GLOBALLY THREATENED INDIAN FAUNA
Status, Issues and Prospects

Arun Kumar* & Vinod Khanna**
Zoological Survey of India, Northern Regional Station, Dehra Dun – 248 195, India

CONTENTS

(VIII) Hymenoptera
(IX) Lepidoptera
(X) Odonata
(XI) Anoplura

Introduction: Biodiversity loss is one of the world's most pressing crises and there is growing global concern about the status of the biological resources on which so much of human life depends. The estimated current species extinction rate is between 1,000 and 10,000 times higher than it would naturally be. Many species are declining to critical population levels, important habitats are being destroyed, fragmented and degraded, and ecosystems are being destabilized through climate changes, pollution, invasive species, and direct human impacts. At the same time, there is also growing awareness of how biodiversity supports livelihoods, allows sustainable development and fosters co-operation between nations. This awareness is generated through products such as the IUCN Red List of Threatened Species.

Governments, the private sector, multilateral agencies responsible for natural resource use, and environmental treaties-all need access to the latest information on biodiversity when making environment-related decisions. Information about species and ecosystems is essential for moving towards more sustainable use of our natural resources. The Redlist is an important tool to provide such information.

IUCN Red List System* **(**International Union for Conservation of Nature and Natural Resources**),** conceived in 1963, set a standard for species listing and conservation assessment efforts. **Species Survival Commission** (SSC) has been evaluating the conservation status of species and subspecies on a global scale- highlighting those threatened with extinction and promoting their conservation for more than 30 years.

Over the time the IUCN recognized a more objective and scientific system for determining threat status. The IUCN Red List Categories evolved over a four-year period through extensive consultation and testing with more than 800 SSC members, and the wider scientific community. The more precise and quantitative Red List Categories and Criteria were adopted by IUCN in 1994.

The IUCN Red List Categories and Criteria are leading IUCN in new directions that allow sophisticated biodiversity analyses, which contribute to scientific discovery and to political policies related to conservation at local, national, and regional levels.

The Red List Index: "Red List Indices" charts overall changes in the threat status of the world's birds and amphibians, the two groups that have been completely assessed. These are based on the number of species that moved between categories as a result of genuine changes in threat status (excluding moves resulting form improved knowledge or taxonomic changes).

***Source:** *IUCN. (2001). IUCN Red List Categories and Criteria: Version 3.1. IUCN Species Survival Commission. IUCN, Gland, Switzerland and Cambridge, UK. ii + 30 pp.*

E-mail Ids: *<drarunk@sancharnet.in> ;** drvkhanna@sancharnet.in

What is the Red List? The IUCN Red List is the world's most comprehensive inventory of the global conservation status of plant and animal species. It uses a set of criteria to evaluate the extinction risk of thousands of species and subspecies. These criteria are relevant to all species and all regions of the world. With its strong scientific base, the IUCN Red List is recognized as the most authoritative guide to the status of biological diversity. The overall aim of the Red List is to convey the urgency and scale of conservation problems to the public and policy makers, and to motivate the global community to try to reduce species extinctions. The 2004 Red List provides the basic knowledge about the status of biodiversity that can be used by conservation planners and decision-makers around the world to establish priorities and take the necessary action.

Uses of the Red List: The Red List

- Draws attention to the magnitude and importance of threatened biodiversity.
- Identifies and documents those species most in need of conservation action.
- Provides a global index of the decline of biodiversity.
- Establishes a baseline from which to monitor the future status of species.
- Provides information to help establish conservation priorities at the local level and guide conservation action.
- Helps influence national and international policy, and
- Provides information to international agreements such as the Convention on Biological Diversity (CBD) and the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).

Users of the Redlist: The Red List is used by government agencies, wildlife departments, conservation-related non-governmental organizations (NGOs), natural resource planners, educational organizations, and many others interested in reversing, or at least halting the decline in biodiversity.

The Red List answers commonly asked questions like

- How threatened is a particular species?
- What are the threats to a species?
- How many threatened species occur in a given country?
- How many known extinctions have there been?

A**ims of the IUCN Red List Categories and Criteria**:

- To provide a system that can be applied consistently by different people;
- To improve objectivity by providing users with clear guidance on how to evaluate different factors which affect the risk of extinction;
- To provide a system which will facilitate comparisons across widely different taxa?

- To give people using threatened species lists a better understanding of how individual species were classified.

Since their adoption by IUCN Council in 1994, the IUCN Red List Categories have become widely recognized internationally, and they are now used in a range of publications and listings produced by IUCN, as well as by numerous governmental and non-governmental organizations. The proposals resulted from a continuing process of drafting, consultation and validation. The production of a large number of draft proposals has led to some confusion, especially as each draft has been used for classifying some set of species for conservation purposes. To clarify matters, and to open the way for modifications as and when they become necessary, a system for version numbering has been adopted as follows:

Version 1.0: Mace and Lande (1991)
The first paper discussing a new basis for the categories, and presenting numerical criteria especially relevant for large vertebrates.

Version 2.0: Mace et al. (1992)
A major revision of Version 1.0, including numerical criteria appropriate to all organisms and introducing the non-threatened categories.

Version 2.1: IUCN (1993)
Following an extensive consultation process within SSC, a number of changes were made to the details of the criteria, and fuller explanation of basic principles was included. A more explicit structure clarified the significance of the non-threatened categories.

Version 2.2: Mace and Stuart (1994)
Following further comments received and additional validation exercises, some minor changes to the criteria were made. In addition, the susceptible category present in Versions 2.0 and 2.1 was subsumed into the vulnerable category. A precautionary application of the system was emphasized.

Version 2.3: IUCN (1994)
IUCN Council adopted this version, which incorporated changes as a result of comments from IUCN members, in December 1994. The initial version of this document was published without the necessary bibliographic details, such as date of publication and ISBN number, but these were included in the subsequent reprints in 1998 and 1999. This version was used for the 1996 IUCN Red List of Threatened Animals (Baillie and Groombridge 1996), The World List of Threatened Trees (Oldfield et al 1998) and the 2000 IUCN Red List of Threatened Species (Hilton-Taylor 2000).

Version 3.0: IUCN/SSC Criteria Review Working Group (1999)
Following comments received, a series of workshops were convened to look at the IUCN Red List Criteria following which, changes were proposed affecting the criteria, the definitions of some key terms and the handling of uncertainty.

Version 3.1: IUCN (2001)

All new assessments from January 2001 should use the latest adopted version and cite the year of publication and version number. The IUCN Council adopted the latest version {(Version 3.1: IUCN (2001)} which incorporated changes as a result of comments from the IUCN and SSC memberships and from a final meeting of the Criteria Review Working Group, in February 2000.

How is the Red List compiled? : The IUCN Red List Categories and Criteria are intended to be an easily and widely understood system for classifying species at high risk of global extinction. The general aim of the system is to provide an explicit, objective framework for the classification of the broadest range of species according to their extinction risk. However, while the Red List may focus attention on those taxa at the highest risk, it is not the sole means of setting priorities for conservation measures for their protection.

Categories: There are nine categories in the IUCN Red List system:

- Extinct(EX),
- Extinct in the Wild(EW),
- Critically Endangered(CR),
- Endangered(EN),
- Vulnerable(VU),
- Near Threatened (NT),
- Least Concern (lc),
- Data Deficient (DD), and
- Not Evaluated (NE).

Note: Classification into the categories for species threatened with extinction (Vulnerable, Endangered, and Critically Endangered) is through a set of five quantitative criteria that form the heart of the system. These criteria are based on biological factors related to extinction risk and include: rate of decline, population size, area of geographic distribution, and degree of population and distribution fragmentation.

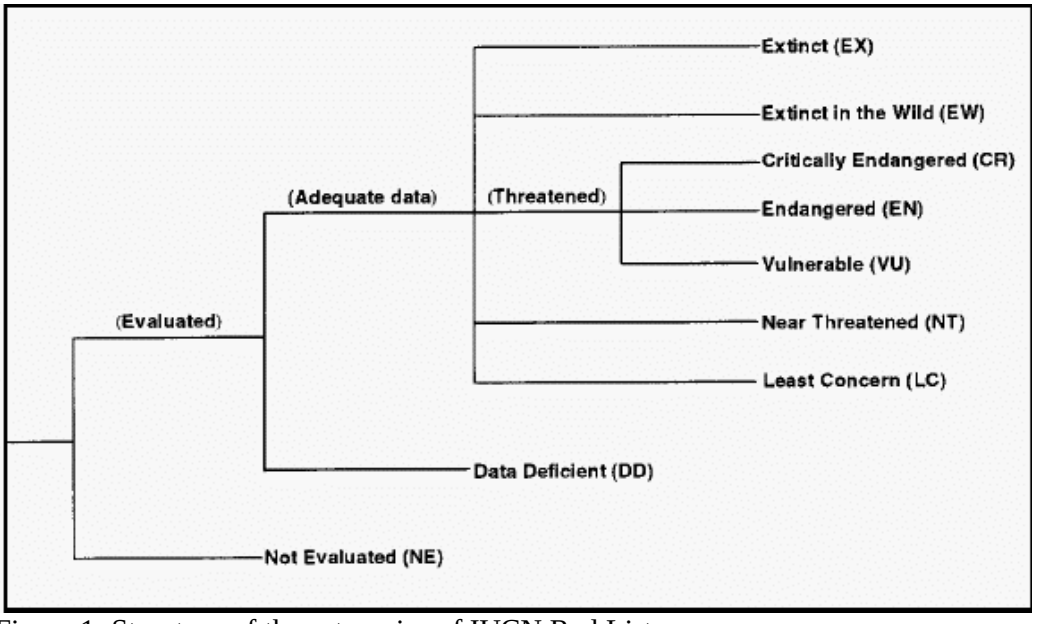

Figure 1. Structure of the categories of IUCN Red List.

(I) IUCN Red List Categories:

Extinct (EX) - A taxon is Extinct when there is no reasonable doubt that the last individual has died.

Extinct In The Wild (EW) - A taxon is Extinct in the wild when it is known only to survive in cultivation, in captivity or as a naturalized population (or populations) well outside the past range.

Critically Endangered (CR) - A taxon is Critically Endangered when it is facing an extremely high risk of extinction in the wild in the immediate future, as defined by any of the criteria.

Endangered (EN) - A taxon is endangered when it is not Critically Endangered but is facing a very high risk of extinction in the wild in the near future, as defined by any of the criteria.

Vulnerable (VU) - A taxon is Vulnerable when it is not Critically Endangered or Endangered but is facing a high risk of extinction in the wild in the medium-term future, as defined by any of the criteria.

Lower Risk (LR) - A taxon is Lower Risk when it has been evaluated, does not qualify for any of the threatened categories Critically Endangered, Endangered or Vulnerable or Data Deficient (LR/nt- near threatened, Lr/lc- least concerned, LR/cd- conservation dependent).

Near Threatened (NT): A taxon is Near Threatened when it has been evaluated against the criteria but does not qualify for Critically Endangered, Endangered or Vulnerable now, but is close to qualifying for, or is likely to qualify for, a threatened category in the near future.

Least Concern (LC) A taxon is Least Concern when it has been evaluated against the criteria and does not qualify for Critically Endangered, Endangered, Vulnerable or Near Threatened. Widespread and abundant taxa are included in this category.

Data Deficient (DD) A taxon is Data Deficient when there is inadequate information to make a direct, or indirect, assessment of its risk of extinction based on its distribution and/or population status.

Not Evaluated (NE) A taxon is Not Evaluated when it is has not yet been assessed against the criteria.

Endemics (E) Species restricted to India.

The IUCN Criteria for Critically Endangered, Endangered and Vulnerable

> **Critically Endangered (CR):** *A taxon is Critically Endangered when the best available evidence indicates that it meets any of the following criteria (A to E), and it is therefore considered to be facing an extremely high risk of extinction in the wild.*

A. **Reduction in population size** based on any of the following:

1. An observed, estimated, inferred or suspected population size reduction of 90% over the last 10 years or three generations, whichever is the longer, where the causes of the reduction are clearly reversible and understood and ceased, based on (and specifying) any of the following:

(a) Direct observation

(b) An index of abundance appropriate to the taxon

(c) A decline in area of occupancy, extent of occurrence and/or quality of habitat

(d) Actual or potential levels of exploitation

(e) The effects of introduced taxa, hybridization, pathogens, pollutants, competitors or parasites.

