

FINAL REPORT

Terminal Review

Integrated Management of Jigme Dorji National Park

(1997-2003)

BHU/96/G33 (GEF) and BHU/96/008 (UNDP)

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And

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Throughout the centuries the Bhutanese have treasured their natural environment and have looked upon it as the source of all life. This traditional reference for nature has delivered us into the twentieth century which our environment still richly intact. We wish to continue living in harmony with nature and to pass on this rich heritage to our future generations.

His Majesty King Jigme Singye Wangchuck, 1996

FORWARD

From our observations during only a few short weeks in Bhutan it is abundantly clear that the commitment of the Royal Government of Bhutan to biodiversity conservation is of the highest order. It is not merely a “paper park” commitment – it exists on the ground throughout the country and it is being implemented by committed staff throughout the protected areas system.

In their own words the Biodiversity Action Plan (2003) outlines an exceptionally comprehensive action plan – which is a “gift to the world”. Setting aside nearly 30% of the land and natural resources of the country to protect plant and animal species exceeds the level of any comparable area on earth – including a major portion of the eastern Himalayas, a global “hotspot” of biodiversity. Jigme Dorji National Park is

a 4300sq.km jewel in the crown of the national park system – and it is designed to mediate a relationship among its human population, international visitors and the natural world. With global assistance from the GEF this mediation has had the opportunity to grow into a successful world-class conservation good-news story.

Through the offices of UNDP and others much of the world has come to know of the Bhutanese concept of “Gross National Happiness” – in effect, an important expansion of the Human Development Index and an extraordinary improvement over conventional economic indicators. This concept is clearly also at the basis of the consensus among park managers, civil administrators and local leaders to decentralize decision –making, provide new alternative livelihoods, to reduce poverty and to improve levels of education, literacy and health care. These in turn are core activities in the ongoing effort to reduce the stress that the human population places on the biodiversity of the Himalayas. Success at one effort leads to a fundamentally more equitable Bhutanese society that continues in greater harmony with nature – a fundamental tenet.

It has been a fundamental pleasure and blessing for the consultants to have been able to contribute to the search for this balance.

Stephan Fuller
Thimpu, Bhutan
September, 2003

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Nim Dorji
Thimphu Bhutan

ACRONYMS and BHUTANESE WORDS

BDFC	Bhutan Development Finance Corporation
BTF	Bhutan Trust Fund
CBNRM	Community Based Natural Resources Management
DFS	Department of Forests Services
DYT	Dzongkhag Yargay Tshogchung
EU	European Union
FAO	Food and Agriculture Organization
FYP	Five Year Plan
GEF	Global Environment Facility
GPS	Global Positioning System
GYT	Geog Yargay Tshogchung
ICDP	Integrated Conservation and Development Programme
ICIMOD	International Centre for Mountain Development Programme
IHDP	Integrated Horticultural Development Programme
JDNP	Jigme Dorji National Park
MoA	Ministry of Agriculture
MTI	Ministry of Trade and Industry
MTR	Mid-Term Review
NCD	Nature Conservation Division
NITM	National Institute of Traditional Medicines
NRTI	Natural Resources Training Institute
NU	Ngultrum
PAC	Project Advisory Committee
PAG	Project Advisory Group
PLA	Participatory Learning and Action
PPD	Policy and Planning Division
PRA	Participatory Rural Appraisal
REMO	Research and Monitoring
RGOB	Royal Government of Bhutan
RNR RC	Renewable Natural Resources Research Centre
RNR	Renewable Natural Resource
RRA	Rapid Rural Appraisal
RSPN	Royal Society for Protection of Nature
SDS	Sustainable Development Support
TPR	Tripartite Review
TRAC	UNDP Country Programme Fund
UNDP	United Nation Development Programme

Bhutanese Words

Chhimi	Elected peoples representative to the national assembly
Dungpa	Sub-divisional Administrator
Dzongdag	District Commissioner
Dzongrab	Assistant Dzongdag
Dzongkha	National language of Bhutan
Dzongkhag	District
Geog	Block

Gup	Elected head of block
Mang Ap	Village headman
Risup	Community Forest Guard

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Executive Summary

The landscapes of Bhutan are an internationally recognized biodiversity “hotspot” of considerable global significance. As such, Bhutan qualified for important investments by the Global Environment Facility (GEF) and the project in Jigme Dorji National Park was one of the early GEF initiatives in the Himalayas. The project was facilitated by UNDP which also invested additional funds in recognition of the human development objectives which were complementary to the biodiversity conservation programming.

This evaluation has determined that the GEF and UNDP investments were utilized largely as the project was originally designed. Component 1 was successfully implemented, while Component 2 was less successful. The mid-term review resulted in some adjustments to the original design and the project was extended for an additional year to allow some of the funds from Component 2 to be used for the successful element of Component 1. The reasons for the programming changes and deferments were all properly explained and justified and have been included in Section 3 of this report. Therefore it is concluded that the GEF project objectives, as amended were successfully achieved in this work.

Overall Conclusions

- **Component 1 was successfully implemented in most cases, while Component 2 was less successfully implemented – and the reasons for the latter are legitimate and well explained. Many lessons may be learned for future projects from these experiences.**
- **The rugged field conditions and logistical difficulties in the eastern Himalayas could not be fully anticipated during the GEF Project design phase. The short field seasons, the need to divert staff to anti-poaching patrols and the involvement of the staff in infrastructure projects also contributed to the delays in some aspects of Component 2.**
- **Staffing and training limitations continued to limit the ability of JDNP to implement all of the originally proposed GEF and UNDP Project activities. This caused by a lack of suitable recruits, difficult working conditions and more recently by a staffing limitation from central government. There will need to be strategic additions to the staff complement at JDNP in future.**
- **The original GEF Project was ambitiously conceived, specifically with respect to Component 2 and not all was achieved. The formulation team hoped to be able to be progressive as possible in investigating people-park interactions – which remain as admirable goals that will take more time to fully implement.**
- **The Mid-Term Review in 2000 did not completely acknowledge nor adjust for the emerging difficulties, however the subsequent adaptation of the project priorities from 2001-2003 (including the year-long extension) were appropriate. The flexibility has been excellent.**
- **The concentration of JDNP on the completion of infrastructure, completion of ICDPs, building the REMO programme and staff training and upgrading is an appropriate focusing of effort which would be appropriate to continue into Phase II, with a slow increase in activities as staffing, resources and partnerships permit.**
- **A strategic plan for the next 5-year period is essential.**

It should be emphasized that UNDP and the Royal Government of Bhutan (in particular the Nature Conservation Division of the Ministry of Agriculture) demonstrated considerable (and appropriate) administrative flexibility throughout the completion of this project. In

instances when a specific task could not be completed as originally conceived the activity was often modified to meet temporal and physical realities. Additional activities were also added from time to time using resources from outside sources to complement the original project objectives.

As an additional result it is clear that the project has demonstrated significant benefits to the target human populations within the protected areas (in addition to the overall biodiversity conservation objectives). The trail construction activity in particular has dramatically improved the quality of human life. Additional projects such as the construction of livestock, forestry and agricultural extension activities (along with experimental vegetable and medicinal plant demonstrations), and the construction of community schools have contributed extra benefits.

The broader objectives of the UNDP were appropriately advanced by the project. The JDNP project has successfully implemented a variety of social development projects, such as the provision of basic services in remote villages. These activities are directly in line with UNDP objectives related to sustainable livelihoods, poverty reduction and economic development, as well as the advancement of good governance. In doing so, the park activities that serve to help people then directly reduce the human population stress on the natural environment.

The question remains however – “Have the GEF and UNDP interventions achieved the longer term biodiversity conservation objectives that are the basis for the Convention on Biological Diversity and the GEF?”

Well, in reality we do not yet know the answer to this question! The first phase of JDNP has indeed made significant progress towards the establishment of a well-functioning National Park. And Bhutan has an admirable road map in place for conserving its overall biological legacy of which JDNP is a pilot project and significant overall element. However the status and population dynamics and trends of many of the keystone species that JDNP protects is not yet well understood. This understanding may take many more years to achieve!

What we do know is that the overall forest cover of Bhutan is increasing, that natural habitats are fully protected in well over 30% of the country (and probably more) and that vast areas of parks such as JDNP are almost unaltered by human activity. Thus it is very likely that the biodiversity values remain essentially intact.

Clearly there is both the time and commitment to continue the complex work of measuring the success of biodiversity conservation programming in Bhutan.

**Stephan Fuller/Nim Dorji
Thimphu, Bhutan
September 2003**

1.0 Introduction

1.1 Purpose of the Evaluation

Jigme Dorji National Park (JDNP) is the largest of the nine protected areas which all-together occupy 26% of the country's land area. JDNP is also the most important protected area in the country and stand out prominently within one of the world's ten global biodiversity "hotspots," the Eastern Himalaya mountains. In 1974, the park was gazetted as the Jigme Dorji Wildlife Sanctuary and occupies the north-western part of Bhutan extending over an area of 4,349 sq. km. In 1993, it was then upgraded to Jigme Dorji National Park. The Park became operational in 1995 with initial funds made available from the Bhutan Trust Fund for Environmental Conservation (BTF).

Jigme Dorji Wangchuk Park is biologically one of the richest protected areas on the sub-continent. With altitudes ranging from 1400 m to over 7000 m, the Park contains eight of the eleven classified vegetation types found in Bhutan. It range from riverine vegetation, temperate broadleaf forest along the steep gorges to temperate evergreen forest, pine forests, mixed conifer forests, sub-alpine grasslands, alpine meadows and glaciated ice, rock and scree found in the higher elevations. It provide habitats for diverse and a striking array of flora and fauna, several of which have commercial, medicinal, traditional and genetic significance. It host at least 31 species of mammals, more than 300 bird species, and 1434 plant species, including number of endangered species.

The Park is also a home to an estimated 6500 people who live out of semi-nomadic yak herding, raising of other livestock, agriculture, harvesting of wild medicinal and incense plants, use of forests products, and barter trade. With the recent increase in traffic comprised mainly of tourists and visitors to Tsachu (estimated in the range of 3000-4000 a year, the inhabitants have begun earning cash money through hiring of their horses, mules, yaks for portering services.

The Integrated Jigme Dorji National Park Project was initially planned for implementation over a period of five years with financial support received from the Royal Government of Bhutan, the Global Environment Facility (GEF), and the United Nations Development Programme (UNDP). The project was signed in August 1997 and operationalized in September 1997 through October 2003 including one year extension. The total project support was Nu. 87.5 million (US\$2.50 million) of which Nu.52.5 million (US\$1.5 million) came from GEF; Nu.21.million (US\$0.270 m) came from UNDP country programme (TRAC) funds and Nu. 14 million (US\$0.38 m from RGOB. The implementation period corresponded with the RGOB's Eighth Five Year Development cycle but the one year extension spilled over into the first year of the Ninth Five Year Plan.

- **Mid-term Evaluation, Logical Framework Analysis and Project Reports**

An independent external mid-term evaluation was carried out on the project between March and April 2000. The team comprised of Stephen Fuller, Evaluation Specialist (Team Leader) through UNDP and Nim Dorji, national consultant specialized in RNR activities. Together, they made an extensive tour of the Jigme Dorji National Park. Their findings and recommendations have been reported in a 30-page report titled "Mid-term Review – Integrated Management of Jigme Dorji National Park".

