Reassessing the Management of National Parks and Sanctuaries in India

Volume 1: Findings & Recommendations

Compiled and Edited by

Raman Mehta, Vishaish Uppal, Shekhar Singh

Cover painting of a Common kingfisher (Alcedo atthis bengalensis) is by Uma Bordoloi, as are the sketches and paintings in the volume.

2nd All India Survey of Wildlife Protected Areas in India:

1998-2003

Reassessing the Management of National Parks and Sanctuaries in India

Volume 1: Findings & Recommendations

Compiled and edited by

Raman Mehta, Vishaish Uppal, Shekhar Singh

Research, Assessment and Analysis Group
C 17A Munirka, New Delhi 110067

2003

Reassessing the Management of National Parks and Sanctuaries in India

Report of the 2nd All India Survey of Wildlife Protected Areas in India - 1998-2003, in six volumes

Volume 1 - Findings & Recommendations
Volume 2 - Biological Profiles of Individual PAs
Volume 3 - Socio-economic Profiles of Individual PAs
Volume 4 - Management Profiles of Individual PAs
Volume 5 - Detailed Socio-economic Profiles of Selected PAs: Part I (Andhra Pradesh & Gujarat)
Volume 6 - Detailed Socio-economic Profiles of Selected PAs: Part II (Haryana, Himachal Pradesh, Meghalaya, Mizoram, Rajasthan)

The above volumes can be downloaded from
http://shekharsinghcollections.com/conserv-wildlife.php
/Second Survey of National Parks & Sanctuaries in India 1998 - 2003

First edition 2001
Revised edition 2003
Formatting and uploading of the revised edition on the web 2021

PROJECT TEAM

Project Director	Shekhar Singh

IIPA Team (1998 - 2001)

Consultants	Tara Gandhi Raman Mehta Archana Prasad (Till March 1999) Prabhakar Rao (Honorary) Vasumathi Sankaran Vishaish Uppal
Project Executive	SK Katyal
Research Associates	Insar Ali Bikram Dutta (Till June 2000) James Pochury Salim Ahmad Quereshi Shalini Sahay Arpan Sharma
Research Assistants/Field Investigators	Abhishek Bhardawaj Mohit Chaturvedi Kaushik Dasgupta Ritwick Dutta Rumman Hamid Syed Mirajuddin Paloma Pal Supriya Singh
Administrative Support	Des Raj Budhiraja Alka Sharma
Computer Operators	Lalit Dabral Harish Mehra Vijay Naugain Navjyoti Shobha Negi Harish Sharma Manish Rawat Neetu Suri

Office Support	Madan Giri Balak Ram Prem Wati

CES TEAM (2001 TO 2003)

Consultants	Vishaish Uppal
Research Associates	Salim Ahmad Quereshi Arpan Sharma
Office Support	Balak Ram Prem Wati

RaaG Team (2021)

Illustrator	Uma Bordoloi
Research Assistants	Chandra Kaushal Rubina Mondal

***

The 2nd All India Survey of Wildlife Protected Areas in India
was supported from 1998 to 2001
by
The World Bank, Washington D.C.
through
The Ministry of Environment & Forests,
Government of India, New Delhi

The survey was initially based at
The Indian Institute of Public Administration (IIPA)
New Delhi
(1998-2001)

and subsequently at
The Centre for Equity Studies (CES)
New Delhi
(2001-2003)

The report was formatted and uploaded on the web by the
Research, Assessment, and Analysis Group (RaaG)
New Delhi
(2021)

TABLE OF CONTENTS

Glossary of Terms and Expansion of Abbreviations

TERM/ ABBREVIATION	MEANING
Adjacent area	10 kms radius from park or sanctuary boundary
Ave or avg.	Average
Bunds	Raised earthen ridges, usually for soil and water conservation
CES	Centre for Equity Studies
chullahs	Cooking fire
Comnt.	Comment/communication
Compt.	Compartment
Dinghies	Small boats
F & WL	Forests and wildlife
FAO	Foods and Agriculture Organisation of The United Nations
Gad/gadh	fortress
Gaur	Indian Bison (Bos gaurus)
Gumpa	Also sometimes spelled gompa - "is a meditation room where practitioners meditate and listen to teachings" of Tibetan Buddhism.
Gurudwara/ gurdwara	A Sikh temple
Ha / ha.	hectares
IIPA	Indian Institute and Public Administration, New Delhi
IUCN	International Union for the Conservation of Nature and Natural Resources
Jhumming	Shifting cultivation
Jt	Joint
Jyotirlingas	Jyotirlinga or Jyotirling or Jyotirlingam is a shrine dedicated to Lord Shiva where Shiva is worshipped in the form of a Jyotirlingam or "Lingam of Light". There are said to be twelve Jyotirlinga shrines in India although their location is not consistently identified.
Kila/quila	Fort
m	meters
Machan	A raised platform, usually in a tree, used for observing animals
MoEF	Ministry of Environment & Forests
msl	Mean See Level
n.a	not available
n.r.	not relevant
N or NP/S	national park / sanctuary

NP	If occurring in a column titled "old data 1984-1987", depicts that the relevant data is "not present" for that PA in the old data set.
Nala	Drain, stream, canal, water channel
Neelgai/nilgai	Bue bull (Boselaphus tragocamelus)
Nistar	Land set apart for exercise of nistar rights may be timber or fuel reserve; pasture, grass, or fodder reserve; burial ground and cremation ground; or village site; encamping ground; threshing floor; bazaar (market); skinning ground; manure pit; public purposes such as schools, playgrounds, parks, lanes, drains; and any other purposes that may be prescribed.
NTFP	Non-timber forest produce
OTH	Other
PA	Protected areas - National Parks and Sanctuaries
Park Manager	An official of any designation and level holding overall responsibility for a park /sanctuary
Pers.	personal
Pop.	population
Rs.	Indian Rupees
S	Sanctuary
Sant	saint
SCs	Scheduled castes
Smt.	Srimati (Mrs)
spp.	Species
State	Union Territory or State
T	total
Tal	lake
Toposheet	topographical sheet of the survey of India
UT	Union Territory
Van	forest
WL	Wildlife (spelled as 'wild life' in the Wildlife (protection) Act of 1972)
WLPA	Wildlife (protection) Act of 1972
Yatra	trip/pilgrimage

PREFACE

The Ministry of Environment, Government of India, sponsored this survey of wildlife protected-areas in India, as a part of a World Bank sponsored poject. The project was initially taken up at the Indian Institute of Public Administration (IIPA), in 1998. The draft report was also finalized and submitted to the Ministry of Environment and Forests, Government of India, in 2001, from the IIPA.

However, the report was finalized only in 2003, at the Centre for Equity Studies (CES), where the project director had since joined (in 2002) as the honorary director, and also had as colleagues, at the CES, some of the consultants and senior members of the original IIPA research team.

The report was finalized after incorporating the additional information received subsequent to the submission of the draft report, and after taking into consideration the comments received on the draft report. (Please see copy of forwarding letter of the revised repport to te director of project tiger, MoEF, at Annexure II)

Background to the Survey

In 1984, the Department of Environment, Government of India, sponsored an All India Survey of National Parks and Sanctuaries, to be jointly carried out by Mrs. Dilnavaz Variava, former member of the National Committee on Environment Planning and member of the IUCN Commission on Education, and Shekhar Singh, on the faculty of the Indian Institute of Public Administration, New Delhi. For further details, please see introduction to Questionnaire I of the All India Survey of National Parks and Sanctuaries [1].The findings of this all-India survey were published in 1989 in a report

[1] Copy accessible from http://shekharsinghcollections.com/content/conserv-wildlife/Wildlife_PAs/1984-Questionnaire-1-All-India-Survey-of-National-Parks-and-Sanctuaries.pdf

titled *Management of National Parks and Sanctuaries in India - A Status Report*[2].

In 1998, the Government of India decided to redo the survey in order to determine the changes and trends, over a fifteen year period, in the management status of national parks and sanctusries in India. Towards this end, they approached various institutions and research organisations and sought detailed proposals from each for undertaking the second survey. Finally, they once again selected the IIPA and requested them to undertake the second survey.

Objectives of the Survey

The terms of reference specified that the survey team would:

1. Survey the status of wildlife protected areas (PAs) in India, including the legal and administrative status, socio-economic pressures, management planning and implementation, staffing, research, monitoring, and tourism.
2. Use a methodology, for the basic survey, that is such that it allows comparison of data with the earlier survey done by the IIPA in 1984-86.
3. Based on this survey, undertake various specific tasks.

Tasks

In order to fulfill these objectives, the survey team set itself to survey the PAs in India in terms of their:

- **Legal Status**: how many of the steps prescribed, for setting up a national park or sanctuary, under the Wild Life (Protection) Act of 1972, as amended in 1991, have been carried out? With whom does the control over the PA vest?
- **Management Status**: Are there up-to-date and approved management plans? Are their appropriate budget provisions? What levels and numbers of staff are in position, and how many

[2] Accessible from http://shekharsinghcollections.com/content/conserv-wildlife/Wildlife_PAs/1989-Management-of-National-Parks-and-Sanctuaries-in-India-A-Status-Report.pdf

are trained in wildlife management? What are the management practices, especially relating to control of poaching, regulation of visitors, and prevention and vacation of encroachments? What is the availability of equipment, literature and reference materials? What interpretation, education and extension facilities and activities are in evidence? What level of participation is there of the local people in the protection and management of the PA? What ecodevelopment initiatives have taken place?

- ***Biological Profile**: What habitat and ecosystem types, including forest and biogeographic types, occur in the PA, what is their location and extent, and what is their status? What species of fauna and flora occur in the PA, what is their distribution and status? What geographical connection, if any, does the PA have, through corridors and such like, with other PAs? What are the significant biological values in the PA?*
- ***Socio-economic Profile**: How many people live within or adjacent to (10 kms radius) the PA? What is their socio-economic status and their dependence on natural resources, especially those of the PA? What is the nature and legitimacy of their use of, and dependence on, the PA, past and present? What is the tourism value of the PA and how many and what sorts of tourists visit it, and when? What are the religious and cultural values of the PA? What impact does the PA have on the local people, especially adverse impacts including depredation by wild animals and restrictions on the use of resources?*
- ***Management Issues**: What are the major threats to the habitat and species? What is the incidence and nature of illegal activities in the PA? What is the incidence and impact of activities within the PA by other government departments? What is the cause, intensity and frequency of law and order problems, including tensions with the local people?*

Methodology

As the findings of this survey had to be contrasted with the findings of the earlier survey, in order to assess the changes that have occurred in the interim, the basic methodology followed was the

same as that which was followed in the earlier survey. This methodology is described below.

- *A questionnaire[3] seeking information on all these aspects will be sent to the directors or officers-in-charge of each national park and sanctuary. They would be requested to complete the questionnaire and return it to IIPA.*
- *Meanwhile, a search of secondary literature on each PA, dealing with any of the listed aspects, will be undertaken, and the documents compiled.*
- *Simultaneously, a database would be created of the known distribution of plant and animal species and of biomes, across India and, based on that, a listing of what species and biomes could ordinarily be expected to occur in which PA.*
- *Also, a survey of census records and other related data would be made and details of the population and socio-economic parameters relevant to PAs and their adjacent areas would be compiled from these sources.*
- *Similarly, the boundaries of each PA would be marked out on a Survey of India toposheet of appropriate scale, and on forest cover maps of the Forest Survey of India, and basic maps produced for each PA. The information on these maps would be supplemented once information from the PAs becomes available.*
- *National and state budgets and plans will also be analysed to identify the allocations and schemes relevant to each PA and to its adjacent area.*

---

[3] Copy of questionnaire accessible from: http://shekharsinghcollections.com/content/conserv-wildlife/Wildlife_PAs/1984-Questionnaire-1-All-India-Survey-of-National-Parks-and-Sanctuaries.pdf

See questionnaire – II, which was sent to the chief wildlife wardens of each state to get information regarding the PAS in the state and policy, financial allocations and staffing of the wildlife department in each state. http://shekharsinghcollections.com/content/conserv-wildlife/Wildlife_PAs/1984-Questionnaire-II-All-India-Survey-of-National-Park-and-Sanctuaries.pdf

Also see questionnaire A, which was a later version of questionnaire 1 and was used to get information in 1989. http://shekharsinghcollections.com/content/conserv-wildlife/Wildlife_PAs/1989-Study-on-Management-of-Wildlife-Protected-Area-in-India-Qestionnaire-A.pdf

- On receipt of the completed questionnaires, they would be analysed and if any gaps or questions remain, they would sought to be filled and answered respectively.
- Based on a quick survey of the questionnaires received, those PAs would be identified that warrant a field visit. These would be those PAs where the information provided in the questionnaires needs to be supplemented by personal observation and/or a discussion with the local level officials.
- The field visits would be done by teams of three or more researchers who would collectively represent all the different areas of expertise required. These teams would not only visit the PA and meet with the forest officials but also, where required, meet revenue and other officials connected with the PA and its adjoining areas. The field visitors would also meet with local NGOs and other knowledgeable and concerned individuals, including a sample of the local villagers.
- The information so gathered would be compiled and a profile made of each PA. There would also be a compilation of state level data. These compilations would then be sent back to the PA/state and, wherever necessary, discussions would be held at the state level.
- The final data set would then be analysed and a draft report produced, which would be discussed in one or more workshops, before being finalised.

Outputs

Given below is a tabular statement of the description of services, as specified in the contract for the survey between the Ministry of Environment and Forests, Government of India and the IIPA, and the outputs in fulfillment of the contract.

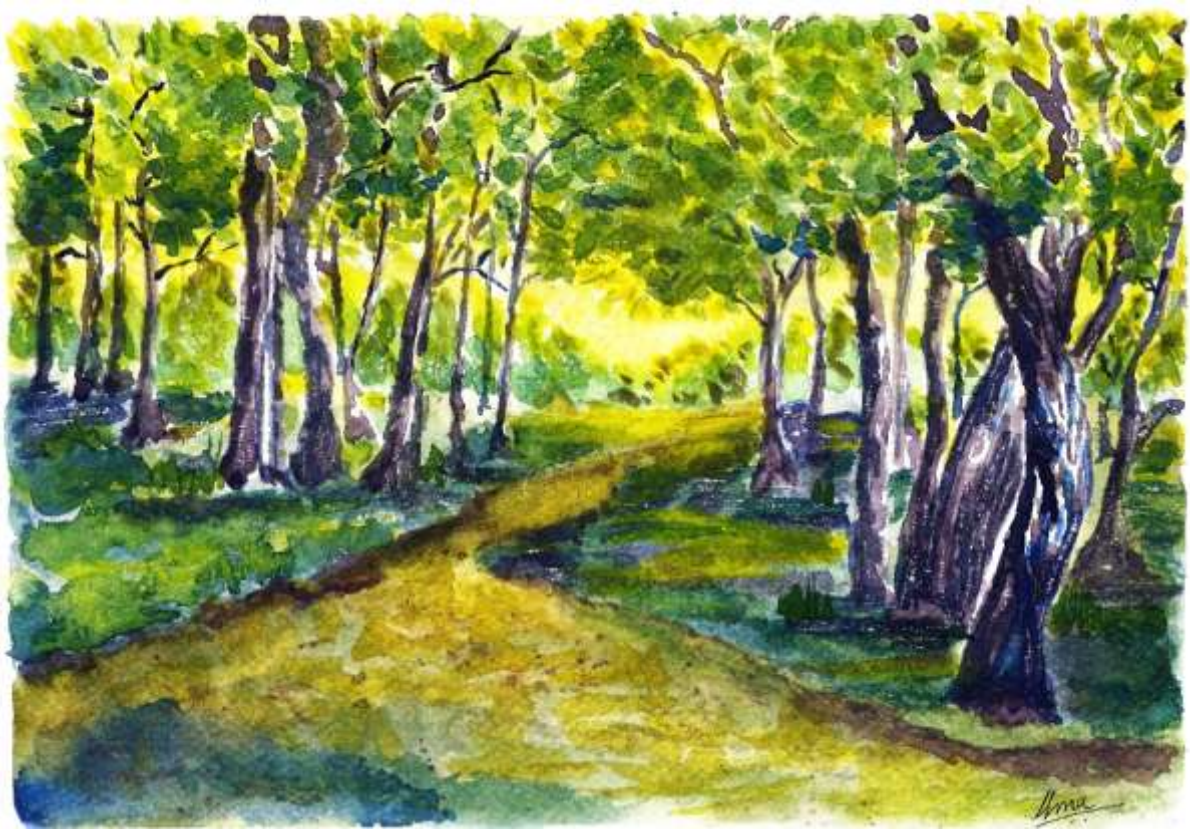
DESCRIPTION OF THE SERVICES	OUTPUTS
The IIPA would :	
1. Survey of status of wildlife protected areas (PAs) in India, including the legal and administrative status, socio-economic pressures, management planning and implementation, staffing, research, monitoring, and tourism.	Completed the survey. A report of the survey is given in this volume.
2. Use a methodology, for the basic survey, that is such that it allows comparison of data with the earlier survey done by the IIPA in 1984-86.	Such a methodology was used.
3. Based on this survey :	
3.1 update their publication Management of National Parks and Sanctuaries in India : A Status Report [IIPA 1989], and highlight trends, using the 1989 report as the baseline.	The report is an update of the said publication and gives, where relevant, for comparison the old and the new data.
3.2 Describe and prioritise PAs in terms of the ecodevelopment requirements for each protected area, so as to assist in developing a list of PAs to be selected for the proposed GEF India Ecodevelopment Project - II.	The prioritization is given in Chapter IV.
3.3 Describe and prioritise PAs in terms of management needs for each PA.	The prioritization is given in Chapter IV.
3.4 Assess national laws, policies, schemes and programmes relevant to PA management and ecodevelopment, and recommend changes, if required.	Given in Chapter V
3.5 Develop a data base on different aspects of PAs including photographic data for use both in training and in subsequent monitoring.	Included in volume 7 and 8
3.6 Identify legal and other external interventions that might be required for the proper conservation of specific PAs.	Given in Chapter IV

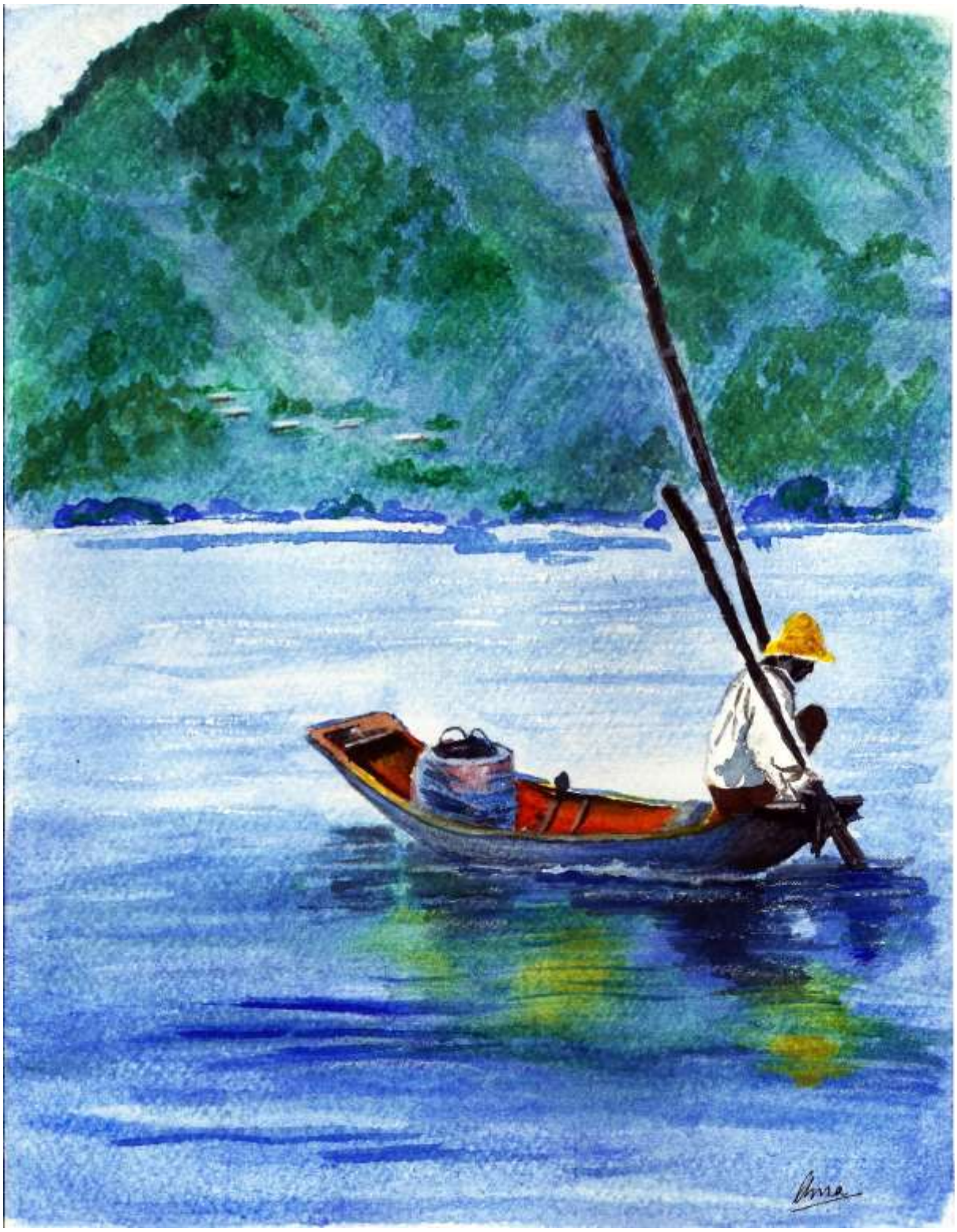
Structure of the Report

This main report and some annexes are in this volume. The detailed data tables and photographs are in separate volumes.

Codes are used for the various PAs. These codes have three elements. The first represents the state in which they occur, eg., ARU

for Arunachal Pradesh, MP for Madhya Pradesh, and so on. The second element specifies their legal status, N for national parks and S for sanctuaries. The third element gives the first three or four letters of their name, BAND for Bandipur, BANN for Bannerghata, or SAD for Saddle Peak. Therefore, Great Himalayan National park in Himachal Pradesh would be coded as HP/N/GRE. A list of the codes along with the names of the PAs responding is given in Annexure III and IIIa.





I. Biological Profile

The primary reason for setting up protected areas is to conserve the biological diversity inherent in them. The Indian Wildlife (Protection) Act, 1972 says that the primary function of national parks and sanctuaries is '… protecting, propagating or developing wild life or its environment' (Section 18 (1)). Consequently, our first task was to investigate the biological profile of PAs and to determine how comprehensively and effectively they protected the biodiversity of India. The type and status of the biological resources in a PA would also determine the level of protection it deserves and the types of management practices appropriate.

Unfortunately, there is still poor information about the biological profile of most PAs. The PA authorities often do not have the staff or facilities to properly list and monitor all the species found in the PA. Though other agencies of the government, and universities and other professional institutions, have also been helping in this task, much still needs to be done.

In studying the biological profile of PAs, information was collected for:

- Habitat types and extent
- Types of Forests and their Status
- Plantations
- Corridors
- Species (faunal), including list of schedule I species occurring, details of overpopulation, of threatened species, of species of special interest, and of those accidentally or deliberately introduced.
- Species (floral), including list important species occurring, details of overpopulation and of infestation of weeds, of threatened species, of species of special interest, of those accidentally or deliberately introduced, and of ex situ cultivation.

- *Impact of pressures on the biodiversity of the PA, including impacts of projects and activities, floods, fires, droughts, pollution, water logging, various natural phenomenon, tree-felling and timber extraction, and disease.*

1.1 Habitat Types and Extent (Table 1.1, volume 2)

Several alternative approaches are available, or are being developed, for classification of natural ecosystems. There is now an increasing acceptance of biogeographic along with vegetation classifications of areas as a starting point for the planning of a protected area network. A classification of biogeographic realms, provinces and biomes has been being elaborated for Indian application at the Wildlife Institute of India.

However, there still appears to be no standardised system of classification for all the different ecosystem types in India. Consequently, for this study we have used a "common sense" classification and listed the various types of habitats as follows:

- *Forests*
- *Wetlands*
- *Perennial rivers/streams*
- *Coasts*
- *Islands*
- *Ocean*
- *Rangelands (grasslands)*
- *Mountains*
- *Deserts*
- *Glaciers and other permanently snowbound areas*
- *Others*

Clearly, there is an overlap in these categories and you can have the same area classified, for example, as forest, as a mountain, and as an island.

There are alternate systems available for classifying vegetation and forest types. In terms of pure vegetation mapping, the most recent classifications are those of Meher-

Homji and others of the French Institute, Pondicherry[4]. However, the present study, uses the Revised Classification of Forest Types by Champion and Seth (1968)[5] as this is the vegetation classification currently most widely used in India, and therefore most familiar to park managers.

Champion and Seth divides India's forests into 16 major groups (e.g., Group 3 Tropical Moist Deciduous Forests), which in turn are divided into sub-groups (e.g., Sub-group 3B Andamans Moist Deciduous Forests). The sub-groups are themselves further divided into type (e.g., 3B/C1 Moist Teak-bearing Forest, or further, 3B/C1a Very Moist Teak Forest). Of these, the unit most commonly used for categorisation of forests is 'type'.

India has a great variety of habitat types, many of which are represented in its parks and sanctuaries. Most parks and sanctuaries, in fact, contain more than one type of habitat, some having over half a dozen.

Information on habitat types (NOT to be confused with "forest types")was available for 312 PAs (see table 1.1, volume 2). As can be expected, forests were the most common type of habitat reported. The percentage of area comprising different types of habitat, in the parks and sanctuaries responding, was as follows:

	Area (sq. km.)	% of total area
Forests	53044.56	52.57
Wetlands	5440.43	5.39
Islands	627.59	0.62
Oceans	10543.12	10.45
Rangelands /grasslands	10350.89	10.26
Mountains	24179.19	23.96

[4] Gadgil, Madhav and Meher-Homji, V. M. (1986) *Localities of great significance to conservation of India's biological diversity* Proceedings of the Indian Academy of Sciences (Animal Sciences/Plant Sciences) (Suppl.). pp. 165-180. Accessible from **http://ces.iisc.ernet.in/envis/sdev/mg/pdfs/mg074....**

[5] Champion, H. G. and Seth, S. K. (1968). *A Revised Survey of Forest Types of India*, Govt. of India Press, New Delhi

Deserts	6709.30	6.65
Glaciers	7221.26	7.16
Total[6]	**100907.70**	**117.28**

1.2 Forest Types (Table 1.2, volume 2)

Information on forest types was available for 257 PAs (of the 312 for which filled in questionnaires were received). As can be seen, many of Champion and Seth's types are represented in one or more of these protected areas. Some of the parks and sanctuaries reported a great diversity of forest types. Kedarnath Sanctuary (UTT) recorded as many as 17 types, by far the PA with the greatest diversity of vegetation reported. Corbett National Park (UTT), Sangla Sanctuary (HP), Lippa Asrang Sanctuary (HP), Namdapha National Park (ARU), and Kawal Sanctuary (AP) are other areas reporting significant diversity.

Further analysis of the data reveals the following incidence of the 16 major groups of forest identified by Champion and Seth:

S.No	Forest Group	No. of PAs	
		Old data	New data
1.	Tropical Wet Evergreen	34	23
2.	Tropical Semi-Evergreen	47	56
3.	Tropical Moist Deciduous	82	90
4.	Littoral and Swamp	35	30
5.	Tropical Dry Deciduous	129	120
6.	Tropical Thorn	18	13
7.	Tropical Dry Evergreen	2	4
8.	Subtropical Broadleaved Hill	16	11
9.	Subtropical Pine	11	9
10.	Subtropical Dry Evergreen	2	0
11.	Montane Wet Temperate	9	8

[6] Area and percentage totals do not add up because of overlaps. Further, in the case of TN/N/GUL, the area under oceans reported by the PA authorities appears to be additional to the notified area of the PA, and has been included in the calculations above

12.	Himalayan Moist Temperate	29	24
13.	Himalayan Dry Temperate	10	5
14.	Sub-Alpine	7	12
15.	Moist Alpine Scrub	8	15
16.	Dry Alpine Scrub	1	7

It can be seen from the above that by far the most common forest group in India's national park and sanctuaries is Tropical Dry Deciduous, which also happens to be the most common kind of forest found in India. Tropical Moist Deciduous Forests also have a strong representation in our protected areas.

On the other hand, forest groups rarely represented are the Moist Alpine Scrub, the Tropical Dry Evergreen, and the Subtropical Dry Evergreen.

Of the 55 PAs that did not respond to this question, for 6 PAs, viz. Abohar (PUN), Balukhand (ORI), Bhindawas (HAR), Koothan(TN), Rajmahal (JHA) and Vellode (TN) it was stated that they were devoid of natural forests. Of these, 4 PAs, viz. Balukhand (ORI), Bhindawas (HAR), Rajmahal (JHA) and Vellode (TN) reported that they only contained plantations, One PA, viz. Abohar (PUN) reported that it only contained cultivated or village land, while one PA - Koothan(TN)- reported that it did not have any forests within. Quite a few PAs did not report any forest types, possibly because they are wetlands.

A listing of forest sub-types (Champion and Seth classification) for individual PAs is given in table 1.2 (volume 2).

1.3 Forest Status (Table 1.3, volume 2)

Data were also sought regarding the status of forests in the PAs. Responses were received from 305 PAs. The sum total of the area of these PAs is 1,00,560.07 sq.kms, stretching across 529 forest ranges. However, information regarding the status of forests was received for only 80,617.63 sq. km (table 1.3, volume 2). For the remaining the status was not indicated and, as such, no information has been entered under

columns 6 to 8 in table 1.3, listing the areas that are "undisturbed", "slightly disturbed", "heavily disturbed" or ?? "plantations"??.

The status of the forests within PAs was sought under four categories and the findings are as follows:

Category[7]	Area[8] (sq. km.)	% of total
Undisturbed	23770.49	29.49
Slightly Disturbed	30012.38	37.23
Heavily Disturbed	21532.60	26.71
Plantations	2773.00	3.44
Total[9]	80617.63	100.00

The information on status of forests in PAs was not collected during the first Survey (1985-1989).

1.4 Plantations (Table 1.4, volume 2)

Manipulation of the habitat of protected areas is being done in various ways. One such is the establishment of plantations (mostly of trees)[10] within the boundaries. Data collected show that plantation work takes place in quite a few of the parks and sanctuaries.

Of the 55 national parks and 257 sanctuaries responding, 34 (61.82%) and 180 (70.03%) respectively, reported that plantations had been established in the PA.

---

[7] The categories are defined as follows:
Undisturbed: Those forest ranges which are undisturbed as they have not been subjected to any forestry operations and human pressures including non-forestry land use like mining and quarrying, habitation, or some other developmental activities, biotic pressures like grazing, NTFP collection etc., and habitat related factors like forest fires or floods and retain their natural species composition.
Slightly Disturbed: Those forest ranges which are subject to some disturbance and show a slight change in their natural species composition
Heavily Disturbed: Those forest ranges which are heavily disturbed and where there is a significant alteration of the natural species composition.
Plantations: Those forest ranges which have either been clear felled and planted, or where the predominant vegetation cover is planted.

[8] For some of the PAs, area reported for the ranges under management happens to be larger than the notified area of the PA. In these instances, we have made our calculations based on data reported by the PA authorities.

[9] The total in the table does not match with the total area of the PAs that responded to this question, because of discrepancies in reporting.

[10] These are either exotic species of trees, or indigenous species planted in non natural formations, like single specie plantations.

(Comparable figures from the old database were that of the 39 national parks and 163 sanctuaries responding, 17 (44%) and 94 (58%) respectively, reported that plantation work was undertaken between 1979 and 1984.)

Of the PAs that responded for both the studies, 24 of the PAs that had indicated no plantations in the earlier survey (1979-84) now reported the existence of plantations. Of these 24, at least in twelve the plantations were recent (after the last survey). These PAs were: Manjira Sanctuary (AP), Mehao Sanctuary (ARU), Bansda National Park (GUJ), Kishtwar National Park, (J&K), Ghataprabha Sanctuary (KAR), Melkote temple Sanctuary (KAR),Nagzira Sanctuary (MAH), Navegaon National Park (MAH), Radhanagri Sanctuary (MAH), Phawngpui National Park (MIZ), Desert National Park (RAJ), and Pulicat Sanctuary (TN). In the remaining 12 the plantations were either old but had not been reported in the earlier survey, or their years were not specified.

Of the 214 PAs reporting plantation activities, 54 (25.23%) reported establishing plantations in the 1990s. Of these 54, in 11 (20.37%) PAs species exotic to the PA were planted in the 1990s. *Some of the more common exotic species planted were Eucalyptus, Robina, Poplar, Acacia sp., Teak, and Prosopis Juliflora*

Limitations of the Data

Since many of our national parks and sanctuaries have not been adequately surveyed on the ground, it is possible that the above data is incomplete. Also, it appears that in some cases the forest types reported was that of the general region within which the park or sanctuary was located. Considering the most convenient listing of forest types in an area is usually found in the forest working plans, which pertain to areas mostly larger than and including the parks or sanctuaries, this is understandable.

Besides, the present state of these forests is not at all clear, and it is quite possible that some of this information represents areas where these forest types did exist in the past

but now either no forest exists or because of extensive felling of certain species of trees, or the introduction of exotic tree species, or both, the nature of the forests have changed significantly.

The extent of area under different forest types in each park and sanctuary was asked for, but the replies were scanty. The information obtained is thus not reproduced here. It has also, therefore, not been possible to work out the extent of each type protected in parks and sanctuaries.

1.5 Corridors (Table 1.5, volume 2)

In a country where there is great pressure on land and it is difficult to create and maintain protected areas that are large enough units to allow the existence of viable populations of species, especially large mammals, one alternative is to connect existing PAs with corridors so that their effective size significantly increases without the concomitant increase in adverse impacts on human populations living in and around. This also allows valuable land to be saved and put under other uses.

Consequently, the existence of corridors connecting various parks and sanctuaries is considered important for the well-being of wildlife, especially of the larger mammals. Such corridors allow movement of animals between different protected areas, enlarge their range and the habitat available to them, and facilitate the maintenance of genetic diversity and health by allowing different populations to intermingle. This significantly increases their chances of survival. Ideally, all the protected areas should be so interlinked so that the problems related to the restrictions in the size and diversity of habitat, are minimised.

Of the 57 national parks and 256 sanctuaries responding, 23 (40.35%) of the parks and 57(22.35%) of the sanctuaries reported being connected to another sanctuary or park through a corridor.

(Corresponding figures in the earlier survey were that of the 62 national parks and 121 sanctuaries responding

[11] (extended database), 16 (25.81%) of the parks and 46 (38.01%) of the sanctuaries reported being connected to another sanctuary or park in this manner.)

It is worth noting that in Tripura, Punjab, Haryana, and Manipur, none of the responding parks and sanctuaries are connected by corridors. Kerala was the only state where all its responding PAs were connected by corridors.

Of the total 80 PAs connected to any natural ecosystem by corridor, there were 22 PAs that had reported no corridors in the earlier survey but have reported being connected by corridor in the present survey. However, Indrawati, Kangerghati, Bhairangarh in Chattisgarh, Nargu in Himachal, Someshwara in Karnataka and Bandavgarh in MP have reported that they are not connected by corridors in the present survey, whereas in the earlier survey, they all had reported corridors.

Limitations of the Data

The data presented do not give any idea of the quality and protection status of the corridors. Also, this information may be under-reporting the presence of corridors, like aquatic or marine stretches, or natural ecosystem corridors other than forests.

1.6 Faunal Species (No table)

The network of protected areas should, ideally, contain viable and multiple populations of all indigenous species of fauna, especially those that are threatened or endangered. Unfortunately, barring a few areas, our information about faunal species occurring in various PAs, especially the less well-known species, is inadequate. Though, in response to our questionnaire, listings of species found in various PAs were received, they have been found inadequate to make any

[11] The numbers of national parks and/or sanctuaries responding may not match with the data table of earlier surveys, as some of the sanctuaries may have been upgraded into national parks

judgement about the adequacy of protection being provided to faunal species by the PA network in India. Perhaps a separate survey is needed to conduct a gap analysis and identify those species that are not adequately represented in the network.

One way of doing this is to first identify the distribution range of priority species and then locate the PAs that occur within that range. As a second step, the ecology of the species, especially the bio-geographic parameters of its habitat, need to be determined. Based on this, those PAs need to be identified that both occur in the known distribution range of a species and contain the appropriate habitat. These PAs have then to be surveyed to determine whether that species is found there and what is its status.

1.7 Overpopulation of Faunal Species (Table 1.6, volume 2)

In many cases, populations of specific species of animals grow to a point where they cross the carrying capacity of their habitat or start upsetting the balance of species. This happens for various reasons and it is necessary to prevent such overpopulation from occurring or to manage it effectively so that damage to the ecosystem is contained and the biological integrity of the PA is safeguarded.

44 PAs indicated that they had an overpopulation of one or more faunal species. Some of the more commonly mentioned species included Cheetal, Elephant, Wild boar, and Neelgai, The most common reasons for overpopulation was stated to be prolific breeding and the lack of predators,as well as habitat destruction due to which animal populations within the PA are finding it difficult to sustain themselves.

Interestingly, among these 44 PAs were 11 that had indicated in the earlier survey that there was no overpopulation of faunal species. These were: Interview Island Sanctuary (A&N), Rajgir Sanctuary (BIH), Sukhna Lake Sanctuary (CHA), Sultanpur National Park (HAR), Sharavathi Sanctuary (KAR), Keibul Lamjao National Park (MAN), Dampa Sanctuary (MIZ), Jamva-Ramgarh Sanctuary

(RAJ), Nahargarh Sanctuary (RAJ), Vedanthangal Sanctuary (TN), and Corbett National Park (UP).

1.8 Locally Threatened Faunal Species (Table 1.7, volume 2)

Whereas the threatened status of species, at a national, regional or global level has to be ascertained on the basis of their over-all population trends, and the threats these face, such information is not always readily available at the specific PA level. Therefore, this study attempted to discover those species that were considered to be locally threatened, i.e., their populations were non-viable or dwindling at the local level, irrespective of what their status was nationally or globally.

The status of a species in a particular PAs is also important in itself for, whatever their status at a national level, if their population is dwindling at the local level, there could be local adverse impacts, irrespective of whether they are overpopulated elsewhere.

Arunachal reported the maximum number of locally threatened species (18) from just three PAs. Some of the species listed were Mishmi takin, Musk deer, Red panda, Marbled cat, Snow leopard, Clouded leopard, White winged wood duck, etc.

112 protected areas reported one or more faunal species as locally threatened and around 90 specific species were reported as locally threatened in one or more PAs. These locally threatened species included: Tiger, Leopard, Wild buffalo, Wild dog, Barking deer, Leopard cat, Giant squirrel, Sambar, Clouded leopard, Snow leopard, Musk deer, Red Panda, Marbled cat, Golden cat, Hog deer, Mouse deer, Slow loris, Pangolin, Serow, Rhino, Hispid hare, Pygmy hog, Wild boar, Peafowl, Cheetal, Chinkara, Caracal, Black and Grey Partridge, Blue sheep, Western tragopan, Monal and Cheer pheasant, Hangul, Lion tailed, Pigtailed and Stumptailed macaque, Hoolock gibbon, Sloth bear, Indian wolf, Caracal, Ratel, Sea cow, Gangetic dolphin, and the porcupine. The names of the PAs they are reported from are given in Table

1.7. The most common cause for decline in population was loss of habitat, followed by disturbance and poaching.

Corresponding information from the last survey is given below:

Bear, Himalayan Black	Rakchham Chitkul and Tundah Sanctuaries (both HP), Senchal Sanctuary (WB)
Bear, Himalayan Brown	Daranghati, Lippa Asrang, Rakchham Chitkul, and Tundah Sanctuaries (all HP)
Cobra, King	Dandeli Sanctuary (KAR)
Coral spp.?	Marine National Park (GUJ)
Crab, Gaint Robber	South Sentinal Island Sanctuary (A&N)
Crab, Horse-shoe	Sunderbans National Park (WB)
Deer, Baeking	Darlaghat And Lippa Asrang Sanctuaries (Both HP), Bethuadahari Sanctuary (WB)
Deer, Hog	Rajaji Sanctuary (now a national park-UP)
Deer, Spotted	Nandur Madhmeshwar Sanctuary (MAH),satpura National Park (MP), Barnawapara Sanctuary (MP), Chandka Dampara and Simlipal Sanctuaries (both ORI), Jaisamand and Sita Mata Sanctuaries (both RAJ) Anamalai Sanctuary(TN), Bethuadahari Sanctuary (WB)
Dog, Wild	Ghatigaon Sanctuary (MP)
Dolphin, Gangetic	National Chambal Sanctuary (MP)
Dolphin, Gangetic /Common?	Sunderbans National Park (WB), Sajnakhali Sanctuary (WB)
Gaur or Indian Bison	Nongkhyllem and siju Sanctuary (both MEG), Sanjay and Bandhavgarh National Park (both MP),Udanti Sanctuary (MP), Simlipal sanctuary (ORI)
Goral	Lippa Asrang Sanctuary (HP), Senchal Sanctuary (WB)
Hyena	Tadoba National Park(MAH)
Marten, Nilgiri	Nilgiri Tahr Sanctuary (TN)

Myna, Hill	Siju Sanctuary (MEG), Hadgarh Sanctuary (ORI)
Nilgai (Bluebull)	Mudumalai Sanctuary (TN)
Otter, Clawless	Mudumalai Sanctuary (TN)
Oyster, Pearl?	Marine National Park (GUJ)
Panda, Red	Siju Sanctuary (MEG), Gambung Lho Sanctuary (SIK)
Pig, Indian wild	Barnawapara Sanctuary (MP), Chandka Dampara Sanctuary ((ORI)
Porcupine, Indian	Tadoba National Park (WB)
Sambar	Udanti Sanctuary (MP), Kumbhalgarh, Mount Abu, and Sita Mata Sanctuaries (all RAJ), Bethuadahari Sanctuary (WB)
Terrapin, Batagur (River)	Sunderbans National Park (WB)
Woodpecker, Black	Mudumalai sanctuary (TN)

1.9 Faunal Species of Special Interest (Table 1.8, volume 2)

Park managers were asked to list those faunal species that they considered to be of special interest and to indicate the reason why they thought these species to be of special interest. Species of special interest were reported from 186 PAs. They included the Golden gecko, Slender loris, Clawless otter, Gaur, Tiger, Pelicans, various species of cats, many species of water and forest birds, Hoolock gibbon, Bengal florican, Snow leopard, Wild dog, Musk deer, Wolf and others such. Endemism, cultural and medicinal value, relationship with domesticated species, level of threat, rarity, commercial value, religious significance, and value as a game species were cited as some of the reasons why the species was considered to be of special interest.

1.10 Deliberate Introduction of Fauna (Table 1.9, volume 2)

Introduction of fauna refers to the release by humans of animals into an ecosystem to which these animals are not indigenous. Such introduction could be accidental or deliberate. If the latter, it could be for one of several reasons. Introduced species may be economically useful, they may have aesthetic value, or their introduction may be designed

to control some other species. In some cases such an introduction may simply be an outcome of someone's whims.

It is usually difficult to justify introduction of a species on ecological grounds, for the result of such an introduction is mostly a disruption of the ongoing ecological processes of a natural ecosystem. Such an ecosystem has a complex and stable web of relationships between its various components, a balance which the entry of an alien element could easily upset.

The history of faunal introduction by humans is full of disasters-rabbits in Australia, dogs in Mauritius, Spotted deer in the Andamans. Animals exotic to the place of introduction have usually either died out because the new habitat was not hospitable, or have caused great ecological damage, mainly because in the absence of natural predators, they have multiplied rapidly and overrun or displaced many indigenous species. However, in certain cases introduction of fauna may be ecologically justified, as in the attempt to redress an imbalance created earlier. Thus, for instance an exotic species which has been introduced earlier and has become a nuisance could be checked by introducing its natural enemies from its original habitat. Such a step requires a thorough understanding of the ecosystem into which the species is being introduced, the habits of the introduced species, the potential impact of its introduction and many other factors. In the absence of such an understanding, introduction of exotic species is always risky.

Far more justifiable is the release of animals into an ecosystem to which they are or were indigenous. This is what is referred to here as reintroduction of fauna. The attempt is usually to 'restock' the ecosystem with an element which was at some point a part of its ecological profile, but whose

population has either been destroyed or declined considerably, leaving an imbalance.

Though reintroduction of indigenous species does not pose the same level of risk to the ecosystem as the introduction of exotics, it is nevertheless fraught with many uncertainties. Human understanding of the complex inter-relationship within an ecosystem is still extremely limited.

Various factors like the number and composition of animals to be reintroduced, the time and place of reintroduction and their effect on the ecosystem are all difficult to determine fully, especially where a particular species might have declined or died out naturally and not because of human interventions. An understanding of all these factors is also relevant to the proper design of a reintroduction strategy. Very many reintroduction attempts have failed due to an inadequate understanding of these factors.

While the conceptual distinction between introduction and reintroduction is clear, in practice there is a likelihood of confusion. One problem is the difficulty in establishing whether or not an ecosystem has at any time in the past been the natural habitat of the speci es sought to be released. For example, it may be thought to be exotic till indications of its earlier presence are found, in which case its status would change from 'introduced' to 'reintroduced'[12].

Whatever the difficulties and uncertainties, both introduction and reintroduction of faunal species have important implications for the management of wildlife habitats.

---

[12] While 'reintroduction' usually refers to an attempt to restock a species which has become locally extinct, here it has been defined to include augmentation of populations which have declined considerably.

Separate questions were asked on the deliberate and accidental introduction of fauna in India's national parks and sanctuaries. Several parks and sanctuaries reported details of animals released not into the wild but into enclosures. In some cases, it was not clear where the animals were released; some specified that release was only proposed. Excluding all such cases, ***introduction of fauna has been reported from 18 (31.57%) of the 57 national parks and 40 (15.68%) of the 255 sanctuaries.***

(Data from the earlier survey, though not strictly comparable, indicates that introduction of fauna was reported from 3 (7%) of the 46 national park and 10 (5%) of the 197 sanctuaries responding. Reintroduction was reported from 4 (9%) of the 43 national parks and 10 (5%) of the 194 sanctuaries responding.)

Of the fauna introduced or reintroduced deliberately, the most common is the Chital (*Axis axis*), reportedly released in nine areas -Sukhna Sanctuary (CHA), Ramnabagan, Bibhutibhushan and Bethuadahari Sanctuaries (WB), Sharavathi Valley Sanctuary (KAR), Sagareshwar Sanctuary (MAH), Guindy National Park and Point Calimere Sanctuary (TN), and Trishna Sanctuary (TRI).

Other species that have been introduced include various species of crocodiles, weevils and mites, Pygmy hog, Black buck, Minor carp and the Indian major carp, Bison, Rainbow and Brown trout, Tiger, Lion, Giant squirrel, Sambar, Peacock, Jackal, Leopard, and a Dzo, which is not strictly a wild species.

1.11 Accidental Introduction of Faunal Species (Table 1.10, volume 2)

Often species get introduced accidentally into a protected area. Though this is not as common for faunal species as it is for floral ones, nevertheless it occasionally happens. ***Only 9 (2.88%) of the 312 PAs responding reported accidental introduction of faunal species.*** These were Interview Island Sanctuary (A&N), Dibru Saikhowa National Park (ASS),

Karakoram Sanctuary (J&K), Bannerghata National park (KAR), Aner Dam Sanctuary (MAH), Ralamandal Sanctuary (MP), and Kyongnasla Alpine Sanctuary (SIK) and Guindy national park (TN).

1.12 Captive Breeding of Faunal Species (Table 1.11, volume 2)

Though in natural ecosystems animal populations perpetuate themselves through free breeding, there may be instances when captive breeding becomes essential. This usually happens when a species is endangered and individuals of that species need to be released into the wild after being bred in captivity. Such breeding of fauna has been tried out in some parks and sanctuaries.

27 (8.65%) of the 312 PAs responding reported the captive breeding of fauna.

(Comparable data from the earlier survey indicates that 36 (15.3%) of the 236 PAs responding had answered this question in the affirmative.)

Among the species bred in captivity there were Turtles (species not specified), Cheetal, Chowsingha, Neelgai, Black Buck, Hispid hare, Sambar, Langur, Pigmy hog, Bonnet macaque, Indian fox, Tiger, Lion, Marsh crocodile, Elephant, Leopard, Musk deer, and Purple moorhen. The most common reason for breeding species was their reintroduction in the wild or for the enhancement of natural populations. Some were also bred for captivity.

1.13 Floral Species (No table)

Information on floral species occurring in PAs was even more patchy than that of faunal species. Consequently, no judgement can be made on the adequacy of coverage, in terms of floral species, of the PA network in India. Perhaps the only thing that can be commented upon is the occurrence of the various forest types within PAs (section 1.2). A special study is required for determining the distribution of various floral species within the PA network, along with their status, along the same lines as that suggested for faunal species (section 1.6).

1.14 Floral Species of Special Interest (Table 1.12, volume 2)

Park managers were asked to list those floral species that they considered to be of special interest and to indicate the reason why they thought these species to be of special interest.

132 (42.31%) of the PAs reported the existence of floral species of special interest.

(Comparable data from the earlier survey suggests that 13 (50%) of the 26 PAs responding had reported such species.)

Unfortunately, almost all the species of special interest were reported to be in decline.

1.15 Deliberate Introduction of Flora (Table 1.13, volume 2)

The introduction, deliberate or accidental, of exotic species of flora into an ecosystem is normally considered detrimental to the well-being of that ecosystem. Certainly in an area protected for its value as a wildlife habitat such introduction can be ecologically justified only in such exceptional cases where it is established to be of benefit to the ecosystem and its living components, mainly as remedial measures for earlier human-caused damage. Park or sanctuary authorities were asked to provide details of deliberate introduction, if carried out in their area, including the species chosen and the purpose for introducing them.

15 (26.32%) of the 57 national parks responding to this question, and 54 (21.18%) of the 255 sanctuaries responding, reported deliberate introduction of flora.

(The comparable figures from the old survey are that 7 (16%) of the 43 national parks responding to this question, and 37 (19%) of the 192 sanctuaries responding, reported introduction of flora.)

Of the plants introduced, the most common are species of eucalyptus, Prosopis juliflora, Robinia, various Acacia species, and Teak.

Limitations of the Data

A limitation is that the data given here do not reflect the impact of introduction of flora into a park or sanctuary. It

is thus not possible to say how extensive the impact is, and with what results.

1.16 Accidental Introduction of Flora (Table 1.14, volume 2)

Many species of flora get accidentally introduced into PAs due to random seed dispersal. The more aggressive or hardier of these establish themselves at the cost of other, indigenous species. Most infestations of weeds occur in this way.

Information was sought from PA directors about the accidental introduction of species in the PA. ***Of the 312 PAs responding, 19 (6.08%) reported incidence of accidental introduction of species.*** The species accidentally introduced included Black Wattle, Accacia spp., Prosopis juliflora, Cassiatora, Lantana, Eupatorium, Parthenium, Eucalyptus, Casuarina, and Teak.

1.17 Threatened Floral Species (Table 1.15, volume 2)

Threatened species of flora were reported from 81 (25.96%) of the PAs responding. Teak was cited most commonly as a threatened species (nine PAs). Other species cited as being threatened included Beeje (Dalbergia latifolia), Pitcher plant (Nepenthus kahsiana), Boswellia Serrata, Sandal or Chandan (santalum album), Sisham (Dalbergia sisoo), and Sterculia urens. As can be seen, a majority of species reported as threatened were tree species. Interestingly, Sukhna Lake Sanctuary, Chandigarh, listed among threatened species Eucalyptus, Parthenium and Lantana. Hazaribagh Sanctuary, Jharkand, sent the depressing report that all species except weeds were threatened. Of the 86 PAs responding earlier, 28 had reported in the earlier survey that there were no threatened species in the PA

Among the reasons for the species being threatened, the most common was the generic "biotic pressures". More specifically, threats included illicit felling and extraction, commercial exploitation, medicinal use, climate change, and encroachments. Interestingly, many species were reported to be threatened due to "botanical collections".

1.18 Excessive Spread of Floral Species- Apart from Weeds (No Table)

Despite this being an important indicator of the health of an ecosystem, no significant data were available for the excessive spread of floral species, other than weeds. Only 39 PAs reported excessive spread of floral species within the PA

1.19 Infestation by Weeds (Table 1.16, volume 2)

Infestation by weeds (exotic and aggressive species) is a major threat to the ecosystems of PAs in India. **Of the 312 PAs responding to this question, 157 (50.32%) reported infestation by weeds. 79 PAs had responded to the same question in the earlier survey. At that time only 19 (24%) had reported weed infestation.**

This, therefore, appears not only to be a widespread problem, but one which is growing rapidly, considering the percentage of PAs reporting such infestation has more than doubled in the ten years since the last survey. Also, 21 of the PAs that had reported no weed infestations in the last survey have now reported the existence of weeds.

Among the species of weeds reported were *Anisomeles, Cassia tora, Parthenium,* Water hyacinth, *Eucalyptus, Eupatorium, Ipoemia, Lantana, Mahavira, Mikenia, Ocimum sp.,* and *Prosopis juliflora.* The most common management initiative reported for fighting weeds was their manual uprooting or clearing. This was almost the universal response.

1.20 Impact of Various Pressures on the Biodiversity (Table 1.17, volume 2)

Various human activities within the PAs have a potential for adversely impacting the PA and its biodiversity. Most of these activities are either banned or restricted by the WLPA. These include:

Activity	Legal Status
Grazing	Banned in national parks and controlled in sanctuaries
Extraction of Timber	Banned in all PAs[13]
Cultivation	Banned in all PAs
Human habitation	Banned in national parks, controlled in sanctuaries
Pilgrimage	Controlled in all PAs
Fuel wood collection	Banned in all PAs
Fodder collection	Banned in all PAs
NTFP collection[14]	Banned in all PAs
Fishing	Banned in all PAs

Data were collected from 250 (80.13%) PAs regarding the existence of such pressures.

1.20.1 Grazing by Livestock[15]

Of the 23 national parks and 114 sanctuaries responding, 21 (91.3%) and 93 (81.58%) respectively, reported impact on biodiversity because of the grazing of livestock within their boundaries.

1.20.2 Extraction of Timber

Of the 11 national parks and 50 sanctuaries responding, 100% of the national parks and 38 (76%) respectively reported impact on biodiversity because of extraction of timber.

1.20.3 Cultivation

Of the 59 PAs responding, 44 (74.57%) reported impact on biodiversity because of cultivation within their boundaries. Four among these were cases of shifting cultivation.

1.20.4 Human Habitation

Of the 68 PAs responding, 55 (80.88) reported impact on biodiversity because of human habitation.

1.20.5 Pilgrimage

Of the 22 PAs responding, 16 (72.72%) reported impact on biodiversity because of pilgrimage.

[13] Permitted only where it is for the better management of the PA.
[14] In some cases response was for all NTFPs and not specifically for fuelwood or fodder.
[15] There is detailed data on grazing in the later section on “Socio-Economic Profile”.

1.20.6 Fuelwood Collection

Of the 9 PAs responding, 6 (66.67%) reported impact on biodiversity because of collection of fuelwood from within.

1.20.7 Extraction of Fodder

Of the 4 PAs responding, all reported impact on biodiversity because of the extraction of fodder.

1.20.8 NTFP Collection

Of the 64 PAs responding, 46 (71.88%) reported impact on biodiversity because of NTFP collection.

1.20.9 Fishing

Of the 10 PAs responding, 8 (80%) reported impact on biodiversity because of fishing.

1.20.10 Fire

Of the 78 PAs responding, 63 (80.77%) reported impact on biodiversity because of fires.

1.21

1.21a Impact on Fauna (Table 1.18, volume 2)

PA managers were asked to list those activities and factors in their PA that impacted on the fauna. 195 PAs responded to this question and some of the activities and factors that were reported included:

Activity/Factor	Number of PAs (percentage of total responding)
Fishing	11(5.64%)
Trapping/Hunting/Shooting/poaching	16(8.21%)
Cutting/Felling of trees	39(20%)
Fire	70(35.9%)
Habitation	46(23.49%)
Mining	14(7.18%)
Development Projects	37(18.97%)
Roads	12(6.15%)
Collection of NTFP	39(20%)

Some of the main impacts that were reported included: "migration away from the site" reported from 82(42.05%), "loss of food source" reported from 80(41.03%), and

"population decline" reported from 59(30.26%) of the PAs responding.

1.21b Impact on Flora (Table 1.19, volume 2)

PA managers were asked to list those activities and factors in their PA that impacted on the flora. 181 PAs responded to this question and some of the activities and factors that were reported included:

Activity/Factor	Number of PAs (percentage of total responding)
Grazing	101(55.8%)
Cultivation	36(19.89%)
NTFP Collection	52(28.73%)
Fire	60(33.15%)
Felling of Trees	65(35.91%)

Some of the main impacts that were reported included: "degradation of habitat" reported from 77(42.54%), "poor regeneration" reported from 84(46.41%), "extinction" reported from 11(6.08%) and "population decline" reported from 52(28.73%) of the PAs responding.

I.22 Forest Fires (Table 1.20, volume 2)

Fires often occur as a natural phenomenon, a part of the dynamics of forest regeneration and succession. Using fire as a deliberate management strategy is also not uncommon in wildlife protected areas, the idea being to allow the growth of new shoots which are favored by wild herbivores.

However, in India a large number of accidental, human-caused, fires are reported from forest areas. These are often a result of carelessness, a cigarette or 'bidi' thrown unthinkingly, a small deliberate fire spreading over a much larger area than desired, and so on. Such fires are a threat to the ecosystem. Their prevention and control has thus become an important part of the management strategies in national parks and sanctuaries.

Information was sought on the occurrence and extent of forest fires in each national park and sanctuary, and on the measures being taken, if any, to counter these fires. Data on

occurrence are presented below, while data on fire-fighting measures are given separately (see section IV:2.21).

Of the 30 national park and 137 sanctuaries sending in information on this aspect, 23(76.67%) national park 100 (72.99%) sanctuaries reported the occurrence of forest fires. Thus, a total of 123 (73.65%) PAs reported that fire had occurred within their PA. The total no of fire incidences reported were 3308, affecting an area of around 12000 sq. kms. 29 PAs of Maharashtra reported 1123 incidences of fire, affecting around 628 sq. kms of area.

(The earlier survey had indicated that of the 37 national parks and 165 sanctuaries sending in information on this aspect, 20 national park (54%) and 65 sanctuaries (39%) had reported the occurrence of forest fires.)

Limitations of the Data

Considering the vast variation between different parks, perhaps the national and state averages might not be reliable indicators of the occurrence area wise.

The level of detection and recording of fires is not comparable among PAs. At best, this information can be taken as reflecting the minimum incidence for it would be rare for an area to report a fire when there has been none. The converse, unfortunately, need not be true.

As already mentioned, these fires might have varying impact on the habitat, and without detailed study no conclusions can be drawn about the 'threat' they pose, if any. Neither can one deduce, from the number of fires that occurred, any facts about how the area is managed. There is no necessary link between the number of fires reported and the quality of management. The relative size of the area, the cause of the fire, the staff's response to the fire and the fire-proneness of the different parks and sanctuaries have to be studied, and only then can a comparative picture emerge in terms of the management of the area. Obviously some areas, like wetlands or evergreen rain forests, are far less susceptible than others.

I.23 Floods (Table 1.21, volume 2)

Of the 270 PAs responding, 23(8.52%) reported the incidence of floods: 6 (11.76%) of the 51 parks and 17(7.76%) of the 219 sanctuaries.

(Comparable data from the earlier survey was that of the 210 PAs responding, 16 (7.6%) reported incidence of floods: 2 (5%) of the 42 parks and 14 (8%) of the 168 sanctuaries.)

Of the 312 PAs that responded to the survey, 30(9.62%) were reportedly situated in flood prone zones. Kaziranga National Park (ASS) reported the flooding of 400 sq km out of its total area of 407 sq km. Harike Lake Sanctuary (PUN) reported that, in 1994, its entire area of 86 sq km was flooded.

I.24 Droughts (Table 1.22, volume 2)

Though availability of water is a crucial factor for wildlife and habitat management, the data available on the availability of water, and on droughts, are very scanty. Perhaps the level of monitoring needed to properly evaluate the adequacy of water resources is not yet possible in most of the parks and sanctuaries. This is especially unfortunate as droughts not only directly affect the wildlife within a park or sanctuary, but also often increase the pressures on the resources of these areas as livestock from surrounding areas enter in search of water.

Of the 285 PAs responding, 49(17.19%) reported the incidence of drought. Of these, 17 (34.69%) were reportedly not in a drought prone zone. A total of 44 PAs reported that they are situated in a drought prone zone (though all of them did not report the occurrence of a drought in the reporting period, and some PAs that were not situated in a drought prone area, actually reported such an occurrence).

(Comparable figures from the earlier survey indicated that of the 192 PAs responding, 32 (16.7%) reported incidence of drought.)

Chandraprabha Sanctuary (UP) is reportedly in both the flood prone and the drought prone zone! Bansda

National Park (GUJ) has reported the incidence of drought every year from February to May.

1.25 Pollution (Table 1.23, volume 2)

Air, water and noise pollution pose a significant threat to PAs and the biodiversity within them. Some of these threats are long term and their impact is not easy to detect or monitor. Therefore, the practical solution is to monitor the levels of pollution, especially air and water pollution, and ensure that PAs are "zero pollution" zones. Unfortunately, very few PAs have facilities to monitor pollution levels.

Of the 292 PAs that responded to this question, only 3 (1.03%) reported that they had a pollution monitoring system (Mudumalai in Tamilnadu, Sundarbans in West Bengal and Trishna Sanctuary in Tripura).

However, a few other PAs reported the incidence of pollution.

5 (1.71%) of the PAs responding reported pollution due to industry. 10 (3.42%) reported air and sound pollution due to traffic, another 5 (1.71%) reported water pollution due to sewage/ garbage and 3 (1.03%) reported water pollution due to cultivation, pisciculture, aqua culture and salt farming. 2 each (0.68%) reported pollution due to mining activities and chemical factories, and one each due to hydroelectric power station, municipal garbage dump, tea garden and activities of the army.

(Comparable information on water pollution, from the earlier survey, was that 26(12.1%) of the 215 PAs responding reported pollution of their water sources.

The major sources of pollution reported were industries and urban sewers, the former emitting industrial effluents and the later municipal waster. In a few cases, cattle and soil reason from fields were also cited as sources of pollution.

Among the worst polluted of the national parks responding seemed to be the Marine National Park in Gujarat, which reported multiple sources of pollution: salt works, oil terminal and steamers.

Among sanctuaries, Gobind Sagar in Himachal Pradesh was the recipient of pollutants from a cement factory, limestone quarry, match factory and from municipal sewers. Similarly, National Chambal Sanctuary in,Rajasthan, reported the Kota Thermal Plant, Sriram Chemicals factory, and Rajasthan Atomic Power Station as sources of pollution. Interestingly, 'possible radiation' from the Rajasthan Atomic Power Station was also cited as a pollutant in Jawahar Sagar Sanctuary of Rajasthan.)

Limitations of the Data

Only those national parks and sanctuaries seem to have reported incidence of pollution where the sources of pollution are visible or obvious.

Considering the level of monitoring in parks and Sanctuaries and considering that there is no evidence to believe that any other agency monitors the water or air quality in most of these areas, it seems inevitable that much of the pollution in parks and sanctuaries, especially due to the widespread use of pesticides and chemical fertilizers, goes undetected.

I.26 Waterlogging (Table 1.24, Volume 2)

Physical factors affecting the habitat, such as water-logging, have implications on the management of a park or sanctuary. While these factors are usually termed 'natural', they may in fact at times be caused, or aggravated, by human activities.

Only 10 (3.2%) of the 312 PAs reported incidence of water logging. The most common cause of water logging was reportedly the building of a dam.

(comparable data from the earlier survey suggests that only 4 (1.9 %) of 214 PAs responding reported the presence of water-logging. These are the Tadoba National Park in Maharashtra, Dhrangadhra Sanctuary in Gujarat, Valmiki Nagar Sanctuary in Bihar, and Ballavpur Sanctuary in West Bengal.)

Limitation of the Data

The figures given here may not give a completely accurate picture because many of these factors are hard to define and distinguish clearly, as is the case with water-logging. An area where the water table rises to just below the land surface could in certain conditions be said to be water-logged, but since this is not readily visible, wildlife personnel with no equipment for, or training in, such matters would be hard put to recognize it. In any case, the level of monitoring and research work in most parks and sanctuaries is so little that many of these factors may not be noticed at all. On the other hand, very temporary instances of land becoming marshy may be taken as a sign of water-logging, though it may not be so.

The data on the presence of such factors does not show the kinds of impact they have. It is difficult to state prima facie that these factors are all actually problematic, i.e., that they have adverse effects on the ecosystem, flora and fauna. Establishing such an impact would require studies of the sort that do not seem to have been carried out so far in most of our parks and sanctuaries.

1.27 **Other Recurring Problems (Table 1.25, volume 2)**

Of the 312 PAs, 46 (14.74%) reported other recurring problems. Of these, 18 reported landslides, 8 reported soil erosion, 2 reported flowering of bamboos, 4 reported avalanches, 2 reported cyclones, 5 reported cloud bursts, 1 reported wind storms, 1 reported accumulation of sandbars. 4 PAs, all from HP, reported erosion due to glaciers, 2 reported cyclones and 1 reported "wild earthquakes", to be a recurring problem!

1.28 Felling and/or Extraction of Timber (Table 1.26)

Of the 54 national parks and 220 sanctuaries responding, 13 (24.07%) and 67 (30.45%) respectively reported extraction of timber.

(Comparable data from the earlier survey indicated that of the 44 national parks and 183 sanctuaries responding, 7

(16%) and 78 (43%) respectively reported extraction of timber.)

1.29 Floral Epidemics (Table 1.27, volume 2)-

Serious management issues arise when plant or animal species in a national park or sanctuary are affected by an epidemic. The resultant loss in numbers, and the consequences of this on the food web and the ecosystem of which these species are a part, are matters of grave concern to those managing a wildlife habitat. Details of recorded epidemics affecting flora and fauna were solicited, to judge the extent to which our protected areas suffers from such problems.