2. An observed, estimated, inferred or suspected population size reduction of 80% over the last 10 years or three generations, whichever is the longer, where the reduction or its causes may not have ceased OR may not be understood OR may not be reversible, based on (and specifying) any of (a) to (e) under A1.

3. A population size reduction of 80%, projected or suspected to be met within the next 10 years or three generations, whichever is the longer (up to a maximum of 100 years), based on (and specifying) any of (b) to (e) under A1.

4. An observed, estimated, inferred, projected or suspected population size reduction of 80% over any 10 year or three generation period, whichever is longer (up to a maximum of 100 years in the future), where the time period must include both the past and the future, and where the reduction or its causes may not have ceased OR may not be understood OR may not be reversible, based on (and specifying) any of (a) to (e) under A1.

B. **Geographic range** in the form of either B1 (extent of occurrence) OR B2 (area of occupancy) OR both:

1. *Extent of occurrence estimated to be less than 100 km²*, and estimates indicating at least two of a-c:

a. *Severely fragmented or known to exist at only a single location*.

b. *Continuing decline, observed, inferred or projected*, in any of the following:

(i) Extent of occurrence
(ii) Area of occupancy
(iii) Area, extent and/or quality of habitat
(iv) Number of locations or subpopulations
(v) Number of mature individuals.

c. *Extreme fluctuations* in any of the following:

(i) Extent of occurrence
(ii) Area of occupancy
(iii) Number of locations or subpopulations
(iv) Number of mature individuals.

2. *Area of occupancy e*stimated to be less than 10 km², and estimates indicating at least two of a-c:

a. Severely fragmented or known to exist at only a single location.

b. Continuing decline, observed, inferred or projected, in any of the following:

(i) Extent of occurrence
(ii) Area of occupancy
(iii) Area, extent and/or quality of habitat
(iv) Number of locations or subpopulations
(v) Number of mature individuals.

c. Extreme fluctuations in any of the following:

(i) Extent of occurrence
(ii) Area of occupancy
(iii) Number of locations or subpopulations
(iv) Number of mature individuals.

C. Population size estimated to number fewer than 250 mature individuals and either:

1. An estimated continuing decline of at least 25% within three years or one generation, whichever is longer, (up to a maximum of 100 years in the future) OR

2. A continuing decline, observed, projected, or inferred, in numbers of mature individuals AND at least one of the following (a-b):
(a) Population structure in the form of one of the following:
(i) No subpopulation estimated to contain more than 50 mature individuals, OR
(ii) At least 90% of mature individuals in one subpopulation.
(b) Extreme fluctuations in number of mature individuals.
D. Population size estimated to number fewer than 50 mature individuals.
E. Quantitative analysis showing the probability of extinction in the wild is at least 50% within 10 years or three generations, whichever is the longer (up to a maximum of 100 years).

> **Endangered (EN):** *A taxon is Endangered when the best available evidence indicates that it meets any of the following criteria (A to E), and it is therefore considered to be facing a very high risk of extinction in the wild.*

A. **Reduction in population size** based on any of the following:
1. An observed, estimated, inferred or suspected population size reduction of 70% over the last 10 years or three generations, whichever is the longer, where the causes of the reduction are clearly reversible AND understood AND ceased, based on (and specifying) any of the following:
(a) Direct observation
(b) An index of abundance appropriate to the taxon
(c) A decline in area of occupancy, extent of occurrence and/or quality of habitat
(d) Actual or potential levels of exploitation
(e) The effects of introduced taxa, hybridization, pathogens, pollutants, competitors or parasites.
2. An observed, estimated, inferred or suspected population size reduction of 50% over the last 10 years or three generations, whichever is the longer, where the reduction or its causes may not have ceased OR may not be understood OR may not be reversible, based on (and specifying) any of (a) to (e) under A1.
3. A population size reduction of 50%, projected or suspected to be met within the next 10 years or three generations, whichever is the longer (up to a maximum of 100 years), based on (and specifying) any of (b) to (e) under A1.
4. An observed, estimated, inferred, projected or suspected population size reduction of 50% over any 10 year or three generation period, whichever is longer (up to a maximum of 100 years in the future), where the time period must include both the past and the future, and where the reduction or its causes may not have ceased OR may not be understood OR may not be reversible, based on (and specifying) any of (a) to (e) under A1.
B. Geographic range in the form of either B1 (extent of occurrence) OR B2 (area of occupancy) OR both:
1. **Extent of occurrence** estimated to be less than 5000 km², and estimates indicating at least two of a-c:
a. Severely fragmented or known to exist at no more than five locations.
b. Continuing decline, observed, inferred or projected, in any of the following:
(i) Extent of occurrence
(ii) Area of occupancy
(iii) Area, extent and/or quality of habitat
(iv) Number of locations or subpopulations
(v) Number of mature individuals.

c. Extreme fluctuations in any of the following:
(i) Extent of occurrence
(ii) Area of occupancy
(iii) Number of locations or subpopulations
(iv) Number of mature individuals.
2. **Area of occupancy** estimated to be less than 500 km², and estimates indicating at least two of a-c:
a. *Severely fragmented* or known to exist at no more than five locations.
b. *Continuing decline*, observed, inferred or projected, in any of the following:
(i) Extent of occurrence
(ii) Area of occupancy
(iii) Area, extent and/or quality of habitat
(iv) Number of locations or subpopulations
(v) Number of mature individuals.
C. Extreme fluctuations in any of the following:
(i) Extent of occurrence
(ii) Area of occupancy
(iii) Number of locations or subpopulations
(iv) Number of mature individuals.
C. Population size estimated to number fewer than 2500 mature individuals and either:
1. An estimated continuing decline of at least 20% within five years or two generations, whichever is longer, (up to a maximum of 100 years in the future) OR 2. A continuing decline, observed, projected, or inferred, in numbers of mature individuals AND at least one of the following (a-b):
(a) Population structure in the form of one of the following:
(i) No subpopulation estimated to contain more than 250 mature individuals, OR
(ii) At least 95% of mature individuals in one subpopulation.
(b) Extreme fluctuations in number of mature individuals.
D. Population size estimated to number fewer than 250 mature individuals.
E. Quantitative analysis showing the probability of extinction in the wild is at least 20% within 20 years or five generations, whichever is the longer (up to a maximum of 100 years).

> **Vulnerable (VU):** *A taxon is Vulnerable when the best available evidence indicates that it meets any of the following criteria (A to E), and it is therefore considered to be facing a high risk of extinction in the wild.*

A. Reduction in population size based on any of the following:
1. An observed, estimated, inferred or suspected population size reduction of 50% over the last 10 years or three generations, whichever is the longer, where the causes of the reduction are: clearly reversible AND understood AND ceased, based on (and specifying) any of the following:
(a) Direct observation
(b) An index of abundance appropriate to the taxon
(c) A decline in area of occupancy, extent of occurrence and/or quality of habitat
(d) Actual or potential levels of exploitation
(e) The effects of introduced taxa, hybridization, pathogens, pollutants, competitors or parasites.
2. An observed, estimated, inferred or suspected population size reduction of 30% over the last 10 years or three generations, whichever is the longer, where the

reduction or its causes may not have ceased OR may not be understood OR may not be reversible, based on (and specifying) any of (a) to (e) under A1.
3. A population size reduction of 30%, projected or suspected to be met within the next 10 years or three generations, whichever is the longer (up to a maximum of 100 years), based on (and specifying) any of (b) to (e) under A1.
4. An observed, estimated, inferred, projected or suspected population size reduction of 30% over any 10 year or three generation period, whichever is longer (up to a maximum of 100 years in the future), where the time period must include both the past and the future, and where the reduction or its causes may not have ceased OR may not be understood OR may not be reversible, based on (and specifying) any of (a) to (e) under A1.

B. Geographic range in the form of either B1 (extent of occurrence) OR B2 (area of occupancy) OR both:

1. **Extent of occurrence** estimated to be less than 20,000 km², and estimates indicating at least two of a-c:
a. Severely fragmented or known to exist at no more than 10 locations.
b. Continuing decline, observed, inferred or projected, in any of the following:
(i) Extent of occurrence
(ii) Area of occupancy
(iii) Area, extent and/or quality of habitat
(iv) Number of locations or subpopulations
(v) Number of mature individuals.
c. Extreme fluctuations in any of the following:
(i) Extent of occurrence
(ii) Area of occupancy
(iii) Number of locations or subpopulations
(iv) Number of mature individuals.

2. **Area of occupancy** estimated to be less than 2000 km², and estimates indicating at least two of a-c:
a. Severely fragmented or known to exist at no more than 10 locations.
b. Continuing decline, observed, inferred or projected, in any of the following:
(i) Extent of occurrence
(ii) Area of occupancy
(iii) Area, extent and/or quality of habitat
(iv) Number of locations or subpopulations
(v) Number of mature individuals.
c. Extreme fluctuations in any of the following:
(i) Extent of occurrence
(ii) Area of occupancy
(iii) Number of locations or subpopulations
(iv) Number of mature individuals.

C. **Population size** estimated to number fewer than 10,000 mature individuals and either:
1. An estimated continuing decline of at least 10% within 10 years or three generations, whichever is longer, (up to a maximum of 100 years in the future) OR
2. A continuing decline, observed, projected, or inferred, in numbers of mature individuals and at least one of the following (a-b):
(a) Population structure in the form of one of the following:
(i) No subpopulation estimated to contain more than 1000 mature individuals, OR
(ii) All mature individuals are in one subpopulation.

(b) Extreme fluctuations in number of mature individuals.
D. **Population very small** or restricted in the form of either of the following:
1. Population size estimated to number fewer than 1000 mature individuals.
2. Population with a very restricted area of occupancy (typically less than 20 km²) or number of locations (typically five or fewer) such that it is prone to the effects of human activities or stochastic events within a very short time period in an uncertain future, and is thus capable of becoming Critically Endangered or even Extinct in a very short time period.
E. **Quantitative analysis** showing the probability of extinction in the wild is at least 10% within 100 years.

Citation of the IUCN Red List Categories and Criteria: To promote the use of a standard format for citing the Red List Categories and Criteria the IUCN recommends the following format:
1) The Red List Category may be written out in full or abbreviated as follows:
Extinct, EX; Extinct in the Wild, EW; Critically Endangered, CR; Endangered, EN; Vulnerable, VU; Near Threatened, NT; Least Concern, LC; Data Deficient, DD; Not Evaluated, NE.

2) The criterion for Critically Endangered, Endangered and Vulnerable has a hierarchical alphanumeric numbering system of criteria and sub criteria. These criteria and sub criteria (all three levels) form an integral part of the Red List assessment and all those that result in the assignment of a threatened category are specified after the Category.

Under the criteria A to C and D under Vulnerable, the first level of the hierarchy is indicated by the use of numbers (1-4) and if more than one is met, they are separated by means of the '+' symbol. The second level is indicated by the use of the lower-case alphabet characters (a-e). These are listed without any punctuation. A third level of the hierarchy under Criteria B and C involves the use of lower case roman numerals (i-v). These are placed in parentheses (with no space between the preceding alphabet character and start of the parenthesis) and separated by the use of commas if more than one is listed. Where more than one criterion is met, they should be separated by semicolons. The following are examples of such usage:
EX
CR A1cd
VU A2c+3c
EN B1ac (i, ii, iii)
EN A2c; D
VU D1+2
CR A2c+3c; B1ab (iii)
CR D
VU D2
EN B2ab (i, ii, iii)
VU C2a (ii)
EN A1c; B1ab (iii); C2a (i)
EN B2b (iii) c (ii)
EN B1ab(i,ii,v)c(iii,iv)+2b(i)c(ii,v)
VU B1ab (iii) +2ab (iii)
EN A2abc+3bc+4abc; B1b(iii,iv,v)c(ii,iii,iv)+2b(iii,iv,v)c(ii,iii,iv)

Role of the different criteria: For listing as Critically Endangered, Endangered or Vulnerable there is a range of quantitative criteria; meeting any one of these criteria qualifies a taxon for listing at that level of threat. Each taxon should be evaluated against all the criteria. Even though some criteria will be inappropriate for certain taxa (some taxa will never qualify under these however close to extinction they come), there should be criteria appropriate for assessing threat levels for any taxon. The relevant factor is whether any one criterion is met, not whether all are appropriate or all are met. Because it will never be clear in advance which criteria are appropriate for a particular taxon, each taxon should be evaluated against all the criteria, and all criteria met at the highest threat category must be listed.

