and regulations".

Not surprisingly, the project has been mainly using annual work plans for planning and budgeting purposes. Unfortunately, the AWPs were not all consistent with the logframe, which aggravates the problems caused by the weak logframe.

Recommendation1 therefore was: The project partners should as soon as possible revise the logframe in the light of past results and future priorities, and with a particular emphasis on developing a coherent set of results and measurable indicators.

An important part of the log-frame change was to adjust the indicators as the initial set of indicators were way beyond the ability of the project to address. For example: One Indicator and Target was that the number of tigers was to rise or remain constant in the project period. Whilst there are tigers in the TNP, they are very rarely seen. Camera traps and pugmark impressions do prove the continued presence of tigers in the NP[6], but there are no estimates as to numbers. Guesstimates by all field staff in a discussion during the TE ranged from 4 to 15 individuals. This problem is not unique to Bhutan but is similar all over the tiger range states, exacerbated here by dense forest and steep terrain.

A second indicator and target was about fuel-wood and timber, expecting to see basal area increases in timber stands within the project period. This was thought to be difficult and expensive to collect sufficient data, and to expect a significant change in 4 years.

It is probable that project management over-reacted to the impossibility of these indicator targets and so the resultant log-frame went to the other extreme of focusing on process indicators (number of trainings conducted, number of MScs completed, number of buildings completed, etc), rather than impact indicators. These process indicators became the focus of the 2007 PIR . An extract from the revised log-frame is shown below.

Component 2. "Strengthened conservation and sustainable use of biological resources in TNP".				
Outcome 2.1 Enhanced management capacity of TNP.	**Adequate infrastructures in place, human resource capacity and management structure strengthened.**	**Some infrastructure and staff capacity.**	**Physical verification and staff interview.**	**Government approvals.**
Output 2.1.1 Developed and improved infrastructures in place.	Infrastructure in terms of office buildings (Head office, Park Range and Guard Posts) put in place at strategic locations by June 2008. One 'visitor center' established by 2008. Park office equipped with adequate computing, communication and travel facilities by June 2008.	None None None	Completed constructions. An operational 'visitor center' Procurement documents, office inventory list and field inspection.	Availability of contractor to take up construction. Availability of contractor to take up construction. Government approval.
Output 2.1.2 Human resources strengthened and capacity developed.	3 PG diplomas in Natural Resources Management completed by June 2008. Short trainings on various technical matters (biodiversity assessment; monitoring and evaluation; participatory planning; GIS and database development; eco-tourism; rural development; leadership skills) availed by park staff and stakeholders (NCD) by June 2008. Exposure trips (community participation in PA and corridor mgt; eco-tourism; park mgt; law enforcement) undertaken by June 2008.	None None None	Completion and office joining reports. Training reports. Tour reports.	Acceptance from relevant institutions. Finding appropriate training courses and study sites and acceptance from relevant institutions. Finding appropriate training courses and study sites and acceptance from relevant institutions.

[6] It was this camera trapping that showed tigers range to above the 4,000 m asl level(the highest record anywhere, and trap pictures suggest that at least three individuals were photographed.

The TE team worked with Project Management to find suitable compromises for outcome indicators from the two extremes, and to find indicators which were answerable from the increasing level of quite detailed resource monitoring undertaken by the NP staff. This discussion also featured on how to meet GEF's interest in "area" targets – areas under management.

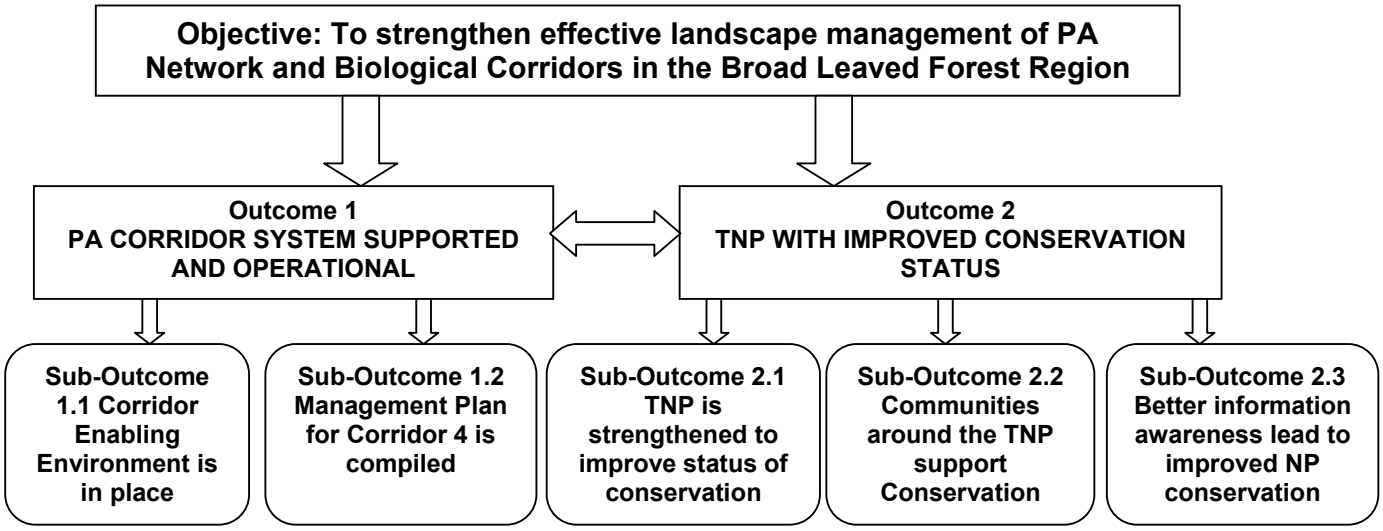
The main Indicator / Targets for Outcome 2 on the Park (with before and after scores) then became:

Indicator	Target	State at start-up	State at EOP
Number of Park Staff Increased	Doubling	17	34
No further Killing of Tigers	No kills	4 in past 5 years	Zero
Increased frequency of sighting key species	Increase*	Base	Increase x 12
No loss of closed forest habitat	Zero Loss	Fringe encroachment	None
Area of forest under improved management **	Hectares	0	600 sq km
METT Scores show significant increase.	Scores	44.5	74.5

- * Figures here are ratios of musk-deer and sambar and leopard to sightings of common generalist barking deer.
- ** Improved management is under the management plan – two figures are given one whole plan area and second is estimated area of "developing core zone" see text.

Similar indicators for the corridor were agreed and these are shown in the final revised log frame and in the Assessment Table at end of part 4.

The log-frame was simplified, removing the "Components" level and using Outcomes and Sub-Outcomes as per the diagram below. The full Log-Frame is shown in Annex 5.



2.3 Project Governance

2.3.1 The Project Implementation Framework

UNDP and the Government agreed that the project will be executed under the NEX (national execution) modality. The UNDP Programming Manual[7] states that "*NEX is used when there is adequate capacity in government to undertake the functions and activities of the programme or project. The UNDP country office ascertains the national capacities during the formulation stage".*

The ProDoc is quite specific about the implementation framework, which has been based on a long history of UNDP (and WWF) working with the Forest Department in the Ministry of Agriculture, and both parties were aware of the strength of project management abilities. No specific capacity assessment was done, but one assumes that parties were agreed that there was sufficient in-house capacity to manage this project.

[7] *UNDP Programming Manual.* UNDP, New York, 2000

Project management under NEX systems is relatively easy to understand. Government was the Executing Authority via the Gross National Happiness Commission; and the Ministry of Agriculture via the Forest Department in that Ministry was the Implementing Authority. UNDP provided oversight and advice, but requested technical support from WWF (the co-financier) and held the purse strings of quarterly disbursement to approved work plans and budgets.

2.3.2 Project Partnership – LINKPA is a three party project.

LINKPA is based on a WWF proposal and interim project, which led to the current tri-partite configuration in project implementation and management between Forestry, WWF and UNDP. WWF contributes over 600,000$ as direct co-financing to the project. This is the first example of an NGO-"executed" project for UNDP in Bhutan. While this partnership carries undoubtedly benefits that go beyond LINKPA, the MTE did stress that it put WWF in the awkward dual role of donor and executing agency.

However as WWF stated, this has been their role in Bhutan for some time, rarely do they "implement" projects. The MTE team noted positively "the good relationship between the project partners, which has helped to overcome initial communication difficulties, and bodes well for the next two years". This cooperation continued to grow, the TE team found a very solid partnership based on institutional advantages but cemented by strong personal ties of cooperation and friendship. This is illustrated by the strong support WWF is putting into the continuation of project support after GEF project completion (see section 4.6)

2.3.3 The Project Steering Committee (PSC)

All projects of a certain size will benefit from an effective steering committee and it is standard practice to discuss the function and makeup of the PSC in the ProDoc. Together with the Tripartite Review, the PSC is the highest governance level for the project. As such, it must have both the authority and the power to set policy for the project, monitor its performance and provide guidance and directions to the Project Manager and other project stakeholders. The PSC should also support UNDP which, as GEF Implementing Agency, retains the ultimate accountability for the delivery of project products and the administration of project funds according to the Standard Basic Assistance Agreement (SBAA) between UNDP and the Government.

The tasks of the PSC should include (and largely did include) the following:

- To set policy and guidance to ensure timely, cost-effective realisation of project objectives
- To review and recommend approval of Annual Work Plans
- To monitor progress in project implementation against agreed Outcomes and Outputs
- To validate Project Outputs
- To resolve conflicts and problem areas as needed to facilitate project delivery
- To ensure country commitments, including co-financing and operational support, are met.

The membership of the Project Steering Committee should comprise (and largely did comprise) the following::

- Representatives of each of the main stakeholders
- Representatives of major donors and/or other partners
- Representative of UNDP
- Representatives of the beneficiaries

The National Project Manager is required to attend and report on progress, assisted by other project personnel as required. The NPM acts as the Secretariat to the Steering Committee. In practice the National PSC was chaired by the Secretary of the Ministry and included broad representation; the PSC met frequently.

2.3.4 The Project Management Unit

There was no separate PMU. Management was integrated within the Forest Department and Nature Conservation Division structures. Management was thus a team process in forestry. The Project Manager was the Park Manager, working in collaboration with the forest partners in District Government. This is very much in line with current aid thinking – empowering the recipient to take charge from the outset.

2.3.5 The Role of UNDP

As implementing agency, UNDP is responsible to the GEF for the timely and cost-effective delivery of the agreed project outputs. It achieves this through its understanding with Government. UNDP has an obligation to ensure accountability in the project, and efforts in this respect are spearheaded by the Country Office which has legal responsibility for the GEF funds. The work of the UNDP Country Office is supported by the UNDP/GEF Regional Office, which also provides coordination within the whole UNDP / GEF portfolio of projects for the region. More specifically, the UNDP / GEF Regional Office provide technical support to the UNDP Country Office and the Government GEF Operational Focal Point (who is the Secretary in the Gross National Happiness Commission).

The UNDP Office did provide input, did host TPRs, did produce annual PIRs and did visit the project sites. Project fund disbursement was satisfactory. The project functioned satisfactorily. The UN system in Bhutan emphasises "environment as key part of their portfolio, UNDAF Outcome 5 for example says: "Conservation of Biological Diversity and ecosystems enhanced – by 2012". Key outputs are: "New Protected Areas and Biological Corridors", "Policies revised", "Agro-biodiversity conserved", "Human-Wildlife Conflict reduced".

2.4 Financial Management

The tri-partite implementation arrangements at first made financial management a "long and winding road", as the MTE quoted the park manager. Early Steering Committees had long discussions on financial requests (and reporting) having to go first through a long process of approvals with delays hampering project implementation. The MTE saw no easy remedy to the problem which to some extent reflected RGoB and UNDP regulations.

But possibly after the MTE discussions, and more probably due to personality changes in all three organisations (the Park and Project Manager, The WWF Project Focal Point and the UNDP team), the process became much more streamlined, delays were few and there was an extreme air of positivism. This was reflected in later Steering Committee Minutes.

The annual budget period in Bhutan is from July to end of June the following. The TNP Project Manager prepared three budgets: budgets for the park, for the corridors, and for the districts where ICDP are executed. The annual budgets are part of annual work plans. The budget for the park and corridor buffers were prepared in consultation with the Park Rangers and staff at park headquarters based on plans and programs. The budgets for the districts are prepared in consultation with communities in consultation with district staff (Agriculture, Livestock, Forestry and Planning) and extension agents in the sub-district Geogs. All the budgets were presented to Project Steering Committee and forwarded to the Ministry Department of Budget where it was scrutinized and approved for implementation.

This Terminal Evaluation is not intended to be a financial audit and the focus of this section is on whether the project financial disbursement process hampered project effectiveness / efficiency; and if the project has given value for money. Financial audits have been conducted regularly and from all reports the auditors (from Government as NEX) have been generally happy with what they found and no issues have been raised. Auditors were thorough, addressing management issues as well as financial, and audit reports were often long and detailed, but in all cases the project took on board the audit recommendations and were able to answer audit queries satisfactorily.

From a superficial point of view, the project design, with a budget of 790,000$ over a four year period, could be considered under-budgeted. However WWF real co-finance raised the total to 1.5 million – a smallish full-sized project. All salaries were paid by Government, adding a further real 750,000$ – a real saving and an indication of commitment from the Royal Government of Bhutan. Given the small amount of funding compared with scale of achievement, this suggests that the project has achieved considerable cost-effectiveness. There was no expenditure on "costly" Project Manager / Advisors and external consultancies were limited.

Over 50% of the GEF budget went to ICD activity. Of that, half went to supporting the substitution of tree based roofing for 286 households (hh) with CGI sheets[8]; 280 hh are still to go; but there are no more funds. The

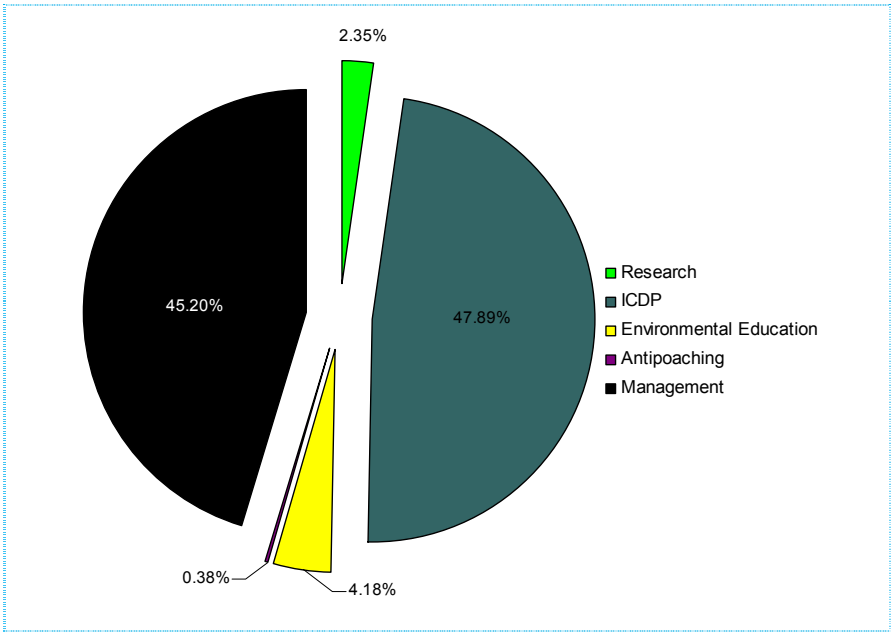
[8] The other major expenditure was solar panels for remote households.

question has been asked "was this high expenditure the best way to use resources?" Many argued, "yes', quoting the extreme pressure on forests for roofing shingles (calculated as equivalent to 24ha forest being cleared a year, and as roofing sheets last a minimum of 25 years, this saves 600 ha of good forest). This intervention demonstrated what could be done: a few houses here and there would not have shown real benefit. Yes, the funds could have gone to other activity (reducing Human Wildlife Conflict for example), but as the project achieved its objectives, there was not a case of "the cost of CGI sheets reduced the chances of success". This is discussed in detail on the lessons from ICD, section 5.

Table 1: Consolidated Summary of Expenditure Details for LINKPA Project (2003/04 – 2007/08)

Donor	Year-wise Expenditure in USD					
	2003/04	2004/05	2005/06	2006/07	2007/08	Total $
RGoB	107,717.00	122,237.44	166,164.38	175,479.45	177,876.70	**749,474.97**
WWF	89,609.60	66,536.17	111,836.55	214,868.82	159,770.05	**642,621.19**
GEF	99,972.00	285,962.19	185,112.48	113,502.74	107,450.59	**792,000.00**
Grand Total						***2,184,096.16***

Figure 4: Financial expenditure under different components



2.5 Monitoring and Evaluation

Monitoring of the project is a joint responsibility of project management, the Ministry as Executing Agency, and UNDP as the GEF Implementing Agency. Provisions for project performance monitoring are covered in the ProDoc through the standard arrangements which include:

- Initial tripartite planning meeting at the beginning of the project (The Inception Process/ Report).
- Annual Tripartite Review (TPR) meetings annually - one of Steering Committee Meetings acts as a TPR. with changed chairmanship and different agenda.
- An independent mid -term evaluation of the project mid -way through the project.
- A final independent evaluation at the end of the project.