The Mid-Term Evaluation was a key document and benchmark for this review and in the interests of brevity much of its detailed review of events from 1997 – 2000 is not repeated here.

Following the mid-term review a revised Logical Framework Analysis was prepared which became the guiding project management tool for the final 2 years of the project and the organizing tool for the subsequent quarterly and annual reporting. The findings and results of this evaluation structured around this – and outlined in Section 3 below.

- **Terminal Evaluation of JDNP**

It has been mandatory for all UNDP/GEF supported projects with long term implementation periods to undertake terminal evaluations three months before the project is terminated. The objectives are to measure outcomes, demonstrate effectiveness and relevance of interventions and strategies. TE is also expected to document lessons learned, assess impact and recommend interventions for the future.

With the JDNP project phase 1 drawing to a close by October 2003, an independent external Terminal Evaluation has been arranged to take place between 19 August to 12 September 2003. The Terminal Evaluation Mission consisted of two independent consultants Stephan Fuller (Team Leader) from the International Mountains Consultancy based in Canada and Nim Dorji from Sengey Karm Consultancy Services, Thimphu.

Stephan Fuller arrived on 19 August 2003 with one day delay due to flight disruptions from Kathmandu. Soon on his arrival in Thimphu, both the members met Mrs. Seeta Giri at UNDP to receive briefing on the programmes ahead. The team along with JDNP staff met the Joint Director of the Nature Conservation Division followed by meetings with the Resident Representative along with other officials at UNDP office.

On 20 August, with postponement of several meetings on that day, the team met Dasho Dzongdag, Thimphu only. The following day, the team was able to meet the Honourable Secretary, Ministry of Agriculture for discussion, Director, Department of Forests Services.

On 22 August, the team along with the JDNP staff left for Damji and continued its journey till return to Thimphu on 4 September. During the trip, the team visited the JDNP headquarter at Damji for fruitful discussion with all the Park Wardens in the presence of the Park Manager. On the way up to Laya, the team visited the Park Warden Post at Gasa and visited the Dzong for an interesting discussion with Dasho Dzongdag. In Laya, the team visited the Park Warden Post where series of discussions were held. The first meeting was held with the staff of the Warden post, 3 RNR Extension staff and the Assistant Head Teacher of Laya Community School. On the following day halt in Laya, the team met separately with the Gup, the Tshogpa and five others from the community. The afternoon was spent visiting a community grazing land located above Laya community.

On the way back to Thimphu, the team visited the Damji Community School and the Goen Shari Community school, both supported by JDNP.

Following the return to Thimphu several additional meetings were held. A debriefing took place at UNDP and on Wednesday, September 4 a presentation was made to the Project Steering Committee. A draft report was then circulated and comments received. Final editing occurred at Stephan Fuller's office in Canada.

1.2 Methodology

The methodology was simple and straightforward and included 4 components

- Document review
- Formal Interviews with project staff
- Extended field visits to project site over a 13 day period
- Informal interview with project beneficiaries in the field
- Continuous informal dialogue with project staff

The formal interview process was undertaken in a round table setting over a 2 day period at the Park Headquarters in Damji, a day with the Dzongkhag staff in Gasa and during 2 days of meetings in Laya. In essence these meetings included a detailed and iterative review of every activity in the Logical Framework Analysis that was constructed following the Mid Term Review in 2000. This resulted in the material that comprises Chapter 3 (Results). This was followed by a less formal Issues Analysis that formed the basis for a series of informal “trailside” discussions. These led in turn to the material that comprises Chapter 4 (Recommendations). Detailed written notes of each meeting and discussions were kept and then collated and re-analyzed upon the return to Thimphu. Fact checking and additional document review also occurred.

The recommendations contained in this report were revised following the Project Steering Committee workshop on Sept 4th, 2003 and additional meetings with UNDP and NCD.

The report format itself was prescribed in the Terms of Reference.

2.0 The Project and the Development Context

JDNP is one of three priority protected areas being strengthened. Two major documents – the Nature Conservation Action Plan and the Eighth Five Year Development Plan (July 1997-02) served instrumental in the implementation of protected area systems and their management.

The Forests and Nature Conservation Act 1995 creates a legal framework for the establishment and management of protected areas including social forestry and species conservation. The Act provided foundation for the implementation of community social forestry programmes within JDNP. The new regulations were promulgated in 2003.

The Forestry Master Plan (1991) provides an overall background for a general programme framework for the management of national parks and protected areas. Sustainable forests harvest, the community forestry programme and non-wood forests products were other important component of the Master Plan. The Forestry Policy Strategy document, an equally important document placed high importance in the proper conservation and sustainable use of Bhutan’s rich bio-diversity.

The Royal Government developed its own strategies for the protected areas within the context of the Convention on Biological Diversity and the Biodiversity Action Plan II (2002) that stress the need to improve the management of protected areas. The Royal Government adopted a concept of integrated conservation and development in the park. Accordingly, community development plans were developed within the Park in line with the RGOB’s overall decentralization policies and strategies to achieve balanced development. It aligned well with the GEF priorities for bio-diversity conservation, and the UNDP’s priorities in Bhutan, which focus on sustainable livelihoods, governance, and environmental conservation. Thus UNDP and GEF provided the necessary financial and technical supports.

The Project Concept and Design

In 1996, the Nature Conservation Section with assistance from the World Wildlife Fund (WWF) prepared a five-year Conservation Management Plan for Jigme Dorji National Park. Details were collected through ecological and social studies carried prior to the plan preparation. Then there was the management plan workshop in April 1996 involving representatives of the 13 geogs. The plan, which then incorporated the ideas of the four Dzongkhags into the ICDP plan received approval from the Royal Government in February in 1997. The National Environment Commission, which has the mandate for protection of the environment in general took the responsibility for monitoring of the protected areas, to ensure compliance with environmental guidelines and approved management plan.

Subsequently, the project document was prepared and submitted to UNDP and GEF for funding. GEF support was requested for a one-time full-scale intervention to prevent further degradation and loss of biodiversity. The project was signed in August 1997.

With US \$1.5 million commitment from GEF and another US \$0.270 million from UNDP country programme (TRAC fund), the project became operational. RGOB contribution was in kind which amounted to US \$0.380 million to cover cost of local staff salaries and other recurrent maintenance costs. The project became operational in September 1997.

The JDNP overall long-term development objective is:

“To promote the conservation of the major eco-systems and their biodiversity with the involvement of the local communities. This will ensure that their livelihoods are further enhanced through proper management and sustainable utilization of the natural resources existing in the Park area.”

The project comprised of two components with following immediate objectives:

The objective of component 1 is:

Fully established Jigme Dorji National Park as an operational, “on the ground” entity”.

The achievement of the objective by end of the project period was expected to result in the following outcomes:

- i) Fully staffed Park administration and management structure
- ii) All Park staff including geog partners trained in park management, monitoring, empowerment, enforcement, and survey methodologies;
- iii) Park management strengthened by demarcating Park boundaries where necessary, demarcate designated “use” zones within the Park, and strengthening Park infrastructure;
- iv) Community Based Natural Resources Management Plans (CBNRMPs) for 9 geogs and 1 community within the Park developed;
- v) Tourism Management Programme developed with attendant guidelines to enable sustainable tourism in the Park;
- vi) Developed baseline data on natural resources and land use information on which to base management decision.

With the Geog-level Community Natural Resources Management Plans developed, Component 2 was planned to take off with the following objective:

Development and implementation of sustainable economic activities based on an integrated conservation and development approach in JDNP.

The achievement of objectives under component 2 envisaged the following results to be accomplished:

- i) Sustainable livestock herding and natural resources use promoted;
- ii) Local communities empowered to develop and implement alternative income generating activities;
- iii) Sustainable forests management and alternative energy sources promoted;
- iv) Awareness raised among local population regarding biodiversity significance and sustainable development methodologies.

The project design, thus, has major elements of protected area management. The key elements are:

- Park Management;

- Biodiversity conservation;
- Community development; and
- Eco-tourism management.

Other elements such as training, research and monitoring supported the above key elements and cuts through all.

The project supported most of the elements in the Conservation Management Plans and implemented by the JDNP staff. The project design incorporated elements of a project logical framework (which has been added later), an indicative work programme, a detailed listing of inputs and detailed budget. Further, the project document also incorporated an incremental cost analysis, justifying GEF funding for global environmental benefits to be accrued in addition to the sustainable national baseline situation and local benefits. While GEF primarily supported activities under Component 1, UNDP TRAC covered funds required under Component 2.

It is important to emphasize that the GEF project was designed to be congruent with the agency objectives and longer-term human development objectives of UNDP. The JDNP is an IUCN Category V protected area – meaning that it integrates human population and the productive landscape with the conservation objectives of the natural landscape. In planning a JDNP management regime which places somewhat equal value on the social development objectives alongside the more conventional prescriptions for protection of the natural world, the UNDP objectives are being advanced. In essence, measures which reduce human poverty also serve to reduce the population pressures and stresses placed on the natural world. There is no contradiction.

The project design considered RGOB's absorptive capacity, and placed emphasis on capacity building to be able to implement the activities envisaged in the management plan. Had there been project logical framework prepared at the beginning, it would have made the project design stronger.

The Mid-term Review Mission restructured the existing project elements according to the current GEF Project Planning Matrix and an LFA was developed in 2000 (Annex 2). The LFA was used as the principal evaluation framework for this Terminal Evaluation.

3.0 Findings and Conclusions

The initial portion of the evaluation of the GEF Project addresses a prescribed list of topics which are monitored worldwide by the GEF Secretariat. These include the following:

Project Formulation Assessment

- Implementation Approach
- Country Ownership
- Stakeholder Participation
- Replication Process
- Cost-Effectiveness
- UNDP Comparative Advantage
- Linkages between the project and other interventions in the sector
- Indicators
- Management Arrangements

Project Implementation Assessment

- Financial Planning

- Monitoring and Evaluation
- Execution and Implementation Modalities
- Management by UNDP Country Offices
- Coordination and Operation Issues

Project Results Assessment

- Attainment of Objectives
- Project Sustainability
- Contribution to the Upgrading of the National Staff

In each of these sections a nominal evaluation grade of Poor-Fair-Good-Excellent is provided. But in comparative terms the grade is entirely qualitative and is provided for indicative purposes only. If it is based on quantitative data this is described. However the narrative that accompanies the assessment is far more important as it will indicate the reasons, if known, for any problems that arose during project implementation.

3.1 Project Formulation

- **Implementation Approach - GOOD**

The implementation approach has been good. The Nature Conservation Division under the Department of Forests, MoA has its headquarter in Thimphu is the executing body for all parks and sanctuaries in the country. JDNP received its financial support from the Global Environmental Facility and the UNDP Country Programme (TRAC) channeled through the Ministry of Finance to the Project.

While the project emphasized strengthening staff capability in planning and reporting systems, 2 UN volunteers and a Eco-tourism consultant were deployed to backstop the project management.

Besides the project uses other mechanisms to facilitate its administration through:

- monthly warden meetings
- periodic Project Advisory Group meetings
- annual Project Advisory Committee meetings
- Annual Tripartite Review Meeting
- Mid-term evaluation
- Terminal Evaluation of the project

Field implementation was little slow initially because of the emphasis given to strengthening staff capacity and staff build-up. Besides, the limited staff have been frequently kept busy attending to official visitors, attending regular park meetings and submission of reports. Despite all these, field implementation gradually picked up its momentum over the time.