Major Threats to Biodiversity: Many species are declining to critical population levels, important habitats are being destroyed, fragmented and degraded, and ecosystems are being destabilized through climate change, pollution, invasive species, and direct human impacts.

1. Habitat Loss and Degradation: The most pervasive threat to birds, mammals and plants, is habitat loss and degradation, affecting 89% of all threatened birds, 83% of the threatened mammals assessed. Agricultural activities (including crop and livestock farming, and timber plantations), extraction activities (mining, fisheries, logging, and harvesting), and development (human settlements, industry and associated infrastructure) are the three main causes of habitat loss. Agricultural activities affect bird species (70% of all), but surprisingly, only 92 (13%) of the threatened mammals.

2.Exploitation: Exploitation, including hunting, collecting, fisheries and fisheries by-catch, and the impacts of trade in species and species' parts, constitutes a major threat for birds (37% of all), mammals (34% of all), Trade affects 13% of both threatened birds and mammals.

3.Alien Invasive Species: Alien invasive species are a significant threat, affecting (30%) of all threatened birds.–e commonest cause of extinction of bird species since 1800, especially those on islands, is the introduction of alien invasive species such as the black rat.

4. Disturbance, persecution and uprooting, including deliberate eradication of species considered to be pests

5. Incidental take, particularly the drowning of aquatic reptiles and mammals in fishing nets

6. Disease, both exotic and endemic, exacerbated by the presence of large number of domestic livestock or introduced plant species

7. Limited distribution, which may compound the effects of other factors.

In the majority of cases individual species are faced by several of these threats operating simultaneously, and it is often difficult or impossible to identify with confidence the primary cause of decline. However, the major category of threat, which affects 76% of species, is habitat loss and modification frequently due to cultivation and settlements.

The IUCN Red List Categories and Criteria* (IUCN 2001; see also http:// www.iucn.org/themes/ssc/redlists/rlcategories2000.html) were developed for classifying species at high risk of global extinction, i.e. for assessment at the global level. At regional, national and local levels (hereafter referred to as regional level) there are essentially two options: (1) to publish an unaltered subset of the global Red List encompassing those species that reproduce in the region or at any stage regularly visit the region. This may be a feasible option, particularly when the region has a high number of endemics or threatened near endemics, or when there is currently a pronounced overall deficiency of data pertaining to species status within the region. (2) To assess species' extinction risk and publish Red Lists within the specific region. For the purposes of regional conservation assessments there are important reasons to assess species' extinction risk and publish Red Lists within specific geographically defined areas.

As part of the process to resolve these issues, the Regional Application Working Group (RAWG) was formed under the auspices of the Species Survival Commission's (SSC) Red List Programme. The membership of RAWG included people with technical experience in the development of the IUCN Red List Criteria, as well as those with practical experience of producing Red Lists at regional levels. The group has consulted many different regional and national groups, participated in regional Red List assessment workshops, published draft versions of the guidelines (Gärdenfors *et al*. 1999, 2001) and undertaken a process of ongoing modification and improvement to the earlier drafts.

1. Application of the guidelines: Any country or region using the IUCN Red List Categories and Criteria for listing species must follow these guidelines if they wish to state that their assessment follows the IUCN system.

2. The Regional Concept: The word *regional* is used here to indicate any subglobal geographically defined area, such as a continent, country, state, or province. Within any region there will be taxa with different distribution histories, ranging from those that are indigenous (native to the area), and have been there since pre-human settlement, to those introduced more recently. There may also be breeding and non-breeding taxa. The latter are those that do not reproduce in the region but may still be dependent upon its resources for their survival. There may also be formerly native taxa that are now extinct in the region, but which are still extant in other parts in the world.

3. IUCN Red List Criteria versus Regional Guidelines: All the rules and definitions in the IUCN Red List Categories and Criteria Version 3.1 (IUCN 2001) apply at regional levels, unless otherwise indicated here. Similarly, the 'Guidelines for using the IUCN Red List Categories and Criteria' (Standards and Petitions Subcommittee of the IUCN SSC Red List Programme Committee 2003) as well as the *IUCN Guidelines for Re-introductions* (IUCN 1998) also apply at regional levels. Consequently, a careful study of all these documents is highly recommended before application of the regional guidelines, and they should be constantly referred to when using this document. The guidelines for regional application are hereafter referred to as the Guidelines.

---

* Source: IUCN. (2003). *Guidelines for Application of IUCN Red List Criteria at Regional Levels: Version 3.0*. IUCN Species Survival Commission. IUCN, Gland, Switzerland and Cambridge, UK. ii + 26 pp.

4. Scale applicability: Provided that the regional population to be assessed is isolated from Conspecific populations outside the region, the IUCN Red List Criteria (IUCN 2001) can be used without modification within any geographically defined area. The extinction risk for such an isolated population is identical to that of an endemic taxon. However, when the criteria are applied to part of a population defined by a geopolitical border, or to a regional population where individuals move to or from other populations beyond the border, the threshold values listed under each criterion may be inappropriate, because the unit being assessed is not the same as the whole population or subpopulation. As a result, the estimate of extinction risk may be inaccurate. These guidelines present methods for adjusting the results from the first step in the assessment process to obtain a Red List Category that adequately reflects a taxon's risk of extinction within the region.

Although the Guidelines may in principle be applied at any geographical scale, application within very restricted geographical areas is strongly discouraged. The smaller the region, and the more wide-ranging the taxon under consideration, the more often the regional population will interchange individuals with neighbouring populations. Therefore the assessment of extinction risk becomes increasingly unreliable. It is not possible to provide any specific guidance on the precise lower limit for sensible application as this depends on the nature of the region, and especially the barriers to dispersal that exist.

5. Regionally determined applications and modifications: Certain definitions and applications of the Guidelines are left to the discretion of regional Red List authorities. For example, the delimitation of natural range, time limits for regional extinction, and the nature of an initial filter for breeding and/or non-breeding taxa, are left open for the regional Red List authorities to decide. Such regional decisions must be clearly recorded and documented, for example as part of an introductory text to the listings.

6. Taxonomy: Regional Red List authorities are encouraged to follow the same taxonomic Checklists as used by the global IUCN Red List (see http://www.redlist.org/info/ info_sources_quality.html). For other taxonomic groups or any deviations from the recommended lists, the differences and the taxonomic authorities followed should be specified.

7. Scaling up assessments: Red List assessments from several smaller regions, such as countries on a continent, cannot be combined or scaled-up in any way to provide Red List Categories for the entire larger region. Assessments of extinction risk for the larger region require new evaluations using the pooled data from across the entire region. Data collected from individual smaller regions may be essential for the assessment of the larger region, and are often important for conservation planning.

Extraction of Red List species (IUCN, 2004)

The species and subspecies list of threatened Indian fauna has been extracted from the IUCN website <www.iucnredlist.org>. Downloaded on 28 October 2005 by using the following menu:

Redlist assessment year: 2004
Text field: Animalia
Country: India
Species and subspecies option ticked
Selecting the Red List Categories as appropriate
All other options left at their default settings.

Table 1: Red List Category summary country total

Category	Numbers of species as per table 6a (IUCN, 2004)	(*) Numbers of species extracted from search page (IUCN, 2004)	(*) Numbers of species & subspecies extracted from search page (IUCN, 2004)
I	II	III	IV
EX	**1**	**1**	**3**
CR	**35**	**39**	**44**
EN	**91**	**93**	**109**
VU	**180**	**183**	**195**
Sub total	**306**	**316**	**351**
LR/cd	**07**	**09**	**09**
LR/nt or NT	**143**	**143**	**154**
DD	**123**	**127**	**134**
Sub total	**273**	**279**	**297**
LR/lc or LC	**1,400**	**1,402**	**1,406**
Total	**580**	**1,997**	**2,054**

(*) The numbers provided in columns III and IV in Table 1 above are slightly higher than the numbers in column II of the Summary Table 6a of IUCN, 2004 which provides summary table for countries. On the introduction page to the summary tables (see http://www.iucnredlist.org/info/tables.html) the reasons for these differences are explained as below.

1. The tables include information on full species ONLY (i.e. not subspecies, varieties or geographically isolated subpopulations or stocks).

2. Only species with confirmed distributions within a country have been included in the figures i.e., species with an unconfirmed distribution within a country have not been included in that country's statistics. However, if the search page is used to produce a list of species within a particular country, all species recorded for that country will appear, including those with unconfirmed distribution records (indicated by a question mark (?)).

3. Similarly, in Table 6a of IUCN, 2004, the country figures for all categories (except EX and EW), do not include species that are regionally extinct (RE) within that country. However, if the search page is used to produce a list of species within a particular country, the list will also include species that are now extinct within that part of their range. Therefore, in some cases, figures in the country tables will not match figures obtained through a search.

Due to ongoing confusion about the figures in the summary tables, from the year 2006 onwards the IUCN proposes to change the summary tables to include the unconfirmed distribution records as well {(Craig-Hamilton Taylor, IUCN Redlist Office, London (*pers. com.*)}.

In the present communication the authors have given the analysis for the taxa downloaded vide the summary in the column IV above (Table 1) excluding LR/lc orLC.

Conservation Assessment and Management Plan (C.A.M.P.): The Red Data Book (RDB) was compiled at global basis and the concept was soon adopted at national or sub national level in several countries like India, which has developed its **Conservation Assessment and Management Plan** (C.A.M.P.). The **Conservation Breeding Specialist Group** (CBSG) of the **Species Survival Commission** of IUCN developed the concept.

The process of CAMP Workshop in south Asia has been developed by **Zoo Outreach Organization** in collaboration with CBSG for the purpose of prioritizing species for conservation action including an ex situ component. The CAMP workshops have been organized since 1995 onwards. While the 1994 version of assessment (Version 2.3) was used at the various Indian CAMP workshops from 1995 to 2005, providing regional assessment for fauna in south Asia.

Protection of Indian Red List fauna: Many of the Red List species are conserved and protected by their inclusion in the schedules and appendices of national and international acts and conventions, namely:

(1) **Against hunting / and or trophies** under Schedules I to V of the **Indian Wildlife (Protection) Act 1972,**
(2) **Against trade** under the Appendices I-III of the **Convention on International Trade in species of the Wild Fauna and Flora** (CITES).
(3) In addition, some of the Migratory species of Birds, Mammals and Reptiles get protection under the **Convention of Migratory Species of Wild Animals** (CMS).

The **Indian Wildlife (Protection) Act 1972 (No.53 0f 1972):** provides for protection of-**Wild animals** (including mammals, birds, reptiles, amphibians, fish, other Chordates and invertebrates and their young and eggs), **Animal articles** (made from captive or wild animal, other than vermin) and - **Plants,** and for matters connected therewith or ancillary or incidental thereto with a view to ensuring the ecological and environmental security of the country. The WL (P) Act regulates sale, barter etc of notified wild plants and animal species. It also provides control over keeping of wild animals in captivity. The 1991 amendment covers the possession of notified plant species**.** The Act exercise control under the Schedules I-VI.

Schedule I lists rare and endangered totally protected species.
Schedule II includes game species for which licenses can be issued under special circumstances.
Schedule III and Schedule **IV** comprises species of small games.
Schedule V includes vermin, common crow, fruit bats, mice and rats.
ScheduleVI includes the species

The **Convention on International Trade in species of Wild Fauna and Flora (CITES)** also known as **Washington Convention.** Signed in 1973 by ten countries, India became a party to convention on 18th October, 1976 the CITES relies on a system of permits to regulate trade in Wildlife. It has its Secretariat located in Geneva

in Switzerland and is administered by UNEP.The trade in wildlife, trophies and produce is regulated by three Appendices.

Appendix-I: includes all species threatened with extinction which are, or may be affected by trade. The trade in specimens these species is subject to particularly strict regulation in order no to endanger further their survival and may be authorized in exceptional circumstances. Trade in appendix -I species can not proceed without both import and export certificate issued by the Management Authorities of importing/exporting countries.