But, there was no framework setting out a monitoring schedule, nor what should be monitored, by whom, or for what purpose. No baseline (on biodiversity values, on incomes) was used (although potentially available) The project started as the Tracking Tool process for Protected Areas (METT) was developed.

2.6. The Logical Framework Matrix and Outcome Indicators

The project LogFrame is arguably the most important single tool for adaptive management. It provides a summary of the project scope and elements. It provides Indicators to be assessed as a measure of progress towards the Objectives and Outcomes and it notes the risks and assumptions recognized by the project designers. Monitoring against the LogFrame is an effective way of gauging project progress. However, effective management requires that the LogFrame remains sufficiently "alive" and subject to change to reflect changing circumstances, experience gained, and shifts in priorities; and that the log-frame is used to guide management. Revisions of the Log-Frame are a good manifestation of adaptive management.

2.6.1 Changes in the Logical Framework

The Mid Term Evaluation of 2005 drew attention to the urgent need to redo what was agreed to be a weak log frame, with overly ambitious targets and confused outcomes/outputs. Recommendation 1 was for "the urgent upgrading of the log frame".

Discussions reveal that the MTE recommendation on log frame was accepted, the files show a process of rewriting the log-frame by all parties, and which was subsequently approved by the 5th PSC Meeting. The core elements of this log frame are detailed below. The main emphasis of the Terminal Review was on assessing progress against these outcomes and determining the remaining impact of these outcomes.

2.7 Stakeholder participation

The ProDoc does describe stakeholder participation, there was a stakeholder participation plan, and consideration of stakeholders and beneficiaries is covered. There is of course the change in project direction – away from co-management to broader partnership. Stakeholders were fully behind these changes. Stakeholder participation was one of the greatest strengths of this project – see later sections.

3 FINDINGS: B) PROJECT RESULTS

3.1 Progress towards the Objective according to Indicators

The Objective is spelled out in the text of the ProDoc. This is copied below, in a table, together with the three Indicators (in first column of table), and project response.

To strengthen effective landscape management of the 'Protected Area' network and 'Biological Corridors' in the broadleaf forest eco-region of Bhutan.

Indicators	Response
1. Governance option and management framework established for 'corridor management' in Bhutan.	**YES, the framework is in place and is functioning**
2. Operational and management capacity of TNP for effective conservation and sustainable use of biological resources in TNP enhanced.	**YES, the park is fully staffed and with equipment and improved biological status**
3. Landscape level conservation enhanced through relevant interventions.	**YES, TNP, through the Project, is having greater national impact on planning, M&E etc.**

Based on the above, it can be said that progress towards the Objective, according to the original Indicators, is **satisfactory.** Since "conservation" implies a need for sustainability, if the project develops an effective exit strategy that strengthens the chances of its products being sustainable, progress towards the Development Objective will remain satisfactory.

3.2 Outcomes and Outputs

The following text and table provides an analysis of results achieved and progress reported towards the Outcomes and Outputs as in the revised Log-Frame (see above). This is summarised in a larger landscape table at the end of section, with ratings. We start here with Outcome 2 on the National Park, as, following MTE conclusions, the **Park** is the "lynch-pin of the **Corridor**. Outcome 1 on the Corridor, follows that.

3.2.1 Outcome Two: The National Park

OUTCOME 2. "Strengthened conservation and sustainable use of biological resources in TNP *has led to improved biodiversity status of TNP and sustainable use strategies in place for eg grazing".* In the latest version (TE) this has three sub-outcomes – one on the Park, one on sustainable resource use in the Buffer Zone, and one on EE. Note that phrases in italics were added in TE discussions so as to reflect Outcome statements.

> **Sub - Outcome 2.1 Enhanced management capacity of TNP *has led to improved biodiversity status within the NP.***
>
> **Sub- Outcome 2.2 Improved sustainable use of biological resources in TNP *and in the Adjacent Buffer Zone***
>
> **Sub-Outcome 2.3 Increased information and awareness lead to improved conservation in TNP.**

This Outcome requires some discussion as to what is Park and what is Buffer Zone? The National Park is that area of the much larger Reserved Forest Land that was upgraded by law to be a National Park. The NP is thus surrounded by the continuing Reserve Forest matrix – which acts as a de-facto buffer-zone, as it is here where most resource utilization takes place. The Forest Department has a number of functional divisions – one of which is Nature Conservation Division, and another is Forest Management (through decentralized District Forest Officers). Staff can interchange between divisions. As communications and travel can be difficult, field staff made functional decisions as to jurisdiction and mandate. If a forest area is closer to the Park HQ or Park Ranger Station, then the Park staff undertake the day to day management on behalf of the territorial staff. If a patch of Park is closer to a territorial base, then the territorial staff manage that area on behalf of the Park staff. Rural families, who in the past got their resources (fuelwood, house timber) from the forests that became Park,

now get their requirements from the peripheral Reserve Forest, facilitated and checked, in most cases, by the Park staff – acting on behalf of territorial foresters.

The only major resource use that has not stopped in the now Park area, is grazing, described below.

The Park itself has a developing "Core Zone", which is what will become a no exploitation zone, once the livestock issues are resolved. This is most of the NP area, and excludes: firstly) the Roads that traverse the Park (mainly the very high altitude and winding National East – West Highway) as that is road reserve, with many road maintenance labour camps throughout the year. And, secondly) the village enclaves, mainly the long established Sengor Village (along the main highway) that occupies some 1200 ha of land.

The Indicators that demonstrate success or otherwise of the Park activities are as follows:

	Outcome and Indicator	Response
2	**OUTCOME 2. "Strengthened conservation and sustainable use of biological resources in TNP *led to improved biodiversity status of TNP and sustainable use strategies in place eg grazing".*** *1 Process Indicator* Adequate infrastructures in place, human resource capacity and management structures were strengthened, resource use more sustainable through community ICD interventions and education.	YES – all processes and inputs leading to outputs were completed satisfactorily, and are in use and are functioning and are maintained. Grazing remains complex, but significant gains are made.
2.1	**Sub – Outcome 2.1 Enhanced management capacity of TNP *has led to improved biodiversity status within NP.*** *2 Status Indicators* a) Loss of Key Species (tiger) reduced b) Poaching cases are reduced c) Increase in key species d) Forest cover remains intact, especially C/W BLF* e) Staff numbers increase significantly	 Successful – no tiger losses since 1999 Successful, no wildlife cases in 2007 / 2008 (till July) Successful, musk deer, sambar and leopard 80 % increase against common edge species (barking deer, macaque) No excisions, encroachment, no felling, YES staff increased from 17 to 35, full time staff.
2.2	**Sub- Outcome 2.2 Improved sustainable use of biological resources in TNP *and Adjacent Buffer Zone*** *Process Indicator* Improved livelihoods of local communities; and sustainable use of natural resources enhanced through greater understanding of park values. *Impact Indicator* a) Resource use in NP reduced b) Grazing Impact reduced in NP c) Reduced demand for timber in buffer zone d) Communities report improved livelihoods	 Whilst there has been considerable investment – there is no evidence that livelihoods have improved in income, they have in quality of life (light, roofing etc). Greater understanding awareness and acceptance YES YES, as Park boundaries become clear, and heavy fines imposed on poachersYES, significantly but difficult to ascribe to project YES from those receiving roof sheets and so demand less roofing trees – this is a difference Improved quality of life YES (lighting allows schoolwork, production, better health etc) Cash? No!
2.3	**Sub - Outcome 2.3. Increased information and awareness lead to improved conservation in the TNP.** *Process Indicator* Critical habitats are identified and participation of stakeholders in conservation initiatives increased. *Impact Indicator* Area of Park under improved management control	Research work completed and this is to be merged with grazing study and new Land Act rules on grazing concessions. People participate in many ways, joint patrolling, boundary discussions eco-tourism etc Developing Management Plan suggests that OVER 600 sq km will be under core zone and multi-use zone will be under regulated resource use

* Cold / warm closed broad-leaved forest (evergreen species rich forests)

The following paragraphs substantiate these findings.

Outcome Level. Outcome 2: Overall this was Satisfactory

The inputs were all put in place, and desired outputs achieved in most cases. Staff were trained, and are using their training; buildings were built and are in use, equipment was purchased and is being used; awareness and education programmes were implemented, boundaries were clarified and are respected,

The detailed evaluation Table (below) at Output level, documents these significant inputs / outputs. Of more interest is what has been the IMPACT at Outcome (sub-outcome) level?

Sub-Outcome 2.1 – The Park. This was judged as Highly Satisfactory (HS)

Poaching. No tiger losses have been reported in the past five years. In the five years before that 4 tiger killings were reported. The frequency of patrolling has greatly increased in recent years, and villagers do report wildlife incidences. Earlier reports on the Park area (eg the Surveys by Yonzon, 2001) remarked on the commercial hunting pressure (largely by non-locals) for eg musk deer, with long snare lines/fences, this was coupled by intense livestock pressure (grazing browsing, disturbance etc). Park prosecutions for poaching have declined annually, with NO reported wildlife cases in 2007 / 8 year. Prosecutions do carry substantial fines (eg NU 50,000 = 1,000$ for hunting pheasants, or several months salary!). This is a real deterrent. There are still a few pheasant trapping incidences along the road, and illegal fuelwood collection but this is minor.

Figure 5: Trend in offence case in different sectors of the park during the project period

Key Species. The initial park administration (at the time of planned gazettement) invested in a detailed biodiversity survey (by Dr Yonzon, from Nepal in 2001), This was very thorough, with 60 separate transects throughout the park AND environs. This constitutes the baseline, and could have been used as baseline.

The present management team, with GEF funding, embarked on a second extremely detailed biodiversity survey as well (2007 -8), with detailed measurements at many points along meticulously planned transects.

Unfortunately, the two surveys were different in techniques. The 2001 survey data were not left in country, and the report does not indicate the length of transects (at all!). We do not know if they were equi-distant, or 1km or 10km long. The latest survey does have known distances but we cannot compare sightings of evidences (dung, tracks) or of animal sightings directly between the two surveys. .

What could be done, and the TE spent time with park staff extracting data, was to compare ratios of sightings of common species (edge species) to sightings of rare species from both surveys.

Barking deer and Assam Macaque (monkey) were deemed common edge species, maintaining populations in disturbed habitats. Sambar (a red deer) and musk deer, were deemed rare species requiring better habitat. The results were of considerable interest.

Simply in 2001 by far the commonest species enumerated was barking deer, with a ratio of 1: 90 for the very infrequently encountered musk deer. In 2007 the ratio was 1: 7 an increase of 12 fold. This is probably not all rapidly increasing musk deer, as another significant change was a great increase in leopard evidences from 2001. We theorise that in the past leopard were a danger to the many livestock groups in the park area and harassed etc. Since the Park has reduced harassment and illegal activity, leopard numbers have increased. And, the number of sheep has decreased, and so barking deer is a preferred prey item. We now see more leopard and less barking deer.

We conclude that key species have increased, since the creation of the Park. Several sets of more casual sightings back up this finding. Some past staff maintained roadside counts of pheasants (both tragopans and blood pheasant). Numbers show an increase, birds we saw along the roadside were remarkably tame – in areas previously hunted and trapped.

Forest Cover. The Park, partially through the project, but also forestry as a whole, make great use of GIS and satellite imagery in mapping and planning. Forest mapping analysis shows no loss of forest, either as boundary encroachment, or inroads from village enclaves. Indeed assessment shows an increase in cover as abandoned areas of shifting cultivation (slash and burn) are regenerating. Recent transects show regeneration of forest species. Livestock pressures remain a problem in places, but evidence is that pressures are reducing.

Numbers of Park Staff. All NP staff were provided by the Royal Government of Bhutan, from the outset of the project. Numbers more than doubled in this project period. Increases were at all levels, professionals and field staff and support staff. Recruitment is to the permanent civil service, so sustainability of input is close to guaranteed. Staff numbers overall are about 30 sq km per staff member, and this equates to some 60 sq km per staff member of field staff. However, the park staff also manage significant areas of peripheral buffer-zone forest, and so ratios are closer to 50 sq km and 80 sq km respectively.

The TE led to interesting debate over the time allocations of staff to "park" work as opposed to "buffer-zone forest" work. Talking to field staff – rangers and forest guards, over 80% of their time was spent on buffer zone forest work – much of that on marking and checking resource extraction for fuelwood and housing requirements. TNP staff justified this explaining that there was little pressure on the park itself (which is more remote from the villages than the peripheral reserve forest), and that working with people in a supportive way – ensuring sustainable use of forest products and that their legitimate requirements were met was an important investment for conservation. This is discussed in more detail under findings.

Other Project Outputs Related to the Park

Sustainable Financing. This was an output from the first Log-Frame (output 1.4), which the MTE commented in (recommendation 3), wanting to clarify and strengthen activities. This was the only recommendation not accepted by the Project Steering Committee, and requires discussion here. The intention of the Output seems to have been rooted in the developing focus on sustainable financing around the world. However it was used in the project management in a more specific and localised manner.

Like many developing countries, revenue collected from government ministries and departments is paid into Treasury and the Ministry / Department gets an annual allocation from Treasury. Tourist gate receipts, permits and repayments etc are all collected on behalf of Treasury. Developing best practice as such receipts increase, is for the departments to retain some proportion of the funds. This could be directly (ie not paid to Treasury in the first place, or as a quick disbursement from Treasury, (often called retention funds). Treasury in Bhutan has not allowed this in the past, and this became a subject of discussion – expecting tourism fees to increase in the years to come.

But a more specific issue came up, around the major ICD activity on supply of subsidised roofing sheets – see below. TNP supplied iron sheets and householders were supposed to repay 20% as their contribution to the cost. The Park Authorities requested permission to open a Bank Account to collect such repayments, the

account was to be a Local Community Development Fund. This matter came up in a Project Steering Committee and the representative from Finance said "No". The issue was a point of principle, Ministry did not want to set a precedent where eg all Parks, and other government units had a special account for Revenue etc, acting as mini-Trust Funds. This was the time of the MTE report, and PSC said no to development of specific TNP approaches to Sustainable Finance. The MTE wanted to re-open the debate along broader lines.

Times have changed since then and Government at a high level has started to look at sustainable financing in the Natural Resource Sector more broadly. Bhutan gets an increasing amount of revenue from exporting both hydro-power and water to India / , and this is due to rise ten fold in the coming decade, Bhutan is therefore assessing PES processes (Payments for Ecosystem Services), and is seeking was to put a portion of such water based revenues back into forestry catchment management and Protected Areas. Already there is agreement that 1% of such revenues will be returned to forest management.

And, secondly, Bhutan was one the first GEF "Trust Fund" pioneers and The Bhutan Trust Fund has grown substantially since the initial 10 million $ capitalisation (1993 / 4) and is now some 40 million$, which with conservative returns, was to produce 2 million$ per annum (before of course the present situation in the global economy!). Trust Fund governance in the preceding years had moved away from supporting the NRM sector, and the NCD gained little or no benefit from the Trust for biodiversity activities (the original purpose of the Trust). However, the new Government was aware of these issues, and whilst we were undertaking the TE, government changed the Trust Governance structure, paving the way for greater cooperation and funding of PA activities. There was no need for project interventions.

Eco-Tourism This is often linked to sustainable financing. Eco-tourism is still very much in its infancy in Bhutan and in TNP. The Park Authorities, NCD and indeed the Royal Government of Bhutan have all supported the concept of eco-tourism as a means of bringing income and employment to the rural people. Of note, are the TNP activities that:

1. Constructed tourist trails.
2. Started the concept of house based cultural stays.
3. Started the Mushroom Festival.
4. Have a focus on tourism in the Environmental Education Exhibits in the Visitor Centre.

Sub-Outcome 2.2: Sustainable use in the Buffer Zone. This was judged as Satisfactory. S

Indicators and outputs were complex and rather mixed up, but a path through this can be found. At sub-outcome level: the phrase in the process indicator: "Improved livelihoods of local communities" needs considerable qualification, as does the second phrase: "Sustainable use of natural resources", and to ascribe this enhancement to a "greater understanding of park values" is extremely questionable. The impact indicators and examination of the outputs give greater insight.

Has resource use been reduced in the National Park?

a) Poaching was discussed above, this is greatly reduced

b) **Timber harvesting** for fuel and household timber requirements. This pressure has been transferred to areas outside the Park, in the Buffer-Zone which is zoned for sustainable use. Note: this is not illegal or commercial harvesting. All rural residents are entitled to so many trees of certain species and sizes per year or five year period, for fuel (remember this is above 3,000m asl) and for house repair/renovation, for example three fir trees in five years to replace roof shingles.

The project invested (and invested heavily) in reducing the need for such roof shingle trees by providing subsidised corrugated galvanised iron roof sheets (GCI) to many households in both enclaves and adjacent villages. This has greatly reduced the demand for such trees. The indicators also ask if the demand for trees is sustainable within the buffer zone areas itself. This has not been answered. Villagers say that "easily accessible trees in buffer forest near their village are now finished, and so please could they go back in the park area?" This is a question for larger forestry in Bhutan to see how to manage the forests to increase preferred trees.