Epidemics affecting flora were reported from only 4 (8%) of the 50 national parks and 15 (6.73%) of the 223 sanctuaries responding. The most common problem was the Sal borer followed by defoliation and skeletonisation. The most common species affected were Sal and Teak. Control measures taken included application of pesticides, monitoring, trapping (!), and biotic control.

(Comparable data from the earlier survey indicated that epidemics affecting flora were reported from only 1 (2%) of the 41 national parks and 11 (6%) of the 174 sanctuaries responding. The most common problems mentioned were defoliation and skeletonisation, and in all but two of the instances the species affected was teak (Tectona grandis). Preventive measures were reportedly not undertaken in any of the parks or sanctuaries reporting epidemics affecting plants.)

1.30 Faunal Epidemics (Table 1.28, volume 2)

Epidemics affecting fauna were reported from 4 (7.55%) of the 53 national parks and 9 (4.02%) of the 224 sanctuaries responding. The most commonly affected species was the Gaur. There were also reports of epidemics affecting Leopards, Tigers and Wild boar. The most common of the diseases reported were Rinderpest and the foot and mouth disease. Domestic cattle were reported to be the most common carriers of disease. Seven

of the sixteen PAs reporting epidemics also reported that they inoculated the cattle. One reported the epidemic to the animal husbandry department.

(Comparable data for fauna epidemics in the earlier survey indicated that 8 (19%) of the 43 national parks and 9 (5%) of the 176 sanctuaries responding reported the incidence of epidemics. The two most common diseases reported were foot and mouth disease, and rinderpest. The species commonly affected were Spotted deer, Nilgai, Goral, Sambar and Gaur - others affected in one or two cases were the Himalayan tahr, Black buck, Jackal and Wild boar. Of the 17 parks and sanctuaries reporting epidemics, 10 reported having taken some form of preventive measures. These usually consisted of vaccinating the domestic cattle, the main transmitter of these diseases, and treating the wild animals' water sources.)

Limitation of the Data

The responses to these questions were very scanty. It appears that the kind of monitoring necessary to keep accurate records of plant and animal epidemics is presently not available. In most cases the response received was 'no such report' (of epidemics) or 'no study done' - very rarely was the response a definite 'no incidence of epidemic'. It is notable that the diseases reported are almost always the same, which seems to indicate that information regarding diseases other than the most common and obvious ones may be lacking. For these reasons data received can only be seen to reflect a bare minimum of the actual incidence of epidemics.

1.31 Vaccination of Cattle (Table 1.29, volume 2)

Disease-carrying domestic cattle, while grazing in or passing through parks and sanctuaries, have been known to infect wild animals and occasionally cause epidemics. Where grazing and moving of cattle through parks and sanctuaries cannot be totally stopped, and where the consequent direct or indirect contact between wild animals and domestic cattle

also cannot be prevented, one of the ways of controlling the spread of diseases is by vaccinating the cattle.

Data collected indicated that of the 248 PAs responding 81(32.66%) reported vaccinating the cattle regularly within the PAs and 63 (25.4%) reported that cattle vaccination was carried out only sometimes and not on a regular basis.

For vaccination around the PA (10 km radius), 271 PAs responded to the question. 101 (37.27%)PAs reported that they regularly vaccinated the cattle around the PA and a similar number 110 (40.59%) reported that vaccination was carried out only sometimes.

(Data collected in the earlier survey indicates that 18 (20%) of the 90 PAs responding reported vaccinating cattle within and 37 (38%) of the 97 PAs responding reported vaccinating cattle around the PA.)

Eight of the PAs who had reported vaccination within in the last survey now reported that they did not vaccinate cattle within. These are Namdapha National Park from Arunachal, Brahmagiri Sanctuary, Mookambika Sanctuary, Nugu Sanctuary, Sharavathi Valley Sanctuary, and Someshwara Sanctuary, all from Karnataka, Sanjay National Park from Madhya Pradesh and Point Calimere Sanctuary from Tamil Nadu. Both Mookambika and Point Calimere also reported discontinuation of cattle vaccination in areas around the PA, while Sanjay National Park reported that information regarding vaccinations was "not known"!.

57 (22.98%) of the PAs vaccinating within reported that they vaccinated 100% of the cattle inside, while 47 (18.95%) vaccinated varying percentages from 5% to 90%. The remaining did not provide information regarding coverage of cattle vaccinated within the PA. In the earlier survey, only 2 (11.1%) PAs had reported that they were vaccinating 100% of the cattle inside.

48 (17.71%) of the PAs vaccinating around reported vaccinating 100% of the cattle, as opposed to only 5 (13.5%) reporting this in the earlier survey.

Of the 249 PAs responding, 15 (6.02%) reported that they always vaccinated cattle passing through their boundaries, 51 (20.48%) reported that they occasionally vaccinated such cattle and 116 (46.59%) reported that they never vaccinated such cattle. Five PAs reported that they had no road or cattle passing through.

In the earlier survey, of the 86 PAs responding, 25 (29%) had stated that they vaccinated cattle passing through, though it is not known whether this was always or occasionally. The remaining 61 (71%) reported that they did not vaccinate such cattle.

1.32 Existence of Quarantine Facilities (Table 1.29, volume 2)

The ability to quarantine animals infected with disease significantly enhances the chances of controlling diseases. Also, for cattle passing through, sometimes it is essential to quarantine them after vaccination so that the vaccine becomes effective before they move into the PA.

Only 10 (3.2%) PAs reported the existence of quarantine facilities. The remaining 302 (96.79%) either reported that they had no quarantine facilities or did not respond to the question.

(Comparable data from the earlier survey indicates that 4 (4.3%) of the 94 PAs responding reported quarantine facilities.)

Interestingly, all the four PAs that had reported such facilities in the last survey, namely Namdapha National Park (ARU), Nagarahole National Park (KAR), Nugu Sanctuary (KAR) and Ballavpur Sanctuary (WB), have now reported that they have none!

II. Socio-Economic Profile

The conservation of biodiversity, within PAs, often necessitates the restriction and regulation of the use of the PA's resources by human beings. Depending on the nature of the PA and the level of conservation sought to be achieved, the severity of these restrictions can vary. Therefore, in a national park, no human use activity is allowed with the possible exception of tourism and research. In a sanctuary, on the other hand, grazing and even human habitation and the exercise of certain rights can be allowed, depending on the needs of conservation.

The interaction between human populations and wilderness areas is fundamental to human civilization. In fact, human beings are as much a part of nature as any of the other animals or plants. Human activities in and around national parks and sanctuaries cannot, therefore, be *prima facie* considered undesirable. What is undesirable is the pushing of the ecosystem to beyond its carrying capacity by excessive destruction of fauna and flora. This is unfortunately becoming increasingly common due either to new types of human activities (mainly because of enhanced technological capacities), or due to an increase in population, leading to even the traditional activities becoming destructive.

Obviously, it is neither desirable nor possible to alienate the people living in and around the protected areas, most of whom are poor, from the natural resources around them. However, if they and the rest of humanity have to have a continued and sustainable interaction with nature, it has to be ensured that these areas are not progressively degraded.

In order to work towards an understanding of these aspects, information was collected on various human activities and uses, and is presented in this section. This section contains details regarding

- Human settlements within and around parks and sanctuaries
- Relocation of human populations from the PA

- Grazing within the PA
- Fishing, collection of timber and non-timber forest produce, and collection of other animals and/or their parts
- Religious and cultural use of the PA
- Impact of PA on the local people, including injury or death caused to humans by wild animals; injury or death of livestock; crop damage; conflicts and clashes between PA staff and communities; the patterns of use of PA resources, and the rights and leases existing within the PA; details of ecodevelopment initiatives, if any.

2.1 Human Population

Information was obtained separately for human populations residing inside each park or sanctuary and those living in areas adjacent to it (i.e. within a 10 km radius of the park boundary).

2.1.1 Human Population within Parks and Sanctuaries (Tables 2.1 & 2.2, volume 3)

Data on human population within PAs was compiled from two different sources. First, it was compiled from the data contained in the filled in questionnaires sent back by the PA managers. Separately, an exercise was carried out to plot the boundaries of PAs on census maps and, based on this, census data was compiled for the settlements falling within the PA.

Data compiled from filled in questionnaires indicate that of the 41 national parks and 182 sanctuaries responding, 20 (48.78%) and 95 (52.2%) respectively reported human populations within their boundaries. However, not all PAs provided information on how many people were living within them. The total population in the 74 PAs that were able to provide the data was 8,16,838, giving an average population of 11,038 per PA having human population.

(Comparable data from the earlier survey indicates that of the 32 national parks and 138 sanctuaries responding, 18 (56%) and 100 (72%) respectively reported human populations within their boundaries. However, population

figures were only available for 22 of the PAs currently responding. In these 22 PAs the total population was 4,29,117 with an average PA population of 19,505.)

Human population figures compiled from census data (1991) reveal that the 74 PAs studied had a total population of 12,77,154 in 2,452 villages. Of these, 1,39,554(10.93%) belonged to scheduled castes and 4,65,749 (36.47%) belonged to scheduled tribes.

2.1.2 Human Population Adjacent to Parks and Sanctuaries (Tables 2.3 & 2.4, volume 3)

Human populations adjacent to a PA could be a source of pressure on the protected area. This is especially true of many parts of India where these protected areas are the only remaining source of fuel, fodder, and other forest produce, with most surrounding areas having been degraded.

Adjacent human settlements can also affect the potential of wild animals to migrate to nearby habitats. Where traditional migrating routes are thus cut off, as has happened in many parts of the country, it is a loss not only to the wild animals but also to the humans in the form of crop and livestock damage and the injuring or killing of people by animals trying to migrate. The case of elephants is especially illustrative of this.

It was, thus, thought important to obtain information on the existence and extent of populations living adjacent to parks and sanctuaries, i.e. within a 10 km. Radius of the boundary.

The data compiled from questionnaires indicates that 94 PAs responding to this question reported adjacent human population. The total population reported from these 94 protected areas was 49,40,725 with a per PA average of 52,561.

(Comparative data collected in the last survey indicates that of the 23 national parks and 132 sanctuaries responding, 19 (83%) and 115 (87%) respectively, reported populations in their adjacent areas. However, population figures were only available for 27 of the PAs that also

responded this time. The total population adjacent to these 27 PAs was 21,14,907, with an average of 78,330 per PA.)

Human population figures compiled from census data (1991) reveal that of the 86 PAs that information was compiled for, the total adjacent population was of the order of 1,57,34,242 in 16,460 villages. Of these, 25,17,885 (16%) belonged to scheduled castes and 38,08,616 (24.20%) belonged to scheduled tribes.

2.2 Relocation of Human Population(Table 2.5 & 2.6, volume 3)

As noted in the earlier paras, a very high percentage of our parks and sanctuaries have human population inside them. Attempts have been made to relocate part or all of this population from a few parks and sanctuaries, as a means of reducing human pressure on these areas.

7 (35%) of the parks and 10 (10.53%) of the sanctuaries that reported the presence of human populations within them have relocated part or whole of their population. Relocation has been proposed in the case of 8 national parks (40%) of those having human population and responding), and 10 sanctuaries (10.53%).

Of the PAs that have relocated, details about population relocated was available from all 17 of them. The total population relocated from these PAs was around 3996, of which 237were SCs and 1694 were STs.

(Comparable data from the earlier survey indicate that of the 16 national parks and 88 sanctuaries which have human population inside them and which have responded to this question, 5 (31%) of the parks and 4 (5%) of the sanctuaries had proposed to relocate a part or whole of their population prior to 1984.

Actual relocation till 1984 has been done in 4 (25%), of the national parks and 3 (3%) of the sanctuaries having human population and responding. This represents 80% of the parks and 75% of the sanctuaries where relocation was proposed. Post-1984 relocation has been proposed in the case

of 6 national parks (38%) of those having human population and responding, and 13 sanctuaries (15%)).

Limitations of the Data

Where relocation has been proposed or actually done, it has not necessarily been proposed or done for the entire population existing in the park or sanctuary. This information, therefore, does not indicate whether human habitation has been completely removed from any area or not. It is also not possible from these data to judge the impact of relocation on the park or sanctuary, nor to comment on the nature or efficacy of the relocation itself.

2.3 Grazing of Livestock (Table 2.7 & 2.8, volume 3)

Grazing of livestock is one of the most common uses that local communities make of PAs. On the one hand, the PAs are often the only patches of greenery left and therefore are the last resorts of livestock, especially during drought conditions. On the other hand, the prevalence of livestock populations within PAs not only threatens the wild population with possible infection and epidemic of diseases but these livestock also compete with the wild animals, especially with the ungulates, for water, food and space.

Of the 21 national parks and 110 sanctuaries responding, 20(95.24%) and 107 (97.27%) respectively reported incidence of grazing. Data were available from 74 PAs regarding the number of livestock grazing, both legally and illegally. The total was 27,86,470 with a PA average of 37,655 per PA per annum.

(Comparable data from the earlier survey indicate that of the 36 national parks and 138 sanctuaries responding, 24 (67%) and 114 (83%) respectively reported incidence of grazing.)

Data were also collected regarding migratory livestock visiting the PAs. **Of the 93 PAs responding, 47 (50.54%) reported grazing by migratory livestock. Figures for the number of migratory livestock grazing were available from**

36 PAs, where totally 7,03,354 heads of livestock grazed annually, at an average of 19,538 heads per PA.

Limitations of the Data

As in the case of human populations, the data presented above can be better appreciated after a more sophisticated analysis involving factors such as the distribution of the livestock within the areas, the mix of livestock grazing at any given time, and so on. This has not been possible here.

2.4 Use of Other PA Resources by the People (Table 2.9, volume 3)

Apart from grazing, many other resources are used from within PAs. Legally the use of resources from PAs is not permitted under the WLA. However, information received from PA managers suggested that it, nevertheless, continues in many PAs.

Of the 199 PAs responding, 117 (58.79%) reported use of other PA resources.

(Comparable data from the earlier survey indicates that of the 40 PAs responding both times, 33 (82.5%) reported similar use)

Most commonly, the resources so collected were used by the collector for household consumption. The next most common use was sale to a trader, followed by sale in a local market, and finally sale in a town.

Among the things so used were Deodar trees, Acacia spp., Albizzia spp, amla, bamboo, ban, Dendrocalamus spp., dhoop, Diospyros spp., Eucalypt spp., fish spp., various types of grasses, gum, guchhi (morel), honey, Imperata spp., jamun, kail, karu, katla, keluthi, Lagerstroemia spp., mahua, Michelia spp., musk, animal and bird meat, Prosopis spp., Rubinia, sal, swiftlets nests, tamarind, teak, tendu, Terminalia spp., wax, Xylocarpus spp., and Zizphus spp. From one PA even Eupatorium was being extracted and used!

The use that the people put these various things to included use as adhesives, forbidi making, as building material, as mats, ingredients in country liquor; as fodder, food, thatching material, medicine, and fuel; for making katha,

furniture, incense, leaf plates, baskets, and other implements, soap, ornaments, oil, paint, brooms, sweetening agent, and as timber.

2.5 *Sites or monuments of religious (or historical) Significance in Protected Areas (Table 2.10, volume 3)*

Many of the PAs are also places of religious or historical significance, containing sites of pilgrimage or holy shrines of various religions. The existence of such sites is a potential that can be utilized for promoting the conservation of these areas, though sometimes a high number of pilgrims can also be a threat to the PA.

Of the 137 PAs responding, 121 (88.32%) reported the existence of shrines or sites of pilgrimage, the remaining 16 (11.68%) reported none.

(Comparable data from the earlier survey indicate that of the 105 PAs responding then and now, 44 (41.9%) reported shrines and pilgrimage sites)

Among the religious sites and shrines reported, the majority were sacred to the Hindus, some were sacred to both Hindus and Muslims. There were also sites sacred to the Muslims, Buddhists, and Jains. Many sites were also sacred to tribals and one PA reported a Sikh shrine. Surprisingly, none of the PAs responding reported Christian shrines or sacred sites. Some details of some of the protected areas in which religious or historical sites are located are given in the table below

SOME PAs WITH RELIGIOUS/HISTORICAL SITES WITHIN

S. NO.	NAME OF THE STATE	NAME OF THE NATIONAL PARK/ SANCTUARY	PLACES OF RELIGIOUS/ HISTORICAL INTEREST
1.	Andhra Pradesh	Eturnagaram Sanctuary	Madaram is of historical value to the tribals.
2.	Andhra Pradesh	Kolleru Sanctuary	Peddinthamma Devi temple in Kolletikota village
3.	Andhra Pradesh	Nagarjuna Sagar Srisailam Sanctuary	Ikshwaku fort (Eagalapenta); Prataparudra fort (Mannanur); Nagarjunakonda & Simhapuri (Buddhist relics); Bhramarabe Shakthipeetha; Mallikarjuna Jyothirlinga; (several more spots listed)
4.	Andhra Pradesh	Pakhal Sanctuary	Pakhal lake, Gundam temple
5.	Andhra Pradesh	Papikonda Sanctuary	Perantapalli ashram on bank of river Godavari
6.	Arunachal Pradesh	Pakhui Sanctuary	Adjacent is site of Banasur times of legendary importance
7.	Bihar	Bimbandh Sanctuary	Bhimbandh hot spring, Rishikund
8.	Bihar	Dalma Sanctuary	Shiva temple; Dalma Devi cave
9.	Bihar	Rajgir Sanctaury	Jain temple
10.	Bihar	Valmiki Sanctuary	3 temples of Hindu gods
11.	Goa	Bhagwanmahavir National Park	Kadamba temple, Tambdi, of historical interest; Dudhsagar and Mahadev temples, at Sonauli and Collem, respectively, of religious interest
12.	Goa	Bondla Sanctuary	Lord Siddha's temple, mid-way between Bondla and Tisca; 3 idols of 6th, 8th and 14th century
13.	Gujarat	Gir National Park	Religious: Banej, Kankai, & Tulsishyam; Sirwan settlement of originally African natives (Sidis)
14.	Gujarat	Marine National Park	Religious: Pirotan island Pir dargah; Krishna temple at Bet-Dwarka
15.	Gujarat	Barda Sanctuary	Shiva temple at Kileshwar
16.	Gujarat	Dharangadhra Wild Ass Sanctuary	Vernu, Jognima, and Mota-Wasadada temples
17.	Gujarat	Narayan Sarovar Sanctuary	Narayan sarovar on boundary of sanctuary is a famous pilgrimage spot
18.	Gujarat	Ratanmahal Sanctuary	Old Shiva temple on top of plateau

S. NO.	NAME OF THE STATE	NAME OF THE NATIONAL PARK/ SANCTUARY	PLACES OF RELIGIOUS/HISTORICAL INTEREST
19.	Himachal Pradesh	Pin Valley National Park	Just outside are monasteries of Tabo and Key
20.	Himachal Pradesh	Kais Sanctuary	Temple of Bijni Mahadev
21.	Himachal Pradesh	Kanawer Sanctuary	On boundary & outskirts: Manikaran Guru Gobind Singh gurudwara and Rama temple; Khirganga and Mantlai holy lakes and natural springs
22.	Himachal Pradesh	Majathal Sanctuary	Harsang and Bara Deo temple
23.	Himachal Pradesh	Naina Devi Sanctuary	Nainadevi temple
24.	Himachal Pradesh	Renuka Sanctuary	Religious: Parshuram and Renuka temple
25.	Himachal Pradesh	Shikari Devi Sanctuary	Shikari Devi temple at top of main ridge; Budha Kedhar holy spring
26.	Himachal Pradesh	Shimla Water Supply Catchment Sanctuary	Kaludev temple
27.	Himachal Pradesh	Tirthan Sanctuary	Tirth, origin of river Tirthan, has religious significance, with people of the valley visiting it every 5 years with their goddesses. Raktisar, the origin of river Sainj, is also a place of religious significance and pilgrimage, like Tirth.
28.	Himachal Pradesh	Tundah Sanctuary	Banni Mata temple
29.	Jammu & Kashmir	Dachigam National Park	Mahadev peak considered abode of Shiva, visited during August (Shravana-Purnimashi) by the Hindus.
30.	Jammu & Kashmir	Hemis High Altitude National Park	Markha and other gumpas[16] in various villages
31.	Jammu & Kashmir	Kishtwar Narional Park	Bramha peak with Trisandha pilgrim centre
32.	Jammu & Kashmir	Lungnag Sanctuary	Gumpas at various villages
33.	Jammu & Kashmir	Ramnagar Sanctuary	Monument in memory of some saints who stayed here

[16] Gumpa, also sometimes spelled gompa – "is a meditation room where practitioners meditate and listen to teachings" of Tibetan Buddhism.

S. NO.	NAME OF THE STATE	NAME OF THE NATIONAL PARK/ SANCTUARY	PLACES OF RELIGIOUS/ HISTORICAL INTEREST
34.	Jammu & Kashmir	Surinsar Mansar Sanctuary	Surinsar and Mansar lakes are sacred lakes.
35.	Jammu & Kashmir	Changthang Sanctuary	Antay gompa
36.	Jammu & Kashmir	Karakoram Sanctuary	Deskit Gompa, and Samtaling Gompa
37.	Karnataka	Bandipur National Park	Religious: temples of Gopalswamy, Belladakappe-Mahadeswara, Bargi-Marigudi, Basaveswar (Begu)
38.	Karnataka	Bannerghatta National Park	Champakadami temple, and prehistoric burial areas
39.	Karnataka	Adichunchanagiri Sanctuary	Pilgrim centre
40.	Karnataka	Brahmagiri Sanctuary	Irupu Srirama temple, at start of Lakshmantheertha river; Bankal falls
41.	Karnataka	Dandeli Sanctuary	Kavla caves, Ulvi temple, Syke's point, Nagjeri Viewpoint, Vincholi rapids, Chimteri rocks
42.	Karnataka	Melkote Sanctuary	(Melkote temple on outskirts)
43.	Karnataka	Mookambika Sanctuary	Mookambika temple, Kollur; Kodachadri hilltop
44.	Karnataka	Shetithally Sanctuary	Maleshankar temple; Hanegere
45.	Karnataka	Someshwara Sanctuary	Temples: Sanetwara; Madamakki-Veerabhadra; Hebri-Ananthapadmanabha; Belve-shankarnarayan; Belanje; Albadi Mahalingeswara; Shadiwane?
46.	Kerala	Periyar National Park	Religious: Sabarimala temple visited by lakhs of pilgrims in summer; Mangala Devi temple in buffer zone.
47.	Kerala	Neyyar Sanctuary	Religious: Agasthiar peak, believed to be abode of Agasthiar Muni, is visited by thousands of pilgrims/
48.	Kerala	Wynad Sanctuary	Ficus tree in Rampur reserved forest, believed to be abode of goddess, is centre of annual festival by hill tribes; also a festival near Ponkly
49.	Maharashtra	Sanjay Gandhi National Park	Kanheri caves; Gandhi Smruti Mandir; various temples
50.	Maharashtra	Tadoba National Park	Pilgrimage for local people

S. NO.	NAME OF THE STATE	NAME OF THE NATIONAL PARK/ SANCTUARY	PLACES OF RELIGIOUS/HISTORICAL INTEREST
51.	Maharashtra	Bhimashankar Sanctuary	Bhimashankar temple, one of the 12 Jyotirlingas of india
52.	Maharashtra	Great Indian Bustard Sanctuary	Temples: Sant Dhyaneshwar at Newasa, and Kamaladevi; Karnala fort; Chrigoda taluka, capital of Maratha Sardar Shinde
53.	Maharashtra	Kalsubai Harichandragad Sanctuary	Kalsubai peak (highest in Sahyadries - 5427'); Ratangad of historical importance; Harishcandragad of religious importance.
54.	Maharashtra	Nandur Madhmeshwar Sanctuary	Sangmeshwar temple
55.	Maharashtra	Tansa Sanctuary	Mahuli fort; Tansa dam; temple
56.	Madhya Pradesh	Kanha National Park	Religious: Shravan Tal; Shravan Chita; Dashrath Machan
57.	Madhya Pradesh	Satpura National Park	Bada Mahadeo temple with fair on mahashivratri; Nagdwari temple with fair on nagpanchami.
58.	Madhya Pradesh	Barnawapara Sanctuary	Turturiya (religious place)
59.	Madhya Pradesh	Ghatigaon Great Indian Bustared Sanctuary	Shikargarh, Deokhoh, Tighara dam, Dhuan temple
60.	Madhya Pradesh	Kheoni Sanctuary	Shanker temple (ruins); Watchtower
61.	Madhya Pradesh	Narsingarh Sanctuary	Temples: Chota Mahadeo, Bade Mahadeo
62.	Madhya Pradesh	Pachmarhi Sanctuary	About 100 rock shelters with prehistoric rock paintings; Jata Shankar pilgrimage spot 2 km outside; Chouradev peak (1308 mtr), 15 km south of Pachmarhi, visited by thousands of Hindu devotees yearly
63.	Madhya Pradesh	Ratapani Sanctuary	Bheem Baithica (historical), Kheri Mahadeo, and Kerwana hot spring (religious)
64.	Madhya Pradesh	Sanjay (Dubri) Sanctuary	Temple near Banas River; reserved forest block Madwas, compartment no. 214, along Bargadi nala, is where Rewa king captured the white tiger Mohan
65.	Madhya Pradesh	Singhori Sanctuary	Chowkigarh Ka Kila (historical); Singhora Devsthan (religious)

S. NO.	NAME OF THE STATE	NAME OF THE NATIONAL PARK/ SANCTUARY	PLACES OF RELIGIOUS/ HISTORICAL INTEREST
66.	Madhya Pradesh	Sitanadi Sanctuary	Michkurishi hill (religious)
67.	Madhya Pradesh	Son Gharyal Sanctuary	Ancient temple 'Chandreh' and old rest house on bank near confluence of Son Banas; Bardi and Khalai Forts
68.	Orissa	Simlipal National Park	Historical and religious: ruined temple and tank at Athardeuli; old ruined fort at Rajupal
69.	Orissa	Bhitarkanika Sanctuary	Religious: ruined temple of Shiva and Naik Babu Thakur in Bhitarkarnika forest block
70.	Orissa	Satkosia Gorge Sanctuary	Tikarpara temple; annual fair at Binkei goddess temple; Shiva temple at Baigani peak with fair on shivaratri.
71.	Orissa	Simlipal Sanctuary	Religious and historic: ruined temple and tank at Athardeuli indicative of old habitation in central Simlipal; ruined fort at Rajupal
72.	Punjab	Bir Moti Bagh Sanctuary	Pir Bawa, Mari
73.	Punjab	Harike Lake Sanctuary	One gurdwara - Nanaksar - is at the entry point, another, Rakabsar, is 15 kms away.
74.	Rajasthan	Desert National Park	Religious site near Miajlar, with the guru worshipped by Sodha rajputs.
75.	Rajasthan	Keoladeo National Park	Religious: Keoladeo, Sautan, Sita Ramji ka, old Shiva, old Hanuman temples
76.	Rajasthan	Ranthambhore National Park	Ranthambhore fort, including Darga, Kamal dhar, Khatola, Soleshwar; Ganesh temple; Ada Balaji; Kasturi Masjid; Misdara, Kachida
77.	Rajasthan	Sariska National Park	Historical: Kankwadi fort; archaeological: Neelkant temple (ruins); religious: Pandupol and Bharthari temples, Talvriksh hot springs
78.	Rajasthan	Bhainsrorgarh Sanctuary	Padujhar Mahadev; spring fall? On Mahadev

S. NO.	NAME OF THE STATE	NAME OF THE NATIONAL PARK/ SANCTUARY	PLACES OF RELIGIOUS/ HISTORICAL INTEREST
79.	Rajasthan	Jaisamand Sanctuary	Shiv temple at Jhoomar Baori; Roothi Rani and Hawamahal Palaces at Jaisamand; Jaisamand lake
80.	Rajasthan	Jamva-Ramgarh Sanctuary	Jamva Ramgarh lake
81.	Rajasthan	Jawahar Sagar Sanctuary	Baroli historical temples
82.	Rajasthan	Kaila Devi Sanctuary	Kailadevi temple adjacent
83.	Rajasthan	Kumbal Garh Sanctuary	Temples: Ranakpur Jain, Parsuram Mahadeo, Muchchala Mahaveer Jain, and Someshwar Mahadeo; Kumbhalgarh fort; Prithvi Raj ki Chhatri; Harganga
84.	Rajasthan	Mount Abu Sanctuary	Gurmukh, Adhar Devi Delwara, Guru Shikar, and other temples, Achalgarh fort
85.	Rajasthan	Nahargarh Sanctuary	Amber fort
86.	Rajasthan	National Chambal Sanctuary	Patan and Kakarawada temples
87.	Rajasthan	Ramgarh Sanctuary	Ramgarh palace, Chothmata, Rameshwar Mahadev, Ramjhar Mahadev
88.	Rajasthan	Sariska Sanctuary	Temples: Neelkant (ruins), Pandupol, Bharthari, Talvriksh; Kankwadi fort
89.	Rajasthan	Shergarh Sancturay	Shergarh fort, village, and temple
90.	Rajasthan	Sitamata Sanctuary	Sitamata temple
91.	Rajasthan	Todgarh Raoli Sanctuary	Village Todgarh, where Col. Tod stayed and worked; temples of Dudhaleshwar Mahadev, Mangatji, and Goramji
92.	Sikkim	Khangchendzonga National Park	Peaks with religious importance: Khangchendzonga (guardian deity for Sikkim), Siniolchu, Pandim, and Pernidhangchen
93.	Sikkim	Fambung Lho Sanctuary	(Adjacent area has Karma Gyalwapa monastery with 100 monks, and an exotic-birds enclosure in the compound)
94.	Tamil Nadu	Anamalai Sanctuary	Many temples, Mr. Hugo Wood's grave
95.	Tamil Nadu	Kalakad Sanctuary	Religious interest: Namlicoil

S. NO.	NAME OF THE STATE	NAME OF THE NATIONAL PARK/ SANCTUARY	PLACES OF RELIGIOUS/ HISTORICAL INTEREST
96.	Tamil Nadu	Mundanthuri Sanctuary	Agasthia peak
97.	Tamil Nadu	Point Calimere Sanctuary	Religious place (Ravan's feet?)
98.	Uttar Pradesh	Govind Pashuvihar Sanctuary	Religious and historical: Har ki Dun; Majhi van
99.	Uttar Pradesh	Kaimur Sanctuary	Prehistorical cave paintings in Kandakot, Rajpur, near Mukla fall; Mukla and Sirsi falls on outskirts; Shiva temple near Shivaduar block
100.	Uttar Pradesh	Kedarnath Sanctuary	Temples: Kedarnath shrine, Madmaheshwar, Tungnata, Rudranath, Ansuya devi, Kalimath
101.	Uttar Pradesh	Mahavir Sanctuary	Jain temples
102.	West Bengal	Sunderbans National Park	Tiger goddess temple at Narayantala creekside

2.6 Impact of PA on Local People

The setting up and management of PAs, as also the restrictions on the use of resources that this implies, often has adverse impact on the local communities living in and around the PA or otherwise dependent on its resources. Besides, there is often an increase in the population of wild animals once a PA is established and this sometimes causes problems for the villagers, and their livestock and crops.

Consequently, information was gathered on various types of possible adverse impacts on local people.

2.6.1 Human Death or Injury Caused by Wild Animals (Table 2.11, volume 3)

A disturbing aspect of the human pressures in and around parks and sanctuaries is the incidence of injury or death of human beings caused by wild animals.

Most parks and sanctuaries have large human populations in and around them. The chance of such incidents is heightened by the fact that in many of the parks and sanctuaries there is free entry and movement of people. The lack of boundary walls or fences, in most of the areas,

contributes to this. In a large proportion of the parks and sanctuaries people graze cattle or carry out other types of activities, often illegally.

Apart from this, in some of the areas wild animals, perhaps in search of food and water, often cross the boundaries of the parks or sanctuaries and enter neighboring fields and villages. This also results in confrontations.

Of the 55 national parks and 257 sanctuaries responding, 19 (34.55%) and 65 (25.29%) respectively reported death or injury to human beings, either inside or adjacent to the PA, in the period 1995-2000.

(Comparable data from the earlier survey indicate that of the 39 national parks and 167 sanctuaries responding, 14(36%) and 49 (29%) respectively reported incidents of injury or death of human beings due to attacks by wild animals, either in side or adjacent to them.)

In these 84 PAs, a total of 766 people were attacked within and adjacent to the PA, in 182 incidents, between 1998 and 2002. 131 of these incidents were within the PA and 110 in adjacent areas.

Of these 766 people attacked, 305 (39.82%) died, 427 (55.74%) were injured and there were no details about the remaining 34 (4.44%).

A total of Rs. 39,49,100 was paid as compensation for 106 cases of death and Rs. 9,26,998 was paid as compensation for 124 cases of injury

(Earlier survey data suggest that the proportion of people injured and dead was almost the same: 56 dead in 11 incidents and 54 injured in 12 incidents).

This is perhaps one of the most heart-rending aspects of human wildlife interaction. Tigers, elephants, bears and leopards cause most of such deaths or injuries. However, other species cited include wild boar, bison, wild buffalo, rhino, hyena, monkey, a viper and a takin.

(Earlier survey data indicate that of the species of wild animals involved, tigers were responsible for 221 attacks (190 in West Bengal alone), bear for 68 (62 in Madhya Pradesh alone) elephants for 56 and leopards for 21 (51 in Gujarat). The other species involved were wolf, gaur, lion, crocodile, buffalo, hyena, wild boar, a snake and a shark. There was one case of a fatal attack by a nilgai!)

Limitation of the Data

First, the cases reported here are those which were officially recorded or brought to the notice of wildlife authorities. It seems plausible that many other cases, especially those not fatal, might not have been officially recorded. Also, there might be some other cases where fatalities occurred while the victim was indulging in illegal activities within the PA and these might also have been hushed up by the victim's companions or relatives. The data, as such, must be seen as reflecting only the minimum number of cases.

2.6.2 Livestock Death or Injury Caused by Wild Animals (Table 2.12, volume 3)

Another major problem inherent in the management of India's PAs is the potential for attacks on local livestock by wild animals.

Of the 55 national parks and 257 sanctuaries responding, 23(41.88%) and 71 (27.63%) respectively reported attack on livestock by wild animals. The number of animals attacked in a five year period (1995-2000) were 6327 in 708 incidents. Of these, 446(62.99%) of the incidents occurred within the PA and 174(24.58%) adjacent to the PA. The other PAs that reported livestock attackes did not provide these details.

Of the livestock attacked, 97% were killed and the remaining 3% were injured.

One of the measures taken to offset or reduce the loss these entail, and to discourage the villagers from attacking the wild animals involved, is the payment of cash compensation to the affected villagers. Details of the amount

payable and actual cases of payment, were asked for in the questionnaire.

An amount of Rs. 2,04,88,472 was paid out as compensation for 557 incidents of death to livestock. A total of Rs. 60,975 was paid out as compensation for livestock injury, for 23 incidents.

(Data from the earlier survey indicate that 10 (22%) of the 45 national parks and 57 (31%) of the 182 sanctuaries responding had reported that compensation was payable for injury or killing of livestock by wildlife within a park or sanctuary. Corresponding figures of compensation payable for livestock injured or killed in adjacent areas were 20 (44%) of the 45 parks and 59 (32%) of the 182 sanctuaries responding. Combining the two, what emerges is that 9 (20%) of the parks and 46 (25%) of the sanctuaries responding paid compensation for livestock injured or killed both within and in areas adjacent to them.

The most common wild animal responsible for such damage was the tiger, followed by the leopard. Some of the other species responsible are Wolf, bear, wild dog, crocodile, rhino, snow leopard, and elephant.

The species attacked included cow, buffalo, bullock, goat, sheep, horse, elephant, and ox.

Limitations of the Data

The data here are unlikely to give a complete picture of the attack on livestock, especially where only injury resulted, because in most cases records are only maintained of those cases that are reported and where compensation is claimed, and it seems likely that there were many others which were not reported or recorded.

2.6.3 Damage to Crops Caused by Wild Animals (Table 2.13, volume 3)

Apart from attacking human beings and livestock, wild animals often forage in the agricultural fields in and around protected areas. This results in damage to the crops and economic loss to the villagers.

Of the 55 national parks and 257 sanctuaries responding, 21 (38.18%) and 70 (27.24%) respectively reported crop damage by wild animals. Details regarding the area affected inside the PA were available from 13 PAs, where a total of 702.28 sq km were affected over a period of 5 years, giving an average of 54.02 sq km per PA reporting. Five of those giving details of crop damage from inside were national parks (Dibru Saikhowa in Assam- 4 sq km; Kanger Valley in Chhattisgarh - details regarding area affected not provided, Hemis in Jammu and Kashmir - 0.5 sq km, Anshi in Karnataka - 7.47 sq km; and Intanki in Nagaland - 7 sq km).

Similarly, details regarding the area affected adjacent to the PA were available from 38 PAs, where a total of 9,840.69 sq km were affected over a period of five years, giving an average of 258.97 sq km per PA giving details. Eleven of these 38 PAs were national parks.

The total compensation paid for crop damage inside was Rs. 16,26,121 for 29 incidents, at an average of Rs. 56,073. Similarly, compensation paid for crop damage in adjacent areas was Rs. 88,72,618 for 85 incidents, with an average of Rs. 1,04,384 per incident.

The species damaging crops included chital, sambar, wild boar, neelgai, buffalo, elephant, bear, gaur, monkey, rhino and porcupine. There was also one case reported of the Wild ass damaging crops.

2.7 Clashes Between PA Authorities and Local People (Table 2.14, volume 3)

The alienation of the local people from the natural resources around them and the inadequate alternative sources of fuel, fodder, water, timber and of earning a livelihood, often force the local people to make demands on the resources of parks and sanctuaries, thereby coming into conflict with park and sanctuary authorities. Sometimes vested interests also provoke, or directly participate in, such confrontations.

Whatever the reasons, very often conflicts over the use and control of natural resources become law and order

problems and result in physical confrontations between the people and the authorities.

Of the 55 national parks and 257 sanctuaries responding, 18 (32.73%) and 56 (21.79%) reported clashes with local people. Of the 195 incidents of clashes reported, 84 (43.08%) were violent clashes.

Among the PAs reporting a large number of clashes were Orang Sanctuary (15), Barnadi Sanctuary (10), Laokhowa Sanctuary (17), Pobitora sanctuary (10), all from Assam.

The major reasons for these clashes included:

- Attacks by timber smugglers
- Prevention/eviction of encroachment
- Death of, or injury to, villagers caused by wild animals
- Protest against displacement
- Restrictions on the extraction of NTFP
- Restrictions on the use of burial grounds
- Prevention of cultivation/ shifting cultivation (jhumming)
- Restrictions on grazing
- Crop damage by wild animals
- Poaching
- Inadequate or lack of compensation for damage, injury, or death
- Protest by villagers against the felling of trees by departments of the government (eg. the electricity department)
- Restrictions on fishing
- Restrictions against construction activity
- Preventing/ penalizing improper entry
- Protest against the notification of the sanctuary
- Demands for the de-notification of parts of the sanctuary
- Violence or other activities by political extremists
- Protest by villagers against the diversion of water
- Restrictions on the construction of roads

- Restrictions on the washing of clothes.

(Comparable data from the earlier survey indicate that 16 (37%) of the 43 national parks and 31 (17%) of the 179 sanctuaries responding, reported the incidence of such confrontations or clashes.

A few of the parks and sanctuaries witnessed a fairly high number of clashes. The Gir National Park and Sanctuary in Gujarat reported 10, and Madhav National Park in Madhya Pradesh reported 18. In West Bengal Jaldapara Sanctuary reported 20 clashes.

The major reasons given for these clashes were: illicit felling of trees, poaching, illegal grazing, encroachments and other forest offences.)

Limitation of the Data

These figures reflect only those clashes, which were officially recorded because of their seriousness, or for other reasons. They, then, can at best be seen as reflecting the minimum number of clashes that occurred, and cannot be seen as representing a complete picture.

The reasons given for the clashes are those given by the wildlife authorities. A proper understanding of the reasons must include the people's versions, which have not been recorded in this report.

2.8 Rights of People Within the PA (Table 2.15, volume 3)

Many of the PAs have been notified in areas where historically local people had and exercised written or unwritten rights and privileges. One of the problems that occurs when these areas get notified is that these rights and privileges have to be curtailed or extinguished.

Of the 55 national parks and 257 sanctuaries responding, 18 (32.73%) and 93 (36.19%) reported the existence of rights within the PA.

The total area used for exercising these rights was 28178 sq km, for 155 different activities. The area that was affected by the use of these rights was 36816 sq km, for 245 activities.

Responses indicated that there were customary rights, recorded rights, leases, licenses, and privileges. Some activities were "permitted" while others were stated to be illegal since the formation of the PA.

The types of activities covered included:

- *Passage and thoroughfare*
- *Pilgrimage and worship*
- *Cultivation, including shifting cultivation*
- *Collection of wood for domestic use*
- *Access to water*
- *Grazing of livestock*
- *Collection of firewood*
- *Collection of medicinal plants*
- *Collection of edible plants and their parts*
- *Fishing*
- *Extraction of fodder*
- *Habitation*
- *Collection of honey*
- *Nistar rights*[17]
- *Collection of silk cocoons*
- *Collection of thatch grass*
- *Collection of other NTFP*

(Data from the earlier survey indicated that in 19 (43%) of the 44 national parks and 128 (68%) of the 187 sanctuaries responding there existed some rights or leases. In national parks the most common types of rights and leases pertained to grazing, which was present in 60% of the 20 parks

[17] *Nistar* refers to the necessities in the carrying on of the business of living. Land set apart for exercise of *nistar* rights may be timber or fuel reserve; pasture, grass, bir or fodder reserve; burial ground and cremation ground; gaodhan or village site; encamping ground; threshing floor; bazaar (market); skinning ground; manure pit; public purposes such as schools, playgrounds, parks, lanes, drains; and any other purposes that may be prescribed. Nistar lands consisted of tree cover categorised as nistari van (open forest), malguzari/zamindari van (forests on land owned by zamindars and malguzars, revenue van, bade jhad ke jungle, chote jhad ke jungle, ghas (grass), charnoi (grazing) and charagah (pasture). Source: http://maptenureindia.org/Glossary

with rights and leases, habitation in 50%, religious yatra in 45% and agriculture in 45%. Similarly, in sanctuaries grazing was by far the most common right, present in 84% of the 128 with rights. The other common ones are fuel wood collection in 54%, collection of minor forest produce in 47%, agriculture in 43%, and habitation in 42% of the sanctuaries with rights.)

Limitations of the Data

Considering that only for 30% of the sanctuaries and 21% of the national parks have the legal procedures been completed (see section 3.1.3), it is probable that in many of the areas the rights and leases existing have not yet been recorded by the wildlife authorities. It is, therefore, possible that many more areas might actually have rights and leases, and many of the areas might have more rights and leases than reported. These figures can, thus, be taken to represent only a minimum.

2.9 Stoppage of Earlier Use of PA Resources (Table 2.16, volume 3)

As already mentioned above, the declaration of a PA often results in the stopping of many of the activities that have traditionally been going on in that PA. These activities are not only those that the villagers and local people are involved with, but also those done by the government, and by commercial and industrial interests.

Of the 55 national parks and 257 sanctuaries responding to this question, 21(38.18%) and 77(29.96%) respectively reported that one or more type of use or activity had been stopped since the area became a PA.

The activities that have been stopped include:

- *Use of water resources*
- *Felling of trees*
- *Working of forests*
- *Hunting*
- *Cultivation*
- *Grazing*
- *Collection of NTFP*
- *Fishing*

- Mining
- Encroachment

The individuals/agencies carrying out these activities include:

- Villagers
- Contractors
- Forest Department
- Forest Development Corporation
- Encroachers
- Miners
- Pilgrims
- Industry
- European hunters (probably includes all westerners!)

2.10 Provision of Alternatives to the Local People (Table 2.17, volume 3)

The stopping of access to PA resources often adversely affects the local communities dependent on these resources for their survival. Therefore, many progressive PAs also try and provide to the people alternatives that are sustainable and do not adversely impact on the PA.

Of the 57 national parks and 244 sanctuaries responding to this question, 7(12.28%) and 14(5.74%) respectively reported that they provided some alternatives.

(Comparable data from the earlier survey suggest that of the 20 national parks and 71 sanctuaries responding, 0 and 9 (12.7%) respectively were providing such alternatives.)

The alternatives offered included biogas plants, free collection of grass and other NTFP, distribution of honey bee boxes, improved and smokeless chullahs, housing material, free rations, agricultural implements, fuel and fodder plantations, employment and income generation opportunities, drinking water, nistar depots and milch cattle.

2.11 Ecodevelopment Around PAs (Table 2.18, volume 3)

A recent approach to resolve potential human nature conflicts attempting to ensure that neither the people are adversely affected by the PA nor is the PA degraded by the people and to elicit their support for conservation, is the ecodevelopment approach. In the last ten years, various NGOs and the government have taken up ecodevelopment activities in and around various PAs in India. There is now a centrally sponsored scheme for ecodevelopment around PAs, a World Bank project (FREEP) supporting ecodevelopment around two protected areas (Kalakad Mundanthurai Tiger Reserve in Tamil Nadu and Great Himalayan National Park in Himachal Pradesh) and the GEF sponsored Indian Ecodevelopment, that is being implemented in seven PAs. There are also various externally sponsored forestry programmes that have an ecodevelopment component.

Of the 53 national parks and 199 sanctuaries responding to this question, 37(69.81%) and 93(46.73%) respectively reported that they were undertaking some ecodevelopment activities.

(Data from the earlier survey indicate that of the 96 PAs responding, only 9(9.4%)reported undertaking any ecodevelopment activity. Of these, only one was a national park)

The common activities undertaken included support for income generating activities (8 PAs), animal husbandry initiatives (7), biogas plants and smokeless chullahs (32), and provision of water facilities (30).

III. Management Profile

The primary objectives of setting up and managing national parks and sanctuaries is to protect a representative sample of natutrl areas from change and degradation caused by human intervention , so that they and all the fauna and flora within them can remain and evolve in accordance with the laws of nature.(Kishore, 1987a)[18]. This chapter deals with some of the various issues relating to the management of national parks and sanctuaries, and their management status in India.

Legal Status

It was only in 1972 that a unified national act came into being under which areas could be constituted and managed as national parks, sanctuaries, game reserves and closed areas. Entitled the Wild Life (Protection) Act, 1972, (here after called the Act), this act was adopted by all states except Jammu and Kashmir, which has its own act differing in certain respects from the national act.

Before the enactment of a national act, some states had their own legislations (e.g., the Hailey National Park Act of UP, 1936, under which the present Corbett National Park was set up as the Hailey National Park). The provisions in the Indian Forest Act of 1927, which allow the setting up of wildlife sanctuaries, were also invoked prior to the passing of the Wild Life (Protection) Act of 1972. This Act was comprehensively reviewed and amended in 1991, making some clauses more stringent while liberalising others.

The present Act not only specifies the procedures to be followed in setting up national parks and sanctuaries, but also specifies the management parameters by indicating the

[18] Kishore, Nawal (1987a). Letter No. 21-1/85-WL, dated Feb 1987, from Nawal Kishore, Under Secretary, MoEF, GoI, to forest secretaries of all states/UTs with attached modified guidelines for providing financial assistance to the state governments under the scheme 'Assistance for Development of National Parks'.

sorts of activities that are allowed or forbidden in such protected areas. The Act also lists the powers and functions of various officials, and the procedures and considerations relevant to the allowing or disallowing of diverse uses of national parks or sanctuaries.

National parks are given a higher level of protection, considering no grazing is permitted within them and it is specified that

> "No person shall destroy, exploit or remove any wildlife from a National Park or destroy or damage the habitat of any wild animal or deprive any wild animal of its habitat within such National Park except under and in accordance with a permit granted by the Chief Wild Life Warden and no such permit shall be granted unless the State Government, being satisfied that such destruction, exploitation or removal of wildlife from the National Park is necessary for the improvement and better management of wild life therein, authorises the issue of such permit". (Section 53 (6) of the Act).

Also, no private land holding or right is allowed within a national park.

Sanctuaries are accorded a lesser level of protection, for in sanctuaries certain types of activities might be permitted. Prior to the amendments in 1991, activities could be permitted in sanctuaries not only 'for the better protection of wildlife', but also 'for any other good and sufficient reason'. The provisions of the act are given below. However, in 1991 clause (b) - "for any other good and sufficient reason" was deleted.

> "Notwithstanding anything contained elsewhere in this Act, no person shall hunt any wild animal in a sanctuary or remove therefrom any wild animal, whether alive or dead, or any trophy, uncured trophy, or meat derived from such animal;

Provided that if the Chief Wild Life Warden is satisfied that it is necessary that any wild animal in a sanctuary should be hunted or removed;

- *for the better protection of wild life , or*
- *for any other good and sufficient reason,*

he may, with the previous approval of the State Government, grant a permit authorising any person to hunt or remove such wild animal under the direction of an officer authorised by him or cause it to be hunted or removed." (Section 29(1) of the Act)

"The Chief Wild Life Warden shall be the authority who shall control, manage and maintain all sanctuaries and for that purpose, within the limits of any sanctuary, may construct such roads, bridges, buildings, fences or barrier gates, and carry out such other works as he may consider necessary for the purposes of such sanctuary; shall take such steps as will ensure the security of wild animals in the sanctuary and the preservation of sanctuary and wild animals therein; may take such measures, in the interests of wild life, as he may consider necessary for the improvement of any habitat; may regulate, control or prohibit, in keeping with the interests of wild life, the grazing or movement of cattle; May regulate, control or prohibit any fishing." (Section 33 of the Act)

The Act further says that "wild life" includes any animal, bees, butterflies, crustacea, fish and moth; and aquatic or land vegetation which forms part of any habitat'. (Section 2(37) of the Act)

The procedures specified in the Act for the setting up of national parks and sanctuaries have the following broad objectives.

- *To identify the extent and boundary of the park or sanctuary.*

- To determine rights, if any, that exist within such an area (to be done by the collector, or an officer appointed specially for the purpose by the state government).
- In the case of existing rights, to either compensate the owner of such rights, if the owner is agreeable, or to acquire the land or such rights, where the owner is not willing to voluntarily accept compensation.
- To exclude areas where unacceptable levels of disturbance exist, and where the disturbance cannot be satisfactorily stopped.
- To allow the continuation of those activities which are considered acceptable.
- To provide for alternatives to public way or a common pasture, 'as far as may be practicable or convenient.' (section 25[1{f}] of the Act)

3.1 Legal Status and Control

The procedure for setting up a national park differed significantly from the procedure for setting up a sanctuary, till the Act was amended in 1991. In the case of sanctuaries, an area was first declared a sanctuary (Section 18 of the Act), then other steps were taken to determine, extinguish, acquire or otherwise adjust existing rights (Sections 19 to 26 of the Act). This ensured that only those activities were allowed in a sanctuary, which were considered compatible with the interests of wildlife protection.

For national parks, the intention to constitute an area into a national park was first declared (section 35 of the Act) and then all the steps prescribed for a sanctuary were followed. After the completion of these steps, the area was declared a national park through a notification (section 35(4) of the Act).

This procedural difference had an important consequence. A protected area was legally not a national park until the final notification under Section 35(4) of the Act, had been issued. On the other hand, an area became a sanctuary upon declaration (under Section 18) even though

various rights and leases had still to be settled. In both cases, of course, completion of the specified procedures was essential for proper management of the area, but in addition it was necessary for the very creation of a national park.

In 1991, the Act was amended and now the procedure for setting up sanctuaries is identical to that of setting up national parks, i.e., even for sanctuaries there are two stages, first an initial notification and then, after all the rights have been settled, a final notification. However, a special clause has been inserted by the 1991 amendment whereby any area that is already a reserve forest (under the Indian Forest Act of 1927) or part of the territorial waters of India, can be declared a sanctuary or a national park without determining and settling rights. In such cases, the notification for declaring intention and the final notification can be simultaneously issues. The logic behind this seems to be that, in any case, as no rights are allowed in reserved forests or in the territorial waters of India, there is no need to go through the process of determining and settling rights.

3.1.1 Notification of PAs (Table 3.1, volume 4)

This section deals with the various acts under which PAs have been notified and their year of notification.

Of the 287 PAs that responded to this part of the question 26[19] (9.06%) were declared prior to 1972, 178(62.03%) were declared between 1972 & 1991, 77 (26.83%) were declared after 1991.

Of the 287 PAs that responded to the section concerning the act under which they were notified, 238 (82.93%) reported notification under the Wildlife (Protection) Act, 1972. Some of the other acts under which the remaining PAs were notified, were the Indian Forest Act, 1927, and the Punjab Wild Birds and Animals Protection Act, 1933.

[19] Some PAs were notified before 1972 under acts passed by the states and were then renotified after enactment of the Wildlife Protection Act, 1972

3.1.2 Status of the Required Legal Steps Taken by PAs (Table 3.2, volume 4)

The WL Act prescribes many steps that need to be taken before an area can legally be constituted as a national park or sanctuary. As already mentioned, this was not so for sanctuaries prior to 1991, for the Act then allowed sanctuaries to be legally and finally notified on the basis of a single, first, notification. This, however, changed after the amendment of the Act in 1991.

Apart from notifying the intention to declare an area into a national park or sanctuary, the government is also obliged to define the boundaries, invite right holders to prefer their rights, enquire about existing rights, settle these rights and then finally notify the PA.

This section describes the various legal steps that the responding PAs had completed in the process of being notified as national parks or sanctuaries, at the time of responding.

LEGAL STEPS	NEW DATA [20]	OLD DATA
Sanctuaries for which the intention to constitute them was notified as per the WL Act, as amended in 1991.	22 (8.56%)	Not Applicable
PA limits defined	23 (41.82%) National Parks 105 (40.86%) Sanctuaries	Not present in Old Data
Proclamation issued by the collector for preferment of rights	22 (40%) National parks 87 (33.85%) Sanctuaries	7 (37%) of 19 National Parks 10 (16%) of 63 Sanctuaries

[20] All percentages given in this section have been calculated out of a total of 47 national parks and 188 sanctuaries responding

LEGAL STEPS	NEW DATA [20]	OLD DATA
Appointment of settlement or other officer to perform the functions of a collector	15 (27.27%) National Parks 71 (27.63%) Sanctuaries.	4 (22%) of 18 National Parks 5 (8%) of 62 Sanctuaries
Commencement of inquiry	14(25.45%) National Parks 62(24.12%) Sanctuaries	7 (37%) of 19 National Parks 9 (15%) of 58 Sanctuaries
Completion of inquiry	14(25.45%) National Parks 51 (19.84%) Sanctuaries	3 (19%) of 16 National Parks 7 (12%) of 60 Sanctuaries
Admittance/rejection of claims	13(23.63%) National Parks 47 (18.29%) Sanctuaries	3 (17%) of 18 National Parks 8 (13%) of 60 Sanctuaries
Exclusion of area	6 (10.91%) National Parks 22 (8.56%) Sanctuaries	Not present in Old Data
Acquisition of the area	7 (12.73%) National Parks 20 (7.78%) Sanctuaries	5 (26%) of 19 National Parks 6 (9%) of 64 Sanctuaries
Allowing of rights	4 (7.27%) National Parks 28 (10.89%) Sanctuaries	Not present in Old Data
Settlement of appeals	8 (14.55%) National Parks 32 (12.45%) Sanctuaries	2 (12%) of 17 National Parks 0 of 59 Sanctuaries

3.1.3 Final notification (Table 3.3, volume 4)

As already mentioned, a national park is not legally so unless the final notification has been done. Similar is the case for sanctuaries declared after 1991.

National Parks

Data indicated that of the 55 national parks that responded, 16(29.09%) national parks had been finally notified.

(Data from the earlier survey indicated that 21 (43.8%) of the 48 national parks responding had been finally notified.)

Details are given in the table below.

ISSUANCE OF FINAL NOTIFICATION OF NATIONAL PARKS

CODE	NAME OF NATIONAL PARK	NEW DATA (1998-2000)	OLD DATA (1984-87)
A&N/N/MAR	Marine National Park		N
A&N/N/MID	Middle Button National Park		N
A&N/N/MOU	Mount Harriet National Park		N
A&N/N/NOR	North Button National Park		N
A&N/N/SAD	Saddle Peak National Park	N	N
A&N/N/SOU	South Button National Park		N
AP/N/KAS	Kasu Brahmananda Reddy National Park	N	
AP/N/MAH	Mahaveer Harina Vanasthali National Park	N	
AP/N/MRU	Mrugavani National Park	N	
AP/N/VEN	Sri Venkateswara National Park	Y (1998)	
ARU/N/MOU	Mouling National Park	N	
ARU/N/NAM	Namdapha National Park	Y	Y
ASS/N/DIB	Dibru Saikhowa National Park	N	
ASS/N/KAZ	Kaziranga National Park	N	
ASS/N/MAN	Manas National Park	Y (1990)	
ASS/N/ORA	Orang Sanctuary	Y(1998)	
CHT/N/IND[21]	Indravati National Park	N	
CHT/N/KAN[22]	Kanger Valley National Park	N	
GOA/N/BHA	Bhagwan Mahavir National Park		N
GUJ/N/BAN	Bansda National Park		Y
GUJ/N/GIR	Gir National Park		Y
GUJ/N/MAR	Marine National Park		Y
GUJ/N/VEL	Velvadar National Park		Y
HAR/N/SUL	Sultanpur National Park	Y (1991)	
HP/N/GRE	Great Himalayan National Park	Y (1999)	N
HP/N/PIN	Pin Valley National Park		N
J&K/N/DAC	Dachigam National Park		Y

[21] Formerly in Madhya Pradesh (MP)
[22] Formerly in Madhya Pradesh (MP)

J&K/N/HEM	Hemis National Park		Y
J&K/N/KIS	Kishtwar High Altitude National Park	Y (1980)	N
JHA/N/RAJ[23]	Rajmahal National Fossil Park	N	
KAR/N/ANS	Anashi National Park	N	
KAR/N/BAND	Bandipur National Park	N	N
KAR/N/BANN	Bannerghatta National Park		N
KAR/N/NAG	Nagarahole National Park		Y
KAR/N/KUD	Kudremukh National Park	N	
KAR/N/NAG	Rajiv Gandhi National Park	N	
KER/N/ERA	Eravikulam National Park	Y	Y
MAH/N/AND	Tadoba Andhari Tiger Reserve	N	
MAH/N/NAV	Navegaon National Park	N	N
MAH/N/PEN	Pench Tiger Reserve	Y (1975)	N
MAH/N/SAN	Sanjay Gandhi National Park	N	N
MAN/N/KEI	Keibul Lamjao National Park	Y (1997)	Y
MAN/N/SIR	Siroy National Park		N
MEG/N/BAL	Balpakram National Park	N	
MEG/N/NOK	Nokrek National Park	Y (1997)	
MIZ/N/MUR	Murlen National Park	N	
MIZ/N/PHA	Phawngpui (Blue Mountain) National Park	Y (1997)	
MP/N/BAN	Bandhavgarh Tiger Reserve	N	N
MP/N/GHU	Ghughuwa Fossil National Park	N	N
MP/N/IND	Indravati National Park		N
MP/N/KANG	Kanger Ghati National Park		Y
MP/N/KANH	Kanha National Park		N
MP/N/MAD	Madhav National Park		Y
MP/N/PAN	Panna National Park		N
MP/N/PEN	Pench National Park	N	N
MP/N/SAN	Sanjay National Park		N
MP/N/SAT	Satpura National Park	N	N
MP/N/VAN	Van Vihar National Park	Y	Y
NAG/N/INT	Intanki National Park	Y (1993)	
ORI/N/SIM	Simlipal National Park		N
ORI/N/BHI	Bhitarkanika National Park	Y (1998)	
RAJ/N/DES	Desert National Park	N	N
RAJ/N/KEO	Keoladeo National Park	Y (1981)	Y

[23] Formerly in Bihar (BIH)

RAJ/N/RAN	Ranthambhore National Park		Y
RAJ/N/SAR	Sariska National Park		N
SIK/N/KHA	Khangchendzonga National Park	Y	Y
TN/N/GUI	Guindy National Park	Y (1978)	Y
TN/N/GUL	Gulf of Mannar Marine National Park	N	
TN/N/IND	Indira Gandhi National Park & Sanctuary	N	
TN/N/MUD	Mudumalai National Park & Sanctuary	N	
TN/N/MUK	Mukurthi National Park	N	
UTT/N/COR[24]	Corbett National Park	Y (1966)	
UTT/N/DUD[25]	Dudhwa National park		Y
UTT/N/NAN[26]	Nanda Devi National Park		Y
UTT/N/VAL[27]	Valley of Flowers National Park		Y
WB/N/GOR	Gorumara National Park	N	
WB/N/SUN	Sunderban National Park	Y	Y
WB/N/NEO	Neora Valley National Park	Y (1992)	

Total number of national parks responding: new data - 55; old data - 48. Total number reporting final notification: new data - 16/55 = 29.09%; old data - 21/48 = 43.8%.

Sanctuaries

Data indicated that of the 257 sanctuaries that responded to the survey, 75 (29.18%) had completed legal processes and also issued the final notification.

(Upto the earlier survey period it was not required to issue such a notification for sanctuaries).

Interestingly, of these 75 sanctuaries, 22 had reportedly been notified prior to 1991. Therefore, according to the unamended wildlife act, these sanctuaries were not required to issue a final notification, but were legally constituted sanctuaries from the date of notification. However, despite this, these 22 sanctuaries thought it fit to also issue a final notification. Perhaps this is due to a possible ambiguity in the amended WL Act with regards to the required legal processes

[24] Formerly in Uttar Pradesh (UP)
[25] Formerly in Uttar Pradesh (UP)
[26] Formerly in Uttar Pradesh (UP)
[27] Formerly in Uttar Pradesh (UP)

for sanctuaries that had not completed settlement of rights by 1991, but were notified prior to 1991. The amended wildlife act came into force in 1991 and stipulated that sanctuaries too will have to issue a final notification after settling rights and would, till such a final notification, only be intended sanctuaries.

There are, however, some additional ambiguities that the data throws up. According to table 3.2, Volume 4, (analysed in section 3.1.2 above), there are 74 sanctuaries in our database that were notified before 1991 or were respondents to our earlier survey whose data pertains to the period between 1984-87. The number of sanctuaries that are common between this table (3.3, Volume 4) and the table analysed in the previous section (table 3.2, Volume 4) is 38. Thus, there are atleast 36 other sanctuaries that were notified prior to 1991, if we consider the totality of the data available with us. Further, there are 11 sanctuaries that reportedly were notified prior to 1991, as per table 3.3, Volume 4, but are not reported as such in table 3.2, Volume 4 (the previously analysed table).

3.1.4 Alteration of PA Boundaries (Table 3.4, volume 4)

Alteration of the boundaries of a national park is allowed vide Section 35(5) of the Act, which specifies that a resolution of the state legislature is required for any such alternation. For sanctuaries, Section 24:2(a) of the Act provides for deleting portions of notified areas.

Additions to the area of parks and sanctuaries are usually aimed at making the existing area more ecologically viable, or to bring under protection a contiguous area of ecological significance. The migratory paths of certain wild animals may be added so as to ensure their protection over their entire range. Areas may also be added to act as a buffer to the existing area.

Deletion of an area, on the other hand, is usually a way of eliminating or reducing pressures detrimental to the well being of the park. An area with intense human pressure or an

area where there are difficulties in acquisition of land or extinguishing of rights can often be excluded to safeguard the overall interests of the park or sanctuary. Unfortunately, in the recent past this clause has been used to accommodate commercial and infrastructure projects at the cost of the protected area.

Out of 55 national parks and 257 sanctuaries that responded to the survey, 8 (14.55%) and 27(10.51%) respectively reported alteration of the boundaries. In case of national parks, area was added to the PA on 6 instances and deleted in 2 cases. 14 sanctuaries reported addition of area while 13 reported deletion.

(In the old survey, 9(26%) of the 35 national parks and 16 (9%) of the 179 sanctuaries responding, reported alteration. Of the parks, which had such a change, there was addition of area in 6 and deletion in 5 - this included 2 parks in which area was both added and deleted. Of the 16 sanctuaries that reported alteration, 10 reported an addition of area and 6 a deletion).

It emerges from the data that the predominant reason for addition of area was to make the protected area ecologically more viable. Deletion of area was usually done due to failure to settle or extinguish local private rights over the area in question, or because the government decided to initiate a development/commercial project, such as a hydro power plant or mining.

<u>Limitations of the Data</u>

The data reflect only formal alterations of boundary and do not include information concerning areas still to be acquired or under illegal occupation. Many of the parks and sanctuaries have reported such areas. Though areas still to be acquired or under illegal occupation are a part of the park or sanctuary, in practice they are not under the control of park authorities and, as such, for the purposes of management can be considered as deleted areas till such time as they are acquired or the encroachments are cleared.

3.2 Zoning in PAs (Table 3.5, volume 4)

The division of national parks and sanctuaries into a buffer zone (BZ), and a core zone (CZ) or sanctum sanctorum, is usually prescribed as essential to the proper management of these areas. It is an important way of reconciling the often conflicting demands of conservation and human activities, by allowing restricted activities in the BZ while keeping out most human uses from the CZ.

Of over-riding and primary importance is the need for each individual reserve to adopt a 'Core-buffer-multiple use surrounds' structure, wherein a restricted forest, i.e. a buffer. surrounds the core, insulating it from an outer multiple use area, the last comprising forests and villages where land use practices are compatible with wildlife conservation.

"While protection must be enforced in the core-buffer area, the multiple use surrounds should be subjected to rapid multilateral eco-development capable of enhancing the agricultural, pastoral and forest productivity of the area and to provide supplemental alternative resources. This is the only way in which compatibility of each area with the others can be brought about" (IBWL 1983)[28].

Among the parks and sanctuaries responding, at least the following four types of zoning practices were found

- Where both the buffer and core zone are inside the notified park/sanctuary.
- Where the park/sanctuary is designated the core zone, and an area surrounding it or adjacent to it, but outside the notified park/sanctuary, is considered a buffer zone.
- Where a national park is designated the core zone and sanctuary surrounding it or adjacent to it is designated as buffer zone.

[28] IBWL 1983. *Eliciting Public Support for Wildlife Conservation,* Indian Board for Wildlife, Department of Environment, GoT, New Delhi, October 1983.