Appendix-II: includes species which (a) though not necessarily threatened with extinction may become so unless the trade in specimen of such species is subject to regulation in order to avoid utilization incompatible with their survival and (b) other species which must be subject to regulation in order that trade in specimens of certain species referred to in (a) above may be brought under effective control. It also provides inclusion in appendix–II of species which are not endangered themselves but which are similar in appearance to endangered or potentially endangered species in order to allow practical regulation of trade in endangered or potentially endangered species.

Appendix-III: includes all species which any party identifies as being subject to regulation within its jurisdiction for the purpose of preventing or restricting exploitation, and as needing the co-operation of other parties in the control of trade. Species for appendix-iii can not be listed until they become parties to the convention.

III- Convention of Migratory Species of Wild Animals (CMS) also known as **Bonn Convention on Migratory Species)**: Some of the Migratory species, that **maintain themselves as a viable component of the ecosystems on long-term basis** , have the privilege of conservation and protection under the Appendix I and II of CMS.

Appendix-I includes the migratory species which are endangered.

Appendix-II includes the species which have unfavorable conservation status and which require international agreements for their conservation and management, as well as those which have a conservation status which would significantly benefit from International Co-operation that could be achieved by International Agreements.

Globally Threatened Indian Fauna: India has a rich and varied heritage of biodiversity, encompassing a wide spectrum of habitats from tropical rainforests in the Andaman and Nicobar Islands to alpine vegetation and dry alpine scrub high in the Himalayas, and from temperate forests to coastal wetlands. Between the two extremes, the country has semi-evergreen rain forests, deciduous monsoon forests, thorn forests, and subtropical pine forests in the lower montane zone and temperate montane forests. Since the Indian sub-continent lies at the confluence of African, European and Indo-Malayan realms the biota, therefore, includes African, European, and Eurasian and Mediterranean elements.

Of the estimated 5–50 million species of the world's biota, only 1.7 million have been described to date and the distribution is highly uneven. About seven per cent of the world's total land area is home to half of the world’s species, with the tropics alone accounting for 5 million of the estimated number. India contributes significantly to this latitudinal biodiversity trend. India is a one of the twelve mega biodiversity countries of the world. With a mere 2.4% of the world's area, India

accounts for 7.25 % of the total global fauna (12, 21,315) (Table -2) with a count of 89,451 species (Alfred, 1998).

The present paper deals with the conservation status of globally threatened Indian fauna that has been redlisted by IUCN. The tables providede also incorporates the redlisted species that have been included in the various schedules of the Indian Wildlife Protection Act, 1972, appendices of the Conventions on International Trade in Endangered Species of Wild Flora and fauna (CITES) and appendices of Convention of Migratory Species (CMS).

India contains 648 species of animals listed as "Globally Threatened" by IUCN (2004) which is approximately 8.91%; of the world's total number of threatened faunal species (7266 species} (Table-3). The 648 Globally Threatened Indian species* includes (Table 4),213 Species of Mammals,149 Birds, 33 Reptiles, 148 Amphibians, 75 Pisces and 30 Invertebrate species (13 species of Insects that includes 5 spp of Hymenoptera, 4 of Lepidoptera, 3 of Odonata and one of Anoplura; 12 species of Crustacea and 5 species of Mollusca).Of the 648 Threatened Indian Species 183 species are endemic (Table 5). It significantly makes 29.01% of the threatened Indian fauna, which is a very high ratio and the threats to the endemic species are a cause of concern.
The analysis of the data of the threatened Indian species (Table 4-7) reveals 44 species as Critical, 109 as Endangered, 195 as Vulnerable, 63 as Lower Risk near Threatened (LRnt), 91 as Near Threatened (NT), 9 as Lower Risk Conservation dependent (LRcd) and 134 as Data Deficient (DD).
The three species reported extinct from India are *Dicerorhinus sumatrensis ssp. lasiotis*, the Sumatran Rhinoceros, *Ratufa indica ssp. dealbata*- the Dangs Giant Squirrel and *Philautus travancoricus*- a species of frog, both the later species have been endemic to India.

On further analysis of the threatened India fauna under various categories the Table 4 depicts the group wise/ category wise status of the Threatened Indian fauna, Table 5 depicts Threatened Indian Endemic Species GroupWise/Category wise, Table 6 depicts Population trends of the Threatened Indian Species and Table 7 depicts Threatened Indian Species in various Acts and Convention.
The Endemic Indian species that are threatened includes 63 species of Mammals, 43 species of Birds 1 sp. of Reptiles, 72 species of Amphibians, 2 species of each of Crustaceans and Mollusca.

While there are tremendous efforts to conserve the threatened fauna world over there has been remarkable decline in the population trends as evident from the Table 6. Out of the 648 threatened Indian species we have the trends available for 447 species only, of which 218 species are showing downward trend while 217 species are indeterminate. Only eleven species have the stable population while, to speak towards upward trend we have only one species of mammals namely, *Megaptera novaeangliae*- a Bunch which is under vulnerable category.

---

*Note: The redlisted species downloaded were put into their respective classes/ orders by accessing '*Nomenclator Zoologicus*' (Neaves, 1939-50). Any missing genera/ species were searched by querying <http:// www.google.com>.

There are 130 species protected under the Schedules of Indian Wildlife (Protection) Act 1972, 260 species conserved under regulated under the various appendices of CITES, while CMS cares for the conservation of 45 species.However, there is lack of data as also the trends to evaluate the various groups of Invertebrate Soil Fauna, which provide yeoman services to the humankind as "ecosystem engineers". They also deserve equal attention for their conservation (Khanna, 2005).

A Look at the Global Trends : The global extinction crisis is as bad as or worse than believed, with dramatic declines in populations of many species, including reptiles and primates, according to the 2004 IUCN Red List of Threatened Species (Table 8). A total of 15,503 species of plants and animals are threatened, facing a high risk of extinction in the near future, in almost all cases as a result of human activities. This includes 20% of mammal species and 12% of bird species, while the highest threat (31%) is to Amphibians species. The total number of threatened animal species has increased from 5,205 in 1996 to 7,180 in 2004.

Indonesia, India, Brazil and China are among the countries with the most threatened mammals and birds, while plant species are declining rapidly in South and Central America, Central and West Africa, and Southeast Asia.

Habitat loss and degradation affects 89% of all threatened birds, 83% of mammals, and 91% of threatened plants assessed. Habitats with the highest number of threatened mammals and birds are lowland and mountain tropical rainforest. Freshwater habitats are extremely vulnerable with many threatened Fish, Reptile, Amphibian and Invertebrate species.

While the overall percentage of threatened Mammals and Birds has not greatly changed in eight years (Table 8), the magnitude of risk, shown by movements to the higher risk categories, has increased. The 1996 IUCN Red List of Threatened Animals included 169 Critically Endangered and 315 Endangered mammals; the 2000 Redlist listed 180 Critically Endangered and 340 Endangered mammals; the 2004 analysis now lists 162 Critical and 352 Endangered mammal species. For birds, there is an increase from 168 to 179 Critically Endangered and from 235 to 345 Endangered species from 1996 to 2004.

Since the last assessment in 1996, Critically Endangered primates increased from 13 to 20, and the number of threatened albatross species has increased from three to 16 due to long line fisheries. Freshwater turtles, heavily exploited for food and medicinal use in Asia, went from 10 to 25 Critically Endangered species in just eight years. These are among the alarming facts announced by the world's largest international conservation organization, with the publication of the Red List, the most authoritative and comprehensive status assessment of global biodiversity.

"The fact that the number of critically endangered species has increased - mammals from 169 to 180; birds from 168 to 182, between 1996 and 2000 was a jolting surprise, even to those already familiar with today's increasing threats to biodiversity. These findings should be taken very seriously by the global community," said Maritta von Bieberstein Koch-Weser, IUCN's Director General.

In the last 500 years, human activity has forced 816 species to extinction (or extinction in the wild). The increase in known bird extinctions is partly due to improved documentation and new knowledge, but 103 extinctions have occurred since 1800, indicating an extinction rate 50 times greater than the natural rate. Many species are lost before they are even discovered. The highest threat is to Amphibians with 35 species are already extinct, 413 are critical, 729 are Endangered and 628 are Vulnerable totaling to mammoth 1,770 species out of 5,743 known species. Thus almost every third species of Amphibia across the globe is under threat (IUCN Redlist, 2004).
A total of 26,220 species and subspecies, including least concerned, are included in the 2004 Red List. Approximately 61% of Reptiles, 31% of Amphibians and 46% of Fishes (mainly freshwater) so far assessed are listed as threatened (in comparison to 25% of Reptiles, 20% of Amphibians and 30% of Fishes in IUCN Redlist of 2000). Since only a small proportion of these groups have been assessed, the percentage of threatened species could be much higher. As well as the animal species listed as threatened, 2302 are classified as near threatened-a category that has no specific criteria, and is used for species that come close to qualifying as Vulnerable. The majority of 'near threatened' animal species are Mammals (557 - mainly bats and rodents), Birds (773) and 359 Amphibians; 111 are lower risk/ conservation dependent; 2,930 are data deficient.12,964 are in least concerned category, which does not qualify for Critically Endangered, Endangered, Vulnerable or Near Threatened. Widespread and abundant taxa are included in this category.

"The Red List is solid documentation of the global extinction crisis, and it reveals just the tip of the iceberg," said Russell A. Mittermeier, President of Conservation International and Chair of IUCN's Primate Specialist Group. "Many wonderful creatures will be lost in the first few decades of the 21st century unless we greatly increase levels of support, involvement and commitment to conservation."

Human and financial resources must be mobilized at between 10 and 100 times the current level to address this crisis, the Red List analysis report says. IUCN should join forces with a wide range of partners, continue to develop strong relationships with governments and local communities, and engage the private sector at a new level, it adds.

Acknowledgements: The authors are thankful to the Director, Zoological Survey of India for the facilities provided and for encouragement. Thanks are due to Authorities from IUCN, namely Craig-Hamilton Taylor, IUCN Redlist Programme Officer, London for guiding in extracting the summary of the correct numbers of threatened species from India from 2004 IUCN Red list of Threatened species <www.iucnredlist.org>. The authors are also thankful to Alicia Held, Librarian, IUCN-The World Conservation Union, Switzerland for formal permission to use the IUCN material on Redlist categories, criteria, etc and concept of regional list of species. Mike Crosby, Birdlife International, London updated the list of threatened birds prepared by senior author for which authors are grateful. Constructive discussions were also held with Sanjay Molur, and BA Daniel of Zoo Outreach Organization for which our thanks are duly acknowledged. They also provided soft and hardcopies of updated CAMP workshops. Our colleague PL Kankane actively discussed the matter for which we are thankful.

References

Alfred, J.R.B. (1998) Faunal Diversity in India: An Overview: In Faunal Diversity in India, i-viii, 1-495. (Editors. Alfred, JRB, *et. al*., 1998). ENVIS Centre, Zoological Survey of India, Calcutta.

Alfred, J.R.B., Sinha, N.K. & Chakraborty, S. (2002) *Checklist of Mammals of India*. Rec. zool. surv.India, Occ. Paper No. 199:1-289.

Birdlife International (2003) *Saving Asia's Threatened Birds: a guide for government and civil society*. Cambridge, U.K.: BirdLife International.

BirdLife International (2004) Threatened birds of the world 2004. CD-ROM. Cambridge, UK: BirdLife International.

CAMP summaries (1995-2000) Species *summaries of Conservation Assessment and Management Plan (C.A.M.P.) workshops.* Zoo Outreach Organisation and Conservation Specialist Group, India: 1-27.

CITES (2003) Appendices I, II and III valid from 28 May 2003. CITES-listed species Database hosted by UNEP-WCMC. CITES Appendices.htm.

CMS (2004) List of Common Names, CMS Appendices I and II - March 2004. S:/_Basic_Docs/Species-Lists/species_5lng_March 2004.wpd.

Islam, M.Z. and Rahmani, A. R. (2002) *Threatened Birds of India*. *Buceros*, 7(1&2): I-X; 1-102.

IUCN (2000). *2000 IUCN Red List of Threatened Species.* www.iucnredlist.org.