The GCI inputs were part of the larger ICD inputs and generated much interesting commentary, see below.

c) **Grazing.** This has been mentioned as a complex topic. Grazing was widespread in the TNP before gazettement. Firstly, livestock pressures came from:

- village enclaves inside what is now Park,
- peripheral villages entering daily,
- peripheral villagers going to summer grazing at higher altitudes in the park,
- transhumance grazing, from other villages at lower altitudes sending cattle to summer pasture,
- transhumance (yaks etc) from higher altitude villages sending livestock in winter,
- and those just passing through en-route elsewhere!

Secondly, opinion is mixed on the costs / benefits of grazing in Protected Areas. There is evidence that livestock grazing can reduce coarse forage and so enhance the "grazophil" species, which would include many higher altitude meadow species (The Valley of Flowers in north India is one example of reduced biodiversity after stopping grazing). Park staff in TNP showed livestock reducing the height and density of the dwarf bamboo as an example. However, there is a great deal of commentary that grazing in closed broadleaved forest reduces biodiversity and competes severely with wild grazers / browsers. Regeneration is reduced, browse and cover reduced and the few grass species are greatly reduced. Lopping and the presence of herder settlements exacerbate the problem. Park documents and studies stress the impact of livestock. Recent biodiversity transects show cattle dung to dominate all wildlife signs and evidences (of course a large cowpat is much easier to see than hidden small musk-deer pellets). The park commissioned a study on grazing, one extract says: *"All palatable shrubs, forbs grasses are browsed and trampled". Grazing has negative impact on natural regeneration" "Grazing has altered forest species composition". "Grazing has led to landslides"* But this is all generalised, there are no statistics or measurements to show this. The report is very detailed on cattle numbers from where to where, but has little documentation on impacts of the cattle numbers.

Park philosophy has been not to interfere directly, by refusing entry, or by closing traditional grazing camps etc, but to rely on changing policies and socio-economic conditions to reduce pressure. There are many signs that this has happened.

1. The emphasis on high quality cattle, (eg Brown Swiss) and stall feeding reduces the need for larger numbers of low grade free ranging animals.
2. Emphasis on education has reduced the number of "younger herdboys", and the lure of cash paying jobs in towns has meant the exodus of youth who traditionally managed the mobile camps.
3. Policies are to reduce large scale trans-humance, fewer cattle come from distant areas.
4. The new Land Act 2007 contains provisions to reduce such movement

Our discussions with villagers show that fewer people were taking fewer cattle into the Park Area. The TNP have undertaken several activities to encourage improved husbandry in the villages; eg:

Overgrazing by cattle and yaks is a major problem in the park. In close collaboration with the district extension staff, park trained more than 46 farmers on livestock management practices in a 5-day training programme. The farmers were taught about pasture development, cattle management, improved diary farming, fodder conservation, weeding and slashing of weeds, use of crop residues as diet supplement for the cattle, orchard and pasture development, control of disease outbreak, and plantation of Napier and Gautemala fodder species. The project also supplied 3 jersey bulls to enhance the breed improvement of livestock so that farmers choose to rear fewer but more productive heads of cattle. Further, the project also helped the community in developing 25 acres of improved pasture for rotational and paddock grazing.

However, the work focus on the buffer forest, has meant less patrolling in the park; especially in summer when grazing is at its peak (albeit a reduced peak). Most park patrols are large elaborate affairs, in the autumn, focusing on biodiversity survey. As a result there is little knowledge or evidence on recent grazing impacts, or the state of abandoned meadows, etc.

The TE team believed that more could have been done in the area of grazing reduction, still without the hard removal of graziers. We agree with the decision to allow policies etc to have indirect influences, But the Environmental Education programmes could have focused on the grazing issue (largely ignored) and more M

and E inputs to assess impacts and to use those assessments to reinforce the EE messages (and to reinforce policy maker decisions). The research studies could have better ToR requiring an assessment of impact.

This issue is now returning to the Park management as the Land Act wishes to change the pattern of grazing, by allocating grazing leases to the main grazing groups, based on traditional occupancies. The Land Act makes no distinction between different types of land, and it is not certain as to whether the Act will treat the Parks as different from peripheral Reserve Forest, which has had legal grazing areas within it. This is a matter for the Ministry to take up at the highest levels. A detailed report on the intensity of grazing impacts would help the conservation case, as would a detailed map of grazing concessions allowing for the planning of a complete core zone that covers all habitats.

Communities Reporting Improved Livelihoods

This is from the ICD inputs, which were of four different approaches:

- Output 2.2.2 on Promoting Alternative Income Generation (AIG)
- Output 2.2.3 on Alternative Activities to Reduce Direct Threats
- Activities on Environmental Education (to support the above)
- Activities (mainly understanding) on Human – Wildlife Conflict (HWC)

Much of this was evaluated in the MTE, by NCD's own Evaluation Processes (ICD EE), and by a project report commissioned in 2005 by the Project and UNDP – WWF: "A First Assessment Report". We start by summarizing the MTE findings:

"The crucial sustainability issue rather evolves around the continuation of ICDP activities. As discussed above, the approach taken by TNP has significantly raised community expectations that TNP is a development agent. This leads to two recommendations:
R1: It is, therefore, imperative, to reduce and sharpen ICDP work to a sustainable level over the next two years (through a narrow focus, increase in community contributions, micro-credit, etc.) and in the context of the sustainable finance plan, and in close collaboration with district and geog authorities, explore longer-term options to provide conservation-relevant livelihood benefits.
R2: In a similar vein, it is advisable to realign some of the environmental education work towards self-sufficiency of school and nature club activities through the development of educational materials and fund-raising schemes". And:

Given that the residents within the park and outside (buffer zone) depended on park resources for various domestic uses, it was important that the demand for forest products be matched with rational use through regulated systems. Issues of most concern included pressure on wood for fuel, shingles, canes and bamboos within and outside park. The park management in close collaboration with local administration provided CGI roofing materials to residents within the park and in the critical buffer zones. The criteria for the selection of beneficiaries were not very clear to the evaluation team. Social benefits from CGI were immediate and for that matter a greater demand for such support. Longer term impacts in terms of contributions to conservation, labour saving, health benefits, and the opportunity costs are yet to be seen (MTE).

Most beneficiaries felt happy about swapping their traditional rights to wood shingles in exchange for CGI roofing materials received. All said and done, the distribution of CGI roofing materials proved to be a very successful scheme with visible economic and social benefits.

Issues, however, remain over high cost and its sustainability. The park has already spent almost half of the budget on ICDP activities alone, and now have only two years to go with 30% budget remaining. Issues also remain unclear over emergence of new household units who would place similar demands on the park management in future if they are also required to forfeit extraction of shingles from park resources.

Alternative Income Generation (AIG)

There is general agreement that these ICD schemes, which were supposed to provide *additional* income (as nothing was substituted) were not well done. Most inputs were too small, with little business planning,

determination of markets, and follow-up. Several things were tried: free pigs, free poultry, free improved bulls, vegetables, fruit trees. Not enough people in each site received inputs to permit sufficient extension support, or to reach economy of scale. The End of Project evaluation, which was different from the MTE timing when people were receiving the support, showed that many schemes seemingly promising were abandoned or failing.

The larger, more planned inputs which were to overcome specific problems were more successful. For example remote villages to the east of the park had no water inflows to allow rice cultivation. The project, through district technicians, invested in simple gravity water supply from nearby streams. The small canal supplied water, people invested in the necessary terracing, and two adjacent hamlets have rice and an improved food security situation.

In summary:

- Much failed (bulls, chickens pigs) as too little, no training support etc. This is fine – IF we learn lessons from the experience.
- Some activities are still developing – eg apple seedlings are yet to mature, but the scale is small, and few marketing linkages.
- Some activities continue adequately, but are too small for impact; eg vegetables
- Some activities are good entry points to villagers and community perception; these include supporting village services, such as monasteries, temples etc.
- But they provided VERY LITTLE evidence for improved incomes or alternative incomes.
- The project also facilitated community group formation for resource management, income generation and small cash saving schemes through Community Forest Management Groups; Livestock Farms; and "Yathra" Weavers' Association.

Alternative Resources

The project provided solar light to remote households which are still not covered by an impressive national grid for rural electrification. The light replaces the need for kerosene and traditional oil lamps. This had a major impact on livelihood quality (if not quantity directly). People now have light allowing children to do school work, women to take up weaving activities, and so increase income etc. House environments are better, with less smoke and fumes and less respiratory problems.

In rural areas with little cash economy, then such increase in the quality of life is of considerable importance.

Resource Substitution and CGI: What are the findings at the end of the project? Several things can be said:

1. YES, demand for shingles has gone down, from those who received CGI. Those who did not receive sheets continued to need them and so ask for and receive trees for shingles.
2. There was concern as to how subsidy was paid, which ended up with most people getting CGI almost free of cost. In the end 20% of the cost was collected from each individual recipient and was used to cover the cost for further beneficiaries along with project funds, as the proposed endowment fund from the community's contribution could not materialize. Had it been only the project GEF funds, the coverage could not have expanded to all the 286 households.
3. Government, at central and at district level, said that whilst the CGI input was useful, government would not do that using its own limited funds. This input would not be replicated or scaled-up. CGI sheets will last for 25 years, more if sheets are painted and fixed properly. Many people did not receive the input.
4. Householders who did receive sheets have more free time (shingle preparation is a major task) and so are now asking for trees for household development (eg cattle sheds etc) which is also their right. So – actual tree demand may not have decreased that much. Data[9] on project computerised databases, from the Village Enclave at Senghor can demonstrate this.
5. The CGI sheet issue has caused considerable debate over the manner of undertaking ICDs.

[9] One major benefit from the project has been the development of high standard databases – computerized and updated, with information in Excel / Access. All households around the park are numbered and all data on resource use recorded.

The Process of ICD was reasonably good:

- The process involved people – the start point was a participatory socio-economic survey, but this did NOT link to a simultaneous "pressure on the park survey", which would have allowed a focus on major pressures (grazing!)
- As such the project became involved in satisfying people's "Wish-lists" as opposed to activity to reduce pressure on park resources.
- The process did involve District / Geog technical extension staff (and possible issues of Attribution)
- There was strong buy in to and from district administrations (which was a new experience to AR!). Even the relatively small sums on AIG were significant to district sector staff, and greatly appreciated by the senior District administration. Also noteworthy was the level of "involvement" of the district staff in both planning and implementing the inputs. Care was taken however to show the recipient villagers that this was support from the National Park and the Nature Conservation Division of Government.

Sub-Outcome 2.3. Increased information / awareness lead to improved conservation in the TNP. MS

The **Process Indicator** was "Critical habitats are identified, and participation of stakeholders in conservation initiatives increased". This is a combination of several issues.

1) Critical habitats are identified and form a key feature of the developing 2008 – 2013 Framework Management Plan for TNP. These habitats will be the "core area of the TNP". The TE would like to have seen a greater focus on grazing impacts on these critical habitats.

2) Did Stakeholder participation in conservation increase? This is such an open ended indicator (what does participation in conservation mean? Which stakeholders? How do you measure increase?). There was no real baseline on this. However the TE team saw no sign of anti-conservation activity, although people suffering from HWC (crop loss / livestock loss) can be vocal critics of the lack of compensation or solution.

Environmental Education was a major programme in peripheral villages targeting school children and adults. EE was generalised, the TE team thought this could have focused more on key problem areas to the Park (grazing), and to people (HWC). There was a good sense of the need for entry points for communities as a whole (eg education for poor family children). The still to be finished visitor centre has the potential to be a driving force for such education ventures. (Note WWF is funding the construction of exhibits etc).

The Impact Indicator was the Area of Park under improved management control.

Park staff stated that the real core area (ie without significant grazing pressures, from all season-long impacts) is some 600 sq kms. But all areas even road side verges, are better managed than they were before TNP establishment. The roadsides are clear of pheasant snare lines from road maintenance camps. Camps rarely cut fuelwood from within the park. Sengor village is better managed, with cattle movement constrained.

3.2.2 Outcome 1: The Corridor. Overall, this was rated as Satisfactory;

This is a single Outcome: "Governance options for biological corridors in Bhutan are approved, using experiences from the LINKPA project".

This takes over what was called a Component in the post MTE LogFrame, and combining the two Outcomes on corridors from the initial Log-frame. As the MTE stated the MSP was overly ambitious. Historically, in 1999 the initial draft proposal was to support ALL corridors in Bhutan, this was scaled down to address the 501 sq km from TNP. The MTE, correctly in our view, recommended that the Project focus on getting the "enabling environment" for the corridors in place, effectively mainstreaming the concept of corridors into Forest "Policy and Practice". This was approved by the PSC.

There are two Sub-Outcomes,

1.1 Management framework for corridors established, approved and under implementation (HS)

1.2 Develop the Management Plan for the LinkPA corridor (Marginally Satisfactory)

	Outcome and Indicator	Response
1	**OUTCOME 1. "Governance options for biological corridors in Bhutan approved with experiences from the LINKPA corridor project".** **1 Process Indicator** Adequate infrastructures in place, human resource capacity and management structures were strengthened, resource use more sustainable through community ICD interventions and education.	**YES, agreement on framework is reached, and training started** **Agreement reached that Corridors will be managed by the territorial Forrest Divisions with coordination by the NCD and survey support from adjacent "anchor" parks** **Draft Mgmt Plan for LinkPA Corridor 4 is completed**
1.1	**Sub- Outcome 1.1 Management Framework for corridors established, *approved and under implementation.*** **'Management Framework' identified and endorsed by the Government by December 2007. Management Framework is used to improve corridor status by stakeholders**	**Done, Ministerial Executive Order Issued Actual implementation to start in 2009, as further donor funds are identified (WWF indicate support) and as first Management Plan is approved**
1.2	**Sub-Outcome 1.2 Develop 'management plan' for LINKPA corridor** **One officially approved management plan for LINKPA corridor.**	**Not yet, drafts are under discussion. This is delayed by decision to involve Territorial Forest Divisions.**

This is relatively simple to report on. The key achievement is that Government has approved the Ministerial Executive Order (which followed Cabinet Approval). The LinkPA project was fully involved in developing this process, with training and awareness workshops and use of on-ground information to inform policy. There was buy in to the process from the Nature Conservation Division and also Territorial Forestry and the Districts.

Secondly, there was agreement that the Territorial Forest Divisions would manage the corridors, NOT the Parks staff. Parks and NCD would provide technical advice, provide biodiversity survey support, and maintain a Corridor Coordination office in Forestry HQ in Thimphu.

Sub-Outcome 2 was on the Management Plan, which could not progress very far until the Executive Order setting up the corridors had been "Approved", and it was known who was to manage the corridors. . As that was not until 2007, there was little time to finalise this. Whilst the Plan was not finished (hence the MS rating), the process cannot be faulted, there was clear logic in the steps taken.

Corridor 4 is the corridor under discussion. This is two pronged, joining TNP to Manas NP in the south and to Jigme Singye Wangchuk NP in the west. The draft corridor varies from 5 to 15km wide, following guidelines from the first corridor planning study. (This was a GIS study, seeking the optimum route from standpoint of steepness, altitude, lack of infrastructure etc). The statistics are of interest:

50% of the corridor is Broadleaved forest, only 1% is cropland or direct pasture. Some 410 households have a direct bearing on the corridor status and will "need ICD support". There are four main bottlenecks – as deep rivers and main road crossings. There will be one Forest Management Unit within the corridor, luckily a wider area. This will need careful coordination between logging agents and conservation planners.

The corridor is only as good as its weakest point[10], and these bottle-necks are the weakest point, that is where management interventions must be prioritised.

3.3 Project impacts

3.3.1 Global environmental impacts

What are the Global Environmental Benefits, and what has been accomplished? The project site forms part of the Eastern Himalayas Eco-Region and Biodiversity Hotspot, arguably one of the richest areas of the world in terms of animal and plan diversity endemism. Bhutan is recognized as one of the most important parts of this hotspot, and has a major protected area network. Benefits are many:

TNP, a key part of the PA system, and one that protects the poorly represented Himalayan broad-leafed forest biome, is firmly established, with most threats reduced, and a management regime implemented through a management plan process. Capacities are in place to continue such management.

The often discussed plan to create corridors is now a firm reality, having been signed into legal agreement, with designated management agents. There are considerable spin-off benefits from this LinkPA – TNP project, that address the broader conservation of the whole PA system in Bhutan. These include: A stronger involvement with territorial forest staff, greater spin-off training, a set of conservation systems / protocols on Biodiversity Assessment. It is expected that this spin-off will continue to grow, for example, the use of METT and TRA methodologies across ALL Protected Areas. The case of ICDs and their role in conservation has been analysed, giving much greater understanding of principles and impacts.