- *Where the notification designates both the core zone and the buffer zones, but only the core zone has been taken over for management as park/sanctuary while the buffer zone remains outside the managed area.*

Out of 50 national parks and 242 sanctuaries that responded to this question, 25 (50%) national parks and 67 (27.69%) sanctuaries reported the presence of zonation.

(In the previous survey, 18 (38%) of the 48 national parks and 41 (19%) of the 221 sanctuaries responding, reported the existence of zoning).

Limitations of the Data

At least for some of the parks and sanctuaries, zoning might not be required as there is no human population or human activity in and around the area.

The existence of a core zone in a park or sanctuary does not necessarily mean that it actually functions as a sanctum sanctorum for wildlife. In fact, in several parks and sanctuaries the core zones have villages and tourist facilities located within them, along with other non-conservation related structures.

3.3 Interstate/International Boundaries or Other Vulnerable Areas (Table 3.6, volume 4)

The existence of inter-state boundaries or other vulnerable areas sometimes create special problems in the management of national parks and sanctuaries.

Interstate boundaries near the park or sanctuary prevent the wildlife staff from properly protecting the areas, as poachers can easily slip across the border. The officials of one state do not ordinarily have the authority to operate within another state, unless prior permission is taken. Such borders can also lead to problems of interstate cooperation in habitat management. These problems could be even greater in the case of international boundaries.

Of the 288 PAs responding, 47(16.32%) reported that their boundaries were contiguous with an interstate or

international boundary. Of these, 12 (4.17%) were PAs that were situated on an international border. The major problems arising out of having a PA on a border were reported to be illegal use of forest resources, poaching, unauthorised grazing, illicit felling etc. In addition, it was reported from Dampa Tiger Reserve, Mizoram, that the Chakmas from across the border in Bangladesh were indulging in illegal jhuming (shifting cultivation) in the PA, while in the case of Asola Sanctuary, Delhi, it was reported that people from across the border in Haryana were involved in illegal mining activities in the PA. Only in one case viz. Barnadi Sanctuary in Assam, was there reported to be no major or special problem because of the border with Bhutan

(Comparable data from the earlier survey indicates that of the 47 national parks and 202 sanctuaries responding, 11 (23%) and 48 (24%) respectively reported the existence of interstate boundaries and other vulnerable areas creating special problems.)

3.4 Management Plan (Table 3.7, volume 4)

The drawing up of management plans can be considered a crucial first step in the proper management of parks and sanctuaries. Apart from the plan itself, which ideally gives a framework within which protection of the area has to be enforced and monitored, the data collection and research that should precede the formulation of a plan is an important source of information on the area and a baseline from which to evaluate the subsequent 'health of the area'.

Ideally, the management plan should fit into the overall land use planning of the region, taking into account the relevant environmental, social and economic parameters relevant to both the park/sanctuary as well as the adjacent areas. Within the ambit of the park itself, the management plan should identify the major objective of the park/sanctuary, assemble comprehensive background data, establish the relationship of different factors to each other, identify the priority areas and strategies for protection and

management, and indicate suitable locations for buildings and facilities. The plan should seek to ensure that the management requirements, goals and objectives, are considered carefully before initiating action,and that planning is done with a long-term perspective in mind, thus protecting the park from the effects of piecemeal and ad hoc management practices.

Of the 47 national parks and 255 sanctuaries responding, 27 (57.45%) parks and 101 (39.61%) sanctuaries reported the existence of management plans. Of the PAs reporting the existence of management plans, 11 (40.74%) parks and 30 (29.7%) sanctuaries reported that their management plans had been approved. Of the 174 PAs that reported that they did not have any management plans, only 21 (12.07%) reported that a management plan was being prepared.

(Comparable data from the earlier survey indicates that of the 52 national parks and 208 sanctuaries responding (extended data base), 25 (50%) of the parks and 65 (31%) of the sanctuaries reported the existence of management plans. Only 5 (9.61%) national parks and 18 (8.65%) sanctuaries stated that their plan had been approved)

A comparison shows that 20 PAs that had reported the existence of management plans in the earlier survey, did not have a management plan at present. Of these, there were 6 PAs viz: Pench Tiger Reserve, Madhya Pradesh , Nagzira Sanctuary, Maharashtra, Pench National Park and Sanctuary, Madhya Pradesh, and Mudumalai National Park and Point Calimere Sanctuary, Tamilnadu, that reported that a management plan was in the process of being formulated.

In all the other areas management was carried out, in so far as it was, on an ad hoc basis with an annual perspective, rather than a five or ten yearly one.

Limitations of the Data

The data only indicate the existence of management plans and not their comprehensiveness or appropriateness. Judging from copies of management plans sent in for many of the areas it appears that, but for a few exceptions, these plans are little more than a budget with a general introduction. Moreover, in some cases the plans cited are old, and it is unclear whether and how they are being followed at present.

The data on approval of management plans are obviously scanty, but from field visitors' experience it appears that a majority of the management plans have never been approved, and often the proposed financial budgets are neither received in full, nor on time.

3.5 Separate Budget (Tables 3.8 and 3.9, volume 4)

As an important indicator of management practices, the existence of a separate budget for each national park and sanctuary was queried. Not having a separate budget implies that the expenditure on the park or sanctuary comes out of the larger budget for the forest/wildlife division, without funds being exclusively allocated for expenditure on the park or sanctuary. This might also mean having very little funds or no funds at all, to spend on the park or sanctuary. It then becomes difficult to plan ahead and take up long-term projects, and the park directors' financial powers are greatly limited.

Of the 312 PAs that responded to the survey, 220 (70.51%) gave details of their budgetary allocations and expenses. The overall trends for average allocations and expenditure for a three-year period (1997-98 to 1999-2000) were as follows:

	Difference in allocation (%) between Year 2 and Year 1	Difference in allocation (%) between Year 3 and Year 2
Plan funds allocated for PAs	10.46%	27.32%
Plan funds[29] spent	7.26%	55.47%
Non plan funds allocated	-7.21%	8.27%
Non plan funds spent	10.73%	9.84%

In most cases, while looking at the data for individual PAs, increase in expenditure was less than the increase in the allocation of funds. However, certain PAs, for example, Gomarda in Chhattisgarh, Bansda in Gujarat, Nagarahole and Pushpagiri in Karnataka, Khawnglung in Mizoram, and a few others, reported especially high growth in plan fund expenditure, thus skewing the data for growth in plan fund spending between year 2 and year 3.

The lowest plan funds allocation for a single year in the three years for which data was asked for was reported to be Rs. 4,000 in the case of Ratanmahal Sanctuary, Gujarat, Rs. 7,000.00 in the case of Tal Chhappar Sanctuary, Rajasthan , Rs. 4,418.00 in the case of Mudumalai National Park, Tamilnadu and Rs. 4,564 in the case of Sandi Sanctuary, Uttar Pradesh. The other PAs that had very small budget allocations of plan funds (less than Rs. 25,000 per annum) in either of the three years that data was asked for were Manali Sanctuary, Himachal Pradesh, Hazaribagh and Parasnath Sanctuaries, Jharkhand; Jaikwadi Sanctuary, Maharashtra; Fakim, Puliebadze and Rangapahar Sanctuaries, Nagaland; Kotgarh Sanctuary Orissa; Samaspur Sanctuary, Uttar Pradesh and Ramnabagan Sanctuary, West Bengal.

[29] Plan funds are allocated for the start of new activities or for new initiatives,assets. Non plan funds are for the maintenance of existing activities and assets, including support of existing staff.

The highest plan funds allocation for a single year in the three years for which data was asked for was reported to be Rs. 4,92,50,000 for Nagarahole National Park, Karnataka. The other PAs that reportedly had substantial allocations of plan funds (more than Rs. 50,00,000.00 per annum) in either of the three years that data was asked for were Interview Island Sanctuary, Andaman and Nicobar, Venkateswara National Park and Eturnagaram Sanctuary Andhra Pradesh, Namdapha Tiger Reserve, Arunachal Pradesh, Kaziranga National Park, and Laokhowa and Pobitara Sanctuaries, Assam, Sukhna Lake, Chandigarh, Indravati Tiger Reserve, Chattisgarh, Bandipur , Bannerghatta , Bhadra and Nagarahole National Parks, as well as Kaveri and Shettihally Sanctuaries, Karnataka, Wayanad and Aralam Sanctuaries, Kerala, Andhari, Sanjay Gandhi and Pench National Parks as well as Chandoli Sanctuary, Maharashtra, Nongkhyllem Sanctuary, Meghalaya, Pench National Park as well as Gandhi Sagar, Kuno and Noradehi Sanctuaries, Madhya Pradesh, Murlen National Park, Mizoram, Similipal Sanctuary, Orissa, Keladevi Sanctuary, Rajasthan, Grizzled Squirrel Sanctuary, Tamil Nadu, Katarniaghat Sanctuary, Uttar Pradesh, Corbett Tiger Reserve, Uttarakhand, and Sundarbans Tiger Reserve, West Bengal.

38 (17.27%) PAs reported that their plan allocations had at least doubled ie; a budgetary increase of 100% or more between the 1st and the 2nd year for which financial data was asked for. Of these, all except 5 PAs, ie; Burha Chapori and Pobitora Sanctuaries, Assam, Daranghati and Shikari Devi Sanctuaries, Himachal Pradesh, and Anshi National Park, Karnataka, reported a negative trend or decline in their budget allocations between the 2nd and 3rd years for which financial data was asked for. ***Further, 78 (35.46%) PAs reported a 100% or greater increase in their plan budget allocations between the 2nd and 3rd years for which data was asked for.***

63 (28.63%) PAs reported that their plan allocations had declined between the 1st and the 2nd year for which financial data was asked for. Of these, only 37 PAs reported a subsequent increase in plan funds allocation while 23 PAs reported that they had been able to regain the level of funding that they had or a 100% or more increase in plan funds allocation between the 2nd and the 3rd years for which financial data was asked for.

103 (33.01%) PAs reported that they had received extra budgetary funds from various sources. While most PAs had tapped on central government funds, 24 (23.3%) reported that they had received funds from the World Bank (India Ecodevelopment Project and/or State Forestry Projects). Only one PA, Kaziranga in Assam, reported receipt of funds from an NGO viz. from the WWF sponsored Tiger Conservation Programme. Trishna Sanctuary in Tripura reported receipt of UNDP funds. The level of funding ranged from as little as Rs. 10,000 or less from sources such as the state governments to Rs. 50,00,000.00 or more from sources such as the World Bank Aided Forestry or India Ecodevelopment Projects in various states, Project Tiger, or the District Rural Development Agencies. The PAs that had received substantial extra budgetary funding were Ventateswara National Park and Coringa, Koundinya, Pulicat and Pocharam Sanctuaries in Andhra Pradesh, Dibru Saikhowa National Park, Assam, Sukhna Lake, Chandigarh, Indravati Tiger Reserve, Kanger Valley National Park, and Sitanadi, Achanakmar and Tamore Pingla Sanctuaries in Chattisgarh, Great Himalayan National Park, Himachal Pradesh, Aralam Sanctuary in Kerala, Pench National Park, Maharashtra, Bandhavgarh, Pench and Van Vihar National Parks and Gandhisagar and National Chambal Sanctuaries in Madhya Pradesh, Chandka Dompada Sanctuary, Orissa, Keladevi Sanctuary, Rajasthan, Khangchendzonga National Park, Sikkim, Indira Gandhi National Park, Tamil Nadu , Sandi

Sanctuary, Uttar Pradesh and Corbett Tiger Reserve in Uttarakhand.

A list of central and state sector schemes pertinent to the wildlife sector is given in annex 1.

(Comparable data from the earlier survey showed that of the 51 national parks and 205 sanctuaries responding, 34 (67%) and 116 (57%) respectively, reported having separate budgets.)

Limitations of the Data

Of course, to properly assess the adequacy of the allocattd funds for any PA, and to meaningfully compare this woth the allocation of other PAs, we would have to factor in the PA size, the threats and pressures, and he vulnerability, at the very least. This exercise has not been possible on the basis of the data available with us.

Also, without a detailed analysis of the actual expenditure on each park or sanctuary, something that has not been attempted in this report, it is not possible to conclude that areas with separate budgets get a higher level of funding than those without it. However, barring exceptional cases, it can generally be argued that separate budgets are desirable and are one of the essential instruments of long-term planning for parks and sanctuaries.

3.6 Number of Visitors to the PA (Table 3.10, volume 4)

PA managers and other policy makers are increasingly turning to eco tourism to justify continued support to PAs. Most PA management plans have sections on tourism and state tourism departments have been enthusiastically marketing PAs, particularly those that harbour charismatic species of animals.

However, uncontrolled tourism can potentially be a source of pressure on the PA. This section describes the number of people visiting PAs. A distinction has been made between tourists and pilgrims as a number of PAs have reported a large influx of pilgrims, particularly during local festivals.

Of the 281 PAs responding, 127 (45.2%) reported visits by tourists. Though over half the PAs responding did not respond to this specific question, yet it is likely that many of them also had visitors. In some of tthese cases, perhaps in many or most, it is likely that though there were visitors, no records were maintained.

The lowest number of visitors (1) was reported from Sonai Rupai sanctuary in Assam, while Mookambika sanctuary in Karnataka reported the highest number (15,05,000). The average number of visitors per PA works out to 55,398. The highest number of visitors in a single day (5,59,539) were reported from Bannerghatta National Park in Karnataka.

Pilgrims reportedly visited 69(24.56%) PAs. The highest number of pilgrims (5,00,000) were reported from Grizzled Squirrel Sanctuary in Tamil Nadu, while Brahamgiri Sanctuary in Karnataka reported the lowest (2). The average number of pilgrims from the PAs that reported their presence was 27,584.

3.7 Regulation of Entry (Table 3.11, volume 4)

Given the need to restrict or regulate various types of human pressures on PAs, including pressures by tourists and pilgrims, it is important that PAs regulate the entry of people so that their numbers can be managed. It is also important to ensure that animals are not disturbed at night and that visitors to the PA do not take in or bring out any prohibited items.

3.7.1 Entry into the PA by Vehicles:

The entry of vehicles into the PA is particularly problematic as not only do these vehicles cause noise and air pollution but also, sometimes, run down wild animals. Vehicles can also be used for illegal activities within the PA.

229 (91.24%) of 251 PAs responding to this question reported that ehicles could enter from one or more points on their boundary. Of these, 157 (68.56%) PAs reported that some or all such entry points were being manned. 37 (16.16%) PAs reported that their vehicular entry points were not manned.

22 (8.76%) PAs reported that they did not have any vehicular entry points.

3.7.2 Entry into the PA on foot:

Many PAs are close to towns or cities and are, consequently, subject to a large amount of visitors on foot. Apart from the possible disturbance such visitors might cause, in PAs that harbour animals potentially dangerous to human beings, it is important to regulate or restrict travel by foot.

223 (96.1%) of 233 PAs that responded to this question reported that they could be entered on foot. Of these, 72 (32.29%) PAs reported that some or all such entry points were being manned. 152 (68.16%) PAs reported that they did not man any foot paths going into the PA. Only 10 (4.48%) PAs reported that they had no entry points on foot. These PAs were Narcondam and North Reef Sanctuaries in Andaman and Nicobar, Garampani Sanctuary, Assam, Nargu Sanctuary, Himachal Pradesh, Andhari National Park, Maharashtra, Bir Mahas Sanctuary, Punjab, Koontakulam Sanctuary, Tamil Nadu and Sundarban National Park, and Bethudahari and Senchal Sanctuaries, West Bengal

3.7.3 Permits for Entry on Vehicles:

110 (35.26%) of the PAs reported that they issued permits for the entry of vehicles into the PA. Of these, there were 7 (2.24%) PAs that had not responded to the question on whether they had any vehicular entry points. These PAs were, Dibru Saikhowa National Park, Assam, Udanti Sanctuary, Chattisgarh, Great Himalayan National Park, Himachal Pradesh, Nagarahole National Park, Karnataka, Radhanagari Sanctuary, Maharashtra, Baghmara Sanctuary, Meghalaya, and National Chambal Sanctuary, Uttar Pradesh.

3.7.4 Permits for Entry on Foot:

84 (26.92%) PAs reported that they issued permits for entry of people on foot into the PA. Of these, there were 11 (3.53%) PAs that either did not respond to whether they had any entry points on foot for people entering the PA (8 PAs) or had said

there were no entry points for people entering the PA on foot (3 PAs).

3.8 Thoroughfares Passing Through PAs (Table 3.12, volume 4)

Public thoroughfares in national parks or sanctuaries are potential sources of disturbance to these areas. They could also be seen as creating a situation where poaching, spread of disease by passing cattle, and problems created by increased quantum of visitors entering the park or sanctuary would become difficult to control. A busy highway, apart from contributing to vehicular pollution, could also make it difficult to ensure that habitat is not destroyed or other unauthorised activities do not take place.

Of the 312 PAs, 110 (35.2%) reported the existence of a public thoroughfare. Of these, 10 (9.09%) PAs reported the existence of national or state highways. The three PAs that reported a very high level of disturbance due to such thoroughfares were:

Wild Ass Sanctuary, Gujarat, which reported that there were 3 lakh trips of trucks per annum to transport 30 lakh tonnes of salt that is produced in salt factories operating inside the PA

Kalatop Khajjiar Sanctuary, Himachal Pradesh, which reported that around 25,000 to 30,000 light vehicles pass through the PA each year, especially in the tourist season

Badarma Sanctuary, Orissa, which reported that there was constant bus and truck traffic in the PA. Each minute, at least one truck or bus is reported to pass through the PA. There is no estimate of light vehicles that pass through the PA, in addition to the above.

(Comparison from the earlier survey showed that of the 47 national parks and 204 sanctuaries responding, 22 (47%) and 117 (57%) respectively, reported the existence of a public thoroughfare.)

23 of the PAs that reported the existence of a thoroughfare in the earlier survey, did not do so in this one.

3.9 Antipoaching or Flying Squads (Table 3.13, volume 4)

Poaching of animals has increasingly become one of the major threats to wild populations, especially of commercially valuable species like rhino, tiger, leopard, elephant, crocodile, musk deer, snow leopard. A large number of poachers are mobile and have sophisticated weapons and equipment. In order to counter the threat, it is important for PAs to have access to specialized anti poaching squads that are properly equipped and trained.

140 (44.87%) PAs reported that they had anti poaching/ flying squads, while 162 (51.9%) PAs reported that they did not have any such squads. The maximum number of squads reported were 23, from Indira Gandhi National Park in Tamil Nadu.

(Comparative data from the earlier survey shows that 66 (25.19%) PAs reported that they had antipoaching squads, while 29 (11.06%) PAs did not report any such squads.)

Of the 66 PAs that had reported the existence of flying squads in the earlier survey, 39 (59.09%) PAs reported in the current survey that they did not have any flying squads.

3.10 Adequacy of Antipoaching Measures (Table 3.14, volume 4)

195 (62.5%) of the PAs reported that the antipoaching measures currently being undertaken by them were not adequate, while 70 (22%) PAs reported that such measures were adequate. 7 (1.27%) PAs, viz. Rajmahal National Park, Jharkhand, Malwan and Naigaon Sanctuaries, Maharashtra, Ghughuwa and Satpura National Parks and National Chambal Sanctuary, Madhya Pradesh, and Ballavpur Sanctuary, West Bengal, responded that the question was not applicable in their case. The reason for responding thus for Rajmahal or Ghughuwa may have been that they are fossil parks. However, the reason for the others responding thus was not apparent. 5 (1.6%) PAs did not respond to this question. However, 2 of these PAs viz. Yordi Rabe Supse, Arunachal, and Gumati Sanctuary, Tripura, listed out measures that were needed for adequate anti-

poaching measures, thus one could presume that antipoaching measures being undertaken were not adequate. Mookambika Sanctuary, Karnataka seemed to suggest that no additional measures were needed, thus implying that antipoaching measures being employed were adequate. Ngengpui Sanctuary, Mizoram and Karaivetti Sanctuary, Tamilnadu seemed to suggest in their response that there weren't any poaching threats in the PA.

3.11 Guns Within the PA and Surrounding Areas (Table 3.15, volume 4)

The existence of private weapons inside or adjacent to a PA pose a special hazard as they can not only be used for poaching but also make it easier for wild animals to be killed while threatening crops or livestock.

134 (42.95%) PAs reported the existence of registered guns within their boundaries or surrounding areas. The maximum number of licensed guns (2000) was reported from Nagarahole National Park, Karnataka. The average number of licensed guns per PA from among those that reported them was 187.

Data for the number of unlicensed guns within or in the surrounds of the PA was inadequate and/or under reported. A total of only 684 unlicensed guns were reported within or around the PA from 10 PAs (32.05%). The maximum number of unlicensed guns (385) was reported from Talakaveri Sanctuary, Karnataka.

3.12 Hunting Permits (No Table)

Hunting within PAs is strictly prohibited, except in case of animals that pose a threat to human life or property, or for the better management of the PA. This, also, only by the the PA authorities or with their permission.

Only 2 (0.85%) PAs reported that they had issued hunting permits. These PAs were Tadoba Andhari Tiger Reserve, Maharashtra, and Desert National Park, Rajasthan. In case of the former, the permit was issued for killing a tiger that was declared to be a man eater, while in case of the

latter, the permit was issued to kill three Blue bulls "due to crop damage". However, the permit was reportedly not used in the case of the Desert National Park.

(Comparative data from the earlier survey show that only 2 (5%) of the 43 national parks responding and 3 (2%) of the 187 sanctuaries responding reported the issuing of hunting permits for killing or collecting of animals). The details are given below.

NP/S	No. of Permits	Animal and Numbers Involved	Reasons
Bhimbandh S. (Bihar)	11	Wild boar (11)	To stop crop damage
Bhittar Kanika S. (Orissa)	2	Collection of Olive ridley turtle eggs (530)	Research
Simlipal S. (Orissa)	1	Tiger (1)	Man-eater
Ranthambore N. (Rajasthan)	5	Wild boar (6)	Unspecified
Dudhwa N. (Uttar Pradesh)	1	Tiger (1)	Man-eater

3.13 Commercial and Developmental Activities Inside PAs (Table 3.16, volume 4)

The Wild Life (Protection) Act 1972 (and the corresponding J&K Act) specifies that the control of national parks and sanctuaries must vest with the Chief Wildlife Warden of each state (section 33 for sanctuaries, and section 35 for national parks). What this implies is that any activity by any agency or department, other than the Wildlife Wing of the Forest Department, in a national park or sanctuary, has to be cleared by the Chief Wildlife Warden.

As far back as 1973 the then Prime Minister of India, Smt. Indira Gandhi, in a D.O. letter addressed to all Chief Ministers (NO. 694-PM/73 dated December 27,1973) had suggested that:

"The Wildlife Service will manage National Parks and Sanctuaries exclusively, and all staff and activity will be under their control."

In a subsequent letter (dated September 16, 1976) from the Joint Secretary (F & WL), Department of Agriculture, Government of India, it was clarified that :

"All roads entering the sanctuaries and national parks should have check posts manned by 3 wildlife forest guards working round the clock."

89 (28.53%) PAs reported the presence of commercial and/or developmental activities inside the PA. The most common commercial or developmental activity in PAs was that of road construction or maintenance, which was reported from 49 (55.06%) of the PAs reporting such activities. In terms of the impact or affect on the PA, the most impacted PAs from roads were Kolleru Sanctuary in Andhra Pradesh (81.16% of the PA) and Changthang Sanctuary in Jammu and Kashmir. The other commonly reported commercial or development activities from PAs were dams, power or irrigation projects, which were reported from 43 (48.31%) of the PAs responding. Many PAs are created on or around reservoirs formed by dams (eg Pong Lake). However, there are many in which dams or their reservoirs are only a part of the overall area of the PA. In terms of the area of the PA occupied/affected by dams/reservoirs in this category, significant area of the PA being affected was reported from Pocharam Sanctuary in Andhra Pradesh and National Chambal Sanctuary in Uttar Pradesh.

Transmission or power lines,were reported from 15 (16.85%) of the PAs responding.

Commercial extraction of NTFP or Timber from PAs, which was reported from 29 (32.58%) of the PAs responding. Significant percentage of the area of the PA was reported to be affected by this activity from almost all the PAs that reported this activity. However, Tamore Pingla Sanctuary in Chattisgarh , Hazaribagh Sanctuary in Jharkhand, Sanjay (Dubri) Sanctuary in Madhya Pradesh, and Khalasuni,

Kuldiha and Similipal Sanctuaries in Orissa reported that their entire area was affected by this activity.

Fishing, pisciculture, or aquaculture, was reported from 11 (12.36%) of the PAs responding. The PAs that reported a significant percentage of their area being affected by these activities were Kolleru Sanctuary in Andhra Pradesh (32.46% of the PA), Pong Lake Sanctuary in Himachal Pradesh (100% of the PA) and Jaikwadi Sanctuary in Maharashtra (70.38% of the PA)

Mining or quarrying were reported from 10 (11.24%) of the PAs responding. In terms of the area affected by mining, in absolute terms, the maximum (46 sq km) reported was from Kudremukh National Park in Karnataka. In all other cases, the area impacted was either not reported or was reported to be small.

(Comparable data of the earlier survey shows that of the 45 national parks responding, 25 (56%) reported use by departments and agencies other than the Wildlife Wing. Similarly, of the 188 sanctuaries responding, 119 (63%) had such use.)

(In national parks, the most common use or occupation was that of roads controlled/used by other departments, which were present in 60% of the parks reporting any use. Other relatively common ones were tourism and transmission lines, present in 28%, and irrigation and housing in 20% of the parks responding.)

(In the case of sanctuaries, 55% of those having such uses reported the existence of roads, 36% reported transmission lines, and 31% reported irrigation under other government agencies. 20% also reported forestry activities being carried out by wings of the Forest Department other than the wildlife wing.)

3.14 Encroachments (Table 3.17, volume 4)

Given the pressure on land in most parts of the country, it is inevitable that PAs would also become a target of encroachers. However, encroachments within PAs can often

become a growing threat and seriously affect the integrity of the area. This is especially so when encroachers start "honey combing" the forest and competing with wildlife for food, water and space.

111 (39.93%) of the 278 PAs that responded to this question reported the incidence of encroachment. In terms of the area of the PA affected by encroachments, the PAs that reported a significant quantum were:

Kolleru Sanctuary, Andhra Pradesh, which reported 250 sq km or 81.16% of its area being encroached!

Pakhal Sanctuary, Andhra Pradesh, which reported 208 sq km or 24.18% of its area being encroached.

Laokhawa Sanctuary, Assam, which reported 26 sq km or 37.08% of its area being encroached/

Hazaribagh Sanctuary, Jharkhand, which reported 106.31 sq km or 57.15% of its area being encroached

Jaikwadi Sanctuary, Maharashtra, reported 85 sq km or 24.91% of its area being encroached

Action taken by authorities to have the encroachments vacated was reported from 90 (81.08%) of the PAs that reported encroachments. Mostly cases had been filed in the court, while in some cases evictions had also been attempted.

(Comparable data from the earlier survey revealed that 3 (7%) of the 44 national parks and 32 (20%) of the 160 sanctuaries responding reported encroachment.

(In all three of the national parks and in 23 (72%) of the 32 sanctuaries reporting encroachment, some action had been reportedly taken by the authorities. This, however, varied considerably. In many cases action taken meant initiation of correspondence between the different concerned department, or filing of case.)

18 of the PAs that reported encroachments in the earlier survey did so in the current one too, while 16 PAs that reported encroachments in the current survey had not done so in the previous one.

Limitations of the Data

Many cases of encroachment seem to go unrecorded or unreported. The figures should therefore be taken as reflecting the minimum incidence.

3.15 Permanent Staff (Table 3.18, volume 4)

There is a heavy density of human population and a high frequency and intensity of various types of human activities in and around most parks and sanctuaries in India. Their protection, therefore, requires intensive management by properly trained staff.

32 (10.26%) PAs did not report any permanent staff. One of the problems that PA authorities have is that staff that have been sanctioned are often not posted to PAs. For example, out of a total of 508 posts of range officers sanctioned, 489 (96.26%) had been filled. Similarly, of the total 3970 posts of Forest Guards sanctioned, 3577 (90.10%) had been filled. The other aspect is that in very many cases, staff at various levels above forest guards, hold multiple charge and are thus not fully assigned to the PA.

Please note that the above data does not give any idea of the variations between the various PAs in terms of their staff strength. Therefore, on the one hand we had PAs that had a staff strength that exceeded 150 people at levels above forest guard, and up to conservator of forests such as Kaziranga National Park, Assam , Similipal National Park, Orissa, and Corbett Tiger Reserve, Uttarakhand, on the other hand, there were 97 PAs that reported less than 5 people as permanent staff at the level of forest guard, upto conservator of forest.
In short, the availability of staff varied drastically between PAs. Of course, as already mentioned, the adequacy and of staffing needs to be judged on the basis of the size of the pa, the pressures that exists and the vunerability of the fauna and their habitat.

3.16 Staff Employed on Daily Wages in PAs (Table 3.19, volume 4)

One of the major constraints that PA managers often face is the lack of adequate staff. This problem is partially overcome by employing people on daily wages. Daily wagers perform a

wide variety of tasks, ranging from protection and patrolling to office work. This, it can be argued, not only provides employment to local people but also creates a stake for the local people in the well being of the PA. However, on the other hand, it has also been argued that local people are more likely to connive and turn a blind eye to the destructive activities of their fellow villagers.

Of the 55 National Parks and 246 sanctuaries that responded to this question, 50 (90.9%) and 171 (69.51%) respectively reported that staff was employed on daily wages for various purposes in the PA.

From the responses to the survey, it emerged that the nature of tasks performed by daily wagers included fire protection, manning barriers and rest houses, patrolling and protection, messenger duties, maintenance of roads etc. inside the PA.

3.17 Additional Responsibilities of the PA Director (Table 3.20, volume 4)

With the exception of tiger reserves and some important national parks, most PAs do not have dedicated PA directors. Usually, an officer of the rank of DCF shares the responsibility of more than one PA. In cases where the PA is not under the control of the wildlife wing, the concerned territorial officer looks after the PA in addition to his/her other duties as a territorial officer.

Of the 275 PAs that responded to this question, in 216 (78.55%) the PA director had responsibilities in addition to managing the PA. Only 55 PAs (20%) stated that that thePA director had no other responsibilities

As described earlier, additional responsibilities of PA directors included territorial duties and wildlife protection duties in other PAs.

3.18 Veterinary Facilities for PAs (Table 3.21, volume 4)

To meet emergencies and to take care of general problems relating to the health of wild animals, the presence of a vet within a park or sanctuary is very useful

Out of 298 PAs responding to this question, 27(9.06%) respectively reported the presence of a veterinarian attached to the PA. However, 199 (66.78%) PAs reported that there was a veterianary hospital in or around the PA

(Data from the previous survey shows that of the 45 national parks and 199 sanctuaries responding, only 7 (16%) and 12 (6%) respectively had vets)

3.19 Availability of Research Staff in PAs (Table 3.24, volume 4)

Good research in PAs can form an important input for taking crucial management decisions. Thus, research staff in PAs has a significant role in effective management of the PA.

Of the 300 PAs that responded to this question, only 14 (4.67%) reported the presence of research staff.

The absence of research staff in a vast majority of the PAs suggests that the importance of research as a management tool is perhaps still not recognized adequately.

3.20 Availability of Staff Trained in Wildlife Management (Table 3.25, volume 4)

The data shows that of the 55 national parks and 257 sanctuaries responding to the survey, 27 (49.09%) and 67 (26.07%) had at least one staff member trained in wildlife management.

(Corresponding figures from the previous survey show that of the 45 parks that responded, 30 (67%) had at least one member trained in wildlife. For sanctuaries, of the 171 responding, 61 (36%)reported presence of staff with wildlife training.)

3.21 Availability of Equipment in PAs (Table 3.26, volume 4)

The ability of the staff to optimally manage a protected areas is significantly enhanced by the availability of appropriate equipment. In fact, investment in equipment can not only reduce the human-power required, by making each individual more effective, but also reduce time and allow for the anticipation and consequent prevention of many undesirable activities and occurrences.

A very high proportion of PAs, 54 (98.18%) of the 55 national parks and 195 (75.86%) of the 257 sanctuaries reported the presence of some equipment

(Data from the previous survey shows that nationwide, of the 40 national parks and 159 sanctuaries responding, 27 parks (68%) and 79 sanctuaries (50%) reported the existence of one or more kinds of equipment).

3.22 Research in PAs (Table 3.27, volume 4)

Research on flora, fauna, habitat and ecological processes is an essential component of the initial planning for a national park or sanctuary. In addition, monitoring of evolutionary and ecological changes, and of the human impact on ecosystems, can provide crucial data for continuous planning and management.

Research within parks and sanctuaries also provides data and insights that are of general, or national, value. It can contribute to the national inventory of flora and fauna, and to a mapping of the genetic resources available in the country. It can also help in mass education programmes related to wildlife and ecosystem conservation. Information was therefore sought on past and present research and monitoring efforts.

Nationwide, out of the 312 PAs that responded, 104 (33.33%) reported that research was either currently ongoing in the PA or had taken place in the past.

(Corresponding figures in the earlier survey were that of the 38 national parks and 166 sanctuaries responding, 16 (42%)of the national parks and 32 (23%) of the sanctuaries reported that research work had been undertaken or was under way).

Limitations of the Data

From this information nothing can be gleaned on the scope and quality of research and monitoring. These probably vary considerably from PA to PA.

3.23 Monitoring Activities in the PA (Table 3.28, volume 4)

Periodic monitoring can provide valuable information about ecological trends, particularly on issues such as trends related to the population of fauna and distribution of flora. Such monitoring can facilitate timely management interventions, if such a need were to arise, and can also serve as an early warning system against threats to the PA.

Monitoring activities of various sorts were reported from 47 (85.45%) of the national parks and 168 (65.37%) of the 171 sanctuaries that responded.

Most PAs reported the following types of monitoring activities: census of select animals such as tigers and elephants using pugmark method, as well as through direct sightings, bird counts and vegetation plots. The frequency of monitoring varied form once every month to once in five years.

3.24 Interpretation and Education Activities in PAs (Table 3.29, volume 4)

Considering the huge human population in and around parks and sanctuaries, it seems essential that this population be made sensitive to, and supportive of, the need and effort for conserving wildlife and wilderness areas. Without the active co-operation of the local population it would be difficult to give anywhere near the required level of protection to parks and sanctuaries.

One of the ways of enthusing the local population is to run educational programmes where they are informed of the reasons for setting up parks and sanctuaries, of the potential benefits of these areas to them and of the care and attention such areas require. Such educational programmes are mostly known as extension programmes, run by extension officers.

Of the 54 national parks and 245 sanctuaries that responded to this question, the existence of interpretation and education programmes for surrounding villages was reported from a large number of national parks - 41 (75.93%), but from a relatively small number of sanctuaries - 96 (39.18%).

(This is a healthy improvement over the data from the previous survey, which revealed that of the of the 44 national parks and 197 sanctuaries responding, 9 (20%) national parks and 23 (12%) sanctuaries reported that they carried out awareness and extension programmes with neighbouring communities).

Limitations of the Data

Responses from many areas indicate that the frequency of these educational programmes is often low and in many cases there is no regular schedule. The content of, and the response to, these programmes also needs to be studied.

3.25 Participation in PA Management and presence of NGOs (Table 3.30, volume 4)

The involvement of people and people's organisations in wildlife management has been recognised as crucial to the protection of wildlife areas. The National Wildlife Action Plan, drawn up by the Government of India, repeatedly stresses this point. There has also been a task force, set up by the Indian Board for Wildlife, to report on ways and means of eliciting public support for wildlife conservation. (Indian Board of Wildlife, 1983, op. cit.).

Out of the 312 PAs that responded to the survey, 36 (11.54) left this question unanswered, while 190 (60.90%) answered it in the negative. Though the nature of participation varied, responses from 85 (27.24%) PAs showed that there was people's participation in some form or the other.

In most cases PAs that reported people's participation alluded to the involvement of local communities in ecodevelopment programmes being run by the PA management. In some instances, employment of local people by the forest department was also described as people's participation.

As far as the involvement of NGOs is concerned, 23(49%) of the 44 national parks and 35 (21%) of the 163 sanctuaries

that responded, reported the involvement of NGOs in some form or the other with the PA.

(With regard to NGOs associated with PAs, there is some improvement compared to the data from the previous survey, when, of the 47 national parks and 198 sanctuaries responding, only 8 (17%) and 23 (12%) respectively reported association of NGOs.)

3.26 Poaching (Table 3.22, volume 4)

Of the 312 PAs responding to the survey, 98 (31.41%) reported poaching cases. As far as poaching methods are concerned, 36 PAs reported shooting, 67 trapping/netting, and 23 electrocution and explosives among the more common methods. In addition, there were several cases involving spears, bows, arrows etc. Further, there were also 7 cases reported where dogs had been used for poaching.

(In the previous survey of the 48 national parks and 170 sanctuaries responding, 26 (54%) and 75 (44%) respectively reported instances of poaching)

Local informer network: *Of the 312 PAs , 115 (37%) PAs reported having a network, though only 94(30%) stated that it works effectively.*

3.27 Offences (Table 3.23, volume 4)

Details regarding different types of recorded offences under the Wild life (Protection) Act were collected for each park and sanctuary. These figures can be indicators of the human pressures on these areas.

Of the 55 national parks and 257 sanctuaries that responded to the survey, 18(32.72%) of the national parks and 57(22.18%) of the sanctuaries reported incidence of one or more types of offences.

(In the previous survey, of the 45 national parks and 172 sanctuaries responding, 31(69%) and 96 (56%) respectively reported one or more offences)

A comparative analysis between the offences reported by the PAs in the old survey and the new survey is presented below:

Category of offence (section of wildlife act)	New survey PA /% [30]	Old survey PA/ % [31]
Illegal alteration of boundary (26A (3) & 35 (5)	3(0.96%)	Not present in old data
Improper entry (27.1)	17(5.45%)	25 (12%)
Improper conduct (27.2)	2(0.64%)	5 (7%)
Causing damage to boundary mark (27.3)	2(0.64%)	Not present in old data
Teasing/molesting of Wild Animals (27.4)	6(1.92%)	Not present in old data
Destruction, exploitation, etc of wildlife (29 & 35.6)	49(15.71%)	59 (27%)
Causing fire (30)	9(2.88%)	23 (11%)
Illegal weapons (31)	9(2.88%)	22 (10%)
Use of explosives/ other banned substances (32)	1 (0.32%)	5 (2%)
Illegal activities (33)	13 (4.17%)	Not present in old data
Grazing livestock without vaccination (33A)	3 (0.96%)	Not present in old data
Non-registration of arms (34.1)	2 (0.64%)	3 (1%)
Illegal granting of new arms licenses (34.3)	0	Not present in old data
Grazing in national park (35.7)	5(1.6%)	50 (23%)
Others	11 (3.53%)	1(0.46%)

Limitation of the Data

These figures only reflect offences, which have been detected and officially recorded. There could be many other offences, which have not been detected or not officially recorded.

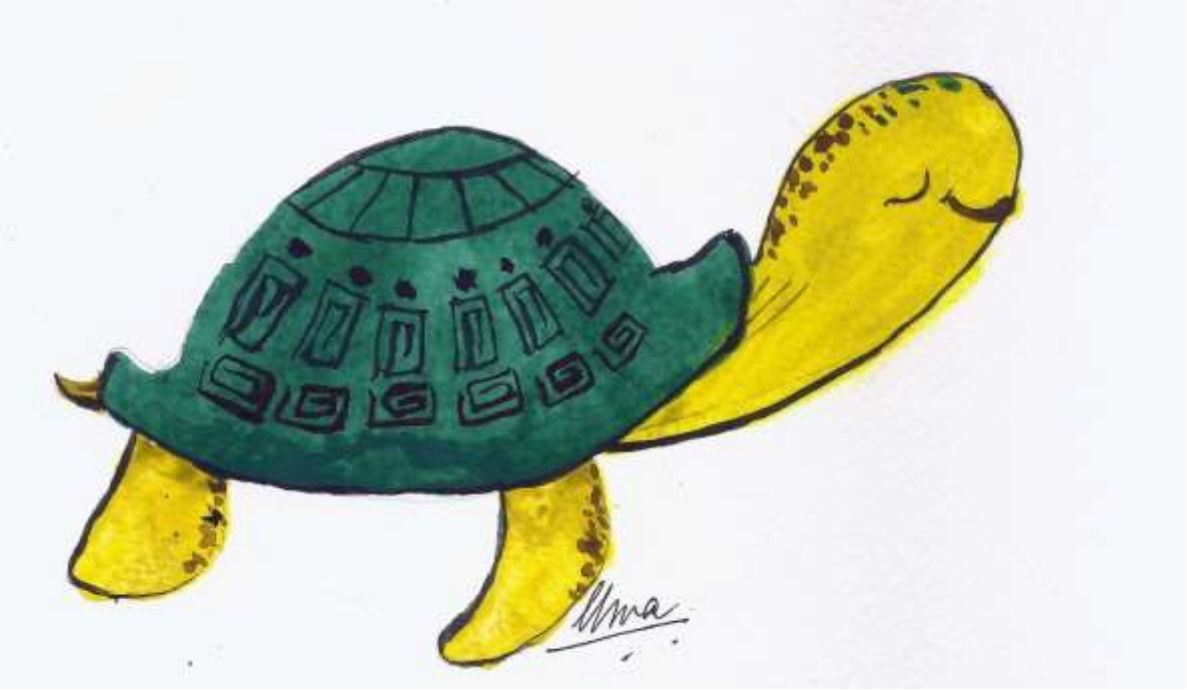
Secondly, the number of recorded cases of a particular offence in a park or sanctuary does not necessarily reflect the incidence of that offence in the area, nor do a higher number of recorded cases in a particular area necessarily reflect negatively on the efficiency of the protection staff. In fact, it is possible that in many instances a higher number of cases have been recorded in parks and sanctuaries where the

[30] All percentages given in this section have been calculated out of a total of 47 national parks and 188 sanctuaries responding

[31] All percentages given in this section have been calculated out of a total of 45 national parks and 172 sanctuaries responding

protection staff is very active and detects and takes action on a larger proportion of the offences occurring.

Comparisons between different protected areas would also be invidious without analysing data on their relative areas, the existence of human pressures, the extent of such pressure, availability of personnel and facilities, etc.



IV. Prioritisation of PAs

The national parks and sanctuaries that have been notified all across the country, in different biogeographic zones and representing different biomes, are in themselves a priority because both categories of protected areas (PAs) are among the last repositories of India's wild biodiversity. Much of India's vast faunal and floral wealth is now contained only within PAs, which offer, arguably, the only viable strategy for in-situ conservation of most wild species. As such, therefore, we would assume that the biodiversity occurring in all PAs needs to be conserved with the same degree of efficacy and urgency. However, this may not be always possible for the following reasons:-

1. The resources available for conservation are scarce, and cannot be used to protect the entire PA network of the country with the same level of effectiveness and efficiency.
2. There are certain PAs which harbour species or communities, which are rare or threatened. It is necessary to identify these sites and take steps for their effective conservation before diverting human and material resources to other sites for their conservation. While some efforts have already been made by the government to do this through initiatives like Project Tiger, there are many more sites which need to be prioritised, and action taken for their immediate and effective conservation.
3. There are also certain PAs, which face high levels of threats or pressures. These PAs, especially the ones, which harbour rare or threatened species or communities, need to be identified so that necessary steps can be taken for their conservation on a priority basis.

It is for all these reasons that a prioritisation exercise for PAs is required. An added benefit of carrying out a prioritisation exercise is that it helps in making an

assessment of the information needed for prioritisation. This in turn is helpful in making an assessment of the gaps which exist in information about PAs. Once these gaps are identified, action can be taken to collect information to try and fill them, so that the correct priorities for conservation can be identified.

Methodology: There are over 525 PAs in the country. Of these, about 100 are located in the Andaman and Nicobar Islands. This prioritisation exercise has been undertaken for PAs located in the Indian Mainland and the ones in the Andaman and Nicobar Islands have not been considered for prioritisation. This is primarily because Islands are fragile ecosystems which have a high level of endemism and therefore all PAs that represent any island ecosystem should automatically be considered as priorities. From among the rest, 253 PAs were picked up for this prioritisation exercise because data was available at the Institute for these sites.

Apart from the 253 PAs mentioned above, an additional 20 PAs have been included in this prioritisation and have been ascribed a value, and prioritised on the principle that it is well known that they harbour a rare or threatened species or community. In addition, from even among the 253 PAs that have been included in this prioritisation, there were 15 PAs for which an accurate evaluation could not be made due to lack of sufficient data. However, these sites have also been ascribed a value and prioritised, since in their case also it is well known that they harbour a rare or threatened species or community. Both these type of PAs, which together add up to a total of 35 sites, are being listed separately in Annexure 1e, along with a justification on why they are being given the value that is being ascribed to them.

The PAs have been prioritised on the basis of their:-

1. **Biological Value**: This is being ascertained through:
    - identifying the diversity of forest types and subtypes occurring in the PA and looking at whether any of them are rare or threatened;

- identifying the species occurring in the PA and whether any of them are endemic, rare, or threatened, the size of the PA;
- its proximity or connectivity to other PAs;
- whether the PA is located in a biogeographic province which does not have an adequate area under protection or whether it is located in a biogeographic province where the total number of PAs is inadequate

These are detailed in Prioritisation Annexure 1.

2. **Pressures or threats** on the PA due to consumptive human use by local and other people and/or institutions. A large number of different types of pressures or threats are being evaluated. These are detailed in Annexure Ia.
3. **Management and legal status** of the PA. This was evaluated on the basis of how many legal processes that are required for creation of a PA under the Wildlife (Protection) Act, 1972, have been completed and whether the PA has a management plan and a separate budget for itself. The details are given in Annexure Ia.

A detailed explanation of the above is being given in the proposed valuation framework attached at Annexure Ia. The valuation framework was applied to the PAs included in this prioritisation and a score given to them. The detailed tables of the PAs along with their biological values, pressures and legal and management status are given at Annexures Ib, Ic, and Id respectively. On the basis of the values that have been ascribed to each PA and their overall score, the PAs have been categorised as follows:

1. In terms of the biodiversity value of a PA, each area has been subclassified as:-
   a. Either a Very High Value PA, or
   b. A High Value PA.
2. In terms of pressures or threats on the PA, each area has been subclassified as:-
   a. Either a High Pressure PA, or

b. A Low Pressure PA.

3. In terms of the legal and management status of a PA, each area has been subclassified as:-
   a. Either a Low Legal and Management Status PA, or
   b. A High Legal and Management Status PA.

Prioritisation of PAs for Conservation: On the basis of the categories outlined above, PAs have been classified within each biogeographic province. It would be reasonable to assume that all the PAs which fall into the category of very high value PAs would be the priority areas for conservation. However, those among the very high value PAs which also have a high level of pressures being exerted on them would have a priority greater than those with a lower level of pressures. Further, if a very high value and high pressure PA also has a low legal and management status, efforts for its conservation would have to be taken up before the others. This is because the same level of pressures or threats being exerted on a certain PA would have a greater impact on it if the management and legal status was low and a lesser impact if the management and legal status was high.

Therefore, the highest priority would be those PAs which have a very high value, are threatened due to a high level of pressures, and where the legal and management status is low. Conversely, the lowest priority would be given to those PAs which have a high value and low level of pressures coupled with a high legal and management status. For the purpose of this report, the following is being assumed to be the order of priority of PAs:-

1. Very High Biodiversity + High Pressure + Low Legal and Management Status
2. Very High Biodiversity + High Pressure + High Legal and Management Status
3. Very High Biodiversity + Low Pressure + Low Legal and Management Status
4. Very High Biodiversity + Low Pressure + High Legal and Management Status

5. High Biodiversity + High Pressure + Low Legal and Management Status
6. High Biodiversity + High Pressure + High Legal and Management Status
7. High Biodiversity + Low Pressure + Low Legal and Management Status
8. High Biodiversity + Low Pressure + High Legal and Management Status

To distinguish between Very High Value and High Value PAs, the median or the middle point was taken as a cutoff from the column of overall value of the PA in Annexure Ib. All PAs which had an overall value of 20.24 (the median) or more were identified as very high value sites, while the others were marked as high value sites. As already mentioned, those PAs which harbour rare or threatened habitats or species and for which either the data were inadequate or did not exist, were also identified and added to the list of very high value PAs.

A total of 162 PAs have been identified as very high value sites. The number of high value sites is 111. Atleast one PA from all the biogeographic provinces of the Indian Mainland is represented in the list of very high value sites. The only state which is not represented in the list of very high priority PAs is Tripura. The number of very high value sites for each state and biogeographic province as well as their order of priority is as follows:

STATE	BIOGEOGRAPHIC PROVINCE	ORDER OF PRIORITY	NUMBER OF PAs
Andhra Pradesh	Deccan Plateau (6A)	2	1
		Not Determined[32]	3
	Central Plateau (6B)	1	1
		2	4
		4	1
	Eastern Plateau (6C)	1	1
	East Coast (10B)	4	1
		Not Determined	1
	Number of Very High Value PAs in State		**13**
Arunachal Pradesh	East Himalaya (2D)	2	1
		4	4
		Not Determined	3
	Number of Very High Value PAs in State		**8**
Assam	Brahmaputra Valley (8A)	2	1
		3	1
		4	2
		Not Determined	1
	Number of Very High Value PAs in State		**5**
Bihar	Chota Nagpur Plateau (6D)	2	3
		4	1
	Lower Gangetic Plain (7B)	2	1
		Not Determined	1
	Number of Very High Value PAs in State		**6**
Goa	Western Ghats (5B)	4	1
	Number of Very High Value PAs in State		**1**
Gujarat	Kachh Desert (3A)	2	2
		Not Determined	1

[32] These are those PAs for which we did not have any data but which have been included as priority sites because they harbour rare or threatened species or communities.

STATE	BIOGEOGRAPHIC PROVINCE	ORDER OF PRIORITY	NUMBER OF PAs
	Gujarat-Rajwara (4B)	2	4
		3	1
		4	1
	West Coast (10A)	4	1
	Number of Very High Value PAs in State		**10**
Haryana	Punjab Plains (4A)	4	2
	Number of Very High Value PAs in State		**2**
Himachal Pradesh	Ladakh (1A)	3	1
	North West Himalaya (2A)	1	4
		2	4
		4	2
	Western Himalaya (2B)	1	2
		3	2
	Number of Very High Value PAs in State		**15**
Jammu & Kashmir	Ladakh (1A)	3	2
		4	1
	North West Himalaya (2A)	4	2
		Not Determined	1
	Number of Very High Value PAs in State		**6**
Karnataka	Malabar Plains (5A)	2	1
	Western Ghats (5B)	2	3
		3	1
		4	3
		Not Determined	2
	Deccan Plateau (6A)	3	1
	Number of Very High Value PAs in State		**11**
Kerala	Western Ghats (5B)	2	4
		3	2
		4	2
	Number of Very High Value PAs in State		**8**
Madhya Pradesh	Gujarat-Rajwara (4B)	2	3
		4	2
	Eastern Highlands (6C)	2	1
		4	5
	Central Highlands (6E)	1	2
		2	2
		3	1

STATE	BIOGEOGRAPHIC PROVINCE	ORDER OF PRIORITY	NUMBER OF PAs
		4	4
	Number of Very High Value PAs in State		**20**
Maharashtra	Malabar Plains (5A)	4	1
	Western Ghats (5B)	4	1
		Not Determined	1
	Central Plateau (6B)	2	1
		3	1
	Central Highlands (6E)	2	2
		4	1
	West Coast (10A)	4	1
	Number of Very High Value PAs in State		**9**
Manipur	Assam Hills (8B)	4	1
	Number of Very High Value PAs in State		**1**
Meghalaya	Assam Hills (8B)	Not Determined	1
	Number of Very High Value PAs in State		**1**
Mizoram	Assam Hills (8B)	3	1
	Number of Very High Value PAs in State		**1**
Nagaland	Assam Hills (8B)	4	1
	Number of Very High Value PAs in State		**1**
Orissa	Eastern Plateau (6C)	2	1
	Chota Nagpur Plateau (6D)	2	1
	East Coast (10B)	1	1
	Number of Very High Value PAs in State		**3**
Punjab	Punjab Plains (4A)	3	2
	Number of Very High Value PAs in State		**2**
Rajasthan	Thar Desert (3B)	2	1
		4	1
	Punjab Plains (4A)	4	1
	Gujarat-Rajwara (4B)	1	3
		2	6
		4	1
	Number of Very High Value PAs in State		**13**
Sikkim	Central Himalaya (2C)	4	1
	Number of Very High Value PAs in State		**1**
Tamil Nadu	Western Ghats (5B)	1	1
		2	2
		3	1
	Deccan Plateau (6A)	Not Determined	1

STATE	BIOGEOGRAPHIC PROVINCE	ORDER OF PRIORITY	NUMBER OF PAs
	East Coast (10B)	3	1
		4	1
		Not Determined	1
	Number of Very High Value PAs in State		**8**
Uttar Pradesh	Western Himalaya (2B)	2	2
		4	2
	Gujarat-Rajwara (4B)	2	1
	Central Highlands (6E)	2	1
		4	1
	Upper Gangetic Plains (7A)	1	2
		2	1
		4	1
		Not Determined	1
	Number of Very High Value PAs in State		**12**
West Bengal	Central Himalaya (2C)	3	1
	Lower Gangetic Plains (7B)	4	1
		Not Determined	2
	East Coast (10B)	4	1
	Number of Very High Value PAs in State		**5**

As can be seen from the table given above, the maximum number of very high value PAs (20) are located in Madhya Pradesh. Himachal Pradesh has 15, while Andhra Pradesh and Rajasthan have 13 each. There are several states like Manipur, Meghalaya, Mizoram, Sikkim etc. that have only one PA having very high biodiversity value, within their boundaries.

Two consolidated lists (Table 1 and Table 2) with Very High Value and High Value PAs respectively, are being given below. The PAs in these lists have been further classified according to whether they are high or low pressure PAs, and subclassified according to whether they have a low or high legal and management status. Both the lists are sorted within each category as per the biogeographic province.

Prioritisation of PAs for Ecodevelopment: *Ecodevelopment is a relatively recent strategy for conservation of PAs in India. It still needs to be evolved and fine-tuned, in order to be implemented widely and effectively. However, in case resources are to be deployed for carrying out ecodevelopment and a choice is to be made regarding which PAs to select for the purpose, it is obvious that investments should first be made around very high value PAs. However, within this category of PAs, the PAs that need to be targeted should be high pressure PAs where the threats to biodiversity are significant. From among these very high value and high pressure PAs, the PAs that should be picked up first should be the ones that have management and legal conditions that would enable the strategy of ecodevelopment to be implemented effectively and efficiently. Therefore, the PAs that need to be taken up for ecodevelopment first, listed in alphabetical order, are[33]: (-):*

1. *Bori Sanctuary, Madhya Pradesh*
2. *Corbett National Park, Uttaranchal*
3. *Dalma Sanctuary, Jharkhand*
4. *Dhrangadhra Wild Ass Sanctuary, Gujarat*
5. *Eturnagaram Sanctuary, Andhra Pradesh*
6. *Gandhisagar Sanctuary, Madhya Pradesh*
7. *Ghatigaon Great Indian Bustard Sanctuary, Madhya Pradesh*
8. *Gir National Park, Gujarat*
9. *Govind Pashuvihar Sanctuary, Uttaranchal*
10. *Great Indian Bustard Sanctuary, Maharashtra*
11. *Hazaribagh Sanctuary, Jharkhand*
12. *Jaisamand Sanctuary, Rajasthan*
13. *Jessore Sanctuary, Gujarat*
14. *Kalakad-Mundanthurai (data combined for Kalakad and Mundanthurai Sanctuaries which are managed as a single tiger reserve), Tamil Nadu*

[33] See also Table 1 below

15. Kanawar Sanctuary, Himachal Pradesh
16. Karera Great Indian Bustard Sanctuary, Madhya Pradesh
17. Kawal Sanctuary, Andhra Pradesh
18. Kedarnath Sanctuary, Uttaranchal
19. Kumbalgarh Sanctuary, Rajasthan
20. Manas Tiger Reserve, Assam
21. Melghat Sanctuary, Maharashtra
22. Mookambika Sanctuary, Karnataka
23. Mount Abu Sanctuary, Rajasthan
24. Mudumalai Sanctuary, Tamil Nadu
25. Nagarjunasagar-Srisailam (data combined for Nagarjunasagar and Srisailam Sanctuaries which are managed as a single tiger reserve), Andhra Pradesh
26. Narayan Sarovar Sanctuary, Gujarat
27. National Chambal Sanctuary, Uttar Pradesh
28. Neyyar Sanctuary, Kerala
29. Pachmarhi Sanctuary, Madhya Pradesh
30. Pakhal Sanctuary, Andhra Pradesh
31. Pakhui Sanctuary, Arunachal
32. Palamau Sanctuary (Tiger Reserve), Jharkhand
33. Parambikulam Sanctuary, Kerala
34. Pench National Park, Maharashtra
35. Periyar National Park (including Periyar Sanctuary), Kerala
36. Pong Lake Sanctuary, Himachal Pradesh
37. Pranhita Sanctuary, Andhra Pradesh
38. Ranipur Sanctuary, Uttar Pradesh
39. Ratanmahal Sanctuary, Gujarat
40. Sariska National Park (including Sariska Sanctuary), Rajasthan
41. Satkosia Gorge Sanctuary, Orissa
42. Sechu Tuan Nalah Sanctuary, Himachal Pradesh
43. Sharavathi Valley Sanctuary, Karnataka
44. Shettihalli Sanctuary, Karnataka
45. Shikari Devi Sanctuary, Himachal Pradesh

46. Simlipal National Park (including Similipal Sanctuary), Orissa
47. Sitamata Sanctuary, Rajasthan
48. Sitanadi Sanctuary, Madhya Pradesh
49. Someshwara Sanctuary, Karnataka
50. Tal Chhaper Sanctuary, Rajasthan
51. Todgarh-Raoli Sanctuary, Rajasthan
52. Valmiki Sanctuary, Bihar
53. Velavadar National Park, Gujarat
54. Wayanad Sanctuary, Kerala

V. Recommendations

1. Coverage of the PA Network

a. An assessment of the habitat types covered in the PA network (1.1 of the report) brings out the very inadequate cover of oceans and marine areas in the PA network. This is despite the fact that the extent of marine areas that are a part of the territorial waters of India is very extensive. Consequently, it is recommended that there be an immediate focus on including marine areas into the PA network. Apart from identifying and setting up new PAs, existing coastal and island PAs, especially in the Andaman and Nicobar Islands and Lakshadweep, should be extended to cover the surrounding seas.

b. An assessment of the forest types covered in the PA network (1.2) points to the inadequate representation of Tropical Dry Evergreen and Dry Alpine Scrub. Therefore, it is recommended that, in conjunction with the recommendations of Rodgers and Panwar (WII 1987), there should be an effort to have greater representation of these forest types in the PA network.

2. Level of Information regarding occurrence of species in PAs

a. Analysis of the data (1.13, 1.17) brings out the fact that there is generally poor information at the PA level about the floral species (other than trees) occurring in the PA. It is recommended that a concerted effort be made, if required by involving university students, research institutions and the BSI, to develop a comprehensive listing of plants occurring in each PA.

b. Based on such a listing, it is recommended that a gap analysis be done to determine which of the endangered or other important species are adequately covered in the PA network. Special focus could be on wild

relatives of important food plants, economically important plants, and medicinal plants.

3. Weeds

a. It is clear from the data (1.19) that many of the PAs are infested by one or more species of weeds. This is posing a serious threat to the ecological integrity of the PAs. It is recommended that a comprehensive scheme for the control and eradication of weeds be drawn up for the PAs of India, taking into consideration the regional and local variations relevant to the plan. This could be a centrally sponsored scheme and could focus on those areas where the original factors that allowed the spread of weeds, like excessive grazing, other human uses or fire, have been checked or controlled.

b. It is further recommended that the scheme also focus on the possibility of identifying and developing the required processes and linkages whereby some of the weed species could be used for income generating activities (like making chip boards from lantana), so that the control of weeds would not only become viable but also create an opportunity for generating local incomes.

4. Grazing by Livestock

Grazing of livestock is permitted in sanctuaries only in so far as it does not adversely affect wildlife (section 33(d) of the WLP Act). However, the responses got from the PA managers indicate that in many PAs (1.21b) grazing is a significant factor for the degradation of flora. It is recommended that the carrying capacity of each PA, in terms of grazing by livestock, be determined as a part of the management planning exercise and that provisions be made under the WLPA or its rules, where this be notified. Grazing in excess of the notified numbers should not be permitted and be subject to legal action.

5. Pilgrimage

A large number of PAs in India have within them religious or cultural sites which are visited by thousands, sometimes hundreds of thousands, pilgrims and visitors. This is both a threat and an opportunity to gather support for the PA and its conservation. It is recommended that there be a concerted effort to try and link the religious and cultural values of the PA with its conservation value. This could be done by focusing on the pilgrims and visitors and by recruiting religious and cultural leaders to highlight the connection.

6. Pollution, droughts and floods

a. Data collected for the study indicates that a large number of protected areas are affected by floods, a smaller number by droughts and even a smaller number by pollution. However, the very infrequent reporting of pollution could be mainly due to the fact that hardly any of the PAs had any system for monitoring air, water or noise pollution. It is recommended that, depending on the vulnerability of the area, pollution monitoring systems should be set up on a priority basis in all the PAs which are susceptible.

b. In order to prevent or regulate activities outside the PA that have an adverse impact on the PA, it is also recommended that the Environmental Protection Act be used to declare the impact area around PAs (perhaps a 10 Kms. Radius) as a regulatory zone, where activities that could adversely affect the PA are banned or regulated.

7. Use of PA resources

A very large percentage of the PAs reported the use of PA resources by various people (2.4). The Wild Life (Protection) Act (WLPA), as amended in 2002, allows for the removal of forests produce for the personal bonafide needs of people living in and around the sanctuary (section 29). However, there is a grave danger that this

clause could be misused, resulting in the over exploitation of PAs. It is, therefore, recommended that, along with the determination of the grazing carrying capacity, as recommended above, the carrying capacity of the PA in terms of other utilized resources should also be determined and the limits notified under law.

8. Impact of PA on local people

a. Injury or death to human beings has been reported in and around a large number of PAs in India. Attacks on domesticated livestock and damage to crops, by wild animals, are even more frequent occurences. Though in many of the PAs there are schemes for compensating injury, death or other losses, there is much variation in the rates of compensation and in the principles and procedures being followed. It is recommended that the process of compensating for the depredation caused by wild animals must be simplified, decentralised, made transparent, and provide replacement costs for losses.

b. According to the data collected, existing rights or uses by local people have been stopped in a third of the protected areas, since they have become PAs. However, alternatives have been provided, in a much smaller number of PAs, and even there not necessarily in a comprehensive manner,. It is recommended that, as a matter of policy, access to basic resources of local communities should not be curtailed or sopped till adequate alternatives have been provided.

c. It is further recommended that, by law, an adequate amount of area around a protected area be identified and notified as an 'Enhanced Production Area' (EPA). This area should be managed and provided adequate investments so that the resources lost to the local communities because of the creation of the PA are more than made up for, in quantum and accessibility, through the enhanced productivity of these EPAs.

9. Legal processes

a. Though there has been a significant improvement in terms of completing the legal processes involved in notifying a sanctuary or a park, the situation is still unsatisfactory. It is, therefore, recommended that the Government of India consider launching a special drive by which the legal processes pertaining to those protected areas where the formalities for their final notification have not yet been completed, can be expedited.

b. It is also recommended that the Government of India formulate and implement a fixed-period Centrally Sponsored Scheme, through which funds can be made available to State Governments to appoint retired officers, on a contract basis, to complete the legal procedures pending in the various PAs. This scheme should be available, along with its financing, for a short period of, say, two years, so as to provide an incentive to the State Governments to complete pending legal proceedings in that time.

10. Management Planning

Compared to the last survey, there has been little increase in the number of PAs with management plans. Less than half of the national parks and about a third of the sanctuaries reported the existence of management plans. Unfortunately, a much smaller number reported that their plans were approved. It is recommended that the Government of India set up four or five task forces, one each for different geographical or ecological regions, which associate retired wild life officers, scientists and other experts, and work with park managers, to carry out the necessary studies and develop the required management plans. Various expert institutions can also be associated in this task and, as far as possible, funding should be provided by the Central Government for a time-bound completion of these management plans.

11. Tourism and visitation

a. Tourism and visitation to protected areas in India is very uneven, with some areas getting many million visitors in a year and other getting none. There are essentially three types of visitors, tourists who visit the PA for its wild life and aesthetic values, visitors who are passing through the PA, and pilgrims visiting religious shrines or cultural sites. Tourism provides both a potential threat and a potential opportunity. It is important to minimise the threat and maximise the opportunities. It is, therefore, recommended that the carrying capacity of each PA, in terms of tourist and visitor traffic, be determined as a part of its management planning and notified under law. The daily, seasonal and annual quota be declared and strictly adhered to on a first cum first served basis.

b. For those areas where there is a huge pressure of tourism, it is recommended that areas outside but adjacent to the PA be developed as educational parks where surplus tourist traffic can be diverted, so that the overflow of tourists do not go away without seeing anything. Efforts should also be made to divert tourist traffic to other PAs, which can absorb additional tourist traffic without any adverse impact.

12. Commercial and Developmental Activities

A very large proportion of the PAs responding have reported the presence of commercial and/or developmental activities within their boundaries. Invariably these caused damage to the wild life and are also in violation of the WLPA. However, it is also 124ecognized that sometimes it is difficult for the PA manager or the forest department on its own to combat such interventions. It is, therefore, recommended that there be a legal requirement for every PA manager to issue an annual public statement, published in at least one local language and one English newspaper and on

a designated web site. This statement should contain details of all the commercial and developmental activities and projects on-going, initiated or proposed within the PA. Hopefully such a statement would alert the public and bring about the required pressure to protect the PA.