IUCN (2002). *2002 IUCN Red List of Threatened Species.* www.iucnredlist.org.

IUCN (2004). 2004 *IUCN Red List of Threatened Species.* www.iucnredlist.org. Downloaded on 28th October 2005.

IUCN. (2001). IUCN Red List Categories and Criteria: Version 3.1. IUCN Species Survival Commission. IUCN, Gland, Switzerland and Cambridge, UK. ii + 30 pp.

IUCN. (2003). Guidelines for Application of IUCN Red List Criteria at Regional Levels: Version 3.0. IUCN Species Survival Commission. IUCN, Gland, Switzerland and Cambridge, UK. ii + 26 pp.

Khanna, V. 2005.Diversity of Soil fauna: Their functions and ecosystem services. *VIII National Symposium on Soil Biology in Human Welfare*, **Indian Society of Soil Biology and Ecology**, Ponnaiyah Ramajayam College, Thanjavur, Oct-5th-7th, 2005 (Abs) pp 55-56.

Kumar, A. and Khanna, V. (2003) Threatened Indian Fauna. *ENVIS Newslett. Zool.Surv.India*. 10(2): 2-12.

Neave, S.A. (1939-50) *Nomenclator Zoologicus*: A list of the names of Genera and Subgenera in zoology from the tenth edition of Linnaeus 1758 to the end of 1935 (A-Z) (volume I-V). *The Zoological Society of London*, London.

Sanjay, Molur, *et.al*. (2005) *Status of South Asian Non-volant Small Mammals: Conservation Assessment and Management Plan (C.A.M.P.) Workshop Repot*. Zoo Outreach Organization/CBSG, South Asia, Coimbatore, India, 618 pp.

The Wildlife (Protection) Act, 1972 (as amended upto 2003) with Rules upto 2003. Wild Life Trust of India, New Delhi (2003).

Todd, F. 1996. Natural History of the Waterfowl. Ibis Publishing Company, Vista, California, USA.

Walker, S. and Molur, S. (Compilers) (2003) Summary of the Status of South Asian Chiroptera. Extracted from CAMP 2002 Report. Zoo Outreach Organization and Conservation, CBSG, South Asia and WILD, Coimbatore, India.

Walker, S. and Molur, S. (Compilers) (2004) Summary of the Status of South Asian Primates. Extracted from CAMP 2003 Report. Zoo Outreach Organization and Conservation, CBSG, South Asia and WILD, Coimbatore, India, 2nd Edition.

Zoo Outreach Organisation and CBSG (2000). Species Summaries of Conservation Assessment and Management Plan (C.A.M.P.) Workshops, 1995-2000. 27 Pp.

Table 2: Estimated number of described species

Taxonomic Group	No. of Species		% in India
	World	**India**	
PROTISTA Protozoa	31250	2577	8.24
Total (Protista)	**31250**	**2577**	**8.24**
ANIMALIA			
Mesozoa	71	10	14.08
Porifera	4562	486	10.65
Cnidaria	9916	842	8.49
Ctenophora	100	12	12
Platyhelminthes	17500	1622	9.27
Nemertinea	600	-	-
Rotifera	2500	330	13.20
Gastrotricha	3000	100	3.33
Kinorhyncha	100	10	10
Nematoda	30000	2850	9.5
Nematomorpha	250	-	-
Acanthocephala	800	229	28.62
Sipuncula	145	35	24.14
Mollusca	66535	5070	7.62
Echiura	127	43	33.86
Annelida	12700	840	6.61
Onychophora	100	1	1
Arthropoda	**987949**	**68389**	**6.90**
Crustacea	35534	2934	8.26
Insecta			6.83
Arachnida	73440		7.9
Pycnogonida	600		2.67
Pauropoda	360		-
Chilopoda	3000	100	3.33
Diplopoda	7500	162	2.16
Symphyla	120	4	3.33
Merostomata	4	2	50
Phoronida	11	3	27.27
Bryozoa (Ectoprocta)	4000	200	5
Endoprocta	60	10	16.66
Brachiopoda	300	3	1
Pogonophora	80	-	-
Praipulida	8	-	-
Pentastomida	70	-	-
Chaetognatha	111	30	27.02
Tardigrada	514	30	5.83
Echinodermata	6223	765	12.29
Hemichordata	120	12	10
Chordata	**48451**	**4952**	**10.22**
Protochordata (Cephalochordata+ Urochordata)	2106	119	5.65
Pisces	21723	2546	11.72
Amphibia	5150	209	4.06
Reptilia	5817	456	7.84
Aves	9026	1232	13.66
Mammalia	4629	390	8.42
Total (Animalia)	**1196903**	**868741**	**7.25**
Grand Total (Protosticta + Animalia)	**1228153**	**89451**	**7.28**

Source: Alfred, J.R.B. (1998)

Table3: Status of the described, evaluated and threatened species (IUCN, 2004)

Taxonomic Group	Number of described species	Number of species evaluated	Number of threatened species in 2004	Number threatened as % of species described	Number threatened as % of species evaluated
Vertebrates					
Mammals	5,416	4,853	1,101	20%	23%
Birds	9,917	9,917	1,213	12%	12%
Amphibians	5,743	5,743	1,856	32%	32%
Reptiles	8,163	499	304	4%	61%
Fishes	28,500	1,721	800	3%	46%
Subtotal	57,739	22,733	5,274	9%	23%
Invertebrates					
Insects	950,000	771	559	0.06%	73%
Mollusca	70,000	2,163	974	1%	45%
Crustaceans	40,000	498	429	1%	86%
Others	130,200	55	30	0.02%	55%
Subtotal	1,190,200	3,487	1,992	0.17%	57%

Table 4: Threatened Indian Species by groups and categories

Groups	Threatened	Extinct	Cr	En	Vu	LRnt	NT	LRcd	DD	Total
Mammals	213	2	12	47	63	39	13	6	31	213
Birds	149		10	13	64	3	56		3	149
Reptiles	033		4	12	10	4			3	33
Amphibia	148	1	14	30	22		9		72	148
Pisces	75		2	5	20	14	13		21	75
Crustacea	12				09				3	12
Mollusca	5			2				3		5
Hymenpotera	5				5					5
Lepidoptera	4					3			1	4
Odonata	3		1		2					3
Anoplura	1		1							1
Total	648	3	44	109	195	63	91	9	134	648

Table 5: Threatened Endemic Indian Species by groups and categories

Groups	Threatened	Endemic	Percentage	Extinct	Cr	En	Vu	LRnt	NT	LRcd	DD
Mammals	213	63	29.10	1	8	21	19	4	2		7
Birds	149	43	28.85		5	3	20		13		2
Reptiles	033	1	3.03			1					
Amphibia	148	72	48.64	1	2	15	13		5		36
Pisces	075	2	2.66			2					
Crustacea	012	2	16.66				2				
Total	648	183	29.01	2	15	42	54	4	20		45

Table 6: Population trends in Threatened Indian Species (IUCN, 2004)

Group	Threatened	No Change Or Stable	Upward or Improving	Downward or decreasing	Indeterminate	Trends Not Available
Mammals	213	4	1	47	87	74
Birds	149	2		80	10	57
Reptiles	33			2	2	29
Amphibia	148	5		68	73	2
Pisces	75			21	42	12
Crustacea	12					12
Mollusca	5				1	4
Hymenpotera	5					5
Lepidoptera	4				1	4
Odonata	3				1	3
Anoplura	1					1
Total	648	11	1	218	217	201

Table 7: Threatened Indian Species in Acts and Conventions

Group	Threatened	Schedules of WL(P)Act					Appendices of CITES			Appendices of CMS		
	No. of Species	I	II	III	IV	V	I	II	III	I	I/II	II
Mammals	213	16	6	1			56	31	5	4	4	10
Birds	149	10			23		87	55	5	4	18	
Reptiles	33	10			1		10	8		1	4	
Amphibia	148	18	11		28							
Pisces	75		2					3				
Crustacea	12											
Mollusca	5	3										
Hymenpotera	5											
Lepidoptera	4											
Odonata	3	1										
Anoplura	1											
Total	648	58	19	1	52		153	97	10	9	26	10

Table 8 Numbers of Globally threatened species by major groups of animals (1996–2004)

	Number of described species	Number of species evaluated in 2004	Number of threatened species in 1996/98	Number of threatened species in 2000	Number of threatened species in 2002	Number of threatened species in 2003	Number of threatened species in 2004	Number threatened in 2004, as % of species described	Number threatened in 2004, as % of species evaluated**
Vertebrates									
Mammals	5,416	4,853	1,096	1,130	1,137	1,130	1,101	20%	23%
Birds	9,917	9,917	1,107	1,183	1,192	1,194	1,213	12%	12%
Reptiles	8,163	499	253	296	293	293	304	4%	61%
Amphibians*	5,743	5,743	124	146	157	157	1,770	31%	31%
Fishes	28,500	1,721	734	752	742	750	800	3%	46%
Subtotal	**57,739**	**22,733**	**3,314**	**3,507**	**3,521**	**3,524**	**5,188**	**9%**	**23%**
Invertebrates									
Insects	950,000	771	537	555	557	553	559	0.06%	73%
Molluscs	70,000	2,163	920	938	939	967	974	1%	45%
Crustaceans	40,000	498	407	408	409	409	429	1%	86%
Others	130,200	55	27	27	27	30	30	0.02%	55%
Subtotal	**1,190,200**	**3,487**	**1,891**	**1,928**	**1,932**	**1,959**	**1,992**	**0.17%**	**57%**

Table 9: Red List Indian Fauna: **Their Threat Category, Criteria, Population Trends, Conservation Status and Endemism,**

I-Mammalia:

	Scientific name	Common name	Category	Criteria	Population trends	CAMP	IWL(P)	CITES	CMS	Endemic
1	*Dicerorhinus sumatrensis ssp. lasiotis*	Sumatran Rhinoceros	EX	EX ver 2.3 (1994)		CR D				
2	*Ratufa indica ssp. Dealbata*	Dangs Giant Squirrel	EX	EX ver 2.3 (1994)		EX	II (part II)	II		E
3	*Biswamoyopterus biswasi*	Namdapha Flying Squirrel	CR	CR B1+2c ver 2.3 (1994)	Indeterminate	CR B1ab; D				E
4	*Cervus duvaucelii ssp. ranjitsinhi*	Barasingha	CR	CR C2b ver 2.3 (1994)			I(partI)	I		
5	*Cervus eldii ssp. eldii*	Manipur Brow-Antlered Deer	CR	CR B1+2c, C2b ver 2.3 (1994)	Downward	CR B1, 2c; C2b		I		E
6	*Dicerorhinus sumatrensis*	Sumatran Rhinoceros	CR	CR A1bcd, C2a ver 2.3 (1994)	Indeterminate	CR D				
7	*Murina grisea*	Peter's Tube-Nosed Bat	CR	CR B1ab(iii) ver 3.1 (2001)	Indeterminate	CR				E
8	*Ochotona thibetana ssp. sikimaria*	Pika	CR	CR A1ac ver 2.3 (1994)		VU B2ab				
9	*Otomops wroughtoni*	Wroughton's Free-Tailed Bat	CR	CR B1+2c ver 2.3 (1994)	Indeterminate	CR B1, 2c	I(partI)			E
10	*Panthera leo ssp. persica*	Asiatic Lion	CR	CR C2a(ii) ver 3.1 (2001)	Downward	CR C2b	I(partI)	I		E
11	*Rhinoceros sondaicus*	Javan Rhinoceros	CR	CR C2a ver 2.3 (1994)	Indeterminate	EX		I		
12	*Semnopithecus entellus ssp. ajax*	Himalayan Grey Langur	CR	CR B1ab(iii,v)+2ab(iii,v) ver 3.1 (2001)	Downward	CR				E
13	*Sus salvanius*	Pygmy Hog	CR	CR A1c, B1+2cd, E ver 2.3 (1994)		CR C2a	I(partI)	I		E
14	*Viverra civettina*	Malabar Civet	CR	CR C2a ver 2.3 (1994)	Indeterminate	CR A1bc		III		E
15	*Ailurus fulgens*	Lesser Panda	EN	EN C2a ver 2.3 (1994)	Indeterminate	VU B1, 2abc	I(partI)			
16	*Atherurus macrourus ssp. assamensis*	Brush-Tailed Porcupine	EN	EN B1+2bcd ver 2.3 (1994)	Indeterminate	EN B1, 2bcd	II(PartI)			E