In August 1999, financial powers were brought to the JDNP headquarter making the finance more accessible and transparent. UNDP also issued a directive along with guidelines to prepare detail financial reporting workplan and made it mandatory since early 2000. Further the JDNP finance has also been subjected to annual auditing for updates.

- **Country Ownership - GOOD**

The Royal Government of Bhutan has its full ownership of the JDNP project. First it has been nationally executed through the NCD with its Park Headquarter based in Damji. Secondly, the RGOB continues to pay all its staff salaries, allowances and other recurrent expenditures although the GEF and the UNDP country programme (TRAC) provided for the capital investment.

JDNP's integrated conservation programme is participatory where park residents contributed to its conservation and development plans (ICDP). Therefore, there is already a sense of responsibility and ownership over the conservation and developmental activities.

- **Stakeholder Participation - FAIR**

Stakeholder participation has been fair and holds considerable potential for greater public participation in conservation activities. However there is a perception that the slow pace of activities could cause some frustration at the Geog level.

Although slow initially, the JDNP park has been successful in developing all 10 ICDP plans through participation of the stakeholders such as park residents and the Dzongkhag administration. Participatory approaches are usually little more expensive and sometimes demands more resource input which might not directly contribute to conservation programme.

- **Replication Process - FAIR**

There have not been large scale concrete results produced and available for replication, but similar replica of JDNP management system have been used in the establishment of Jigme Singye National Park and Sakten Wild Life Sanctuary. Lessons learned from the implementation of JDNP and now available in the form of mid-term evaluation and terminal evaluation report will be useful for future direction of JDNP and other relevant conservation projects. For instances, JDNPs delegation of more specialized environmental campaign to RSPN is a good example which can be replicated in framing other park managements. The ICDP Warden, Bomdeling was trained at JDNP headquarter over a period of one month. Further, GIS infrastructures including staff capacity developed at the GIS unit of NEC, Thimphu covers all other parks in the nation.

- **Cost-Effectiveness - UNKNOWN**

The GEF definition of cost-effectiveness suggests that a comparison should be made between the JDNP project approach and either of:

- A similar project in another country
- An alternative approach with the same objectives within Bhutan

Neither comparison can be made in reality (at this time). There is so little existing baseline information on the species that may be considered as the principal indicators of the maintenance of global biodiversity (within the incremental benefit definition) that a quantitative calculation is impossible. With additional research over the long-term on species status and population dynamics (both plant and animal) then this assessment could be possible. However it should be understood that the evaluation team believes that the vast area, remoteness and limited human intervention in JDNP ensure that there is adequate time to undertake the longitudinal research necessary to assess the incremental benefit to global biodiversity.

- **UNDP Comparative Advantage - GOOD**

While GEF funds can be accessed through UNDP, World Bank and UNEP none of these except the office of the UNDP was available in Bhutan at the time of JDNP project formulation. It has proven

advantageous for the Royal Government and for JDNP in particular because it facilitated communication with UNDP and GEF much easier in terms of financing arrangements and technical assistance. The JDNP project has enjoyed an excellent relationship with UNDP/GEF office in Thimphu. Besides the Environment/GEF program, UNDP has several other programs including a significant emphasis on sustainable livelihoods and on poverty alleviation.

- **Linkages between the project and other interventions in the sector - GOOD**

The JDNP good linkages with key organizations have proved to be of considerable advantage. The cooperation received was excellent and as a result of which the project was able to achieve many things. Its good linkages with Dzongkhag administration, the RNR RCs and the RNR Sector Heads and agents, the Royal Institute of Management through its collaborative efforts have been able to produce geog ICDP plans available for implementation. Further they also received excellent cooperation from the Institute of Traditional Medicines and RSPN for research on traditional medicines and environmental campaign respectively. Its collaboration with Department of Tourism and WWF helped in the implementation of atleast two workshops and production of Eco-tourism Development Strategy although it was not related to JDNP alone. The Integrated Horticultural Development Project funded by UNDP and the National Mushroom Centre has helped to inventory of mushrooms and its potential for cultivation. The JDNP's good relationship with UNDP and GEF cannot be underestimated for their contribution to the success of the project.

- **Indicators - FAIR**

This has been one of the weaknesses of the project design, which did not incorporate Log Framework Approach (LFA) specifying indicators, means of verification and results. It was only at a later stage after the MTR that a LFA has been added to the project design. The Terminal Evaluation mission has attempted to redesign and improve upon its presentation.

It is essential that every project formulation design in future should have a LFA so that it is possible to measure the success of the project.

3.2 Implementation

- **Financial Planning**

Financial planning activities have been fully consistent with the accounting and control standards established by UNDP and GEF as well as the Royal Government of Bhutan. Independent annual audits have been conducted by the Royal Audit Authority.

Annex 3 contains a summary of project expenditure current to June 2003. A final audit by the Royal Government of Bhutan remains to be completed in December 2003.

- **Monitoring and Evaluation**

There has been constant monitoring of the activities by field staff based in the park, and further supported by JDNP management staff and who visit the Park at least once a month. Quarterly wardens meetings are undertaken as part of ongoing management activities. Quarterly and annual monitoring reports are filed with UNDP and GEF. UNDP staff has also been visiting the Park every six months.

Project Implementation Review (PIR) has been a regular exercise carried out annually by UNDP and park staff. There was also an independent Mid-term Evaluation (MTE) in May 2000 and a Tripartite Review Meeting (TRM) which is again an annual feature conducted by UNDP and NCD.

- **Execution and Implementation Modalities – GOOD**

All informants indicated that the strong relationship among a relatively small group of actors during the implementation of the project ensured expediency and efficiency during implementation. Although there was some delay in constructing and establishing the Park Headquarters and transferring the staff into a fully operational office, it took place in an efficient manner. There have been resultant problems in communications among UNDP, NCD and JNDP due to the fact there are still no phone lines to Damji. But with the completion of the road within 1 or 2 years and the VHS phone lines installed and operational by end of this year, then this issue will have been substantially resolved.

- **Management by UNDP Country Offices - EXCELLENT**

All informants indicated that the management activities of the UNDP country office in Bhutan were excellent. With the UNDP office itself being located in Thimphu this facilitated easy access for the Park staff on all matters related to the park, especially with respect to access to funds channeled through the Department of Aid and Debt Management. Secondly, the park staff benefited from visits by the UNDP officials for advice and necessary guidance which served a morale boost for staff in the field.

- **Coordination and Operation Issues - GOOD**

All informants indicated that the co-ordination and operational matters have been well handled.

- **Project Sustainability - FAIR**

Full project financial and resource sustainability has not been achieved during the first six years of management planning and implementation at JNDP. However, the Royal Government of Bhutan provides the basic operating and staffing costs and this is a singular achievement for a new National Park.

Projects such as the preparation and implementation of the next Five Year Management Plan require outside project assistance (which will be forthcoming from SDS). Continuing capital costs will be also borne by this project and possibly from the Bhutan Trust Fund and other donors. Specialized research activities related to wildlife population status and dynamics as well as human use of grasslands will also require additional external support and partnerships.

It is important to qualify these remarks by clearly stating that continuing external support needs are not in themselves an indication of a lack of sustainability – parks and protected areas that are important contributors to national and global biodiversity conservation may always require an external subsidy. The concept of parks being entirely financially self-sustaining is not relevant in the case of a large wilderness area with relatively little human use.

- **Contribution to the Upgrading of the National Staff**

There has been significant and continuous annual training available for the JNDP staff. The opportunities to undertake training have been determined annually using a participatory process (which in itself is somewhat of an innovation). The principal methods have ranged from long-term educational opportunities to short term study tours.

There have also been inputs made to strengthen the monitoring capability through training and workshops. In 2000, a total of six wardens and Deputy Wardens plus three park guards were trained in wildlife management, survey and monitoring techniques at the University of Philippines, Los Banos. (sponsored by The Bhutan Trust Fund) There has also been a snow leopard survey training held for the Park staff in

Laya from 8-20 April 2000 conducted by the International Snow Leopard Trust. A Blue sheep field survey was also been carried out in the same year.

In 2001, a warden and a park guard were trained in wildlife management, survey and monitoring techniques at the University of Philippines, Los Banos under WWF and Park scholarship. Under the same scholarship, the Park Manager, JDNP attended an intensive course in Biodiversity monitoring and adaptive management in May/June organized by the Smithsonian Institute.

In 2003, the Warden from Lingshi and the Warden REMO based at the HQ were trained in wildlife management, survey and monitoring techniques at the Wildlife Institute of India. Their sponsorship have also been provided by the Bhutan Trust Fund and the Park.

Other miscellaneous workshops and short course have been attended on an ad hoc basis.

However it is important to re-iterate that an annual training plan development (undertaken with the MOA HRD unit and with the senior management of NCD) does not represent a fully developed long-term training and capacity development program. An internal capacity for on-going staff training and development, specific to the protected areas system still needs to be developed. A recommendation to this effect is included below.

3.3 Results

Following the JDNP mid-term review in May 2000, the original GEF objectives and outputs (formulated in 1995/96) were recast in the form of the now common Logical Framework Analysis (LFA). There were no significant changes in the overall objectives but by 2001 it became clear that there would be some significant under-expenditures in some areas, primarily in Component 2. Decisions were then taken by the Project Advisory Group that resulted in the extension of the project for another year (July 2002-October 2003). The funds were re-allocated to those areas (often infrastructure) needing additional budget support. This flexibility is considered to be both appropriate and acceptable.

The following inventory and analysis of the project objectives and activities is based on the 2001 Logical Framework Analysis and it emphasizes the activities that have taken place since the Mid-Term Review

- **Attainment of Objectives**

There were two principal components included in the Logical Framework Analysis. Each component had several objectives and specific activities. The LFA is included in Annex 2

A brief analysis of each activity follows.

Component 1: Fully developed and implemented JDNP

Objective 1: Fully Staffed Administration and Management Structure

Activity 1.1: Hire a full complement of 50 trained staff for JDNP.

Result: By mid-2003, there were 32 full time staff, 4 retired army personnel working as park guards plus 9 village (part-time) forest guards or Risups in place.

Conclusion/Explanation: The project had only 17 park staff in 1997. Today at the end of the project phase 1, it has doubled its strength to 45. Recruitment of additional trained staff has been difficult due in part to limitations in the number of staff graduating from

the respective training institutes. In 2001 the civil service placed a limitation of 32 full-time staff on each park in Bhutan. As the initial estimate of 50 was based on a preliminary understanding of the number that may be needed it was a target that has been adjusted as the park implementation proceeds. However the staff complement has not been able to undertake all the GEF project activities it will be necessary to seek amendments to the staff limits in order to fully staff the most basic warden and park guard positions in the future.

Objective 2: All JDNP and Geog partners trained in park management, monitoring empowerment, enforcement and survey methodologies.

Activity 2.1: Hire UN Volunteers for park management and social forestry.

Result: Successfully completed by the mid-term review

Conclusion/Explanation: N/A

Activity 2.2: Community forestry and development extension training for 14 wardens and Geog partners.

Result: Successfully completed by the mid-term review.

Conclusion/Explanation: N/A

Activity 2.3: Sustainable development workshop for the Dzongkhag leaders in the park.

Result: Successfully completed

Conclusion/Explanation: However with staff changes occurring frequently at the senior levels within Dzongkhag administrations it will be necessary to replicate such training activities on a regular basis

Activity 2.4: PA management training for senior park staff at a regional center of excellence.