13. Staffing

a. Because of the lack of any standards, it is not possible to determine which of the PAs are understaffed and which are overstaffed. However, the data collected reveals that there are large differences between the levels of staffing in different PAs. It is recommended that the Government of India develop a staffing formula, based on PA area, terrain, ecological value, threats, and level of local community support. Using this formula, it should be possible to determine the optimum staffing pattern for any PA. This could also become a basis for allocating staff and funds.

b. It is further recommended that the equipment, transport and management facilities available in a PA, along with the levels of training imparted to the staff, also be taken into consideration while determining the optimum staffing pattern for a PA.

14. Research

a. A very small proportion of the PAs (3.19%) had any research staff in position. A somewhat larger proportion reported that some research was either on going or had been undertaken in the past. However, on the whole, there appears to be a very inadequate level of research going on in the PAs. It is recommended that the Government of India consider formulating and implementing a scheme by which research scientists attached to research institutions and universities are located in various PAs and are given support to undertake research in topics and areas that are jointly decided upon by the PA manager and the research

scientist. These topics and areas should be such that they are relevant to the management needs of the PA while adding to the general body of scientific knowledge.

b. It is further recommended that there be an allocation of funds specifically earmarked for research on PAs. This allocation should be widely publicised and students should be encouraged to take up their Phd work in PAs.

c. It is also recommended that, in order to facilitate research, appropriate facilities be made available in priority PAs, especially in the form of subsidised accommodation, data collection and monitoring system, and a mechanism for support and cooperation by the PA staff be developed. The quantity and quality of research being undertaken in a PA should be one of the factors by which the performance of the PA manager is evaluated.

15. People's participation in PA management

Nearly half the national parks and about 1/5th of the sanctuaries responding reported the involvement of NGOs in some form or the other. A somewhat larger proportion reported community participation of one form or the other. However, an unacceptably high proportion seemed still to be managed in isolation of the local communities and people's organisations. It is recommended that there be a legal provision that requires each PA to have an advisory committee which has, as its members, local community representatives, representatives of local NGOs and, where appropriate, representatives of other professional NGOs. Such a committee should meet at least once every three months and should be consulted in both management planning and implementation.

16. Prosecution of offences

Data collected during the course of the study suggests that PA staff face a lot of problems in the prosecuting of

offences in PAs. It is recommended that staff with legal background be recruited at appropriate levels (perhaps Ranger or Deputy Ranger level), who can be responsible for the prosecution of cases in the courts of law. Depending upon the size and proximity of PAs, and on the number of offences, such legal officers can be attached to one or more PAs.

ANNEXURES

ANNEXURE - Ia
PROPOSED FRAMEWORK FOR VALUATION OF PAs

1. Biodiversity Values

The following is proposed for biodiversity and other positive values:

a) Occurrence of forest types:

i) Occurrence of a forest sub type = 2 marks for each forest sub type [source: Questionnaire 1A[34]]

ii) Occurrence of more than one forest type = 5 marks

iii) Occurrence of a rare forest type/sub type = 5 marks [source: Rodgers and Panwar[35]]

b) Occurrence of an underrepresented biome apart from a forest type e.g. deserts, wetlands etc. = 5 marks [source: Rodgers and Panwar (ibid) & Forest Survey of India[36]]

c) Occurrence of a species of flora or fauna listed in schedule - I of the Wildlife (Protection) Act, 1972, in a PA, which does not occur in any other PA = 10 marks [source: Questionnaire 1A, WII Database[37] & Rodgers and Panwar (ibid)]

d) Occurrence of a species of flora or fauna listed in schedule - I of the Wildlife (Protection) Act, 1972, which is found in more than 1 PA and less than or equal to 5 PAs = 8 marks [source: Questionnaire 1A, WII Database & Rodgers and Panwar]

e) Occurrence of a species of flora or fauna listed in schedule - I of the Wildlife (Protection) Act, 1972, which is found in more than 5 PAs and less than or equal to 10 PAs = 5 marks [source: Questionnaire 1A, WII Database (ibid) & Rodgers and Panwar (ibid)]

---

[34] The Questionnaire 1 (1998 – can be downloaded from **Download**) sent out as a part of the 2nd Survey of National Parks and Sanctuaries in India (1998-2003), referred to here as "Questionnaire 1A" to distinguish it from the Questionnaire 1 (1984) circulated as a part of the 1st Survey of National Parkas and Sanctuaries in India (1984-1989).

[35] Rodgers, W.A, and Panwar, H.S., *Planning a Protectted Area Network in India*. Wildlife Institute of India, Dehradun. March 1988 (in two volumes).

[36] Forest Survey of India, *State of Forest Report 1999*. FSI, Dehradun.

[37] Wildlife Institute of India, Dehradun. Unpublished database on Wildlife Protected Areas.

f) Occurrence of a species of flora or fauna listed in schedule - I of the Wildlife (Protection) Act, 1972, which is found in more than 10 PAs and less than or equal to 15 PAs = 3 marks [source: Questionnaire 1A, WII Database (ibid) & Rodgers and Panwar (ibid)]

g) Occurrence of a species of flora or fauna listed in schedule - I of the Wildlife (Protection) Act, 1972, which do not fall in categories c), d), e) and f) above = 1 mark per species [source: Questionnaire 1A, WII Database (ibid)]

h) Value for the size of the PA = Area of the PA (sq. km.)/100 upto a maximum of 10 marks

i) PA adjoining other PAs or linked through corridors to other PAs = Area of the PA/PAs (sq. km.)/100 upto a maximum of 10 marks [Source: Rodgers and Panwar (ibid), IIPA Database]

j) PA situated within a biogeographic province where total area covered by PAs is less than or equal to 1% = 10 marks [Rodgers and Panwar (ibid), List of PAs (MoEF)[38]]

k) PA situated within a biogeographic province where total area covered by PAs is greater than 1% and less than or equal to 2% = 7 marks [Rodgers and Panwar (ibid), List of PAs (MoEF)]

l) PA situated within a biogeographic province where total area covered by PAs is greater than 2% and less than or equal to 4% = 4 marks [Rodgers and Panwar (ibid), List of PAs (MoEF)]

m) PA situated within a biogeographic province where total number of PAs is less than or equal to 5 = 10 marks [Rodgers and Panwar (ibid), List of PAs (MoEF)]

n) PA situated within a biogeographic province where total number of PAs is greater than 5 and less than or equal

[38] Unpublished list of wildlife protected areas compiled by the Ministry of Environment and Forests, Government of India.

to 10 = 7 marks [Rodgers and Panwar(ibid), List of PAs (MoEF)]

o) PA situated within a biogeographic province where total number of PAs is greater than 10 and less than or equal to 15 = 4 marks [Rodgers and Panwar(ibid), List of PAs (MoEF)]

2. **Legal Status:**

The following is proposed for looking at Legal Status and Management Values:

a) Intended Sanctuary (if notified after the 1991 amendment of the Wildlife (Protection) Act, 1972) = 0.5 marks [source: Questionnaire 1A]

b) Intended Sanctuary having a legal status of a Reserve Forest = 1 mark [source: Questionnaire 1A]

c) Intended Sanctuary having no rights within = 1.5 marks [source: Questionnaire 1A]

d) Intended National Park = 2 marks [source: Questionnaire 1A]

e) Intended National Park having a legal status of a Reserve Forest = 2.5 marks [source: Questionnaire 1A]

f) Intended National Park having no rights within = 3 marks [source: Questionnaire 1A]

g) Sanctuary notified before the 1991 amendment of the Wildlife (Protection) Act, 1972, but not fully set up = 3.5 marks [source: Questionnaire 1A]

h) Sanctuary not fully set up but having a legal status of a Reserve Forest = 4 marks [source: Questionnaire 1A]

i) Sanctuary not fully set up but having no rights within = 4.5 marks [source: Questionnaire 1A]

j) Sanctuary fully set up = 5 marks [source: Questionnaire 1A]

k) Sanctuary fully set up and an Intended National Park = 5.5 marks [source: Questionnaire 1A]

l) Sanctuary fully set up and an Intended National Park as well as having a legal status of a Reserve Forest = 6 marks [source: Questionnaire 1A]

m) Sanctuary fully set up and an Intended National Park having no rights within = 6.5 marks [source: Questionnaire 1A]

n) Fully notified National Park = 7 marks [source: Questionnaire 1A]

3. **Management Parameters:**

a) PAs which have a management plan = 1 mark [source: IIPA database, Questionnaire 1A & WII database]

b) PAs which have a separate budget = 1 mark [source: IIPA database, Questionnaire 1A & WII database]

c) PAs which have zoning = 1 mark [source: IIPA database, Questionnaire 1A & WII database]

4. **Biotic Pressures**

[Source: IIPA database and Questionnaire 1A]

The following is proposed for valuation of pressures or negative values:

Please note that an absence of any of the pressures will result in the PA getting no marks for those pressures which do not exist. In the case of a PA having no pressures at all, its negative value will be equal to zero.

a) Dam for an irrigation or hydel power project:

i) Area of the reservoir less than or equal to 5% of the PA = 1 mark

ii) Area of the reservoir more than 5% or equal to 10% of the PA = 2 marks

iii) Area of the reservoir more than 10% of the PA = 3 marks

b) Tourism:

i) Area occupied by the tourism project less than or equal to 5% of the PA = 1 mark

ii) Area occupied by the tourism project more than 5% and equal to 10% of the PA = 2 marks

iii) Area occupied by the tourism project more than 10% of the PA = 3 marks

iv) Density of tourists visiting the PA annually below or equal to the 33 percentile class density of tourists visiting all other PAs annually = 1 mark

v) Density tourists visiting the PA annually more than 33 or equal to 66 percentile class density of tourists visiting all other PAs annually = 2 marks

vi) Density of tourists visiting the PA annually more than 66 percentile class density of tourists visiting all other PAs annually = 3 marks

c) Mining/Quarrying

i) Area occupied by the mining/quarrying project less than or equal to 5% of the PA = 1 mark

ii) Area occupied by the mining/quarrying project more than 5% and equal to 10% of the PA = 2 marks

iii) Area occupied by the mining/quarrying project more than 10% of the PA = 3 marks

d) Plantations:

i) Area of the PA used for plantations less than or equal to 5% of the PA = 1 mark

ii) Area of the PA used for plantations more than 5% and equal to 10% of the PA = 2 marks

iii) Area of the PA used for plantations more than 10% of the PA = 3 marks

e) Electrical cables/transmission lines:

i) Electrical cables transmission lines within the PA = 2 marks

f) PWD Roads/Highways:

i) PWD Roads/Highways within the PA = 2 marks

g) Habitation:

i) Area of habitation less than or equal to 5% of the PA = 1 mark

ii) Area of habitation more than 5% or equal to 10% of the PA = 2 marks

iii) Area of habitation greater than 10% of the PA = 3 marks

iv) Density of population less than or equal to 33% of the density of population of the district(s) in which the PA is located = 1 mark

v) Density of population more than 33% and less than or equal to 66% of the density of population of the district(s) in which the PA is located = 2 marks

vi) Density of population more than 66% of the density of population of the district(s) in which the PA is located = 3 marks

h) Cultivation:

i) Area of cultivation less than or equal to 5% of the PA = 1 mark

ii) Area of cultivation more than 5% or equal to 10% of the PA = 2 marks

iii) Area of cultivation greater than 10% of the PA = 3 marks

i) Pilgrimage:

i) Area of pilgrimage spot(s) less than or equal to 5% of the PA = 1 mark

ii) Area of pilgrimage spot(s) more than 5% or equal to 10% of the PA = 2 marks

iii) Area of pilgrimage spot(s) greater than 10% of the PA = 3 marks

iv) Density of pilgrims visiting the PA annually less than or equal to the 33 percentile class of pilgrims visiting all other PAs annually = 1 mark

v) Density of pilgrims visiting the PA annually more than 33 percentile or equal to 66 percentile class of pilgrims visiting all other PAs annually = 2 marks

vi) Density of pilgrims visiting the PA annually more than 66 percentile class of pilgrims visiting all other PAs annually = 3 marks

j) Fishing:

i) Area impacted by fishing less than or equal to 5% of the PA = 1 mark

ii) Area impacted by fishing more than 5% or equal to 10% of the PA = 2 marks

iii) Area impacted by fishing greater than 10% of the PA = 3 marks

iv) Quantum of extraction per sq. km. of fish less than or equal to the 33 percentile class of the per sq. km. extraction of fish from PAs = 1 mark

v) Quantum of extraction per sq. km. of fish more than 33 or equal to 66 percentile class of the per sq. km. extraction of fish from PAs = 2 marks

vi) Quantum of extraction per sq. km. of fish more than 66 percentile class of the per sq. km. extraction of fish from PAs = 3 marks

k) Timber Extraction:

i) Area impacted by timber extraction less than or equal to 5% of the PA = 1 mark

ii) Area impacted by timber extraction more than 5% or equal to 10% of the PA = 2 marks

iii) Area impacted by timber extraction greater than 10% of the PA = 3 marks

iv) Quantum of extraction per sq. km. of timber less than or equal to 33 percentile class of the per sq. km. extraction of timber from PAs = 1 mark

v) Quantum of extraction per sq. km. of timber more than 33 percentile or equal to 66 percentile class of the per sq. km. extraction of timber from PAs = 2 marks

vi) Quantum of extraction per sq. km. of timber more than 66 percentile class of the per sq. km. extraction of timber from PAs = 3 marks

l) Fuelwood Extraction:

i) Area impacted by fuelwood extraction less than or equal to 5% of the PA = 1 mark

ii) Area impacted by fuelwood extraction more than 5% or equal to 10% of the PA = 2 marks

iii) Area impacted by fuelwood extraction greater than 10% of the PA = 3 marks

iv) Quantum of extraction per sq. km. of fuelwood less than or equal to 33 percentile class of the per sq. km. extraction of fuelwood from PAs = 1 mark

v) Quantum of extraction per sq. km. of fuelwood more than 33 percentile or equal to 66 percentile class of the per sq. km. extraction of fuelwood from PAs = 2 marks

vi) Quantum of extraction per sq. km. of fuelwood more than 66 percentile class of the per sq. km. extraction of fuelwood from PAs = 3 marks

m) NWFP Extraction:

i) Area impacted by NWFP extraction less than or equal to 5% of the PA = 1 mark

ii) Area impacted by NWFP extraction more than 5% or equal to 10% of the PA = 2 marks

iii) Area impacted by NWFP extraction greater than 10% of the PA = 3 marks

iv) Quantum of extraction per sq. km. of NWFP less than or equal to 33 percentile class of the per sq. km. extraction of NWFP from PAs = 1 mark

v) Quantum of extraction per sq. km. of NWFP more than 33 percentile or equal to 66 percentile class of the per sq. km. extraction of NWFP from PAs = 2 marks

vi) Quantum of extraction per sq. km. of NWFP more than 66 percentile class of the per sq. km. extraction of NWFP from PAs = 3 marks

n) Fodder Extraction:

i) Area impacted by fodder extraction less than or equal to 5% of the PA = 1 mark

ii) Area impacted by fodder extraction more than 5% or equal to 10% of the PA = 2 marks

iii) Area impacted by fodder extraction greater than 10% of the PA = 3 marks

iv) Quantum of extraction per sq. km. of fodder less than or equal to 33 percentile class of the per sq. km. extraction of fodder from PAs = 1 mark

v) Quantum of extraction per sq. km. of fodder more than 33 percentile or equal to 66 percentile class of the per sq. km. extraction of fodder from PAs = 2 marks

vi) Quantum of extraction of fodder more than 66 percentile class of the per sq. km. extraction of fodder from PAs = 3 marks

o) Grazing:

i) Area impacted by grazing less than or equal to 5% of the PA = 1 mark

ii) Area impacted by grazing more than 5% or equal to 10% of the PA = 2 marks

iii) Area impacted by grazing greater than 10% of the PA = 3 marks

iv) Density of cattle units grazing in the PA less than the density of cattle units in the district in which the PA is located = 1 mark

v) Density of cattle units grazing in the PA equal to the density of cattle units in the district in which the PA is located = 2 marks

vi) Density of cattle units grazing in the PA less more than the density of cattle units in the district in which the PA is located = 3 marks

p) Forest Fires:

i) Area impacted by forest fires less than or equal to 5% of the PA = 1 mark

ii) Area impacted by forest fires more than 5% or equal to 10% of the PA = 2 marks

iii) Area impacted by forest fires greater than 10% of the PA = 3 marks

q) Weed infestation:

i) Area impacted by weed infestation less than or equal to 5% of the PA = 1 mark

ii) Area impacted by weed infestation more than 5% or equal to 10% of the PA = 2 marks

iii) Area impacted by weed infestation greater than 10% of the PA = 3 marks

r) Poaching:

i) Existence of Poaching of animals = 2 marks

ii) Existence of illegal cutting of trees = 2 marks

iii) Poaching or illegal cutting of trees
done by organised gangs of poachers = 3 marks

ANNEXURE - I B
BIOLOGICAL VALUES OF PAs

CODE	BIOGEOGRAPHIC PROVIN	NAME	AREA OF THE PA (Hectares)	VALUE ON THE BASIS OF OCCURR-ENCE OF FOREST TYPES/SUB TYPES [Source: IIPA Database]	VALUE ON THE BASIS OF HARBOUR-ING A RARELY OCCURRING FOREST TYPE/SUB TYPE [Source: Rodgers and Panwar]	VALUE ON THE BASIS OF OCCURRENCE OF MAMMALIAN SPECIES LISTED IN SCHEDULE - I OF THE WILDLIFE (PROTECTION) ACT, 1972 [FOR DETAILS, PLEASE REFER TO ANNEXURE - F]	VALUE ACCORDING TO SIZE (Maximum upto 10) [Source: List of PAs by MoEF]	VALUE ON THE BASIS OF EXISTENCE OF FOREST CORRIDORS OR LOCATION OF THE PA ADJOINING OTHER PAs [Source: Rodgers and Panwar]	LOCATION OF PA WITHIN A BIO-GEOGRAPHIC PROVINCE WHERE AREA COVERAGE OF PAs IS INADEQUATE [For details, please see Annexure E]	WITHIN A BIO-GEOGRAPHIC PROVINCE WHERE THE TOTAL NUMBER OF PAs IS INADEQUATE [For details, please see annexure E]	VALUE ON THE BASIS OF HARBOUR-ING AN UNDER REPRE-SENTED ECOSYSTEM eg. WETLANDS, DESERTS, GRASS-LANDS [Source: IIPA database, Rodgers and Panwar]	OVERALL VALUE OF THE PA
AP/S/COR	10B	CORINGA SANCTUARY	23570.3	2		2	2.36			4	5	15.36
AP/S/ETU	6B	ETURNAGARAM SANCTUARY	81259.0	6		11	8.13					25.13
AP/S/KAW	6B	KAWAL SANCTUARY	89228.0	2		11	8.92					21.92
AP/S/KIN	6B	KINNERASANI SANCTUARY	63540.0	6		11	6.35					23.35
AP/S/KOL	6B	KOLLERU SANCTUARY	90100.0	4		3	9.01				5	21.01
AP/S/MAN	6B	MANJIRA SANCTUARY	2000.0			1	0.20					1.20
AP/S/NAG	6A	NAGARJUNA SAGAR SRISAILAM TIGER RESERVE	356890.0			15	10.00		4		5	34.00
AP/S/NEL	6A	NELAPATTU SANCTUARY	453.0				0.05		4			4.05
AP/S/PAK	6B	PAKHAL SANCTUARY	89205.0	6		11	8.92					25.92
AP/S/PAP	6C	PAPIKONDA SANCTUARY	59068.0	2		13	5.91		4			24.91
AP/S/POC	6B	POCHARAM SANCTUARY	12963.6	2		11	1.30				5	19.30
AP/S/PRA	6B	PRANHITA	13602.7	2		12	1.36				5	20.36
AP/S/PUL	10B	PULICAT SANCTUARY	58000.0			9	5.80			4	5	23.80
AP/S/SIW	6B	SIWARAM SANCTUARY	2991.7	2		11	0.30				5	18.30
ARU/N/NAM	2D	NAMDAPHA NATIONAL PARK	198523.0	21		63	10.00			4	5	103.00
ARU/S/ITA	2D	ITANAGAR SANCTUARY	14080.0	2		51	1.41			4		58.41
ARU/S/LAL	2D	LALI SANCTUARY	19000.0	4		36	1.90			4	5	50.90
ARU/S/MEH	2D	MEHAO SANCTUARY	28150.0	15		45	2.82			4		66.82
ARU/S/PAK	2D	PAKHUI SANCTUARY	86195.0	17		51	8.62			4		80.62
ASS/N/KAZ	8A	KAZIRANGA NATIONAL PARK	43000.0			70	4.30		4	4		82.30
ASS/S/BAR	8A	BARNADI SANCTUARY	2600.0			73	0.26	3.91	4	4		85.17
ASS/S/LAO	8A	LAOKHAWA SANCTUARY	7000.0			27	0.70		4	4		35.70
ASS/S/MAN	8A	MANAS TIGER RESERVE	39100.0			96	3.91	3.94	4	4		111.85
BIH/S/BHI	6D	BHIMBANDH SANCTUARY	68190.2	15			6.82		4			25.82
BIH/S/DAL	6D	DALMA SANCTUARY	19322.1	4			1.93		4			9.93
BIH/S/GAU	6D	GAUTAM BUDDHA SANCTUARY	25950.0	12			2.60		4			18.60
BIH/S/HAZ	6D	HAZARIBAGH SANCTUARY	18323.0	6		11	1.83		4			22.83

ANNEXURE - I B
BIOLOGICAL VALUES OF PAs

CODE	BIOGEOGRAPHIC PROVIN	NAME	AREA OF THE PA (Hectares)	VALUE ON THE BASIS OF OCCURR-ENCE OF FOREST TYPES/SUB TYPES [Source: IIPA Database]	VALUE ON THE BASIS OF HARBOUR-ING A RARELY OCCURRING FOREST TYPE/SUB TYPE [Source: Rodgers and Panwar]	VALUE ON THE BASIS OF OCCURRENCE OF MAMMALIAN SPECIES LISTED IN SCHEDULE - I OF THE WILDLIFE (PROTECTION) ACT, 1972 [FOR DETAILS, PLEASE REFER TO ANNEXURE - F]	VALUE ACCORDING TO SIZE (Maximum upto 10) [Source: List of PAs by MoEF]	VALUE ON THE BASIS OF EXISTENCE OF FOREST CORRIDORS OR LOCATION OF THE PA ADJOINING OTHER PAs [Source: Rodgers and Panwar]	LOCATION OF PA WITHIN A BIO-GEOGRAPHIC PROVINCE WHERE AREA COVERAGE OF PAs IS INADEQUATE [For details, please see Annexure E]	WITHIN A BIO-GEOGRAPHIC PROVINCE WHERE THE TOTAL NUMBER OF PAs IS INADEQUATE [For details, please see annexure E]	VALUE ON THE BASIS OF HARBOUR-ING AN UNDER REPRE-SENTED ECOSYSTEM eg. WETLANDS, DESERTS, GRASS-LANDS [Source: IIPA database, Rodgers and Panwar]	OVERALL VALUE OF THE PA
BIH/S/LAW	6D	LAWALONG SANCTUARY	21103.3	2			2.11		4			8.11
BIH/S/PAL	6D	PALAMAU SANCTUARY	97927.0	19		13	9.79		4			45.79
BIH/S/RAJ	6D	RAJGIR SANCTUARY	3545.0	10			0.35		4			14.35
BIH/S/TOP	6D	TOPCHANCHI SANCTUARY	1282.0	2			0.13		4		5	11.13
BIH/S/VAL	7B	VALMIKI SANCTUARY	46160.0	7		31	4.62	4.28	7		5	58.90
CHA/S/SUK	4A	SUKHNA SANCTUARY	2542.0				0.25		10		5	15.25
GOA/N/BHA	5B	BHAGWAN MAHAVIR NATIONAL PARK (Including Bhagwan mahavir Sanctuary)	25552.9	17		6	2.56					25.56
GOA/S/BON	5B	BONDLA SANCTUARY	800.0	17			0.08					17.08
GOA/S/COT	5B	COTIGAO SANCTUARY	10500.0	17			1.05					18.05
GUJ/N/BAN	5B	BANSDA NATIONAL PARK	2399.4			9	0.24					9.24
GUJ/N/GIR	4B	GIR NATIONAL PARK	141213.2	6		24	10.00		4		5	49.00
GUJ/N/MAR	10A	MARINE NATIONAL PARK	16289.0	6		10	1.63			10	5	32.63
GUJ/N/VEL	4B	VELAVADAR NATIONAL PARK	3408.1	2		14	0.34		4			20.34
GUJ/S/BAR	4B	BARDA SANCTUARY	18025.1	2		12	1.80		4			19.80
GUJ/S/DHR	3A	DHRANGADHRA WILD ASS SANCTUARY	484090.0	2		20	10.00			10	5	47.00
GUJ/S/DUM	4B	DUMKHAL SLOTH BEAR SANCTUARY	15087.2	2		11	1.51		4			18.51
GUJ/S/HIN	4B	HINGOLGARH SANCTUARY	654.1	2		14	0.07		4		5	25.07
GUJ/S/JES	4B	JESSORE SANCTUARY	18066.3	2		14	1.81		4			21.81
GUJ/S/KHI	4B	KHIJADAYA SANCTUARY	604.9				0.06		4			4.06
GUJ/S/NAL	4B	NAL SAROVAR SANCTUARY	12082.2			11	1.21		4		5	21.21
GUJ/S/NAR	3A	NARAYAN SAROVAR SANCTUARY	30754.5	10			3.08			10	5	28.08
GUJ/S/RAT	4B	RATANMAHAL SANCTUARY	5565.1	2		14	0.56		4		5	25.56
HAR/N/SUL	4A	SULTANPUR NATIONAL PARK	117.4	2			0.01		10		5	17.01

ANNEXURE - I B
BIOLOGICAL VALUES OF PAs

CODE	BIOGEOGRAPHIC PROVIN	NAME	AREA OF THE PA (Hectares)	VALUE ON THE BASIS OF OCCURR-ENCE OF FOREST TYPES/SUB TYPES [Source: IIPA Database]	VALUE ON THE BASIS OF HARBOUR-ING A RARELY OCCURRING FOREST TYPE/SUB TYPE [Source: Rodgers and Panwar]	VALUE ON THE BASIS OF OCCURRENCE OF MAMMALIAN SPECIES LISTED IN SCHEDULE - I OF THE WILDLIFE (PROTECTION) ACT, 1972 [FOR DETAILS, PLEASE REFER TO ANNEXURE - F]	VALUE ACCORDING TO SIZE (Maximum upto 10) [Source: List of PAs by MoEF]	VALUE ON THE BASIS OF EXISTENCE OF FOREST CORRIDORS OR LOCATION OF THE PA ADJOINING OTHER PAs [Source: Rodgers and Panwar]	LOCATION OF PA WITHIN A BIO-GEOGRAPHIC PROVINCE WHERE AREA COVERAGE OF PAs IS INADEQUATE [For details, please see Annexure E]	WITHIN A BIO-GEOGRAPHIC PROVINCE WHERE THE TOTAL NUMBER OF PAs IS INADEQUATE [For details, please see annexure E]	VALUE ON THE BASIS OF HARBOUR-ING AN UNDER REPRE-SENTED ECOSYSTEM eg. WETLANDS, DESERTS, GRASS-LANDS [Source: IIPA database, Rodgers and Panwar]	OVERALL VALUE OF THE PA
HAR/S/BHI	4A	BHINDAWAS SANCTUARY	406.0	2			0.04		10		5	17.04
HAR/S/SAR	4A	SARASWATI PLANTATION SANCTUARY	4998.0	2			0.50		10			12.50
HP/N/GRE	2A	GREAT HIMALAYAN NATIONAL PARK	62000.0	17		10	6.20	10.03			5	48.23
HP/N/PIN	1A	PIN VALLEY NATIONAL PARK	67655.0			12	6.77	7.45		10	5	41.22
HP/S/BAN	2A	BANDLI SANCTUARY	3130.0	9		1	0.31					10.31
HP/S/CHA	2B	CHAIL SANCTUARY	10855.0	9		2	1.09					12.09
HP/S/DAR	2B	DARANGHATI SANCTUARY	16740.0	23		7	1.67					31.67
HP/S/DARL	2B	DARLAGHAT SANCTUARY	4432.3	2		1	0.44					3.44
HP/S/GAM	2A	GAMGUL SIAHBEHI SANCTUARY	900.8	4		16	0.09				5	25.09
HP/S/GOB	2B	GOBIND SAGAR SANCTUARY	10034.0	2			1.00				5	8.00
HP/S/KAI	2A	KAIS SANCTUARY	1419.0			5	0.14					5.14
HP/S/KAL	2A	KALATOP KHAJJIAR SANCTUARY	4728.0	6		4	0.47				5	15.47
HP/S/KAN	2A	KANAWER SANCTUARY	6070.0	11		9	0.61	6.20			5	31.81
HP/S/KHO	2A	KHOKHAN SANCTUARY	1405.0			5	0.14	2.78				7.92
HP/S/KUG	2A	KUGTI SANCTUARY	37886.0	4		7	3.79	0.64			5	20.43
HP/S/LIP	2B	LIPPA ASRANG SANCTUARY	10911.0	25		13	1.09				5	44.09
HP/S/MAJ	2B	MAJATHAL	9206.0	2		1	0.92					3.92
HP/S/MAN	2A	MANALI SANCTUARY	3180.0	17		15	0.32				5	37.32
HP/S/NAI	2B	NAINA DEVI SANCTUARY	4550.0	9		2	0.46					11.46
HP/S/NAR	2A	NARGU SANCTUARY	27837.0	15		3	2.78	0.14				20.92
HP/S/PON	2A	PONG LAKE SANCTUARY	50729.0	11			5.07				5	21.07
HP/S/RAK	2B	RAKCHHAM CHHITKUL SANCTUARY	13844.0	25		4	1.38					30.38
HP/S/REN	4A	RENUKA SANCTUARY	407.5	2		1	0.04		10		5	18.04
HP/S/RUP	2B	RUPI BHAWA SANCTUARY	12487.0	23		8	1.25	12.97				45.22

ANNEXURE - I B
BIOLOGICAL VALUES OF PAs

CODE	BIOGEOGRAPHIC PROVIN	NAME	AREA OF THE PA (Hectares)	VALUE ON THE BASIS OF OCCURR-ENCE OF FOREST TYPES/SUB TYPES [Source: IIPA Database]	VALUE ON THE BASIS OF HARBOUR-ING A RARELY OCCURRING FOREST TYPE/SUB TYPE [Source: Rodgers and Panwar]	VALUE ON THE BASIS OF OCCURRENCE OF MAMMALIAN SPECIES LISTED IN SCHEDULE - I OF THE WILDLIFE (PROTECTION) ACT, 1972 [FOR DETAILS, PLEASE REFER TO ANNEXURE - F]	VALUE ACCORDING TO SIZE (Maximum upto 10) [Source: List of PAs by MoEF]	VALUE ON THE BASIS OF EXISTENCE OF FOREST CORRIDORS OR LOCATION OF THE PA ADJOINING OTHER PAs [Source: Rodgers and Panwar]	LOCATION OF PA WITHIN A BIO-GEOGRAPHIC PROVINCE WHERE AREA COVERAGE OF PAs IS INADEQUATE [For details, please see Annexure E]	WITHIN A BIO-GEOGRAPHIC PROVINCE WHERE THE TOTAL NUMBER OF PAs IS INADEQUATE [For details, please see annexure E]	VALUE ON THE BASIS OF HARBOUR-ING AN UNDER REPRE-SENTED ECOSYSTEM eg. WETLANDS, DESERTS, GRASS-LANDS [Source: IIPA database, Rodgers and Panwar]	OVERALL VALUE OF THE PA
HP/S/SEC	2A	SECHU TWAN NALAH SANCTUARY	10295.0	2		15	1.03					18.03
HP/S/SHIK	2A	SHIKARI DEVI SANCTUARY	21350.0	17		3	2.14					22.14
HP/S/SHIL	2B	SHILLI SANCTUARY	196.7	4		1	0.02					5.02
HP/S/SHIM	2B	SHIMLA WATER SUPPLY CATCHMENT SANCTUARY	1025.3	2		1	0.10					3.10
HP/S/SIM	4A	SIMBALBARA SANCTUARY	1925.6	2		3	0.19		10			15.19
HP/S/TAL	2B	TALRA SANCTUARY	2610.0	13		2	0.26					15.26
HP/S/TIR	2A	TIRTHAN SANCTUARY	14000.0	17		9	1.40	6.20			5	38.60
HP/S/TUN	2A	TUNDAH SANCTUARY	6422.1	2		7	0.64	3.79				13.43
J&K/N/DAC	2A	DACHIGAM NATIONAL PARK	14100.0	23		14	1.41				5	43.41
J&K/N/HEM	1A	HEMIS HIGH ALTITUDE NATIONAL	60000.0			39	6.00			10	5	60.00
J&K/N/KIS	2A	KISHTWAR NATIONAL PARK	31000.0	13		24	3.10				5	45.10
J&K/S/CHA	1A	CHANGTHANG SANCTUARY	40000.0			18	4.00			10	5	37.00
J&K/S/JAS	4A	JASROTA SANCTUARY	912.8			0	0.09		10			10.09
J&K/S/KAR	1A	KARAKORAM SANCTUARY	500000.0			47	10.00			10	5	72.00
J&K/S/LUN	1A	LUNGNAG SANCTUARY	40000.0				4.00			10		14.00
J&K/S/NAN	2A	NANDINI SANCTUARY	1349.8	2		1	0.13					3.13
J&K/S/OVE	2A	OVERA SANCTUARY	3237.0				0.32					0.32
J&K/S/RAM	2A	RAMNAGAR SANCTUARY	1130.0	2			0.11					2.11
J&K/S/SUR	2A	SURINSAR MANSAR SANCTUARY	3912.0	2		1	0.39				5	8.39
KAR/N/BAN	5B	BANDIPUR NATIONAL PARK	86573.0	11		14	8.66	12.37				46.03
KAR/N/BANN	6A	BANNERGHATTA NATIONAL PARK	10434.8	6			1.04		4			11.04
KAR/N/NAG	5B	NAGARHOLE NATIONAL PARK	57155.0	9		12	5.72	15.31			5	47.03
KAR/S/ADI	6A	ADICHUNCHANAGIRI SANCTUARY	84.4	2		2	0.01		4			8.01
KAR/S/BHA	5B	BHADRA SANCTUARY	49039.2	2		16	4.90				5	27.90

ANNEXURE - I B
BIOLOGICAL VALUES OF PAs

CODE	BIOGEOGRAPHIC PROVIN	NAME	AREA OF THE PA (Hectares)	VALUE ON THE BASIS OF OCCURR-ENCE OF FOREST TYPES/SUB TYPES [Source: IIPA Database]	VALUE ON THE BASIS OF HARBOUR-ING A RARELY OCCURRING FOREST TYPE/SUB TYPE [Source: Rodgers and Panwar]	VALUE ON THE BASIS OF OCCURRENCE OF MAMMALIAN SPECIES LISTED IN SCHEDULE - I OF THE WILDLIFE (PROTECTION) ACT, 1972 [FOR DETAILS, PLEASE REFER TO ANNEXURE - F]	VALUE ACCORDING TO SIZE (Maximum upto 10) [Source: List of PAs by MoEF]	VALUE ON THE BASIS OF EXISTENCE OF FOREST CORRIDORS OR LOCATION OF THE PA ADJOINING OTHER PAs [Source: Rodgers and Panwar]	LOCATION OF PA WITHIN A BIO-GEOGRAPHIC PROVINCE WHERE AREA COVERAGE OF PAs IS INADEQUATE [For details, please see Annexure E]	WITHIN A BIO-GEOGRAPHIC PROVINCE WHERE THE TOTAL NUMBER OF PAs IS INADEQUATE [For details, please see annexure E]	VALUE ON THE BASIS OF HARBOUR-ING AN UNDER REPRE-SENTED ECOSYSTEM eg: WETLANDS, DESERTS, GRASS-LANDS [Source: IIPA database, Rodgers and Panwar]	OVERALL VALUE OF THE PA
KAR/S/BIL	6A	BILIGIRI RANGASWAMY TEMPLE SANCTUARY	32440.0	2		11	3.24		4			20.24
KAR/S/BLA	6A	BLACK BUCK SANCTUARY (RANEBENNUR)	11900.0	2		4	1.19		4			11.19
KAR/S/BRA	5B	BRAHMAGIRI SANCTUARY	18129.0			15	1.81	1.63				18.44
KAR/S/DAN	5B	DANDELI SANCTUARY	83400.0	2		8	8.34					18.34
KAR/S/GHA	6A	GHATAPRABHA SANCTUARY	2978.5				0.30		4		5	9.30
KAR/S/MEL	6A	MELKOTE SANCTUARY	4982.0	2		3	0.50		4			9.50
KAR/S/MOO	5A	MOOKAMBIKA SANCTUARY	24679.8	9		9	2.47	4.31	10	10		44.78
KAR/S/NUG	5B	NUGU SANCTUARY	3032.0	2		5	0.30				5	12.30
KAR/S/RANG	6A	RANGANITHITTU SANCTUARY	26.7	9		1	0.00		4		5	19.00
KAR/S/SHA	5B	SHARAVATHI VALLEY SANCTUARY	43133.0	9		9	4.31	2.47			5	29.78
KAR/S/SHE	5B	SHETTIHALLY SANCTUARY	39560.0	9		9	3.96					21.96
KAR/S/SOM	5B	SOMESHWARA SANCTUARY	8840.0	9		16	0.88					25.88
KER/N/ERA	5B	ERAVIKULAM NATIONAL PARK	10400.0	4		11	1.04	9.31				25.35
KER/N/PER	5B	PERIYAR NATIONAL PARK (Including Periyar Sanctuary)	77700.0	11		24	7.77				5	47.77
KER/N/SIL	5B	SILENT VALLEY NATIONAL PARK	8951.7	13		18	0.90					31.90
KER/S/ARA	5B	ARALAM SANCTUARY	5500.0	2		6	0.55					8.55
KER/S/CHIM	5B	CHIMONY SANCTUARY	7500.0	15		7	0.75	3.55				26.30
KER/S/CHIN	5B	CHINNAR SANCTUARY	9044.2			8	0.90	9.45				18.35
KER/S/IDU	5B	IDUKKI SANCTUARY	7000.0	11			0.70					11.70
KER/S/NEY	5B	NEYYAR SANCTUARY	12800.0	19		5	1.28	1.53			5	31.81
KER/S/PEE	5B	PEECHI-VAZHANI SANCTUARY	8365.0	2			0.84	3.46				6.30
KER/S/PEP	5B	PEPPARA SANCTUARY	5300.0			6	0.53	2.28				8.81
KER/S/PER	5B	PERAMBIKULAM SANCTUARY	27100.0	17		23	2.71	10.00				52.71

ANNEXURE - I B
BIOLOGICAL VALUES OF PAs

CODE	BIOGEOGRAPHIC PROVIN	NAME	AREA OF THE PA (Hectares)	VALUE ON THE BASIS OF OCCURR-ENCE OF FOREST TYPES/SUB TYPES [Source: IIPA Database]	VALUE ON THE BASIS OF HARBOUR-ING A RARELY OCCURRING FOREST TYPE/SUB TYPE [Source: Rodgers and Panwar]	VALUE ON THE BASIS OF OCCURRENCE OF MAMMALIAN SPECIES LISTED IN SCHEDULE - I OF THE WILDLIFE (PROTECTION) ACT, 1972 [FOR DETAILS, PLEASE REFER TO ANNEXURE - F]	VALUE ACCORDING TO SIZE (Maximum upto 10) [Source: List of PAs by MoEF]	VALUE ON THE BASIS OF EXISTENCE OF FOREST CORRIDORS OR LOCATION OF THE PA ADJOINING OTHER PAs [Source: Rodgers and Panwar]	LOCATION OF PA WITHIN A BIO-GEOGRAPHIC PROVINCE WHERE AREA COVERAGE OF PAs IS INADEQUATE [For details, please see Annexure E]	WITHIN A BIO-GEOGRAPHIC PROVINCE WHERE THE TOTAL NUMBER OF PAs IS INADEQUATE [For details, please see annexure E]	VALUE ON THE BASIS OF HARBOUR-ING AN UNDER REPRE-SENTED ECOSYSTEM eg. WETLANDS, DESERTS, GRASS-LANDS [Source: IIPA database, Rodgers and Panwar]	OVERALL VALUE OF THE PA
KER/S/SHE	5B	SHENDURUNY SANCTUARY	10032.0	11		7	1.00	1.81				20.81
KER/S/THA	5B	THATTEKKAD SANCTUARY	2516.0	2		7	0.25					9.25
KER/S/WYN	5B	WYNAD SANCTUARY	34444.1	4		8	3.44	17.59				33.03
MAH/N/NAW	6B	NAWEGAON NATIONAL PARK	133.9	2		12	0.01				5	19.01
MAH/N/PEN	6E	PENCH NATIONAL PARK	25723.7	2		8	2.57	4.11			5	21.68
MAH/N/SAN	5A	SANJAY GANDHI NATIONAL PARK	9469.9	13		6	0.95		10	10	5	44.95
MAH/N/TAD	6B	TADOBA NATIONAL PARK	11654.9			12	1.17	5.09			5	23.26
MAH/S/BHI	5B	BHIMASHANKAR SANCTUARY	13078.0	2		4	1.31					7.31
MAH/S/BOR	6E	BOR SANCTUARY	61.1	2		4	0.01				5	11.01
MAH/S/DEU	6B	DEULGAON SANCTUARY	217.3	2		3	0.02					5.02
MAH/S/GRE	6B	GREAT INDIAN BUSTARD SANCTUARY	781847.0	2			10.00					12.00
MAH/S/KAL	5B	KALSUBAI HARICHANDRAGAD SANCTUARY	36181.0	2		4	3.62					9.62
MAH/S/MEL	6E	MELGHAT SANCTUARY	159723.0	2		10	10.00					22.00
MAH/S/NAG	6B	NAGZIRA SANCTUARY	15281.0	2		7	1.53					10.53
MAH/S/NAN	6B	NANDUR MADHMESHWAR SANCTUARY	10012.7			1	1.00					2.00
MAH/S/PAI	6B	PAINGANGA SANCTUARY	32462.0			6	3.25					9.25
MAH/S/PHA	10A	PHANSAD SANCTUARY	5387.0			3	0.54			10		13.54
MAH/S/RAD	5B	RADHANAGARI BISON SANCTUARY	35116.0	9		7	3.51				5	24.51
MAH/S/TAN	5B	TANSA SANCTUARY	21675.0	2		9	2.17					13.17
MAH/S/YAW	6E	YAWAL SANCTUARY	177520.0			7	10.00				5	22.00
MAN/N/KEI	8B	KEIBUL LAMJAO NATIONAL PARK	4000.0	9		63	0.40		4		5	81.40
MAN/N/SIR	8B	SIROY NATIONAL PARK	4130.0			5	0.41		4			9.41
MEG/S/SIJ	8B	SIJU SANCTUARY	518.0	9			0.05		4			13.05

ANNEXURE - I B
BIOLOGICAL VALUES OF PAs

CODE	BIOGEOGRAPHIC PROVIN	NAME	AREA OF THE PA (Hectares)	VALUE ON THE BASIS OF OCCURR-ENCE OF FOREST TYPES/SUB TYPES [Source: IIPA Database]	VALUE ON THE BASIS OF HARBOUR-ING A RARELY OCCURRING FOREST TYPE/SUB TYPE [Source: Rodgers and Panwar]	VALUE ON THE BASIS OF OCCURRENCE OF MAMMALIAN SPECIES LISTED IN SCHEDULE - I OF THE WILDLIFE (PROTECTION) ACT, 1972 [FOR DETAILS, PLEASE REFER TO ANNEXURE - F]	VALUE ACCORDING TO SIZE (Maximum upto 10) [Source: List of PAs by MoEF]	VALUE ON THE BASIS OF EXISTENCE OF FOREST CORRIDORS OR LOCATION OF THE PA ADJOINING OTHER PAs [Source: Rodgers and Panwar]	LOCATION OF PA WITHIN A BIO-GEOGRAPHIC PROVINCE WHERE AREA COVERAGE OF PAs IS INADEQUATE [For details, please see Annexure E]	WITHIN A BIO-GEOGRAPHIC PROVINCE WHERE THE TOTAL NUMBER OF PAs IS INADEQUATE [For details, please see annexure E]	VALUE ON THE BASIS OF HARBOUR-ING AN UNDER REPRE-SENTED ECOSYSTEM eg. WETLANDS, DESERTS, GRASS-LANDS [Source: IIPA database, Rodgers and Panwar]	OVERALL VALUE OF THE PA
MIZ/S/DAM	8B	DAMPA SANCTUARY	68100.0	2			6.81		4			12.81
MP/N/BAN	6E	BANDHAVGARH NATIONAL PARK	44884.0	4		11	4.49	13.51				33.00
MP/N/FOS	6E	FOSSIL NATIONAL PARK	27.4				0.00					0.00
MP/N/IND	6C	INDRAVATI NATIONAL PARK	125837.2	11		13	10.00	2.00	4		5	45.00
MP/N/KAN	6E	KANHA NATIONAL PARK	93994.0	4		13	9.40	8.60				35.00
MP/N/KANG	6C	KANGER GHATI NATIONAL PARK	20000.0	2		13	2.00		4			21.00
MP/N/MAD	4B	MADHAV NATIONAL PARK	15600.0	2		12	1.56		4		5	24.56
MP/N/PAN	6E	PANNA NATIONAL PARK	54300.0			11	5.43	4.49				20.92
MP/N/PEN	6E	PENCH NATIONAL PARK (Including Pench Sanctuary)	41133.0	4		12	4.11	13.89			5	39.00
MP/N/SAN	6E	SANJAY NATIONAL PARK	193800.0			11	10.00					21.00
MP/N/SAT	6E	SATPURA NATIONAL PARK	52400.0	11		11	5.24	9.58				36.82
MP/N/VAN	6E	VAN VIHAR NATIONAL PARK	445.2	2			0.04					2.04
MP/S/ACH	6C	ACHANKMAR SANCTUARY	55155.2	13			5.52		4			22.52
MP/S/BAD	6D	BADALKHOL SANCTUARY	10445.4	2		7	1.04		4			14.04
MP/S/BAG	6E	BAGDARA SANCTUARY	47800.0	2		11	4.78					17.78
MP/S/BAR	6C	BARNAWAPARA SANCTUARY	24466.0				2.45		4			6.45
MP/S/BHA	6C	BHAIRAMGARH WILD BUFFALO SANCTUARY	13895.0	11		11	1.39		4			27.39
MP/S/BOR	6E	BORI SANCTUARY	48572.2	11		11	4.86	9.96			5	41.82
MP/S/GAN	4B	GANDHISAGAR SANCTUARY	22098.6	2		11	2.21		4		5	24.21
MP/S/GHA	4B	GHATIGAON GREAT INDIAN BUSTARD SANCTUARY	51200.0	10		11	5.12		4			30.12
MP/S/GOM	6C	GOMARDA SANCTUARY	27782.0	2		9	2.78		4			17.78

ANNEXURE - I B
BIOLOGICAL VALUES OF PAs

CODE	BIOGEOGRAPHIC PROVIN	NAME	AREA OF THE PA (Hectares)	VALUE ON THE BASIS OF OCCURR-ENCE OF FOREST TYPES/SUB TYPES [Source: IIPA Database]	VALUE ON THE BASIS OF HARBOUR-ING A RARELY OCCURRING FOREST TYPE/SUB TYPE [Source: Rodgers and Panwar]	VALUE ON THE BASIS OF OCCURRENCE OF MAMMALIAN SPECIES LISTED IN SCHEDULE - I OF THE WILDLIFE (PROTECTION) ACT, 1972 [FOR DETAILS, PLEASE REFER TO ANNEXURE - F]	VALUE ACCORDING TO SIZE (Maximum upto 10) [Source: List of PAs by MoEF]	VALUE ON THE BASIS OF EXISTENCE OF FOREST CORRIDORS OR LOCATION OF THE PA ADJOINING OTHER PAs [Source: Rodgers and Panwar]	LOCATION OF PA WITHIN A BIO-GEOGRAPHIC PROVINCE WHERE AREA COVERAGE OF PAs IS INADEQUATE [For details, please see Annexure E]	WITHIN A BIO-GEOGRAPHIC PROVINCE WHERE THE TOTAL NUMBER OF PAs IS INADEQUATE [For details, please see annexure E]	VALUE ON THE BASIS OF HARBOUR-ING AN UNDER REPRE-SENTED ECOSYSTEM eg. WETLANDS, DESERTS, GRASS-LANDS [Source: IIPA database, Rodgers and Panwar]	OVERALL VALUE OF THE PA
MP/S/KAR	4B	KARERA GREAT INDIAN BUSTARD SANCTUARY	20221.0			11	2.02		4		5	22.02
MP/S/KEN	6E	KEN GHARIYAL SANCTUARY	4500.0	4			0.45				5	9.45
MP/S/KHE	6E	KHEONI SANCTUARY	12270.0	2		11	1.23					14.23
MP/S/NAR	4B	NARSINGARH SANCTUARY	5919.0	2			0.59		4			6.59
MP/S/NAT	4B	NATIONAL CHAMBAL SANCTUARY	42300.0			11	4.23	9.15	4		5	33.38
MP/S/NAU	6E	NAURADEHI SANCTUARY	118696.1	14			10.00					24.00
MP/S/PAC	6E	PACHMARHI SANCTUARY	47216.0	11		11	4.72	10.10				36.82
MP/S/PAL	4B	PALPUR KUND SANCTUARY	34468.6	4			3.45	6.76	4			18.21
MP/S/PAM	6C	PAMED SANCTUARY	26212.0	2			2.62		4		5	13.62
MP/S/PAN	6E	PANPATHA SANCTUARY	245.8	11			0.02	4.49				15.51
MP/S/PHE	6E	PHEN SANCTUARY	11074.0	6			1.11	9.40				16.51
MP/S/RAT	6E	RATAPANI SANCTUARY	66580.0	8			6.66				5	19.66
MP/S/SAI	4B	SAILANA SANCTUARY	1296.5	2			0.13		4			6.13
MP/S/SAN	6E	SANJAY (DUBRI) SANCTUARY	364593.0	2			10.00					12.00
MP/S/SAR	4B	SARDARPUR SANCTUARY	34812.0				3.48		4			7.48
MP/S/SEM	6D	SEMARSOT SANCTUARY	43036.1	2			4.30	6.09	4			16.39
MP/S/SING	6E	SINGHORI SANCTUARY	28791.0	4		11	2.88					17.88
MP/S/SIT	6C	SITANADI SANCTUARY	55380.0	13			5.54	2.48	4			25.02
MP/S/SON	6E	SON GHARYAL SANCTUARY	20291.0	11			2.03					13.03
MP/S/TAM	6D	TAMORE PINGLA SANCTUARY	60852.0	2			6.09	4.30	4			16.39
MP/S/UDA	6C	UDANTI SANCTUARY	24759.0	4		12	2.48	5.54	4		5	33.02
NAG/S/INT	8B	INTANKI SANCTUARY	20220.0	2	5		2.02		4			13.02
ORI/N/SIM	6D	SIMLIPAL NATIONAL PARK (Including Similipal Sanctuary)	250300.0	21	5	14	10.00	2.72	4			56.72
ORI/S/BAI	6C	BAISIPALLI SANCTUARY	16641.0	2			1.66	7.96	4			15.62

ANNEXURE - I B
BIOLOGICAL VALUES OF PAs

CODE	BIOGEOGRAPHIC PROVIN	NAME	AREA OF THE PA (Hectares)	VALUE ON THE BASIS OF OCCURR-ENCE OF FOREST TYPES/SUB TYPES [Source: IIPA Database]	VALUE ON THE BASIS OF HARBOUR-ING A RARELY OCCURRING FOREST TYPE/SUB TYPE [Source: Rodgers and Panwar]	VALUE ON THE BASIS OF OCCURRENCE OF MAMMALIAN SPECIES LISTED IN SCHEDULE - I OF THE WILDLIFE (PROTECTION) ACT, 1972 [FOR DETAILS, PLEASE REFER TO ANNEXURE - F]	VALUE ACCORDING TO SIZE (Maximum upto 10) [Source: List of PAs by MoEF]	VALUE ON THE BASIS OF EXISTENCE OF FOREST CORRIDORS OR LOCATION OF THE PA ADJOINING OTHER PAs [Source: Rodgers and Panwar]	LOCATION OF PA WITHIN A BIO-GEOGRAPHIC PROVINCE WHERE AREA COVERAGE OF PAs IS INADEQUATE [For details, please see Annexure E]	WITHIN A BIO-GEOGRAPHIC PROVINCE WHERE THE TOTAL NUMBER OF PAs IS INADEQUATE [For details, please see annexure E]	VALUE ON THE BASIS OF HARBOUR-ING AN UNDER REPRE-SENTED ECOSYSTEM eg. WETLANDS, DESERTS, GRASS-LANDS [Source: IIPA database, Rodgers and Panwar]	OVERALL VALUE OF THE PA
ORI/S/BAL	10B	BALUKHAND-KONARK SANCTUARY	7172.0				0.72			4		4.72
ORI/S/BHI	10B	BHITARKANIKA SANCTUARY	65000.0	4			6.50			4	5	19.50
ORI/S/CHA	6C	CHANDAKA-DAMPADA SANCTUARY	22000.0	2			2.20		4			8.20
ORI/S/HAD	6D	HADGARH SANCTUARY	19160.0	11			1.92		4			16.92
ORI/S/NAN	6D	NANDANKANAN SANCTUARY	1426.0	2			0.14		4			6.14
ORI/S/SAT	6C	SATKOSIA GORGE SANCTUARY	79552.0	9			7.96	1.66	4		5	27.62
PUN/S/ABO	4A	ABOHAR	18600.0			9	1.86		10			20.86
PUN/S/BIRG	4A	BIR GURDIAL PURA	610.0			1	0.06		10			11.06
PUN/S/BIRM	4A	BIR MOTIBAGH	640.0			6	0.06		10			16.06
PUN/S/BUN	4A	BIR BUNERHERI	650.0				0.07		10			10.07
PUN/S/HAR	4A	HARIKE LAKE	8600.0	4			0.86		10		5	19.86
RAJ/N/DES	3B	DESERT NATIONAL PARK	316200.0	2		4	10.00		7	10	5	38.00
RAJ/N/KEO	4A	KEOLADEO GHANA NATIONAL PARK	2873.0	6		8	0.29		10		5	29.29
RAJ/N/RAN	4B	RANTHAMBHORE NATIONAL PARK	39200.0	11		15	3.92	6.76	4		5	45.68
RAJ/N/SAR	4B	SARISKA NATIONAL PARK (Including Sariska Sanctuary)	76580.0	4		15	7.66		4			30.66
RAJ/S/BHE	4B	BHENSRODGARH SANCTUARY	22914.0	2		11	2.29		4			19.29
RAJ/S/DAR	4B	DARAH SANCTUARY	26583.0	2		11	2.66		4			19.66
RAJ/S/JAI	4B	JAISAMAND SANCTUARY	5200.0	2		11	0.52		4		5	22.52
RAJ/S/JAM	4B	JAMVA-RAMGARH SANCTUARY	30000.0	2			3.00		4			9.00
RAJ/S/JAW	4B	JAWAHAR SAGAR SANCTUARY	10000.0	4			1.00		4		5	14.00
RAJ/S/KAI	4B	KAILA DEVI SANCTUARY	67638.0	2		12	6.76	7.37	4			32.13
RAJ/S/KUM	4B	KUMBALGARH SANCTUARY	57825.9	4		11	5.78		4			24.78
RAJ/S/MOU	4B	MOUNT ABU SANCTUARY	28884.0	6		14	2.89		4			26.89

ANNEXURE - I B
BIOLOGICAL VALUES OF PAs

CODE	BIOGEOGRAPHIC PROVIN	NAME	AREA OF THE PA (Hectares)	VALUE ON THE BASIS OF OCCURR-ENCE OF FOREST TYPES/SUB TYPES [Source: IIPA Database]	VALUE ON THE BASIS OF HARBOUR-ING A RARELY OCCURRING FOREST TYPE/SUB TYPE [Source: Rodgers and Panwar]	VALUE ON THE BASIS OF OCCURRENCE OF MAMMALIAN SPECIES LISTED IN SCHEDULE - I OF THE WILDLIFE (PROTECTION) ACT, 1972 [FOR DETAILS, PLEASE REFER TO ANNEXURE - F]	VALUE ACCORDING TO SIZE (Maximum upto 10) [Source: List of PAs by MoEF]	VALUE ON THE BASIS OF EXISTENCE OF FOREST CORRIDORS OR LOCATION OF THE PA ADJOINING OTHER PAs [Source: Rodgers and Panwar]	LOCATION OF PA WITHIN A BIO-GEOGRAPHIC PROVINCE WHERE AREA COVERAGE OF PAs IS INADEQUATE [For details, please see Annexure E]	WITHIN A BIO-GEOGRAPHIC PROVINCE WHERE THE TOTAL NUMBER OF PAs IS INADEQUATE [For details, please see annexure E]	VALUE ON THE BASIS OF HARBOUR-ING AN UNDER REPRE-SENTED ECOSYSTEM eg. WETLANDS, DESERTS, GRASS-LANDS [Source: IIPA database, Rodgers and Panwar]	OVERALL VALUE OF THE PA
RAJ/S/NAH	4B	NAHARGARH SANCTUARY	5000.0	2			0.50		4			6.50
RAJ/S/NAT	4B	NATIONAL CHAMBAL SANCTUARY	28000.0	9		11	2.80	10.58	4		5	42.38
RAJ/S/PHU	4B	PHULWARI SANCTUARY	51141.0	2			5.11		4			11.11
RAJ/S/RAM	4B	RAMGARH SANCTUARY	30700.0	2		11	3.07		4			20.07
RAJ/S/SHE	4B	SHERGARH	9871.0	2		11	0.99		4			17.99
RAJ/S/SIT	4B	SITAMATA SANCTUARY	42294.0	2		11	4.23		4			21.23
RAJ/S/TAL	3B	TAL CHHAPER SANCTUARY	710.0	2		12	0.07		7	10	5	36.07
RAJ/S/TOD	4B	TODGARH-RAOLI SANCTUARY	49527.0	2		11	4.95		4			21.95
RAJ/S/VAN	4B	VAN BIHAR SANCTUARY	5993.0	6			0.60		4			10.60
SIK/N/KHA	2C	KHANGCHENDZONGA NATIONAL PARK	85000.0	9		31	8.50			7	5	60.50
SIK/S/FAM	2C	FAMBUNG LHO SANCTUARY	1500.0	2			0.15			7		9.15
TN/N/GUI	6A	GUINDY NATIONAL PARK	270.6	2			0.03		4			6.03
TN/S/ANA	5B	ANAMALAIS SANCTUARY	84149.0	11		23	8.41	4.65				47.06
TN/S/KAL	5B	KALAKAD MUNDANTHURAI TIGER RESERVE	79058.0	23		21	7.91					51.91
TN/S/MUD	5B	MUDUMALAI SANCTUARY	32100.0	13		23	3.21	17.82				57.03
TN/S/NIL	5B	NILGIRI TAHR (Mukurthy) SANCTUARY	7846.0	11		10	0.78	3.44				25.22
TN/S/POI	10B	POINT CALIMERE SANCTUARY	1728.8	4		1	0.17			4	5	14.17
TN/S/PUL	10B	PULICAT SANCTUARY	46102.0			9	4.61			4	5	22.61
TN/S/VED	6A	VEDANTHANGAL SANCTUARY	29.5				0.00		4		5	9.00
UP/N/COR	7A	CORBETT NATIONAL PARK	52082.0	13		13	5.21	5.87	4		5	46.08
UP/N/DUD	7A	DUDHWA NATIONAL PARK	49029.2	17		22	4.90		4		5	52.90

ANNEXURE - I B
BIOLOGICAL VALUES OF PAs

CODE	BIOGEOGRAPHIC PROVIN	NAME	AREA OF THE PA (Hectares)	VALUE ON THE BASIS OF OCCURR-ENCE OF FOREST TYPES/SUB TYPES [Source: IIPA Database]	VALUE ON THE BASIS OF HARBOUR-ING A RARELY OCCURRING FOREST TYPE/SUB TYPE [Source: Rodgers and Panwar]	VALUE ON THE BASIS OF OCCURRENCE OF MAMMALIAN SPECIES LISTED IN SCHEDULE - I OF THE WILDLIFE (PROTECTION) ACT, 1972 [FOR DETAILS, PLEASE REFER TO ANNEXURE - F]	VALUE ACCORDING TO SIZE (Maximum upto 10) [Source: List of PAs by MoEF]	VALUE ON THE BASIS OF EXISTENCE OF FOREST CORRIDORS OR LOCATION OF THE PA ADJOINING OTHER PAs [Source: Rodgers and Panwar]	LOCATION OF PA WITHIN A BIO-GEOGRAPHIC PROVINCE WHERE AREA COVERAGE OF PAs IS INADEQUATE [For details, please see Annexure E]	WITHIN A BIO-GEOGRAPHIC PROVINCE WHERE THE TOTAL NUMBER OF PAs IS INADEQUATE [For details, please see annexure E]	VALUE ON THE BASIS OF HARBOUR-ING AN UNDER REPRE-SENTED ECOSYSTEM eg. WETLANDS, DESERTS, GRASS-LANDS [Source: IIPA database, Rodgers and Panwar]	OVERALL VALUE OF THE PA
UP/N/NAN	2B	NANDA DEVI NATIONAL PARK	63033.0	15		12	6.30					33.30
UP/N/RAJ	7A	RAJAJI NATIONAL PARK (Data aggregated for Chilla, Motichur and Rajaji Sanctuaries)	58696.3	17		9	5.87	5.21	4			41.08
UP/N/VAL	2B	VALLEY OF FLOWERS NATIONAL PARK	8750.0	23		10	0.88					33.88
UP/S/CHA	6E	CHANDRAPRABHA SANCTUARY	9600.0	2		3	0.96					5.96
UP/S/GOV	2B	GOVIND PASHUVIHAR SANCTUARY	95312.0			9	9.53					18.53
UP/S/KAI	6E	KAIMUR SANCTUARY	50074.7	20			5.01	13.42				38.43
UP/S/KAT	7A	KATERNIAGHAT SANCTUARY	40000.0	2			4.00		4		5	15.00
UP/S/KED	2B	KEDARNATH SANCTUARY	96725.5	37		9	9.67					55.67
UP/S/KIS	7A	KISHANPUR SANCTUARY	20021.9	11		6	2.00		4		5	28.00
UP/S/MAH	6E	MAHAVIR SANCTUARY	541.1				0.05					0.05
UP/S/NAT	4B	NATIONAL CHAMBAL SANCTUARY	63500.0	11		11	6.35	7.03	4		5	44.38
UP/S/NAW	7A	NAWABGANJ SANCTUARY	224.6				0.02		4		5	9.02
UP/S/RAN	6E	RANIPUR SANCTUARY	23031.0	16		1	2.30				5	24.30
WB/N/SUN	10B	SUNDERBANS NATIONAL PARK	133010.0	2		14	10.00			4	5	35.00
WB/S/BAL	7B	BALLAVPUR SANCTUARY	202.0				0.02		7			7.02
WB/S/JAL	7B	JALDAPARA SANCTUARY	11600.0	15		11	1.16	7.58	7			41.74
WB/S/LOT	10B	LOTHIAN ISLAND SANCTUARY	3800.0				0.38			4	5	9.38
WB/S/RAM	7B	RAMNABAGAN SANCTUARY	14.5	2			0.00		7			9.00
WB/S/SAJ	10B	SAJNAKHALI SANCTUARY	36236.0	2			3.62			4	5	14.62
WB/S/SEN	2C	SENCHAL SANCTUARY	3860.0				0.39			7		7.39
Median of Values												20.24

ANNEXURE - I C
VALUES OF PRESSURES OR THREATS ON PAs

CODE	BIOGEOGRAPHIC PROVINCE	NAME	AREA OF THE PA (Hectares)	VALUE ACCORDING TO THE AREA OCCUPIED BY	VALUE ACCORDING TO THE AREA OCCUPIED FOR	VALUE ACCORDING TO THE QUANTUM OF TOURISTS	VALUE ACCORDING TO THE AREA USED FOR MINING	VALUE ACCORDING TO THE AREA USED FOR QUARRYING	VALUE ACCORDING TO THE AREA USED FOR PLANTATIONS	VALUE FOR OCCURRENCE OF TRANSMISSION LINES	VALUE FOR OCCURRENCE OF ROADS/ HIGHWAYS	VALUE ACCORDING TO AREA OCCUPIED FOR HABITATION	VALUE ACCORDING TO THE DENSITY OF POPULATION INSIDE THE PA	VALUE ACCORDING TO THE AREA OCCUPIED FOR CULTIVATION	VALUE ACCORDING TO THE AREA USED FOR RELIGIOUS YATRA/ RELIGIOUS MONUMENTS	VALUE ACCORDING TO THE AREA USED FOR FISHING
AP/S/COR	10B	CORINGA SANCTUARY	23570.3	0	0	0	0	0	0		0	0	0	0	0	3
AP/S/ETU	6B	ETURNAGARAM SANCTUARY	81259.0	1	0	3	0	0	0	2	2	1	1	1	1	1
AP/S/KAW	6B	KAWAL SANCTUARY	89228.0	1	0	0	0	0	0	2	2	0	1	0	0	0
AP/S/KIN	6B	KINNERASANI SANCTUARY	63540.0	1	0	0	0	0	0	2	2	0	1	0	0	0
AP/S/KOL	6B	KOLLERU SANCTUARY	90100.0	1	0	0	0	0	0	0	2	0	0	3	0	3
AP/S/MAN	6B	MANJIRA SANCTUARY	2000.0	1	0	0	0	0	0	0	0	0	0	0	0	1
AP/S/NAG	6A	NAGARJUNA SAGAR SRISAILAM TIGER RESERVE	356890.0	0	0	0	0	0	0	0	2	1	1	0	1	0
AP/S/NEL	6A	NELAPATTU SANCTUARY	453.0	3	0	0	0	0	0	0	0	0	0	0	0	0
AP/S/PAK	6B	PAKHAL SANCTUARY	89205.0	1	1	0	0	0	0	2	2	1	1	2	1	1
AP/S/PAP	6C	PAPIKONDA SANCTUARY	59068.0	0	0	0	0	0	0	0	0	3	1	0	1	0
AP/S/POC	6B	POCHARAM SANCTUARY	12963.6	0	0	0	0	0	0	0	2	0	0	0	0	0
AP/S/PRA	6B	PRANHITA	13602.7	0	0	0	0	0	0	2	2	0	2	0	0	0
AP/S/PUL	10B	PULICAT SANCTUARY	58000.0	0	0	0	0	0	0	0	2	0	0	0	0	3
AP/S/SIW	6B	SIWARAM SANCTUARY	2991.7	0	0	0	0	0	0	0	0	0	3	0	0	0
ARU/N/NAM	2D	NAMDAPHA NATIONAL PARK	198523.0	1	1	0	0	0	0	0	2	0	0	0	0	0
ARU/S/ITA	2D	ITANAGAR SANCTUARY	14080.0	0	0	0	0	0	0	0	2	0	0	0	0	0
ARU/S/LAL	2D	LALI SANCTUARY	19000.0	0	0	0	0	0	0	0	0	0	0	0	0	0
ARU/S/MEH	2D	MEHAO SANCTUARY	28150.0	1	0	0	0	0	0	0	2	1	1	0	0	1
ARU/S/PAK	2D	PAKHUI SANCTUARY	86195.0	0	0	0	0	0	0	0	2	1	1	1	0	1
ASS/N/KAZ	8A	KAZIRANGA NATIONAL PARK	43000.0	0	0	3	0	0	0	0	2	0	1	0	0	0
ASS/S/BAR	8A	BARNADI SANCTUARY	2600.0	0	0	0	0	0	1	0	0	0	0	0	0	0
ASS/S/LAO	8A	LAOKHAWA SANCTUARY	7000.0	0	0	3	0	0	0	0	0	0	1	1	0	0
ASS/S/MAN	8A	MANAS TIGER RESERVE	39100.0	0	0	3	0	1	1	0	0	1	0	1	0	0
BIH/S/BHI	6D	BHIMBANDH SANCTUARY	68190.2	0	0	3	0	0	0	0	2	0	1	0	0	0
BIH/S/DAL	6D	DALMA SANCTUARY	19322.1	0	0	3	0	0	0	2	2	0	3	0	1	0
BIH/S/GAU	6D	GAUTAM BUDDHA SANCTUARY	25950.0	0	0	3	0	0	0	0	2	0	2	0	0	0
BIH/S/HAZ	6D	HAZARIBAGH SANCTUARY	18323.0	0	0	3	0	0	0	0	2	0	3	0	0	0
BIH/S/LAW	6D	LAWALONG SANCTUARY	21103.3	0	0	2	0	0	0	0	2	0	2	0	0	0