Bhutan is one of the few countries in the world with net greenhouse gas sequestration capacity largely due to its vast forest cover (72.5%) and widespread use of clean energy. The project in particular through support to Thrumshingla National Park & the two Biological Corridors (BCs) has further strengthened protection to 140,500 ha of forest cover thereby contributing to global green house sequestration. The project also contributed to the protection of a major watershed (Kurichu) which forms the main source for a hydro power project in eastern Bhutan contributing to the use of clean energy and cutting down on carbon emission.

The project had a geographical focus in the temperate broadleaf forest eco-region which was identified as a major conservation gap in Bhutan, requiring urgent conservation initiatives to protect the critical global significant forest and mountain ecosystems. The project therefore, ensured long-term conservation of the forest and mountain ecosystems and viable population of species of global biodiversity significance in Bhutan through maintaining a network of protected areas and linking corridors.

Bhutan today has the distinction of being the first country in the world with specific constitutional obligation on its people to preserve the environment. Article 5 of Bhutan's Constitution emphasizes that a minimum of sixty percent of the total land area must always be maintained under forest cover for all time to come. As a constitutional obligation, the project focused towards strengthening Community Based Natural Resource Management in the project area in maintaining sustainability of the local resources including vegetative cover, non-wood forest products and watershed. The main objective of such initiative is to protect and derive benefits of local resources through joint initiative of the government and community themselves. The park through the project facilitated in training the users groups and preparing management plan over a 10 years cycle. Once established, the community and private user groups take full ownership of the designated area in terms of protection, re-establishment and sharing of resources and benefits. Such joint initiatives have helped the Royal Government in actually increasing the forest coverage and re-establishing most of the barren areas.

3.3.2 National level Impacts

TNP is firmly established as a key part of Bhutan's PA system. The Project has demonstrated that positive relationships with local administrations can be developed and maintained. The linkage between the Park, people and eco-tourism has been demonstrated by the creation of the new Mushroom Festival in URA Village.

[10] Learning lessons from another GEF UNDP- "Corridor project", the Selous Niassa Corridor Project, in south Tanzania

The Park has highlighted levels of poverty and problems of HWC in rural areas. Whilst ICDS have not raised cash income levels, they have improved quality of life, and given valuable insight for future ICD inputs. Bhutan's poverty level as of 2004 stood at 37 % and the focus of the RGoB's five year plans were on poverty alleviation. The LINKPA project specifically focused on improving the livelihood opportunities of the resident communities (5600 people). Through the ICD programs, the project is expected to increase the income of the community and make them self reliant.

The project has worked closely with its stakeholders in terms of decision making. Participatory assessments are carried out in consultation with the geog administration to identify critical issues and recommend required interventions. These are then approved at the Dzongkhag Development Committee consisting of people's representative from the block, which then goes to the Project Steering Committee for review and approval. These participatory institutions providing opportunities for rural communities to participate in decision making on their development activities will remain after the project and have contributed largely to their empowerment.

In terms of gender equality, it is noteworthy to mention that all project decisions at the village and geog level were made in participatory forum with equal representation of men and women. Women equally participated and benefitted from weavers' association and community forestry groups. Therefore, the project contributed towards gender mainstreaming in national plans and policies.

3.4 Assessment of Achievement: Ratings

Evaluators have used the "new" GEF ratings, on a 6 point scale:

HS	Highly Satisfactory	S	Satisfactory	MS	Marginally Satisfactory
MU	Marginally Unsatisfactory	U	Un-Satisfactory	HU	Highly Unsatisfactory

These ratings are used against three sets of criteria: Relevance, Effectiveness and Cost Effectiveness plus an overall rating. Ratings are for Outcomes and the Outputs within these outcomes and an overall PROJECT RATING, looking achievement of Objective.

Overall we believe the project has achieved a great deal with a relatively small MSP (<750,000$) NEX process assisted this relative frugality. Cost Effectiveness is rated HS through out. Detailed results are in the next four pages (of a landscape table), putting the Assessments against the Logframe and Log-frame Indicators.

Overall we give this project an "S" SATISFACTORY rating.
In the case of Sustainability, we give an S rating (see next sections)
In the case of M and E activities, an MU and an MS (see next sections).

EVALUATION MATRIX AGAINST REVISED LOGFRAME[11] for LINKPA

Narrative Summary	Indicator	Status at End of Project	Rating
Overall Objective: **To strengthen effective landscape management of 'Protected Area' network and 'Biological Corridors' in the broadleaf forest eco-region.**	**Governance option and management framework established for 'corridor management' in Bhutan.** **Operational and management capacity of TNP for effective conservation and sustainable use of biological resources in TNP enhanced.** **Landscape level conservation enhanced through relevant interventions.**	**YES in place and functioning** **YES, park fully staffed and with equipment and improved biological status** **YES, TNP through Project having greater national impact**	**S**
OUTCOME 1. "Governance options for biological corridors in Bhutan approved with experiences from the LINKPA corridor project".	**Management Framework for all corridors approved and in place.** **Stakeholders agree management processes at national level** **First LinkPA Corridor Management Plan Developed**	**YES, agreement on framework is reached, and training started** **Agreement reached that Corridors will be managed by the territorial Forrest Divisions with coordination by the NCD and survey support from adjacent "anchor" parks** **Draft MP for LinkPA Corridor 4 is completed**	**S**
Sub- Outcome 1.1 Management Framework for corridors established, *approved and under implementation.*	**'Management Framework' identified and endorsed by the Government by December 2007.** **Management Framework is used to improve corridor status by stakeholders**	**Done, Ministerial Executive Order Issued** **Actual implementation to start in 2009, as further donor funds are identified (WWF indicate support) and as first Management Plan is approved**	**HS**
Output 1.1.1 A 'policy paper' outlining management options –s for corridor management prepared.	One 'policy paper' paper prepared and submitted by June 2007.	Completed	S
Output 1.1.2 Improved and enhanced understanding of stakeholder perceptions and needs.	Community, regional and national level stakeholder workshops conducted by March 2007.	Stakeholder workshops at Central and District level started – those at community level await new funding (LINkPA had no funds for this see MTE)	S
Output 1.1.3 An analysis of existing governance options and possible management arrangements explored.	Comprehensive analysis of existing legal frameworks, institutions and stakeholder perceptions done by December 2006.	Done in 2007 / 8 OK	S
Output 1.1.4 Draft '*regulatory*	Draft regulatory framework prepared and circulated for	Done in 2007 OK	S

[11] The Log-Frame has been reworked for this Terminal Evaluation to improve logic, reduce overlap, and focus on Outcomes with quantified indicatorsText in bold at Outcome / Sub-Outcome levels.

framework' prepared to guide stakeholder consultations.	discussions by June 2006.		
Output 1.1.5 Clear understanding of the LINKPA corridor boundary.	Boundary demarcation process initiated with stakeholders by June 2007.	NO this awaited full policy agreement – this Output was misplaced!	N / A
Output 1.1.6 Socio-economic, threat analysis, and faunal floral studies are conducted and documented.	Socio-economic, grazing and threat analysis study for the corridor completed by EOP One Rapid Biodiversity (plants, mammals and birds) Assessment survey completed by June 2006. One database developed for flora and fauna by June 2007.	YES Studies and RBA were completed and used to justify the Corridor concepts. YES, the database open for corridor data, still discussion on who uses, owns and maintains the corridor database	S
Output 1.1.7 Capacity of Park staff developed in 'corridor management'	Study tours and trainings (short-term and long term) conducted by June 2008.	YES, some study tours for the Corridor staff and start of RBA training completed. MANAGEMENT training awaits new funding and plan.	S
Sub-Outcome 1.2 Develop 'management plan' for LINKPA corridor	**One officially approved management plan for LINKPA corridor.**	**Not yet, drafts are under discussion. This is delayed by decision to involve territorial staff more fully.**	**MS**
Output 1.2.2 Draft management plan produced and discussed with stakeholders and endorsed by the Government.	Draft 'management plan' discussed with stakeholders.	Initial discussions with National Stakeholders, needs more focus on bottlenecks and mandates and accountability	S
Output 1.2.3 Enhanced ecological understanding of the corridor.	Critical and key habitats identified for the corridor by June 2008.	Bottlenecks are being identified (major rivers and roads crossing corridors, village clusters and Forest Management (=extraction) Units). New guidelines for extraction needed	S
OUTCOME 2. "Strengthened conservation and sustainable use of biological resources in TNP *has led to improved biodiversity status of TNP and sustainable use strategies in place for eg grazing".* [12]	**1 Process Indicator** Adequate infrastructures in place, human resource capacity and management structures were strengthened, resource use more sustainable through community ICD interventions and education.	YES – all processes and inputs leading to outputs were completed satisfactorily, and are in use and are functioning and are maintained	S
Sub - Outcome 2.1 Enhanced management capacity of TNP *has led to improved biodiversity status within the NP.*	**2 Status Indicators** a) Loss of Key Species (tiger) reduced b) Poaching cases are reduced c) Increase in key species d) Forest cover remains intact, especially C/W BLF	**Successful – no tiger losses since 1999** **Successful, no wildlife cases in 2007 / 2008 (till July)** **Successful, musk deer, sambar and leopard 80 %s increase against common edge species (barking deer and macaque)**	**HS**

[12] Text in italics added in TE to emphasise "Outcome" level focus -

	e) Staff umbers increase significantly	**No excisions, encroachment, no felling, loss of canopy cover YES staff increased from 17 to 35, full time staff.**	
Output 2.1.1 Developed and improved infrastructures in place.	Infrastructure in terms of office buildings (Head office, Park Range and Guard Posts) put in place at strategic locations by June 2008. One 'visitor center' established by June 2008. Park office equipped with adequate computing, communication and travel facilities by June 2008.	Completed, buildings in use and maintained Built, interior fittings being designed and completed with WWF funding. GOOD facilities in use for conservation work.	S
Output 2.1.2 Human resources strengthened and capacity developed.	3 PG diplomas in Natural Resources Management completed by June 2008. Short trainings on various technical matters (availed by park staff and relevant stakeholders (NCD) by June 08. Exposure trips undertaken by park staff and stakeholders by June 2008.	Completed, and staff are in place in Park (One on Study Leave) Completed satisfactorily for STAFF and PARTNERS, and training is in use Completed satisfactorily for staff and partners and knowledge is in use **SPIN OFF benefit is Very High**	S
Output 2.13. Law enforcement strengthened. (Moved from Outcome 2.3)	One 'protection and law enforcement' section established in the park by June 2005. Patrolling routes, seasons and poaching hotspots identified and implemented by June 2008.	Completed and functioning Completed and being used	S
Output 2.1.4 Monitoring and evaluation system established and strengthened for project components and park management to improve service delivery and achievement of project goals.	One 'monitoring and evaluation' unit established in the Park office by June 07. Impact assessment' study of ICDP and EE by June 2007. Monitoring and evaluation protocol developed by June 2007. Quarterly monitoring exercise carried out in park (staff meetings; field trips; progress report validations; feedbacks National (disseminate lessons to facilitate adaptive management). An M and E information system developed by 2007.	YES, after much debate this was put in Research section. All completed by 2008 and in place and being used, see detail in repot Yes, this will be built into new Management Plan Yes, and these are being strengthened and will follow guidelines in new Plan This is in place and EXTREMELY useful and is being shared with OTHER parks and with HQ	S
Sub- Outcome 2.2 Improved sustainable use of biological resources in TNP *and in the Adjacent Buffer Zone*	***Process Indicator*** **Improved livelihoods of local communities; and sustainable use of natural resources enhanced through greater understanding of park values.**	**Whilst there has been considerable investment – there is no evidence that livelihoods have improved in income, they have in quality of life (light, roofing etc). Greater understanding awareness and acceptance YES**	**S**

	Impact Indicator **a) Resource use in NP reduced** **b) Grazing Impact reduced in NP** **c) Reduced demand for timber in buffer zone** **d) Communities report improved livelihoods**	**YES, as Park boundaries become clear, and heavy fines imposed on poachers** **YES, significantly but difficult to ascribe to project** **YES from those receiving roof sheets and so demand less roofing trees – this is a difference** **Improved quality of life YES (lighting allows schoolwork, productive work, better health etc) CASH? No**	
Output 2.2.1 Greater understanding of conservation threats, opportunities and resource use.	A more comprehensive socio-economic survey carried out for TNP by June 2008. An 'information system' for conservations threats (illegal activities – poaching, encroachment, resource extraction; livestock and crop depredation; resource use – grazing, timber allotment, NTFP's use, stones, sand, minerals) for TNP developed by June 2007.	YES but did not correlate with baseline of 2001 Information system is good and in use by park staff and being used elsewhere	MS HS
Output 2.2.2 Promotion of improved and alternative livelihood options and resource use.	Implementation of identified ICDP interventions in selected geogs by June 2008.	This was a totally inadequate indicator: See notes in Report	MS
Output 2.2.3 **.** Adoption of technologies to reduce conservation threats and address environmental issues.	Implementation of identified ICDP interventions in selected geogs by June 2008.	This was a totally inadequate indicator See notes in Report	MS
Sub - Outcome 2.3. Increased information and awareness lead to improved conservation in the TNP.	**Process Indicator** **Critical habitats are identified and participation of stakeholders in conservation initiatives increased.** **Impact Indicator** **Area of Park under improved management control**	**Research work completed and this is to be merged with grazing study and new Land Act rules on grazing concessions. People participate in many ways, joint patrolling, boundary discussions eco-tourism etc** **Developing Management Plan suggests that OVER 600 KM 2 WILL BE UNDER CORE ZONE AND MULTI-USE ZONE WILL BE UNDER REGULATED RESOURCE USE**	**MS**
Output 2.3.1 Enhanced ecological understanding of TNP.	Grazing study in TNP conducted Studies on focal and charismatic species initiated and conducted. Identification of key critical habitats for purposes of scientific zoning of TNP by June 2008. Highway monitoring plots set up for assessing bird diversity and monitored by June 2008.	COMPLETED Starting with CEPF Support See above – starting the final planning In place Yes, to some extent.	S

	Information generated from above studies translated into environmental education programmes and packages.		
Output 2.3.3 Enhanced understanding of TNP boundaries.	Stakeholder consultations on TNP boundary. Physical demarcation of TNP boundary by December 2007.	General agreement This awaits national discussion on type of boundary marking.	S
Output 2.3.4 Enhanced understanding and acceptance of conservation initiatives by residents in and around TNP.	Implementation of identified EE interventions in selected schools, communities, road worker camps and religious institutions till June 2008. Implementation of 'rural scholarship programme' in selected schools till 2008.	YES Done and evaluated (but no baseline) Done and successful.	S

4 FINDINGS: SUSTAINABILITY

4.1 ASSESSMENT OF SUSTAINABILTY ISSUES

The latest GEF guidelines state that "The Terminal Evaluation will assess at the minimum the "likelihood of sustainability of project OUTCOMES at project termination, and provide ratings for this. The assessment will give special attention to analysis of RISKS that might affect project outcomes". There are two **Outcomes**, and there are **Four Dimensions** of sustainability

1 Financial Resources
2 Socio-Political Resources
3 Institutional Frameworks and Governance
4 Environmental Issues

We discuss the issues behind these dimensions and then award rankings.

1. **Financial Resources.** The project has ended, but many activities continue

2. **Socio-Political (and Economic) Resources.** The strength of the Village Societies and the new partnership gives a new mechanism for interaction on conservation. Socio-economic parameters of the villagers suggest that their growing economic status has reduced demand for forest products (although continued flow of forest water continues to emphasise the importance of forests to communities).

3. **Institutional Frameworks:** Firstly, the new legal structure: both national (Conservation Forest) and international (MAB status) ensures the permanent prevention of legal extractive use of the forest, gives greater management resources. Secondly, the strong village institutional structures and continuing interest in forest issues (the evaluation was after two years since main funding stopped) suggests that this people – forest partnership has the ability to continue. Forestry has certainly invested into the process with the recruitment of forest extension cadres.

4. **Environmental Issues.** Biodiversity is improving in terms of recovery after past intense logging. Forest structure is improving, gaps are filling, and canopy cover is increasing. There is some concern at the lack of an overall Management Plan Framework or the Reserves. There is a past Plan, written in 1995 by IUCN, for the Forest Department, but this sets out principles, not prescriptions, government buy-in is not certain and many issues are rather out of date. There are many new issues facing forest conservation – perhaps especially in the wet forests, such as Invasive Species, Biodiversity Monitoring and Climate Change. In addition there are emerging opportunities such as Carbon Sequestration and Payments for Environmental Services. It would be encouraging to see Forest Department and perhaps the Environment Ministry giving greater attention to these issues. Whilst we realise the need for Forestry institutional structures to streamline sections, the loss of the Environmental Management section has perhaps reduced the prominence of these environmental issues, Perhaps a cross-cutting unit in Forestry could restore such concern and attention?