Result: Successfully completed

Conclusion/Explanation: This will also need to be periodically repeated.

Activity 2.5: Wildlife management training for JDNP wardens and REMO Director

Result: Successfully completed.

Conclusion/Explanation: This will also need to be periodically repeated.

Activity 2.6: ICDP regional study tours for a total of 47 park staff including Geog partners.

Result: Successfully completed.

Conclusion/Explanation: This will also need to be periodically repeated

Activity 2.7: Equip park staff and facilities with basic communications, office and field equipment.

Result: This has been largely completed but it is an ongoing process that continues as the various park facilities are completed and or upgraded.

Conclusion/Explanation: Provision of field equipment is not complete and items such as proper firearms, adequate camera equipment, communications sets as well as the ongoing re-equipping of individual staff with adequate personal equipment will need attention.

The park will rely on the next project in order to continue this process and a capital equipment replacement programme as well. Eventually this will need to be incorporated into the core park budget

Objective 3: Park Boundary Demarcation and Zoning and Strengthening park infrastructure

Activity 3.1: GPS field missions to demarcate the southern boundary of the park.

Result: Successfully completed during 2002/2003

Conclusion/Explanation: This work was delayed by staffing limitations and other planning and operational priorities

Activity 3.2: Demarcation of the internal park zonation system.

Result: Not completed

Conclusion/Explanation: There has been a complicated set of reasons for the deferral of this activity. However it includes the staffing limitations and other operational workload as well as the fact that the park has a de facto zoning in place due to the extreme ruggedness of terrain and the limited human use of the landscape. In addition it was considered very advisable to incorporate the zoning activities close to villages into the work on Integrated Conservation and Development Plans (ICDPs) given that the traditional land uses are a politically sensitive subject.

However it remains very important for the long term conservation objectives of the park that village area zoning become an important priority for the next phase of the management planning activity.

Activity 3.3: Build 8 warden/guard posts.

Result: 7 are completed.

Conclusion/Explanation: Time and budget constraints resulted in the deferral of the last phase of this activity until the next phase of the park is approved and budgeted. The final warden post construction activities at Rimchu are now scheduled.

Activity 3.4: Build 2 interpretation centers.

Result: Completed.

Conclusion/Explanation: N/A

Activity 3.5: Build 9 traditional and 2 suspension bridges.

Result: Completed.

Conclusion/Explanation: N/A

Activity 3.6: Build 200km of trails.

Result: Completed. The building and improvement of trails has not only been beneficial to the public but for the park patrolling, too.)

Conclusion/Explanation: N/A

Objective 4: Geog CBNRMPs prepared (revised to 10 ICDPs, not 13)

Activity 4.1: Study tours for various ICDP committee members to model protected areas in the region.

Result: Completed

Conclusion/Explanation: N/A

Activity 4.2: Short-term training for Risups in park-people interactions.

Result: Completed

Conclusion/Explanation: N/A

Activity 4.3: Geog ICDP planning committees formed and planning process initiated in 4 per year.

Result: Completed

Conclusion/Explanation: The terminology for ICDPs replaced the original CNRMPs following the work of the UNV prior to the mid-term review. Although the completion of all 10 ICDPs took longer than expected the NCD and park staff are now fully trained in this work. The ICDPs are now the focal point of the relationship between the park and the respective communities – and much of the politically sensitive and other difficult GEF project tasks have been allocated to the ICDP unit to undertake inside the context of this relationship. This is an acceptable approach and should simplify the implementation of some other park management responsibilities such as zoning, local management planning and resolution of grazing management and people-wildlife interaction problems.

Activity 4.4: Workshop processes undertaken to develop and finalize ICDPs.

Result: Completed

Conclusion/Explanation:

Objective 5: Produce a full Tourism Management Plan

Activity 5.1: Policies, procedures and guidelines for a sustainable Tourism Management Programme (TMP) will be developed.

Result: Eco-tourism Plan for JDNP exists but not as originally designed.

Conclusion/Explanation: The basic tourism plan for the park has been developed. The park staffs have also contributed to several national level planning studies. The intention now is to work further on the plan to fit within the national tourism policies and strategies.

Activity 5.2: Workshops held with all tourism stakeholders to finalize the TMP.

Result: Not Completed as originally designed

Conclusion/Explanation: see 5.1

Activity 5.3: establish 10 improved campgrounds along major trails.

Result: 3 small campgrounds have been improved

Conclusion/Explanation: Staff limitations and delays in completing much of the major park infrastructure slowed down work on the TMP and hence there has been little point in building more campgrounds. However, the 3 campgrounds are being used by tourists during the season and managed by the community schools.

Objective 6: Baseline natural resource and land-use information

Activity 6.1: Conduct Rapid (Bi-Annual) Natural Resource Assessments.

Result: Not completed as originally designed

Conclusion/Explanation: This very ambitious initiative has not been able to be completed as designed. Staff limitations, tough field conditions and short seasons have meant that while some species research has been possible it has not been as systematic as was originally designed.

Activity 6.2: Conduct management-oriented research on species distribution and population dynamics for priority species representative of the 8 major habitat types.

Result: Not completed as originally designed

Conclusion/Explanation: Staff limitations have hampered much of this work. There simply has not been the time, nor resources to undertake a comprehensive management oriented research program – much data has simply not been able to be collected in a timely manner.

Activity 6.3: Train 1 park staff as a GIS technician.

Result: An early decision was taken to centralize the GIS functions at the NCD headquarters in Thimphu. Two technical staffs have been hired and trained and basic GIS functions are now in place – although at the time of this review one staff was on educational leave and the other was away for personal reasons so a detailed discussions of the GIS unit did not take place at the staff level.

Conclusion/Explanation: The decision to centralize the GIS system was taken by the Project Review Group in order to provide an enhanced service from within NCD for all of the parks. Hence the JDNP mapping exercise has slowed

Activity 6.4: Build the GIS database and develop 1:50,000 scale maps of the entire park.

Result: Not completed, although mapping projects are continuing when staff are available

Conclusion/Explanation:

Component 2: Development and implementation of sustainable economic activities based on an integrated conservation and development approach in JDNP.

Objective 1: To promote sustainable livestock herding and natural resource use

Activity 1.1: Identify formal and informal user groups.

Result: A complete stakeholder analysis was undertaken (sequentially) during the development of the 10 ICDPs.

Conclusion/Explanation:

Activity 1.2: Verify existing grazing permits issued by local authorities.

Result: Not completed.

Conclusion/Explanation: The workload and political sensitivity of this task was underestimated during the design of the GEF project. There is a very high possibility of alienating the monk bodies, local villagers and Dzongkhag administration if this task is undertaken in a haphazard or poorly organized manner. JDNP have not had staff to work on this project (which should be dedicated to the project). The partner organization Renewable Natural Resource Research Center estimated the work (including 1.3) could take up to 15 years to complete.

Activity 1.3: Survey and map all registered grazing land in order to assess stocking rates using GIS.

Result: Not undertaken.

Conclusion/Explanation: This activity has not been undertaken for both practical and political reasons. In essence the continuing staffing limitations have not allowed the activity to take place. Also, due to the emphasis placed on completion of ICDPs and building community alliances it was determined to be ill-advised to undertake this activity outside of the ICDP context.

Activity 1.4: Extend formal recognition to informal herder groups and develop and implement a new property system that updates the old system to a new taxation system.

Result: Not undertaken.

Conclusion/Explanation: Same as 1.3

Activity 1.5: Implement a fodder production pilot program in tandem with the rehabilitation of degraded slopes and provision of incentives for adopting more sustainable systems.

Result: trial project is underway in Soe

Conclusion/Explanation

Activity 1.6: Ongoing educational and awareness programmes related to grasslands and grazing.

Result: This work was successfully integrated into the ICDP program, and it continues.

Conclusion/Explanation: As with many other activities it was deemed advisable to incorporate most of the effort into the ICDP program to ensure a consistent focal point and message was maintained between the community and the park.

Objective 2: To empower local communities to develop and implement alternative income generating activities.

Activity 2.1: Research habitat and soils requirements for selected high value medicinal plants.

Result: A small-scale trial project is underway in Lingshi with technical support from the National Institute of Traditional Medicines (NITM).

Conclusion/Explanation: Four species of medicinal herbs has been success-fully cultivated and sold to NITM, Thimphu.

Activity 2.2: Implement pilot horticultural programmes for plants.

Result: Not undertaken by the park staff but several small-scale programmes underway through the UNDP funded IHDP and other institutions.

Conclusion/Explanation: Staffing limitations, operational workload and expertise limitations have constrained this activity. New partnerships for expertise and delegation of some of its responsibilities are needed.

Activity 2.3: Devise a new property system for exploitation of plant species.

Result: Small scale programmes only.

Conclusion/Explanation: Staffing limitations, operational workload and expertise limitations have constrained this activity. New partnerships are needed.

Activity 2.4: Promote a sustainable utilization programme for wild medicinal plants.

Result: Promotion through the ICDP programme in partnership with NITM.

Conclusion/Explanation: Staffing limitations, operational workload and expertise limitations have constrained this activity.

Activity 2.5: Promote social forestry through training, provision of seedling and establishment of 8 nurseries.

Result: Three small scale seedling nurseries have been established at warden posts on a trial basis.

Conclusion/Explanation: Staffing limitations, operational workload and expertise limitations have constrained this activity. New partnerships are needed

Activity 2.6: Conduct demonstration programmes on sustainable economic activities related to horticulture, tourism and lumber.

Result: Not undertaken to date.

Conclusion/Explanation: Staffing limitations, operational workload and expertise limitations have constrained this activity. New partnerships are needed

Activity 2.7: Provide micro-credit from the regular BDFC schemes for environmentally sustainable economic development initiatives.

Result: Not undertaken to date.

Conclusion/Explanation: JDNP staffs have limited experience with micro-credit programmes and any future programme here will require collaboration of financial institutions such as BDFC.

Objective 3: To maintain existing forest cover and rehabilitate degraded forest cover by addressing root causes of forest loss: lack of fuelwood and alternative energy sources.

Activity 3.1: Develop pilot cooking and heating stove demonstrations for fuel efficient technologies – in the alpine zone where wood is scarce.

Result: The demonstration stoves were introduced and tried in several homes and communities under Khatoe geogs.

Conclusion/Explanation:

Activity 3.2: Demonstrate pilot water heaters in pilot areas within the park.

Result: Four solar water heaters have been planned for installation in various institutions within the park. However, it has not been done so far due to transportation constraints.

Conclusion/Explanation: Since it has just been installed, more time is required to exactly determine the results/success of solar as one viable alternative.

Activity 3.3: Install one micro-hydro system in Laya and give basic appliance demonstrations/Installation of PICO at Goen Shari Community School for demonstration.

Result: Technical feasibility studies later proved that the distribution of houses was too large to support the distribution systems. A substitute proposal for solar lighting systems was introduced but it is not as extensive as the original proposal.

Conclusion/Explanation: 103 solar PVs have been distributed and installed within the park area.

Objective 4: To raise awareness within the local population regarding biodiversity significance and sustainable development methodologies.

Activity 4.1: Produce 10 brochures in Dzongkha and one book in English and Dzongkha.

Result: Brochures have been produced but no book has been developed to date. Funds have been utilized to purchase video production equipment and initial work with the Bhutan Broadcasting Service has proven very successful. A film on Takins and an Anti-poaching have been completed and aired in national television.