ANNEXURE - I C
VALUES OF PRESSURES OR THREATS ON PAs

CODE	BIOGEOGRAPHIC PROVINCE	NAME	AREA OF THE PA (Hectares)	VALUE ACCORDING TO THE AREA OCCUPIED BY	VALUE ACCORDING TO THE AREA OCCUPIED FOR	VALUE ACCORDING TO THE QUANTUM OF TOURISTS	VALUE ACCORDING TO THE AREA USED FOR MINING	VALUE ACCORDING TO THE AREA USED FOR QUARRYING	VALUE ACCORDING TO THE AREA USED FOR PLANTATIONS	VALUE FOR OCCURRENCE OF TRANSMISSION LINES	VALUE FOR OCCURRENCE OF ROADS/ HIGHWAYS	VALUE ACCORDING TO AREA OCCUPIED FOR HABITATION	VALUE ACCORDING TO THE DENSITY OF POPULATION INSIDE THE PA	VALUE ACCORDING TO THE AREA OCCUPIED FOR CULTIVATION	VALUE ACCORDING TO THE AREA USED FOR RELIGIOUS YATRA/ RELIGIOUS MONUMENTS	VALUE ACCORDING TO THE AREA USED FOR FISHING
BIH/S/PAL	6D	PALAMAU SANCTUARY	97927.0	2	0	3	0	0	0	0	2	0	1	0	0	0
BIH/S/RAJ	6D	RAJGIR SANCTUARY	3545.0	0	1	0	0	0	0	0	2	0	0	0	1	0
BIH/S/TOP	6D	TOPCHANCHI SANCTUARY	1282.0	0	0	3	0	0	0	0	2	0	3	0	1	0
BIH/S/VAL	7B	VALMIKI SANCTUARY	46160.0	0	0	3	0	0	0	0	2	0	1	0	1	0
CHA/S/SUK	4A	SUKHNA SANCTUARY	2542.0	0	0	3	0	0	0	0	0	0	0	0	0	0
GOA/N/BHA	5B	BHAGWAN MAHAVIR NATIONAL PARK (Including Bhagwan mahavir Sanctuary)	25552.9	0	1	0	0	0	0	0	2	0	0	0	0	0
GOA/S/BON	5B	BONDLA SANCTUARY	800.0	0	1	3	0	0	0	2	0	0	0	0	0	0
GOA/S/COT	5B	COTIGAO SANCTUARY	10500.0	0	0	0	0	0	0	0	2	0	1	0	0	0
GUJ/N/BAN	5B	BANSDA NATIONAL PARK	2399.4	0	0	2	0	0	0	0	0	0	2	0	0	0
GUJ/N/GIR	4B	GIR NATIONAL PARK	141213.2	1	0	3	0	0	0	2	2	1	0	1	0	
GUJ/N/MAR	10A	MARINE NATIONAL PARK	16289.0	0	0	3	0	1	0	0	0	0	1	1	1	0
GUJ/N/VEL	4B	VELAVADAR NATIONAL PARK	3408.1	1	0	3	0	0	0	2	2	0	0	0	0	0
GUJ/S/BAR	4B	BARDA SANCTUARY	18025.1	0	0	0	0	0	0	0	2	3	2	0	0	0
GUJ/S/DHR	3A	DHRANGADHRA WILD ASS SANCTUARY	484090.0	0	0	0	0	0	0	2	2	0	0	0	1	0
GUJ/S/DUM	4B	DUMKHAL SLOTH BEAR SANCTUARY	15087.2	0	0	0	0	0	0	0	2	0	2	0	0	0
GUJ/S/HIN	4B	HINGOLGARH SANCTUARY	654.1	0	0	0	0	0	0	0	2	0	0	0	0	0
GUJ/S/JES	4B	JESSORE SANCTUARY	18066.3	0	0	0	0	1	0	0	2	0	0	0	0	0
GUJ/S/KHI	4B	KHIJADAYA SANCTUARY	604.9	1	0	0	0	0	0	0	2	0	0	0	0	0
GUJ/S/NAL	4B	NAL SAROVAR SANCTUARY	12082.2	0	3	3	0	0	0	0	0	0	0	0	0	0
GUJ/S/NAR	3A	NARAYAN SAROVAR SANCTUARY	30754.5	0	0	0	0	0	1	0	2	3	2	3	0	0
GUJ/S/RAT	4B	RATANMAHAL SANCTUARY	5565.1	0	0	3	0	0	0	0	0	0	3	0	0	0
HAR/N/SUL	4A	SULTANPUR NATIONAL PARK	117.4	0	2	3	0	1	0	0	0	0	0	0	0	0
HAR/S/BHI	4A	BHINDAWAS SANCTUARY	406.0	3					3							
HAR/S/SAR	4A	SARASWATI PLANTATION SANCTUARY	4998.0													

ANNEXURE - I C
VALUES OF PRESSURES OR THREATS ON PAs

CODE	BIOGEOGRAPHIC PROVINCE	NAME	AREA OF THE PA (Hectares)	VALUE ACCORDING TO THE AREA OCCUPIED BY	VALUE ACCORDING TO THE AREA OCCUPIED FOR	VALUE ACCORDING TO THE QUANTUM OF TOURISTS	VALUE ACCORDING TO THE AREA USED FOR MINING	VALUE ACCORDING TO THE AREA USED FOR QUARRYING	VALUE ACCORDING TO THE AREA USED FOR PLANTATIONS	VALUE FOR OCCURRENCE OF TRANSMISSION LINES	VALUE FOR OCCURRENCE OF ROADS/ HIGHWAYS	VALUE ACCORDING TO AREA OCCUPIED FOR HABITATION	VALUE ACCORDING TO THE DENSITY OF POPULATION INSIDE THE PA	VALUE ACCORDING TO THE AREA OCCUPIED FOR CULTIVATION	VALUE ACCORDING TO THE AREA USED FOR RELIGIOUS YATRA/ RELIGIOUS MONUMENTS	VALUE ACCORDING TO THE AREA USED FOR FISHING
HP/N/GRE	2A	GREAT HIMALAYAN NATIONAL PARK	62000.0	0	0	0	0	0	0	0	0	1	0	1	1	0
HP/N/PIN	1A	PIN VALLEY NATIONAL PARK	67655.0	1	0	0	0	0	0	0	2	0	1	0	0	0
HP/S/BAN	2A	BANDLI SANCTUARY	3130.0	0	0	0	0	0	0	0	0	1	1	1	0	0
HP/S/CHA	2B	CHAIL SANCTUARY	10855.0	0	0	0	0	3	0	0	2	1	0	1	1	0
HP/S/DAR	2B	DARANGHATI SANCTUARY	16740.0	0	0	0	0	0	0	2	2	1	0	1	0	0
HP/S/DARL	2B	DARLAGHAT SANCTUARY	4432.3	0	0	0	0	0	0	0	2	0	0	3	3	0
HP/S/GAM	2A	GAMGUL SIAHBEHI SANCTUARY	900.8	0	0	2	0	1	0	0	2	1	3	3	0	0
HP/S/GOB	2B	GOBIND SAGAR SANCTUARY	10034.0	0	0	0	0	0	0	0	2	0	0	0	0	3
HP/S/KAI	2A	KAIS SANCTUARY	1419.0	0	0	0	0	0	0	0	2	0	0	0	0	0
HP/S/KAL	2A	KALATOP KHAJJIAR SANCTUARY	4728.0	0	1	3	0	0	0	0	2	1	3	1	0	0
HP/S/KAN	2A	KANAWER SANCTUARY	6070.0	0	0	3	0	3	0	0	0	3	1	3	1	0
HP/S/KHO	2A	KHOKHAN SANCTUARY	1405.0	0	0	0	0	3	0	0	0	1	0	1	0	0
HP/S/KUG	2A	KUGTI SANCTUARY	37886.0	0	0	2	0	0	0	0	2	1	1	1	0	0
HP/S/LIP	2B	LIPPA ASRANG SANCTUARY	10911.0	0	1	0	0	0	0	0	2	0	0	0	1	0
HP/S/MAJ	2B	MAJATHAL	9206.0	0	0	0	0	0	0	0	2	0	0	3	3	0
HP/S/MAN	2A	MANALI SANCTUARY	3180.0	0	0	0	0	3	0	0	0	1	0	1	1	0
HP/S/NAI	2B	NAINA DEVI SANCTUARY	4550.0	0	0	0	0	0	0	0	2	0	0	0	0	0
HP/S/NAR	2A	NARGU SANCTUARY	27837.0	0	0	0	0	1	0	0	2	1	0	1	1	0
HP/S/PON	2A	PONG LAKE SANCTUARY	50729.0	0	0	0	0	0	0	0	0	1	3	2	0	3
HP/S/RAK	2B	RAKCHHAM CHHITKUL SANCTUARY	13844.0	0	0	0	0	0	0	0	0	0	0	0	1	0
HP/S/REN	4A	RENUKA SANCTUARY	407.5	0	0	0	0	0	0	0	2	0	0	0	0	0
HP/S/RUP	2B	RUPI BHAWA SANCTUARY	12487.0	0	0	0	0	0	0	0	2	0	1	0	0	0
HP/S/SEC	2A	SECHU TWAN NALAH SANCTUARY	10295.0	0	0	0	0	0	0	0	2	0	2	0	0	0
HP/S/SHIK	2A	SHIKARI DEVI SANCTUARY	21350.0	0	0	0	0	1	0	0	2	1	0	1	1	0
HP/S/SHIL	2B	SHILLI SANCTUARY	196.7	0	0	0	0	3	0	0	2	1	0	1	3	0
HP/S/SHIM	2B	SHIMLA WATER SUPPLY CATCHMENT SANCTUARY	1025.3	0	0	0	0	0	0	0	2	0	0	0	0	0

ANNEXURE - I C
VALUES OF PRESSURES OR THREATS ON PAs

CODE	BIOGEOGRAPHIC PROVINCE	NAME	AREA OF THE PA (Hectares)	VALUE ACCORDING TO THE AREA OCCUPIED BY	VALUE ACCORDING TO THE AREA OCCUPIED FOR	VALUE ACCORDING TO THE QUANTUM OF TOURISTS	VALUE ACCORDING TO THE AREA USED FOR MINING	VALUE ACCORDING TO THE AREA USED FOR QUARRYING	VALUE ACCORDING TO THE AREA USED FOR PLANTATIONS	VALUE FOR OCCURRENCE OF TRANSMISSION LINES	VALUE FOR OCCURRENCE OF ROADS/ HIGHWAYS	VALUE ACCORDING TO AREA OCCUPIED FOR HABITATION	VALUE ACCORDING TO THE DENSITY OF POPULATION INSIDE THE PA	VALUE ACCORDING TO THE AREA OCCUPIED FOR CULTIVATION	VALUE ACCORDING TO THE AREA USED FOR RELIGIOUS YATRA/ RELIGIOUS MONUMENTS	VALUE ACCORDING TO THE AREA USED FOR FISHING
HP/S/SIM	4A	SIMBALBARA SANCTUARY	1925.6	0	0	0	0	0	0	0	2	0	0	0	0	0
HP/S/TAL	2B	TALRA SANCTUARY	2610.0	0	0	0	0	0	0	0	2	0	3	0	0	0
HP/S/TIR	2A	TIRTHAN SANCTUARY	14000.0	0	0	0	0	1	0	0	0	1	0	1	1	0
HP/S/TUN	2A	TUNDAH SANCTUARY	6422.1	0	0	3	0	0	0	0	0	1	3	1	1	0
J&K/N/DAC	2A	DACHIGAM NATIONAL PARK	14100.0	0	0	3	0	0	1	2	0	0	0	0	0	1
J&K/N/HEM	1A	HEMIS HIGH ALTITUDE NATIONAL	60000.0	0	0	0	0	0	0	0	0	0	0	0	0	0
J&K/N/KIS	2A	KISHTWAR NATIONAL PARK	31000.0	0	0	0	0	0	0	0	0	1	1	0	1	0
J&K/S/CHA	1A	CHANGTHANG SANCTUARY	40000.0	0	0	0	0	0	0	2	0	1	0	0	0	0
J&K/S/JAS	4A	JASROTA SANCTUARY	912.8	0	0	0	0	0	0	2	2	1	1	0	0	0
J&K/S/KAR	1A	KARAKORAM SANCTUARY	500000.0	1	0	0	0	0	0	2	0	1	0	1	0	0
J&K/S/LUN	1A	LUNGNAG SANCTUARY	40000.0	0	0	0	0	0	0	0	0	0	0	0	0	0
J&K/S/NAN	2A	NANDINI SANCTUARY	1349.8	0	0	0	0	0	0	0	2	1	1	0	0	0
J&K/S/OVE	2A	OVERA SANCTUARY	3237.0	0	0	0	0	0	0	2	0	0	1	0	0	0
J&K/S/RAM	2A	RAMNAGAR SANCTUARY	1130.0	0	0	0	0	0	0	2	2	0	1	0	1	0
J&K/S/SUR	2A	SURINSAR MANSAR SANCTUARY	3912.0	0	1	0	0	0	0	0	2	0	1	1	0	0
KAR/N/BAN	5B	BANDIPUR NATIONAL PARK	86573.0	0	0	0	0	0	0	0	2	0	0	0	0	0
KAR/N/BANN	6A	BANNERGHATTA NATIONAL PARK	10434.8	0	0	3	0	0	0	2	2	0	0	0	1	0
KAR/N/NAG	5B	NAGARHOLE NATIONAL PARK	57155.0	0	1	3	0	0	0	0	2	0	0	0	0	0
KAR/S/ADI	6A	ADICHUNCHANAGIRI SANCTUARY	84.4	0	0	3	0	0	0	2	2	0	1	0	0	0
KAR/S/BHA	5B	BHADRA SANCTUARY	49039.2	0	0	3	0	0	0	0	2	1	1	1	0	0
KAR/S/BIL	6A	BILIGIRI RANGASWAMY TEMPLE SANCTUARY	32440.0	0	0	0	0	0	0	2	2	0	0	0	1	0
KAR/S/BLA	6A	BLACK BUCK SANCTUARY (RANEBENNUR)	11900.0	0	0	3	0	0	0	2	2	0	3	0	0	0
KAR/S/BRA	5B	BRAHMAGIRI SANCTUARY	18129.0	0	0	0	0	0	0	0	0	0	0	0	1	0
KAR/S/DAN	5B	DANDELI SANCTUARY	83400.0	3	1	3	0	1	0	2	2	0	3	0	1	1

ANNEXURE - I C
VALUES OF PRESSURES OR THREATS ON PAs

CODE	BIOGEOGRAPHIC PROVINCE	NAME	AREA OF THE PA (Hectares)	VALUE ACCORDING TO THE AREA OCCUPIED BY	VALUE ACCORDING TO THE AREA OCCUPIED FOR	VALUE ACCORDING TO THE QUANTUM OF TOURISTS	VALUE ACCORDING TO THE AREA USED FOR MINING	VALUE ACCORDING TO THE AREA USED FOR QUARRYING	VALUE ACCORDING TO THE AREA USED FOR PLANTATIONS	VALUE FOR OCCURRENCE OF TRANSMISSION LINES	VALUE FOR OCCURRENCE OF ROADS/ HIGHWAYS	VALUE ACCORDING TO AREA OCCUPIED FOR HABITATION	VALUE ACCORDING TO THE DENSITY OF POPULATION INSIDE THE PA	VALUE ACCORDING TO THE AREA OCCUPIED FOR CULTIVATION	VALUE ACCORDING TO THE AREA USED FOR RELIGIOUS YATRA/ RELIGIOUS MONUMENTS	VALUE ACCORDING TO THE AREA USED FOR FISHING
KAR/S/GHA	6A	GHATAPRABHA SANCTUARY	2978.5	0	0	0	0	0	0	0	0	0	0	0	0	0
KAR/S/MEL	6A	MELKOTE SANCTUARY	4982.0	0	0	0	0	0	0	0	2	0	0	0	0	0
KAR/S/MOO	5A	MOOKAMBIKA SANCTUARY	24679.8	0	0	0	0	0	0	2	2	1	2	2	1	0
KAR/S/NUG	5B	NUGU SANCTUARY	3032.0	0	0	0	0	0	0	2	2	0	0	0	0	1
KAR/S/RANG	6A	RANGANITHITTU SANCTUARY	26.7	0	0	3	0	0	0	0	0	0	0	0	0	0
KAR/S/SHA	5B	SHARAVATHI VALLEY SANCTUARY	43133.0	3	0	0	0	0	0	2	2	1	2	2	0	1
KAR/S/SHE	5B	SHETTIHALLY SANCTUARY	39560.0	1	0	0	0	0	0	2	2	1	2	0	1	0
KAR/S/SOM	5B	SOMESHWARA SANCTUARY	8840.0	0	0	0	0	0	0	2	2	0	3	1	1	0
KER/N/ERA	5B	ERAVIKULAM NATIONAL PARK	10400.0	0	0	2	0	0	0	0	0	0	0	0	0	0
KER/N/PER	5B	PERIYAR NATIONAL PARK (Including Periyar Sanctuary)	77700.0	1	1	3	0	0	0	2	2	0	1	1	1	0
KER/N/SIL	5B	SILENT VALLEY NATIONAL PARK	8951.7	0	0	0	0	0	0	0	0	0	0	0	0	0
KER/S/ARA	5B	ARALAM SANCTUARY	5500.0	0	0	0	0	0	1	0	0	0	0	0	0	0
KER/S/CHIM	5B	CHIMONY SANCTUARY	7500.0	1	0	0	0	0	0	0	0	0	1	0	0	0
KER/S/CHIN	5B	CHINNAR SANCTUARY	9044.2	0	0	0	0	0	0	0	2	0	1	0	0	0
KER/S/IDU	5B	IDUKKI SANCTUARY	7000.0	3	0	0	0	0	0	0	0	0	0	0	0	0
KER/S/NEY	5B	NEYYAR SANCTUARY	12800.0	3	0	3	0	0	0	0	0	1	0	1	1	3
KER/S/PEE	5B	PEECHI-VAZHANI SANCTUARY	8365.0	3	0	0	0	0	0	0	2	0	0	0	0	0
KER/S/PEP	5B	PEPPARA SANCTUARY	5300.0	0	0	3	0	0	0	0	0	1	1	0	0	0
KER/S/PER	5B	PERAMBIKULAM SANCTUARY	27100.0	0	0	3	0	0	1	0	2	0	1	0	0	0
KER/S/SHE	5B	SHENDURUNY SANCTUARY	10032.0	0	0	0	0	0	0	0	0	0	1	0	0	0
KER/S/THA	5B	THATTEKKAD SANCTUARY	2516.0	0	0	0	0	0	0	0	2	0	0	0	0	0
KER/S/WYN	5B	WYNAD SANCTUARY	34444.1	0	0	3	0	0	0	2	2	0	0	1	0	0
MAH/N/NAW	6B	NAWEGAON NATIONAL PARK	133.9	0	0	0	0	0	3	0	2	0	3	0	0	0
MAH/N/PEN	6E	PENCH NATIONAL PARK	25723.7	1	0	3	0	0	0	0	2	0	3	0	0	0
MAH/N/SAN	5A	SANJAY GANDHI NATIONAL PARK	9469.9	0	0	3	0	0	0	2	0	0	1	0	0	0

ANNEXURE - I C
VALUES OF PRESSURES OR THREATS ON PAs

CODE	BIOGEOGRAPHIC PROVINCE	NAME	AREA OF THE PA (Hectares)	VALUE ACCORDING TO THE AREA OCCUPIED BY	VALUE ACCORDING TO THE AREA OCCUPIED FOR	VALUE ACCORDING TO THE QUANTUM OF TOURISTS	VALUE ACCORDING TO THE AREA USED FOR MINING	VALUE ACCORDING TO THE AREA USED FOR QUARRYING	VALUE ACCORDING TO THE AREA USED FOR PLANTATIONS	VALUE FOR OCCURRENCE OF TRANSMISSION LINES	VALUE FOR OCCURRENCE OF ROADS/ HIGHWAYS	VALUE ACCORDING TO AREA OCCUPIED FOR HABITATION	VALUE ACCORDING TO THE DENSITY OF POPULATION INSIDE THE PA	VALUE ACCORDING TO THE AREA OCCUPIED FOR CULTIVATION	VALUE ACCORDING TO THE AREA USED FOR RELIGIOUS YATRA/ RELIGIOUS MONUMENTS	VALUE ACCORDING TO THE AREA USED FOR FISHING
MAH/N/TAD	6B	TADOBA NATIONAL PARK	11654.9	0	0	0	0	0	0	0	2	0	0	0	1	0
MAH/S/BHI	5B	BHIMASHANKAR SANCTUARY	13078.0	0	1	0	0	0	0	0	2	0	1	0	1	0
MAH/S/BOR	6E	BOR SANCTUARY	61.1	1	0	0	0	0	0	0	2	0	3	0	0	3
MAH/S/DEU	6B	DEULGAON SANCTUARY	217.3	0	0	0	0	0	0	0	2	0	0	0	0	0
MAH/S/GRE	6B	GREAT INDIAN BUSTARD SANCTUARY	781847.0	2	0	0	0	0	0	2	2	1	2	3	1	2
MAH/S/KAL	5B	KALSUBAI HARICHANDRAGAD SANCTUARY	36181.0	0	0	0	0	0	0	0	0	0	0	0	1	0
MAH/S/MEL	6E	MELGHAT SANCTUARY	159723.0	0	0	3	0	0	0	0	2	0	0	0	0	0
MAH/S/NAG	6B	NAGZIRA SANCTUARY	15281.0	0	0	3	0	0	0	0	0	0	3	0	0	0
MAH/S/NAN	6B	NANDUR MADHMESHWAR SANCTUARY	10012.7	0	0	0	0	0	0	0	2	0	0	0	0	0
MAH/S/PAI	6B	PAINGANGA SANCTUARY	32462.0	0	0	0	0	0	0	0	2	0	3	0	0	0
MAH/S/PHA	10A	PHANSAD SANCTUARY	5387.0	2	0	0	0	0	0	0	2	0	0	0	0	0
MAH/S/RAD	5B	RADHANAGARI BISON SANCTUARY	35116.0	0	0	3	0	0	0	0	0	0	0	0	0	0
MAH/S/TAN	5B	TANSA SANCTUARY	21675.0	0	0	3	0	0	0	0	2	0	3	0	0	0
MAH/S/YAW	6E	YAWAL SANCTUARY	177520.0	0	0	0	0	0	0	0	2	0	1	1	0	0
MAN/N/KEI	8B	KEIBUL LAMJAO NATIONAL PARK	4000.0	0	0	3	0	0	0	0	0	0	0	0	0	0
MAN/N/SIR	8B	SIROY NATIONAL PARK	4130.0	0	0	3	0	0	0	0	0	0	0	0	0	0
MEG/S/SIJ	8B	SIJU SANCTUARY	518.0	0	0	2	0	0	0	0	0	0	0	0	0	0
MIZ/S/DAM	8B	DAMPA SANCTUARY	68100.0	0	0	0	0	0	0	2	2	0	0	0	0	0
MP/N/BAN	6E	BANDHAVGARH NATIONAL PARK	44884.0	0	0	3	0	0	0	0	2	0	1	0	1	0
MP/N/FOS	6E	FOSSIL NATIONAL PARK	27.4	0	0	0	0	0	0	0	0	0	0	3	0	0
MP/N/IND	6C	INDRAVATI NATIONAL PARK	125837.2	0	0	3	0	0	0	0	2	1	0	1	0	0
MP/N/KAN	6E	KANHA NATIONAL PARK	93994.0	0	0	3	0	0	0	0	2	0	1	0	1	0
MP/N/KANG	6C	KANGER GHATI NATIONAL PARK	20000.0	0	0	0	0	0	0	0	2	0	0	0	0	0
MP/N/MAD	4B	MADHAV NATIONAL PARK	15600.0	1	0	0	0	0	0	0	2	0	0	0	0	2

ANNEXURE - I C
VALUES OF PRESSURES OR THREATS ON PAs

CODE	BIOGEOGRAPHIC PROVINCE	NAME	AREA OF THE PA (Hectares)	VALUE ACCORDING TO THE AREA OCCUPIED BY	VALUE ACCORDING TO THE AREA OCCUPIED FOR	VALUE ACCORDING TO THE QUANTUM OF TOURISTS	VALUE ACCORDING TO THE AREA USED FOR MINING	VALUE ACCORDING TO THE AREA USED FOR QUARRYING	VALUE ACCORDING TO THE AREA USED FOR PLANTATIONS	VALUE FOR OCCURRENCE OF TRANSMISSION LINES	VALUE FOR OCCURRENCE OF ROADS/ HIGHWAYS	VALUE ACCORDING TO AREA OCCUPIED FOR HABITATION	VALUE ACCORDING TO THE DENSITY OF POPULATION INSIDE THE PA	VALUE ACCORDING TO THE AREA OCCUPIED FOR CULTIVATION	VALUE ACCORDING TO THE AREA USED FOR RELIGIOUS YATRA/ RELIGIOUS MONUMENTS	VALUE ACCORDING TO THE AREA USED FOR FISHING
MP/N/PAN	6E	PANNA NATIONAL PARK	54300.0	1	0	0	0	0	0	0	2	2	1	2	0	2
MP/N/PEN	6E	PENCH NATIONAL PARK (Including Pench Sanctuary)	41133.0	2	0	2	0	0	0	0	2	0	0	0	0	0
MP/N/SAN	6E	SANJAY NATIONAL PARK	193800.0	1	0	0	0	0	0	2	2	1	1	1	0	0
MP/N/SAT	6E	SATPURA NATIONAL PARK	52400.0	0	0	3	0	0	0	0	2	1	1	0	2	0
MP/N/VAN	6E	VAN VIHAR NATIONAL PARK	445.2	0	0	0	0	0	0	0	2	0	0	0	0	0
MP/S/ACH	6C	ACHANKMAR SANCTUARY	55155.2	0	0	3	0	0	0	0	2	0	1	1	0	0
MP/S/BAD	6D	BADALKHOL SANCTUARY	10445.4	0	0	0	0	0	0	0	2	1	3	1	0	0
MP/S/BAG	6E	BAGDARA SANCTUARY	47800.0	0	0	0	0	0	0	0	2	0	2	3	0	0
MP/S/BAR	6C	BARNAWAPARA SANCTUARY	24466.0	1	0	3	0	0	0	0	2	1	1	3	0	0
MP/S/BHA	6C	BHAIRAMGARH WILD BUFFALO SANCTUARY	13895.0	0	0	0	0	0	0	0	0	1	1	1	0	0
MP/S/BOR	6E	BORI SANCTUARY	48572.2	0	0	2	0	0	0	0	0	1	1	1	0	0
MP/S/GAN	4B	GANDHISAGAR SANCTUARY	22098.6	1	0	0	0	0	0	2	2	0	1	0	0	2
MP/S/GHA	4B	GHATIGAON GREAT INDIAN BUSTARD SANCTUARY	51200.0	0	0	3	0	2	0	0	2	0	3	0	0	0
MP/S/GOM	6C	GOMARDA SANCTUARY	27782.0	0	0	2	0	0	0	0	2	0	1	0	0	0
MP/S/KAR	4B	KARERA GREAT INDIAN BUSTARD SANCTUARY	20221.0	1	0	0	0	0	0	0	2	0	1	1	1	1
MP/S/KEN	6E	KEN GHARIYAL SANCTUARY	4500.0	1	0	0	0	0	0	0	0	0	0	0	0	0
MP/S/KHE	6E	KHEONI SANCTUARY	12270.0	0	0	2	0	0	0	0	0	0	3	0	0	0
MP/S/NAR	4B	NARSINGARH SANCTUARY	5919.0	0	0	3	0	0	0	0	2	0	1	0	0	0
MP/S/NAT	4B	NATIONAL CHAMBAL SANCTUARY	42300.0	0	0	3	0	0	0	0	2	0	0	0	0	3
MP/S/NAU	6E	NAURADEHI SANCTUARY	118696.1	0	0	0	0	0	0	0	2	0	1	0	0	0
MP/S/PAC	6E	PACHMARHI SANCTUARY	47216.0	0	0	3	0	0	0	2	2	1	2	2	2	0

ANNEXURE - I C
VALUES OF PRESSURES OR THREATS ON PAs

CODE	BIOGEOGRAPHIC PROVINCE	NAME	AREA OF THE PA (Hectares)	VALUE ACCORDING TO THE AREA OCCUPIED BY	VALUE ACCORDING TO THE AREA OCCUPIED FOR	VALUE ACCORDING TO THE QUANTUM OF TOURISTS	VALUE ACCORDING TO THE AREA USED FOR MINING	VALUE ACCORDING TO THE AREA USED FOR QUARRYING	VALUE ACCORDING TO THE AREA USED FOR PLANTATIONS	VALUE FOR OCCURRENCE OF TRANSMISSION LINES	VALUE FOR OCCURRENCE OF ROADS/ HIGHWAYS	VALUE ACCORDING TO AREA OCCUPIED FOR HABITATION	VALUE ACCORDING TO THE DENSITY OF POPULATION INSIDE THE PA	VALUE ACCORDING TO THE AREA OCCUPIED FOR CULTIVATION	VALUE ACCORDING TO THE AREA USED FOR RELIGIOUS YATRA/ RELIGIOUS MONUMENTS	VALUE ACCORDING TO THE AREA USED FOR FISHING
MP/S/PAL	4B	PALPUR KUND SANCTUARY	34468.6	0	0	2	0	0	0	0	0	0	1	0	0	0
MP/S/PAM	6C	PAMED SANCTUARY	26212.0	0	0	0	0	0	0	0	2	0	0	0	0	0
MP/S/PAN	6E	PANPATHA SANCTUARY	245.8	1	0	0	0	0	0	2	2	1	3	1	0	0
MP/S/PHE	6E	PHEN SANCTUARY	11074.0	0	0	0	0	0	0	0	2	1	1	0	0	0
MP/S/RAT	6E	RATAPANI SANCTUARY	66580.0	0	0	3	0	0	0	2	2	0	1	0	0	0
MP/S/SAI	4B	SAILANA SANCTUARY	1296.5	0	0	3	0	0	0	0	2	0	0	0	0	0
MP/S/SAN	6E	SANJAY (DUBRI) SANCTUARY	364593.0	1	0	3	0	3	0	0	0	3	1	3	1	0
MP/S/SAR	4B	SARDARPUR SANCTUARY	34812.0	0	0	0	0	0	0	0	2	1	2	3	0	0
MP/S/SEM	6D	SEMARSOT SANCTUARY	43036.1	1	0	0	0	0	0	2	2	0	1	0	0	0
MP/S/SING	6E	SINGHORI SANCTUARY	28791.0	1	0	0	0	0	0	0	2	0	1	2	0	0
MP/S/SIT	6C	SITANADI SANCTUARY	55380.0	1	0	2	0	0	0	0	2	0	1	1	0	0
MP/S/SON	6E	SON GHARYAL SANCTUARY	20291.0	1	0	0	0	0	0	2	2	0	0	0	0	0
MP/S/TAM	6D	TAMOR PINGLA SANCTUARY	60852.0	0	0	0	0	0	0	0	0	0	1	0	0	0
MP/S/UDA	6C	UDANTI SANCTUARY	24759.0	0	0	3	0	0	0	0	2	0	1	0	0	0
NAG/S/INT	8B	INTANKI SANCTUARY	20220.0	0	0	0	0	0	1	0	0	0	0	0	0	0
ORI/N/SIM	6D	SIMLIPAL NATIONAL PARK (Including Similipal Sanctuary)	250300.0	0	0	3	0	1	1	0	0	1	1	1	1	1
ORI/S/BAI	6C	BAISIPALLI SANCTUARY	16641.0	0	0	0	0	0	0	0	2	0	3	0	0	0
ORI/S/BAL	10B	BALUKHAND-KONARK SANCTUARY	7172.0	0	0	0	0	0	0	2	2	0	0	0	0	0
ORI/S/BHI	10B	BHITARKANIKA SANCTUARY	65000.0	1	0	3	0	0	0	0	2	1	3	3	1	3
ORI/S/CHA	6C	CHANDAKA-DAMPADA SANCTUARY	22000.0	1	0	0	3	0	1	0	0	0	1	0	0	0
ORI/S/HAD	6D	HADGARH SANCTUARY	19160.0	0	0	3	1	1	0	0	0	1	1	0	0	3
ORI/S/NAN	6D	NANDANKANAN SANCTUARY	1426.0	0	0	3	0	1	0	0	0	0	0	0	0	3
ORI/S/SAT	6C	SATKOSIA GORGE SANCTUARY	79552.0	0	0	3	0	0	1	2	2	2	3	1	0	2
PUN/S/ABO	4A	ABOHAR	18600.0	0	0	0	0	0	0	0	2	1		3	0	0
PUN/S/BIRG	4A	BIR GURDIAL PURA	610.0	0	0	0	0	0	0	0	0	0	0	0	0	0
PUN/S/BIRM	4A	BIR MOTIBAGH	640.0	0	0	3	0	0	0	0	0	0	0	0	1	0
PUN/S/BUN	4A	BIR BUNERHERI	650.0	0	0	0	0	0	0	0	0	0	0	0	0	0
PUN/S/HAR	4A	HARIKE LAKE	8600.0	1	0	3	0	0	1	0	0	0	0	0	1	1

ANNEXURE - I C
VALUES OF PRESSURES OR THREATS ON PAs

CODE	BIOGEOGRAPHIC PROVINCE	NAME	AREA OF THE PA (Hectares)	VALUE ACCORDING TO THE AREA OCCUPIED BY	VALUE ACCORDING TO THE AREA OCCUPIED FOR	VALUE ACCORDING TO THE QUANTUM OF TOURISTS	VALUE ACCORDING TO THE AREA USED FOR MINING	VALUE ACCORDING TO THE AREA USED FOR QUARRYING	VALUE ACCORDING TO THE AREA USED FOR PLANTATIONS	VALUE FOR OCCURRENCE OF TRANSMISSION LINES	VALUE FOR OCCURRENCE OF ROADS/ HIGHWAYS	VALUE ACCORDING TO AREA OCCUPIED FOR HABITATION	VALUE ACCORDING TO THE DENSITY OF POPULATION INSIDE THE PA	VALUE ACCORDING TO THE AREA OCCUPIED FOR CULTIVATION	VALUE ACCORDING TO THE AREA USED FOR RELIGIOUS YATRA/ RELIGIOUS MONUMENTS	VALUE ACCORDING TO THE AREA USED FOR FISHING
RAJ/N/DES	3B	DESERT NATIONAL PARK	316200.0	0	0	3	0	0	0	0	2	0	0	0	0	0
RAJ/N/KEO	4A	KEOLADEO GHANA NATIONAL PARK	2873.0	0	1	3	0	0	1	0	0	0	0	0	0	0
RAJ/N/RAN	4B	RANTHAMBHORE NATIONAL PARK	39200.0	1	0	0	0	0	0	0	0	1	1	0	0	0
RAJ/N/SAR	4B	SARISKA NATIONAL PARK (Including Sariska Sanctuary)	76580.0	0	1	3	0	1	0	2	2	1	1	2	1	0
RAJ/S/BHE	4B	BHENSRODGARH SANCTUARY	22914.0	0	0	0	0	0	1	2	2	0	3	0	0	0
RAJ/S/DAR	4B	DARAH SANCTUARY	26583.0	0	0	0	0	0	1	2	2	0	1	0	1	0
RAJ/S/JAI	4B	JAISAMAND SANCTUARY	5200.0	1	1	2	1	0	1	2	2	0	0	1	1	1
RAJ/S/JAM	4B	JAMVA-RAMGARH SANCTUARY	30000.0	0	0	0	1	0	1	0	2	0	0	0	0	0
RAJ/S/JAW	4B	JAWAHAR SAGAR SANCTUARY	10000.0	3	0	0	0	0	0	0	0	1	0	1	0	0
RAJ/S/KAI	4B	KAILA DEVI SANCTUARY	67638.0	1	0	0	0	0	0	2	2	0	0	0	0	0
RAJ/S/KUM	4B	KUMBALGARH SANCTUARY	57825.9	0	0	2	0	0	1	2	2	0	1	0	1	0
RAJ/S/MOU	4B	MOUNT ABU SANCTUARY	28884.0	0	0	0	0	0	0	0	2	0	2	0	1	0
RAJ/S/NAH	4B	NAHARGARH SANCTUARY	5000.0	0	0	0	0	0	0	0	2	0	0	0	0	0
RAJ/S/NAT	4B	NATIONAL CHAMBAL SANCTUARY	28000.0	0	0	0	0	0	0	0	0	2	0	3	1	3
RAJ/S/PHU	4B	PHULWARI SANCTUARY	51141.0	0	0	0	0	0	1	0	2	0	2	0	0	0
RAJ/S/RAM	4B	RAMGARH SANCTUARY	30700.0	1	0	0	1	0	1	2	2			2	1	0
RAJ/S/SHE	4B	SHERGARH	9871.0	0	0	0	0	1	0	0	0	1	3	1	0	0
RAJ/S/SIT	4B	SITAMATA SANCTUARY	42294.0	1	0	0	0	0	0	0	2	0	1	1	1	0
RAJ/S/TAL	3B	TAL CHHAPER SANCTUARY	710.0	3	0	2	3	3	0	0	0	3	0	3	0	3
RAJ/S/TOD	4B	TODGARH-RAOLI SANCTUARY	49527.0	0	0	0	0	1	1	0	2	0	0	0	0	0
RAJ/S/VAN	4B	VAN BIHAR SANCTUARY	5993.0	0	0	3	0	0	1	0	2	0	0	0	0	0
SIK/N/KHA	2C	KHANGCHENDZONGA NATIONAL PARK	85000.0	0	0	0	0	0	1	0	0	0	0	0	0	0

ANNEXURE - I C
VALUES OF PRESSURES OR THREATS ON PAs

CODE	BIOGEOGRAPHIC PROVINCE	NAME	AREA OF THE PA (Hectares)	VALUE ACCORDING TO THE AREA OCCUPIED BY	VALUE ACCORDING TO THE AREA OCCUPIED FOR	VALUE ACCORDING TO THE QUANTUM OF TOURISTS	VALUE ACCORDING TO THE AREA USED FOR MINING	VALUE ACCORDING TO THE AREA USED FOR QUARRYING	VALUE ACCORDING TO THE AREA USED FOR PLANTATIONS	VALUE FOR OCCURRENCE OF TRANSMISSION LINES	VALUE FOR OCCURRENCE OF ROADS/ HIGHWAYS	VALUE ACCORDING TO AREA OCCUPIED FOR HABITATION	VALUE ACCORDING TO THE DENSITY OF POPULATION INSIDE THE PA	VALUE ACCORDING TO THE AREA OCCUPIED FOR CULTIVATION	VALUE ACCORDING TO THE AREA USED FOR RELIGIOUS YATRA/ RELIGIOUS MONUMENTS	VALUE ACCORDING TO THE AREA USED FOR FISHING
SIK/S/FAM	2C	FAMBUNG LHO SANCTUARY	1500.0	0	0	0	0	0	0	0	0	0	0	0	0	0
TN/N/GUI	6A	GUINDY NATIONAL PARK	270.6	0	1	3	0	0	0	0	2	0	0	0	0	0
TN/S/ANA	5B	ANAMALAIS SANCTUARY	84149.0	1	0	3	0	0	1	0	2	0	1	1	1	0
TN/S/KAL	5B	KALAKAD MUNDANTHURAI TIGER RESERVE	79058.0	1	0	3	0	1	1	2	2	1	1	0	1	0
TN/S/MUD	5B	MUDUMALAI SANCTUARY	32100.0	0	1	3	0	0	0	2	2	0	1	0	0	0
TN/S/NIL	5B	NILGIRI TAHR (Mukurthy) SANCTUARY	7846.0	0	1	3	0	0	0	0	0	0		0	0	0
TN/S/POI	10B	POINT CALIMERE SANCTUARY	1728.8	0	0	3	0	0	0	0	2	0	3	0	0	0
TN/S/PUL	10B	PULICAT SANCTUARY	46102.0	0	0	0	0	0	0	0	0	0	0	0	0	0
TN/S/VED	6A	VEDANTHANGAL SANCTUARY	29.5	0	0	3	0	0	0	0	2	0	0	0	0	0
UP/N/COR	7A	CORBETT NATIONAL PARK	52082.0	1	0	3	0	0	0	0	0	0	0	0	0	0
UP/N/DUD	7A	DUDHWA NATIONAL PARK	49029.2	0	0	3	0	0	1	0	2	0	1	0	0	0
UP/N/NAN	2B	NANDA DEVI NATIONAL PARK	63033.0	0	0	0	0	0	0	0	0	0	0	0	0	0
UP/N/RAJ	7A	RAJAJI NATIONAL PARK (Data aggregated for Chilla, Motichur and Rajaji Sanctuaries)	58696.3	1	0	3	0	0	0	2	2	3	1	0	0	0
UP/N/VAL	2B	VALLEY OF FLOWERS NATIONAL PARK	8750.0	0	0	3	0	0	0	0	0	0	0	0	0	0
UP/S/CHA	6E	CHANDRAPRABHA SANCTUARY	9600.0	0	1	0	0	0	1	0	0	0	1	1	0	0
UP/S/GOV	2B	GOVIND PASHUVIHAR SANCTUARY	95312.0	0	0	3	0	1	1	0	2	0	1	0	0	0
UP/S/KAI	6E	KAIMUR SANCTUARY	50074.7	1	0	0	1	1	0	0	0	1	1	1	0	0
UP/S/KAT	7A	KATERNIAGHAT SANCTUARY	40000.0	0	0	0	0	0	1	0	2	0	1	1	0	0
UP/S/KED	2B	KEDARNATH SANCTUARY	96725.5	0	0	0	0	3	0	0	0	0	1	0	0	0

ANNEXURE - I C
VALUES OF PRESSURES OR THREATS ON PAs

CODE	BIOGEOGRAPHIC PROVINCE	NAME	AREA OF THE PA (Hectares)	VALUE ACCORDING TO THE AREA OCCUPIED BY	VALUE ACCORDING TO THE AREA OCCUPIED FOR	VALUE ACCORDING TO THE QUANTUM OF TOURISTS	VALUE ACCORDING TO THE AREA USED FOR MINING	VALUE ACCORDING TO THE AREA USED FOR QUARRYING	VALUE ACCORDING TO THE AREA USED FOR PLANTATIONS	VALUE FOR OCCURRENCE OF TRANSMISSION LINES	VALUE FOR OCCURRENCE OF ROADS/ HIGHWAYS	VALUE ACCORDING TO AREA OCCUPIED FOR HABITATION	VALUE ACCORDING TO THE DENSITY OF POPULATION INSIDE THE PA	VALUE ACCORDING TO THE AREA OCCUPIED FOR CULTIVATION	VALUE ACCORDING TO THE AREA USED FOR RELIGIOUS YATRA/ RELIGIOUS MONUMENTS	VALUE ACCORDING TO THE AREA USED FOR FISHING
UP/S/KIS	7A	KISHANPUR SANCTUARY	20021.9	1	0	0	0	0	1	0	2	1	1	0	0	0
UP/S/MAH	6E	MAHAVIR SANCTUARY	541.1	0	1	0	0	0	0	2	2	0	0	0	1	0
UP/S/NAT	4B	NATIONAL CHAMBAL SANCTUARY	63500.0	0	0	0	0	3	1	0	2	0	0	3	0	0
UP/S/NAW	7A	NAWABGANJ SANCTUARY	224.6	0	1	0	0	0	0	0	2	0	0	0	0	0
UP/S/RAN	6E	RANIPUR SANCTUARY	23031.0	0	0	0		1	1	0	2	1	1	1	0	0
WB/N/SUN	10B	SUNDERBANS NATIONAL PARK	133010.0	0	0	0	0	0	0	0	0	0	0	0	0	0
WB/S/BAL	7B	BALLAVPUR SANCTUARY	202.0	0	0	3	0	0	2	0	0	0	3	0	0	0
WB/S/JAL	7B	JALDAPARA SANCTUARY	11600.0	0	1	3	0	0	0	0	0	0	3	0	0	0
WB/S/LOT	10B	LOTHIAN ISLAND SANCTUARY	3800.0	0	0	0	0	0	0	0	0	0	0	0	0	0
WB/S/RAM	7B	RAMNABAGAN SANCTUARY	14.5	0	0	3	0	0	0	0	0	0	0	0	0	0
WB/S/SAJ	10B	SAJNAKHALI SANCTUARY	36236.0	0	0	0	0	0	0	0	0	0	0	0	0	0
WB/S/SEN	2C	SENCHAL SANCTUARY	3860.0	0	1	0	1	0	0	0	2	0	0	0	0	0

Annexure 1 C contd...

CODE	BIOGEOGRAPHIC PROVINCE	NAME	VALUE ACCORDING TO THE AREA USED FOR TIMBER EXTRACTION	VALUE ACCORDING TO THE AREA USED FOR FUELWOOD EXTRACTION	VALUE ACCORDING TO THE AREA USED FOR NWFP EXTRACTION	VALUE ACCORDING TO THE AREA USED FOR FODDER EXTRACTION	VALUE ACCORDING TO THE AREA USED FOR GRAZING	VALUE ACCORDING TO DENSITY OF CATTLE UNITS GRAZING IN THE PA	VALUE ACCORDING TO THE AREA AFFECTED BY FOREST FIRES	VALUE ACCORDING TO THE AREA AFFECTED BY OCCURRENCE OF WEEDS	TOTAL VALUE OF PRESSURES OR THREATS
AP/S/COR	10B	CORINGA SANCTUARY	0	1	0	0	3	1	0		8.00
AP/S/ETU	6B	ETURNAGARAM SANCTUARY	1	0	3	0	3	1	1		22.00
AP/S/KAW	6B	KAWAL SANCTUARY	1	0	3	0	3	1	0		14.00
AP/S/KIN	6B	KINNERASANI SANCTUARY	0	0	0	0	1	1	0		8.00
AP/S/KOL	6B	KOLLERU SANCTUARY	0	0	0	0	3		0	2	14.00
AP/S/MAN	6B	MANJIRA SANCTUARY	0	0	0	0	1	3	0		6.00
AP/S/NAG	6A	NAGARJUNA SAGAR SRISAILAM TIGER RESERVE	1	0	3	1	3		1	2	16.00
AP/S/NEL	6A	NELAPATTU SANCTUARY	0	0	0	0	0		0		3.00
AP/S/PAK	6B	PAKHAL SANCTUARY	1	0	3	0	3	3	1		23.00
AP/S/PAP	6C	PAPIKONDA SANCTUARY	1	0	3	0	3	1	0		13.00
AP/S/POC	6B	POCHARAM SANCTUARY	0	0	3	0	3	1	1	2	12.00
AP/S/PRA	6B	PRANHITA	1	0	3	0	3	3	0		16.00
AP/S/PUL	10B	PULICAT SANCTUARY	0	0	0	0	0		0		5.00
AP/S/SIW	6B	SIWARAM SANCTUARY	0	0	3	0	3	1	0		10.00
ARU/N/NAM	2D	NAMDAPHA NATIONAL PARK	0	0	0	0	0		0		4.00
ARU/S/ITA	2D	ITANAGAR SANCTUARY	1	1	0	0	0		0		4.00
ARU/S/LAL	2D	LALI SANCTUARY	0	1	0	0	0		1	2	4.00
ARU/S/MEH	2D	MEHAO SANCTUARY	0	0	0	1	1	2	1		11.00
ARU/S/PAK	2D	PAKHUI SANCTUARY	1	1	3	0	1		0		12.00
ASS/N/KAZ	8A	KAZIRANGA NATIONAL PARK	0	0	0	0	0		0		6.00
ASS/S/BAR	8A	BARNADI SANCTUARY	0	0	0	0	0		0		1.00
ASS/S/LAO	8A	LAOKHAWA SANCTUARY	0	0	0	0	1		0		6.00
ASS/S/MAN	8A	MANAS TIGER RESERVE	1	3	1	0	1		0		13.00
BIH/S/BHI	6D	BHIMBANDH SANCTUARY	1	1	0	0	1	1	0		10.00
BIH/S/DAL	6D	DALMA SANCTUARY	1	0	0	0	1	1	1		15.00
BIH/S/GAU	6D	GAUTAM BUDDHA SANCTUARY	1	3	0	1	3	1	0		16.00
BIH/S/HAZ	6D	HAZARIBAGH SANCTUARY	1	3	3	0	3	3	0	2	23.00
BIH/S/LAW	6D	LAWALONG SANCTUARY	1	1	3	1	3	3	0		18.00

ANNEXURE - I C
VALUES OF PRESSURES OR THREATS ON PAs

Annexure 1 C contd...

CODE	BIOGEOGRAPHIC PROVINCE	NAME	VALUE ACCORDING TO THE AREA USED FOR TIMBER EXTRACTION	VALUE ACCORDING TO THE AREA USED FOR FUELWOOD EXTRACTION	VALUE ACCORDING TO THE AREA USED FOR NWFP EXTRACTION	VALUE ACCORDING TO THE AREA USED FOR FODDER EXTRACTION	VALUE ACCORDING TO THE AREA USED FOR GRAZING	VALUE ACCORDING TO DENSITY OF CATTLE UNITS GRAZING IN THE PA	VALUE ACCORDING TO THE AREA AFFECTED BY FOREST FIRES	VALUE ACCORDING TO THE AREA AFFECTED BY OCCURRENCE OF WEEDS	TOTAL VALUE OF PRESSURES OR THREATS
BIH/S/PAL	6D	PALAMAU SANCTUARY	1	0	1	1	3		1		15.00
BIH/S/RAJ	6D	RAJGIR SANCTUARY	0	0	0	1	1	3	0		9.00
BIH/S/TOP	6D	TOPCHANCHI SANCTUARY	0	0	0	0	1	1	0		11.00
BIH/S/VAL	7B	VALMIKI SANCTUARY	3	3	0	1	3	1	3		21.00
CHA/S/SUK	4A	SUKHNA SANCTUARY	0	0	0	1	0		1	2	7.00
GOA/N/BHA	5B	BHAGWAN MAHAVIR NATIONAL PARK (Including Bhagwan mahavir Sanctuary)	1	0	0	0	1	1	0		6.00
GOA/S/BON	5B	BONDLA SANCTUARY	0	0	0	0	1	1	0		8.00
GOA/S/COT	5B	COTIGAO SANCTUARY	0	0	0	0	1	1	0	2	7.00
GUJ/N/BAN	5B	BANSDA NATIONAL PARK	0	0	0	0	1	1	1		7.00
GUJ/N/GIR	4B	GIR NATIONAL PARK	0	0	0	0	1	1	1		13.00
GUJ/N/MAR	10A	MARINE NATIONAL PARK	0	0	0	0	1	1	0		9.00
GUJ/N/VEL	4B	VELAVADAR NATIONAL PARK	0	0	0	0	1	1	3	2	15.00
GUJ/S/BAR	4B	BARDA SANCTUARY	0	0	0	0	3	1	0	2	13.00
GUJ/S/DHR	3A	DHRANGADHRA WILD ASS SANCTUARY	0	3	3	1	3	1	1		17.00
GUJ/S/DUM	4B	DUMKHAL SLOTH BEAR SANCTUARY	1	0	0	1	1	3	1		11.00
GUJ/S/HIN	4B	HINGOLGARH SANCTUARY	0	0	0	0	0		0		2.00
GUJ/S/JES	4B	JESSORE SANCTUARY	0	3	1	1	1	3	1		13.00
GUJ/S/KHI	4B	KHIJADAYA SANCTUARY	0	0	0	0	1	1	0		5.00
GUJ/S/NAL	4B	NAL SAROVAR SANCTUARY	0	0	1	1	1	1	0		10.00
GUJ/S/NAR	3A	NARAYAN SAROVAR SANCTUARY	0	0	0	1	3	3	0	2	20.00
GUJ/S/RAT	4B	RATANMAHAL SANCTUARY	0	3	3	1	3	1	1		18.00
HAR/N/SUL	4A	SULTANPUR NATIONAL PARK	0	0	0	1	1	1	0		9.00
HAR/S/BHI	4A	BHINDAWAS SANCTUARY								3	9.00
HAR/S/SAR	4A	SARASWATI PLANTATION SANCTUARY									0.00

Annexure 1 C contd...

CODE	BIOGEOGRAPHIC PROVINCE	NAME	VALUE ACCORDING TO THE AREA USED FOR TIMBER EXTRACTION	VALUE ACCORDING TO THE AREA USED FOR FUELWOOD EXTRACTION	VALUE ACCORDING TO THE AREA USED FOR NWFP EXTRACTION	VALUE ACCORDING TO THE AREA USED FOR FODDER EXTRACTION	VALUE ACCORDING TO THE AREA USED FOR GRAZING	VALUE ACCORDING TO DENSITY OF CATTLE UNITS GRAZING IN THE PA	VALUE ACCORDING TO THE AREA AFFECTED BY FOREST FIRES	VALUE ACCORDING TO THE AREA AFFECTED BY OCCURRENCE OF WEEDS	TOTAL VALUE OF PRESSURES OR THREATS
HP/N/GRE	2A	GREAT HIMALAYAN NATIONAL PARK	1	1	0	0	1	1	0		7.00
HP/N/PIN	1A	PIN VALLEY NATIONAL PARK	0	0	0	0	3		0		7.00
HP/S/BAN	2A	BANDLI SANCTUARY	1	1	3	0	3		1		12.00
HP/S/CHA	2B	CHAIL SANCTUARY	3	3	3	1	3	1	1		23.00
HP/S/DAR	2B	DARANGHATI SANCTUARY	3	3	3	1	3	1	0		20.00
HP/S/DARL	2B	DARLAGHAT SANCTUARY	3	3	3	1	3		0		21.00
HP/S/GAM	2A	GAMGUL SIAHBEHI SANCTUARY	3	3	3	1	3	3	1		29.00
HP/S/GOB	2B	GOBIND SAGAR SANCTUARY	0	0	0	1	0		0		6.00
HP/S/KAI	2A	KAIS SANCTUARY	1	0	1	0	1		0		5.00
HP/S/KAL	2A	KALATOP KHAJJIAR SANCTUARY	3	3	0	1	3	1	0		22.00
HP/S/KAN	2A	KANAWER SANCTUARY	3	3	3	0	3	1	1		28.00
HP/S/KHO	2A	KHOKHAN SANCTUARY	3	3	3	0	3		0		17.00
HP/S/KUG	2A	KUGTI SANCTUARY	2	2	3	1	3	1	0		19.00
HP/S/LIP	2B	LIPPA ASRANG SANCTUARY	3	3	3	1	3	3	0		20.00
HP/S/MAJ	2B	MAJATHAL	3	3	3	1	3		1		22.00
HP/S/MAN	2A	MANALI SANCTUARY	3	3	3	0	3		0		18.00
HP/S/NAI	2B	NAINA DEVI SANCTUARY	1	0	0	1	1	1	1	2	9.00
HP/S/NAR	2A	NARGU SANCTUARY	3	1	1	0	3		0		14.00
HP/S/PON	2A	PONG LAKE SANCTUARY	1	2	0	1	2	3	0		18.00
HP/S/RAK	2B	RAKCHHAM CHHITKUL SANCTUARY	1	1	0	1	1	3	0		8.00
HP/S/REN	4A	RENUKA SANCTUARY	0	0	0	0	1	3	0	2	8.00
HP/S/RUP	2B	RUPI BHAWA SANCTUARY	0	0	0	1	1	3	1		9.00
HP/S/SEC	2A	SECHU TWAN NALAH SANCTUARY	1	0	3	0	3	3	1	2	17.00
HP/S/SHIK	2A	SHIKARI DEVI SANCTUARY	1	1	3	0	3	1	0		15.00
HP/S/SHIL	2B	SHILLI SANCTUARY	1	3	3	1	3		0		21.00
HP/S/SHIM	2B	SHIMLA WATER SUPPLY CATCHMENT SANCTUARY	1	0	0	1	0		1		5.00

Annexure 1 C contd...

CODE	BIOGEOGRAPHIC PROVINCE	NAME	VALUE ACCORDING TO THE AREA USED FOR TIMBER EXTRACTION	VALUE ACCORDING TO THE AREA USED FOR FUELWOOD EXTRACTION	VALUE ACCORDING TO THE AREA USED FOR NWFP EXTRACTION	VALUE ACCORDING TO THE AREA USED FOR FODDER EXTRACTION	VALUE ACCORDING TO THE AREA USED FOR GRAZING	VALUE ACCORDING TO DENSITY OF CATTLE UNITS GRAZING IN THE PA	VALUE ACCORDING TO THE AREA AFFECTED BY FOREST FIRES	VALUE ACCORDING TO THE AREA AFFECTED BY OCCURRENCE OF WEEDS	TOTAL VALUE OF PRESSURES OR THREATS
HP/S/SIM	4A	SIMBALBARA SANCTUARY	0	0	0	0	1	1	1		5.00
HP/S/TAL	2B	TALRA SANCTUARY	1	3	3	1	3	3	0		19.00
HP/S/TIR	2A	TIRTHAN SANCTUARY	1	0	0	0	1	1	0		7.00
HP/S/TUN	2A	TUNDAH SANCTUARY	3	3	3	1	3	3	1		26.00
J&K/N/DAC	2A	DACHIGAM NATIONAL PARK	0	0	0	1	1		1		10.00
J&K/N/HEM	1A	HEMIS HIGH ALTITUDE NATIONAL	0	3	0	0	3		0		6.00
J&K/N/KIS	2A	KISHTWAR NATIONAL PARK	1	1	0	3	1		0		9.00
J&K/S/CHA	1A	CHANGTHANG SANCTUARY	0	1	0	0	1		0		5.00
J&K/S/JAS	4A	JASROTA SANCTUARY	0	0	0	1	1		0		8.00
J&K/S/KAR	1A	KARAKORAM SANCTUARY	0	1	0	0	1		0		7.00
J&K/S/LUN	1A	LUNGNAG SANCTUARY	0	0	0	0	3		0		3.00
J&K/S/NAN	2A	NANDINI SANCTUARY	1	0	0	1	1		1		8.00
J&K/S/OVE	2A	OVERA SANCTUARY	0	0	3	0	2		0		8.00
J&K/S/RAM	2A	RAMNAGAR SANCTUARY	0	0	0	0	1		0		7.00
J&K/S/SUR	2A	SURINSAR MANSAR SANCTUARY	0	1	1	0	1		0		8.00
KAR/N/BAN	5B	BANDIPUR NATIONAL PARK	0		0	0	0		0	2	4.00
KAR/N/BANN	6A	BANNERGHATTA NATIONAL PARK	0	0	0	0	1	1	1	2	13.00
KAR/N/NAG	5B	NAGARHOLE NATIONAL PARK	0	0	0	0	1	1	1		9.00
KAR/S/ADI	6A	ADICHUNCHANAGIRI SANCTUARY	0	0	0	0	0		1	2	11.00
KAR/S/BHA	5B	BHADRA SANCTUARY	1	0	0	0	1	1	0		11.00
KAR/S/BIL	6A	BILIGIRI RANGASWAMY TEMPLE SANCTUARY	0	0	0	0	0		0	2	7.00
KAR/S/BLA	6A	BLACK BUCK SANCTUARY (RANEBENNUR)	0	0	0	0	3	3	0		16.00
KAR/S/BRA	5B	BRAHMAGIRI SANCTUARY	0	0	0	0	0		0	2	3.00
KAR/S/DAN	5B	DANDELI SANCTUARY	1	0	0	0	3	3	1	2	27.00

Annexure 1 C contd...

CODE	BIOGEOGRAPHIC PROVINCE	NAME	VALUE ACCORDING TO THE AREA USED FOR TIMBER EXTRACTION	VALUE ACCORDING TO THE AREA USED FOR FUELWOOD EXTRACTION	VALUE ACCORDING TO THE AREA USED FOR NWFP EXTRACTION	VALUE ACCORDING TO THE AREA USED FOR FODDER EXTRACTION	VALUE ACCORDING TO THE AREA USED FOR GRAZING	VALUE ACCORDING TO DENSITY OF CATTLE UNITS GRAZING IN THE PA	VALUE ACCORDING TO THE AREA AFFECTED BY FOREST FIRES	VALUE ACCORDING TO THE AREA AFFECTED BY OCCURRENCE OF WEEDS	TOTAL VALUE OF PRESSURES OR THREATS
KAR/S/GHA	6A	GHATAPRABHA SANCTUARY	0	0	0	0	0		0		0.00
KAR/S/MEL	6A	MELKOTE SANCTUARY	0	0	0	0	0		0		2.00
KAR/S/MOO	5A	MOOKAMBIKA SANCTUARY	1	0	0	1	1	1	0		14.00
KAR/S/NUG	5B	NUGU SANCTUARY	0	0	0	0	0		0	2	7.00
KAR/S/RANG	6A	RANGANITHITTU SANCTUARY	0	0	0	0	0		0		3.00
KAR/S/SHA	5B	SHARAVATHI VALLEY SANCTUARY	1		0	1	3	1	0		19.00
KAR/S/SHE	5B	SHETTIHALLY SANCTUARY	1	0	0	1	1	3	0		15.00
KAR/S/SOM	5B	SOMESHWARA SANCTUARY	0	0	0	1	3	1	0		14.00
KER/N/ERA	5B	ERAVIKULAM NATIONAL PARK	0		0	0	0		1		3.00
KER/N/PER	5B	PERIYAR NATIONAL PARK (Including Periyar Sanctuary)	0		0	0	1	1	1	2	17.00
KER/N/SIL	5B	SILENT VALLEY NATIONAL PARK	0	0	0	0	0		0		0.00
KER/S/ARA	5B	ARALAM SANCTUARY	0	0	0	0	0		1		2.00
KER/S/CHIM	5B	CHIMONY SANCTUARY	0		3	0	1	1	0		7.00
KER/S/CHIN	5B	CHINNAR SANCTUARY	0	0	0	0	0		0		3.00
KER/S/IDU	5B	IDUKKI SANCTUARY	0	0	0	0	0		0		3.00
KER/S/NEY	5B	NEYYAR SANCTUARY	0	3	0	0	1		1	2	19.00
KER/S/PEE	5B	PEECHI-VAZHANI SANCTUARY	0	0	0	0	0		0		5.00
KER/S/PEP	5B	PEPPARA SANCTUARY	0	1	1	0	0		0		7.00
KER/S/PER	5B	PERAMBIKULAM SANCTUARY	1	0	0	0	1	1	0	2	12.00
KER/S/SHE	5B	SHENDURUNY SANCTUARY	0	0	1	0	0		2	2	6.00
KER/S/THA	5B	THATTEKKAD SANCTUARY	0	0	0	0	0		0		2.00
KER/S/WYN	5B	WYNAD SANCTUARY	1	1	3	0	1	1	0		15.00
MAH/N/NAW	6B	NAWEGAON NATIONAL PARK	1	0	3	0	3		1	2	18.00
MAH/N/PEN	6E	PENCH NATIONAL PARK	1	0	0	0	1	1	1		13.00
MAH/N/SAN	5A	SANJAY GANDHI NATIONAL PARK	0	0	0	0	1	1	1		9.00

ANNEXURE - I C
VALUES OF PRESSURES OR THREATS ON PAs

Annexure 1 C contd...