There are **Four Ratings of Sustainability:**

Likely,	There are NO or NEGLIBLE RISKS
Moderately likely,	Some minor risks could affect the long term outcome.
Moderately Unlikely and	There are considerable risks
Unlikely	SEVERE RISKS affect this dimension of Sustainability

This allows a matrix of assessment, see table on next page:

4.2 ASSESSMENT OF SUSTAINABILITY OF PROJECT OUTCOMES

The GEF Evaluation guidelines give **Four Ratings of Sustainability. These are:**

Likely,	There are NO or NEGLIBLE RISKS that affect the OUTCOME
Moderately likely,	Some minor risks could affect the long term outcome.
Moderately Unlikely and	There are considerable risks that this Outcome may not last
Unlikely	SEVERE RISKS affect this dimension of Sustainability

This allows a matrix of assessment for the two Outcomes,

	FOUR DIMENSIONS			
OUTCOME	**Finance**	**Socio-Political**	**Institutional**	**Environmental**
1 Governance options for biological corridors in Bhutan approved with experiences from the LINKPA corridor project".	Moderately Likely (New Corridor Project is partially approved)	Likely HWC may affect support to conservation	Moderately Likely (New Corridor Project is partially approved)	Likely Again HWC may affect success
2 Strengthened conservation and sustainable use of biological resources in TNP *has led to improved biodiversity status of TNP and sustainable use strategies in place for eg grazing.*	Moderately Likely	Moderately Likely (some reduction of Human – Wildlife Conflict will be needed)	Likely.	Likely, but some reduction in HWC needed

4.3 ASSESSMENT OF MONITORING AND EVALUATION SYSTEMS

The 2007 GEF Guidelines on Evaluation say that: "The Terminal Evaluation WILL ASSESS whether the project met the minimum requirements for M and E (ie both in the DESIGN and in the IMPLEMENTATION of M and E)". An M and E Framework is obviously essential, as is a budget to operationalise that Framework; and the use of M and E information in adaptive management. If the project has met these requirements, then the M and E component will be successful. The TE will therefore assess:

M and E Design,
M and E Plan Implementation,
Budgeting and Funding for the M and E plan,
Adaptive Management in the project, based on M and E results

The TE will use HS, S, MS, MU, U and HU categories for the Assessment.

It is necessary to separate the M and E of the Protected Area itself, from the M and E of the project intervention to support that Protected Area. Examples may make this clearer:

1. Protected Area Monitoring. This includes building M and E capacity and institutionalising the M and E process, with mandates and funding support. Undertaking formalised anti-poaching protocols – against standard templates is one example of Monitoring. The detailed assessments of Environmental Education and ICD within the Park context, is an example of Evaluation. On the whole, the M and E activity for Protected Area Management was done adequately, and better than project M and E.

2. Project Monitoring. Here we should separate the "Administrative Monitoring" of project "Inputs", so that "Outputs" could be achieved. Were the inputs on time? How many trainings took place, and how many trainees per training? And, how much did it cost? This again was done relatively well.

3. Project Monitoring of "Impact" – this was the weakest and a pity as the MTE picked on this and asked for a stronger log-frame and better quantitative indicators around the log-frame outcomes.

4. This Assessment separates these two different dimensions of M and E.

A) Assessment of PROTECTED AREA M and E processes (Supported by the Project)

No	Issue	Description	Rating
1	M and E Design	Poor use of available baseline information and perhaps inadequate use of Ministry M and E processes. BUT an M and E Framework was prepared and used.	MS
2	M and E Implementation	Following MTE advice the PA management gave the M and E mandate to the Research Cell. M did take place (routine patrols etc). The NCD, with the Park conducted TWO separate evaluations of activity (ICD and Environmental Education)	S
3	Budgeting and Funding M and E	Specific amounts in the Annual Work Plans from Project	S
4	Adaptive Management based on M E	Some changes were made in park management – although their formalisation was not done. And new guidelines on ICD	S

B) Assessment of PROJECT M and E process.

No	Issue	Description	Rating
1	M and E Design	The initial prodoc had an administrative M and E framework (ie use of PSCs, PIRs and the TE MTE etc). The initial Prodoc had an extremely ambitious indicator / target log frame matrix (basically un-doable). The MTE asked for a revision, and whilst this was done, the indicator target matrix was the weakest part of the revision with NO real indicators or targets.	MU
2	M and E Implementation	No M&E Implementation Plan No use of indicators. Adequate M on inputs and process (Number of trainings, no of seedlings planted, no of offences; etc), but not on impact	MU
3	Budgeting and Funding M and E	The administrative M and E was funded.	MS
4	Adaptive Management based on M E	Some realistic changes in project direction were made – although their formalisation was not completed.	MS

Our assessment suggests that this Project M and E was one of the weakest parts of project design and project management. Whilst there was reasonably good monitoring of inputs and process, there was less monitoring of the impact from these inputs/outputs, and the revised Log Frame did not offer enough support or suggestion.

4.4a Use of the Project "Monitoring Effectiveness Tracking Tool for Protected Areas or METT"

The TE process used two more tools in the evaluation process. One was the use of the standard GEF METT tool for Protected Areas, described below, and the second was the compilation of a Threat Reduction Exercise (following Margoulis and Salasfki methodologies, see section 4.4).

The METT: This was done originally at Project Start-up; it was not redone at MTE time. We could not trace the original recorders, and so with Park Staff who were in the NP at the time of project start-up we looked at conditions then and now, in a sense revalidating the rather highly scored original METT. We did this thrice, looking at a) the Park area then and now, b) the peripheral Buffer Zone Area then and now; and c) the corridor 4 area, now only – which acts as a baseline for further corridor work. Note that:

- The METT is done for all PAs all over world , that are supported with GEF funding
- This can allow some tentative comparisons between PAs; but more importantly allows comparisons for the same PA over time! Which is what we have done here for LINKPa
- There are 30 standard questions with a 4 point ranking answer (scoring 0,1,2,3)
- The maximum score would be 95 (there are some bonus points)
- But the METT also sets out what should be done, in particular check where areas of deficiency occur.

The Results are summarised below and raw data forms are in Annex XXX.

YEAR	**2003**	**2008**	
TNP "NPark" increase)	44.5	74.5	(A commendable
TNP RF "Buffer"	38.5	59	
Corridor	-	36	

Note the increase in both TNP areas (due to project), and note that the corridor is only just starting, with no on ground interventions.

4.4b Threat Reduction Assessment for Thurmshingla National Park, Bhutan (Assessed for 2003 – 2008)

The TRA was developed by the TE team, with the present TNP Director and his Chief Range Officer – both of whom have worked in and around TNP since project start-up. Issues were discussed with present field staff, and the TRA results discussed in the TE feedback presentation with senior staff of the NCD and Forest Department. The procedure was as follows:

a) The six main threats to successful biodiversity conservation in TNP were listed and then ranked in order of how much of the TNP area did the threat cover? (Note in the table below – pheasant snaring was localised – along the main road and some grazing camps, whereas timber extraction was widespread in all habitats). Such extraction was widespread BEFORE the Park was declared).

b) Each threat was assessed as to two other criteria – first "intensity": musk deer poaching was seen as most intense ie it really affected population integrity, even though area wise it was restricted to higher altitudes. Secondly "urgency", was this something which needed immediate attention or could it wait? Note that stopping timber was seen as urgent so as to demonstrate that TNP really was a Park and extraction had been stopped!

c) Total ranking re-identified the most important threats

d) (The most important bit!). To what extent had the Park interventions been able to reduce that threat? This necessitated defining what "100% of the threat had been met" actually meant? This is described below the table. Note the separation between local grazing threat and migratory graziers.

No	Direct and Indirect Threats	Area Rank	Intensity Ranking	Urgency Ranking	Total Ranking	% Threat Met	Raw Score	TRA index
1	Logging of timber trees	6	4	6	16	80	12.8	
2	Commercial Poaching (musk-deer)	5	6	5	16	80	12.8	
3	Human Wildlife Conflict	4	5	4	13	20	2.6	
4	Migratory Grazing	3	2	2	7	50	3.5	
5	Local Livestock grazing	2	1	1	4	40	1.6	
6	Local snares (eg pheasant)	1	3	3	7	80	5.6	
Sub-Total					**63**		**38.9**	
Total					**63**			**61.7**

Definitions of '100% Threat Met' for Thurumshingla National Park, by individual threat:

Logging of timber trees: Un-authorised tree cutting virtually stopped. No signs and no reports of felled trees. People use permits – including fuel-wood needs by graziers

Commercial Poaching: Commercial Poaching has virtually stopped. No field evidences; no reports; musk deer sightings increase. Note in 2000 – 2003 period this was "serious"

Human-Wildlife Conflict: (NOTE : this is a potential threat rather than a direct threat now – it realizes that if the conflict continues, then communities will not accept the park and impact on park values (eg poisoning predators).

Migratory Cattle Grazing. Long term stay by migratory cattle stopped (both yak on winter and cattle in summer). Depending on implementation of new Land Act, there may be few leases outside core area.

Local Cattle Grazing: Numbers of cattle below carrying capacity, restricted to leases, not in core area; graziers not poaching, cutting or expanding meadows.

Local Poaching – snaring of pheasants etc. Snaring of birds and eg barking deer from road side work camps, grazing camps etc stopped. No reports, no signs of snare lines.

2 Interpretation of this Threat Reduction Assessment

a) The data feeding into this TRA came from discussion with persons knowledgeable about the present status of TNP, AND how it has changed over past few years. The patrolling reports and the recent Rapid Biodiversity Assessment have shaped their perceptions, as has scrutiny of recent satellite imagery.

b) This is the FIRST TRA for TNP, (although it looks back 5 years) and so it cannot be compared with preceding analyses.

c) Whilst the "level of % threat met or reduced" is praiseworthy for the project, there do remain problem areas. The averaged Threat Reduction (weighted to take account of serious and not so serious threats) is 61.7%. This says that: "over the project life, informed expertise, using a standard methodology, believes that some 60% of the threat facing sustainable conservation of the Biodiversity Resources of the PA has been reduced".

d) The other 40% remains the problem – Reducing Human Wildlife Conflict, and further reducing grazing pressures. These are largely outside the immediate remit of the TNP authorities – eg dealing

with grazing and dealing with the threat from increasing levels of human wildlife conflict. BUT new Government initiatives are exerting increased influence which will be beneficial in years to come

4.5 Knowledge management

Part of the potential legacy of the project is the ability to document, disseminate and codify the impressive amount of experiences and information collected. This has been done exceptionally well, with impressive computerised databases that can be accessed by most of the TNP management team.

4.6 Exit strategy

The project did develop an exit strategy. This ensured that outstanding issues started by the project were continued with funding from other sources. Key aspects were:

- ALL staff salaries and running cost were provided by the RGoB from the outset
- There was no external PMU to be integrated; project management was integrated into park management from the outset, so no management hand-over.
- The unfinished Education and Interpretation Centre is to be finalised with extra funding from WWF. The project built the building, and it is the fittings and exhibits which are to supported, using expertise from external sources.
- The continuation of scholarships for children from poor families till higher secondary level was seen as necessary. Again WWF has taken on this role[13].
- WWF further provided support for Red Panda biodiversity surveys, ICD for Ungar village (focus on biogas as alternative energy); they provide support to "yatra" weavers, support to crop-damage - HWC, and provide inputs to implementing Corridor 5, ie starting from where GEF LinkPa finished.
- Small Grants Programme of UNDP is starting support to community enterprise, and PEI – Poverty Environment Initiative is looking at stronger mainstreaming if poverty-environment aspects into policies, plans and programs through the targeted ICD interventions.

The Exit strategy also includes strategies for funding the developing Management Plan for TNP.

4.7 Replicability and Follow-up

One of the findings of this evaluation is that the results of the project were not confined to the National Park alone; they have had significant impact on the whole Protected Area Network. Impacts have come through the processes instigated (eg the Biodiversity Surveys), from specific outreach (eg the trainings offered in short courses), from direct inclusion in project activity (eg workshops on corridor management) and from the individual personalities of senior Park staff.

This suggests that many project activities are being replicated within the PA system. The corridor process is poised to take off, WWF are funding this, building on the models tested in this LinkPA project. A new Protected Area (in northern Bhutan) is being created – with the same set of needed inputs, which could well borrow this investment model. Many of the areas discussed in this report could benefit from further follow-up. Support to both HWC (Human Wildlife Conflict, and PES (Payment for Ecosystem Services) across the productive forest catchment sector; are two immediate examples. The PA system needs consolidation, with a roll-out of capacities, and stronger oversight from NCD / Forestry.

[13] The TE team met with 10 secondary school student scholars, with their teacher / mentor. ALL students were in the top 25% of their class, suggesting strong motivation to achieve. Many students had returned to their villages in vacations and run tree planting exercises. Two students (one a girl) said that they wanted careers in forestry. We believed that was a true statement as the next student, said she wished to become a traditional dancer!

5. CONCLUSIONS AND OVERALL FINDINGS

5.1 EXPERIENCES AND LESSONS LEARNED

Lessons learned from the implementation of this project include those stated in the Mid Term Evaluation and those generated by this Terminal Evaluation:

A) **The Discussion in the MTE**,

LL1: The level of ambition for an MSP.

LL2: This stressed the deficiencies of the logical – framework and especially the need for realistic indicators

LL3: In order to keep local authorities engaged and committed, constant dialogue is necessary that often needs to exceed the formal forums such as PCC.

LL4: Meaningful community participation is a long, complex and time-consuming process that often requires specialized skills that many conservation actors either do not have or cannot afford. This again suggests a geographically limited and more holistic approach.

B) This evaluation endorses these lessons, and adds five more: We focus on the issue of ICD, on Capacity Building, and on the three outstanding conservation issues: corridors, the issue of village enclaves, and HWC – Human Wildlife Conflict.

1: ICD The question of Integrated Conservation and Development has been controversial in conservation literature: Does it work? How can it be improved? Should this be part of a GEF project? How do you separate local from global benefit?

This project helps provide some answers, but also opens up many more questions. Opening paragraphs in this report stress the importance of ICD in Bhutan's conservation philosophy. This is translated into practice by the creation of an ICD office in the HQ of the Nature Conservation Division in Thimphu. The Office undertook a detailed Evaluation of the ICD activities in and around TNP during the last years of the project[14].

We asked "**What would you do differently, IF you were to start all over again?"**

- The District (and others) said: focus on big things which have lasting impact, such as the irrigation canal for rice. Two villages have permanent benefit, and the district could not have afforded that outlay.
- There was considerable comment on more care with selection of beneficiaries, but several different answers: (eg assist the poorest of poor; support those who exert most pressure; support those in most remote hamlets {who are often the poorest and those who exert pressure).
- All people agreed the need for more base-line and more planning. We learn that the project "took a long time to get going" and so pressure grew "to do something". Ideally each component needed its own planning process with exit strategy, markets, care and back-up, and information on the expected benefits in both income and environment. If there were Cost / Benefit ratios, then the project would not have embarked on piggery, chickens etc.
- Of more concern was the failure of the project to learn many of these lessons from past ICD experiences in Bhutan (even from past UNDP support); and WWF has a large set of experiences from S E Asia. The Inception Period allowed for such internal discussion, and both UNDP – and WWF partners could have accessed broader international experience.
- Much of the controversy of ICD revolves around the linkages between the C and D. We assume that if we help the people with Development inputs, then they will help conserve the resource.

[14] See Report: NCD

There is thus a need to strengthen these linkages and assumptions. The project did put this into practice by those people receiving corrugated iron sheets signing Park contracts in which they pledged not to abuse Park resources.

- We return to the issue that was not the first ICD in Bhutan (nor first via NCD, or in a Park, or by UNDP, or by WWF). There were specific GUIDELINES on ICD dating from 2001. But these were not followed! We argue for the Guidelines to be updated, and for each new ICD activity to have an ICD framework or format and a formal approval process based on the degree of both conservation and livelihood benefits.
- There was much mention of the need to have entry points into realistic dialogue with rural communities around the Park. Villagers do see the Park Authorities as those who prevented them from using traditional resources. Meetings are thus based around "what are you going to do for us?" This leads onto the wish list syndrome, which results from unrestricted fully participatory discussions "tell us your problems and we will see how we can help you" approach. Better to start discussion around the key issue – "how can we help you to reduce the pressure on park grazing resources?" The TE team was convinced of the need for entry points, for some level of people's prioritisation. But IF an activity is to be an entry point, then it should be labeled as such, and not hidden behind a façade of improbable conservation benefits and improved livelihoods.
- It is useful to distinguish direct conservation benefits (less trees cut) and indirect conservation benefits (through awareness, understanding and acceptance). Equally there are direct livelihood benefits (food security from local rice) and indirect benefits (satisfaction in improved monastery, temple). The latter can be in terms of individual benefit (eg the poor children with scholarships) or group benefit (temple renovation).
- There is need to integrate ALL the components of the project, into a more unified whole. The issue of Environmental Education and ICD working together to address specific conservation and development issues, such as grazing pressure and human wildlife conflict (HWC); provides needed synergy.
- There was little focus on group empowerment (interesting discussion about the weaving groups) – and if communal approaches would be better than individual approaches, and some input into demonstrating how CBNRM activities could work around Community Forests – in the buffer zone.
- There was no consideration of micro-credit schemes although other donors (IFAD, Helvetas) were doing this in adjacent districts. A greater sense of partnership would have been beneficial here, and learning lessons that communities who invest their own savings in enterprise are more likely to safeguard that investment than if it was a hasty handout!
- Recent learning from another ICD oriented GEF UNDP project (Sri Lanka)[15] showed the value of linking credit with specific training, so recipients could put training to use (carpentry, improved agriculture etc).