Conclusion/Explanation: The use of educational videos for national broadcast has proven quite effective in creating conservation awareness.

Activity 4.2: Disseminate information materials on JDNP's biodiversity to park residents and the Bhutanese public.

Result: Ongoing public awareness activities have been undertaken within the ICDP process, and through the offices of each Warden station.

Conclusion/Explanation: While print media as a communication tool has been able to serve a wider population coverage, the use of educational videos for national broadcast although effective is limited within urban boundaries.

Activity 4.3: Develop and distribute sustainable development materials to park residents.

Result: This is an ongoing activity implemented through the ICDP development process – and will continue as they are implemented.

Conclusion/Explanation: This is the logical unit to continue public education activities within the park

Activity 4.4: Implement an awareness-raising programme related to medicinal plant harvesting.

Result: This activity was included in the ICDP programme and is an ongoing activity at JDNP.

Conclusion/Explanation: This is the logical unit to continue public education activities within the park.

Objective 5: GIS for JDNP containing biodiversity and socioeconomic information

Activity 5.1: Conduct rapid bi-annual resource assessments of biodiversity and socio-economic information.

Result: This programme has not been initiated as originally conceived. Some species-specific activities have taken place as resources and partnerships are available (e.g. WWF). The ICDP programme has successfully collected extensive community socio-economic baseline information, supplementing the data collected during the preparation of the 1997 initial management plan.

Conclusion/Explanation: The original proposal was too ambitious given field conditions, staff limitations, and the cost of completing the work on a bi-annual basis.

Activity 5.2: Conduct management-oriented research on priority species.

Result: Preliminary work has been undertaken through the REMO unit but not to the level originally anticipated in the project design

Conclusion/Explanation: Staff limitations, difficult field conditions and other unplanned activities undertaken were not anticipated in the original project design.

Overall Conclusions concerning the Implementation of the Logical Framework Activities

- **Component 1 was successfully implemented in most cases, while Component 2 was less successfully implemented – and the reasons for the latter are legitimate and well explained. Many lessons may be learned for future projects from these experiences.**
- **The rugged field conditions and logistical difficulties in the eastern Himalayas could not be fully anticipated during the GEF Project design phase. The short field seasons, the need to divert staff to anti-poaching patrols and the involvement of the staff in infrastructure projects also contributed to the delays in some aspects of Component 2.**

- Staffing and training limitations continued to limit the ability of JDNP to implement all of the originally proposed GEF Project activities. This caused by a lack of suitable recruits, difficult working conditions and more recently by a staffing limitation from central government. There will need to be strategic additions to the staff complement at JDNP
- The original GEF Project was ambitiously conceived (in a very short time), specifically with respect to Component 2 and not all was achieved. The political sensitivity of the land use, grazing rights and short working seasons were not well understood. The formulation team hoped to be able to be progressive as possible in investigating people-park interactions – which remain as admirable goals. The mid-term review did not completely acknowledge nor adjust for the emerging difficulties, however the subsequent adaptation of the project priorities (and the year-long extension) was appropriate. The flexibility has been excellent.
- The concentration of JDNP on the completion of infrastructure, completion of ICDPs, building the REMO programme and staff training and upgrading is an appropriate focusing of effort which would be appropriate to continue into Phase II, with a slow increase in activities as staffing, resources and partnerships permit.
- A strategic plan for the next 5-year period is essential.

It should be emphasized that UNDP and the Royal Government of Bhutan (in particular the Nature Conservation Division of the Ministry of Agriculture) demonstrated considerable (and appropriate) administrative flexibility throughout the completion of this project. In instances when a specific task could not be completed as originally conceived the activity was often modified to meet temporal and physical realities.

Additional activities (not originally included in the logframe) were also added from time to time using resources from outside sources to complement the original project objectives. These have been integrated into the list above without an explicit differentiation (for the sake of simplicity in this report).

Based on the results of the analysis of the logframe activities and an ongoing and iterative discussion of the challenges and problems facing the park staff the Evaluation Mission has placed a considerable emphasis on making the recommendations which follow. In each case the rationale for the recommendation is described first followed by a short, self-explanatory statement of the changes which may be incorporated into the next phase of the JDNP project.

4.0 Recommendations Section

4.1 Strengthening the Center: Implement an Institutional Strengthening Project for the Nature Conservation Division.

With the development and adoption of the *Biodiversity Action Plan for Bhutan* (BAP II, 2002) and the follow-up (and more agency-specific) *Vision and Strategy for the Nature Conservation Division* (2003) there is now a comprehensive policy and action framework in place for the protected areas system in Bhutan.

Implementation activities are underway, including the significant JDNP pilot project financed by GEF. Other examples have included park-specific activities funded variously by the Bhutan Trust Fund (BTF), WWF, DANIDA, SNV and a second significant GEF project just underway.

In addition, there has been in place a Dutch-financed, (inside the SDS framework) project for Black Mountains National Park (1998-2002) (which is now renamed Jigme Singye Wanchuck NP), which was formulated largely on a park-specific basis, with an enhanced institutional-strengthening component for NCD. During 2003 a new project – now known as the *Biodiversity Conservation Project Phase II – Community-based*

Biodiversity Conservation and management of Endangered Species of Flora and Fauna (2003-2008) has been developed and is close to final approval.

In the words of NCD:

“so far support to NCD has mainly followed a project-based approach. Donors have focused at supporting concrete parks.....as a result of different donors supporting a specific park, different approaches have developed.....while this diversity has been a source of richness, it has also created inequality, and has led to duplication, conflicting approaches and high transaction costs”

So, very appropriately, the new SDS BCP II project has been designed with an increased programmatic emphasis on institutional strengthening specifically at NCD. Three components are envisaged

- Implementation on Integrated Conservation and Development Plans (remembering that there are 10 already prepared in JDNP, ready to go)
- Management Plan Implementation of 3 NPs (including JDNP)
- Assessing the status of endangered species throughout Bhutan (helping to implement BAP II, including in JDNP)

Therefore significant new resources will be available for JDNP for the forthcoming 5 years which suggests there should be no significant gap between the conclusion of the GEF project and the start-up of the SDS project. This is an excellent development from the perspective of JDNP.

However, there are two outstanding concerns.

First, the new initiative retains a partial “project” emphasis when indeed a more programmatic approach has been widely acknowledged as necessary and important (S. Wangchuck, pers. comm.). In our analysis in the previous section, we determined that additional backstopping from NCD to JDNP on a variety of subjects such as training and capacity development, tourism (eco and adventure) planning, strategic planning (particularly with respect to ICDP implementation) and several others will be essential in forthcoming years. NCD acknowledges that it has very limited resources to undertake these tasks – in addition to the growing demands from the other protected areas and corridor projects.

Secondly, there is a growing concern that the continuing emphasis on project funding detracts from the broader vision that is expressed in the BAP II and NCD “Vision and Strategy”. Biodiversity conservation in Bhutan must be addressed at a “landscape” level – there needs to be awareness at all levels within all government departments (and their programs) that the BAP II and NCD envisage the country as a “biological conservation complex” and that not just the protected areas and corridors are managed for conservation purposes. The entire landscape must be examined and biodiversity must be managed (in some appropriate manner) wherever it is found to be significant. Ongoing assessment of biological resources must continue as a priority initiative – and that identification of gaps in the protected areas system may result in new and additional conservation programs being established.

Having reviewed all of the above documentation and undertaken many varied discussions with NCD and JDNP staff (among others) – including the world-class *Vision and Strategy for the Nature Conservation Division* (2003) – there is an additional need for core institutional strengthening activities at NCD.

Recommendation 1a: NCD would benefit from an additional 5-year grant from BTF, GEF or another multi- or bilateral donor to fully implement the “Vision and Strategy 2003” document.

Recommendation 1b: NCD should continue (as a priority component of 1A) the assessment of biodiversity resources at a landscape level (a “biodiversity conservation complex”) and promote the understanding of this perspective throughout the RGoB and abroad.

4.2 Implement a More Focused Approach to JDNP Phase II

As part of (and in parallel with) the new institutional strengthening initiative for NCD, there will be a Phase II JDNP project financed largely through the NCD SDS Biodiversity Conservation Project II. This will occur reasonably quickly after the completion of the GEF project, which will allow for critical programme continuity, particularly during the slow winter season when park activities are somewhat curtailed.

During the last two years of the GEF project a series of formal and informal decisions have been taken that have narrowed the range of project activities from the longer list that was originally outlined in the GEF project brief and budget (both GEF and UNDP TRAC). These were described in detail in Section 3 of this report but may be summarized as an increasing the focus on the “basics” such as the completion of the park infrastructure development, ICDP implementation, strengthening of REMO activities and human resource development. Other activities related to socio-economic issues outside of the ICDP format have been deferred for a complex set of financing and staffing limitations as well as political and procedural considerations.

Many of the activities that were deferred as a result of the staffing limitations and the initial adjustments to the field realities of JDNP are medium to long-term planning needs so it is legitimate and acceptable to defer them further. The flexibility demonstrated by UNDP/GEF in allowing modifications to the original 5-year project to 6 years have been necessary and critically important developments.

NCD and JDNP managers and staff have developed a Phase II proposal which begins with a reinforcement of the successful elements of the GEF Project and then slowly addresses the less successful elements (partly by mobilizing additional partners and donors to contribute to the longer term research activities and more difficult resource management investigations and tasks.

Some of the high priority elements that should occur early in the next phase of JDNP implementation include:

- Completion of the Management Plan Update for 2003-2008
- Staffing and Quality of Working Life issues
- Internal zoning of the park
- Sequential ICDP Implementation
- REMO Consolidation and Expansion
- Completion of a long-term Training Plan
- Infrastructure Completion

This is not to suggest that the other elements outlined below should be treated as unnecessary, just that a prioritization will be necessary in order to prepare the way to deal with the more complex and vexatious issues.

NCD have also undertaken a “management effectiveness review” using the IUCN-the World Conservation Union international format for comparative management of worldwide protected areas. This provides an important international baseline for the analysis of management planning activities in future years and this could beneficially be repeated every five years.

Recommendation 2a: Phase II of the JDNP park management plan implementation should concentrate on consolidating the successful elements of the GEF Project before extending work into more complex or more difficult tasks.

Recommendation 2b: The new draft of the park management plan needs to be completed as quickly as possible.

Recommendation 2c. NCD and JDNP should undertake an IUCN-based management effectiveness review every 5 years (and take advantage of the international resources available for these reviews)

4.3 Guidelines for Sustainable Mountain Development

The Nature Conservation Division with the assistance of WWF developed the first JDNP management plan for the period 1996-2001. After a short hiatus the park management staff have prepared an update (which remains in draft form at the time of writing). During the same period the first Biodiversity Action Plan (1998) for Bhutan was produced, implemented, evaluated and updated. (BAP II, 2002). As mentioned above the NCD have produced and are now implementing a comprehensive “Vision and Strategy” document. These documents all (to some degree) introduce the policy context needed for the management of the protected areas system and JDNP in particular. They introduce considerable specificity with respect to the activities that will or will not be allowed in various protected areas and (although not yet fully implemented) in specific zones within each National Park.

However many of these policies have not been operationalized. Although the JDNP staff clearly have the local expertise to undertake decision making concerning land and resource use permitting it would still be exceptionally valuable to have more specific guidelines in place to guide the activities of the staff, allow for greater public understanding of park objectives and to have better cooperation among the various agencies and partners who also operate inside the protected areas.