CODE	BIOGEOGRAPHIC PROVINCE	NAME	VALUE ACCORDING TO THE AREA USED FOR TIMBER EXTRACTION	VALUE ACCORDING TO THE AREA USED FOR FUELWOOD EXTRACTION	VALUE ACCORDING TO THE AREA USED FOR NWFP EXTRACTION	VALUE ACCORDING TO THE AREA USED FOR FODDER EXTRACTION	VALUE ACCORDING TO THE AREA USED FOR GRAZING	VALUE ACCORDING TO DENSITY OF CATTLE UNITS GRAZING IN THE PA	VALUE ACCORDING TO THE AREA AFFECTED BY FOREST FIRES	VALUE ACCORDING TO THE AREA AFFECTED BY OCCURRENCE OF WEEDS	TOTAL VALUE OF PRESSURES OR THREATS
MAH/N/TAD	6B	TADOBA NATIONAL PARK	0	0	3	0	0		1		7.00
MAH/S/BHI	5B	BHIMASHANKAR SANCTUARY	0	1	0	1	1		0		8.00
MAH/S/BOR	6E	BOR SANCTUARY	1	0	0	0	3		1	2	16.00
MAH/S/DEU	6B	DEULGAON SANCTUARY	0	0	0	0	0		1		3.00
MAH/S/GRE	6B	GREAT INDIAN BUSTARD SANCTUARY	0	0	0	1	1	1	0		18.00
MAH/S/KAL	5B	KALSUBAI HARICHANDRAGAD SANCTUARY	0	0	0	1	3		0		5.00
MAH/S/MEL	6E	MELGHAT SANCTUARY	1	0	0	1	1	1	1	2	12.00
MAH/S/NAG	6B	NAGZIRA SANCTUARY	1	0	0	0	0		1	2	10.00
MAH/S/NAN	6B	NANDUR MADHMESHWAR SANCTUARY	0	0	0	0	0		0		2.00
MAH/S/PAI	6B	PAINGANGA SANCTUARY	1	0	0	0	1	1	1		9.00
MAH/S/PHA	10A	PHANSAD SANCTUARY	0	0	0	0	1		0		5.00
MAH/S/RAD	5B	RADHANAGARI BISON SANCTUARY	0	0	0	0	0		0		3.00
MAH/S/TAN	5B	TANSA SANCTUARY	1	0	3	1	3	1	1		18.00
MAH/S/YAW	6E	YAWAL SANCTUARY	1	1	0	0	1		1		8.00
MAN/N/KEI	8B	KEIBUL LAMJAO NATIONAL PARK	0	0	0	0	1	3	1		8.00
MAN/N/SIR	8B	SIROY NATIONAL PARK	0	0	0	0	0		0		3.00
MEG/S/SIJ	8B	SIJU SANCTUARY	0	0	0	0	0		0		2.00
MIZ/S/DAM	8B	DAMPA SANCTUARY	0	0	0	0	0		0		4.00
MP/N/BAN	6E	BANDHAVGARH NATIONAL PARK	1	0	0	0	1	1	1		11.00
MP/N/FOS	6E	FOSSIL NATIONAL PARK	0	0	0	0	0		0		3.00
MP/N/IND	6C	INDRAVATI NATIONAL PARK	1	0	0	0	1	1	0		10.00
MP/N/KAN	6E	KANHA NATIONAL PARK	0	0	0	0	0		1	2	10.00
MP/N/KANG	6C	KANGER GHATI NATIONAL PARK	0	0	0	1	0		0		3.00
MP/N/MAD	4B	MADHAV NATIONAL PARK	0	0	0	1	0		1		7.00

ANNEXURE - I C
VALUES OF PRESSURES OR THREATS ON PAs

Annexure 1 C contd...

CODE	BIOGEOGRAPHIC PROVINCE	NAME	VALUE ACCORDING TO THE AREA USED FOR TIMBER EXTRACTION	VALUE ACCORDING TO THE AREA USED FOR FUELWOOD EXTRACTION	VALUE ACCORDING TO THE AREA USED FOR NWFP EXTRACTION	VALUE ACCORDING TO THE AREA USED FOR FODDER EXTRACTION	VALUE ACCORDING TO THE AREA USED FOR GRAZING	VALUE ACCORDING TO DENSITY OF CATTLE UNITS GRAZING IN THE PA	VALUE ACCORDING TO THE AREA AFFECTED BY FOREST FIRES	VALUE ACCORDING TO THE AREA AFFECTED BY OCCURRENCE OF WEEDS	TOTAL VALUE OF PRESSURES OR THREATS
MP/N/PAN	6E	PANNA NATIONAL PARK	1	3	0	1	3		0	2	20.00
MP/N/PEN	6E	PENCH NATIONAL PARK (Including Pench Sanctuary)	0	1	0	0	2	1	1		11.00
MP/N/SAN	6E	SANJAY NATIONAL PARK	0	1	0	0	1		0		10.00
MP/N/SAT	6E	SATPURA NATIONAL PARK	0	3	3	0	3	1	1	2	22.00
MP/N/VAN	6E	VAN VIHAR NATIONAL PARK	0	0	0	0	0		0	2	4.00
MP/S/ACH	6C	ACHANKMAR SANCTUARY	1	0	0	0	1	1	1		11.00
MP/S/BAD	6D	BADALKHOL SANCTUARY	1	1	0	0	1	3	1		14.00
MP/S/BAG	6E	BAGDARA SANCTUARY	0	3	0	0	3	3	0		16.00
MP/S/BAR	6C	BARNAWAPARA SANCTUARY	1	1	0	0	1	1	1		16.00
MP/S/BHA	6C	BHAIRAMGARH WILD BUFFALO SANCTUARY	0	0	0	0	1		0		4.00
MP/S/BOR	6E	BORI SANCTUARY	1		0	1	1	1	1	2	12.00
MP/S/GAN	4B	GANDHISAGAR SANCTUARY	1	0	0	1	1		1		12.00
MP/S/GHA	4B	GHATIGAON GREAT INDIAN BUSTARD SANCTUARY	0	0	0	0	3	1	0	2	16.00
MP/S/GOM	6C	GOMARDA SANCTUARY	1	3	3	0	3	3	0		18.00
MP/S/KAR	4B	KARERA GREAT INDIAN BUSTARD SANCTUARY	0	0	0	1	3	3	0		14.00
MP/S/KEN	6E	KEN GHARIYAL SANCTUARY	0	0	0	0	1	3	1		6.00
MP/S/KHE	6E	KHEONI SANCTUARY	1	1	0	1	1	1	1		11.00
MP/S/NAR	4B	NARSINGARH SANCTUARY	0	0	0	1	2	3	1		13.00
MP/S/NAT	4B	NATIONAL CHAMBAL SANCTUARY	0	0	0	0	0		0		8.00
MP/S/NAU	6E	NAURADEHI SANCTUARY	0	0	3	0	3	1	1		11.00
MP/S/PAC	6E	PACHMARHI SANCTUARY	0	3	3	1	3	3	1	2	30.00

Annexure 1 C contd...

CODE	BIOGEOGRAPHIC PROVINCE	NAME	VALUE ACCORDING TO THE AREA USED FOR TIMBER EXTRACTION	VALUE ACCORDING TO THE AREA USED FOR FUELWOOD EXTRACTION	VALUE ACCORDING TO THE AREA USED FOR NWFP EXTRACTION	VALUE ACCORDING TO THE AREA USED FOR FODDER EXTRACTION	VALUE ACCORDING TO THE AREA USED FOR GRAZING	VALUE ACCORDING TO DENSITY OF CATTLE UNITS GRAZING IN THE PA	VALUE ACCORDING TO THE AREA AFFECTED BY FOREST FIRES	VALUE ACCORDING TO THE AREA AFFECTED BY OCCURRENCE OF WEEDS	TOTAL VALUE OF PRESSURES OR THREATS
MP/S/PAL	4B	PALPUR KUND SANCTUARY	3	3	3	1	3	1	1		18.00
MP/S/PAM	6C	PAMED SANCTUARY	0	0	0	0	0		0		2.00
MP/S/PAN	6E	PANPATHA SANCTUARY	0	0	0	0	3	3	1		17.00
MP/S/PHE	6E	PHEN SANCTUARY	1	1	0	1	1	1	1		10.00
MP/S/RAT	6E	RATAPANI SANCTUARY	1	0	0	0	1	1	1		12.00
MP/S/SAI	4B	SAILANA SANCTUARY	0	3	0	1	3	3	0		15.00
MP/S/SAN	6E	SANJAY (DUBRI) SANCTUARY	1	3	3	0	3	1	1		27.00
MP/S/SAR	4B	SARDARPUR SANCTUARY	0	0	0	1	3		0		12.00
MP/S/SEM	6D	SEMARSOT SANCTUARY	1	1	3	0	3	3	1	2	20.00
MP/S/SING	6E	SINGHORI SANCTUARY	1	0	0	0	1	1	1		10.00
MP/S/SIT	6C	SITANADI SANCTUARY	1	1	0	1	1	1	1		13.00
MP/S/SON	6E	SON GHARYAL SANCTUARY	0	0	0	0	0		0		5.00
MP/S/TAM	6D	TAMORE PINGLA SANCTUARY	1	1	3	0	3	1	0	2	12.00
MP/S/UDA	6C	UDANTI SANCTUARY	1	0	0	0	1	1	0		9.00
NAG/S/INT	8B	INTANKI SANCTUARY	0	0	0	0	0		0		1.00
ORI/N/SIM	6D	SIMLIPAL NATIONAL PARK (Including Similipal Sanctuary)	1	1	1	0	1	1	1	2	18.00
ORI/S/BAI	6C	BAISIPALLI SANCTUARY	0	0	0	0	0		0		5.00
ORI/S/BAL	10B	BALUKHAND-KONARK SANCTUARY	0	1	0	0	1	1	0		7.00
ORI/S/BHI	10B	BHITARKANIKA SANCTUARY	0	0	0	0	1	1	0		19.00
ORI/S/CHA	6C	CHANDAKA-DAMPADA SANCTUARY	0	0	0	0	1		0	2	9.00
ORI/S/HAD	6D	HADGARH SANCTUARY	1	1	1	0	1	1	3		18.00
ORI/S/NAN	6D	NANDANKANAN SANCTUARY	0	1	1	0	1	1	0	2	13.00
ORI/S/SAT	6C	SATKOSIA GORGE SANCTUARY	3	3	3	1	1	1	3		31.00
PUN/S/ABO	4A	ABOHAR	0	0	0	1	1		0		8.00
PUN/S/BIRG	4A	BIR GURDIAL PURA	1	1	1	0	1		0		4.00
PUN/S/BIRM	4A	BIR MOTIBAGH	1	0	0	0	0		0		5.00
PUN/S/BUN	4A	BIR BUNERHERI	1	0	1	0	1		0		3.00
PUN/S/HAR	4A	HARIKE LAKE	0	0	0	0	0		0		7.00

ANNEXURE - I C
VALUES OF PRESSURES OR THREATS ON PAs

Annexure 1 C contd...

CODE	BIOGEOGRAPHIC PROVINCE	NAME	VALUE ACCORDING TO THE AREA USED FOR TIMBER EXTRACTION	VALUE ACCORDING TO THE AREA USED FOR FUELWOOD EXTRACTION	VALUE ACCORDING TO THE AREA USED FOR NWFP EXTRACTION	VALUE ACCORDING TO THE AREA USED FOR FODDER EXTRACTION	VALUE ACCORDING TO THE AREA USED FOR GRAZING	VALUE ACCORDING TO DENSITY OF CATTLE UNITS GRAZING IN THE PA	VALUE ACCORDING TO THE AREA AFFECTED BY FOREST FIRES	VALUE ACCORDING TO THE AREA AFFECTED BY OCCURRENCE OF WEEDS	TOTAL VALUE OF PRESSURES OR THREATS
RAJ/N/DES	3B	DESERT NATIONAL PARK	0	0	0	1	1	3	0		10.00
RAJ/N/KEO	4A	KEOLADEO GHANA NATIONAL PARK	0	0	0	0	1		0	2	8.00
RAJ/N/RAN	4B	RANTHAMBHORE NATIONAL PARK	0	0	0	0	3		1	2	9.00
RAJ/N/SAR	4B	SARISKA NATIONAL PARK (Including Sariska Sanctuary)	1	1	0	0	1	1	1	2	21.00
RAJ/S/BHE	4B	BHENSRODGARH SANCTUARY	0	3	0	1	3	1	0		16.00
RAJ/S/DAR	4B	DARAH SANCTUARY	0	1	1	1	1	1	0	2	14.00
RAJ/S/JAI	4B	JAISAMAND SANCTUARY	1	3	0	3	3		0	2	25.00
RAJ/S/JAM	4B	JAMVA-RAMGARH SANCTUARY	0	0	0	0	1	1	0		6.00
RAJ/S/JAW	4B	JAWAHAR SAGAR SANCTUARY	0	0	0	1	1	1	0		8.00
RAJ/S/KAI	4B	KAILA DEVI SANCTUARY	1	1	0	1	1	1	0	2	12.00
RAJ/S/KUM	4B	KUMBALGARH SANCTUARY	3	1	1	1	3		1	2	21.00
RAJ/S/MOU	4B	MOUNT ABU SANCTUARY	0	1	1	1	3	1	1	2	15.00
RAJ/S/NAH	4B	NAHARGARH SANCTUARY	0	0	0	0	0		0		2.00
RAJ/S/NAT	4B	NATIONAL CHAMBAL SANCTUARY	0	1	0	1	1		0		12.00
RAJ/S/PHU	4B	PHULWARI SANCTUARY	1	0	0	1	1	1	0		9.00
RAJ/S/RAM	4B	RAMGARH SANCTUARY	0	3	0	0	3	3	1		20.00
RAJ/S/SHE	4B	SHERGARH	0	1	0	0	3	1	0		11.00
RAJ/S/SIT	4B	SITAMATA SANCTUARY	3	3	0	1	3	1	1	2	20.00
RAJ/S/TAL	3B	TAL CHHAPER SANCTUARY	0	0	0	1	0		0	2	23.00
RAJ/S/TOD	4B	TODGARH-RAOLI SANCTUARY	3	3	1	3	3	1	0		18.00
RAJ/S/VAN	4B	VAN BIHAR SANCTUARY	0	0	0	0	1		0		7.00
SIK/N/KHA	2C	KHANGCHENDZONGA NATIONAL PARK	0	0	0	0	1		0		2.00

ANNEXURE - I C
VALUES OF PRESSURES OR THREATS ON PAs

Annexure 1 C contd...

CODE	BIOGEOGRAPHIC PROVINCE	NAME	VALUE ACCORDING TO THE AREA USED FOR TIMBER EXTRACTION	VALUE ACCORDING TO THE AREA USED FOR FUELWOOD EXTRACTION	VALUE ACCORDING TO THE AREA USED FOR NWFP EXTRACTION	VALUE ACCORDING TO THE AREA USED FOR FODDER EXTRACTION	VALUE ACCORDING TO THE AREA USED FOR GRAZING	VALUE ACCORDING TO DENSITY OF CATTLE UNITS GRAZING IN THE PA	VALUE ACCORDING TO THE AREA AFFECTED BY FOREST FIRES	VALUE ACCORDING TO THE AREA AFFECTED BY OCCURRENCE OF WEEDS	TOTAL VALUE OF PRESSURES OR THREATS
SIK/S/FAM	2C	FAMBUNG LHO SANCTUARY	1	0	0	0	1	1	0		3.00
TN/N/GUI	6A	GUINDY NATIONAL PARK	0	0	1	1	0		0		8.00
TN/S/ANA	5B	ANAMALAIS SANCTUARY	1	0	1	0	3	1	1	2	19.00
TN/S/KAL	5B	KALAKAD MUNDANTHURAI TIGER RESERVE	1	0	0	0	1	1	1		17.00
TN/S/MUD	5B	MUDUMALAI SANCTUARY	0	0	0	0	1	1	1		12.00
TN/S/NIL	5B	NILGIRI TAHR (Mukurthy) SANCTUARY	0	0	0	0	0		0		4.00
TN/S/POI	10B	POINT CALIMERE SANCTUARY	0	0	0	1	1	1	0		11.00
TN/S/PUL	10B	PULICAT SANCTUARY	0	0	0	0	0		0		0.00
TN/S/VED	6A	VEDANTHANGAL SANCTUARY	0	0	0	0	0		0		5.00
UP/N/COR	7A	CORBETT NATIONAL PARK	1	1	0	0	3		1	2	12.00
UP/N/DUD	7A	DUDHWA NATIONAL PARK	0	1	0	0	1		1		10.00
UP/N/NAN	2B	NANDA DEVI NATIONAL PARK	0	0	0	0	0		1		1.00
UP/N/RAJ	7A	RAJAJI NATIONAL PARK (Data aggregated for Chilla, Motichur and Rajaji Sanctuaries)	2	2	2	0	3	1	1	2	25.00
UP/N/VAL	2B	VALLEY OF FLOWERS NATIONAL PARK	0	0	0	0	0		0	2	5.00
UP/S/CHA	6E	CHANDRAPRABHA SANCTUARY	1	0	1	0	0		1		7.00
UP/S/GOV	2B	GOVIND PASHUVIHAR SANCTUARY	1	1	1	0	1	2	1		15.00
UP/S/KAI	6E	KAIMUR SANCTUARY	1	1	1	0	1	1	0		11.00
UP/S/KAT	7A	KATERNIAGHAT SANCTUARY	1	1	1	1	1	1	1		12.00
UP/S/KED	2B	KEDARNATH SANCTUARY	1	3	3	0	1		0		12.00

ANNEXURE - I C
VALUES OF PRESSURES OR THREATS ON PAs

Annexure 1 C contd...

CODE	BIOGEOGRAPHIC PROVINCE	NAME	VALUE ACCORDING TO THE AREA USED FOR TIMBER EXTRACTION	VALUE ACCORDING TO THE AREA USED FOR FUELWOOD EXTRACTION	VALUE ACCORDING TO THE AREA USED FOR NWFP EXTRACTION	VALUE ACCORDING TO THE AREA USED FOR FODDER EXTRACTION	VALUE ACCORDING TO THE AREA USED FOR GRAZING	VALUE ACCORDING TO DENSITY OF CATTLE UNITS GRAZING IN THE PA	VALUE ACCORDING TO THE AREA AFFECTED BY FOREST FIRES	VALUE ACCORDING TO THE AREA AFFECTED BY OCCURRENCE OF WEEDS	TOTAL VALUE OF PRESSURES OR THREATS
UP/S/KIS	7A	KISHANPUR SANCTUARY	1	1	3	0	3		3		17.00
UP/S/MAH	6E	MAHAVIR SANCTUARY	0	1	1	0	1		0		9.00
UP/S/NAT	4B	NATIONAL CHAMBAL SANCTUARY	3	3	1	3	3		0		22.00
UP/S/NAW	7A	NAWABGANJ SANCTUARY	0	0	0	1	1	1	0	2	8.00
UP/S/RAN	6E	RANIPUR SANCTUARY	1	3	3	3	3	1	1		22.00
WB/N/SUN	10B	SUNDERBANS NATIONAL PARK	0	0	0	0	0		0		0.00
WB/S/BAL	7B	BALLAVPUR SANCTUARY	0	0	0	0	0		0		8.00
WB/S/JAL	7B	JALDAPARA SANCTUARY	0	0	0	0	1	1	0	2	11.00
WB/S/LOT	10B	LOTHIAN ISLAND SANCTUARY	0	0	0	0	0		0		0.00
WB/S/RAM	7B	RAMNABAGAN SANCTUARY	0	0	0	0	0		0		3.00
WB/S/SAJ	10B	SAJNAKHALI SANCTUARY	0	0	0	0	0		0		0.00
WB/S/SEN	2C	SENCHAL SANCTUARY	1	0	0	3	1	1	0		10.00
									Thirty third precentile of value of pressures		7.16
									Sixty Seventh precentile of value of pressures		13.00

ANNEXURE - I D
VALUES OF MANAGEMENT AND LEGAL STATUS OF PAs

CODE	BIOGEOGRAPHIC PROVINCE	NAME	AREA OF THE PA (Hectares)	VALUE ACCORDING TO LEGAL STATUS	VALUE ON THE BASIS OF EXISTENCE OF A MANAGEMENT PLAN	VALUE ON THE BASIS OF EXISTENCE OF A SEPARATE BUDGET	VALUE ON THE BASIS OF EXISTENCE OF ZONING	VALUE OF THE PA ACCORDING TO LEGAL AND MANAGEMENT STATUS
AP/S/COR	10B	CORINGA SANCTUARY	23570.3	3.5			1	4.50
AP/S/ETU	6B	ETURNAGARAM SANCTUARY	81259.0	3.5		1	1	5.50
AP/S/KAW	6B	KAWAL SANCTUARY	89228.0	3.5		1		4.50
AP/S/KIN	6B	KINNERASANI SANCTUARY	63540.0	3.5		1	1	5.50
AP/S/KOL	6B	KOLLERU SANCTUARY	90100.0	3.5				3.50
AP/S/MAN	6B	MANJIRA SANCTUARY	2000.0	3.5		1		4.50
AP/S/NAG	6A	NAGARJUNA SAGAR SRISAILAM TIGER RESERVE	356890.0	3.5		1	1	5.50
AP/S/NEL	6A	NELAPATTU SANCTUARY	453.0	3.5		1		4.50
AP/S/PAK	6B	PAKHAL SANCTUARY	89205.0	3.5		1	1	5.50
AP/S/PAP	6C	PAPIKONDA SANCTUARY	59068.0	3.5				3.50
AP/S/POC	6B	POCHARAM SANCTUARY	12963.6	3.5		1		4.50
AP/S/PRA	6B	PRANHITA SANCTUARY	13602.7	3.5		1		4.50
AP/S/PUL	10B	PULICAT SANCTUARY	58000.0	3.5		1		4.50
AP/S/SIW	6B	SANCTUARY	2991.7			1		1.00
ARU/N/NAM	2D	NAMDAPHA NATIONAL PARK	198523.0	7.5	1	1	1	10.50
ARU/S/ITA	2D	ITANAGAR SANCTUARY	14080.0	3.5		1		4.50
ARU/S/LAL	2D	LALI SANCTUARY	19000.0	3.5	1	1		5.50
ARU/S/MEH	2D	MEHAO SANCTUARY	28150.0	3.5		1		4.50
ARU/S/PAK	2D	PAKHUI SANCTUARY	86195.0	3.5		1		4.50
ASS/N/KAZ	8A	KAZIRANGA NATIONAL PARK	43000.0	7.0	1	1		9.00
ASS/S/BAR	8A	SANCTUARY	2600.0	3.5				3.50
ASS/S/LAO	8A	LAOKHAWA SANCTUARY	7000.0	3.5		1		4.50
ASS/S/MAN	8A	MANAS TIGER RESERVE	39100.0	3.5	1	1	1	6.50
BIH/S/BHI	6D	BHIMBANDH SANCTUARY	68190.2	3.5	1	1	1	6.50
BIH/S/DAL	6D	DALMA SANCTUARY	19322.1	3.5	1	1	1	6.50
BIH/S/GAU	6D	GAUTAM BUDDHA SANCTUARY	25950.0	3.5	1	1	1	6.50
BIH/S/HAZ	6D	HAZARIBAGH SANCTUARY	18323.0	3.5	1	1	1	6.50
BIH/S/LAW	6D	LAWALONG SANCTUARY	21103.3	3.5		1		4.50
BIH/S/PAL	6D	PALAMAU SANCTUARY	97927.0	3.5	1	1	1	6.50
BIH/S/RAJ	6D	RAJGIR SANCTUARY	3545.0	3.5	1	1	1	6.50
BIH/S/TOP	6D	TOPCHANCHI SANCTUARY	1282.0	3.5				3.50
BIH/S/VAL	7B	VALMIKI SANCTUARY	46160.0	3.5	1	1	1	6.50
CHA/S/SUK	4A	SUKHNA SANCTUARY	2542.0	4.5	1	1		6.50
GOA/N/BHA	5B	BHAGWAN MAHAVIR NATIONAL PARK (Including Bhagwan mahavir	25552.9	3.5			1	4.50
GOA/S/BON	5B	BONDLA SANCTUARY	800.0	4.5			1	5.50
GOA/S/COT	5B	COTIGAO SANCTUARY	10500.0	3.5				3.50
GUJ/N/BAN	5B	BANSDA NATIONAL PARK	2399.4	7.5	1	1		9.50
GUJ/N/GIR	4B	GIR NATIONAL PARK	141213.2	7.5		1	1	9.50
GUJ/N/MAR	10A	MARINE NATIONAL PARK	16289.0	7.5		1		8.50
GUJ/N/VEL	4B	VELAVADAR NATIONAL PARK	3408.1	7.5		1		8.50
GUJ/S/BAR	4B	BARDA SANCTUARY	18025.1	3.5	1	1		5.50
GUJ/S/DHR	3A	DHRANGADHRA WILD ASS SANCTUARY	484090.0	3.5	1	1		5.50
GUJ/S/DUM	4B	DUMKHAL SLOTH BEAR SANCTUARY	15087.2	3.5		1		4.50

ANNEXURE - I D
VALUES OF MANAGEMENT AND LEGAL STATUS OF PAs

CODE	BIOGEOGRAPHIC PROVINCE	NAME	AREA OF THE PA (Hectares)	VALUE ACCORDING TO LEGAL STATUS	VALUE ON THE BASIS OF EXISTENCE OF A MANAGEMENT PLAN	VALUE ON THE BASIS OF EXISTENCE OF A SEPARATE BUDGET	VALUE ON THE BASIS OF EXISTENCE OF ZONING	VALUE OF THE PA ACCORDING TO LEGAL AND MANAGEMENT STATUS
GUJ/S/HIN	4B	HINGOLGARH SANCTUARY	654.1	3.5				3.50
GUJ/S/JES	4B	JESSORE SANCTUARY	18066.3	3.5		1		4.50
GUJ/S/KHI	4B	KHIJADAYA SANCTUARY	604.9	3.5		1		4.50
GUJ/S/NAL	4B	NAL SAROVAR SANCTUARY	12082.2	3.5		1		4.50
GUJ/S/NAR	3A	NARAYAN SAROVAR SANCTUARY	30754.5	3.5		1		4.50
GUJ/S/RAT	4B	RATANMAHAL SANCTUARY	5565.1	3.5		1		4.50
HAR/N/SUL	4A	SULTANPUR NATIONAL PARK	117.4	4.5	1	1		6.50
HAR/S/BHI	4A	BHINDAWAS SANCTUARY	406.0	4.5	1	1		6.50
HAR/S/SAR	4A	SARASWATI PLANTATION SANCTUARY	4998.0	4.5		1		5.50
HP/N/GRE	2A	GREAT HIMALAYAN NATIONAL PARK	62000.0	3.5		1	1	5.50
HP/N/PIN	1A	PIN VALLEY NATIONAL PARK	67655.0	2.0		1	1	4.00
HP/S/BAN	2A	BANDLI SANCTUARY	3130.0	3.5				3.50
HP/S/CHA	2B	CHAIL SANCTUARY	10855.0	3.5				3.50
HP/S/DAR	2B	DARANGHATI SANCTUARY	16740.0	3.5				3.50
HP/S/DARL	2B	DARLAGHAT SANCTUARY	4432.3	3.5				3.50
HP/S/GAM	2A	GAMGUL SIAHBEHI SANCTUARY	900.8	3.5				3.50
HP/S/GOB	2B	GOBIND SAGAR SANCTUARY	10034.0	3.5				3.50
HP/S/KAI	2A	KAIS SANCTUARY	1419.0	3.5				3.50
HP/S/KAL	2A	KALATOP KHAJJIAR SANCTUARY	4728.0	3.5			1	4.50
HP/S/KAN	2A	KANAWER SANCTUARY	6070.0	3.5	1			4.50
HP/S/KHO	2A	KHOKHAN SANCTUARY	1405.0	3.5				3.50
HP/S/KUG	2A	KUGTI SANCTUARY	37886.0	3.5				3.50
HP/S/LIP	2B	LIPPA ASRANG SANCTUARY	10911.0	3.5				3.50
HP/S/MAJ	2B	MAJATHAL SANCTUARY	9206.0	3.5				3.50
HP/S/MAN	2A	MANALI SANCTUARY	3180.0	3.5				3.50
HP/S/NAI	2B	NAINA DEVI SANCTUARY	4550.0	3.5				3.50
HP/S/NAR	2A	NARGU SANCTUARY	27837.0	3.5				3.50
HP/S/PON	2A	PONG LAKE SANCTUARY	50729.0	3.5	1		1	5.50
HP/S/RAK	2B	RAKCHHAM CHHITKUL SANCTUARY	13844.0	3.5				3.50
HP/S/REN	4A	RENUKA SANCTUARY	407.5	3.5			1	4.50
HP/S/RUP	2B	RUPI BHAWA SANCTUARY	12487.0	3.5				3.50
HP/S/SEC	2A	SECHU TWAN NALAH SANCTUARY	10295.0	3.5			1	4.50
HP/S/SHIK	2A	SHIKARI DEVI SANCTUARY	21350.0	3.5	1		1	5.50
HP/S/SHIL	2B	SHILLI SANCTUARY	196.7	3.5				3.50
HP/S/SHIM	2B	SHIMLA WATER SUPPLY CATCHMENT SANCTUARY	1025.3	3.5				3.50
HP/S/SIM	4A	SIMBALBARA SANCTUARY	1925.6	3.5	1			4.50
HP/S/TAL	2B	TALRA SANCTUARY	2610.0	3.5				3.50
HP/S/TIR	2A	TIRTHAN SANCTUARY	14000.0	3.5	1			4.50
HP/S/TUN	2A	TUNDAH SANCTUARY	6422.1	3.5				3.50

ANNEXURE - I D
VALUES OF MANAGEMENT AND LEGAL STATUS OF PAs

CODE	BIOGEOGRAPHIC PROVINCE	NAME	AREA OF THE PA (Hectares)	VALUE ACCORDING TO LEGAL STATUS	VALUE ON THE BASIS OF EXISTENCE OF A MANAGEMENT PLAN	VALUE ON THE BASIS OF EXISTENCE OF A SEPARATE BUDGET	VALUE ON THE BASIS OF EXISTENCE OF ZONING	VALUE OF THE PA ACCORDING TO LEGAL AND MANAGEMENT STATUS
J&K/N/DAC	2A	DACHIGAM NATIONAL PARK	14100.0	7.5	1		1	9.50
J&K/N/HEM	1A	HEMIS HIGH ALTITUDE NATIONAL PARK	60000.0	7.5	1	1		9.50
J&K/N/KIS	2A	KISHTWAR NATIONAL PARK	31000.0	2.0	1	1	1	5.00
J&K/S/CHA	1A	CHANGTHANG SANCTUARY	40000.0					0.00
J&K/S/JAS	4A	JASROTA SANCTUARY	912.8	3.5	1	1		5.50
J&K/S/KAR	1A	KARAKORAM SANCTUARY	500000.0					0.00
J&K/S/LUN	1A	SANCTUARY	40000.0					0.00
J&K/S/NAN	2A	NANDINI SANCTUARY	1349.8	3.5	1	1	1	6.50
J&K/S/OVE	2A	OVERA SANCTUARY	3237.0	3.5	1	1	1	6.50
J&K/S/RAM	2A	RAMNAGAR SANCTUARY	1130.0	3.5	1			4.50
J&K/S/SUR	2A	SURINSAR MANSAR SANCTUARY	3912.0	3.5				3.50
KAR/N/BAN	5B	BANDIPUR NATIONAL PARK	86573.0	2.5	1	1	1	5.50
KAR/N/BANN	6A	BANNERGHATTA NATIONAL PARK	10434.8	2.0	1	1		4.00
KAR/N/NAG	5B	NAGARHOLE NATIONAL PARK	57155.0	7.5	1	1	1	10.50
KAR/S/ADI	6A	ADICHUNCHANAGIRI SANCTUARY	84.4	3.5				3.50
KAR/S/BHA	5B	BHADRA SANCTUARY	49039.2	3.5		1	1	5.50
KAR/S/BIL	6A	BILIGIRI RANGASWAMY TEMPLE SANCTUARY	32440.0	4.0				4.00
KAR/S/BLA	6A	BLACK BUCK SANCTUARY (RANEBENNUR)	11900.0	3.5		1	1	5.50
KAR/S/BRA	5B	BRAHMAGIRI SANCTUARY	18129.0	4.0				4.00
KAR/S/DAN	5B	DANDELI SANCTUARY	83400.0	3.5		1		4.50
KAR/S/GHA	6A	GHATAPRABHA SANCTUARY	2978.5	3.5				3.50
KAR/S/MEL	6A	MELKOTE SANCTUARY	4982.0	3.5				3.50
KAR/S/MOO	5A	MOOKAMBIKA SANCTUARY	24679.8	3.5		1	1	5.50
KAR/S/NUG	5B	NUGU SANCTUARY	3032.0	3.5				3.50
KAR/S/RANG	6A	RANGANITHITTU SANCTUARY	26.7	3.5				3.50
KAR/S/SHA	5B	SHARAVATHI VALLEY SANCTUARY	43133.0	3.5		1	1	5.50
KAR/S/SHE	5B	SHETTIHALLY SANCTUARY	39560.0	3.5		1	1	5.50
KAR/S/SOM	5B	SOMESHWARA SANCTUARY	8840.0	3.5		1	1	5.50
KER/N/ERA	5B	ERAVIKULAM NATIONAL PARK	10400.0	7.5		1		8.50
KER/N/PER	5B	PERIYAR NATIONAL PARK (Including Periyar Sanctuary)	77700.0	3.5	1	1	1	6.50
KER/N/SIL	5B	SILENT VALLEY NATIONAL PARK	8951.7	2.5				2.50
KER/S/ARA	5B	ARALAM SANCTUARY	5500.0					0.00
KER/S/CHIM	5B	SANCTUARY	7500.0	3.5				3.50
KER/S/CHIN	5B	SANCTUARY	9044.2	3.5				3.50
KER/S/IDU	5B	IDUKKI SANCTUARY	7000.0	3.5		1		4.50
KER/S/NEY	5B	NEYYAR SANCTUARY	12800.0	3.5	1	1		5.50
KER/S/PEE	5B	PEECHI-VAZHANI SANCTUARY	8365.0	3.5				3.50
KER/S/PEP	5B	PEPPARA SANCTUARY	5300.0	3.5				3.50
KER/S/PER	5B	PERAMBIKULAM SANCTUARY	27100.0	3.5		1		4.50
KER/S/SHE	5B	SHENDURUNY SANCTUARY	10032.0	3.5		1		4.50

ANNEXURE - I D
VALUES OF MANAGEMENT AND LEGAL STATUS OF PAs

CODE	BIOGEOGRAPHIC PROVINCE	NAME	AREA OF THE PA (Hectares)	VALUE ACCORDING TO LEGAL STATUS	VALUE ON THE BASIS OF EXISTENCE OF A MANAGEMENT PLAN	VALUE ON THE BASIS OF EXISTENCE OF A SEPARATE BUDGET	VALUE ON THE BASIS OF EXISTENCE OF ZONING	VALUE OF THE PA ACCORDING TO LEGAL AND MANAGEMENT STATUS
KER/S/THA	5B	THATTEKKAD SANCTUARY	2516.0	3.5				3.50
KER/S/WYN	5B	WYNAD SANCTUARY	34444.1	3.5		1		4.50
MAH/N/NAW	6B	NAWEGAON NATIONAL PARK	133.9	3.5	1			4.50
MAH/N/PEN	6E	PENCH NATIONAL PARK	25723.7	3.5	1		1	5.50
MAH/N/SAN	5A	SANJAY GANDHI NATIONAL PARK	9469.9	2.0	1	1	1	5.00
MAH/N/TAD	6B	TADOBA NATIONAL PARK	11654.9	2.0	1	1		4.00
MAH/S/BHI	5B	BHIMASHANKAR SANCTUARY	13078.0	3.5				3.50
MAH/S/BOR	6E	BOR SANCTUARY	61.1	3.5	1	1	1	6.50
MAH/S/DEU	6B	DEULGAON SANCTUARY	217.3	4.5	1	1		6.50
MAH/S/GRE	6B	GREAT INDIAN BUSTARD SANCTUARY	781847.0	3.5	1	1		5.50
MAH/S/KAL	5B	KALSUBAI HARICHANDRAGAD SANCTUARY	36181.0	3.5	1	1		5.50
MAH/S/MEL	6E	MELGHAT SANCTUARY	159723.0	3.5	1		1	5.50
MAH/S/NAG	6B	NAGZIRA SANCTUARY	15281.0	3.5	1	1	1	6.50
MAH/S/NAN	6B	NANDUR MADHMESHWAR SANCTUARY	10012.7	3.5	1			4.50
MAH/S/PAI	6B	PAINGANGA SANCTUARY	32462.0					0.00
MAH/S/PHA	10A	SANCTUARY	5387.0	3.5		1	1	5.50
MAH/S/RAD	5B	RADHANAGARI BISON SANCTUARY	35116.0	3.5		1		4.50
MAH/S/TAN	5B	TANSA SANCTUARY	21675.0	3.5		1	1	5.50
MAH/S/YAW	6E	YAWAL SANCTUARY	177520.0	3.5		1		4.50
MAN/N/KEI	8B	KEIBUL LAMJAO NATIONAL PARK	4000.0	7.5		1		8.50
MAN/N/SIR	8B	SIROY NATIONAL PARK	4130.0	2.0	1			3.00
MEG/S/SIJ	8B	SIJU SANCTUARY	518.0	3.5	1	1		5.50
MIZ/S/DAM	8B	DAMPA SANCTUARY	68100.0	3.5				3.50
MP/N/BAN	6E	BANDHAVGARH NATIONAL PARK	44884.0	2.0	1	1	1	5.00
MP/N/FOS	6E	FOSSIL NATIONAL PARK	27.4	2.0				2.00
MP/N/IND	6C	INDRAVATI NATIONAL PARK	125837.2	3.5	1	1	1	6.50
MP/N/KAN	6E	KANHA NATIONAL PARK	93994.0	2.5	1	1		4.50
MP/N/KANG	6C	KANGER GHATI NATIONAL PARK	20000.0	7.5				7.50
MP/N/MAD	4B	MADHAV NATIONAL PARK	15600.0	7.5		1		8.50
MP/N/PAN	6E	PANNA NATIONAL PARK	54300.0	2.0		1		3.00
MP/N/PEN	6E	PENCH NATIONAL PARK (Including Pench Sanctuary)	41133.0	3.5	1	1		5.50
MP/N/SAN	6E	SANJAY NATIONAL PARK	193800.0	2.0		1		3.00
MP/N/SAT	6E	SATPURA NATIONAL PARK	52400.0	2.0		1		3.00
MP/N/VAN	6E	VAN VIHAR NATIONAL PARK	445.2	7.5		1		8.50
MP/S/ACH	6C	ACHANKMAR SANCTUARY	55155.2	4.0	1			5.00
MP/S/BAD	6D	BADALKHOL SANCTUARY	10445.4	3.5	1	1		5.50
MP/S/BAG	6E	BAGDARA SANCTUARY	47800.0	3.5	1	1	1	6.50
MP/S/BAR	6C	BARNAWAPARA SANCTUARY	24466.0	3.5	1	1		5.50

ANNEXURE - I D
VALUES OF MANAGEMENT AND LEGAL STATUS OF PAs

CODE	BIOGEOGRAPHIC PROVINCE	NAME	AREA OF THE PA (Hectares)	VALUE ACCORDING TO LEGAL STATUS	VALUE ON THE BASIS OF EXISTENCE OF A MANAGEMENT PLAN	VALUE ON THE BASIS OF EXISTENCE OF A SEPARATE BUDGET	VALUE ON THE BASIS OF EXISTENCE OF ZONING	VALUE OF THE PA ACCORDING TO LEGAL AND MANAGEMENT STATUS
MP/S/BHA	6C	BHAIRAMGARH WILD BUFFALO SANCTUARY	13895.0	3.5		1		4.50
MP/S/BOR	6E	BORI SANCTUARY	48572.2	3.5	1	1	1	6.50
MP/S/GAN	4B	GANDHISAGAR SANCTUARY	22098.6	3.5		1	1	5.50
MP/S/GHA	4B	GHATIGAON GREAT INDIAN BUSTARD SANCTUARY	51200.0	3.5		1		4.50
MP/S/GOM	6C	GOMARDA SANCTUARY	27782.0	3.5		1		4.50
MP/S/KAR	4B	KARERA GREAT INDIAN BUSTARD SANCTUARY	20221.0	3.5		1		4.50
MP/S/KEN	6E	KEN GHARIYAL SANCTUARY	4500.0	3.5		1		4.50
MP/S/KHE	6E	KHEONI SANCTUARY	12270.0	3.5		1		4.50
MP/S/NAR	4B	NARSINGARH SANCTUARY	5919.0	3.5	1	1		5.50
MP/S/NAT	4B	NATIONAL CHAMBAL SANCTUARY	42300.0	3.5		1		4.50
MP/S/NAU	6E	NAURADEHI SANCTUARY	118696.1	3.5		1		4.50
MP/S/PAC	6E	PACHMARHI SANCTUARY	47216.0	3.5	1	1		5.50
MP/S/PAL	4B	PALPUR KUND SANCTUARY	34468.6	3.5		1		4.50
MP/S/PAM	6C	PAMED SANCTUARY	26212.0	3.5		1		4.50
MP/S/PAN	6E	PANPATHA SANCTUARY	245.8	3.5				3.50
MP/S/PHE	6E	PHEN SANCTUARY	11074.0	3.5				3.50
MP/S/RAT	6E	RATAPANI SANCTUARY	66580.0	3.5	1	1	1	6.50
MP/S/SAI	4B	SAILANA SANCTUARY	1296.5	3.5		1		4.50
MP/S/SAN	6E	SANJAY (DUBRI) SANCTUARY	364593.0	3.5	1	1	1	6.50
MP/S/SAR	4B	SARDARPUR SANCTUARY	34812.0					0.00
MP/S/SEM	6D	SEMARSOT SANCTUARY	43036.1	3.5	1	1		5.50
MP/S/SING	6E	SINGHORI SANCTUARY	28791.0	3.5	1	1		5.50
MP/S/SIT	6C	SITANADI SANCTUARY	55380.0	3.5	1	1		5.50
MP/S/SON	6E	SON GHARYAL SANCTUARY	20291.0	3.5	1	1	1	6.50
MP/S/TAM	6D	TAMORE PINGLA SANCTUARY	60852.0	3.5	1	1		5.50
MP/S/UDA	6C	UDANTI SANCTUARY	24759.0	3.5		1		4.50
NAG/S/INT	8B	INTANKI SANCTUARY	20220.0	2.5	1		1	4.50
ORI/N/SIM	6D	SIMLIPAL NATIONAL PARK (Including Similipal Sanctuary)	250300.0	3.5	1	1	1	6.50
ORI/S/BAI	6C	BAISIPALLI SANCTUARY	16641.0	3.5				3.50
ORI/S/BAL	10B	BALUKHAND-KONARK SANCTUARY	7172.0					0.00
ORI/S/BHI	10B	BHITARKANIKA SANCTUARY	65000.0		1	1		2.00
ORI/S/CHA	6C	CHANDAKA-DAMPADA SANCTUARY	22000.0	3.5	1	1		5.50
ORI/S/HAD	6D	HADGARH SANCTUARY	19160.0	3.5	1			4.50
ORI/S/NAN	6D	NANDANKANAN SANCTUARY	1426.0	3.5	1	1		5.50
ORI/S/SAT	6C	SATKOSIA GORGE SANCTUARY	79552.0	3.5	1	1		5.50
PUN/S/ABO	4A	ABOHAR	18600.0					0.00
PUN/S/BIRG	4A	BIR GURDIAL PURA	610.0					0.00
PUN/S/BIRM	4A	BIR MOTIBAGH	640.0					0.00

ANNEXURE - I D
VALUES OF MANAGEMENT AND LEGAL STATUS OF PAs

CODE	BIOGEOGRAPHIC PROVINCE	NAME	AREA OF THE PA (Hectares)	VALUE ACCORDING TO LEGAL STATUS	VALUE ON THE BASIS OF EXISTENCE OF A MANAGEMENT PLAN	VALUE ON THE BASIS OF EXISTENCE OF A SEPARATE BUDGET	VALUE ON THE BASIS OF EXISTENCE OF ZONING	VALUE OF THE PA ACCORDING TO LEGAL AND MANAGEMENT STATUS
PUN/S/BUN	4A	BIR BUNERHERI	650.0					0.00
PUN/S/HAR	4A	HARIKE LAKE	8600.0					0.00
RAJ/N/DES	3B	DESERT NATIONAL PARK	316200.0	3.5		1		4.50
RAJ/N/KEO	4A	KEOLADEO GHANA NATIONAL PARK	2873.0	3.5		1		4.50
RAJ/N/RAN	4B	RANTHAMBHORE NATIONAL PARK	39200.0	7.5	1	1	1	10.50
RAJ/N/SAR	4B	SARISKA NATIONAL PARK (Including Sariska Sanctuary)	76580.0	3.5	1	1	1	6.50
RAJ/S/BHE	4B	BHENSRODGARH SANCTUARY	22914.0	3.5		1		4.50
RAJ/S/DAR	4B	DARAH SANCTUARY	26583.0	3.5				3.50
RAJ/S/JAI	4B	JAISAMAND SANCTUARY	5200.0	3.5		1		4.50
RAJ/S/JAM	4B	JAMVA-RAMGARH SANCTUARY	30000.0	3.5				3.50
RAJ/S/JAW	4B	JAWAHAR SAGAR SANCTUARY	10000.0	3.5				3.50
RAJ/S/KAI	4B	KAILA DEVI SANCTUARY	67638.0	3.5				3.50
RAJ/S/KUM	4B	KUMBALGARH SANCTUARY	57825.9	3.5		1		4.50
RAJ/S/MOU	4B	MOUNT ABU SANCTUARY	28884.0	3.5		1		4.50
RAJ/S/NAH	4B	NAHARGARH SANCTUARY	5000.0	3.5	1			4.50
RAJ/S/NAT	4B	NATIONAL CHAMBAL SANCTUARY	28000.0	3.5				3.50
RAJ/S/PHU	4B	PHULWARI SANCTUARY	51141.0	3.5				3.50
RAJ/S/RAM	4B	RAMGARH SANCTUARY	30700.0	3.5				3.50
RAJ/S/SHE	4B	SHERGARH SANCTUARY	9871.0	3.5				3.50
RAJ/S/SIT	4B	SITAMATA SANCTUARY	42294.0	3.5		1		4.50
RAJ/S/TAL	3B	TAL CHHAPER SANCTUARY	710.0	3.5		1		4.50
RAJ/S/TOD	4B	TODGARH-RAOLI SANCTUARY	49527.0	3.5		1		4.50
RAJ/S/VAN	4B	VAN BIHAR SANCTUARY	5993.0	3.5		1		4.50
SIK/N/KHA	2C	KHANGCHENDZONGA NATIONAL PARK	85000.0	7.5	1	1		9.50
SIK/S/FAM	2C	FAMBUNG LHO SANCTUARY	1500.0	3.5				3.50
TN/N/GUI	6A	GUINDY NATIONAL PARK	270.6	7.5	1	1		9.50
TN/S/ANA	5B	ANAMALAIS SANCTUARY	84149.0	3.5				3.50
TN/S/KAL	5B	KALAKAD MUNDANTHURAI TIGER RESERVE	79058.0	3.5	1	1		5.50
TN/S/MUD	5B	MUDUMALAI SANCTUARY	32100.0	3.5	1	1	1	6.50
TN/S/NIL	5B	NILGIRI TAHR (Mukurthy) SANCTUARY	7846.0			1		1.00
TN/S/POI	10B	POINT CALIMERE SANCTUARY	1728.8	3.5	1	1		5.50
TN/S/PUL	10B	PULICAT SANCTUARY	46102.0	3.5				3.50
TN/S/VED	6A	VEDANTHANGAL SANCTUARY	29.5	3.5				3.50
UP/N/COR	7A	CORBETT NATIONAL PARK	52082.0	7.5	1	1	1	10.50
UP/N/DUD	7A	DUDHWA NATIONAL PARK	49029.2	7.5	1	1	1	10.50

ANNEXURE - I D
VALUES OF MANAGEMENT AND LEGAL STATUS OF PAs

CODE	BIOGEOGRAPHIC PROVINCE	NAME	AREA OF THE PA (Hectares)	VALUE ACCORDING TO LEGAL STATUS	VALUE ON THE BASIS OF EXISTENCE OF A MANAGEMENT PLAN	VALUE ON THE BASIS OF EXISTENCE OF A SEPARATE BUDGET	VALUE ON THE BASIS OF EXISTENCE OF ZONING	VALUE OF THE PA ACCORDING TO LEGAL AND MANAGEMENT STATUS
UP/N/NAN	2B	NANDA DEVI NATIONAL PARK	63033.0	7.5		1		8.50
UP/N/RAJ	7A	RAJAJI NATIONAL PARK (Data aggregated for Chilla, Motichur and Rajaji Sanctuaries)	58696.3	3.5				3.50
UP/N/VAL	2B	VALLEY OF FLOWERS NATIONAL PARK	8750.0	7.5				7.50
UP/S/CHA	6E	CHANDRAPRABHA SANCTUARY	9600.0	3.5				3.50
UP/S/GOV	2B	GOVIND PASHUVIHAR	95312.0	3.5		1		4.50
UP/S/KAI	6E	KAIMUR SANCTUARY	50074.7	3.5	1			4.50
UP/S/KAT	7A	KATERNIAGHAT SANCTUARY	40000.0	3.5		1		4.50
UP/S/KED	2B	KEDARNATH SANCTUARY	96725.5	3.5	1	1		5.50
UP/S/KIS	7A	KISHANPUR SANCTUARY	20021.9	3.5				3.50
UP/S/MAH	6E	SANCTUARY	541.1	3.5				3.50
UP/S/NAT	4B	NATIONAL CHAMBAL SANCTUARY	63500.0	3.5		1		4.50
UP/S/NAW	7A	NAWABGANJ SANCTUARY	224.6	3.5				3.50
UP/S/RAN	6E	RANIPUR SANCTUARY	23031.0	3.5		1		4.50
WB/N/SUN	10B	SUNDERBANS NATIONAL PARK	133010.0	7.5	1		1	9.50
WB/S/BAL	7B	BALLAVPUR SANCTUARY	202.0	3.5	1	1	1	6.50
WB/S/JAL	7B	JALDAPARA SANCTUARY	11600.0	3.5	1	1		5.50
WB/S/LOT	10B	LOTHIAN ISLAND SANCTUARY	3800.0	3.5				3.50
WB/S/RAM	7B	RAMNABAGAN SANCTUARY	14.5	3.5	1	1	1	6.50
WB/S/SAJ	10B	SAJNAKHALI SANCTUARY	36236.0	3.5			1	4.50
WB/S/SEN	2C	SENCHAL SANCTUARY	3860.0	3.5				3.50
			Thirty third precentile of management and legal values					4.00
			Sixty Seventh precentile of management and legal values					5.50

ANNEXURE- I E

LIST OF PRIORITY PAs THAT HAVE NOT BEEN EVALUATED DUE TO LACK OF DATA SETS

Sno:	CODE	BIOGEOGRAPHIC PROVINCE	NAME OF THE PA	AREA OF THE PA (ha.)	JUSTIFICATION
1	AP/N/SRI	6A	SRI VENKATESWARA NATIONAL PARK	35262.00	ONE OF THE ONLY TWO LOCATIONS IN INDIA FROM WHERE THE GOLDEN GECKO IS REPORTED [PERS. COMM., A.K., RODGERS AND PANWAR]
2	AP/S/GUN	6A	GUNDLA BRAHMESHWARAM SANCTUARY	119400.00	CONTAINS THE RARE ALBIZIA - HARDWICKIA MIXED DECIDUOUS FOREST COMMUNITIES [RODGERS AND PANWAR]
3	AP/S/KRI	10B	KRISHNA SANCTUARY	19481.00	NOTIFIED FOR THE PROTECTION OF KRISHNA DELTA MANGROVES [RODGERS AND PANWAR]
4	AP/S/SRI	6A	SRI LANKAMALLESWARA SANCTUARY	46442.00	HOME TO THE JERDON'S COURSER [RODGERS AND PANWAR]
5	ARU/N/MOU	2D	MOULING NATIONAL PARK	48300.00	HAS RARE FAUNA LIKE WHITE WINGED WOOD DUCK, CLOUDED LEOPARD, REDPANDA, LINSANG. [RODGERS AND PANWAR]
6	ARU/SDIB	2D	DIBANG	414900.00	ONE OF THE FEW SITES FROM WHERE THE EXTREMELY RARE TEMMINCK'S TRAGOPAN IS REPORTED [ALI AND RIPLEY]
7	ARU/S/KAM	2D	KAMLANG	78300.00	ONE OF THE FEW LOCATIONS FROM WHERE THE EXTREMELY RARE SCLATER'S MONAL IS REPORTED [ALI AND RIPLEY]
8	ASS/S/DIB	8A	DIBRU SAIKHOWA SANCTUARY	64000.00	CONTAINS A WETLAND IMPORTANT FOR MIGRATORY WATER FOWL AS WELL AS WILD BUFFALO, ELEPHANT, TIGER [RODGERS AND PANWAR]
9	BIH/S/DAL	6D	DALMA SANCTUARY	19322.10	IMPORTANT NON USE SOCIO ECONOMIC VALUES FOR THE CITY OF JAMSHEDPUR. ALSO HAS SIGNIFICANT ELEPHANT POPULATION AND IS REPRESENTATIVE OF THE SHOREA - CLEISTANTHUS CROTON VEGETATION TYPE [RODGERS AND PANWAR]
10	BIH/S/VIK	7B	VIKRAMSHILA DOLPHIN SANCTUARY	5000.00	FOR THE PROTECTION OF THE THREATENED GANGETIC DOLPHIN
11	GUJ/S/KAC	3A	KACHH DESERT SANCTUARY	750622.00	CONTAINS SEVERAL BREEDING SITES FOR THE FLAMINGO [RODGERS AND PANWAR]

ANNEXURE- I E

LIST OF PRIORITY PAs THAT HAVE NOT BEEN EVALUATED DUE TO LACK OF DATA SETS

Sno:	CODE	BIOGEOGRAPHIC PROVINCE	NAME OF THE PA	AREA OF THE PA (ha.)	JUSTIFICATION
12	HAR/N/SUL	4A	SULTANPUR NATIONAL PARK	117.37	WATERFOWL VALUES OF NATIONAL IMPORTANCE [RODGERS AND PANWAR]
13	HAR/S/BHI	4A	BHINDAWAS SANCTUARY	406.00	IMPORTANT WATERFOWL VALUES [RODGERS AND PANWAR]
14	HP/S/SEC	2A	SECHU TUAN NALA SANCTUARY	10295.00	BORDERS LADAKH AND HAS SNOW LEOPARD, BROWN BEAR, HIMALAYAN TAHR, BHARAL, IBEX [RODGERS AND PANWAR]
15	J&K/S/OVEA	2A	OVERA-ARU SANCTUARY	42500.00	CONTAINS A POPULATION OF MARKHOR [RODGERS AND PANWAR]
16	KAR/N/KUD	5B	KUDREMUKH NATIONAL PARK	60032.00	THE EXTREMELY RARE MALABAR CIVET FOUND IN THE PA. IMPORTANT POPULATION OF THE LION TAILED MACAQUE. NORTHERN EXTENT OF THE SHOLA FORESTS. [PERS. COMM. A.K., RODGERS AND PANWAR]
17	KAR/S/BRA	5B	BRAHMAGIRI SANCTUARY	18129.00	ONE OF THE ONLY TWO LOCATIONS IN INDIA FROM WHERE THE TOAD ANSORIA ORNATA IS REPORTED [PERS. COMM., A.K.]
18	KAR/S/PUS	5B	PUSHPAGIRI SANCTUARY	10292.00	ONE OF THE ONLY TWO LOCATIONS IN INDIA FROM WHERE THE TOAD ANSORIA ORNATA IS REPORTED [PERS. COMM., A.K.]
19	MAH/S/GRE	6B	GREAT INDIAN BUSTARD SANCTUARY	781847.00	AS IS EVIDENT, IT IS ONE OF THE FEW PAs WHICH IS HOME TO THE GREAT INDIAN BUSTARD
20	MAH/S/KOY	5B	KOYNA SANCTUARY	42305.00	CONTAINS IMPORTANT EXAMPLES OF NORTHERN EVERGREEN AND SEMI-EVERGREEN FOREST COMMUNITIES. ONE OF THE ONLY TWO LOCATIONS IN INDIA FROM WHERE THE TOAD BUFO KOYAENENSIS IS REPORTED [RODGERS AND PANWAR, PERS. COMM., A.K.]
21	MAH/S/PHA	5A/10A	PHANSAD SANCTUARY	5387.00	STRADDLES TWO BIOGEOGRAPHIC PROVINCES. CONTAINS RARE MALABAR PLAINS HABITAT [RODGERS AND PANWAR]
22	MEG/N/BAL	8B	BALPHAKRAM NATIONAL PARK	39922.00	POSSIBLE OCCURRENCE OF THE MALAYAN SUN BEAR AND HOME TO THE BUSHTAILED PORCUPINE [RODGERS AND PANWAR, PERS. COMM., A.K.]

ANNEXURE- I E

LIST OF PRIORITY PAs THAT HAVE NOT BEEN EVALUATED DUE TO LACK OF DATA SETS

Sno.	CODE	BIOGEOGRAPHIC PROVINCE	NAME OF THE PA	AREA OF THE PA (ha.)	JUSTIFICATION
23	MIZ/S/DAM	8B	DAMPA SANCTUARY	68100.00	IMPORTANT FOR THE CONSERVATION OF BIOLOGICAL VALUES OF THE STATE [RODGERS AND PANWAR]. HAS ALSO BEEN NOTIFIED AS A TIGER RESERVE.
24	NAG/S/INT	8B	INTANKI SANCTUARY	20220.00	IMPORTANT FOR THE CONSERVATION OF BIOLOGICAL VALUES OF THE STATE [RODGERS AND PANWAR]
25	ORI/N/BHI	10B	BHITARKANIKA (GAHIRMATHA) NATIONAL PARK AND SANCTUARY	53700.00	WORLD'S MOST IMPORTANT NESTING SITE FOR THE OLIVE RIDLEY TURTLES [RODGERS AND PANWAR]
26	PUN/S/HAR	4A	HARIKE LAKE	8600.00	WATERFOWL VALUES OF NATIONAL IMPORTANCE [RODGERS AND PANWAR]
27	RAJ/S/RAM	4B	RAMGARH SANCTUARY	30700.00	NATURAL GRASSLAND WITH A VIABLE GREAT INDIAN BUSTARD POPULATION [RODGERS AND PANWAR]
28	TN/N/MAR	10B	GULF OF MANNAR MARINE NATIONAL PARK	623.00	IMPORTANT FOR THE GREEN SEA TURTLE AND DUGONG AND DOLPHIN POPULATIONS [RODGERS AND PANWAR, DANIEL, J.C.]
29	TN/S/GRI	6A	GRIZZLED SQUIRREL (SRIVILLIPUTHUR)	48520.00	IMPORTANT POPULATIONS OF THE GRIZZLED GIANT SQUIRREL AND NILGIRI TAHR [PERS. COMM., A.K.]
30	TN/S/POI	10B	POINT CALIMERE SANCTUARY	1728.76	HAS BLACKBUCK, WATERFOWL, MANGROVE, SALT MARSH, MUD FLATS, DRY EVERGREEN FOREST VALUES [RODGERS AND PANWAR]
31	UP/N/GOV	2B	GOVIND PASHU VIHAR (National Park and Sanctuary)	142520.00	A VALUABLE AREA REPRESENTING THE WESTERN HIMALAYAN BIOGEOGRAPHIC PROVINCE [RODGERS AND PANWAR]
32	UP/S/SON	7A	SONANADI SANCTUARY	30176.00	PART OF THE ONLY REMAINING HABITAT OF THE ELEPHANT IN NORTH INDIA. ADJOINS CORBETT NATIONAL PARK AND IS A PART OF THE RAJAJI-CORBETT ELEPHANT CORRIDOR. [RODGERS AND PANWAR]
33	WB/N/BUX	7B	BUXA NATIONAL PARK AND SANCTUARY (TIGER RESERVE)	36899.00	EGG EATING SNAKE, TIGER, RHINOCEROS AND ELEPHANT [PERS. COMM., A.K.]

ANNEXURE- I E

LIST OF PRIORITY PAs THAT HAVE NOT BEEN EVALUATED DUE TO LACK OF DATA SETS

Sno.	CODE	BIOGEOGRAPHIC PROVINCE	NAME OF THE PA	AREA OF THE PA (ha.)	JUSTIFICATION
34	WB/N/GOR	7B	GORUMARA NATIONAL PARK AND SANCTUARY	8818.00	LARGE POPULATION OF RHINOS
35	WB/S/SEN	2C	SENCHAL SANCTUARY	3860.00	THE ONLY LOCATION FROM WHERE THE FROG RANA SENCHALENSIS IS REPORTED [PERS. COMM., A.K.]

ANNEXURE - I F

TABLE OF VALUES ATTRIBUTED TO PAy ON OCCURRENCE OF MAMMALS LISTED IN SCHEDULE - I OF THE WILDLIFE (PROTECTION) ACT, 1972.

CODE	BIOGEOGRAPHIC PROVINCE	NAME	Antelope, Four-horned	Antelope, Indian or Blackbuck	Antelope, Tibetan or Chiru	Badger, Hog	Bear, Himalayan Brown	Bear, Sloth	Bear, Sun or Malay	Binturong	Bison or Gaur	Buffalo, Wild	Caracal	Cat, Desert	Cat, Fishing	Cat, Golden	Cat, Leopard	Cat, Marbled	Cat, Pallas's	Cat, Rusty-spotted	Civet, Malabar	Deer, Brow-antlered or Thamin	Deer, Mouse	Deer, Musk	Deer, Swamp	Dolphin, Gangetic	Dugong	Elephant, Indian	Gazelle, Indian or Chinkara	Gazelle, Tibetan	Hare, Hispid	Hog, Pygmy	Hoolock	Ibex, Himalayan	Langur, Capped or Leaf Monkey	Langur, Golden	Leopard or panther	Leopard, Clouded	Leopard, Snow
AP/N/SRIV	6A	SRI VENKATESHWARA (National Park and Sanctuary)						1																													1		
AP/S/COR	10B	CORINGA																																					
AP/S/ETU	6B	ETURNAGARAM	1	1				1			1						1											1								1		
AP/S/GUN	6A	GUNDLA BRAHMESHWARAM	1	1																								1								1		
AP/S/KAU	6A	KAUNDINYA	1					1																												1		
AP/S/KAW	6B	KAWAL	1	1				1			1						1											1								1		
AP/S/KIN	6B	KINNERSANI	1	1				1			1						1											1								1		
AP/S/KOL	6B	KOLLERU																																		1		
AP/S/KRI	6B	KRISHNA																																				
AP/S/LAN	6B	LANJAMADUGU (SIVARAM)	1	1				1			1						1											1								1		
AP/S/MAN	6B	MANJIRA																																				
AP/S/NAG	6A	NAGARJUNASAGAR SRISAILAM (TIGER RESERVE)	1	1				1			1						1											1								1		
AP/S/PAK	6B	PAKHAL	1	1				1			1						1											1								1		
AP/S/PAP	6C	PAPIKONDA	1					1			1	3					1											1								1		
AP/S/POC	6B	POCHARAM	1	1				1			1						1											1								1		
AP/S/PRA	6B	PRANAHITA	1	1				1			1						1											1								1		
AP/S/PUL	10B	PULICAT						1																												1		
AP/S/ROL	6A	ROLLAPADU		1							1																									1		
AP/S/SRIL	6A	SRI LANKAMALLESWARA						1																												1		
ARU/N/MOU	2D	MOULING								3	1						1							1											3		1	3	1
ARU/N/NAM	2D	NAMDAPHA (TIGER RESERVE)				5				3	1				1	5	1	5						1				1					5				1	3	1
ARU/S/DIB	2D	DIBANG																																				1
ARU/S/EAG	2D	EAGLE NEST								3	1						1	5										1							3		1	3	
ARU/S/ITA	2D	ITANAGAR				5		1		3	1					5	1	5										1							3		1	3	
ARU/S/KAM	2D	KAMLANG								3							1	5															5		3		1	3	
ARU/S/KAN	2D	KANE															1											1											
ARU/S/LAL	2D	LALI				5				3							1	5										1								1	3	
ARU/S/MEH	2D	MEHAO								3						5	1							1				1					5		3		1	3	
ARU/S/PAK	2D	PAKHUI				5				3	1				1	5	1	5										1					5		3		1	3	
ARU/S/SES	2D	SESSA ORCHID															1											1							3		1		
ASS/N/KAZ	8A	KAZIRANGA				5		1		3	1	3			1		1								3			1			5	8	5		3		1	3	
ASS/N/MAN	8A	MANAS (TIGER RESERVE INCLUDING MANAS SANCTUARY)				5		1		3	1	3			1	5	1	5							3	8		1			5	8	5		3	8	1	3	
ASS/S/BAR	8A	BARNADI				5		1		3	1	3			1		1								3			1			5	8	5			8	1	3	
ASS/S/GAR	8A	GARAMPANI						1			1	3			1		1								3			1			5		5				1		
ASS/S/LAO	8A	LAOKHOWA						1			1	3			1		1								3			1			5						1		
ASS/S/NAM	8A	NAMERI						1																													1		

ANNEXURE - I F

TABLE OF VALUES ATTRIBUTED TO PAy ON OCCURRENCE OF MAMMALS LISTED IN SCHEDULE - I OF THE WILDLIFE (PROTECTION) ACT, 1972.