2: Capacity Building. The project invested heavily in capacity building for both Park Staff and Park Partners. This included both formal post-graduate training in aspects of PA management, but also shorter specific training courses, and joint learning experiences in neighbouring countries (the rather frowned upon "Study-Tours" in the new GEF). Numbers were impressive:

Formal Long Term Training (PG Diploma)	3
Overseas Study Tours (Thailand, Nepal. India)	57
Short Specialised Training (Abroad)	5
Short Specialised Training (Local)	108

More importantly than the actual training itself was the use made of it. Firstly, via Training of Trainers this programme has built local capacity in Bhutan. Park staff now teach and instruct and give

[15] This was **Contributing to the Conservation of Unique Biodiversity in the Threatened Rain Forests of South-west Sri Lanka SRL/00/G36/A/1G/99**

presentations and demonstrations at the developing training colleges / schools for natural resource management in Bhutan.

The TE team was extremely pleased to receive the power-point demonstrations on project / park progress by the field staff (Senior Guards and Range Officers). Capacity was built, that capacity was used, and most importantly that capacity was empowered, by senior staff. The TNP staff functioned as a team, with interaction between all levels of seniority. Our questions were answered by field staff, who would access computer databases to find factual information. The Chief Forestry Officer – National Project Manager deserves much credit for his empowerment of his field staff.

3: Conservation Issues: 1: The Corridor Issue.

Bhutan has advanced the corridor concept in large scale Protected Area Planning quite significantly. One real achievement is to start planning corridors now, whilst there is still adequate forested land to provide connectivity (and now wait until all but the remnants have gone). Looking back at Figure 1, there is the impression that the corridors are the only natural habitat left between the PAs. Not so, much of the intervening matrix is forest land, with scattering of small villages. The demarcated corridors provide what is likely to provide the most suitable reasonable quality habitat within that matrix. The corridors then become the "core corridor" within a buffer forest matrix. This core is then to be given extra protection in terms of avoiding degradation pressures (eg possible roads, development projects and forest (timber) utilisation areas).

Conservation Issue: 2: Village Enclaves.

The TE generated considerable discussion about Protected Area Zonation, and developed some general principles:

- The core area should be as extensive as possible, covering all habitats in the TNP.
- The reserve forest outside TNP was the buffer zone, supplying resources to past park users.
- The road through the park and the village enclaves in the park were either in or passed through the core zone, but could not be considered as core zone. They act as Multiple Use Zones.
- The main enclave is the relatively old village of Sengor, some 21 main households astride the main E-W road through the Park, grasslands and a few crops with village infrastructure amidst good Mixed Conifer Forest.

There is no longer an option that Sengor Village should be removed so the challenge now is to see Sengor as an opportunity for Park Management and not a threat. It could be a trekking and eco-tourism base (close to birding sites listed amongst the best in Asia). It could be a demonstration of ecologically sustainable livelihoods. How does this happen?

- Sengor (and two other tiny enclaves on edge of NP) need a chapter in the Park Management Plan that sets out "how do you regulate or support or deal with Sengor issues?"
- Just as importantly it needs a broader development plan to allow for District and Geog and donor coordination (at present it seems fairly ad-hoc!) and that the NP is involved in coordination through membership of the Sengor Development Committee

Conservation Issue: 3 HWC.

Human Wildlife Conflict was described by virtually all of the people (villagers, district officials and conservationists) we met as the single biggest problem facing conservation in Bhutan. The media certainly gives crop depredation, livestock killing and personal injury great attention. All the villagers we met stated that both crop loss (to eg deer, wild boar and monkeys and rodents) and livestock depredation (tiger, leopard, wild dog) was both serious, time consuming and increasing. Government is experimenting with a variety of controls (fencing, noise, group action etc) and is relaxing the rules

on hunting of "vermin" especially wild boar. **The project however did not really get engaged.** In terms of ICD the prevention of loss of crops would have generated more income than the ill-fated poultry and piggeries! Some of the improved bulls were lost to predators! Environmental Education again could have focused on the issue of HWC in more detail.

The following table shows the pattern of livestock losses (cattle, yak, sheep, very few goats) from one village complex near the Park. The pattern of increase could indicate an unwillingness to report losses in earlier years, as well as a real increase as both wildlife and human populations increase.

Year	Wild dog	Tiger	Leopard	Bear
2002	28	7	5	8
2003	42	6	10	11
2004	61	15	28	25
2005	101	11	51	31
2006-07	120	12	50	19

The scale of HWC is such that it will affect the very sustainability of long term conservation success. Levels of poverty, precariousness of livelihoods are such that the total destruction a rice crop, or loss of a portion of a livestock herd, can tip the balance into permanent poverty. The tiger killings of the late 1990s were in part a "revenge killing", people too need support and investment. More analysis of HWC and possible alleviation, such as insurance (at local social community levels) are urgently required.

5.2 SUMMARY OF FINDINGS

Start-up and design

Overall the project has been a distinct success, with strong positive results in Protected Area establishment and management, with good preparatory work on corridors. The project gets an S rating, some sub-outcomes scoring HS. The ownership of the project, based on within Government, and specifically within the Forest Department (using UNDP – Government NEX -National Execution Modalities), has been a major factor in this success. The project has been administered and managed by government processes, with good support from UNDP and WWF.

There has been considerable adaptive management within the project, resulting from appreciation of the ambitious design. This started from before GEF approval, when the project moved from a country wide approach to corridors to a focus on one eco-region (broad-leaved forest), one PA (TNP), and one corridor, (Corridor 5). The MTE further reduced the scale of ambition, with a focus on the Park and enabling activities for corridor development, not direct development itself. Apart from that reduction in ambition, the design was OK. However some of the constituent detail was inadequate. First and foremost among those was the lack of a rigorous logframe, comprehensive but achievable targets and indicators. This was stressed within the Midterm Evaluation which stressed the need for a stronger logframe but this was not followed-up by major partners.

Apart from the logframe issues project oversight worked well, through annual Steering Committee. PIRs etc).

Implementation and Impact

The ratings, particularly for Park Management, were high, the METT scores showed good progress in Protected Area Management, and the Threat Reduction Analysis showed both positive outcomes and reasons where more input are needed.

The impact of the project went far beyond the single PA and associated corridor. The national PA system benefited and continues to benefit from the project interventions.

Replication

The continued growth in the PA system of Bhutan, and the need for increased capacity as the complexity of modern PA management and conservation expands, means that many of the lessons learned from within LinkPA can be transferred elsewhere, and that other donors could usefully replicate many of the project successes.

Finances

The project was efficiently managed, and being rooted so hard in government forestry, many savings were made in management costs (a senior Forester was made PM – at no cost to the Project).

5.3 RECOMMENDATIONS

5.3.1 Recommendations for Ministry of Agriculture and Forestry Department, in Bhutan

1. **Institutional Issues in NCD.**

- NCD should encourage greater cross PA learning (and link PA learning to Forestry) by:
    - Re-instituting the Park Project Managers / Park Directors (CFOs) Annual Workshops.[16]
    - Re-instituting the Departmental Newsletter, rewarding those who write and debate
- Build in the position of Forest Ecologist to NCD / Department of Forestry. Many conservation problems are habitat based, regeneration, succession, invasives, etc.
- Strengthen linkages between PAs and HQ specialists. At HQ there is a tiger conservation cell, a specialist mammalogist and specialist birder, but their inputs to park management is not high.

2. **ICD Issues in NCD**

- There is need to update the ICD Guidelines, and build in new learning. NCD should actively seek this new learning (both locally and regionally).
- In future it would be useful to tie the ICD inputs to the Environmental Education activity, and both of those inputs to address the overwhelming problem of Human Wildlife Conflict (HWC).
- NCD must insist that Parks and Park / Forestry Projects follow these guidelines, and that projects use the initial Inception Planning period to assess ICD interventions, and that EACH intervention is given its own cost benefit analysis.
- Where the Park / Project believes that an ICD intervention is necessary for entry into a community (starting dialogue, demonstrating goodwill) and if NCD believes the Entry to the community is valid, then treat it as an entry process, and evaluate success that way.
- And, yes, it is important to ensure people participation in ICD planning, but it is equally important to avoid wish lists. There is a need to prioritise and intended beneficiaries.

[16] This led to the fastest response to an evaluation recommendation, when the Department listened to this in the feedback session on the Friday and organised the Workshop for the Monday – two days later!

- As ICD links to people development, go up a step-up and involve political leadership in the Districts in the ICD process and in pro-conservation activity.

3. Research and Management Issues in NCD

NCD should seek greater mentorship and support in research design for park staff,

The TE team was NOT convinced that "Rare Species Studies" was the best way forwards such as prioritizing research into Red Panda. Focus on threats eg Grazing impacts, road impacts, corridor bottlenecks and overall forest regeneration were seen as more important. The rare species will come along with habitat improvement!

The project has succeeded in changing NATIONAL awareness by focus on site issues, and now needs to start to implement positive management under these new national strategies, eg a focus on adaptive supportive remedies for HWC.

5.3.3 Recommendations for UNDP – GEF WWF and Royal Government of Bhutan

Donor processes are changing (including GEF) but as Bhutan is still developing a comprehensive PA system with NEW and major PAs there is a continuing need for developmental support at PA level. At system level, there is great opportunity to bring together the threads of new conservation processes such as PA connectivity, landscape planning – including integrating the PAs within the productive forest matrix. There is a need to focus on systemic problems such as HWC, and supporting new solutions, such as PES and Eco-Tourism. Bhutan does offer considerable Carbon Sequestration in larger (longer) programmes.

Capacity Building at local and institutional level as well as larger systemic level remains a major necessity. This project demonstrates the importance of good training (and focused study tours are part of that learning mechanism!) Training of Trainers – supporting training institutes is important.

Donors need greater understanding that sustainable conservation of resources in complex ecosystems requires time. Projects cannot succeed in changing century old resource use patterns in 3-5 years.

Greater technical backstopping would have been useful around the log frame and new indicators. Linking this into better M and E. Ideally the Project document should spell out separate Protected Area monitoring and project monitoring modalities.

UNDP-GEF and WWF should have insisted on more learning into ICD at an earlier stage of the project implementation cycle. But, this was an MSP, and was firmly embedded into Government processes (which is well done, basically all MSPs should be embedded in Government or NGO processes). But how does one bring in incremental learning into such a project? Where, in the project process could the ICD learning have been enhanced, so that a) the ICD could have been more focused and show greater impact, and b) that a much greater level of analysis and lessons learned experience been developed to feed into national ICD guidelines? This remains a conundrum for GEF and agencies such as UNDP-WWF, who are charged with implementing GEF projects.

IN CONCLUSION

The TE team would like to congratulate all those who made this a successful project. We noted that there was a great deal of partnership, between institutions and between individuals in those institutions. The investment into such networking, led, perhaps by the charismatic Project Manager / Chief Forest Officer, is noteworthy. But this partnership moved at all levels from the Minister downwards in the Ministry of Agriculture. This level of political support for conservation, is all to rare and needs acknowledgement.

ANNEX 1: TERMS OF REFERENCE

Terminal Evaluation of Linking and Enhancing Protected Areas in the Temperate Broadleaf Forest Eco-region of Bhutan (LINKPA)

1. PROJECT CONTEXT & BACKGROUND

LINKPA is a tripartite project of the Royal Government of Bhutan, GEF/UNDP, and WWF. It is also the first project where GEF/UNDP and WWF Bhutan work together as partners in the country. The project area covers Thrumshingla National Park (TNP) and two corridors connecting to Jigme Singye Wangchuck NP and Royal Manas NP. TNP nestled in the central part of Bhutan is strategically important for the conservation of contiguous tracks of the largest and richest temperate broadleaf forest ecoregion in the Eastern Himalayas. The park was notified in 1993 and gazetted in 1998 and expands over an area of 905.05 sq. km. The wide variation in altitudinal zones ranging from 700 m in the low land to above 4000 m in the northern part supports different vegetation zones in the park from subtropical, warm broadleaved, cool broadleaved, temperate to the sub alpine forests. Vegetation data include over 700 species of plants with 152 species having medicinal value and 21 species endemic to Bhutan. The faunal diversity in the park and corridor includes 69 mammals and 351 species of birds, including several globally threatened, restricted, and rare species. The park's strategic location also serves as a nerve center for Tiger (*Panthera tigris*) distribution in Bhutan and forms central part of the biological corridor system. The park and its peripheral areas are settled by some 1165 households with an approximate population of slightly over ten thousand people who subsist on farming and livestock rearing. The park administratively spreads into 4 *dzongkhags* (districts) of nine *geogs* (blocks) and the two corridors extend to 3 *dzongkhags* and 4 *geogs*.

Project Approach
The Royal Government of Bhutan has placed sustainable development, which is locally called the "middle path approach", as its central government policy and vision for long-term development. The approach is highlighted and reflected in all government policy and planning, including the Bhutan 2020 and the National Environmental Strategy for Bhutan.

This project builds up on this strong commitment of the Royal Government of Bhutan for biodiversity conservation and to strengthen management of the protected area network and the biological corridors, which is critical to ensure long-term protection of the critical global forest and mountain ecosystems and the flagship species it supports.

Through an assessment conducted in 1993, with support from WWF, it was recognized that the conservation of the ecologically rich broadleaf forest ecosystem in Bhutan was not fully represented in the protected area network, thus Thrumshingla National Park was newly established. Moreover, the same year, the government established the innovative biological corridors to link these protected areas to maintain its ecological integrity. Strengthening conservation activities in this newly established protected area and the biological corridor in the Broadleaf Forest Ecoregion is recognized as a major gap to effectively conserve the representative ecosystems and globally significant biodiversity resources in Bhutan.

This project has been designed to focus its landscape scale conservation initiatives in the Broadleaf Forest Ecoregion of Bhutan, particularly in Thrumshingla, Jigme Singye Wangchuck, and Royal Manas National Parks, their buffer zone, and the biological corridors that connect these protected areas. The landscape scale biodiversity conservation through the protected areas and biological corridor management in the Broadleaf Forest Ecoregion is expected to be an innovative model and to be replicated in other parts of Bhutan in the future. The experience gained under the project is expected to lead to a development of regulatory framework for the management of the important biological corridor nation wide

This project ensured participation of men and women in all its relevant activities such as development and implementation of ICDPs, management and use of natural resources, and, capacity development considering gender differentiated needs of the communities living in Thrumshingla Park and the biological corridors.

The project's Development Objective:
The overall goal of the project is *Sustainable Conservation and Management of the Temperate Forest and Mountain Ecosystem in the newly established Thrumshingla National Park and its biological corridors.*

The more immediate project objective is a reformulation of the goal and is aims to *strengthen effective landscape management of the protected area network and biological corridors in the cool broadleaf forest eco-region.*

To achieve this objective, the project has three components

Component I
Develop conservation and management guidelines, regulatory framework, and capacity of implementers at project level.
Component II
Develop model pilot initiatives for biological corridor conservation by the local authorities and communities in selected critical sites.
Component III
Strengthen conservation and sustainable use of biological resources in TNP.

Project Budget:
The total approved budget for the project is USD 1,855,000 comprising

Global Environmental Facility	**USD**	**792,000**
Co-financing- Committed:		
World Wildlife Fund (WWF)	USD	643,000
Royal Govt. of Bhutan	USD	420,000 (later increased)
Sub-total co-financing:	**USD**	**1,063,000**
Grand Total	**USD**	**1,855,000**

An independent mid-term evaluation conducted in July 2006 noted inconsistency in the log-frame in terms of outcomes, outputs and activities, and therefore recommended the project partners to revise the log-frame in light of past results and future priorities, and a with particular emphasis on developing a coherent set of results and measurable indicators. The PMU in consultation with the executing agency and UNDP CO undertook the revision of the logframe and narrowed down to two components as recommended. Thereafter, the project tasks were implemented in accordance with the outcomes identified in realizing the projective objectives.

Component 1
Develop governance options for biological corridors in Bhutan with experiences from the LINKPA corridor.
Outcome 1.1 Establishment of Management Framework for corridors.
Outcome 1.2 Develop 'management plan' for LINKPA corridor

Component 2
Strengthen conservation and sustainable use of biological resources in TNP.

Outcome 2.1 Enhance management capacity of TNP.
Outcome 2.2 Improve sustainable use of biological resources in TNP.
Outcome 2.3 Enhance conservation and awareness in TNP.

Project partners:
The project partner comprises of UNDP CO, WWF Bhutan Programme, Department of Forests, Nature Conservation Division (Ministry of Agriculture) and the field office. The stakeholders of the project include – territorial divisions of the Department of Forests, Dzongkhag RNR Sectors, Department of Roads, Dzongkhag Adminsitration, Geog Administration and Civil Societies (RSPN).