Among the many topics that should be addressed:

- Management guidelines for soil and water conservation
- Management guidelines for the conservation of biological diversity
- Management guidelines for the protection of community social and economic life
- Management guidelines to minimize physical and biological damage
 - Fire
 - Pollution and waste disposal
 - Exotic Species
 - Pathogen Dispersal
 - Fuelwood
 - Hunting
 - Facilities Construction
 - Grazing
 - Sustainable Use of Wild Species
- Protection of Scenic Resources
- Inventory and protection of spiritual and cultural resources
- Management for visitor’s health and safety
- Natural Hazard Assessment and Mapping

It would seem appropriate that such an initiative be undertaken by NCD in co-operation with at least one National Park, in this case JDNP – fully acknowledging that to be operational for each protected area there would be changes needed for local conditions. If sufficient resources were available for this initiative then the full project could involve all of the operational National Parks and corridor areas.

Recommendation 3: A specific project should be undertaken to develop a detailed set of mountain sustainable development guidelines for the Bhutan protected areas system – with a focus on operationalizing the management and zoning policies of each national Park.

4.4 Training and Capacity Development (JDNP and NCD) Program

There is an important and significant difference for JDNP between having short term (and individualized) training programs and a fully developed Capacity Development Program. As noted above the issues related to staff numbers and training have placed a limitation on the degree of success that has been achieved (particularly Component 2) during the GEF project. This limitation will continue into the next phase of the project.

The MOA HRD team undertakes quite extensive training activities, NCD has an ongoing program for providing professional upgrade and there have been numerous project specific training programs, study tours and related short courses. Almost all respondents expressed satisfaction with the opportunities that were becoming available for advancement – however these opportunities remain dependent on external resources – the internal capacity at JDNP for training is limited. With one or two transfers or resignations several of the most important JDNP programs would be significantly delayed or deferred.

The need for a comprehensive Training Program was a principal recommendation arising from the Mid-Term Review and although in recent years there have been annual training plans (developed in a participatory manner with the staff) the longer-term training has not been developed, nor has there been progress towards a broader Capacity Development Program. In particular, there is a need for a longer term strategic vision for park staff; there needs to an expansion of the basic training that park staff undergo and there needs to be an internal capacity developed for self-training and assessment.

Recommendation 4: A Training Needs Assessment followed by a full-scale Capacity Development program is recommended (ideally in association with Recommendation 1)

4.5 Strengthened ICDP Implementation

JDNP has successfully completed all 10 ICDP projects. Originally called the Community-Based Natural Resource Management Plans in the GEF project the ICDP approach was adopted with the assistance and training from a successful UNV. NCD have established a management planning and ICDP section to backstop the work in individual parks (with well trained but with limited staffing at this time). Both the NCD and JDNP staff are now competent to update and implement the ICDPs in the park. Replication into other areas of Bhutan is also possible and is taking place.

However ICDP implementation inside JDNP has not begun and there is a sense of growing concern over delays. While the participatory processes used in ICDP are ideal development tools the participants can become cynical about the procedures and the results. The good relationship between park and community is likely to suffer with further delays. JDNP needs to avoid this to greatest extent possible.

There is also a prospect that ICDPs will become stale documents while there are delays in implementation. The annual planning activities at the GYT and DYT level will tend not to either utilize or indeed remember the results of the ICDP planning processes. As time proceeds staff changes occur, village priorities change and more immediate individual development priorities take precedence over the results of the ICDP – the results become open to interpretation!

JDNP have also clustered a lot of other (and many deferred) GEF project activities into the ICDP “basket” in order to preserve a consistent focal point in the relationship between each Geog and the park. Now implementation activities are proposed to begin during Phase II of JDNP. This will need to be strategically designed and prioritized to ensure that Geogs with pressing development issues get early attention (e.g. Gasa and Tsachu (hot-springs)). It is also essential that the staff allocation is sufficient to ensure that the implementation activities may be undertaken in a timely and efficient manner.

Recommendation 5: Implementation of the ICDP programme inside JDNP should remain as a high priority activity of the next project phase.

4.6 Strengthened Community Participation and Awareness

Dzongkhag and community participation has been featured as a key element in the development of community based natural resources management (CBNRMP) plans for all the 10 ICDPs falling within the park domain. It was primarily for this reason that integrated conservation and development plan (ICDP) approach has been adopted to help the community residents to take ownership in the preparation of their own plans and implementing it. Indeed the communities themselves were expected to finalize and demarcate the provisional demarcation of six land-use zones within the park.

Therefore the preparation of CBNRMP plans was foreseen as an important tool to make the people understand the linkages between conservation and development and get their cooperation in supporting conservation effort. Secondly, the development of CBNRMP was seen as a pre-condition for component 2 for development and implementation of sustainable economic activities. These two steps were to be implemented successively with the development of CBNRMP preceding the other.

JDNP has put in substantial effort in collaborating with the community residents in the developments of the ICDP plans. The pilot ICDP plan prepared for Laya alone took six months to complete because people have had no earlier experiences besides low participation initially. With now at least 10 ICDP plans developed, most people in the geog are now aware of the decentralization and their participation in the development process.

JDNP has delegated its environment awareness campaign responsibility to the Royal Society for Protection of Nature (RSPN), which was a wise thing to do. While RSPN focus its awareness campaign in schools, it is felt more appropriate and effective if similar campaigns are directly carried for the communities.

Recommendation 6: The emphasis on the highly participatory planning approach in the JDNP should be continued as a high priority policy in the Phase II of the park

4.7 Strengthened REMO – with a new priority on species status and population dynamics.

Basic natural resource inventory and assessments were identified as an essential component of JDNP management planning during the earliest conception of the protected areas system. However the initial idea of rapid biannual NR assessments was replaced with a less ambitious appraisal approach in light of the staff and resource limitations. A baseline inventory was completed in 1996 with the assistance of WWF. This has been supplemented since 1996 by a variety of studies (from Takin to Tigers) some of them park-specific and others nation-wide. Complementary information on vegetation classification and land use has been collected from satellite sources and integrated into the basic GIS system. A wide variety of donors and partners have been involved.

JDNP have the inventory activities organized into a Research and Environmental Monitoring Unit which undertakes both passive data collection on species sightings, poaching incidents, wildlife depredation incidents and other information. When time and resources permit then more structured wildlife surveys have taken place. However the REMO staffs have often had to become involved in day to day patrolling and other anti-poaching activities that occupy the operational staff during the summer season.

The SDS BCP II project provides significant new funding to undertake systematic surveys, particularly of endangered species. This needs to be supplemented as frequently as possible with additional resources for wildlife inventory and populations dynamics and trends surveys. This in turn needs to be integrated with the

socio-economic data (such as grazing information which remains to be collected) and incorporated into the GIS system and applied into management activities.

Recommendation 7: JDNP should continue the original effort to complete the natural resource assessments, with an emphasis on establishing the conservation status and trends of the principal wildlife species in the park.

4.8 Strengthened Infrastructure Planning and Development

The period from 2000 to 2003 has seen the completion of the construction of most of the park specific infrastructure that was supported by UNDP and GEF (among others). The Park Headquarters, warden post, guard posts, trails, bridges as well as facilities related to the community schools basic health units, agriculture and forestry extension services. These serve both the conservation objectives of the park and the social development objectives of UNDP – they work in consort to improve the direct conservation of important species as well as to improve human livelihood conditions and thereby reduce the stress on the natural environment.

- Rimchu

There are several additional facilities that remain to be constructed, such as the Rimchu Warden station and park entry point and there have been additional requests for services such as multi-function halls in proximity to schools. These are all within the general precedents that have been within the park and can, in principal, be supported in the Phase II project. It is the responsibility of the park management to prioritize and budget for these.

- Koina

There are also a number of facilities that could be added to or improved at each of the sites that have already been developed. For example at Koina, where an overnight station is already developed, additional work should be done to drain the area, build proper toilet facilities (male and female), provide a horse paddock and provide space for tenting etc. Again the prioritization and budgeting for these should be built into the annual work plan of the JDNP – there is no reason, other than budgetary, not to proceed.

- Muletracks

The Park's input to improvement of several mule tracks in JDNP has proved by far the most significant contribution to park residents and visitors coming into the area. Appreciation for the Park's support to this scheme was tremendous as reflected from their responses. But the Park's responsibility has been limited to the improvement and not its maintenance. The Evaluation Mission while on its way through the park painfully observed major damages inflicted on those beautiful trees along the track by labourers employed through lamsey woola (voluntary labour). Such a practice could accelerate more landslides and damage those precarious tracks.

The lesson from this is that mule tracks are important features under the JDNP's conservation effort and that the project should take over ownership of all of the improvement and maintenance work. This, the mission felt strongly to be adopted in future plans and for replication elsewhere.

Two significant additional infrastructure issues also remain to be considered.

First, it is not advisable for JDNP to proceed with development of facilities at new locations until there is a zoning plan in place that is clearly linked to Park's eco-tourism management plan. This applies to new mule track or trail proposals. It is exceptionally important to understand that such facilities have potentially

significant negative environmental consequences and they should not be developed in an ad hoc or haphazard manner.

Secondly, there are at least two sets of developments already proposed by the Dzongkhag authorities that are outside of the planning structure of JDNP at the present time. These are:

- The road to Damji and possibly beyond to Gasa.
- Related tourist facilities at the Tsachu hot springs.

The road to Damji has already been approved and is under construction and it will provide access to the Park headquarters. Beyond this location both the route and length of the road should receive very careful planning consideration. (Note: while the road in itself has minimal direct physical impact – it is in effect a wide trail, suitable for 4WD vehicle use – it is the human use impacts and implications that need to be debated).

The various proposals for the hot springs development are much more problematic than the road and deserve even more intense planning consideration. The hot springs are very small and do not lend themselves to further extensive human use. To date no carrying capacity analysis has been undertaken and it essential that this occurs before any development decisions are taken. No access planning has occurred and it should including a no-road option. Natural hazards analysis needs to be completed for both land slide potential and flood frequency prediction.

As well as these specific examples, the general issue of the dual initiation of development proposals by both the park and the Dzongkhag administrations, which may not always be well co-ordinated, needs early resolution. (see 4.11 below)

Recommendation 8a: JDNP should not proceed with any new facilities (Rimchu excepted) at new locations until there is a zoning plan in place that is clearly linked to a tourism/eco-tourism plan for the park.

Recommendation 8b: The construction and maintenance of mule tracks should all be coordinated by JDNP (through a pre-planned annual working plan)

Recommendation 8c: Beyond Damji both the route and length of the road should receive very careful planning consideration in the context of JDNP objectives, before approval by the government.

Recommendation 8d: The Tsachu Hotsprings development proposals must receive special planning consideration at an early date, including an evaluation of carrying capacity, access considerations, human use management, and natural hazards assessment.

4.9 Tourism/Ecotourism Planning and Implementation

Eco-tourism in a strict sense is something quite new to Bhutan although of course the tourism management system (that includes some ecotourism activities) is very well developed and integrated into national economic planning. With the establishment of the protected areas system there have been a variety of national level planning workshops and studies related to developing and marketing new tourism products and a national level strategy has been developed. Although a park-specific plan was originally proposed as part of the GEF project, the national level planning has not yet been translated into a JDNP-specific approach.