CODE	BIOGEOGRAPHIC PROVINCE	NAME	Antelope, Four-horned	Antelope, Indian or Blackbuck	Antelope, Tibetan or Chiru	Badger, Hog	Bear, Himalayan Brown	Bear, Sloth	Bear, Sun or Malay	Binturong	Bison or Gaur	Buffalo, Wild	Caracal	Cat, Desert	Cat, Fishing	Cat, Golden	Cat, Leopard	Cat, Marbled	Cat, Pallas's	Cat, Rusty-spotted	Civet, Malabar	Deer, Brow-antlered or Thamin	Deer, Mouse	Deer, Musk	Deer, Swamp	Dolphin, Gangetic	Dugong	Elephant, Indian	Gazelle, Indian or Chinkara	Gazelle, Tibetan	Hare, Hispid	Hog, Pygmy	Hoolock	Ibex, Himalayan	Langur, Capped or Leaf Monkey	Langur, Golden	Leopard or panther	Leopard, Clouded	Leopard, Snow
ASS/S/ORA	8A	ORANG						1			1	3			1		1								3			1			5					1		
ASS/S/POB	8A	POBITARA						1			1	3			1		1								3			1			5					1		
BIH/N/BET	6D	BETLA (Palamau Tiger Reserve Including Palamau Sanctuary)	1	1				1			1																	1	1							1		
BIH/N/VAL	7B	VALMIKINAGAR (TIGER RESERVE INCLUDING VALMIKI SANCTUARY)	1	1				1			1				1		1								3	8					5					1		
BIH/S/HAZ	6D	HAZARIBAGH	1	1				1			1																1	1								1		
BIH/S/VIK	7B	VIKRAMSHILA DOLPHIN																								8												
GOA/N/BHA	5B	BHAGWAN MAHAVIR (National Park and						1			1																									1		
GUJ/N/GIR	4B	GIR	1	1				1					1	3															1							1		
GUJ/N/MAR	10A	MARINE (National Park and Sanctuary)																									10											
GUJ/N/VAN	5B	VANSDA	1					1												3																1		
GUJ/N/VEL	4B	VELAVADAR	1	1				1					1	3															1							1		
GUJ/S/BAR	4B	BARDA	1	1				1					1	3															1							1		
GUJ/S/DHU	4B	DHUMKHAL (SHOOLPANESHWAR)	1	1				1					1																1							1		
GUJ/S/HIN	4B	HINGOLADAHN	1	1				1					1	3															1							1		
GUJ/S/JES	4B	JESSORA	1	1				1					1	3															1							1		
GUJ/S/NAL	4B	NALSAROVAR	1	1				1					1																1							1		
GUJ/S/RAT	4B	RATANMAHAL	1	1				1					1	3															1							1		
GUJ/S/WIL	3A	WILD ASS (DHRANGADHRA)	1	1									1	3															1							1		
HP/N/GRE	2A	GREAT HIMALYAN					1										1							1										1		1		1
HP/N/PIN	1A	PIN VALLEY																												8				1				1
HP/S/BAN	2A	BANDLI																																		1		
HP/S/CHA	2B	CHAIL															1																			1		
HP/S/CHU	2B	CHURDHAR																						1												1		
HP/S/DARA	2B	DARANGHATI I & II					1																	1										1		1		
HP/S/DARL	2B	DARLAGHAT																																		1		
HP/S/GAM	2A	GAMGUL SIYA-BEHI					1										1							1										1		1		
HP/S/KAL	2A	KALATOP & KHAJJAR															1							1												1		
HP/S/KAN	2A	KANWAR					1																	1										1		1		1
HP/S/KHO	2A	KHOKHAN																						1												1		
HP/S/KIA	2A	KIAS					1																	1												1		
HP/S/KUG	2A	KUGTI					1										1							1										1		1		
HP/S/LIP	2B	LIPPA ASRANG					1																	1										1		1		
HP/S/MAJ	2B	MAJATHAL HASARANG																																		1		
HP/S/MAN	2A	MANALI					1																	1										1		1		1
HP/S/NAI	2B	NAINADEVI																																		1		

ANNEXURE - I F

TABLE OF VALUES ATTRIBUTED TO PAy ON OCCURRENCE OF MAMMALS LISTED IN SCHEDULE - I OF THE WILDLIFE (PROTECTION) ACT, 1972.

CODE	BIOGEOGRAPHIC PROVINCE	NAME	Antelope, Four-horned	Antelope, Indian or Blackbuck	Antelope, Tibetan or Chiru	Badger, Hog	Bear, Himalayan Brown	Bear, Sloth	Bear, Sun or Malay	Binturong	Bison or Gaur	Buffalo, Wild	Caracal	Cat, Desert	Cat, Fishing	Cat, Golden	Cat, Leopard	Cat, Marbled	Cat, Pallas's	Cat, Rusty-spotted	Civet, Malabar	Deer, Brow-antlered or Thamin	Deer, Mouse	Deer, Musk	Deer, Swamp	Dolphin, Gangetic	Dugong	Elephant, Indian	Gazelle, Indian or Chinkara	Gazelle, Tibetan	Hare, Hispid	Hog, Pygmy	Hoolock	Ibex, Himalayan	Langur, Capped or Leaf Monkey	Langur, Golden	Leopard or panther	Leopard, Clouded	Leopard, Snow
HP/S/NAR	2A	NARGU					1																	1												1		
HP/S/RAK	2B	RAKSHAM CHITKUL					1																	1												1		
HP/S/REN	4A	RENUKA																																		1		
HP/S/RUP	2B	RUPI BHABA					1																	1												1		1
HP/S/SEC	2A	SECHU TUAN NALA					1																	1										1				1
HP/S/SHK	2A	SHIKARI DEVI															1							1												1		
HP/S/SHL	2B	SHILLI																																		1		
HP/S/SHIM	2B	SHIMLA WATER CATCHMENT AREA																																		1		
HP/S/SIM	4A	SIMBALBARA															1																			1		
HP/S/TAL	2B	TALRA																						1												1		
HP/S/TIR	2A	TIRTHAN					1																	1										1		1		1
HP/S/TUN	2A	TUNDAH					1																	1										1		1		
J&K/N/DAC	2A	DACHIGAM					1										1							1												1		
J&K/N/HEM	1A	HEMIS HIGH ALTITUDE																	10																1				1
J&K/N/KIS	2A	KISTWAR					1										1							1										1		1		1
J&K/S/BAL	2A	BALTAL					1										1							1												1		1
J7K/S/CHA	1A	CHANGTHANG																																				1
J&K/S/GUL	2A	GULMARG					1										1							1												1		1
J&K/S/HIR	2A	HIRAPORA					1										1							1												1		
J&K/S/JAS	4A	JASROTA																																				
J&K/S/KAR	1A	KARAKORAM			10																									8				1				1
J&K/S/LAC	2A	LACHIPORA					1										1							1										1		1		
J&K/S/LIM	2A	LIMBER					1										1							1										1		1		
J&K/S/NAN	2A	NANDINI																																		1		
J&K/S/OVEA	2A	OVERA-ARU					1										1																			1		1
J&K/S/RAM	2A	RAMNAGAR																																				
J&K/S/SUR	2A	SURINSAR MANSAR																																		1		
J&K/S/TRI	2A	TRIKUTA																																				
KAR/N/ANS	5B	ANSHI									1						1											1								1		
KAR/N/BAND	5B	BANDIPUR (TIGER RESERVE)	1					1			1						1						1					1								1		
KAR/N/KUD	5B	KUDREMUKH						1			1										8															1		
KAR/N/NAG	5B	NAGARHOLE	1					1			1						1						1					1								1		
KAR/S/ADI	6A	ADICHUNCHANAGIRI		1				1																														
KAR/S/ARA	6A	ARABITHITTO																																		1		
KAR/S/BHA	5B	BHADRA	1					1			1						1			3			1					1								1		
KAR/S/BIL	6A	BILLIGIRI RANGA SWAMY	1					1			1						1						1					1								1		
KAR/S/BRA	5B	BRAHMAGIRI						1			1						1						1					1								1		
KAR/S/CAU	6A	CAUVERY																										1										
KAR/S/DAN	5B	DANDELI									1						1						1					1								1		
KAR/S/MEL	6A	MELKOTE TEMPLE						1																												1		
KAR/S/MOK	5A	MOKAMBIKA						1			1												1					1								1		

TABLE OF VALUES ATTRIBUTED TO PAy ON OCCURRENCE OF MAMMALS LISTED IN SCHEDULE - I OF THE WILDLIFE (PROTECTION) ACT, 1972.

CODE	BIOGEOGRAPHIC PROVINCE	NAME	Antelope, Four-horned	Antelope, Indian or Blackbuck	Antelope, Tibetan or Chiru	Badger, Hog	Bear, Himalayan Brown	Bear, Sloth	Bear, Sun or Malay	Binturong	Bison or Gaur	Buffalo, Wild	Caracal	Cat, Desert	Cat, Fishing	Cat, Golden	Cat, Leopard	Cat, Marbled	Cat, Pallas's	Cat, Rusty-spotted	Civet, Malabar	Deer, Brow-antlered or Thamin	Deer, Mouse	Deer, Musk	Deer, Swamp	Dolphin, Gangetic	Dugong	Elephant, Indian	Gazelle, Indian or Chinkara	Gazelle, Tibetan	Hare, Hispid	Hog, Pygmy	Hoolock	Ibex, Himalayan	Langur, Capped or Leaf Monkey	Langur, Golden	Leopard or panther	Leopard, Clouded	Leopard, Snow
KAR/S/NUG	5B	NUGU																					1					1								1		
KAR/S/PUS	5B	PUSHPAGIRI									1						1											1								1		
KAR/S/RANE	6A	RANENBENNUR (BLACKBUCK)		1																																		
KAR/S/RANG	6A	RANGANTHITTO																																				
KAR/S/SHA	5B	SHARAVATHI VALLEY						1			1												1													1		
KAR/S/SHE	5B	SHETTIHALLY						1			1						1											1								1		
KAR/S/SOM	5B	SOMESHWARA						1			1										8		1													1		
KAR/S/TAL	5B	TALAKAVERI																										1								1		
KER/N/ERA	5B	ERAVIKULAM						1			1																	1								1		
KER/N/PER	5B	PERIYAR (TIGER RESERVE INCLUDING PERIYAR SANCTUARY)	1					1			1						1			3								1								1		
KER/N/SIL	5B	SILENT VALLEY						1			1						1			3								1								1		
KER/S/ARA	5B	ARALAM									1																	1								1		
KER/S/CHIM	5B	CHIMMONY						1			1																	1										
KER/S/CHIN	5B	CHINNAR									1																	1								1		
KER/S/NEY	5B	NEYYAR									1																	1										
KER/S/PAR	5B	PARAMBIKULLAM	1					1			1									3								1								1		
KER/S/PEP	5B	PEPPARA						1																				1								1		
KER/S/SHE	5B	SHENDURUNY						1			1																	1								1		
KER/S/THA	5B	THATTIKAD						1																				1								1		
KER/S/WAY	5B	WAYANAD	1					1			1																	1								1		
MAH/N/NAW	6B	NAWEGAON	1					1			1						1						1						1							1		
MAH/N/PEN	6E	PENCH	1					1			1						1												1							1		
MAH/N/SAN	5A	SANJAY GANDHI	1																	3			1													1		
MAH/N/TAD	6B	TADOBA	1					1			1						1			3			1													1		
MAH/S/ANE	6E	ANER DAM																											1									
MAH/S/BHI	5B	BHIMASHANKAR																					1													1		
MAH/S/BOR	6E	BOR						1																					1							1		
MAH/S/CHAN	5B	CHANDOLI						1			1												1													1		
MAH/S/CHAP	5B	CHAPRALA	1	1				1																												1		
MAH/S/DEU	6B	DEUL GAON REHKURI		1																									1									
MAH/S/GAU	6B	GAUTALA AUTRAM		1				1																					1							1		
MAH/S/KAL	5B	KALSUBAI HARISH CHANDRAGAD																					1													1		
MAH/S/KAR	5A	KARNALA	1																																			
MAH/S/KAT	6B	KATOPURNA		1																																1		
MAH/S/KOY	5B	KOYNA						1			1												1													1		
MAH/S/MEL	6E	MELGHAT	1					1			1				1								1													1		
MAH/S/NAG	6B	NAGZIRI	1					1			1						1						1													1		
MAH/S/NAN	6B	NANDUR MADMESHWAR													1																							
MAH/S/PAI	6B	PAINGANGA	1	1				1																					1							1		

ANNEXURE - I F

TABLE OF VALUES ATTRIBUTED TO PAy ON OCCURRENCE OF MAMMALS LISTED IN SCHEDULE - I OF THE WILDLIFE (PROTECTION) ACT, 1972.

CODE	BIOGEOGRAPHIC PROVINCE	NAME	Antelope, Four-horned	Antelope, Indian or Blackbuck	Antelope, Tibetan or Chiru	Badger, Hog	Bear, Himalayan Brown	Bear, Sloth	Bear, Sun or Malay	Binturong	Bison or Gaur	Buffalo, Wild	Caracal	Cat, Desert	Cat, Fishing	Cat, Golden	Cat, Leopard	Cat, Marbled	Cat, Pallas's	Cat, Rusty-spotted	Civet, Malabar	Deer, Brow-antlered or Thamin	Deer, Mouse	Deer, Musk	Deer, Swamp	Dolphin, Gangetic	Dugong	Elephant, Indian	Gazelle, Indian or Chinkara	Gazelle, Tibetan	Hare, Hispid	Hog, Pygmy	Hoolock	Ibex, Himalayan	Langur, Capped or Leaf Monkey	Langur, Golden	Leopard or panther	Leopard, Clouded	Leopard, Snow
MAH/S/PHA	5A	PHANSAD																					1													1		
MAH/S/RAD	5B	RADHANAGARI						1			1												1													1		
MAH/S/TAN	5B	TANSA	1																	3			1													1		
MAH/S/YAW	6E	YAWAL	1																										1							1		
MAN/N/KEI	8B	KEIBUL LAMJAO				5			8	3					1		1	5				10											5		3		1	3	
MAN/N/SIR	8B	SIROHI								3	1				1																							
MEG/N/BAL	8B	BALPHAKRAM				5			8	3	1					5	1											1					5		3		1	3	
MEG/N/NOK	8B	NOKREK																																					
MP/N/BAN	6E	BANDHAVGARH	1	1				1			1																		1							1		
MP/N/IND	6C	INDRAVATI(TIGER RESERVE)	1	1				1			1	3																								1		
MP/N/KANG	6C	KANGER	1	1				1			1	3																								1		
MP/N/KANH	6E	KANHA (TIGER RESERVE)	1	1				1			1														3											1		
MP/N/MAD	4B	MADHAV	1	1				1			1		1																1							1		
MP/N/PAN	6E	PANNA	1	1				1			1																		1							1		
MP/N/PEN	6E	PENCH (TIGER RESERVE)	1	1				1			1						1												1							1		
MP/N/SAN	6E	SANJAY	1	1				1			1																		1							1		
MP/N/SAT	6E	SATPURA	1	1				1			1																		1							1		
MP/S/BAD	6D	BADALKHOL	1					1			1																									1		
MP/S/BAG	6E	BAGDARA	1	1				1			1																		1							1		
MP/S/BHA	6C	BHAIRAMGARH	1	1				1			1																		1							1		
MP/S/BOR	6E	BORI	1	1				1			1																		1							1		
MP/S/GAN	4B	GANDHI SAGAR	1	1				1					1																1							1		
MP/S/GHA	4B	GHATIGAON GREAT INDIAN BUSTARD	1	1				1					1																1							1		
MP/S/GOM	6C	GOMARDA	1	1				1			1																									1		
MP/S/KAR	4B	KARERA GREAT INDIAN BUSTARD	1	1				1					1																1							1		
MP/S/KHE	6E	KHEONI	1	1				1			1																		1							1		
MP/S/NAT	4B	NATIONAL CHAMBAL	1	1				1					1																1							1		
MP/S/PAC	6E	PACHMARHI	1	1				1			1																		1							1		
MP/S/SIN	6E	SINGHORI	1	1				1			1																		1							1		
MP/S/UDA	6C	UDANTI WILD BUFFALO	1	1				1			1	3																								1		
ORI/N/SIM	6D	SIMILIPAL (TIGER RESERVE INCLUDING SIMILIPAL SANCTUARY)	1	1				1			1				1		1											1								1		
PUN/S/ABO	4A	ABOHAR	1	1									1	3																						1		
PUN/S/BIRG	4A	BIR GURDIAL PURA		1																																		
PUN/S/BIRM	4A	BIR MOTIBAG	1	1									1																								1		
RAJ/N/DES	3B	DESERT NATIONAL PARK		1									1																1									
RAJ/N/KEO	4A	KEOLADEO GHANA	1	1									1																							1		

ANNEXURE - I F

TABLE OF VALUES ATTRIBUTED TO PAy ON OCCURRENCE OF MAMMALS LISTED IN SCHEDULE - I OF THE WILDLIFE (PROTECTION) ACT, 1972.

CODE	BIOGEOGRAPHIC PROVINCE	NAME	Antelope, Four-horned	Antelope, Indian or Blackbuck	Antelope, Tibetan or Chiru	Badger, Hog	Bear, Himalayan Brown	Bear, Sloth	Bear, Sun or Malay	Binturong	Bison or Gaur	Buffalo, Wild	Caracal	Cat, Desert	Cat, Fishing	Cat, Golden	Cat, Leopard	Cat, Marbled	Cat, Pallas's	Cat, Rusty-spotted	Civet, Malabar	Deer, Brow-antlered or Thamin	Deer, Mouse	Deer, Musk	Deer, Swamp	Dolphin, Gangetic	Dugong	Elephant, Indian	Gazelle, Indian or Chinkara	Gazelle, Tibetan	Hare, Hispid	Hog, Pygmy	Hoolock	Ibex, Himalayan	Langur, Capped or Leaf Monkey	Langur, Golden	Leopard or panther	Leopard, Clouded	Leopard, Snow
RAJ/N/RAN	4B	RANTHAMBORE (TIGER RESERVE INCLUDING KAILADEVI SANCTUARY)	1	1				1					1	3			1												1								1		
RAJ/N/SAR	4B	SARISKA (TIGER RESERVE INCLUDING SARISKA SANCTUARY)	1	1				1					1	3			1												1								1		
RAJ/S/BAS	4B	BASSI	1																										1								1		
RAJ/S/BHE	4B	BHENSROADGARH	1	1				1					1																1								1		
RAJ/S/DAR	4B	DARRAH	1	1				1					1																1								1		
RAJ/S/JAI	4B	JAISAMAND	1	1				1					1																1								1		
RAJ/S/KUM	4B	KUMBHALGARH	1	1				1					1																1								1		
RAJ/S/MOU	4B	MOUNT ABU	1	1				1					1	3															1								1		
RAJ/S/NAT	4B	NATIONAL CHAMBAL	1	1				1					1																1								1		
RAJ/S/RAM	3B	RAMGARH VISDHARI	1	1				1					1																1								1		
RAJ/S/SAW	4B	SAWAI MANSINGH	1	1				1					1																1								1		
RAJ/S/SHE	4B	SHERGARH	1	1				1					1																1								1		
RAJ/S/SIT	4B	SITA MATA	1	1				1					1																1								1		
RAJ/S/TAL	3B	TAL CHAPPER	1	1				1					1	3															1								1		
RAJ/S/TOD	4B	TODGARH RAWALI	1	1				1					1																1								1		
SIK/N/KHA	2C	KHANCHENDZONGA					1			3						5	1	5						1													1	3	1
TN/N/IND	5B	INDIRA GANDHI (ANAMALAI NATIONAL PARK AND SANCTUARY)	1					1			1									3									1								1		
TN/N/MUD	5B	MUDUMALAI (National Park and Sanctuary)	1					1			1									3									1								1		
TN/N/MUK	5B	MUKURTHI									1																		1								1		
TN/S/GRI	6A	GRIZZLED SQUIRREL (SRIVILLIPUTHUR)																																					
TN/S/MUN	5B	KALAKAD-MUNDANTHURAI TIGER RESERVE									1									3									1								1		
TN/S/POI	10B	POINT CALIMERE		1																																			
TN/S/PUL	10B	PULICAT						1																													1		
TRI/S/TRI	8B	TRISHNA						1			1				1		1												1								1		
UP/N/COR	7A	CORBETT (TIGER RESERVE)	1					1							1		1							1					1								1		
UP/N/DUD	7A	DUDHWA (TIGER RESERVE INCLUDING KISHANPUR SANCTUARY)	1					1							1		1								3				1			5					1		
UP/N/GOV	2B	GOVIND PASHU VIHAR					1										1							1													1		1
UP/N/NAN	2B	NANDA DEVI					1	1									1							1													1		1
UP/N/RAJ	7A	RAJAJI						1							1		1												1								1		
UP/N/VAL	2B	VALLEY OF FLOWERS					1										1							1													1		1
UP/S/ASK	2B	ASKOT					1										1							1													1		1

ANNEXURE - I F

TABLE OF VALUES ATTRIBUTED TO PAs ON OCCURRENCE OF MAMMALS LISTED IN SCHEDULE - I OF THE WILDLIFE (PROTECTION) ACT, 1972.

CODE	BIOGEOGRAPHIC PROVINCE	NAME	Antelope, Four-horned	Antelope, Indian or Blackbuck	Antelope, Tibetan or Chiru	Badger, Hog	Bear, Himalayan Brown	Bear, Sloth	Bear, Sun or Malay	Binturong	Bison or Gaur	Buffalo, Wild	Caracal	Cat, Desert	Cat, Fishing	Cat, Golden	Cat, Leopard	Cat, Marbled	Cat, Pallas's	Cat, Rusty-spotted	Civet, Malabar	Deer, Brow-antlered or Thamin	Deer, Mouse	Deer, Musk	Deer, Swamp	Dolphin, Gangetic	Dugong	Elephant, Indian	Gazelle, Indian or Chinkara	Gazelle, Tibetan	Hare, Hispid	Hog, Pygmy	Hoolock	Ibex, Himalayan	Langur, Capped or Leaf Monkey	Langur, Golden	Leopard or panther	Leopard, Clouded	Leopard, Snow
UP/S/BAK	7A	BAKHIRA																																				
UP/S/BIN	2B	BINSAR					1										1							1													1		
UP/S/CHA	6E	CHANDRA PRABHA						1																													1		
UP/S/GOV	2B	GOVIND PASHU VIHAR					1										1							1													1		1
UP/S/KED	2B	KEDARNATH					1										1							1													1		1
UP/S/NAT	4B	NATIONAL CHAMBAL	1	1				1					1																1								1		
UP/S/RAN	6E	RANIPUR		1																																		
WB/N/BUX	7B	BUXA (TIGER RESERVE INCLUDING BUXA SANCTUARY)						1			1				1		1											1									1		
WB/N/GOR	7B	GORUMARA (National Park and Sanctuary)	1					1			1				1		1																				1		
WB/N/NEO	7B	NEORA VALLEY					1										1																				1		
WB/N/SIN	2C	SINGALILA															1																				1		
WB/N/SUN	10B	SUNDERBANS													1		1								3	8													
WB/S/BET	7B	BETHUDAHARI	1					1			1				1		1																				1		
WB/S/CHA	7B	CHAMPRAMERI									1				1		1																				1		
WB/S/JAL	7B	JALDAPARA						1			1				1		1																				1		
WB/S/MAH	7B	MAHANANDA													1		1																				1		
WB/S/SIN	2C	SINCHAL															1																				1		
		Total Number of PAs in Which the Species Occurs	91	74	1	9	31	##	2	15	89	11	33	12	26	7	85	9	1	11	2	1	22	38	11	4	1	53	62	2	9	3	9	17	11	2	202	14	24

ANNEXURE 1 F Contd...

TABLE OF VALUES ATTRIBUTED TO PAs ON OCCURRENCE OF MAMMALS LISTED IN SCHEDULE - I OF THE WILDLIFE (PROTECTION) ACT, 1972.

CODE	BIOGEOGRAPHIC PROVINCE	NAME	Linsang, Spotted	Lion, Indian	Loris, Slender	Loris, Slow	Lynx	Macaque, Lion-tailed	Markhor	Otter, Clawless	Otter, Common	Otter, Smooth Indian	Panda, Lesser or Red	Pangolin, Chinese	Pangolin, Indian	Ratel	Rhinoceros	Serow	Sheep, Blue or Bharal	Squirrel, Grizzled Giant	Squirrel, Indian Giant	Squirrel, Malayan Giant Flying	Stag, Kashmir or Hangul	Tahr, Himalayan	Tahr, Nilgiri	Takin or Mishmi takin	Tiger	Urial or Shapu	Wild Ass, Indian	Wild Ass, Tibetan	Wolf, Indian	Yak, Wild	Value of the PA according to occurrence of Schedule - I mammalian species	Total Number of Schedule - I Mammalian Species Occurring in the PA
AP/N/SRIV	6A	SRI VENKATESHWARA (National Park and Sanctuary)			1																						1						4	4
AP/S/COR	10B	CORINGA									1																1						2	2
AP/S/ETU	6B	ETURNAGARAM										1				1											1				1		11	11
AP/S/GUN	6A	GUNDLA BRAHMESHWARAM													1												1						6	6
AP/S/KAU	6A	KAUNDINYA																															3	3
AP/S/KAW	6B	KAWAL										1				1											1				1		11	11
AP/S/KIN	6B	KINNERSANI										1				1											1				1		11	11
AP/S/KOL	6B	KOLLERU														1											1						3	3
AP/S/KRI	6B	KRISHNA									1																						1	1
AP/S/LAN	6B	LANJAMADUGU (SIVARAM)										1				1											1				1		11	11
AP/S/MAN	6B	MANJIRA																									1						1	1
AP/S/NAG	6A	NAGARJUNASAGAR SRISAILAM (TIGER RESERVE)			1						1	1			1	1					1						1				1		15	15
AP/S/PAK	6B	PAKHAL										1				1											1				1		11	11
AP/S/PAP	6C	PAPIKONDA										1				1											1				1		13	11
AP/S/POC	6B	POCHARAM										1				1											1				1		11	11
AP/S/PRA	6B	PRANAHITA										1			1	1											1				1		12	12
AP/S/PUL	10B	PULICAT			1										1	1				3							1						9	7
AP/S/ROL	6A	ROLLAPADU			1						1	1								3	1						1				1		12	10
AP/S/SRIL	6A	SRI LANKAMALLESWARA																															2	2
ARU/N/MOU	2D	MOULING	3			3					1		5					1				3		1		5	1						37	17
ARU/N/NAM	2D	NAMDAPHA (TIGER RESERVE)	3			3					1		5	5				1	1			3		1		5	1				1		63	25
ARU/S/DIB	2D	DIBANG											5					1															7	3
ARU/S/EAG	2D	EAGLE NEST	3			3					1		5					1									1				1		33	15
ARU/S/ITA	2D	ITANAGAR	3			3					1		5					1				3				5	1						51	19
ARU/S/KAM	2D	KAMLANG	3			3					1		5					1				3				5	1						43	15
ARU/S/KAN	2D	KANE																				3					1						6	4
ARU/S/LAL	2D	LALI	3			3					1							1				3				5	1						36	14
ARU/S/MEH	2D	MEHAO	3			3					1		5					1				3				5	1						45	17
ARU/S/PAK	2D	PAKHUI	3			3					1		5					1				3				5	1						51	19
ARU/S/SES	2D	SESSA ORCHID																1				3											10	6
ASS/N/KAZ	8A	KAZIRANGA	3			3				5	1	1		5			3					3					1				1		70	25
ASS/N/MAN	8A	MANAS (TIGER RESERVE INCLUDING MANAS SANCTUARY)	3			3				5	1	1		5	1		3					3					1						96	29
ASS/S/BAR	8A	BARNADI	3			3				5		1		5			3					3					1						73	23
ASS/S/GAR	8A	GARAMPANI										1		5			3										1						32	14
ASS/S/LAO	8A	LAOKHOWA										1		5			3										1						27	13
ASS/S/NAM	8A	NAMERI			1										1												1						5	5

ANNEXURE - I F

TABLE OF VALUES ATTRIBUTED TO PAs ON OCCURRENCE OF MAMMALS LISTED IN SCHEDULE - I OF THE WILDLIFE (PROTECTION) ACT, 1972.

ANNEXURE 1 F Contd...

CODE	BIOGEOGRAPHIC PROVINCE	NAME	Linsang, Spotted	Lion, Indian	Loris, Slender	Loris, Slow	Lynx	Macaque, Lion-tailed	Markhor	Otter, Clawless	Otter, Common	Otter, Smooth Indian	Panda, Lesser or Red	Pangolin, Chinese	Pangolin, Indian	Ratel	Rhinoceros	Serow	Sheep, Blue or Bharal	Squirrel, Grizzled Giant	Squirrel, Indian Giant	Squirrel, Malayan Giant Flying	Stag, Kashmir or Hangul	Tahr, Himalayan	Tahr, Nilgiri	Takin or Mishmi takin	Tiger	Urial or Shapu	Wild Ass, Indian	Wild Ass, Tibetan	Wolf, Indian	Yak, Wild	Value of the PA according to occurrence of Schedule - I mammalian species	Total Number of Schedule - I Mammalian Species Occurring in the PA
ASS/S/ORA	8A	ORANG										1		5			3										1						27	13
ASS/S/POB	8A	POBITARA										1		5			3										1						27	13
BIH/N/BET	6D	BETLA (Palamau Tiger Reserve Including Palamau Sanctuary)										1			1	1					1						1				1		13	13
BIH/N/VAL	7B	VALMIKINAGAR (TIGER RESERVE INCLUDING VALMIKI SANCTUARY)										1			1	1	3										1				1		31	16
BIH/S/HAZ	6D	HAZARIBAGH										1				1											1				1		11	11
BIH/S/VIK	7B	VIKRAMSHILA DOLPHIN																															8	1
GOA/N/BHA	5B	BHAGWAN MAHAVIR (National Park and			1										1						1												6	6
GUJ/N/GIR	4B	GIR		#								1			1	1											1				1		24	13
GUJ/N/MAR	10A	MARINE (National Park and Sanctuary)																															10	1
GUJ/N/VAN	5B	VANSDA													1	1											1						9	7
GUJ/N/VEL	4B	VELAVADAR										1			1	1											1				1		14	12
GUJ/S/BAR	4B	BARDA													1	1															1		12	10
GUJ/S/DHU	4B	DHUMKHAL (SHOOLPANESHWAR)										1			1	1											1				1		11	11
GUJ/S/HIN	4B	HINGOLADAHN										1			1	1											1				1		14	12
GUJ/S/JES	4B	JESSORA										1			1	1											1				1		14	12
GUJ/S/NAL	4B	NALSAROVAR										1			1	1											1				1		11	11
GUJ/S/RAT	4B	RATANMAHAL										1			1	1											1				1		14	12
GUJ/S/WIL	3A	WILD ASS (DHRANGADHRA)														1													10		1		20	9
HP/N/GRE	2A	GREAT HIMALYAN																1	1					1							1		10	10
HP/N/PIN	1A	PIN VALLEY																	1												1		12	5
HP/S/BAN	2A	BANDLI																															1	1
HP/S/CHA	2B	CHAIL																															2	2
HP/S/CHU	2B	CHURDHAR																															2	2
HP/S/DARA	2B	DARANGHATI I & II																1	1					1									7	7
HP/S/DARL	2B	DARLAGHAT																															1	1
HP/S/GAM	2A	GAMGUL SIYA-BEHI																1					8	1							1		16	9
HP/S/KAL	2A	KALATOP & KHAJJAR																1															4	4
HP/S/KAN	2A	KANWAR																1	1					1							1		9	9
HP/S/KHO	2A	KHOKHAN																	1					1							1		5	5
HP/S/KIA	2A	KIAS																	1					1									5	5
HP/S/KUG	2A	KUGTI																1						1									7	7
HP/S/LIP	2B	LIPPA ASRANG																	1													8	13	6
HP/S/MAJ	2B	MAJATHAL HASARANG																															1	1
HP/S/MAN	2A	MANALI					8											1						1									15	8
HP/S/NAI	2B	NAINADEVI																1															2	2

TABLE OF VALUES ATTRIBUTED TO PAs ON OCCURRENCE OF MAMMALS LISTED IN SCHEDULE - I OF THE WILDLIFE (PROTECTION) ACT, 1972.

ANNEXURE 1 F Contd...

CODE	BIOGEOGRAPHIC PROVINCE	NAME	Linsang, Spotted	Lion, Indian	Loris, Slender	Loris, Slow	Lynx	Macaque, Lion-tailed	Markhor	Otter, Clawless	Otter, Common	Otter, Smooth Indian	Panda, Lesser or Red	Pangolin, Chinese	Pangolin, Indian	Ratel	Rhinoceros	Serow	Sheep, Blue or Bharal	Squirrel, Grizzled Giant	Squirrel, Indian Giant	Squirrel, Malayan Giant Flying	Stag, Kashmir or Hangul	Tahr, Himalayan	Tahr, Nilgiri	Takin or Mishmi takin	Tiger	Urial or Shapu	Wild Ass, Indian	Wild Ass, Tibetan	Wolf, Indian	Yak, Wild	Value of the PA according to occurrence of Schedule - I mammalian species	Total Number of Schedule - I Mammalian Species Occurring in the PA
HP/S/NAR	2A	NARGU																															3	3
HP/S/RAK	2B	RAKSHAM CHITKUL																	1														4	4
HP/S/REN	4A	RENUKA																															1	1
HP/S/RUP	2B	RUPI BHABA																1	1					1									8	8
HP/S/SEC	2A	SECHU TUAN NALA							8									1	1					1									15	8
HP/S/SHK	2A	SHIKARI DEVI																															3	3
HP/S/SHL	2B	SHILLI																															1	1
HP/S/SHIM	2B	SHIMLA WATER CATCHMENT AREA																															1	1
HP/S/SIM	4A	SIMBALBARA																									1						3	3
HP/S/TAL	2B	TALRA																															2	2
HP/S/TIR	2A	TIRTHAN																1	1					1							1		9	9
HP/S/TUN	2A	TUNDAH																1						1							1		7	7
J&K/N/DAC	2A	DACHIGAM									1							1					8										14	7
J&K/N/HEM	1A	HEMIS HIGH ALTITUDE					8				1								1									8		8	1		39	9
J&K/N/KIS	2A	KISTWAR							8										1				8	1									24	10
J&K/S/BAL	2A	BALTAL																1					8										14	7
J7K/S/CHA	1A	CHANGTHANG																										8		8	1		18	4
J&K/S/GUL	2A	GULMARG									1																						6	6
J&K/S/HIR	2A	HIRAPORA							8		1																						13	6
J&K/S/JAS	4A	JASROTA																															0	0
J&K/S/KAR	1A	KARAKORAM					8				1								1									8			1	8	47	10
J&K/S/LAC	2A	LACHIPORA							8																								13	6
J&K/S/LIM	2A	LIMBER							8																								13	6
J&K/S/NAN	2A	NANDINI																															1	1
J&K/S/OVEA	2A	OVERA-ARU									1							1					8										14	7
J&K/S/RAM	2A	RAMNAGAR																															0	0
J&K/S/SUR	2A	SURINSAR MANSAR																															1	1
J&K/S/TRI	2A	TRIKUTA																															0	0
KAR/N/ANS	5B	ANSHI																		3	1						1						9	7
KAR/N/BAND	5B	BANDIPUR (TIGER RESERVE)									1				1					3	1						1						14	12
KAR/N/KUD	5B	KUDREMUKH			1			1							1						1						1						16	9
KAR/N/NAG	5B	NAGARHOLE			1						1				1						1						1						12	12
KAR/S/ADI	6A	ADICHUNCHANAGIRI																															2	2
KAR/S/ARA	6A	ARABITHITTO																									1						2	2
KAR/S/BHA	5B	BHADRA			1						1	1			1						1						1						16	14
KAR/S/BIL	6A	BILLIGIRI RANGA SWAMY									1										1						1				1		11	11
KAR/S/BRA	5B	BRAHMAGIRI			1			1		5					1												1						15	11
KAR/S/CAU	6A	CAUVERY									1																						2	2
KAR/S/DAN	5B	DANDELI													1												1				1		8	8
KAR/S/MEL	6A	MELKOTE TEMPLE																													1		3	3
KAR/S/MOK	5A	MOKAMBIKA						1			1				1												1						9	9

TABLE OF VALUES ATTRIBUTED TO PAs ON OCCURRENCE OF MAMMALS LISTED IN SCHEDULE - I OF THE WILDLIFE (PROTECTION) ACT, 1972.

ANNEXURE 1 F COntd...

CODE	BIOGEOGRAPHIC PROVINCE	NAME	Linsang, Spotted	Lion, Indian	Loris, Slender	Loris, Slow	Lynx	Macaque, Lion-tailed	Markhor	Otter, Clawless	Otter, Common	Otter, Smooth Indian	Panda, Lesser or Red	Pangolin, Chinese	Pangolin, Indian	Ratel	Rhinoceros	Serow	Sheep, Blue or Bharal	Squirrel, Grizzled Giant	Squirrel, Indian Giant	Squirrel, Malayan Giant Flying	Stag, Kashmir or Hangul	Tahr, Himalayan	Tahr, Nilgiri	Takin or Mishmi takin	Tiger	Urial or Shapu	Wild Ass, Indian	Wild Ass, Tibetan	Wolf, Indian	Yak, Wild	Value of the PA according to occurrence of Schedule - I mammalian species	Total Number of Schedule - I Mammalian Species Occurring in the PA
KAR/S/NUG	5B	NUGU									1																1						5	5
KAR/S/PUS	5B	PUSHPAGIRI						1																			1						6	6
KAR/S/RANE	6A	RANENBENNUR (BLACKBUCK)									1				1																1		4	4
KAR/S/RANG	6A	RANGANTHITTO									1																						1	1
KAR/S/SHA	5B	SHARAVATHI VALLEY			1			1			1				1												1						9	9
KAR/S/SHE	5B	SHETTIHALLY			1										1						1						1						9	9
KAR/S/SOM	5B	SOMESHWARA						1							1						1						1						16	9
KAR/S/TAL	5B	TALAKAVERI						1																									3	3
KER/N/ERA	5B	ERAVIKULAM																			1				5		1						11	7
KER/N/PER	5B	PERIYAR (TIGER RESERVE INCLUDING PERIYAR SANCTUARY)			1			1			1	1			1					3	1				5		1						24	16
KER/N/SIL	5B	SILENT VALLEY			1			1			1	1			1					3	1						1						18	14
KER/S/ARA	5B	ARALAM			1										1												1						6	6
KER/S/CHIM	5B	CHIMMONY			1			1							1						1												7	7
KER/S/CHIN	5B	CHINNAR						1												3							1						8	6
KER/S/NEY	5B	NEYYAR						1													1						1						5	5
KER/S/PAR	5B	PARAMBIKULLAM			1			1			1	1			1					3	1				5		1						23	15
KER/S/PEP	5B	PEPPARA						1													1						1						6	6
KER/S/SHE	5B	SHENDURUNY						1													1						1						7	7
KER/S/THA	5B	THATTIKAD										1			1						1						1						7	7
KER/S/WAY	5B	WAYANAD									1				1												1						8	8
MAH/N/NAW	6B	NAWEGAON			1										1	1											1				1		12	12
MAH/N/PEN	6E	PENCH														1											1						8	8
MAH/N/SAN	5A	SANJAY GANDHI																															6	4
MAH/N/TAD	6B	TADOBA													1	1											1						12	10
MAH/S/ANE	6E	ANER DAM																															1	1
MAH/S/BHI	5B	BHIMASHANKAR													1						1												4	4
MAH/S/BOR	6E	BOR																									1						4	4
MAH/S/CHAN	5B	CHANDOLI													1						1						1				1		8	8
MAH/S/CHAP	5B	CHAPRALA																			1						1				1		7	7
MAH/S/DEU	6B	DEUL GAON REHKURI																													1		3	3
MAH/S/GAU	6B	GAUTALA AUTRAM													1												1				1		7	7
MAH/S/KAL	5B	KALSUBAI HARISH CHANDRAGAD																			1										1		4	4
MAH/S/KAR	5A	KARNALA																															1	1
MAH/S/KAT	6B	KATOPURNA																									1				1		4	4
MAH/S/KOY	5B	KOYNA													1						1						1						7	7
MAH/S/MEL	6E	MELGHAT													1	1					1						1						10	10
MAH/S/NAG	6B	NAGZIRI																									1						7	7
MAH/S/NAN	6B	NANDUR MADMESHWAR																															1	1
MAH/S/PAI	6B	PAINGANGA																									1						6	6

ANNEXURE - I F

TABLE OF VALUES ATTRIBUTED TO PAs ON OCCURRENCE OF MAMMALS LISTED IN SCHEDULE - I OF THE WILDLIFE (PROTECTION) ACT, 1972.

ANNEXURE 1 F Contd...

CODE	BIOGEOGRAPHIC PROVINCE	NAME	Linsang, Spotted	Lion, Indian	Loris, Slender	Loris, Slow	Lynx	Macaque, Lion-tailed	Markhor	Otter, Clawless	Otter, Common	Otter, Smooth Indian	Panda, Lesser or Red	Pangolin, Chinese	Pangolin, Indian	Ratel	Rhinoceros	Serow	Sheep, Blue or Bharal	Squirrel, Grizzled Giant	Squirrel, Indian Giant	Squirrel, Malayan Giant Flying	Stag, Kashmir or Hangul	Tahr, Himalayan	Tahr, Nilgiri	Takin or Mishmi takin	Tiger	Urial or Shapu	Wild Ass, Indian	Wild Ass, Tibetan	Wolf, Indian	Yak, Wild	Value of the PA according to occurrence of Schedule - I mammalian species	Total Number of Schedule - I Mammalian Species Occurring in the PA
MAH/S/PHA	5A	PHANSAD																			1												3	3
MAH/S/RAD	5B	RADHANAGARI										1			1						1												7	7
MAH/S/TAN	5B	TANSA										1			1												1						9	7
MAH/S/YAW	6E	YAWAL													1	1											1				1		7	7
MAN/N/KEI	8B	KEIBUL LAMJAO	3		1	3					1	1		5				1				3											63	19
MAN/N/SIR	8B	SIROHI																															5	3
MEG/N/BAL	8B	BALPHAKRAM				3					1	1	5					1			1						1				1		50	19
MEG/N/NOK	8B	NOKREK													1																		1	1
MP/N/BAN	6E	BANDHAVGARH										1			1	1											1				1		11	11
MP/N/IND	6C	INDRAVATI(TIGER RESERVE)										1			1	1											1				1		13	11
MP/N/KANG	6C	KANGER										1			1	1											1				1		13	11
MP/N/KANH	6E	KANHA (TIGER RESERVE)										1			1	1											1				1		13	11
MP/N/MAD	4B	MADHAV										1			1	1											1				1		12	12
MP/N/PAN	6E	PANNA										1			1	1											1				1		11	11
MP/N/PEN	6E	PENCH (TIGER RESERVE)										1			1	1											1				1		12	12
MP/N/SAN	6E	SANJAY										1			1	1											1				1		11	11
MP/N/SAT	6E	SATPURA										1			1	1											1				1		11	11
MP/S/BAD	6D	BADALKHOL										1				1											1						7	7
MP/S/BAG	6E	BAGDARA										1			1	1											1				1		11	11
MP/S/BHA	6C	BHAIRAMGARH										1			1	1											1				1		11	11
MP/S/BOR	6E	BORI										1			1	1											1				1		11	11
MP/S/GAN	4B	GANDHI SAGAR										1			1	1											1				1		11	11
MP/S/GHA	4B	GHATIGAON GREAT INDIAN BUSTARD										1			1	1											1				1		11	11
MP/S/GOM	6C	GOMARDA										1				1											1				1		9	9
MP/S/KAR	4B	KARERA GREAT INDIAN BUSTARD										1			1	1											1				1		11	11
MP/S/KHE	6E	KHEONI										1			1	1											1				1		11	11
MP/S/NAT	4B	NATIONAL CHAMBAL										1			1	1											1				1		11	11
MP/S/PAC	6E	PACHMARHI										1			1	1											1				1		11	11
MP/S/SIN	6E	SINGHORI										1			1	1											1				1		11	11
MP/S/UDA	6C	UDANTI WILD BUFFALO										1				1											1				1		12	10
ORI/N/SIM	6D	SIMILIPAL (TIGER RESERVE INCLUDING SIMILIPAL SANCTUARY)										1			1	1					1						1				1		14	14
PUN/S/ABO	4A	ABOHAR														1															1		9	7
PUN/S/BIRG	4A	BIR GURDIAL PURA																															1	1
PUN/S/BIRM	4A	BIR MOTIBAG														1															1		6	6
RAJ/N/DES	3B	DESERT NATIONAL PARK																													1		4	4
RAJ/N/KEO	4A	KEOLADEO GHANA										1			1	1															1		8	8

ANNEXURE - I F

TABLE OF VALUES ATTRIBUTED TO PAs ON OCCURRENCE OF MAMMALS LISTED IN SCHEDULE - I OF THE WILDLIFE (PROTECTION) ACT, 1972.

ANNEXURE 1 F Contd...

CODE	BIOGEOGRAPHIC PROVINCE	NAME	Linsang, Spotted	Lion, Indian	Loris, Slender	Loris, Slow	Lynx	Macaque, Lion-tailed	Markhor	Otter, Clawless	Otter, Common	Otter, Smooth Indian	Panda, Lesser or Red	Pangolin, Chinese	Pangolin, Indian	Ratel	Rhinoceros	Serow	Sheep, Blue or Bharal	Squirrel, Grizzled Giant	Squirrel, Indian Giant	Squirrel, Malayan Giant Flying	Stag, Kashmir or Hangul	Tahr, Himalayan	Tahr, Nilgiri	Takin or Mishmi takin	Tiger	Urial or Shapu	Wild Ass, Indian	Wild Ass, Tibetan	Wolf, Indian	Yak, Wild	Value of the PA according to occurrence of Schedule - I mammalian species	Total Number of Schedule - I Mammalian Species Occurring in the PA
RAJ/N/RAN	4B	RANTHAMBORE (TIGER RESERVE INCLUDING KAILADEVI SANCTUARY)										1			1	1											1				1		15	13
RAJ/N/SAR	4B	SARISKA (TIGER RESERVE INCLUDING SARISKA SANCTUARY)										1			1	1											1				1		15	13
RAJ/S/BAS	4B	BASSI																													1		4	4
RAJ/S/BHE	4B	BHENSROADGARH										1			1	1											1				1		11	11
RAJ/S/DAR	4B	DARRAH										1			1	1											1				1		11	11
RAJ/S/JAI	4B	JAISAMAND										1			1	1											1				1		11	11
RAJ/S/KUM	4B	KUMBHALGARH										1			1	1											1				1		11	11
RAJ/S/MOU	4B	MOUNT ABU										1			1	1											1				1		14	12
RAJ/S/NAT	4B	NATIONAL CHAMBAL										1			1	1											1				1		11	11
RAJ/S/RAM	3B	RAMGARH VISDHARI										1			1	1											1				1		11	11
RAJ/S/SAW	4B	SAWAI MANSINGH										1			1	1											1				1		11	11
RAJ/S/SHE	4B	SHERGARH										1			1	1											1				1		11	11
RAJ/S/SIT	4B	SITA MATA										1			1	1											1				1		11	11
RAJ/S/TAL	3B	TAL CHAPPER													1	1															1		12	10
RAJ/S/TOD	4B	TODGARH RAWALI										1			1	1											1				1		11	11
SIK/N/KHA	2C	KHANCHENDZONGA									1		5					1	1					1							1		31	15
TN/N/IND	5B	INDIRA GANDHI (ANAMALAI NATIONAL PARK AND SANCTUARY)			1			1			1	1			1					3	1				5		1						23	15
TN/N/MUD	5B	MUDUMALAI (National Park and Sanctuary)			1			1			1	1			1					3	1				5		1						23	15
TN/N/MUK	5B	MUKURTHI																			1				5		1						10	6
TN/S/GRI	6A	GRIZZLED SQUIRREL (SRIVILLIPUTHUR)																		3					5								8	2
TN/S/MUN	5B	KALAKAD-MUNDANTHURAI TIGER RESERVE			1			1			1	1			1					3	1				5		1						21	13
TN/S/POI	10B	POINT CALIMERE																															1	1
TN/S/PUL	10B	PULICAT			1										1	1				3							1						9	7
TRI/S/TRI	8B	TRISHNA			1						1	1		5				1									1						16	12
UP/N/COR	7A	CORBETT (TIGER RESERVE)									1	1			1	1											1				1		13	13
UP/N/DUD	7A	DUDHWA (TIGER RESERVE INCLUDING KISHANPUR SANCTUARY)										1			1	1	3										1				1		22	14
UP/N/GOV	2B	GOVIND PASHU VIHAR									1							1	1					1									9	9
UP/N/NAN	2B	NANDA DEVI									1							1	1					1			1				1		12	12
UP/N/RAJ	7A	RAJAJI										1				1											1				1		9	9
UP/N/VAL	2B	VALLEY OF FLOWERS									1							1	1					1							1		10	10
UP/S/ASK	2B	ASKOT									1							1	1					1									9	9

ANNEXURE - I F

TABLE OF VALUES ATTRIBUTED TO PAs ON OCCURRENCE OF MAMMALS LISTED IN SCHEDULE - I OF THE WILDLIFE (PROTECTION) ACT, 1972.

ANNEXURE 1 F Contd...

CODE	BIOGEOGRAPHIC PROVINCE	NAME	Linsang, Spotted	Lion, Indian	Loris, Slender	Loris, Slow	Lynx	Macaque, Lion-tailed	Markhor	Otter, Clawless	Otter, Common	Otter, Smooth Indian	Panda, Lesser or Red	Pangolin, Chinese	Pangolin, Indian	Ratel	Rhinoceros	Serow	Sheep, Blue or Bharal	Squirrel, Grizzled Giant	Squirrel, Indian Giant	Squirrel, Malayan Giant Flying	Stag, Kashmir or Hangul	Tahr, Himalayan	Tahr, Nilgiri	Takin or Mishmi takin	Tiger	Urial or Shapu	Wild Ass, Indian	Wild Ass, Tibetan	Wolf, Indian	Yak, Wild	Value of the PA according to occurrence of Schedule - I mammalian species	Total Number of Schedule - I Mammalian Species Occurring in the PA
UP/S/BAK	7A	BAKHIRA																						1									1	1
UP/S/BIN	2B	BINSAR									1							1															6	6
UP/S/CHA	6E	CHANDRA PRABHA																									1						3	3
UP/S/GOV	2B	GOVIND PASHU VIHAR									1							1	1					1									9	9
UP/S/KED	2B	KEDARNATH									1							1	1					1									9	9
UP/S/NAT	4B	NATIONAL CHAMBAL										1			1	1											1				1		11	11
UP/S/RAN	6E	RANIPUR																															1	1
WB/N/BUX	7B	BUXA (TIGER RESERVE INCLUDING BUXA SANCTUARY)								5		1										3					1						16	10
WB/N/GOR	7B	GORUMARA (National Park and Sanctuary)										1			1	1	3										1						13	11
WB/N/NEO	7B	NEORA VALLEY								5														1									9	5
WB/N/SIN	2C	SINGALILA									1							1															4	4
WB/N/SUN	10B	SUNDERBANS																									1						14	5
WB/S/BET	7B	BETHUDAHARI										1			1	1	3										1						13	11
WB/S/CHA	7B	CHAMPRAMERI								5					1												1						11	7
WB/S/JAL	7B	JALDAPARA													1	1	3										1						11	9
WB/S/MAH	7B	MAHANANDA								5					1												1						10	6
WB/S/SIN	2C	SINCHAL									1							1															4	4
		Total Number of PAs in Which the Species Occurs	12	1	24	13	3	18	5	8	51	85	10	10	95	#	12	38	22	13	35	14	5	24	8	7	142	3	1	2	97	2		

ANNEXURE II

Samya - Centre for Equity Studies

Shekhar Singh
Honorary Director

3 September, 2003

Dear Dr. Rajesh Gopal,

Kindly refer to our telephonic conservation of 2 September, 2003 regarding the submission of the final report of the survey of national parks and sanctuaries in India, for which IIPA was contracted by your Ministry. I have pleasure in enclosing the final report, along with data tables and photographs in two CDs.

This report has been revised and finalised, based on the discussion held in the IIPA between the officials of the MoEF and the IIPA team. We have added data from an additional 80 PAs and data for over 300 PAs is now recorded and analysed in this report. We have also redrafted portions of the text and added a new section, in order to fulfil all the contractual requirements. A statement of the contractual requirements, and our outputs in their fulfilment, is enclosed.

With regards,

Yours sincerely,

Shekhar Singh

Dr. Rajesh Gopal, IFS
Inspector General of Forests &
Director, Project Tiger
Ministry of Environment and Forests
Government of India
New Delhi 110 001

Encl: aa

C 17A Munirka, New Delhi 110 067
Telephone: +91 (0)11 26178048; Telefax: +91 (0)11 26168759
Email: shekharsingh@vsnl.com

ENCLOSURE

THE DESCRIPTION OF SERVICES TO BE PROVIDED BY THE IIPA UNDER CONTRACT (APPENDIX A) SIGNED WITH THE MINISTRY OF ENVIRONMENT AND FORESTS AND THE OUTPUTS PROVIDED IN FULFILMENT OF THE CONTRACT

DESCRIPTION OF THE SERVICES	**OUTPUTS**
The IIPA would :	
1. Survey of status of wildlife protected areas (PAs) in India, including the legal and administrative status, socio-economic pressures, management planning and implementation, staffing, research, monitoring, and tourism.	Completed the survey. A report of the survey is given in this volume.
2. Use a methodology, for the basic survey, that is such that it allows comparison of data with the earlier survey done by the IIPA in 1984-86.	Such a methodology was used.
3. Based on this survey :	
3.1 update their publication *Management of National Parks and Sanctuaries in India* : A Status Report [IIPA 1989], and highlight trends, using the 1989 report as the baseline.	The report is an update of the said publication and gives, where relevant, for comparison the old and the new data.
3.2 Describe and prioritise PAs in terms of the ecodevelopment requirements for each protected area, so as to assist in developing a list of PAs to be selected for the proposed GEF India Ecodevelopment Project - II.	The prioritization is given in Chapter IV.
3.3 Describe and prioritise PAs in terms of management needs for each PA.	The prioritization is given in Chapter IV.
3.4 Assess national laws, policies, schemes and programmes relevant to PA management and ecodevelopment, and recommend changes, if required.	Given in Chapter V
3.5 Develop a data base on different aspects of PAs including photographic data for use both in training and in subsequent monitoring.	Included in the CDs.
3.6 Identify legal and other external interventions that might be required for the proper conservation of specific PAs.	Given in Chapter IV and V

ANNEXURE III

NAMES AND CODES OF PROTECTED AREAS RESPONDING TO THE SURVEY

Andaman and Nicobar Islands		
1.	A&N/N/SAD	Saddle Peak National Park
2.	A&N/S/CUT	Cuthbert Bay Sanctuary
3.	A&N/S/INT	Interview Island Sanctuary
4.	A&N/S/NAR	Narcondam Sanctuary
5.	A&N/S/NOR	North Reef Sanctuary
Andhra Pradesh		
1.	AP/N/KAS	Kasu Brahmananda Reddy National Park
2.	AP/N/MAH	Mahaveer Harina Vanasthali National Park
3.	AP/N/MRU	Mrugavani National Park
4.	AP/N/VEN	Sri Venkateswara National Park
5.	AP/S/COR	Coringa Sanctuary
6.	AP/S/ETU	Eturnagaram Sanctuary
7.	AP/S/GUN	Gundla Brahmeswaram Sanctuary
8.	AP/S/KAW	Kawal Sanctuary
9.	AP/S/KOL	Kolleru Sanctuary
10.	AP/S/KOU	Koundinya Sanctuary
11.	AP/S/KRI	Krishna Sanctuary
12.	AP/S/MAN	Manjira Sanctuary
13.	AP/S/NEL	Neelapattu Bird Sanctuary
14.	AP/S/PAK	Pakhal Sanctuary
15.	AP/S/PAP	Papikonda Sanctuary
16.	AP/S/POC	Pocharam Sanctuary
17.	AP/S/PRA	Pranhita Black Buck Sanctuary
18.	AP/S/PUL	Pulicat Bird Sanctuary
19.	AP/S/SIW	Siwaram Sanctuary
Arunachal Pradesh		
1.	ARU/N/MOU	Mouling National Park
2.	ARU/N/NAM	Namdapha National Park
3.	ARU/S/DER	D' Ering Memorial Sanctuary
4.	ARU/S/KAM	Kamlang Sanctuary

5.	ARU/S/MEH	Mehao Sanctuary
6.	ARU/S/YOR	Yordi Rabe Supse Sanctuary
Assam		
1.	ASS/N/DIB	Dibru Saikhowa National Park
2.	ASS/N/KAZ	Kaziranga National Park
3.	ASS/N/MAN	Manas National Park
4.	ASS/N/ORA	Orang Sanctuary
5.	ASS/S/BAR	Barnadi Sanctuary
6.	ASS/S/DIP	Dipar Beel Sanctuary
7.	ASS/S/GIB	Gibbon Sanctuary
8.	ASS/S/LAO	Laokhowa Sanctuary
9.	ASS/S/PAN	Panidehing Bird Sanctuary
10.	ASS/S/POB	Pobitora Sanctuary
11.	ASS/S/SON	Soni-Rupai Sanctuary
12.	ASS/S/NAME	Nameri Sanctuary
13.	ASS/S/BUR	Burha Chapori Sanctuary
14.	ASS/S/KAR	Karbi Anglong Sanctuary
15.	ASS/S/NAMB	Nambor Sanctuary
16.	ASS/S/EAS	East Karbi Anglong Sanctuary
17.	ASS/S/GAR	Garampani Sanctuary
Bihar		
1.	BIH/S/RAJ	Rajgir Sanctuary
Chandigarh		
1.	CHD/S/SUK	Sukhna Sanctuary
Chattisgarh		
1.	CHT/N/IND	Indravati National Park
2.	CHT/N/KAN	Kanger Valley National Park
3.	CHT/S/ACH	Achanakmar Sanctuary
4.	CHT/S/BAR	Barnawapara Sanctuary
5.	CHT/S/BHA	Bhairamgarh Wild Buffalo Sanctuary
6.	CHT/S/GOM	Gomarda Sanctuary
7.	CHT/S/PAM	Pamed Wild Buffalo Sanctuary
8.	CHT/S/SIT	Sitanadi Sanctuary
9.	CHT/S/TAM	Tamor Pingla Game Sanctuary
10.	CHT/S/UDA	Udanti Sanctuary

Delhi		
1.	DEL/S/ASO	Asola-Bhatti Sanctuary
Goa		
1.	GOA/S/CHO	Chorao Island - Dr. Salim Ali Bird Sanctuary
2.	GOA/S/BON	Bondla Sanctuary
Gujarat		
1.	GUJ/N/BAN	Bansda National Park
2.	GUJ/S/WIL	Wild Ass Sanctuary
3.	GUJ/S/PUR	Purna Sanctuary
4.	GUJ/S/RAT	Ratanmahal Sanctuary
Haryana		
1.	HAR/N/SUL	Sultanpur National Park
2.	HAR/S/ABU	Abuabsher Sanctuary
3.	HAR/S/BHIN	Bhindarwas Bird Sanctuary
4.	HAR/S/BIRB	Bir Bara Ban Sanctuary
5.	HAR/S/BIRS	Bir Sikargah Sanctuary
6.	HAR/S/CHIL	Chilchilla (Bird) Sanctuary
7.	HAR/S/KAL	Kalesar Sanctuary
8.	HAR/S/KHA	Khaparwas Bird Sanctuary
9.	HAR/S/NAH	Nahar Sanctuary
10.	HAR/S/SAR	Saraswati Plantation Sanctuary
Himachal Pradesh		
1.	HP/N/GRE	Great Himalayan National Park
2.	HP/S/DAR	Daranghati Sanctuary Part I & II
3.	HP/S/DHA	Dhauladhar Sanctuary
4.	HP/S/GAM	Gamgul Siyabehi Sanctuary
5.	HP/S/KAL	Kalatop - Khajjiar Sanctuary
6.	HP/S/KHO	Khokhan Sanctuary
7.	HP/S/KAN	Kanawar Sanctuary
8.	HP/S/KIA	Kias Sanctuary
9.	HP/S/KUG	Kugti Sanctuary
10.	HP/S/LIP	Lippa Asrang Sanctuary
11.	HP/S/MAN	Manali Sanctuary
12.	HP/S/NAR	Nargu Sanctuary
13.	HP/S/PON	Pong Lake Bird Sanctuary

14.	HP/S/RUP	Rupi Bhaba Sanctuary
15.	HP/S/SAN	Sangla Valley Sanctuary
16.	HP/S/SHI	Shikari Devi Sanctuary
17.	HP/S/TUN	Tundah Sanctuary
Jammu & Kashmir		
1.	J&K/N/KIS	Kishtwar High Altitude National Park
2.	J&K/N/HEM	Hemis National Park
3.	J&K/S/KAR	Karakoram Sanctuary
4.	J&K/S/CHA	Changthang Sanctuary
5.	J&K/S/OVE	Overa Aru Sanctuary
Jharkhand		
1.	JHA/N/RAJ	Rajmahal National Fossil Park
2.	JHA/S/HAZ	Hazaribagh Sanctuary
3.	JHA/S/PAR	Parasnath Sanctuary
4.	JHA/S/UDH	Udhwa Bird Sanctuary
Karnataka		
1.	KAR/N/ANS	Anshi National Park
2.	KAR/N/BAND	Bandipur National Park
3.	KAR/N/BANN	Bannerghatta National park
4.	KAR/N/KUD	Kudremukh National Park
5.	KAR/N/NAG	Nagarhole (Rajiv Gandhi) National Park
6.	KAR/S/ADI	Adichunchanagiri Peacock Sanctuary
7.	KAR/S/ARA	Arabitittu Sanctuary
8.	KAR/S/ATT	Attiveri Sanctuary
9.	KAR/S/BHA	Bhadra Sanctuary
10.	KAR/S/BIL	Billigiri Ranga Swami Sanctuary
11.	KAR/S/BRA	Brahmagiri Sanctuary
12.	KAR/S/DAN	Dandeli Sanctuary
13.	KAR/S/DOR	Doraji Bear Sanctuary
14.	KAR/S/GHA	Ghataprabha Bird Sanctuary
15.	KAR/S/GUD	Gudavi Bird Sanctuary
16.	KAR/S/KAV	Kaveri Sanctuary
17.	KAR/S/MEL	Melkote Sanctuary
18.	KAR/S/MOO	Mookambika Sanctuary
19.	KAR/S/NUG	Nugu Sanctuary

20.	KAR/S/PUS	Pushpagiri Sanctuary
21.	KAR/S/RANE	Ranebennur Black Buck Sanctuary
22.	KAR/S/RANG	Ranganathittu Bird Sanctuary
23.	KAR/S/SHA	Sharavathi Valley Sanctuary
24.	KAR/S/SHE	Shettihalli Sanctuary
25.	KAR/S/SOM	Someshwara Sanctuary
26.	KAR/S/TAL	Talakaveri Sanctuary
Kerala		
1.	KER/N/ERA	Eravikulam National Park
2.	KER/S/ARA	Aralam Sanctuary
3.	KER/S/CHIN	Chinnar Sanctuary
4.	KER/S/WAY	Wayanad Sanctuary
Maharashtra		
1.	MAH/N/AND	Tadoba Andhari Tiger Reserve
2.	MAH/N/NAV	Navegaon National Park
3.	MAH/N/PEN	Pench Tiger Reserve
4.	MAH/N/SAN	Sanjay Gandhi National Park
5.	MAH/S/AMB	Ambabarva Sanctuary
6.	MAH/S/ANR	Aner Dam Sanctuary
7.	MAH/S/BHA	Bhamragarh Sanctuary
8.	MAH/S/BHI	Bhimashankar Sanctuary
9.	MAH/S/BOR	Bor Sanctuary
10.	MAH/S/CHAN	Chandoli Sanctuary
11.	MAH/S/CHAP	Chaprala Sanctuary
12.	MAH/S/DEU	Deulgaon Rehekhuri Sanctuary
13.	MAH/S/GAU	Gautala-Autramghat Sanctuary
14.	MAH/S/GYA	Gyanganga Sanctuary
15.	MAH/S/JAI	Jaikwadi Bird Sanctuary
16.	MAH/S/KAL	Kalusubai Harishchandragad Sanctuary
17.	MAH/S/KAR	Karnala Bird Sanctuary
18.	MAH/S/KAT	Katepurna Sanctuary
19.	MAH/S/MAL	Malwan Marine Sanctuary
20.	MAH/S/MAY	Mayureshwar Supe Sanctuary
21.	MAH/S/NAG	Nagzira Sanctuary
22.	MAH/S/NAI	Naigaon Peacock Sanctuary

23.	MAH/S/NAR	Narnala Bird Sanctuary
24.	MAH/S/PAI	Painganga Sanctuary
25.	MAH/S/RAD	Radhanagri Sanctuary
26.	MAH/S/SAG	Sagreshwar Sanctuary
27.	MAH/S/TIP	Tipeshwar Sanctuary
28.	MAH/S/WAN	Wan Sanctuary
29.	MAH/S/YAW	Yawal Sanctuary
30.	MAH/S/YED	Yedshi Ramling Ghat Sanctuary
Manipur		
1.	MAN/N/KEI	Keibul Lamjao National Park
2.	MAN/S/YAN	Yangoupokpi Lokchao Sanctuary
Meghalaya		
1.	MEG/N/BAL	Balpakram National Park
2.	MEG/N/NOK	Nokrek National Park
3.	MEG/S/BAG	Baghmara Pitcher Plant Sanctuary
4.	MEG/S/NON	Nongkhyllem Sanctuary
5.	MEG/S/SIJ	Siju Sanctuary
Mizoram		
1.	MIZ/N/MUR	Murlen National Park
2.	MIZ/N/PHA	Phawngpui (Blue Mountain) National Park
3.	MIZ/S/DAM	Dampa Tiger Reserve
4.	MIZ/S/KHA	Khawnglung Sanctuary
5.	MIZ/S/LEN	Lengteng Sanctuary
6.	MIZ/S/NGE	Ngengpui Sanctuary
Madhya Pradesh		
1.	MP/N/BAN	Bandhavgarh Tiger Reserve (inc Panpatha Sanctuary)
2.	MP/N/GHU	Ghughuwa Fossil National Park
3.	MP/N/PEN	Pench National Park
4.	MP/N/SAT	Satpura National Park
5.	MP/N/VAN	Van Vihar National Park
6.	CHT/S/BAD	Badalkhol Sanctuary
7.	CHT/S/BAG	Bagdara Sanctuary
8.	MP/S/GAN	Gandhi Sagar Sanctuary
9.	MP/S/KAR	Karera Great Indian Bustard Sanctuary

10.	MP/S/KHE	Kheoni Sanctuary
11.	MP/S/KUN	Kuno Sanctuary
12.	MP/S/NAR	Narsingarh Sanctuary
13.	MP/S/NAT	National Chambal Sanctuary
14.	MP/S/NOR	Noradehi Sanctuary
15.	MP/S/ORC	Orcha Sanctuary
16.	MP/S/PEN	Pench Sanctuary
17.	MP/S/RAL	Ralamandal Sanctuary
18.	MP/S/SAI	Sailana Sanctuary
19.	MP/S/SAN	Sanjay (Dubri) Sanctuary
20.	MP/S/SAR	Sardarpur Sanctuary
21.	MP/S/SON	Son Gharial Sanctuary
Nagaland		
1.	NAG/N/INT	Intanki National Park
2.	NAG/S/FAK	Fakim Sanctuary
3.	NAG/S/PUL	Pulie Badze Sanctuary
4.	NAG/S/RAN	Rangapahar Sanctuary
Orissa		
1.	ORI/N/SIM	Similipal Tiger Reserve
2.	ORI/S/BAD	Badarma Sanctuary
3.	ORI/S/BAI	Baisapalli Sanctuary
4.	ORI/S/BAL	Balukhand-Konark Sanctuary
5.	ORI/S/BHI	Bhittarkanika Sanctuary
6.	ORI/S/CHA	Chandaka-Dompada Sanctuary
7.	ORI/S/CHI	Chilika Sanctuary
8.	ORI/S/DEB	Debrigarh Sanctuary
9.	ORI/S/HAD	Hadgarh Sanctuary
10.	ORI/S/KAR	Karlapat Sanctuary
11.	ORI/S/KHA	Khalasuni Sanctuary
12.	ORI/S/KOT	Kotgarh Sanctuary
13.	ORI/S/KUL	Kuldiha Sanctuary
14.	ORI/S/LAK	Lakhari Valley Elephant Sanctuary
15.	ORI/S/SAT	Satkosia Gorge Sanctuary
16.	ORI/S/SUN	Sunabeda Sanctuary

Punjab		
1.	PUN/S/ABO	Abohar Sanctuary
2.	PUN/S/AIS	Bir Aishwan Sanctuary
3.	PUN/S/BHA	Bir Bhadson Sanctuary
4.	PUN/S/BHU	Bir Bhunerheri Sanctuary
5.	PUN/S/DOS	Bir Doshamajan Sanctuary
6.	PUN/S/GUR	Bir Gurdial Pura Sanctuary
7.	PUN/S/HAR	Harike Lake Bird Sanctuary
8.	PUN/S/MAH	Bir Mahas Sanctuary
9.	PUN/S/MOT	Bir Moti Bag Sanctuary
10.	PUN/S/TAK	Takhani Rehmapur Sanctuary
Rajasthan		
1.	RAJ/N/DES	Desert National Park
2.	RAJ/N/KEO	Keoladeo Ghana National Park
3.	RAJ/S/BAS	Bassi Sanctuary
4.	RAJ/S/BAI	Bainsroadgarh Sanctuary
5.	RAJ/S/JAM	Jamwa Ramgarh Sanctuary
6.	RAJ/S/JAI	Jaisamand Sanctuary
7.	RAJ/S/KAI	Kailadevi Sanctuary
8.	RAJ/S/KUM	Kumbalgarh Sanctuary
9.	RAJ/S/NAH	Nahargarh Sanctuary
10.	RAJ/S/PHU	Phulwari Ki Nal Sanctuary
11.	RAJ/S/SAJ	Sajjangarh Sanctuary
12.	RAJ/S/SIT	Sitamata Sanctuary
13.	RAJ/S/TAL	Tal Chappar Sanctuary
14.	RAJ/S/TOD	Todgarh Rawali Sanctuary
15.	RAJ/S/VAN	Van Vihar Sanctuary
Sikkim		
1.	SIK/N/KHA	Khangchendzonga National Park
2.	SIK/S/BAR	Barsey Rhododendron Sanctuary
3.	SIK/S/FAM	Fambung Lho Sanctuary
4.	SIK/S/KYON	Kyongnosla Alpine Sanctuary
5.	SIK/S/MAE	Maenam Sanctuary
6.	SIK/S/SHIN	Shingba Rhododendron Sanctuary

Tamil Nadu		
1.	TN/N/GUL	Gulf of Mannar Marine National Park
2.	TN/S/GUI	Guindy National Park
3.	TN/N/IND	Indira Gandhi National Park & Sanctuary
4.	TN/N/MUD	Mudumalai National Park & Sanctuary
5.	TN/N/MUK	Mukurthi National Park
6.	TN/S/CHI	Chitrangudi Sanctuary
7.	TN/S/GRI	Grizzled Squirrel Sanctuary
8.	TN/S/KAN	Kanjirankulam Birds Sanctuary
9.	TN/S/KARA	Karaivetti Bird Sanctuary
10.	TN/S/KARI	Karikili Bird Sanctuary
11.	TN/S/KOO	Koontakulam Bird Sanctuary
12.	TN/S/MEL	Mela Selvanur and Kela Selvanur Bird Sanctuary
13.	TN/S/POIN	Point Calimere Sanctuary
14.	TN/S/PUL	Pulicat Bird Sanctuary
15.	TN/S/UDA	Udayamarthandapuram Bird Sanctuary
16.	TN/S/VAD	Vaduvoor Bird Sanctuary
17.	TN/S/VALL	Vallanad Black Buck
18.	TN/S/VED	Vedanthangal Bird Sanctuary
19.	TN/S/VELL	Vellode Birds Sanctuary
20.	TN/S/VET	Vettangudi Birds Sanctuary
Tripura		
1.	TRI/S/GUM	Gumati Sanctuary
2.	TRI/S/TRI	Trishna Sanctuary
Uttar Pradesh		
1.	UP/S/BAK	Bakhira Sanctuary
2.	UP/S/CHA	Chandraprabha Sanctuary
3.	UP/S/KAI	Kaimur Sanctuary
4.	UP/S/KAT	Katerniaghat Sanctuary
5.	UP/S/LAK	Lakh Bahosi Sanctuary
6.	UP/S/MAH	Mahaveer Swami Sanctuary
7.	UP/S/NAT	National Chambal Sanctuary
8.	UP/S/NAW	Nawabganj Sanctuary
9.	UP/S/OKH	Okhla Sanctuary

10.	UP/S/PAR	Parvati Aranya Sanctuary
11.	UP/S/PAT	Patna Sanctuary
12.	UP/S/RAN	Ranipur Sanctuary
13.	UP/S/SAMN	Saman Sanctuary
14.	UP/S/SAMS	Samaspur Sanctuary
15.	UP/S/SAN	Sandi Sanctuary
16.	UP/S/SOHA	Sohagiberva Sanctuary
17.	UP/S/SOHI	Sohilwa Sanctuary
18.	UP/S/SURA	Surahatal Sanctuary
19.	UP/S/SURS	Sur Sarovar Sanctuary
20.	UP/S/TUR	Turtle Sanctuary
21.	UP/S/VIJ	Vijay Sagar Sanctuary
Uttaranchal		
1.	UTT/N/COR	Corbett National Park
2.	UTT/N/GAN	Gangotri National Park
3.	UTT/N/GOV	Govind National Park and Sanctuary
4.	UTT/S/ASK	Askote Sanctuary
5.	UTT/N/BIN	Binog Mountain Quail Sanctuary
6.	UTT/S/BIN	Binsar Sanctuary
7.	UTT/S/KED	Kedarnath Muskdeer Sanctuary
8.	UTT/S/SON	Sonanadi Sanctuary
West Bengal		
1.	WB/N/GOR	Gorumara National Park
2.	WB/N/NEO	Neora Valley National Park
3.	WB/N/SUN	Sunderban National Park & Sajnakhali Sanctuary
4.	WB/S/BAL	Ballavpur Sanctuary
5.	WB/S/BET	Bethuadahari Sanctuary
6.	WB/S/BIB	Bibhuti Bhushan Sanctuary
7.	WB/S/CHA	Champramari Sanctuary
8.	WB/S/HAL	Halliday Island Sanctuary
9.	WB/S/LOT	Lothian Island Sanctuary
10.	WB/S/RAI	Raiganj Sanctuary
11.	WB/S/RAM	Ramnabagan Sanctuary
12.	WB/S/SEN	Senchal Sanctuary

Total: 312 + 3 protected areas. Three of the responses received (listed below) gave data for two PAs in the same questionnaire.