2. OBJECTIVES OF THE EVALUATION

In accordance with the UNDP/GEF M&E policies and procedures, all projects with long-term implementation period (e.g. over 5 or 6 years) must undergo terminal evaluation at the end of the project. The Monitoring and Evaluation (M&E) policy at the project level in UNDP/GEF has four objectives: i) to monitor and evaluate results and impacts, ii) to provide a basis for decision making on necessary amendments and improvement; iii) to promote accountability for resource use; and iv) to document, provide feedback on, and disseminate lessons learned.

Terminal Evaluations (TE) are intended to provide an objective and independent assessment of project implementation and impact, including achievement of global environmental benefits and lessons learned to guide future conservation efforts including the design and implementation of other UNDP and GEF projects. Specifically, the TE will assess the extent to which planned project outcomes and outputs have been achieved, as well assess the relevance, effectiveness and efficiency of the project as defined in the GEF Evaluation Office guidelines for Terminal Evaluations. The evaluation will also evaluate the strengths and weaknesses of project design, implementation, monitoring and adaptive management and sustainability of project outcomes, including the project exit strategy. The evaluation covers the entire project including non-GEF financed components.

3. SCOPE OF THE EVALUATION

The TE should cover the following areas:

Appropriateness of the project concept and design

1. Project relevance and consistency with country priorities and the GEF Biodiversity Focal Area Strategy (specifically Strategic Objective 1 in GEF 3, ie Catalyzing the Sustainability of Protected Area Systems).
2. Ownership of the project at the national and local levels
3. Stakeholder participation at national and local levels.
4. Effectiveness in realizing project immediate objectives, planned outcomes and outputs, and the extent to which these have contributed towards strengthening the institutional, organizational and technical capability of the Government in achieving its long-term sustainable development objectives (including environmental management goals).
5. Sustainability of project achievements and impacts, including financial and institutional sustainability, and an assessment of planned replication and exit strategies
6. Review management arrangements and the Project Monitoring and Evaluation System, including the quality and timeliness of inputs, activities, responsiveness of project management to changes in the project environment and other monitoring feedback. Evaluate whether project design allowed for flexibility in responding to changes in the project environment.

7. Financial planning and sustainability, including the timely delivery and use of committed co-financing.
8. Evaluate the national execution modality to assess its effectiveness and impacts on effective and efficient project execution.
9. Implementing Agency's Supervision and Backstopping
10. Cost-effectiveness: were project outputs and outcomes achieved in the most cost-effective manner? Were there any delays that affected efficiency?
11. Monitoring and evaluation and the application of adaptive management principles (including effective use of logframe, UNDP risk management system, the annual Project Implementation Reviews, and other monitoring tools and mechanisms as appropriate)
12. Completion of the Tracking Tool for Strategic Priority 1, Catalyzing the Sustainability of Protected Area Systems.

Special Issues to be Considered:

1. Review the achievements of the project and assess their effectiveness in solving/mitigating the original conservation problem that was to be addressed;
2. Determine the effect of the project on target groups or institutions (such as the communities of 8 geogs, Schools affiliated under park's nature club, communal sites within the park etc.)
3. Assess the significance of the results achieved for the country and global biodiversity conservation.
4. Determine the degree of support given by the government in integrating the project objectives and goals into the national development programme and other related projects. Also how well the project fits into the latest national development policy;
5. Assess how well the ICDP approach fits with **geog based planning** and the involvement of local stakeholders.
6. The GEF, UNDP and other donors are paying particular attention to risk analysis and management. UNDP has developed a risk management system within ATLAS and guidance on using this system, which is also now incorporated in the annual PIR. The evaluators are requested to determine how effectively the risk management system is being used as an adaptive management tool. Risks may be of a financial, socio-political, institutional, operational, environmental (or other) type.
7. Considering that UNDP is concerned about poverty reduction, local governance and promotion of gender equity, the review will be required to look at these cross cutting issues.
    - Poverty reduction: How has the project contributed to poverty reduction of communities living in and around the park and enhanced sustainable livelihoods?
    - Governance: How has the project facilitated the participation of the local communities in natural resource management and decision making processes?
    - Promotion of gender equity: Has the project considered gender sensitivity or equal participation of man and women and boys and girls in decision making processes?
8. Describe the main lessons that have emerged in terms of:
    - strengthening country ownership;
    - strengthening stakeholder participation;
    - application of adaptive management strategies;
    - efforts to secure sustainability;
    - knowledge transfer; and
    - role of M & E in project implementation and its effectiveness.
9. Capacity Development: Assess the extent to which national project implementers have been adequately trained and enhanced capacity to take over technical and professional responsibilities as envisaged in the project design.

Ratings of Key Review Criteria

In accordance with GEF Guidelines for Terminal Evaluations, the evaluators will provide ratings for the following as indicated broadly below, and further elaborated in the Guidelines, which must be carefully referred to.

1. Rate the relevance, efficiency and effectiveness of different Project Outcomes as:

HS = Highly Satisfactory
S = Satisfactory
MS = Moderately Satisfactory
Moderately Unsatisfactory (MU)
US = Unsatisfactory
HS = Highly Unsatisfactory
2. Rate the sustainability of project outcomes along 4 key dimensions, **Financial Resources, Socio-political, Institutional framework & governance and Environmental** using the following scale:

Likely (L), Moderately Likely (ML), Moderately Unlikely (MU) Unlikely (U)

3. Rate the Project's M&E system as follows:

HS = Highly Satisfactory, S = Satisfactory, MS = Moderately Satisfactory, Moderately Unsatisfactory (MU), US = Unsatisfactory HS = Highly Unsatisfactory

4. PRODUCTS EXPECTED FROM THE EVALUATION

The main products expected from the evaluation are:

- presentation(s) to key stakeholders;
- an interim draft report;
- a final comprehensive terminal evaluation report
- an updated Tracking Tool for Strategic Priority 1

1. The presentation on the conduct of TE and its preliminary findings will have to be made in Thimphu in presence of all the project stakeholders including representatives from WWF, UNDP Regional Center Bangkok and UNDP CO Bhutan.
2. Reporting: The main final output of the evaluation will be an independent and comprehensive Terminal Evaluation report with annexes as needed. The minimum requirements for the content of the final TE report are given below:

   Executive Summary
   a. Brief description of project
   b. Context and purpose of the evaluation
   c. Main conclusions, recommendations and lessons learned

   Introduction
   a. Purpose of evaluation
   b. Key issues addressed
   c. Methodology of the evaluation
   d. Structure of the evaluation

   The project and its development context
   a. Project start and its duration
   b. Problems that the project seek to address
   c. Immediate and development objectives of the project
   d. Planned outputs and sub-outputs
   e. Main stakeholders
   f. Results expected

Findings and Conclusions

1. Project formulation
   - Implementation approach
   - Country ownership/Driveness
   - Stakeholder participation
   - Replication approach
   - Cost-effectiveness
   - UNDP comparative advantage
   - Linkages between project and other interventions within the sector
   - Indicators
   - Management arrangements
2. Implementation
   - Financial planning
   - Monitoring and evaluation
   - Execution and implementation modalities
   - Management by UNDP country office
   - Coordination and operational issues
3. Results
   - Attainment of planned objectives & outcomes
   - Sustainability of impacts (including policy impact and evidence of mainstreaming biodiversity conservation approaches into sustainable development strategies and programmes)
   - Contribution to national capacity development

Recommendations

a. Corrective actions for the design, implementation, monitoring and evaluation of the project
b. Actions to follow up or reinforce initial benefits from the project
c. Proposals for future directions underlining main objectives

Lessons learned

- Best and worst practices in addressing issues relating to relevance, performance and success

Annexes

- TOR
- Itinerary
- List of persons interviewed
- Summary of field visits
- List of documents reviewed
- Questionnaires used and summary of results
- Co-financing and Leverages Resources (see Table 1 attached)

5. EVALUATION TEAM COMPOSITION & RESPONSIBILITIES

The TE mission for Linkpa project will comprise of an international and a local consultant. The international consultant, who will have in depth understanding of UNDP and GEF projects including evaluation experience, will be the team leader and will have the overall responsibility for developing the evaluation methodology, leading the evaluation and delivering the key products expected from the evaluation, including coordinating the inputs from the national consultant. The national consultant will provide supportive roles both in terms of professional back up, translation and conduct of local meetings.

Under the guidance and close consultations with WWF Bhutan Program, UNDP and NCD/TNP, the consultants will be responsible in desk research of existing management plans,

survey/research/evaluation reports and database. Besides, the consultants will consult all the partners and institutions and gather information and opinions on implementation processes like management and coordination; fund release mechanism and project management capacity and see whether each of them has been supportive to the project delivery. They will visit field sites and consult extension agents and communities and directly record issues, benefits and gaps and relate them to the project achievements. Finally, they will compile them into a report highlighting both constraints and opportunities suggesting recommendations and lessons learnt for future directions of both the donor and implementer.

The consultants will sign an agreement with UNDP Bhutan and will be bound by its terms and conditions set in the agreement.

6. METHODOLOGY

The evaluation methodology will be determined by the evaluation team, guided by the requirements of GEF and UNDP as articulated in various guidelines, policies and manuals on the conduct of evaluations for GEF projects as well as key project documents such as the approved GEF project brief, the final UNDP project document, the inception workshop report, the project log-frame and annual budgets and work plans, the annual Project Implementation Review, PSC, PCC and PMU meeting minutes as available, and other technical reports and documents as relevant. A list of key documents is given in Annex 1.

The evaluation methodology should be clearly documented in the final evaluation report including comprehensive details of the following:

- Documents reviewed
- Interviews conducted
- Consultations held with all key stakeholders
- Project sites visited
- Techniques and approaches used for data gathering, verification and analysis

7. CONDUCT OF THE EVALUATION

Under the leadership of the Team Leader, the Evaluation Team will work independently but will liaise closely with UNDP CO, WWF Bhutan Program and TNP/NCD. The evaluation mission will also liaise periodically with the UNDP-GEF Regional Technical Advisor (RTA) at the UNDP Regional Centre in Bangkok to ensure that UNDP-GEF and GEF requirements are being met. The UNDP-GEF RTA will attend the presentations to stakeholders in Thimphu.

The team will visit the project site to ensure adequate consultation with all key stakeholders. Towards the end of the field evaluation, presentation will be made to all key stakeholders in Thimphu. After the presentation the team will take note of verbal and/or written responses to its presentation and consider these in preparing an interim draft evaluation report that will be provided to UNDP CO before the team leaves Bhutan for distribution to stakeholders. UNDP will circulate the draft report to all stakeholders requesting written feedback which should be sent directly to the evaluators within 10 days of receipt of the draft. The TE report including all annexes should be finalized within another 10 days of the deadline for receiving comments on the first draft.
While the evaluation team is free to determine the actual layout of the final evaluation report, this must include the minimum content requirements mentioned earlier. The Team Leader will forward the final report by e-mail to UNDP CO Bhutan and the UNDP-GEF RTA in Bangkok for onward distribution to all stakeholders. The evaluators will be responsible for the contents, quality and veracity of the report.

Annex 2 Schedule for the Terminal Evaluation

Dates	Time	Program	Remarks
17 August 2008	0930–1200	Arrive Thimphu and sort out programs with the national consultant Meet UNDP Programme Officer	Pick-up will be arranged from Paro.
18 August 2008	0930-1000	**Meet with stakeholders in Thimphu:** Call on Dasho Sherub Gyeltshen, Secretary, MoA	**Halt at Thimphu.** WWF to coordinate the meeting.
	1015-1045	Karma Dukpa, Director, Department of Forests.	
	1100-1130	Dr. Sangay Wangchuk, Nature Conservation Specialist/ Head, Nature Conservation Division Meet with UNDP officials	
	1145-1300	Meet with WWF & UNDP officials	
	1600-1400	Consultants prepare for field trip.	
19 Aug. 2008	0900-1730	Travel to Bumthang	Halt at Ura, Bumthang
20 Aug. 2008	0900-1030	Briefing of project activities by project officials	Halt at Ura, Bumthang
	1100-1600		
21 – 26 Aug. 2008		Field work and meetings with beneficiaries, park staff and district stakeholders (4 districts).	**CFO, TNP to prepare detailed program.**
26 Aug 2008		Travel back to Thimphu.	Halt at Thimphu
27 Aug 2008		Meet HE Minister, and other Officials	Thimphu
28 Aug. 2008		Work on the draft report and prepare debriefing of the preliminary results to the stakeholders.	Work in WWF/ UNDP CO
29 Aug. 2008	1430	Presentation of the draft evaluation report to the stakeholders.	MoA Conference hall.
30 Aug. 2008		Compilation of comments from the presentation. Sort out further work programs with national consultant.	
31 Aug 2008		Consultant leaves Bhutan	
1-10 Sept. 2008		Work on the draft report from home.	National consultant input via email.
11 Sept. 2008		Share the first draft with NCD, UNDP, WWF, TNP, UNDP-GEF RTA electronically.	Comments via email

Annex 3: List of Documents Examined for the Evaluation

A Project Document

1 LINKPA Project Document 2003

B UNDP Documents

1 Common Country Programme Action Plan (cCPAP) 2008 - 2012
2 United Nations Development Assistance Framework for the Kingdom of Bhutan 2008-2012
3 Macroeconomics of Poverty Reduction: The Case Study of Bhutan

C Government Documents

1 Bhutan Millennium Development Goals: Needs Assessment and Costing Report (2006-2015) – Planning Commission, Royal Government of Bhutan
2 RGoB (2002), Ninth Five-year Plan 2002-2007. Planning Commission, Royal Government of Bhutan, Thimphu.
3 NSB (2004), Poverty Analysis Report Bhutan 2004. National Statistical Bureau, Royal Government of Bhutan, Thimphu.
4 NSB (2004), Bhutan Living Standards Survey 2003. National Statistical Bureau, RGoB, Thimphu.
5 RGoB (2000), Bhutan 2020: A vision for Peace, Prosperity and Happiness, Royal Government of Bhutan, Thimphu.
6 RGoB (2005), Millennium development Goals Progress Report 2005: Bhutan. Planning Commission, Royal Government of Bhutan, Thimphu
7 RGoB (2005), Population and Housing Census of Bhutan 2005. Office of the Census Commissioner, Royal Government of Bhutan, Thimphu

D UNDP/GEF Guidance Documents

1 GEF Evaluation Office (2007): Guidelines for Implementing and Executing Agencies to Conduct Terminal Evaluations.
2 The Evaluation Policy of UNDP 2006
3 GEF Focal Area Strategy paper 2007
4 GEF Tracking Tools for Strategic Objective 1 and Strategic Objective 2

E Project Monitoring Reports

1 First Assessment Report of LINKPA, 6 to 15 May 2005.
2 Auditor's report on the United Nations Development Programme (UNDP) Assisted Project: LINKPA.
3 Mid-term Evaluation Report (2006)
4 Evaluation Report of ICDP / EEA Programs by Nature Conservation Division (2008)
Project Information Reviews
Audit Reports

F Key Project Outputs

1 Regulatory Framework for the Biological Corridor connecting Thrumshingla National park to Jigme Singye Wangchuck and Royal Manas National Park.
2 Socio-economic Study on Royal Manas National Park, Black Mountain National Park, Jigme Dorji National Park and Thrumshing La National Park.
3 Thrumshingla National Park. 2000. Vegetation Survey Report.
4 Thrumshingla National Park. 2001. Conservation Management Plan, 2002/03 – 2006/07.
5 Study on Grazing, Cattle Migration and Tseri/Pangshing in Thrumshingla National park – 2004.
6 Thrumshingla National Park. 2006. Plants, Mammals and Birds in the Biological Corridor Connecting Thrumshingla National Park to Jigme Singye Wangchuck and Royal Manas National Park. A Rapid Biological Assessment Report.
7 Socio-economic Study of TNP-JSW-RMNP Biological Corridor.