17	*Balaenoptera borealis*	Coalfish Whale	EN	EN A1abd ver 2.3 (1994)		LRnt		I	I/II	
18	*Balaenoptera musculus*	Blue Whale	EN	EN A1abd ver 2.3 (1994)		CR A1bd	II(part I)	I	I	
19	*Balaenoptera physalus*	Common Rorqual	EN	EN A1abd ver 2.3 (1994)		LRnt		I	I/II	
20	*Bos javanicus*	Banteng	EN	EN A1cd+2cd, C1+2a ver 2.3 (1994)	Downward					E
21	*Bubalus bubalis*	Asian Buffalo	EN	EN A2e, C1 ver 2.3 (1994)	Downward		I(partI)			
22	*Budorcas taxicolor ssp. taxicolor*	Mishmi Takin	EN	EN A2cd ver 2.3 (1994)	Indeterminate			II		
23	*Bunopithecus hoolock*	Hoolock Gibbon	EN	EN A1cd ver 2.3 (1994)	Indeterminate	EN C2a	I(partI)	I		
24	*Bunopithecus hoolock ssp. hoolock*	Western Hoolock	EN	EN A1cd ver 2.3 (1994)				I		E
25	*Capra falconeri*	Markhor	EN	EN A2cde ver 2.3 (1994)	Indeterminate		I(partI)	I		
26	*Capra falconeri ssp. falconeri*	Flare-Horned Markhor	EN	EN C2a ver 2.3 (1994)	Indeterminate	CR C2b				
27	*Capricornis sumatraensis ssp. rubidus*	Red Serow	EN	EN A2cd ver 2.3 (1994)	Downward					E
28	*Caprolagus hispidus*	Assam Rabbit	EN	EN A1c+2c, B1+2abcde, C1 ver 2.3 (1994)		EN B2ab	I(partI)	II		E
29	*Cervus duvaucelii ssp. branderi*	Upland Barasingha	EN	EN D ver 2.3 (1994)		CR C2b	I(partI)	I		E
30	*Cervus elaphus ssp. hanglu*	Hangul	EN	EN D ver 2.3 (1994)		CR B1, 2cd; C2b	I(partI)	I		E
31	*Crocidura hispida*	Andaman Shrew	EN	EN B1+2c ver 2.3 (1994)	Indeterminate	VU D2				E
32	*Cuon alpinus*	Asiatic Wild Dog	EN	EN C2a(i) ver 3.1 (2001)	Downward	LRnt				E
33	*Elephas maximus*	Asian Elephant	EN	EN A1cd ver 2.3 (1994)		VU A1acd	I(partI)	I		
34	*Equus hemionus ssp. khur*	Indian Wild Ass	EN	EN B1ab(iii,v); C2a(ii) ver 3.1 (2001)	Indeterminate		I(partI)	I		
35	*Eupetaurus cinereus*	Woolly Flying	EN	EN A2ce, B1+2cd,	Indeterminate	LRnt	II(part II)			

		Squirrel		C2a ver 2.3 (1994)						
36	*Hemitragus hylocrius*	Nilgiri Tahr	EN	EN B1+2acd, C2a ver 2.3 (1994)	Downward	EN B1, 2acd; C2a	I(partI)			E
37	*Herpestes palustris*	Bengal Mongoose	EN	EN B1+2abcd ver 2.3 (1994)	Downward	VU B1, 2abc	II (part II)			E
38	*Hipposideros durgadasi*	Khajuria's Leaf-Nosed Bat	EN	EN D ver 3.1 (2001)	Indeterminate	EN				E
39	*Hipposideros hypophyllus*	Kolar Leaf-Nosed Bat	EN	EN B1ab(ii,iii)+2ab(ii,iii) ver 3.1 (2001)		EN				E
40	*Hylopetes alboniger*	Particolored Flying Squirrel	EN	EN A1c ver 2.3 (1994)	Indeterminate	VU B1, 2abc				
41	*Latidens salimalii*	Salim Ali's Fruit Bat	EN	EN B1ab(iii)+2ab(iii) ver 3.1 (2001)	Downward	EN B1, 2a; C2a	I(partI)			E
42	*Macaca assamensis ssp. pelops*	Western Assamese Macaque	EN	EN B1ab(i,ii,iii)+2ab(i,ii,iii); C2a(i) ver 3.1 (2001)	Downward	EN	II(PartI)			
43	*Macaca silenus*	Lion-Tailed Macaque	EN	EN C2a(i) ver 3.1 (2001)	Downward	EN B1, 2c; C2a	I(partI)	I		E
44	*Millardia kondana*	Kondana Soft-Furred Rat	EN	EN B1+2c ver 2.3 (1994)	No change	CR B1ab, 2ab				E
45	*Mus famulus*	Servant Mouse	EN	EN B1+2c ver 2.3 (1994)	Indeterminate	EN B1ab, 2ab				E
46	*Ovis orientalis ssp. vignei*	Ladahk Urial	EN	EN C2a ver 2.3 (1994)	Downward	EN C2a	I(partI)			E
47	*Panthera tigris*	Tiger	EN	EN C2a(i) ver 3.1 (2001)	Downward	EN C2a	I(partI)	I		
48	*Pantholops hodgsonii*	Chiru	EN	EN A2d ver 3.1 (2001)	Downward	CR C2b	I(partI)	I		
49	*Platanista gangetica*	Blind River Dolphin	EN	EN A2abcde ver 3.1 (2001)	Downward	CR A1acd; C1, C2a	I(partI)	I	I/II	
50	*Platanista gangetica ssp. gangetica*	Ganges Dolphin	EN	EN	Downward			I		
51	*Platanista gangetica ssp. minor*	Indus Dolphin	EN	EN A2abcde; B1ab(i,ii,iii,iv); C1 ver 3.1 (2001)	Downward			I		

52	*Pteropus faunulus*	Nicobar Flying Fox	EN	EN B1ab(iii+2ab(iii) ver 3.1 (2001)	Indeterminate	EN		II		E
53	*Rhinoceros unicornis*	Great Indian Rhinoceros	EN	EN B1+2cde ver 2.3 (1994)		EN B1, 2d	I(partI)	I		
54	*Semnopithecus entellus ssp. hector*	Hanuman Langur	EN	EN B2ab(i,ii,iii,iv,v) ver 3.1 (2001)	Downward	EN				
55	*Trachypithecus geei*	Gee's Golden Langur	EN	EN B1ab(i,ii,iii,iv,v); C1+2a(i) ver 3.1 (2001)	Downward	CR C2a	I(partI)	I		
56	*Trachypithecus pileatus*	Bonneted Langur	EN	EN A1cd, C2a ver 2.3 (1994)	Indeterminate	LRnt		I		
57	*Trachypithecus pileatus ssp. durga*	Capped Langur	EN	EN A1cd, C2a ver 2.3 (1994)	Downward	EN		I		
58	*Trachypithecus pileatus ssp. pileatus*	Blond-Bellied Langur	EN	EN A1cd, C2a ver 2.3 (1994)		EN		I		E
59	*Trachypithecus pileatus ssp. tenebricus*	Capped Langur	EN	EN C2a(i) ver 3.1 (2001)	Downward	EN		I		
60	*Tupaia nicobarica*	Nicobar Tree Shrew	EN	EN B1+2c ver 2.3 (1994)	Indeterminate	EN B1ab, 2ab				E
61	*Uncia uncia*	Ounce	EN	EN C2a(i) ver 3.1 (2001)	Downward	EN C2a		I	I	
62	*Acinonyx jubatus ssp venaticus*	Cheetah	VU	VU C2a(i) ver 3.1 (2001)	Downward	EX	I(partI)	I		
63	*Alticola montosa*	Central Kashmir Vole	VU	VU B1+2c ver 2.3 (1994)	Indeterminate	NT				
64	*Bos frontalis*	Indian Bison	VU	VU A1cd+2cd, C1+2a ver 2.3 (1994)	Downward					
65	*Bos grunniens*	Wild Yak	VU	VU A1cd+2cd, C1 ver 2.3 (1994)	Downward	CR C2a	I(partI)		I	
66	*Budorcas taxicolor*	Takin	VU	VU A2cd ver 2.3 (1994)	Indeterminate		I(partI)	II		
67	*Budorcas taxicolor ssp. whitei*	Bhutan Takin	VU	VU A2cde ver 2.3 (1994)	Indeterminate			II		
68	*Callosciurus pygerythrus*	Irrawaddy Squirrel	VU	VU A1cd ver 2.3 (1994)	Indeterminate	LRnt				
69	*Canis lupus ssp. dingo*	Dingo	VU	VU A2e ver 3.1 (2001)	Downward			I		
70	*Capra aegagrus*	Wild Goat	VU	VU A2cde	Indeterminate					

				ver 2.3 (1994)						
71	*Capricornis sumatraensis*	Serow	VU	VU A2cd ver 2.3 (1994)	Indeterminate		I(partI)			
72	*Capricornis sumatraensis ssp. thar*	Himalayan Serow	VU	VU A2cd ver 2.3 (1994)	Indeterminate					
73	*Catopuma temminckii*	Asiatic Golden Cat	VU	VU C2a(i) ver 3.1 (2001)	Downward			I		
74	*Cervus duvaucelii*	Barasingha	VU	VU C1 ver 2.3 (1994)			I(partI)	I		
75	*Cervus duvaucelii ssp. duvaucelii*	Barasingha	VU	VU C1 ver 2.3 (1994)		EN C2a	I(partI)	I		
76	*Cervus eldii*	Brow-Antlered Deer	VU	VU A2c ver 2.3 (1994)			I(partI)	I		
77	*Cremnomys elvira*	Elvira Rat	VU	VU D2 ver 2.3 (1994)	Indeterminate	CR B1ab, 2ab				E
78	*Crocidura pergrisea*	Pale Grey Shrew	VU	VU B1+2c ver 2.3 (1994)	Indeterminate	DD				E
79	*Dugong dugon*	Dugong	VU	VU A1cd ver 2.3 (1994)		CR A1acd; D	I(partI)	I	II	
80	*Equus hemionus*	Asian Wild Ass	VU	VU A3bcd; C1 ver 3.1 (2001)	Downward		I(partI)	I	II	
81	*Hemiechinus nudiventris*	Bare-Bellied Hedgehog	VU	VU D2 ver 2.3 (1994)	Indeterminate	NT				E
82	*Hemitragus jemlahicus*	Himalayan Tahr	VU	VU A2cde ver 2.3 (1994)	Indeterminate	LRnt	I(partI)			
83	*Herpestes fuscus ssp. fuscus*	Brown Mongoose	VU	VU B1+2abc ver 2.3 (1994)	Indeterminate	VU B1, 2abc	II (part II)	III		E
84	*Hystrix brachyura*	Malayan Porcupine	VU	VU A1d ver 2.3 (1994)		NT				
85	*Lutrogale perspicillata*	Indian Smooth-Coated Otter	VU	VU A2acd ver 3.1 (2001)	Downward					
86	*Macaca arctoides*	Bear Macaque	VU	VU A1cd ver 2.3 (1994)	Indeterminate	CR				
87	*Macaca assamensis*	Assam Macaque	VU	VU A1cd ver 2.3 (1994)	Downward	LRnt	II(PartI)			
88	*Macaca assamensis ssp. assamensis*	Eastern Assamese Macaque	VU	VU A1cd ver 2.3 (1994)		EN	II(PartI)			
89	*Martes gwatkinsii*	Nilgiri Marten	VU	VU B1+2bc ver 2.3 (1994)	Indeterminate	VU B1, 2bc	II (part II)	II		E