MP/N/BAN Bandhavgarh Tiger Reserve (inc Panpatha Sanctuary

TN/S/MEL Mela Selvanur and Kela Selvanur Bird Sanctuary

WB/N/SUN Sunderban National Park & Sajnakhali Sanctuary

ANNEXURE III A

Number of PAs to whom questionnaires (Q1) were sent, and list of PAs that had not sent in filled-in questionnaires by 20/02/2003

S. no	STATE	TOTAL no of PAs	PAs from which filled-in questionnaires were not received
1.	Andaman & Nicobar Islands	107 (Questionnaire required only for 15)[39]	1. Campbell bay 2. Galathea (N+S) 3. Wandoor 4. North, Middle, South Button 5. Mount Harriet 6. Rani Jhansi 7. Lohabarrack 8. Megapode 9. South Sentinel 10. Tillongchong
2.	Andhra Pradesh	25	1. Kinnerasani 2. Nagarjuna sagar 3. Rollapadu 4. Lankamalleshwara 5. Penusila Narsimha
3.	Arunachal Pradesh	13	1. Dibang 2. Eagle Nest 3. Itanagar 4. Pakhui 5. Sessa Orchid 6. Tale valley 7. Kane
4.	Assam	22	1. Bhirjan Borajan Podumon 2. Bordoibam Bilmukh 3. Chakrashila 4. Marat Longri
5.	Bihar	11	1. Valmiki (N+S) 2. Bhimbandh 3. Gautam Budh 4. KabarTal 5. Kaimur 6. Nagi Dam 7. Nakti Dam 8. Udaipur 9. Vikramshila
6.	Chandigarh	1	
7.	Chattisgarh	13.	1. Semarsot 2. Semapur
8.	Daman & Diu	1	1. Fudam

[39] The remaining NPS were mostly small, isolated, islands with no human population and little or no human pressures.

S. no	STATE	TOTAL no of PAs	PAs from which filled-in questionnaires were not received
9.	Delhi	1	
10.	Goa	4	1. Bhagwan Mahavir (N+S) 2. Cotigao
11.	Gujarat	25	1. Gir (N+S) 2. Marine(N+S) 3. Velavadar 4. Balram Ambaji 5. Barda 6. Dhumkal 7. Gaga 8. Hingolgarh 9. Jambhugodha 10. Jessore 11. Kachch Desert 12. Khijadiya 13. Kutch Bustard 14. Nal Sarovar 15. Narayan Sarovar 16. Paniya 17. Porbandar 18. Rampura 19. Thol
12.	Haryana	10	
13.	Himachal Pradesh	3	1. Pin valley 2. Bandli 3. Chail 4. Churdhar 5. Darlaghat 6. Gobind sagar 7. Kibber 8. Majathal hasrang 9. Naina Devi 10. Renuka 11. Sainj?? 12. Sechu Tuan Nala 13. Shilli 14. Shimla water Catchment 15. Simababara 16. Talra 17. Tirthan
14.	Jammu & Kashmir	23	1. City Forest 2. Dachigam 3. Baltal 4. Gulmarg 5. Hirapora 6. Hokersar 7. Jasrota 8. Lachipora

S. no	STATE	TOTAL no of PAs	PAs from which filled-in questionnaires were not received
			9. Limber 10. Nagoneri 11. Nandini 12. Overa 13. Raj Parian 14. Ramnagar Rakha 15. Salim Ali 16. Surinsar Mansar 17. Thajwas 18. Trikuta
15.	Jharkhand	12	1. Betla 2. Dalma 3. Koderma 4. Lawalong 5. Mahuadand 6. Palamua 7. Palkot 8. Topchanchi
16.	Karnataka	27	1. Anaiketty
17.	Kerala	15	1. Periyar (N+S) 2. Silent Valley 3. Chimmony 4. Idukki 5. Neyar 6. parambikulam 7. Peechi Vazani 8. Peppara 9. Shendurney 10. Thattekad
18.	Lakshadweep	1	1. Pitti Island
19.	Madhya Pradesh	33	1. Kanha 2. Madhav 3. Panna 4. Sanjay NP 5. Bori 6. Ghatigaon 7. Ken Gharial 8. Panchmarhi 9. Panpatha 10. Phen 11. Ratapani 12. Singhori 13. Veerangana Durgawati
20.	Maharashtra	39	1. Koyna 2. Dajipur 3. Nanaj 4. Nandur Madhmeshwar 5. Phansad

S. no	STATE	TOTAL no of PAs	PAs from which filled-in questionnaires were not received
			6. Tansa 7. Melghat (N+S)*
21.	Manipur	3	1. Sirohi
22.	Meghalaya	5	
23.	Mizoram	6	
24.	Nagaland	4	
25.	Orissa	20	1. Nandan Kanan 2. Gahirmatha Marine
26.	Punjab	10	
27.	Rajasthan	26	1. Ranthambhore (N+S) 2. Sariska (N+S) 3. Darrah 4. Jawahar Sagar 5. Mount Abu 6. National Chambal 7. Ramgarh Vishdhari 8. Sawai Mansingh 9. Shergarh
28.	Sikkim	6	
29.	Tamilnadu	24	1. Kalakad 2. Mundanthurai
30.	Tripura	4	1. Rao 2. Sepahijala
31.	Uttar Pradesh	24	1. Dudhwa 2. Kishanpur 3. Hastinapur
32.	Uttaranchal	12	1. Nanda Devi 2. Rajaji 3. Valley of Flowers
33.	West Bengal	20	1. Buxa (N+S) 2. Singalila 3. Jaldapara 4. Jorepokri 5. Mahananda 6. Narendrapur
	Total No of PAs who were sent Q1	**489**	
	Q1 not yet received		**160**

* We had received the questionnaire for Melghat but it had sections in which data was only for Gugamal and in other sections data for both together.

ANNEXURE III B
FIELD VISITED PROTECTED AREAS

Sno	STATES and UNION TERRITORIES/ PAs
	ANDAMAN AND NICOBAR ISLANDS
1	CAMPBELL BAY NATIONAL PARK
2	GALATHEA NATIONAL PARK
3	MARINE/WANDOOR NATIONAL PARK
4	MIDDLE BUTTON NATIONAL PARK
5	MOUNT HARRIET NATIONAL PARK
6	NORTH BUTTON NATIONAL PARK
7	RANI JHANSI NATIONAL PARK
8	SADDLE PEAK NATIONAL PARK
9	SOUTH BUTTON NATIONAL PARK
10	CUTHBERT BAY SANCTUARY
11	GALATHEA SANCTUARY
12	INTERVIEW SANCTUARY
13	LOHABARRACK (SALTWATER CROCODILE) SANCTUARY
	ANDHRA PRADESH
14	KASU BRAHMANANDA REDDY NATIONAL PARK
15	MAHAVEER HARINA NATIONAL PARK
16	MRUGAVANI NATIONAL PARK
17	SHRI VENKATESHWARA NATIONAL PARK
18	CORINGA SANCTUARY
19	ETURNAGARAM SANCTUARY
20	GUNDLA BRAHMESHWARAM SANCTUARY
21	KAWAL SANCTUARY
22	KINNERSANI SANCTUARY
23	KOLLERU SANCTUARY
24	KRISHNA SANCTUARY
25	MANJIRA SANCTUARY
26	NAGAR JUNASAGAR (TIGER RESERVE) SANCTUARY
27	NELAPATTU SANCTUARY
28	PAKHAL SANCTUARY
29	PAPIKONDA SANCTUARY
30	PRANHITA SANCTUARY
31	PULICAT SANCTUARY
32	ROLLAPADU SANCTUARY
33	SRI VENKATESWARA SANCTUARY
	ASSAM
34	MANAS (TIGER RESERVE) NATIONAL PARK
35	DIBRU SAIKHOWA SANCTUARY
36	GIBBON SANCTUARY
37	LAOKHOWA SANCTUARY
38	MANAS (TIGER RESERVE) SANCTUARY
39	ORANG SANCTUARY
40	PANIDIHING SANCTUARY
	CHATTISGARH
41	ACHANAKMAR SANCTUARY
	HIMACHAL PRADESH
42	DARANGHATI I & II SANCTUARY
43	DHAULADHAR SANCTUARY
44	KALATOP-KHAJJAR SANCTUARY
45	KANAWAR SANCTUARY

ANNEXURE III B
FIELD VISITED PROTECTED AREAS

Sno	STATES and UNION TERRITORIES/ PAs
46	KHOKHAN SANCTUARY
47	KIAS SANCTUARY
48	KUGTI SANCTUARY
49	LIPPA ASRANG SANCTUARY
50	MANALI SANCTUARY
51	RUPI BHABA SANCTUARY
52	SANGLA SANCTUARY
	JAMMU & KASHMIR
53	HEMIS HIGH ALTITUDE NATIONAL PARK
54	CHANGTHANG SANCTUARY
55	KARAKORAM SANCTUARY
	KARNATAKA
56	BANDIPUR (TR) NATIONAL PARK
57	KUDREMUKH NATIONAL PARK
58	BHADRA SANCTUARY
59	BILLIGIRI RANGA SWAMY SANCTUARY
60	BRAHMAGIRI SANCTUARY
61	MOOKAMBIKA SANCTUARY
62	PUSHPAGIRI SANCTUARY
63	SHARAVATHI VALLEY SANCTUARY
64	SHETTIHALLY SANCTUARY
65	SOMESHWARA SANCTUARY
66	TALAKAVERI SANCTUARY
	KERALA
67	ERAVIKULAM NATIONAL PARK
68	PERIYAR (TIGER RESERVE) NATIONAL PARK
69	SILENT VALLEY NATIONAL PARK
70	CHIMMONY SANCTUARY
71	CHINNAR SANCTUARY
72	IDUKKI SANCTUARY
73	NEYYAR SANCTUARY
74	PARAMBIKULLAM SANCTUARY
75	PEECHI VAZANI SANCTUARY
76	PEPPARA SANCTUARY
77	PERIYAR SANCTUARY
78	SHENDURUNY SANCTUARY
79	THATTIKAD SANCTUARY
80	WAYANAD SANCTUARY
	MADHYA PRADESH
81	MADHAV NATIONAL PARK
	MAHARASHTRA
82	GUGAMAL (TR) NATIONAL PARK
83	AMBABARWA SANCTUARY
84	BHIMASHANKAR SANCTUARY
85	DAJIPUR SANCTUARY
86	KOYNA SANCTUARY
87	MELGHAT SANCTUARY
88	NANAJ SANCTUARY
89	NARNALA SANCTUARY
90	RADHANAGARI SANCTUARY

ANNEXURE III B
FIELD VISITED PROTECTED AREAS

Sno	STATES and UNION TERRITORIES/ PAs
91	REHEKURI BLACKBUCK SANCTUARY
92	WAN SANCTUARY
	MEGHALAYA
93	BALPAKRAM NATIONAL PARK
94	NOKREK NATIONAL PARK
95	BAGHMARA SANCTUARY
96	NONGKHYLLEM SANCTUARY
97	SIJJU SANCTUARY
	MIZORAM
98	MURLEN NATIONAL PARK
99	DAMPA SANCTUARY
100	NGENGPUI SANCTUARY
	NAGALAND
101	INTANKI SANCTUARY
102	PULIEBADZE SANCTUARY
103	RANGAPAHAR SANCTUARY
	ORISSA
104	DEBRIGARH SANCTUARY
105	KHALASUNI SANCTUARY
106	KOTGARH SANCTUARY
107	LAKHARI VALLEY SANCTUARY
108	BAISIPALLI SANCTUARY
109	SATKOSIA GORGE SANCTUARY
110	SUNABEDA SANCTUARY
111	BADARMA (Ushakothi) SANCTUARY
	PUNJAB
112	HARIKE LAKE SANCTUARY
	RAJASTHAN
113	JAISAMAND SANCTUARY
114	JAMWA RAMGARH SANCTUARY
115	KUMBHALGARH SANCTUARY
116	MOUNT ABU SANCTUARY
117	RAMGARH VISDHARI SANCTUARY
	SIKKIM
118	KHANGCHENDZONGA NATIONAL PARK
119	FAMBUNG LHO SANCTUARY
120	KYONGHOSLA SANCTUARY
121	MAENAM SANCTUARY
122	SINGHBA SANCTUARY
	TRIPURA
123	GUMATI SANCTUARY
124	RAO SANCTUARY
125	TRISHNA SANCTUARY
	TAMIL NADU
126	INDIRA GANDHI NATIONAL PARK
127	MARINE NATIONAL PARK
128	MUDUMALAI NATIONAL PARK
129	MUKURTHI NATIONAL PARK
130	ANAMALAI (INDIRA GANDHI) SANCTUARY
131	MUDUMALAI SANCTUARY

ANNEXURE III B
FIELD VISITED PROTECTED AREAS

Sno	STATES and UNION TERRITORIES/ PAs
	UTTARANCHAL
132	CORBETT (TIGER RERSERVE) NATIONAL PARK
133	GANGOTRI NATIONAL PARK
134	GOVIND PASHU VIHAR NATIONAL PARK
135	ASKOT SANCTUARY
136	BINSAR SANCTUARY
137	GOVIND PASHU VIHAR SANCTUARY
	WEST BENGAL
138	SUNDERBANS NATIONAL PARK
139	SAJNAKHALI SANCTUARY

ANNEXURE IV

List of Central and State Schemes Relevant to Wildlife Management

EIGHTH FIVE YEAR PLAN AND ANNUAL PLAN 1995-96

Schematic Break-up of Outlays and Expenditure

STATE	SECTOR	SUB-SECTOR	SCHEME	TYPE OF SCHEME	State Share	Central Share	HEADS					
												(Rs. in Lakhs)
							Total Allocation for the Eighth Plan (1992-97)	Expenditure (1992-93)	Expenditure (1993-94)	Approved Outlay (1994-95)	Anticipated Expenditure (1994-95)	Proposed Outlay (1995-96)
A&N	AGRI&AA	Crop Husbandry	Forestry and Wildlife	State					444.45	533.20	543.10	579.67
A&N	AGRI&AA	Crop Husbandry	Soil and Water Conservation	State			220.00			47.20	47.20	55.26
A&N	AGRI&AA	Crop Husbandry	Forestry and Wildlife	State			2500.00			533.20	53.10	579.67
A&N	FOR&WL	Forestry and Wildlife	Intensification of management	State			16.80		0.00	10.00	10.00	3.50
A&N	FOR&WL	Forestry and Wildlife	Forestry Research	State			49.65		13.84	15.00	15.00	10.75
A&N	FOR&WL	Forestry and Wildlife	Training of staff	State			37.20		2.48	7.55	7.55	8.70
A&N	FOR&WL	Forestry and Wildlife	Survey demonstration and settlement of forests area	State			57.00		10.09	12.00	12.00	13.10
A&N	FOR&WL	Forestry and Wildlife	Natural regeneration of forests	State			440.00		69.92	77.00	77.00	80.00
A&N	FOR&WL	Forestry and Wildlife	Development of minor forest produce	State			33.00		9.56	6.00	6.60	8.00
A&N	FOR	Forests	Action Plan for Great Nicobar Biosphere	State			0.00		1.71	40.05	0.00	40.05

ANNEXURE IV

List of Central and State Schemes Relevant to Wildlife Management

STATE	SECTOR	SUB-SECTOR	SCHEME	TYPE OF SCHEME	State Share	Central Share	HEADS					
												(Rs. in Lakhs)
							Total Allocation for the Eighth Plan (1992-97)	Expenditure (1992-93)	Expenditure (1993-94)	Approved Outlay (1994-95)	Anticipated Expenditure (1994-95)	Proposed Outlay (1995-96)
A&N	FOR	Forests	Assistance for management of coral reaf of A&N Islands	State			0.00		0.00	6.68	0.00	6.68
A&N	FOR	Forests	Action Plan for conservation and management of Andman and Nicobar mangroves	State			0.00		0.00	31.90	0.00	31.90
AP	FOR	Scheme retained as CSS	Sanctuaries preservation of degraded forestry	CSS		50.00	500.00		137.88	155.00	150.00	280.00
AP	FOR	Scheme to be transfered to the State	Already transfered : Forest protection (Biotic Intereference)	CSS		50.00	80.00					
AP	ST&E	Science, Technology & Environment	Kolleru Lake Development	State			25.00			5.00	5.00	5.00
ASS	FOR&WL	Agricultural Research and Education	Wildlife preservation : Strengthening of Wildlife organisation	State			150.00			30.00	30.00	31.00
ASS	FOR&WL	Agricultural Research and Education	Wildlife preservation : Development/Management of Wildlife AReas	State			??			50.00	50.00	52.00

ANNEXURE IV

List of Central and State Schemes Relevant to Wildlife Management

STATE	SECTOR	SUB-SECTOR	SCHEME	TYPE OF SCHEME	State Share	Central Share	HEADS					
												(Rs. in Lakhs)
							Total Allocation for the Eighth Plan (1992	Expenditure (1992-93)	Expenditure (1993-94)	Approved Outlay (1994-95)	Anticipated Expenditure (1994-95)	Proposed Outlay (1995-96)
ASS	FOR&WL	Agricultural Research and Education	Zoological park : State Zoo	State			150.00			28.00	28.00	30.00
ASS	FOR&WL	Agricultural Research and Education	Zoological Park : Control of Poaching	State			20.00			4.00	4.00	4.00
ASS	FOR&WL	Agricultural Research and Education	Public Garden : Development of Botanical gArden	State			100.00			16.00	16.00	15.00
ASS	FOR&WL	Agricultural Research and Education	Biotic Interference	State			100.00			4.00	4.00	1.00
ASS	FOR&WL	Agricultural Research and Education	Conservation of Rhino	State						5.00	5.00	50.00
ASS	FOR&WL	Agricultural Research and Education	Tiger Project	CSS			225.00			38.00	38.00	40.00
ASS	FOR&WL	Agricultural Research and Education	Assistance to Guwahati Zoo	CSS			20.00			3.00	3.00	3.00
ASS	FOR&WL	Agricultural Research and Education	Assistance to Kaziranga National park	CSS			20.00			3.00	3.00	3.00
ASS	FOR&WL	Agricultural Research and Education	Barnadi Wildlife Sanctuary	CSS			20.00			3.00	3.00	3.00

ANNEXURE IV

List of Central and State Schemes Relevant to Wildlife Management

STATE	SECTOR	SUB-SECTOR	SCHEME	TYPE OF SCHEME	State Share	Central Share	HEADS					
												(Rs. in Lakhs)
							Total Allocation for the Eighth Plan (1992	Expenditure (1992-93)	Expenditure (1993-94)	Approved Outlay (1994-95)	Anticipated Expenditure (1994-95)	Proposed Outlay (1995-96)
ASS	FOR&WL	Agricultural Research and Education	Nameri Wildlife Sanctuary	CSS			20.00			3.00	3.00	3.00
ASS	FOR&WL	Agricultural Research and Education	Captive Breeding	CSS			20.00			3.00	3.00	3.00
ASS	FOR&WL	Agricultural Research and Education	Wildlife education cum interpretation centre	CSS			30.00			3.00	3.00	3.00
ASS	FOR	Forestry	Preservation of Wildlife	State								
ASS	FOR	Forestry	Botanical garden	State			40.00			11.00	11.00	14.00
ASS	FOR&WL	Forestry	Preservation of Wildlife	Add Plan			30.00			5.00	5.00	10.00
ASS	FOR&WL	Forestry	Botanical Garden	Add Plan			60.00			10.00	10.00	12.00
ASS	FOR	Forestry	Development of infrastructure for protection of forest from biotic interence	CSS	100.00		100.00		5.62	4.00	4.00	1.00
ASS	FOR	Forestry	Assistance for control of poaching and illegal trade	CSS		100.00	20.00		5.60	4.00	5.00	4.00
ASS	FOR	Forestry	100% GA Scheme : Rhino Conservation	CSS		100.00			117.00	5.00	213.00	50.00
ASS	FOR	Forestry	Project tiger	CSS	50.00	50.00	450.00		41.40	76.00	76.00	80.00
ASS	FOR	Forestry	Assistance to Guwahati Zoo	CSS	50.00	50.00	40.00		3.10	6.00	6.00	6.00

ANNEXURE IV

List of Central and State Schemes Relevant to Wildlife Management

STATE	SECTOR	SUB-SECTOR	SCHEME	TYPE OF SCHEME	State Share	Central Share	HEADS					
												(Rs. in Lakhs)
							Total Allocation for the Eighth Plan (1992	Expenditure (1992-93)	Expenditure (1993-94)	Approved Outlay (1994-95)	Anticipated Expenditure (1994-95)	Proposed Outlay (1995-96)
ASS	FOR	Forestry	Development of Kaziranga National Park	CSS	50.00	50.00	40.00					
ASS	FOR	Forestry	Development of Barnadi Wildlife Sanctuary	CSS	50.00	50.00	40.00			6.00	6.00	6.00
ASS	FOR	Forestry	Development of Nameri Wildlife Sanctuary	CSS	50.00	50.00	40.00			6.00	6.00	6.00
ASS	FOR	Forestry	Assistance for Captive Breeding and Rehabilitation of Endangered Species Fauna	CSS	50.00	50.00	40.00			6.00	6.00	6.00
ASS	FOR	Forestry	Assistance for Wildlife Education cum Inter Pretation Centre	CSS	50.00	50.00	60.00			6.00	6.00	6.00
ASS	FOR&WL	Forestry	Management plan	State			150.00			14.00	14.00	16.00
ASS		Schemes retained as CSS	Assistant to Ghy. Zoo	CSS	50.00	50.00	225.00		40.70	38.00	38.00	40.00
ASS		Schemes retained as CSS	Development of Barnadi Wildlife Sanctuary	CSS	50.00	50.00	20.00		1.55	3.00	3.00	3.00
ASS		Schemes retained as CSS	Development of Kaziranga Park	CSS	50.00	50.00	20.00					

ANNEXURE IV

List of Central and State Schemes Relevant to Wildlife Management

STATE	SECTOR	SUB-SECTOR	SCHEME	TYPE OF SCHEME	State Share	Central Share	HEADS					
												(Rs. in Lakhs)
							Total Allocation for the Eighth Plan (1992	Expenditure (1992-93)	Expenditure (1993-94)	Approved Outlay (1994-95)	Anticipated Expenditure (1994-95)	Proposed Outlay (1995-96)
ASS		Schemes retained as CSS	Assistance to captive breeding and rehabilitation to endangered	CSS	50.00	50.00	20.00			3.00	3.00	3.00
ASS		Schemes retained as CSS	Assistance for wildlife education and inter protection centre	CSS	50.00	50.00	30.00			3.00	3.00	3.00
ASS		Schemes retained as CSS	Beneficiary oriented scheme for tribal development	CSS	100.00		100.00			20.00		20.00
ASS		Schemes retained as CSS	Development of Pobitra wildlife Sanctuary	CSS	100.00		150.00			30.00		35.00
ASS		Schemes retained as CSS	Project Elephant	CSS			100.00		21.72	50.00		115.00
ASS		Schemes transferred to state	Rhino Conservation	State	100.00				117.00	5.00	213.00	50.00
ASS		Schemes transferred to state	Asstt. to control of poaching and illegal trade	State			20.00		5.60	4.00	5.00	4.00
ASS		Schemes transferred to state	Development of infrastructure protection of forests to Biotic interference	State			100.00		5.82	4.00	4.00	1.00
BIH	FOR	Forestry	Pola?? Tiger Project	CSS	50.00	50.00	150.00		21.97	40.00	35.00	50.00

ANNEXURE IV

List of Central and State Schemes Relevant to Wildlife Management

STATE	SECTOR	SUB-SECTOR	SCHEME	TYPE OF SCHEME	State Share	Central Share	HEADS					
												(Rs. in Lakhs)
							Total Allocation for the Eighth Plan (1992	Expenditure (1992-93)	Expenditure (1993-94)	Approved Outlay (1994-95)	Anticipated Expenditure (1994-95)	Proposed Outlay (1995-96)
BIH	FOR	Forestry	V??? Tiger Project	CSS	50.00	50.00	150.00		0.00	5.00	5.00	50.00
BIH	AGRI&AA	Forestry & Wildlife	Forestry & Wildlife	State			10391.00			3264.00	1033.92	3264.00
BIH	AGRI&AA	Forestry & Wildlife	Forestry and Wildlife	District			13131.00					
BIH	FOR&WL	Forestry & Wildlife Department	Intensification of Management	State			125.00	5.52	4.82		5.52	
BIH	FOR&WL	Forestry & Wildlife Department	Planning and Monitoring	State			25.00	1.97	1.21		1.25	
BIH	FOR&WL	Forestry & Wildlife Department	Research and evaluation	State			75.00	11.76	4.68		0.22	
BIH	FOR&WL	Forestry & Wildlife Department	Wildlife & Env. Forestry	State			250.00	49.20	14.91		16.85	
BIH	FOR&WL	Forestry & Wildlife Department	Deve.lpment of Sanctuaries	State			500.00					
BIH	FOR&WL	Forestry & Wildlife Department	Development of National Park	State	50.00	50.00	50.00					
BIH	FOR&WL	Forestry & Wildlife Department	Sanjoy Bio. Park	State			395.00	75.00	50.00		50.00	
BIH	FOR&WL	Forestry & Wildlife Department	Ranchi Bio. Park	State			800.00	80.00	27.13		15.22	

ANNEXURE IV

List of Central and State Schemes Relevant to Wildlife Management

STATE	SECTOR	SUB-SECTOR	SCHEME	TYPE OF SCHEME	State Share	Central Share	HEADS					
												(Rs. in Lakhs)
							Total Allocation for the Eighth Plan (1992	Expenditure (1992-93)	Expenditure (1993-94)	Approved Outlay (1994-95)	Anticipated Expenditure (1994-95)	Proposed Outlay (1995-96)
BIH	FOR&WL	Forestry & Wildlife Department	Palamau Tiger Reserve	State	50.00	50.00	150.00	29.16	32.10		36.00	
BIH	FOR&WL	Forestry & Wildlife Department	Valmiki Magger T.P.	State			150.00				5.00	
BIH	FOR&WL	Forestry & Wildlife Department	Control of poaching and illegal trade	State			150.00					
BIH	AGRI&AA	Forestry and Wildlife	Forestry & Wildlife	State					1055.19	3264.00	1033.92	3264.00
CHA	ST&E	Ecology Environment	Conservation and protection of Sukhna wetland	State			2.50			0.50	0.50	0.50
CHA	ST&E	Ecology Environment	Desilting of Sukhna lake	State			1.00			15.00	15.00	14.00
CHA	AGRI&AA	Forestry & Wildlife	Forest conservation and dev.	State			135.00			35.00	35.00	42.00
CHA	AGRI&AA	Forestry & Wildlife	Preservation of wildlife	State			50.00			8.50	8.50	2.40
D&D	FOR&WL	Forest	Fudam Bird Sanctuary, Diu	Centre			26.48		1.50	6.70	6.70	3.45
D&N	FOR&WL	Environment	Wildlife sanctuary	District			30.00		17.26		10.00	2.26
D&N	FOR&WL	Environment	Development of existing zoo	District			32.00		0.00		10.00	2.00
D&N	FOR&WL	Environment	Zoological Park	District			40.00		0.00		5.00	2.00
D&N	ENV/FOR &WL	Environment, Forest & Wildlife	Wildlife Sanctuary	State			30.00			10.00	10.00	2.26

ANNEXURE IV

List of Central and State Schemes Relevant to Wildlife Management

STATE	SECTOR	SUB-SECTOR	SCHEME	TYPE OF SCHEME	State Share	Central Share	HEADS					
												(Rs. in Lakhs)
							Total Allocation for the Eighth Plan (1992	Expenditure (1992-93)	Expenditure (1993-94)	Approved Outlay (1994-95)	Anticipated Expenditure (1994-95)	Proposed Outlay (1995-96)
D&N	ENV/FOR &WL	Environment, Forest & Wildlife	Development of existing zoo	State			32.00			10.00	10.00	2.00
D&N	ENV/FOR &WL	Environment, Forest & Wildlife	Zoological Park (Lion Safari)	State			40.00			5.00	5.00	2.00
GOA	AGRI&AA	Forestry & Wildlife	Forestry & Wildlife	State					298.00	217.00	214.00	233.00
GOA	AGRI&AA	Forestry & Wildlife	Forestry & Wildlife	State			1065.00			217.00	161.00	233.00
GOA	FOR	Schemes retained as CSS	Action Plan for conservation of mangrove ecosystem : Plantation and maintenance of earlier plantation	CSS		100.00			5.20	7.50	7.50	7.00
GOA	FOR	Schemes retained as CSS	Assistance for development of National Parks and sanctuaries at Cotigao	CSS		100.00			2.20	1.77	1.77	2.00
GOA	FOR	Schemes retained as CSS	Assistance for development of National Parks and sanctuaries at Bondla	CSS						0.25	0.25	1.00

ANNEXURE IV

List of Central and State Schemes Relevant to Wildlife Management

STATE	SECTOR	SUB-SECTOR	SCHEME	TYPE OF SCHEME	State Share	Central Share	HEADS					
												(Rs. in Lakhs)
							Total Allocation for the Eighth Plan (1992	Expenditure (1992-93)	Expenditure (1993-94)	Approved Outlay (1994-95)	Anticipated Expenditure (1994-95)	Proposed Outlay (1995-96)
GOA	FOR	Schemes retained as CSS	Assistance for development of National Parks and sanctuaries atBhavwan, Mahavir W.L.S.	CSS					3.20	2.40	2.40	3.00
GOA	FOR	Schemes retained as CSS	Development of National Parks	CSS		100.00			14.91	1.56	1.56	1.00
GOA	FOR	Schemes retained as CSS	Modern forest fire control methods	CSS		100.00				11.88	11.88	12.00
GOA	FOR	Schemes retained as CSS	Assistance for the Development of Dr. Salim Ali Bird Sanctuary, Chorao	CSS		100.00				4.00	4.00	4.00
HAR	FOR&WL	Breeding of Endangered species	Pheasant Breeding centre at Morni	State			30.00	4.33	5.15	4.00	3.00	3.00
HAR	FOR&WL	Development of Buffer Zone	Eco-development of buffer zone of Bhindawas wildlife Sanctuary	State			5.00			0.50	0.50	3.00
HAR	FOR&WL	Development of Buffer Zone	Land acquisition	State			25.00					

ANNEXURE IV

List of Central and State Schemes Relevant to Wildlife Management

STATE	SECTOR	SUB-SECTOR	SCHEME	TYPE OF SCHEME	State Share	Central Share	HEADS					
												(Rs. in Lakhs)
							Total Allocation for the Eighth Plan (1992	Expenditure (1992-93)	Expenditure (1993-94)	Approved Outlay (1994-95)	Anticipated Expenditure (1994-95)	Proposed Outlay (1995-96)
HAR	FOR&WL	Development of Buffer Zone	Development of Wildlife Habitat and extension of mini zoo, Jind in Bir Bara Ban, Jind Wildlife Sanctuary	State			20.00		5.00	5.00	1.70	3.00
HAR	FOR&WL	Development of Buffer Zone	Khaparwas/Chhuchhakwas Wildlife Sanctuary	State			20.00		0.08	0.50	0.50	1.00
HAR	FOR&WL	Development of Buffer Zone	Establishment of Development of Kalesar Wildlife Sanctuary	State						0.50	0.50	3.00
HAR	FOR&WL	Education and Publicity	Deer Park at Chaubi??? Chabutra at Meham	State			15.00	1.72	1.49	5.00	3.50	2.50
HAR	FOR&WL	Education and Publicity	Extension of Zoos in the state	State			110.00	12.20	4.10	19.00	14.00	19.00
HAR	FOR&WL	Habitat Management	Development of Nahar Wildlife Sanctuary	State			20.00	6.67	4.00	4.00	2.50	2.00
HAR	FOR&WL	Habitat Management	Development of Wildlife at Abubshehar Kala Titar Tourist Complex	State			30.00	3.50	2.58	3.00	2.40	3.00
HAR	FOR&WL	Habitat Management	Development of Bhindawas Wildlife Sanctuary	CSS			20.00	1.95	4.10	1.50	2.00	3.00

ANNEXURE IV

List of Central and State Schemes Relevant to Wildlife Management

STATE	SECTOR	SUB-SECTOR	SCHEME	TYPE OF SCHEME	State Share	Central Share	HEADS					
												(Rs. in Lakhs)
							Total Allocation for the Eighth Plan (1992	Expenditure (1992-93)	Expenditure (1993-94)	Approved Outlay (1994-95)	Anticipated Expenditure (1994-95)	Proposed Outlay (1995-96)
HAR	FOR&WL	Habitat Management	Development of Saraswati Plantation Wildlife Sanctuary	CSS			10.00	0.31	1.00	1.00	1.00	3.00
HAR	FOR&WL	Habitat Management	Development of Bir Shikargah Wildlife Sanctuary	State			15.00		2.33	4.00	3.00	7.00
HAR	FOR&WL	Habitat Management	Development of Abubshehar Wildlife Sanctuary	State			10.00	1.28		2.00	1.00	3.00
HAR	FOR&WL	Protection of Wildlife	Protection of Wildlife in Multiple use areas	State			125.00	8.84	9.30	20.00	19.40	20.00
HAR	FOR&WL	Protection of Wildlife	Control over poaching and illegal trade in wildlife and its products	State			10.00	1.19	1.50	1.00	1.00	2.00
HAR	WL	Wildlife Preservation	Protection of wildlife in multiple use areas	State			125.00	8.84	9.30	20.00	19.40	20.00
HAR	WL	Wildlife Preservation	Control over poaching and illegal trade in wildlife and its products	State			10.00	1.19	1.50	1.00	1.00	2.00
HAR	WL	Wildlife Preservation	Development of Nahar wildlife sanctuary	State			20.00	6.67	4.00	4.00	2.50	2.00

ANNEXURE IV

List of Central and State Schemes Relevant to Wildlife Management

STATE	SECTOR	SUB-SECTOR	SCHEME	TYPE OF SCHEME	State Share	Central Share	HEADS					
												(Rs. in Lakhs)
							Total Allocation for the Eighth Plan (1992	Expenditure (1992-93)	Expenditure (1993-94)	Approved Outlay (1994-95)	Anticipated Expenditure (1994-95)	Proposed Outlay (1995-96)
HAR	WL	Wildlife Preservation	Development of Wildlife at Abubshehar Kala Titar Tourist	State			30.00	3.50	2.58	3.00	2.40	3.00
HAR	WL	Wildlife Preservation	Development of Bhindawas Wildlife Sanctuary	CSS	60.00	40.00	20.00	1.95	4.10	1.50	2.00	3.00
HAR	WL	Wildlife Preservation	Development of Saraswati Plantion Wildlife Sanctuary	CSS	60.00	40.00	10.00	0.31	1.00	1.00	1.00	3.00
HAR	WL	Wildlife Preservation	Development of Bir Shikargah Wildlife Sanctuary	State			15.00		2.33	4.00	3.00	7.00
HAR	WL	Wildlife Preservation	Development of Abubshehar Wildlife Sanctuary	State			10.00	1.28		2.00	1.00	3.00
HAR	WL	Wildlife Preservation	Deer Park at Chaubisi-ka-Chabutra at Meham	State			15.00	1.72	1.49	5.00	3.50	2.50
HAR	WL	Wildlife Preservation	Extension of Zoos in the State	State			110.00	12.20	4.10	19.00	14.00	19.00
HAR	WL	Wildlife Preservation	Pheasant breading centre at Morni	State			30.00	4.33	5.15	4.00	3.00	3.00
HAR	WL	Wildlife Preservation	Eco-development of Buffer Zone of National Parks and Bhindawas Wildlife Sanctuary	CSS	60.00	40.00	5.00			0.50	0.50	3.00

ANNEXURE IV

List of Central and State Schemes Relevant to Wildlife Management

STATE	SECTOR	SUB-SECTOR	SCHEME	TYPE OF SCHEME	State Share	Central Share	HEADS					
												(Rs. in Lakhs)
							Total Allocation for the Eighth Plan (1992	Expenditure (1992-93)	Expenditure (1993-94)	Approved Outlay (1994-95)	Anticipated Expenditure (1994-95)	Proposed Outlay (1995-96)
HAR	WL	Wildlife Preservation	Land aquisition	State			25.00					
HAR	WL	Wildlife Preservation	Development of Wildlife habitat and extension of Mini Zoo Jind in Bir-Bara Ban, Jind Wildlife Sanctuary	State			20.00		5.00	5.00	1.70	3.00
HAR	WL	Wildlife Preservation	Chhuchhkwas Wildlife Sanctuary	CSS	80.00	20.00	20.00		0.08	0.50	0.50	1.00
HAR	WL	Wildlife Preservation	Establishment and development of Kalesar Wildlife Sanctuary	CSS	67.00	33.00				0.50	0.50	3.00
HAR	WL	Wildlife Preservation	Development of Bhindawas Wildlife Sanctuary	Centre	60.00	40.00	20.00	3.90		4.00	4.00	5.00
HAR	WL	Wildlife Preservation	Development of Saraswati Plantation Wildlife Sanctuary	Centre	60.00	40.00	25.00	6.75	1.00	4.00	4.65	5.00
HAR	WL	Wildlife Preservation	Ecodevelopment of Buffer zone of National Parks in Bhindawas Wildlife Sanctuary	Centre	60.00	40.00	20.00	4.30	4.00	1.00	3.60	4.00
HAR	WL	Wildlife Preservation	Chhelchhalwas/Khep arwas wildlife Sanctuary	Centre	80.00	20.00	20.00	5.00	2.00	5.00	4.88	5.00

ANNEXURE IV

List of Central and State Schemes Relevant to Wildlife Management

STATE	SECTOR	SUB-SECTOR	SCHEME	TYPE OF SCHEME	State Share	Central Share	HEADS					
												(Rs. in Lakhs)
							Total Allocation for the Eighth Plan (1992	Expenditure (1992-93)	Expenditure (1993-94)	Approved Outlay (1994-95)	Anticipated Expenditure (1994-95)	Proposed Outlay (1995-96)
HAR	WL	Wildlife Preservation	Establishment and development of Kalesar Wildlife Sanctuary	Centre	67.00	33.00			2.00	2.00	2.35	6.00
HAR	WL	Wildlife Preservation	Nagalmala Wildlife Sanctuary	Centre			25.00					
HAR	WL	Wildlife Preservation	Chhilchhila Wildlife Sanctuary	Centre								
HAR	WL	Wildlife Preservation	Control over Poaching	Centre				0.36				
HAR	WL	Wildlife Preservation	Development of Sultanpur National Park	CSS	100.00		10.00	1.51	1.00		2.75	5.00
HAR	WL	Wildlife Preservation	Preparation to Educational Material Ecology of Sultanpur National Park	CSS	100.00						1.00	0.74
HAR	AGRI&AA	Wildlife Preservation	Wildlife Preservation	District			500.00	42.29	47.63	75.00		85.00
HAR	FOR&WL	Wildlife Preservation	Forestry and Wildlife	State			500.00	42.29	47.63	75.00	60.00	82.50
HP	AGRI&AA	Forestry & Wildlife	Wildlife	State			700.00	169.00	150.89	169.00	169.00	487.00
HP	FOR&WL	Social and Farm Forestry	World Bank Aided Forestry Res. & Edu. Pro.	Centre			0.00	0.00	0.00	0.00	0.00	150.00

ANNEXURE IV

List of Central and State Schemes Relevant to Wildlife Management

STATE	SECTOR	SUB-SECTOR	SCHEME	TYPE OF SCHEME	State Share	Central Share	HEADS					
												(Rs. in Lakhs)
							Total Allocation for the Eighth Plan (1992	Expenditure (1992-93)	Expenditure (1993-94)	Approved Outlay (1994-95)	Anticipated Expenditure (1994-95)	Proposed Outlay (1995-96)
HP	WL	Wildlife	State Sector Scheme : Wildlife Management and Nature Conservation	Centre			100.00	13.00	13.12	15.00	15.00	16.00
HP	WL	Wildlife	State Sector Scheme : Improvement & Development of Wild Life Sanctuary	Centre			150.00	29.14	43.82	45.92	45.92	50.00
HP	WL	Wildlife	State Sector Scheme : Development of Himalayan Zoological Park	Centre			175.00	75.52	49.48	61.26	61.26	71.00
HP	WL	Wildlife	State Sector Scheme : Strengthening of Wild Life Wing (RNS)	Centre			15.00	0.00	0.00	0.00	0.00	0.00
HP	WL	Wildlife	State Sector Scheme : Awareness of Nature & Wildlife Conservation in Youths	Centre		50.00	20.00	3.34	2.95	3.38	3.38	4.00
HP	WL	Wildlife	State Sector Scheme : Captive Breeding/Rehab. For Endangered Species	Centre		50.00	25.00	3.91	4.32	5.40	5.40	6.00

ANNEXURE IV

List of Central and State Schemes Relevant to Wildlife Management

STATE	SECTOR	SUB-SECTOR	SCHEME	TYPE OF SCHEME	State Share	Central Share	HEADS					
												(Rs. in Lakhs)
							Total Allocation for the Eighth Plan (1992-97)	Expenditure (1992-93)	Expenditure (1993-94)	Approved Outlay (1994-95)	Anticipated Expenditure (1994-95)	Proposed Outlay (1995-96)
HP	WL	Wildlife	Central Secotr Schemes : Intensive Management of Wild Life Sanctuaries	Centre		50.00	125.00	32.58	24.02	24.29	24.29	25.00
HP	WL	Wildlife	Central Secotr Schemes : Control of Poaching & Illegal trade	Centre		50.00	10.00	0.00	0.00	0.00	0.00	0.00
HP	WL	Wildlife	Central Secotr Schemes : Dev. of Great Himalayan National Park Kullu	Centre		50.00	45.00	8.71	9.18	9.55	9.55	10.00
HP	WL	Wildlife	Central Secotr Schemes : Development of Pin Valley National Park	Centre		50.00	35.00	3.75	4.00	4.20	4.20	5.00
HP	WL	Wildlife	Central Secotr Schemes : Improvement & Development of Wild Life Sanctuaries	Centre		100.00	0.00	0.00	0.00	0.00	0.00	0.00
J&K	ST&E	Ecology & Environment	Development of Wet land Bodies	State			215.00	0.79	12.57	30.00	30.00	33.60
J&K	FOR&WL	Wildlife Preservation	Development of National Parks & Wildlife Sanctuaries	Centre	0.00	100.00	185.00	8.88	8.86	19.76	19.76	55.00

ANNEXURE IV

List of Central and State Schemes Relevant to Wildlife Management

STATE	SECTOR	SUB-SECTOR	SCHEME	TYPE OF SCHEME	State Share	Central Share	HEADS					
												(Rs. in Lakhs)
							Total Allocation for the Eighth Plan (1992	Expenditure (1992-93)	Expenditure (1993-94)	Approved Outlay (1994-95)	Anticipated Expenditure (1994-95)	Proposed Outlay (1995-96)
J&K	FOR&WL	Wildlife Preservation	Snow Leopard Recovery Programme	Centre	0.00	100.00	80.00	0.00	0.00	0.00	0.00	0.00
J&K	FOR&WL	Wildlife Preservation	Development of wildliffe education/interpretation programme	CSS	50.00	50.00	75.00	0.00	0.00	0.00	0.00	0.00
J&K	FOR&WL	Wildlife Preservation	Captive Breeding programme	CSS	50.00	50.00	100.00	0.00	0.00	0.00	0.00	0.00
J&K	FOR&WL	Wildlife Preservation	Improvement of wetland reserves	CSS	50.00	50.00	180.00	0.00	0.00	0.00	0.00	0.00
J&K	FOR&WL	Wildlife Preservation	Control of poaching and illegal trade	CSS	50.00	50.00	30.00	0.00	0.00	0.00	0.00	0.00
J&K	FOR&WL	Wildlife Protection	Research Survey and Census	State			20.00	2.08	4.14	3.36	3.36	3.68
J&K	FOR&WL	Wildlife Protection	National Parks & Sanctuaries	State			150.00	17.58	19.23	22.14	22.14	24.42
J&K	FOR&WL	Wildlife Protection	Small and Big Game Reserves	State			30.00	15.50	15.18	15.76	15.76	17.08
J&K	FOR&WL	Wildlife Protection	Wetland Reserves	State			60.00	12.25	18.25	23.14	23.14	25.40
J&K	FOR&WL	Wildlife Protection	Captive Breeding and Reh. Programme	State			25.00	6.25	10.04	9.10	9.10	10.18
J&K	FOR&WL	Wildlife Protection	Wildlife Week and Pub.	State			10.00	1.00	1.01	1.00	1.00	1.08
J&K	FOR&WL	Wildlife Protection	Nature Club Project	State			25.00	5.90	1.56	4.00	4.00	4.48

ANNEXURE IV

List of Central and State Schemes Relevant to Wildlife Management

STATE	SECTOR	SUB-SECTOR	SCHEME	TYPE OF SCHEME	State Share	Central Share	HEADS					
												(Rs. in Lakhs)
							Total Allocation for the Eighth Plan (1992-97)	Expenditure (1992-93)	Expenditure (1993-94)	Approved Outlay (1994-95)	Anticipated Expenditure (1994-95)	Proposed Outlay (1995-96)
J&K	FOR&WL	Wildlife Protection	Training Symposium/Con.	State			5.00	1.30	0.96	0.50	0.50	0.56
J&K	FOR&WL	Wildlife Protection	Forests Biosphere Reserve	State			15.00	5.20	0.50	1.00	1.00	1.12
J&K	FOR&WL	Wildlife Protection	Assistance for Crop Cattle damage	State			5.00	0.85	0.00	0.00	0.00	0.00
J&K	FOR&WL	Wildlife Protection	Eco Development	State			10.00	5.84	5.52	5.00	5.00	5.60
J&K	FOR&WL	Wildlife Protection	Strengthening of W.P.C. of Poaching	State			25.00	6.50	6.93	9.00	9.00	10.08
J&K	FOR&WL	Wildlife Protection	Establishment of furpheasant/Chakour	State			0.00	0.00	0.00	0.00	0.00	0.00
KER	FOR&WL	Forestry & Wildlife	Wildlife Sanctuaries and Tiger Reserve	CSS		50.00	665.00		131.00	174.00	174.00	180.00
KER	FOR&WL	Forestry & Wildlife	National Parks	CSS		50.00	100.00		15.66	30.00	30.00	40.00
KER	FOR&WL	Forestry & Wildlife	Control pf Poaching & illegal trade	CSS		50.00	25.00		3.24	15.00	15.00	15.00
KER	FOR&WL	Forestry & Wildlife	Education and interpretation in Wildlife	CSS		50.00	50.00		3.32	24.00	24.00	20.00
KER	FOR&WL	Forestry and Wildlife	Nilgiri Biosphere Reserve	CSS		100.00	200.00		27.00	50.00	50.00	50.00
KER	FOR&WL	Forestry and Wildlife	Eco-development Scheme for Periyar Tiger Reserve	CSS		100.00	200.00		20.00	50.00	50.00	50.00
KER	FOR&WL	Forestry and Wildlife	Project Elephant	CSS		100.00	3250.00		27.00	100.00	100.00	100.00

ANNEXURE IV

List of Central and State Schemes Relevant to Wildlife Management

STATE	SECTOR	SUB-SECTOR	SCHEME	TYPE OF SCHEME	State Share	Central Share	HEADS					
												(Rs. in Lakhs)
							Total Allocation for the Eighth Plan (1992	Expenditure (1992-93)	Expenditure (1993-94)	Approved Outlay (1994-95)	Anticipated Expenditure (1994-95)	Proposed Outlay (1995-96)
KER	FOR&WL	Forestry and Wildlife	Establishment of a Bio-diversity Centre	CSS		100.00				273.20	273.20	273.00
KER	FOR&WL	Forestry and Wildlife	Eco-tourism in Wildlife Santuaries and National Parks	CSS		100.00					120.00	120.00
KER	FOR&WL	Forestry and Wildlife	Sylvan Valley Fern Sanctuary	State			50.00			8.00	8.00	8.00
KER	ST&E	Other Scientific Research	Tropical Botanic Garden and Research Institute	State			275.00			65.00	65.00	85.00
KER	FOR&WL	Wildlifd	Wildlife Preservation Division	State			125.00			62.00	62.00	65.00
KER	FOR&WL	Wildlifd	Wildlife Sanctuaries and Tiger Reserve]	State	50.00		665.00			174.00	174.00	180.00
KER	FOR&WL	Wildlifd	National Parks	State	50.00		100.00			30.00	30.00	40.00
KER	FOR&WL	Wildlifd	Agasthyavanam Biological Park	State			500.00			120.00	120.00	120.00
KER	FOR&WL	Wildlifd	Kumarakam Bird Sanctuary	State			75.00			10.00	10.00	10.00
KER	FOR&WL	Wildlifd	Afforestation in Memory of National leaders	State			400.00			75.00	75.00	75.00
KER	FOR&WL	Wildlifd	Control of poaching and illegal trade	State			25.00			15.00	15.00	15.00
KER	FOR&WL	Wildlifd	Education and interpretation in wildlife	State			50.00			24.00	24.00	20.00

ANNEXURE IV

List of Central and State Schemes Relevant to Wildlife Management

STATE	SECTOR	SUB-SECTOR	SCHEME	TYPE OF SCHEME	State Share	Central Share	HEADS					
												(Rs. in Lakhs)
							Total Allocation for the Eighth Plan (1992-97)	Expenditure (1992-93)	Expenditure (1993-94)	Approved Outlay (1994-95)	Anticipated Expenditure (1994-95)	Proposed Outlay (1995-96)
KER	FOR&WL	Wildlifd	Separate Cadre of watchers and guards of tribals	State			10.00			5.00	5.00	5.00
KER	FOR&WL	Wildlifd	Wildlife Research	State			125.00			25.00	25.00	35.00
MEG	FOR&WL	Forestry and Wildlife	Wildlife Conservation works	CSS		100.00	90.00		300.00		300.00	300.00
MEG	ENV/FOR &WL	Other Expenditure	Zoological Park	State			5.00			2.00	2.00	3.00
MEG	ENV/FOR &WL	Wildlife	Wildlife	State			1000.00			169.00	169.00	120.00
MEG	ENV/FOR &WL	Wildlife	Ext. Aided Project	State			100.00			100.00		
MIZ	ENV/FOR &WL	Environmental Forestry and Wildlife	Wildlife Preservation	District			190.00		35.71		47.65	59.00
MIZ	ENV/FOR &WL	Environmental Forestry and Wildlife	Zoological Parks	District								
MIZ	ENV/FOR &WL	Environmental Foresty and Wildlife	Wildlife preservation	State			190.00			49.00	47.65	53.50
MIZ	FOR	Schemes retained as CSS	Development of sanctuaries	CSS		100.00			15.00			
PUN	FOR&WL	Forestry & Wildlife	Assistance for the control of poaching and illegal trade in wildlife	CSS	50.00	50.00	10.00					

ANNEXURE IV

List of Central and State Schemes Relevant to Wildlife Management

STATE	SECTOR	SUB-SECTOR	SCHEME	TYPE OF SCHEME	State Share	Central Share	HEADS					
												(Rs. in Lakhs)
							Total Allocation for the Eighth Plan (1992	Expenditure (1992-93)	Expenditure (1993-94)	Approved Outlay (1994-95)	Anticipated Expenditure (1994-95)	Proposed Outlay (1995-96)
PUN	FOR&WL	State Level Schemes	Preservation of Wildlife (Committed)	State					38.82	40.80		45.00
PUN	FOR&WL	State Level Schemes	Establishment of Zoological Park (a) at Chhat Bir (Committed)	State					123.27	121.80		150.00
PUN	FOR&WL	State Level Schemes	Control of poaching and illegal trade in Wild Life	State			10.00			0.13		0.10
PUN	FOR&WL	State Level Schemes	Establishment of Tiger Safari at Ludhiana	State			50.00	10.00	6.00	5.00		15.00
PUN	FOR&WL	State Level Schemes	Assistance for the development of selected Zoos (CSS - State Share)	State			10.00		5.00	4.87		15.00
RAJ	FOR&WL	Environmental Forestry and Wildlife	Preservation of Wildlife	State			900.00			170.00	170.00	273.00
RAJ	FOR	Forestry	Tiger Project, Ranthambhore	CSS		100.00	612.73		86.69	162.00	162.00	175.00
RAJ	FOR	Forestry	Tiger Project, Sariska	CSS		100.00	489.27		62.92	116.00	116.00	130.00
RAJ	FOR	Forestry	Development of Ghana Bird Sanctuary	CSS		50.00	250.00		19.79	25.00	25.00	25.00
RAJ	FOR	Forestry	Desert National Park	CSS		100.00	225.00		5.86	15.00	15.00	10.00

ANNEXURE IV

List of Central and State Schemes Relevant to Wildlife Management

STATE	SECTOR	SUB-SECTOR	SCHEME	TYPE OF SCHEME	State Share	Central Share	HEADS					
												(Rs. in Lakhs)
							Total Allocation for the Eighth Plan (1992	Expenditure (1992-93)	Expenditure (1993-94)	Approved Outlay (1994-95)	Anticipated Expenditure (1994-95)	Proposed Outlay (1995-96)
RAJ	FOR	Forestry	Development of Other Sanctuaries	CSS		100.00	875.00		38.09	100.00	100.00	100.00
RAJ	FOR	Forestry	Improvement of Zoos	CSS		50.00	200.00		6.19	20.00	20.00	20.00
SIK	ST&E	Ecology and Environment	Conservation Programme : Wetland conservation	State			30.00			6.00	6.00	8.00
SIK	ST&E	Ecology and Environment	Research and Receneration : Botanic Garden	State			18.00			3.00	3.00	3.00
SIK	FOR&WL	Forestry & Wildlife	Forest conservation development and regeneration : Biosphere Reserve	State			17.00			3.00	3.00	4.00
SIK	FOR&WL	Forestry & Wildlife	Forest conservation development and regeneration : Biodiversity Hotspot conservation	State								
SIK	FOR&WL	Forestry & Wildlife	Plantation Scheme : Greening of ecologically Fragile Areas	State			197.00			25.00	25.00	70.00
SIK	FOR&WL	Forestry & Wildlife	Plantation Scheme : Rehabilitation of fire damaged area	State			197.00			20.00	20.00	70.00

ANNEXURE IV

List of Central and State Schemes Relevant to Wildlife Management

STATE	SECTOR	SUB-SECTOR	SCHEME	TYPE OF SCHEME	State Share	Central Share	HEADS					
												(Rs. in Lakhs)
							Total Allocation for the Eighth Plan (1992-97)	Expenditure (1992-93)	Expenditure (1993-94)	Approved Outlay (1994-95)	Anticipated Expenditure (1994-95)	Proposed Outlay (1995-96)
SIK	FOR&WL	Forestry & Wildlife	Plantation Scheme : Regeneration of conifer forests	State			49.00			5.00	5.00	12.00
SIK	FOR&WL	Foretry and Wildlife	Khanchandzonga National Park			100.00			15.94	24.00	22.00	24.00
SIK	FOR&WL	Foretry and Wildlife	Development of Maino Sanctuary	Centre		100.00			5.60	10.00	5.60	10.00
SIK	FOR&WL	Foretry and Wildlife	Fambong tho Sanctuary	Centre		100.00			8.62	14.00	12.50	14.00
SIK	FOR&WL	Foretry and Wildlife	Shingba Rhododendron Sanctuary	Centre		100.00			6.40	9.00	9.00	10.00
SIK	FOR&WL	Foretry and Wildlife	Kyongosla alpine Sanctuary	Centre		100.00			6.00	11.00	8.00	11.00
TN	FOR	Forests	Wild Life	State					0.67	36.66	54.47	71.62
TN	FOR	Forests	Zoological Park	State					90.00	92.40	121.13	132.50
TN	FOR	Forests	Tiger Reserve Scheme	Centre		100.00			20.19	65.00	68.25	115.00
TN	FOR	Forests	Conservation and Management of mangroves	Centre		100.00			4.00	0.01	22.68	25.00
TN	FOR	Forests	Development of Vadanthangal Birds Sanctuary	Centre		100.00			1.04	0.01	10.62	12.00
TN	FOR	Forests	Establishment of Gulf of Mannar Biosphere Reserve	Centre		100.00			24.52	0.01	53.01	55.00

ANNEXURE IV

List of Central and State Schemes Relevant to Wildlife Management

STATE	SECTOR	SUB-SECTOR	SCHEME	TYPE OF SCHEME	State Share	Central Share	HEADS					
												(Rs. in Lakhs)
							Total Allocation for the Eighth Plan (1992	Expenditure (1992-93)	Expenditure (1993-94)	Approved Outlay (1994-95)	Anticipated Expenditure (1994-95)	Proposed Outlay (1995-96)
TN	FOR	Forests	Development of Pulicat Lake Bird and Marine Development	Centre		100.00			2.66	2.20	5.36	7.00
TN	FOR	Forests	Wild Life Preservation - Project Elephant- Anamalai and Mudumalai	Centre		100.00			0.00	0.01	114.00	115.00
TN	FOR	Forests	Development of Vettangudi Bird Sanctyar, P.M. Devar Dist.	Centre		100.00			2.00	0.01	3.15	5.00
TN	FOR	Forests	Development of Grizzled Squirrel Wild Life Sanctuary	Centre		100.00			2.93	0.01	20.67	22.00
TN	FOR	Forests	Development of Karikili Sanctuary	Centre		100.00			0.27	0.01	8.05	10.00
TN	FOR	Forests	Development of Mudumali National Park	Centre		100.00			1.08	0.01	6.35	8.00
TRI	FOR&WL	Conservatation of Wildlife	Wildlife conservation and education	State			205.00			31.30		44.30
TRI	FOR&WL	Conservatation of Wildlife	Control of poaching and illegal in wildlife	State			0.00			360.00		0.70
TRI	ST&E	Conservation Programme	Ecodevlopment Programme	State			15.47			0.00		0.00

ANNEXURE IV

List of Central and State Schemes Relevant to Wildlife Management

STATE	SECTOR	SUB-SECTOR	SCHEME	TYPE OF SCHEME	State Share	Central Share	HEADS					
												(Rs. in Lakhs)
							Total Allocation for the Eighth Plan (1992	Expenditure (1992-93)	Expenditure (1993-94)	Approved Outlay (1994-95)	Anticipated Expenditure (1994-95)	Proposed Outlay (1995-96)
TRI	ST&E	Conservation Programme	Wetland Development Programme	State			3.87			0.00		0.00
TRI	FOR&WL	Forest & Wildlife	Development of Parks	State			26.42			5.40		5.40
					2404.00	5696.00	52255.39	881.86	4364.86	13061.44	8421.84	14866.79