NCD are in the process of developing a new dialogue with the Ministry of Tourism, TAB and others to expand both awareness and programming prospects for ecotourism. Some specific new tourism products (home visits, wildlife viewing ad community-based enterprise) are being proposed for use in a variety of national parks.

There are a variety of additional products that could also be developed including a variety of adventure travel activities (base-camp based activities such as mountaineering, kayaking and river rafting)

JDNP has a vast potential for additional tourism development. Several basic priority activities including zoning and inventory of the wildlife species need to be completed as baseline studies for tourism planning. Trail construction is also an important feature for eco-tourism development. JDNP has taken some initiatives to develop some tourism facilities along the way to Damji and along other routes but these have hardly been used because of the very low volume visitors. Approximately 200 to 300 tourist visitors pass through the Park of whom most are trekkers following the trails to Laya and Lunana. There are only a few wildlife enthusiasts who come to the park to bird watch and undertake wildlife studies.

JDNP needs to undertake more development of basic eco-tourism infrastructure. This will require a continuing collaboration with Department of Tourism and Association of Bhutan Tour Operators (ABTO) for guidance and supplementary financing. Given the vast potential the park holds for development, there many opportunities for local people and communities to also benefit from the increase in activity. This would more explicitly include ecotourism activity as part of the general implementation of the ICDP programming in each park community.

Recommendation 9: JDNP should continue with the implementation of the original GEF project activity to develop a park-specific Tourism Plan (in conjunction with ICDP implantation and park zoning)

4.10 JDNP Zoning

A zoning system for JDNP was first outlined in the initial management plan for JDNP in 1997. Provisional categories (and approx. areas) included:

- Core Zone 3607 sq. km.
- Administrative Zone negligible
- Seasonal grazing Zone 735 sq.km.
- Enclave (community) Zone 116 sq.km.
- Multiple use Zone 103 sq.km.
- Buffer Zone (outside JDNP) 1322sq.km.

(Note that there were some seasonal overlaps in this preliminary system).

However, during 2001 at the 1st annual Parks Conference, a basic decision was taken to simplify this complicated approach to a set 3 zones – Core ones, Multiple Use Zones and Buffer Zones. This system has not yet been legally adopted in any of Bhutan’s protected areas.

A specific activity and funding were provided in the GEF project document. Zoning policies and rationale were explicitly outlined in the JDNP plan and these are re-iterated in the Biodiversity Action Plan for Bhutan (2002) and in the Vision and Strategy (2003) for NCD. However the JDNP zoning plan has not been completed at the conclusion of 2003.

The reason for the delay has been threefold. First, the park has a de facto zoning already in place due to the rugged landscape, the small human population and their relatively limited impact on the land base, and the few transport and infrastructure facilities that are in place. In effect most of the park is in the “core zone” category simply due to the nature of the landscape itself. Secondly there has been no staff time to undertake the zoning after allocations to anti-poaching patrols, basic park infrastructure development and ICDP preparation, among other high priority tasks such as demarcating the southern boundary of JDNP. And lastly, the considered judgment of the park staff themselves is that a rush to draw the zonal boundaries would potentially alienate the

local communities and grazing rights holders who may perceive the exercise as a loss of community or individual rights to use park resources for traditional activities.

Thus the implementation of the zoning system has been delayed – in part to await the implementation of the ICDPs – a system in which participatory activities should allow both the establishment of trust relationships among staff and community residents (which has been improving steadily in any event) and where the detailed local data that is needed for zoning around the individual communities may be collected in a cooperative manner.

The logic of deferring JDNP zoning has been a mix of pragmatism and good judgment to date. However, there are ranges of other development pressures, which are gathering that argue for at least a partial zoning of the park in the near future. These range from the proposed increase in tourism in the park, the incremental completion of the road to Damji, development proposals at the Tsachu hot springs and others. An open discussion of the park-zoning plan would provide an ideal context for an integrated discussion of various proposals – and obviously there would be a degree of control over the location and feasibility of future development proposals as they emerge.

Recommendation 10: JDNP should undertake the park zoning activities in two phases during the first three years of the next phase of the park implementation. Phase One would include a provisional zoning of the all areas with the exception of the area in the immediate vicinity of the established villages. Phase Two would complete the detailed community (multiple use zoning process within the participatory process used for each Geog ICDP.

4.11 Integration of Dzongkhag and JDNP Planning

The combination of park administration and civil government with some overlapping responsibilities complicates the management of JDNP. This is a significant matter to be resolved during the next phase of management implementation. It is further complicated by the lack of a zoning system for the park and some of the other needed subsidiary plans in place, such as an ecotourism model and development plan.

There are several basic co-ordination issues that could be easily resolved such improving communications, better involvement in GYT and DYT annual planning cycles by the park administration, and more involvement of the Dzongkhag staff in park management planning activities.

A more fundamental issue is rationalizing both parties involvement in the Geog ICDP implementation activities. In theory the ICDPs are the most comprehensive and most participatory examples of development planning currently available in each Geog. However there are always staff changes, changes in local priorities, and delays in ICDP implementation that will result in potentially varying priorities. Resources and funds are always limited and senior government officials' project concepts may vary from year to year.

The mission does not have a solution to this set of issues – a local solution is needed. However there are considerable transaction costs to both administrations if there are continuing differences in priorities being worked on at the Geog level. Overall park management plan implementation will be slowed if attention is not afforded to the issue.

Recommendation 11: A local Task Force should be established to streamline and co-ordinate the annual planning GYT and DYT processes with the park management planning, zoning, ecotourism planning and research activities.

4.12 Alternative Approaches to Sustainable Use of Wild Species

In recent years there has been a dramatic expansion of experiments (worldwide) related to the sustainable use of wild species. In essence these projects involve determining a mechanism by which a local community is provided the opportunity to benefit economically from the use of a species – thereby inducing an incentive to locally conserve and sustainably manage the species. This is now being tried in JDNP.

The legalization of cordyceps sinensis harvesting in Lunana on a pilot basis is likely to give greater community participation in its management and protection. If found successful will be replicated to other cordyceps producing areas such as Laya where people are already looking forward to similar opportunities. However the experimental approach does face certain difficulties.

Monitoring of anti-poaching especially on cordyceps has been weak. Although poaching activities in the Park has reduced with monitoring from JDNP, it has remained ineffective due to thinly spread Park guards. There has been cases where anti-poaching team with poor arms been threatened by large group poachers coming across the boarder. According to reports from the staff at JDNP, only 30 to 40% of the poachers are apprehended.

A further significant difficulty at the moment is lack of data on cordyceps. Not much is known about the life cycle and its regeneration process. JDNP has this immediate task of developing guidelines and recommendations for monitoring of cordyceps harvest, which cannot be delayed any further. People have to be made aware of the sustainability issue and that by adopting certain techniques be able to harvest year after year. The biggest challenge here for JDNP monitoring the cordyceps harvest.

Recommendation 12: The cordyceps harvest experiment should be carefully monitored and reported widely. Additional sustainable use of traditional medicine projects should be designed.

4.13 Wildlife Predation and Compensation

Bhutan has 72% of its geographical area under forest cover, which holds a rich diversity of wild animal species, many of them endangered. Recognizing its potential in terms of rich genetic biodiversity that this country can offer to the world, the Royal Government imposed strong regulations to protect those animals by declaring at least 33% of the area as parks, sanctuaries and biological corridors. Anecdotally (and subject to more research), the population of the wild animals is believed to have increased in these areas.

In the case of JDNP as the wild predators have increased, predation on domestic animals and crops have intensified resulting in substantial losses to private property. During the Terminal Evaluation Mission to Laya, there were several complaints from the people of predation on mules, horses, yaks, etc. RNR statistics 2000 suggest losses as high 20-25% on an average reduction in crop harvest as result of losses to wild animal depredation at the national level.

While management plans have been drawn up for the parks, none of them as yet included compensation schemes for the loss of property, which directly or indirectly have been affected by conservation scheme. This is a critical issue especially in the context of Bhutan where park management continues to allow inhabitants occupy their ancestral places within the park. Experiences elsewhere in the world have proven that Parks are destined to fail if local population fails to support conservation programmes. Several people during the field mission have expressed resentment over the loss of their animals to predation.

Recommendation 13: The mission strongly supports replication or revision of livestock depredation compensation scheme in JDNP being implemented under Tiger Conservation Trust Fund Compensation Program for livestock depredation in the kingdom.

4.14 Strategic Staffing Increases

Staffing limitations are understood to have limited the successful completion of many of the GEF project activities. This resulted from a lack of qualified candidates for park positions during the early phases of the project and later the RGoB limited the number of staff in each National Park to 32. At present JDNP has the 32 staff in place, plus 4 retired army personnel in guard posts plus 9 individual risups.

However with the large size of JDNP and the upcoming completion of the new park entrance and warden post at Rimchu there will need to be an additional warden and guard staff hired in order to ensure that basic patrol and enforcement staff are available, at a minimum. A special exception to the staff limitation will be required if JDNP is to function properly.

Even if these positions are filled it will still not allow many of the core professional research and ICDP activities to be undertaken and the limitations on the implementation of the management plans will continue to be a problem. Professional staff will quite likely still be required to undertake basic patrol and anti-poaching tasks that detract directly from the ICDP implementation, REMO, tourism planning and other high priority management plan activities.

So a new staffing approach or model is needed.

Again with the concurrence of the RGoB, and possibly with external funding, three new warden-level dedicated park headquarters positions should be established (perhaps for an initial 5-year term). Each position would be assigned to a high priority management plan implementation task. For example the three new staff could be assigned exclusively to three of the following:

- Muletrack construction, upgrading and maintenance
- Ecological and biological research (for REMO)
- ICDP Implementation
- Zoning and community grazing lands research
- Tourism/Ecotourism Planning

This approach to achieving the additional staff time needed to move forward with the implementation of the Phase II management will also release some of the regional warden staff time that is presently allocated to more specialist tasks.

Recommendation 14a: The limitation to additional staff hiring should be re-considered by the RGoB.

Recommendation 14b: JDNP should allocate dedicated staff to high priority management plan implementation tasks (whom are not subsequently assigned to patrolling and ant-poaching activities).

4.15 Gender Equity Issues

JDNP has no female employees at the present time (although there have been some in the past) and it is the general perception of the existing park staff that the remote locations, difficult field conditions and lack of separate facilities in most locations make the recruitment and effective integration of women a very difficult if not impossible task. In strictly practical terms this assessment is accurate. The park has barely had time to complete its most basic infrastructure – and these have been designed without provision of gender-specific facilities.

Nevertheless, this is a situation that has been faced in the past in almost every new protected areas system anywhere in the world. The only technique available to provide opportunities to women at all levels in the PA system is to simply decide to do so. For example, new infrastructure developments should provide separate bath and sleeping facilities by design, whether or not there are presently any female employees at present. This

will certainly be useful in the event that there are shared facilities used by eco-tourists, research staff or visitors from central agencies or abroad. Reducing any structural impediments for female staff or guests is a very basic step that can begin the process of gender equity.

While the government approach to gender issue has never been discriminatory a more active, evolutionary approach to encourage women into the park service is needed. This is possible with a small additional investment by creating basic gender specific facilities in the park for women to live comfortably. There are many examples of such planning available from other park area management agencies that may be used as models for such a program.

Recommendation 15: NCD and JDNP should develop a gender equity program that endeavors to develop opportunities for new female employees within the park management structure during the next 5 year planning cycle.