8 Project Fact Sheets for LINKPA.
9 Project Implementation Reports for 2004, 2005 and 2006, 2007.
10 Quarterly Progress Reports.
11 Annual Work and Budget Plans.
12 Budget documents and expenditure reports.
13 Minutes of PSC and project partner meetings.
14 Mammal Assessment Report 2008
15 Avifauna Assessment Report 2008
16 Vegetation Assessment Report 2008
17 Socioeconomic assessment of the park and corridors 2008
18 Conservation Management Plan of TNP 2008
19 Human-Wildlife conflict, resource utilization and ecotourism report of TNP 2008
20 Field Manual on Rapid Biodiversity Assessment and Conservation Information Systems for Conservation in Bhutan 2008.
21 Biological Corridor Rules and Regulations 2007
22 Revised LINKPA Logframe 2006

Annex 4: List of key people met during the evaluation field mission

Focal persons
UNDP: Doley Tshering, Head – Environment, Energy and Disaster Management Unit
email: doley.tshering@undp.org

WWF: Mincha Wangdi, Programme Officer
email: mwangdi@wwfbhutan.org.bt

TNP: Nawang Norbu, Chief Forestry Officer
email: norbu_nawang@yahoo.com

UNDP Regional Centre in Bangkok: Dr Sultana Bashir, UNDP-GEF Regional Technical Advisor (Biodiversity) email: sultana.bashir@undp.org

1. Thimphu
Dasho Sherub Gyeltshen, Secretary, Ministry of Agriculture
Mr. Karma Dukpa, Director Department of Forests
Dr. Sangay Wangchuk, Nature Conservation Specialist, Department of Forests
Mr. Sonam Wangyel Wang, Head, Nature Conservation Division
Mr. Kinzang Namgay, CR, WWF Bhutan Program
Mr. Doley Tshering, Head, Environment Unit, UNDP Bhutan
HE Minister of Agriculture
Secretary Gross National Happiness Commission

2. Thrumshingla National Park
Nawang Norbu, Chief Forest Officer
Jigme Dorji, Assistant Forest Officer, EEA Section
Dorji Wangdi, Forest Ranger, ICDP Section
Rinchen Drakpa, Sr. Forest Ranger, Research & Monitoring Section
Pema Dendup, Sr. Forest Ranger, PoWRU Section
Phintsho, ICDP & Accounts Section
Rinchen Wangchuk, Sr. Forest Ranger, Western Range Office
Jamtsho, Assistant Forest Officer, Central Range, Lingmethang
Pema Rinchen, Sr. Forest Ranger, Eastern Range

3. Bumthang
Governor
Dy Governor
Planning Officer
District Forest Officer (ai)
Farmer's group of livestock farm at Ura
Community beneficiaries of Ura, Tangsibi village
Schools Nature club in Ura, Tangsibi and Chungphel

4. Lhuentse
Dy Governor and Dzongkhag Sector heads

ANNEX 5

The METT or "Monitoring Effectiveness Tracking Tool for Protected Areas
Reporting Progress at Protected Area Sites

Name of protected area	**Thurumsinghala National Park**		
Location of protected area (country and if possible map reference)	BHUTAN (Central Region)		
Date of establishment (distinguish between agreed and gazetted*) or formally established in the case of private protected areas	Agreed 1993	Gazetted 1998	
Ownership details	Royal Government of Bhutan (some people / communities have grazing rights)		
Management Authority	Royal Government of Bhutan through Dept of Forests in Ministry of Agriculture		
Size of protected area (ha)	90,500		
Number of staff	Permanent 35	Temporary	
Budget			
Designations (IUCN category, World Heritage, Ramsar etc)	Category 4		
Reasons for designation	a) Pristine Closed broad leafed forest communities b) Maintain continuity of viable tiger population in Bhutan		
Brief details of World Bank funded project or projects in PA	Not applicable		
Brief details of WWF funded project or projects in PA	Not applicable		
Brief details of **all relevant projects** in PA	GEF UNDP MSP "LinkPA" with WWF Co-Finance		
List the two primary protected area objectives			
Objective 1	To include significant areas of closed broad leaved forest in the Protected Area System, including warm CBLF, Cool CBLF and CBLF – conifer forest transition along an altitudinal gradient of 800 m to 2,500 m		
Objective 2	To give full protection to the forest habitats of tiger (as a flagship species) within the middle altitudinal forests of Bhutan.		
List the top two most important threats to the PA (and indicate reasons why these were chosen)			
Threat 1	Human Wildlife Conflict through crop loss and livestock loss in communities outside the Core Park Area. This conflict (which is rising) could lead to poisoning and increased aggression against PA process.		
Threat 2	Grazing Pressures from migratory and local livestock.		
List top two critical management activities			
Activity 1	Patrolling ensuring that illegal activities are reduced		
Activity 2	Support to communities through awareness and ICD activity		

Date assessment carried out: August 2008

Name/s of assessors: Park Director, WWF Programme Coordinator, UNDP GEF Project Programme Coordinator, TE

Issue	Criteria	Score 2003	Score 2008	Comments and Next Steps
1. Legal status Does the protected area have legal status? *Context*				
	The protected area has been legally gazetted (or in the case of private reserves is owned by a trust or similar)	3	3	
2. Protected area regulations Are inappropriate land uses and activities (e.g. poaching) controlled? *Context*	There are no mechanisms for controlling inappropriate land use and activities in the protected area			Present Forest Act is under Revision with chapter on PA provisions New Land Act has implications for Grazing regulations.
	Mechanisms for controlling inappropriate land use and activities in the protected area exist but there are major problems in implementing them effectively	1		
	Mechanisms for controlling inappropriate land use and activities in the protected area exist but there are some problems in effectively implementing them		2	
	Mechanisms for controlling inappropriate land use and activities in the protected area exist and are being effectively implemented			
3. Law enforcement Can staff enforce protected area rules well enough? *Context*	The staff have no effective capacity / resources to enforce protected area legislation and regulations			LINKPA project has supported capacity, it is expected that this will remain after project closure. Large area of step terrain means more protection can always be created.
	There are major deficiencies in staff capacity / resources to enforce protected area legislation and regulations (e.g. lack of skills, no patrol budget)	1		
	The staff have acceptable capacity/resources to enforce protected area legislation and regulations but some deficiencies remain		2	
	The staff have excellent capacity/resources to enforce protected area legislation and regulations			
4. Protected area objectives Have objectives been agreed? *Planning*	No firm objectives have been agreed for the protected area			Objectives still being fine tuned – such as zonation and the presence of grazing leases and potential new roads.
	The protected area has agreed objectives, but is not managed according to these objectives	1		
	The protected area has agreed objectives, but these are only partially implemented		2.5	
	The protected area has agreed objectives and is managed to meet these objectives			
5. Protected area design Does the protected area need enlarging, corridors etc to meet its objectives? *Planning*	Inadequacies in design mean achieving the protected areas major management objectives of the protected area is impossible			Connectivity between PAs coming through corridors Associated forests outside the PA are under PA control
	Inadequacies in design mean that achievement of major objectives are constrained to some extent			
	Design is not significantly constraining achievement of major objectives, but could be improved	2	2.5	
	Reserve design features are particularly aiding achievement of major objectives of the protected area			
6. Protected area boundary demarcation Is the boundary known and demarcated? *Context*	The boundary of the protected area is not known by the management authority or local residents/ neighbouring land users			Needed clarification on national policy. PA boundary follows rivers and ridges, use of piillas will be hugely expensive. ,
	The boundary of the protected area is known by the management authority but is not known by local residents / neighbouring land users			
	The boundary of the protected area is known by both the management authority and local residents but is not appropriately demarcated	2	2	
	The boundary of the protected area is known by the management authority and local residents and is appropriately demarcated			
7. Management plan Is there a management plan and is it being implemented? *Planning*	There is no management plan for the protected area			A new Management Plan is under development (2009 – 2013)
	A management plan is being prepared or has been prepared but is not being implemented	1		
	An approved management plan exists but it is only being partially implemented because of funding constraints or other problems		2	
	An approved management plan exists and is being implemented			

Issue	Criteria	Score 2003	Score 2008	Comments and Next Steps
Additional points	The planning process allows adequate opportunity for key stakeholders to influence the management plan	+1	+1	Strong participatory process exists
	There is an established schedule and process for periodic review and updating of the management plan	+1	+1	Plans should be updated every 5 years
Planning	The results of monitoring, research and evaluation are routinely incorporated into planning	-	+1	PA has M and E cell
8. Regular work plan Is there an annual work plan?	No regular work plan exists			Regular Work Plan exists, it is hoped that ending of GEF WWF project does not reduce funding so that work is disrupted.
	A regular work plan exists but activities are not monitored against the plan's targets			
	A regular work plan exists and actions are monitored against the plan's targets, but many activities are not completed	2	2.5	
Planning/Outputs	A regular work plan exists, actions are monitored against the plan's targets and most or all prescribed activities are completed			
9. Resource inventory Do you have enough information to manage the area?	There is little or no information available on the critical habitats, species and cultural values of the protected area			Survey capacity increases, with adaptive management feedback
	Information on the critical habitats, species and cultural values of the protected area is not sufficient to support planning and decision making			
	Information on the critical habitats, species and cultural values of the protected area is sufficient for key areas of planning/decision making but the necessary survey work is not being maintained	2	2.5	
Context	Information concerning on the critical habitats, species and cultural values of the protected area is sufficient to support planning and decision making and is being maintained			
10. Research Is there a programme of management-orientated survey and research work?	There is no survey or research work taking place in the protected area			
	There is some *ad hoc* survey and research work			
	There is considerable survey and research work but it is not directed towards the needs of protected area management	2	2.5	
Inputs	There is a comprehensive, integrated programme of survey and research work, which is relevant to management needs			
11. Resource management Is the protected area adequately managed (e.g. for fire, invasive species, poaching)? *Process*	Requirements for active management of critical ecosystems, species and cultural values have not been assessed			Much improvement since 2003, but more inputs needed
	Requirements for active management of critical ecosystems, species and cultural values are known but are not being addressed	1.5		
	Requirements for active management of critical ecosystems, species and cultural values are only being partially addressed		2.5	
	Requirements for active management of critical ecosystems, species and cultural values are being substantially or fully addressed			
12. Staff numbers Are there enough people employed to manage the protected area? *Inputs*	There are no staff			Staff numbers are close to optimum, as pressures build up (possible new roads, eco-tourism etc) more specialist staff will be needed.
	Staff numbers are inadequate for critical management activities			
	Staff numbers are below optimum level for critical management activities	2	2.5	
	Staff numbers are adequate for the management needs of the site			
13. Personnel management Are the staff managed well enough?	Problems with personnel management constrain the achievement of major management objectives			Good
	Problems with personnel management partially constrain the achievement of major management objectives			
	Personnel management is adequate to the achievement of major management objectives but could be improved	2		

Issue	Criteria	Score 2003	Score 2008	Comments and Next Steps
Process	Personnel management is excellent and aids the achievement major management objectives		3	
14. Staff training Is there enough training for staff? *Inputs/Process*	Staff are untrained			The GEF WWF project has produced increased skills, however staff posting transfer process meansuch inputs are ALWAYS needed, with more emphasis on Training of Trainers in country.
	Staff training and skills are low relative to the needs of the protected area	1		
	Staff training and skills are adequate, but could be further improved to fully achieve the objectives of management		2	
	Staff training and skills are in tune with the management needs of the protected area, and with anticipated future needs			
15. Current budget Is the current budget sufficient? *Inputs*	There is no budget for the protected area			Concern with development budget after project ends
	The available budget is inadequate for basic management needs and presents a serious constraint to the capacity to manage	1		
	The available budget is acceptable, but could be further improved to fully achieve effective management		2	
	The available budget is sufficient and meets the full management needs of the protected area			
16. Security of budget Is the budget secure? *Inputs*	There is no secure budget for the protected area and management is wholly reliant on outside or year by year funding			OK
	There is very little secure budget and the protected area could not function adequately without outside funding			
	There is a reasonably secure core budget for the protected area but many innovations and initiatives are reliant on outside funding	2	2	
	There is a secure budget for the protected area and its management needs on a multi-year cycle			
17. Management of budget Is the budget managed to meet critical management needs? *Process*	Budget management is poor and significantly undermines effectiveness			Good new Computerised controls and planning of cot centres.
	Budget management is poor and constrains effectiveness			
	Budget management is adequate but could be improved	2		
	Budget management is excellent and aids effectiveness		3	
18. Equipment Is equipment adequately maintained? *Process*	There is little or no equipment and facilities			Adequate
	There is some equipment and facilities but these are wholly inadequate	1		
	There is equipment and facilities, but still some major gaps that constrain management		2	
	There is adequate equipment and facilities			
19. Maintenance of equipment Is equipment adequately maintained? *Process*	There is little or no maintenance of equipment and facilities			Maintenance has always been good.
	There is some *ad hoc* maintenance of equipment and facilities			
	There is maintenance of equipment and facilities, but there are some important gaps in maintenance			
	Equipment and facilities are well maintained	3	3	
20. Education and awareness programme Is there a planned	There is no education and awareness programme			Project introduced GOOD E and E programme
	There is a limited and *ad hoc* education and awareness programme, but no overall planning for this	1		

Issue	Criteria	Score 2003	Score 2008	Comments and Next Steps
education programme? *Process*	There is a planned education and awareness programme but there are still serious gaps			
	There is a planned and effective education and awareness programme fully linked to the objectives and needs of the protected area		3	
21. State and commercial neighbours Is there co-operation with adjacent land users? *Process*	There is no contact between managers and neighbouring official or corporate land users			PA manager also manages adjacent forest in cooperation with territorial Forest Officers
	There is limited contact between managers and neighbouring official or corporate land users	1		
	There is regular contact between managers and neighbouring official or corporate land users, but only limited co-operation			
	There is regular contact between managers and neighbouring official or corporate land users, and substantial co-operation on management		3	
22. Indigenous people Do indigenous and traditional peoples resident or regularly using the PA have input to management decisions? *Process*	Indigenous and traditional peoples have no input into decisions relating to the management of the protected area			NOT APPLICABLE
	Indigenous and traditional peoples have some input into discussions relating to management but no direct involvement in the resulting decisions			
	Indigenous and traditional peoples directly contribute to some decisions relating to management			
	Indigenous and traditional peoples directly participate in making decisions relating to management			
23. Local communities Do local communities resident or near the protected area have input to management decisions? *Process*	Local communities have no input into decisions relating to the management of the protected area			Community relations are GOOD – BUT the ever present Human Wildlife Conflict is a recurring threat
	Local communities have some input into discussions relating to management but no direct involvement in the resulting decisions			
	Local communities directly contribute to some decisions relating to management	2		
	Local communities directly participate in making decisions relating to management		3	
Additional points Additional points *Outputs*	There is open communication and trust between local stakeholders and protected area managers	0	+1	
	Programmes to enhance local community welfare, while conserving protected area resources, are being implemented	0	+1	
24. Visitor facilities Are visitor facilities (for tourists, pilgrims etc) good enough? *Outputs*	There are no visitor facilities and services			Still few visitors but expected to sise!
	Visitor facilities and services are inappropriate for current levels of visitation or are under construction	1		
	Visitor facilities and services are adequate for current levels of visitation but could be improved		2	
	Visitor facilities and services are excellent for current levels of visitation			
25. Commercial tourism Do commercial tour operators contribute to protected area management? *Process*	There is little or no contact between managers and tourism operators using the protected area	0		Eco-Tourism Framework coming in place
	There is contact between managers and tourism operators but this is largely confined to administrative or regulatory matters			
	There is limited co-operation between managers and tourism operators to enhance visitor experiences and maintain protected area values		2	
	There is excellent co-operation between managers and tourism operators to enhance visitor experiences, protect values and resolve conflicts			
26. Fees If fees (tourism, fines) are applied, do they help protected area	Although fees are theoretically applied, they are not collected			Few visitors means few fees
	The fee is collected, but it goes straight to central government and is not returned to the protected area or its environs	1	1	
	The fee is collected, but is disbursed to the local authority rather than the protected area			

Issue	Criteria	Score 2003	Score 2008	Comments and Next Steps
management? *Outputs*	There is a fee for visiting the protected area that helps to support this and/or other protected areas			
27. Condition assessment Is the protected area being managed consistent to its objectives? *Outcomes*	Important biodiversity, ecological and cultural values are being severely degraded			Values are predominantly intact!
	Some biodiversity, ecological and cultural values are being severely degraded			
	Some biodiversity, ecological and cultural values are being partially degraded but the most important values have not been significantly impacted	2		
	Biodiversity, ecological and cultural values are predominantly intact		3	
Additional points *Outputs*	There are active programmes for restoration of degraded areas within the protected area and/or the protected area buffer zone	0	0	Mot an issue natural regeneration can cope with landslides on steep slopes.
28. Access assessment Are the available management mechanisms working to control access or use? *Outcomes*	Protection systems (patrols, permits etc) are ineffective in controlling access or use of the reserve in accordance with designated objectives			Controls in place
	Protection systems are only partially effective in controlling access or use of the reserve in accordance with designated objectives			
	Protection systems are moderately effective in controlling access or use of the reserve in accordance with designated objectives	2	2.5	
	Protection systems are largely or wholly effective in controlling access or use of the reserve in accordance with designated objectives			
29. Economic benefit assessment Is the protected area providing economic benefits to local communities? *Outcomes*	The existence of the protected area has reduced the options for economic development of the local communities			Changing land act has implications
	The existence of the protected area has neither damaged nor benefited the local economy	1		
	There is some flow of economic benefits to local communities from the existence of the protected area but this is of minor significance to the regional economy		2	
	There is a significant or major flow of economic benefits to local communities from activities in and around the protected area (e.g. employment of locals, locally operated commercial tours etc)			
30. Monitoring and evaluation *Planning/Process*	There is no monitoring and evaluation in the protected area			Much increased M and E process.
	There is some *ad hoc* monitoring and evaluation, but no overall strategy and/or no regular collection of results	1		
	There is an agreed and implemented monitoring and evaluation system but results are not systematically used for management		2.5	
	A good monitoring and evaluation system exists, is well implemented and used in adaptive management			
TOTAL SCORE		**44.5**	**74.5**	**(A significant improvement)**