90	*Megaptera novaeangliae*	Bunch	VU	VU A1ad ver 2.3 (1994)	Upward			I	I	
91	*Melursus ursinus*	Sloth Bear	VU	VU A2cd, C1+2a ver 2.3 (1994)	Indeterminate	VU C2a	I(partI)	II		
92	*Mustela strigidorsa*	Back-Striped Weasel	VU	VU C2a ver 2.3 (1994)	Indeterminate			I		
93	*Myotis longipes*	Kashmir Cave Bat	VU	VU B1+2c, D2 ver 2.3 (1994)	Indeterminate	EN B1,2c				
94	*Myotis sicarius*	Mandelli's Mouse-Eared Bat	VU	VU B2ab(iii) ver 3.1 (2001)	Indeterminate	EN				E
95	*Naemorhedus baileyi*	Red Goral	VU	VU A2cd ver 2.3 (1994)	Indeterminate			I		
96	*Naemorhedus baileyi ssp. cranbrooki*	Burmese Red Goral	VU	VU A2cd ver 2.3 (1994)	Indeterminate			I		
97	*Neofelis nebulosa*	Clouded Leopard	VU	VU C2a(i) ver 3.1 (2001)	Downward	LRnt	I(partI)	I		
98	*Ovis ammon*	Argali	VU	VU A2cde ver 2.3 (1994)	Indeterminate	CR C2a	I(partI)	II		
99	*Ovis ammon ssp. hodgsonii*	Tibetan Argali	VU	VU A2cde ver 2.3 (1994)	Indeterminate			I		
100	*Ovis orientalis*	Urial	VU	VU A2cde ver 2.3 (1994)	Indeterminate	EN B1, 2c				
101	*Panthera leo*	African Lion	VU	VU A2abcd ver 3.1 (2001)	Downward					
102	*Paradoxurus jerdoni*	Brown Palm Civet	VU	VU B1+2bc ver 2.3 (1994)	Indeterminate	VU B1, 2bc		III		E
103	*Pardofelis marmorata*	Marbled Cat	VU	VU C2a(i) ver 3.1 (2001)	Downward	LRnt		I		
104	*Petinomys fuscocapillus ssp. fuscocapillus*	Small Travancore Flying Squirrel	VU	VU B1+2bc ver 2.3 (1994)	Indeterminate	NT	I(partI)			E
105	*Physeter macrocephalus*	Cachelot	VU	VU A1bd ver 2.3 (1994)			II (part II)	II	I/II	
106	*Prionailurus rubiginosus*	Rusty-Spotted Cat	VU	VU C2a(i) ver 3.1 (2001)	Downward	LRnt		I		
107	*Prionailurus viverrinus*	Fishing Cat	VU	VU C2a(i) ver 3.1 (2001)	Downward	VU B1, 2abc				
108	*Rattus burrus*	Nonsense Rat	VU	VU D2 ver 2.3 (1994)		EN B1ab, 2ab				E
109	*Rattus palmarum*	Palm Rat	VU	VU D2 ver 2.3 (1994)	Indeterminate	CR B1ab, 2ab				E

110	*Rattus ranjiniae*	Kerala Rat	VU	VU D2 ver 2.3 (1994)	Indeterminate	EN B1ab, 2ab				E
111	*Rattus sikkimensis*	Sikkim Rat	VU	VU A1c ver 2.3 (1994)		DD				
112	*Rattus stoicus*	Andaman Rat	VU	VU D2 ver 2.3 (1994)	Indeterminate	VU D2				E
113	*Ratufa indica*	Indian Giant Squirrel	VU	VU B1+2c ver 2.3 (1994)	Indeterminate	VU A2c, 3c, 4c	II (part II)	II		E
114	*Ratufa indica ssp. centralis*	Indian Giant Squirrel	VU	VU A1c ver 2.3 (1994)	Indeterminate	VU A1c	II (part II)	II		E
115	*Ratufa indica ssp. indica*	Indian Giant Squirrel	VU	VU A1acd, C1 ver 2.3 (1994)	Downward	VU A2c, 3c, 4c	II (part II)	II		E
116	*Ratufa indica ssp. maxima*	Indian Giant Squirrel	VU	VU B1+2c, C1 ver 2.3 (1994)	Downward	VU B1, 2c; C1	II (part II)	II		E
117	*Ratufa macroura*	Grizzled Giant Squirrel	VU	VU A1c ver 2.3 (1994)	Indeterminate	VU A2c, 3c, 4c; D	I (partI)	II		
118	*Rhinolophus cognatus*	Andaman Horseshoe Bat	VU	VU D2 ver 3.1 (2001)	Indeterminate	VU				E
119	*Rhinolophus mitratus*	Mitred Horseshoe Bat	VU	VU D2 ver 3.1 (2001)	Indeterminate	VU D2				E
120	*Semnopithecus johnii*	Nilgiri Langur	VU	VU C2a(i) ver 3.1 (2001)	Downward	VU	I(partI)			
121	*Suncus dayi*	Day's Shrew	VU	VU B1+2b ver 2.3 (1994)	Indeterminate	EN B1ab, 2ab				E
122	*Suncus montanus*	Sri Lanka Highland Shrew	VU	VU B1+2c ver 2.3 (1994)	Indeterminate	EN B2ab				
123	*Tetracerus quadricornis*	Chousingha	VU	VU C2a(i) ver 3.1 (2001)	Downward	LRnt	I(partI)			
124	*Ursus thibetanus*	Asiatic Black Bear	VU	VU A1cd ver 2.3 (1994)		LRlc		I		
125	*Globicephala macrorhynchus*	Pacific Pilot Whale	LR/cd	LR/cd ver 2.3 (1994)		LRnt		II		
126	*Macaca thibetana*	Short-Tailed Tibetan Macaque	LR/cd	LR/cd ver 2.3 (1994)	Indeterminate					
127	*Orcinus orca*	Killer Whale	LR/cd	LR/cd ver 2.3 (1994)		LRnt		II	II	
128	*Stenella attenuata*	Bridled Dolphin	LR/cd	LR/cd ver 2.3 (1994)				II	II	
129	*Stenella coeruleoalba*	Euphrosyne Dolphin	LR/cd	LR/cd ver 2.3 (1994)				II	II	

130	*Stenella longirostris*	Long-Beaked Dolphin	LR/cd	LR/cd ver 2.3 (1994)		LRnt		II	II	
131	*Alticola albicauda*	White-Tailed Mountain Vole	LR/nt	LR/nt ver 2.3 (1994)	Indeterminate	DD				E
132	*Alticola roylei*	Royle's Mountain Vole	LR/nt	LR/nt ver 2.3 (1994)	Indeterminate	EN				E
133	*Anathana ellioti*	Madras Tree Shrew	LR/nt	LR/nt ver 2.3 (1994)	Indeterminate	NT				E
134	*Antilope cervicapra*	Blackbuck	NT	NT ver 3.1 (2001)	No change	LRlc	I(part I)			
135	*Aonyx cinereus*	Asian Small-Clawed Otter	NT	NT ver 3.1 (2001)	Indeterminate		I(partI)			
136	*Axis porcinus ssp. porcinus*		LR/nt	LR/nt ver 2.3 (1994)		LRnt	III			
137	*Balaenoptera acutorostrata*	Common Minke Whale	LR/nt	LR/nt ver 2.3 (1994)		LRnt		II		
138	*Belomys pearsonii*	Hairy-Footed Flying Squirrel	LR/nt	LR/nt ver 2.3 (1994)	Indeterminate		II (partII)}			
139	*Diomys crumpi*	Crump's Mouse	LR/nt	LR/nt ver 2.3 (1994)	Indeterminate	EN B1, 2c				
140	*Eoglaucomys fimbriatus*		LR/nt	LR/nt ver 2.3 (1994)	Indeterminate	LC				
141	*Eptesicus pachyotis*	Thick-Eared Bat	LR/nt	LR/nt ver 2.3 (1994)		DD				
142	*Funambulus tristriatus*	Jungle Palm Squirrel	LR/nt	LR/nt ver 2.3 (1994)	Indeterminate	LRnt				E
143	*Hyaena hyaena*	Striped Hyaena	LR/nt	LR/nt ver 2.3 (1994)	Indeterminate	LRnt	III			
144	*Ia io*	Great Evening Bat	LR/nt	LR/nt ver 2.3 (1994)		EN B1,2c				
145	*Loris lydekkerianus*	Gray Slender Loris	NT	NT ver 3.1 (2001)	Downward					
146	*Loris lydekkerianus ssp. lydekkerianus*	Mysore Slender Loris	NT	NT ver 3.1 (2001)	Downward	NT				
147	*Loris lydekkerianus ssp. malabaricus*	Gray Slender Loris	NT	NT ver 3.1 (2001)	Downward	NT				
148	*Lutra lutra*	Common Otter	NT	NT ver 3.1 (2001)	Indeterminate		II (part II)	I		
149	*Lynx lynx*	Eurasian Lynx	NT	NT ver 3.1 (2001)	Downward	EN B1, 2bc				

150	*Macaca fascicularis*	Crab-Eating Macaque	LR/nt	LR/nt ver 2.3 (1994)	Indeterminate					
151	*Macaca fascicularis ssp. umbrosa*	Nicobar Long-Tailed Macaque	NT	NT ver 3.1 (2001)	No change	CR C2a	I(partI)			
152	*Macaca mulatta*	Rhesus Macaque	LR/nt	LR/nt ver 2.3 (1994)	Indeterminate	LRlc				
153	*Manis crassicaudata*	Indian Pangolin	LR/nt	LR/nt ver 2.3 (1994)		VU A2c, 3c, 4c	I(partI)	II		
154	*Manis pentadactyla*	Chinese Pangolin	LR/nt	LR/nt ver 2.3 (1994)		VU B2ab	I (partI)	II		
155	*Marmota caudata*	Long-Tailed Marmot	LR/nt	LR/nt ver 2.3 (1994)	Indeterminate	VU B1, 2abc	II (part II)	III		
156	*Micromys minutus*	Eurasian Harvest Mouse	LR/nt	LR/nt ver 2.3 (1994)		VU D2				
157	*Moschus chrysogaster*	Alpine Musk Deer	LR/nt	LR/nt ver 2.3 (1994)		CR A1d		I		
158	*Moschus chrysogaster ssp. chrysogaster*	Alpine Musk Deer	LR/nt	LR/nt ver 2.3 (1994)				I		
159	*Moschus chrysogaster ssp. leucogaster*	Himalayan Musk Deer	LR/nt	LR/nt ver 2.3 (1994)			I(partI)	I		
160	*Moschus fuscus*	Black Musk Deer	LR/nt	LR/nt ver 2.3 (1994)						
161	*Murina aurata*	Little Tube-Nosed Bat	LR/nt	LR/nt ver 2.3 (1994)		NT				
162	*Murina huttoni*	Hutton's Tube-Nosed Bat	LR/nt	LR/nt ver 2.3 (1994)		LC				
163	*Myotis annectans*	Hairy-Faced Bat	LR/nt	LR/nt ver 2.3 (1994)		VU				
164	*Myotis montivagus*	Burmese Whiskered Bat	LR/nt	LR/nt ver 2.3 (1994)		VU				
165	*Naemorhedus goral*	Goral	LR/nt	LR/nt ver 2.3 (1994)	Indeterminate		III	I		
166	*Naemorhedus goral ssp. bedfordi*	Western Himalayan Goral	LR/nt	LR/nt ver 2.3 (1994)	Indeterminate		III	I		
167	*Naemorhedus goral ssp. goral*	Eastern Himalayan Goral	LR/nt	LR/nt ver 2.3 (1994)	Indeterminate		III	I		
168	*Nyctalus leisleri*	Lesser Noctule	LR/nt	LR/nt ver 2.3 (1994)		EN				
169	*Nyctalus montanus*	Mountain Noctule	LR/nt	LR/nt		NT				