4.16 Quality of Working Life

A significant portion of the discussion with JDNP officials focused on the practical day-to-day problems faced by the park managers, wardens, guards and risups. This discussion arose nearly spontaneously on every day of the field mission due to the tough monsoon field conditions which were faced and because JDNP is a difficult field environment in which to work at the best of times.

It is apparent that additional attention must be given to easing the existing difficulties of the JDNP staff, particularly for the remote locations in the park and for staff while on basic and during anti-poaching patrols. There are safety issues to be considered and the prospect of an overall reduction in staff morale and job performance if basic quality of working life issues are not addressed and solved.

This requires the expenditure of funds or providing allowances for the purchase of better field equipment including the highest quality footwear, raingear and sleeping systems. Provision must also be made for proper support for patrolling activities such as portering services, stoves, gas and adequate food. Further it requires the purchase or acquisition of better quality equipment for use on enforcement patrols ranging from cameras to handguns. An additional vehicle is required to improve the efficiency of staff and material movements among warden post and NCD Headquarters in Thimphu.

Another drawback on the monitoring of the poaching has been the low remunerations offered to Risups appointed by the Park. The remunerations of Nu.1000 provided per person per month appear to have little incentive value. An increase in remuneration at least up to Nu.3000 per month (minimum national wage limit) is recommended.

Recommendation 16a: A full and comprehensive assessment of the additional equipment needs should be undertaken for each post and individual within the park and a priority should be placed on procuring new and additional equipment within the first year of the new JDNP Phase II project.

Recommendation 16b: One additional FWD vehicles should be purchased and allocated to JDNP headquarters to ensure more timely delivery of materials, supplies and staff.

4.17 Replication and Partnerships within the Protected Areas System

The replication of the lessons learned from the JDNP GEF Project (designated as a pilot project by the RGoB) has been the expressed intention of all of the principal actors in the programme – including NCD, UNDP, GEF, RSPN and WWF among others. Several small initiatives have already taken place and there is an expressed

willingness to continue these as time and resources permit. Many joint workshops on a range of subjects have occurred in the past.

During 2001 an initial “annual” parks conference took place which was intended to be repeated each year. It has not been repeated at this point.

However the fledgling efforts to date do not take full advantage of the spirit and potential of the full idea of replication as it is understood at the national and international level within protected areas systems. The Bhutan PA system must be seen as an integrated whole – with a biodiversity conservation objective at its core. Thus the replication of the lessons learned in JDNP must be designed as more than a set of technical training subjects (as useful as these may be) but must continue to reinforce the integrity of the entire “biodiversity conservation complex” in Bhutan.

Recommendation 17: A formalized process for staff interchanges and semi-annual or annual conferences on issues of mutual concern will be of new benefit to the protected areas system in Bhutan. These meetings should examine the overall biodiversity objectives of each protected areas in addition to technical topics. It may be useful for such conferences to be organized and hosted by either WWF or RSPN or both.

4.18 Strategic Partnerships (external to JDNP and NCD; within and outside Bhutan)

Initial baseline research projects, field extension activities, environmental awareness programmes and some enforcement activities have all engaged a variety of other government agencies and NGOs within Bhutan. These include groups involved in research on traditional medicines, grassland and grazing management, agricultural improvement, social forestry, species surveys and anti-poaching. Many organizations such as NITM, RNRRRC, RSPN, ICIMOD and WWF already have had a significant formal involvement in the work program of JDNP. This trend should be encouraged and expanded as much as possible.

There are also new linkages which could be fostered with additional international partners including:

- IUCN – the World Conservation Union (particularly the World Commission on Protected Areas)
- The Mountain Forum
- Additional International NGOs
- Additional Philanthropic Foundations

It should also be possible for Bhutan to become engaged in the development of WSSD Type II partnerships following up upon the Mountain Sustainable Development theme which is being actively developed under the auspices of the UN CSD.

It will be ideal if these relationships are continued and expanded. Additional partnerships should be encouraged both inside and outside of Bhutan, particularly with respect to long-term research and monitoring activities.

Recommendation 18: Partnerships with Bhutanese and international agencies should be continued and expanded.

4.19 Maintaining an ongoing relationship with UNDP and GEF

With the conclusion of the GEF project and the initiation of a new donor-financed Phase II project in JDNP the linkage between JDNP and UNDP will be weakened. However with the principal objectives of the two groups still in basic agreement and congruence it will be very useful for co-operation to continue. UNDP will be

undertaking support for RGoB decentralization policies within the Geogs inside the park and there will continue to be opportunities for UNDP small grants initiatives at various times and places.

Similarly it will be important for UNDP to remain aware of the policies and plans that have been adopted by NCD and JDNP and to foster an atmosphere of policy coherence within the respective planning bodies of RGoB such as the GYT and DYT. In particular, the Biodiversity Action Plan II, the NCD “Strategy and Vision” and the overall progress towards the implementation of both will be critical to the success of UNDP programme implementation.

The co-operation of UNDP in assisting NCD and JDNP with donor co-ordination and accessing future funding opportunities (e.g. GEF) will no doubt be important as well.

Recommendation 19: An ongoing policy dialogue among UNDP, GEF, NCD, JDNP and other Bhutan protected areas should remain a high priority.

4.20 Monitoring and Evaluation

There has been consistent and satisfactory level of monitoring in the form of visits, meetings, workshops and timely progress reporting. It has served the purpose in guiding the project direction and progress of the work. Besides the Park’s constant field visits, other agencies such as UNDP/GEF has also been making at least bi-annual visits to the Park. Such visits to the field has not only kept implementation on track but served as a morale boost for the field staff working in remote and harsh terrains. An independent external mid-term review has also been fielded in March-April 2000, which highlighted important recommendations for direction and improvement.

5.0 Lessons Learned

With the implementation of the first phase of the Jigme Dorji National Park project drawing to a close, it is vital to draw on those positive experiences and lessons learned for improvements in future planning and strategy developments. Here are some of the observations made and lessons learned during the mission’s field trip in JDNP.

5.1 Project Flexibility and Adaptability

In many respects one of the strongest lessons learned from the UNDP/GEF project in JDNP is the value of **maintaining a flexible and adaptive approach to project design and implementation.** Given that the project was formulated relatively early in the existence of the GEF system, that the designers intended to be progressive as possible, that a “people and parks” model was in use for one of the first times in Bhutan and that many of the logistical difficulties could not be fully anticipated (by the short mission) it would have been very easy for the project to fail if the original programme had been rigidly adhered to.

5.2 Strong Country Ownership

Conservation and protection of nature has always been a priority goal of the Royal Government of Bhutan. His Majesty has always been a driving force and an architect of all the achievements made in so far as conservation in Bhutan is concerned. Therefore, there is a strong political will and commitment from the government and the King to conserve the country’s biological diversity.

Although project-specific funds are still met from external sources, staff salaries including operation and maintenance costs are all being met from internal resources. Over the time as the Park is able to generate enough resources from tourism, BTF, and other internal resources, dependency on external financing will be

reduced. It is an important consideration that realistic targets are set in commensurate with actual staff strength and adequate remunerations provided for effective service.

5.3. Sustainability

Parks in Bhutan have been explicitly designed to accommodate local inhabitants whose aspirations to attain for a better life is no different from others. **Bhutan's experience in this park development model (IUCN Category V) proves that both people and the park can exist harmoniously.** Local inhabitants needs are being met through the relatively benign development of minimal infrastructure such as mule tracks, bridges, power, etc. Although these services have to be supported by external donor agencies, potentials exist within the park to be able to meet its own end in the longer run.

There is already a general awareness among the people of the value of protecting nature, the mountains and the forests and their keenness to continue living in an environment that has sustained them for generations. The practice of shifting cultivation (tseri) in many parts of Gasa have reduced and forests been regenerated. Forests felling have also been reduced in the community vicinity partly to JDNP patrolling. According to people in Laya, animals such as leopards, tigers, bears and deer have reappeared in the last two years as a result of wild animal habitats been restored.

5.4. Stakeholder Participation

JDNP has utilized an integrated participatory programme from the beginning of the project. **All stakeholders are actively participating in planning and implementation of conservation and development activities.** There is already a sense of responsibility and ownership in the minds of the people that they have ownership of the results of the conservation and development programme. People are beginning to realize that conservation and development can co-exist.

While it has been very successful in the development of integrated community plans, the success of implementation process is yet to be seen. The project is indeed going through a critical stage.

5.5 The Privilege of Commitment

One of the most striking features of the JDNP project is **the personal and professional commitment to nature conservation**, which is exhibited at all levels within the project and among the NCD and park staff. This is both a cultural trait within Bhutan and it is clear that there is a strong sense of national pride in the biodiversity "gift to the world" which is a core government policy.

6.0 Conclusion

The landscapes of Bhutan are an internationally recognized biodiversity "hotspot" of considerable global significance. As such, Bhutan has qualified for important investments by the Global Environment Facility and the project in Jigme Dorji National Park was one of the early GEF initiatives in the Himalayas. The project was facilitated by UNDP which also invested additional funds in recognition of the human development objectives which were complementary to the biodiversity conservation programming.

This evaluation has determined that the GEF and UNDP investments were utilized largely as the project was originally designed. Component 1 was successfully implemented, while Component 2 was less successful. The mid-term review resulted in some adjustments to the original design and the project was extended for an additional year to allow some of the funds from Component 2 to be used for the successful element of Component 1. The reasons for the programming changes and deferments were all properly explained and justified and have been included in Section 3 of this report. Therefore it is concluded that the GEF project objectives, as amended were successfully achieved in this work.

As an additional result it is clear that the project has demonstrated significant benefits to the target human populations within the protected areas (in addition to the overall biodiversity conservation objectives). The trail construction activity in particular has dramatically improved the quality of human life. Additional projects such as the construction of livestock, forestry and agricultural extension activities (along with experimental vegetable and medicinal plant demonstrations), and the construction of community schools have contributed extra benefits.

The broader objectives of the UNDP investments in this project were appropriately advanced by the project. The JDNP project has successfully implemented a variety of social development projects, such as the provision of basic services in remote villages. These activities are directly in line with UNDP objectives related to poverty reduction and economic development, as well as the advancement of good governance. In doing so, the park activities that serve to help people then directly reduce the human population stress on the natural environment.

The question remains however – “Have the GEF and UNDP interventions achieved the longer term biodiversity conservation objectives that are the basis for the Convention on Biological Diversity and the GEF?”

Well, in reality we do not yet know the answer to this question! (yet) The first phase of JDNP has indeed made significant progress towards the establishment of a well-functioning National Park. And Bhutan has an admirable road map in place for conserving its overall biological legacy of which JDNP is a pilot project and significant overall element. However the status and population dynamics and trends of many of the keystone species that JDNP protects is not yet well understood. This understanding may take many more years to achieve!

What we do know is that the overall forest cover of Bhutan is increasing, that natural habitats are fully protected in well over 30% of the country (and probably more) and that vast areas of parks such as JDNP are almost unaltered by human activity. Thus it is very likely that the biodiversity values remain essentially intact.

Clearly there is both the time and commitment to continue the complex work of measuring the success of biodiversity conservation programming in Bhutan.

7.0 Annexes

7.1 Terms of Reference

7.2 JDNP LogFrame

7.3 Financial Expenditures by the Project

7.4 Persons Interviewed

7.5 Documents Reviewed

7.6 JDNP Map