				ver 2.3 (1994)						
170	*Ochotona forresti*	Forrest's Pika	LR/nt	LR/nt ver 2.3 (1994)		LRnt				
171	*Otocolobus manul*	Pallas's Cat	NT	NT ver 3.1 (2001)	Downward					
172	*Petaurista magnificus*	Hodgson's Giant Flying Squirrel	LR/nt	LR/nt ver 2.3 (1994)	Indeterminate		II (part II)			
173	*Petaurista nobilis*	Bhutan Giant Flying Squirrel	LR/nt	LR/nt ver 2.3 (1994)	Indeterminate	EN A2c, 3c, 4c	II (part II)			
174	*Rhinolophus beddomei*	Lesser Woolly Horseshoe Bat	NT	NT ver 3.1 (2001)	Downward	NT				
175	*Rhinolophus ferrumequinum*	Greater Horseshoe Bat	LR/nt	LR/nt ver 2.3 (1994)		VU B1, 2c; B2				
176	*Rhinolophus yunanensis*	Dobson's Horseshoe Bat	LR/nt	LR/nt ver 2.3 (1994)		VU				
177	*Scotoecus pallidus*	Desert Yellow Bat	NT	NT ver 3.1 (2001)	Indeterminate	LRnt				E
178	*Scotomanes ornatus*	Harlequin Bat	LR/nt	LR/nt ver 2.3 (1994)						
179	*Semnopithecus entellus*	Common Langur	LR/nt	LR/nt ver 2.3 (1994)	Indeterminate			I		
180	*Semnopithecus entellus ssp. anchises*	Deccan Hanuman Langur	NT		No change					E
181	*Semnopithecus entellus ssp. entellus*	Bengal Hanuman Langur	NT	NT ver 3.1 (2001)		NT				
182	*Semnopithecus entellus ssp. schistaceus*	Central Himalayan Langur	LR/nt	LR/nt ver 2.3 (1994)		NT				
183	*Barkudia insularis*	Legless Skink	DD	DD ver 2.3 (1994)						
184	*Crocidura andamanensis*	Andaman Shrew	DD	DD ver 3.1 (2001)	Indeterminate	CR B1ab, 2ab				E
185	*Crocidura jenkinsi*	Jenkin's Shrew	DD	DD ver 3.1 (2001)	Indeterminate	CR B1ab				E
186	*Crocidura nicobarica*	Nicobar Shrew	DD	DD ver 3.1 (2001)	Indeterminate	EN B1ab, 2ab				E
187	*Eptesicus tatei*	Sombre Bat	DD	DD ver 3.1 (2001)	Indeterminate	DD				E
188	*Equus kiang ssp. kiang*	Western Kiang	DD	DD ver 2.3 (1994)		VU B1,2c;D2	I(partI)	II		
189	*Equus kiang ssp. polyodon*	Southern Kiang	DD	DD ver 2.3 (1994)				II		
190	*Feresa attenuata*	Pygmy Killer Whale	DD	DD ver 2.3 (1994)						

191	*Grampus griseus*	Grey Dolphin	DD	DD ver 2.3 (1994)		LRnt		II		
192	*Helarctos malayanus*	Malayan Sun Bear	DD	DD ver 2.3 (1994)	Indeterminate	DD	I(partI)			
193	*Herpestes fuscus*	Indian Brown Mongoose	DD	DD ver 2.3 (1994)			II C (part II)	III		
194	*Hippocampus fuscus*	Sea Pony	DD	DD ver 3.1 (2001)	Indeterminate					E
195	*Hippocampus kelloggi*	Great Seahorse	DD	DD ver 3.1 (2001)	Indeterminate					
196	*Hipposideros schistaceus*	Split Roundleaf Bat	DD	DD ver 2.3 (1994)	Indeterminate	DD				E
197	*Lagenodelphis hosei*	Fraser's Dolphin	DD	DD ver 2.3 (1994)					II	
198	*Mesoplodon densirostris*	Blainville's Beaked Whale	DD	DD ver 2.3 (1994)			II(part I)	II		
199	*Mesoplodon ginkgodens*	Ginkgo-Toothed Beaked Whale	DD	DD ver 2.3 (1994)				II		
200	*Muntiacus gongshanensis*	Gongshan Muntjac	DD	DD ver 2.3 (1994)						
201	*Neophocaena phocaenoides*	Black Finless Porpoise	DD	DD ver 2.3 (1994)						
202	*Nycticebus bengalensis*	Bengal Loris	DD	DD ver 2.3 (1994)	Indeterminate	DD				
203	*Orcaella brevirostris*	Irrawaddy Dolphin	DD	DD ver 2.3 (1994)		EN B1, 2c	I(partI)	I	II	
204	*Rhinolophus subbadius*	Little Nepalese Horseshoe Bat	DD	DD ver 2.3 (1994)		VU				
205	*Scotomanes emarginatus*	Emarginate Harlequin Bat	DD	DD ver 2.3 (1994)						E
206	*Semnopithecus entellus ssp. dussumieri*	Dussumier's Malabar Langur	DD	DD ver 2.3 (1994)						
207	*Semnopithecus entellus ssp. hypoleucos*	Dark-Legged Malabar Langur	DD	DD ver 2.3 (1994)		EN				
208	*Semnopithecus entellus ssp. priam*	Madras Gray Langur	DD	DD ver 2.3 (1994)		VU				
209	*Sousa chinensis*	Chinese White Dolphin	DD	DD ver 2.3 (1994)		EN A1acd, 2b		I		
210	*Steno bredanensis*	Rough-Toothed Dolphin	DD	DD ver 2.3 (1994)				II		
211	*Trachypithecus pileatus ssp. brahma*	Buff-Bellied Langur	DD	DD ver 3.1 (2001)	Indeterminate	DD		I		

212	*Tursiops aduncus*	Indian Ocean Bottlenose Dolphin	DD	DD ver 2.3 (1994)				II	II	
213	*Tursiops truncatus*	Bottle-Nosed Dolphin	DD	DD ver 2.3 (1994)		LRnt		II	II	

II-AVES:

	Scientific name	Common name	Category	Criteria	Population trends	CAMP	IW(P)	CITES	CMS	Endemic
1	*Fregata andrewsi*	Christmas Island Frigatebird	CR	CR B2ab(ii,iii,v) ver 3.1 (2001)	Downward		IV	I		
2	*Grus leucogeranus*	Siberian Crane	CR	CR A3cde ver 3.1 (2001)	Downward		I(III)	I	I/II	E
3	*Gyps bengalensis*	Asian White-Backed Vulture	CR	CR A2ce+3ce ver 3.1 (2001)	Downward		I(III)			
4	*Gyps indicus*	Indian Vulture	CR	CR A2ce+3ce ver 3.1 (2001)	Downward		I(III)			
5	*Gyps tenuirostris*	Slender-Billed Vulture	CR	CR A2ce+3ce ver 3.1 (2001)	Downward		I(III)			
6	*Heteroglaux blewitti*	Forest Little Owl	CR	CR C2a(i) ver 3.1 (2001)	Downward					
7	*Ophrysia superciliosa*	Himalayan Quail	CR	CR D ver 3.1 (2001)	Indeterminate		I(III)			E
8	*Rhinoptilus bitorquatus*	Jerdon's Courser	CR	CR C2a(ii) ver 3.1 (2001)	Downward					E
9	*Rhodonessa caryophyllacea*	Pink-Headed Duck	CR	CR D ver 3.1 (2001)	Indeterminate		I(III)	I		E
10	*Vanellus gregarius*	Sociable Lapwing	CR	CR A3bc ver 3.1 (2001)	Downward				I/II	E
11	*Ardea insignis*	Imperial Heron	EN	EN A3cd; C2a(i) ver 3.1 (2001)	Downward		I(III)			
12	*Ardeotis nigriceps*	Great Indian Bustard	EN	EN C2a(ii) ver 3.1 (2001)	Downward		I(III)	I		
13	*Cairina scutulata*	White-Winged Duck	EN	EN A2cd+3cd; C2a(i) ver 3.1 (2001)	Downward		I(III)	I		
14	*Ciconia boyciana*	Japanese White Stork	EN	EN A3c ver 3.1 (2001)	Downward		I(III)	I	I	
15	*Eurynorhynchus pygmeus*	Spoon-Billed Sandpiper	EN	EN C1+2a(ii) ver 3.1 (2001)	Downward		IV		I	
16	*Falco cherrug*	Saker Falcon	EN	EN A2bcd+3bcd					I/II	

				ver 3.1 (2001)						
17	*Garrulax cachinnans*	Rufous-Breasted Laughingthrush	EN	EN B1ab(i,ii,iii,iv,v) ver 3.1 (2001)	Downward					E
18	*Himantura fluviatilis*	Ganges Stingray	EN	EN A1cde+2cde, B1+2c ver 2.3 (1994)	Indeterminate					
19	*Houbaropsis bengalensis*	Bengal Bustard	EN	EN C1 ver 3.1 (2001)	Downward		IV			
20	*Leptoptilos dubius*	Greater Adjutant	EN	EN A3cde ver 3.1 (2001)	Downward		IV			E
21	*Oxyura leucocephala*	White-Headed Duck	EN	EN A2bcde ver 3.1 (2001)	Downward		IV	II	I/II	
22	*Sypheotides indica*	Lesser Florican	EN	EN A3bc; C1 ver 3.1 (2001)	Downward		I(III)			E
23	*Tringa guttifer*	Nordmann's Greenshank	EN	EN C2a(i) ver 3.1 (2001)	Downward			I	I	
24	*Accipiter butleri*	Nicobar Shikra	VU	VU C2a(ii) ver 3.1 (2001)	Downward		II			E
25	*Aceros narcondami*	Narcondam Hornbill	VU	VU D1+2 ver 3.1 (2001)	No change			II		E
26	*Aceros nipalensis*	Rufous-Cheeked Hornbill	VU	VU A2cd+3cd ver 3.1 (2001)	Downward		I(III)	II		E
27	*Amandava formosa*	Green Avadavat	VU	VU A2bcd+3bcd ver 3.1 (2001)	Downward		IV	II		E
28	*Anas formosa*	Baikal Teal	VU	VU A3c ver 3.1 (2001)	Downward		IV	II	I	E
29	*Anser erythropus*	Lesser White-Fronted Goose	VU	VU A2bcd+3bcd ver 3.1 (2001)	Downward		IV		I/II	E
30	*Apus acuticauda*	Dark-Rumped Swift	VU	VU D1 ver 3.1 (2001)	Indeterminate					
31	*Aquila clanga*	Greater Spotted Eagle	VU	VU C1 ver 3.1 (2001)	Downward		I(III)		I/II	
32	*Aquila hastata*	Indian Spotted Eagle	VU	VU C1 ver 3.1 (2001)			I(III)			
33	*Aquila heliaca*	Imperial Eagle	VU	VU C1 ver 3.1 (2001)	Downward		I(III)	I	I/II	
34	*Arborophila mandellii*	Chestnut-Breasted Partridge	VU	VU C2a(i) ver 3.1 (2001)	Downward		IV			E

35	*Aythya baeri*	Baer's Pochard	VU	VU A2cd+3cd ver 3.1 (2001)	Downward		IV			E
36	*Brachypteryx hyperythra*	Rusty-Bellied Shortwing (E)	VU	VU C1 ver 3.1 (2001)	Downward					
37	*Brachypteryx major*	White-Bellied Shortwing	VU	VU B1ab(i,ii,iii,iv,v) ver 3.1 (2001)	Downward					
38	*Branta ruficollis*	Red-Breasted Goose	VU	VU B2ab(iii) ver 3.1 (2001)	Indeterminate		IV	II		
39	*Catreus wallichi*	Cheer Pheasant	VU	VU C2a(i) ver 3.1 (2001)	Downward		I(III)	I		E
40	*Chaetornis striatus*	Bristled Grass-Warbler	VU	VU A2c+3c; C2a(i) ver 3.1 (2001)	Downward					
41	*Chlamydotis undulata*	Houbara Bustard	VU	VU A2bcd+3bcd ver 3.1 (2001)	Downward		I(III)	I	I/II	
42	*Chrysomma altirostre*	Jerdon's Babbler	VU	VU A2c+3c ver 3.1 (2001)	Downward		IV			
43	*Columba elphinstonii*	Nilgiri Wood-Pigeon	VU	VU C1 ver 3.1 (2001)	Downward		IV			E
44	*Columba eversmanni*	Pale-Backed Pigeon	VU	VU A2bcd+3bcd ver 3.1 (2001)	Indeterminate		IV			
45	*Columba punicea*	Pale-Capped Pigeon	VU	VU C2a(i) ver 3.1 (2001)	Downward		IV			E
46	*Euploea andamanensis*	Andaman Crow	VU	VU B1+2c ver 2.3 (1994)						
47	*Euploea scherzeri*	Nicobar Crow	VU	VU B1+2c ver 2.3 (1994)						
48	*Falco naumanni*	Lesser Kestrel	VU	VU A2bce+3bce ver 3.1 (2001)	Downward				I/II	
49	*Ficedula subrubra*	Kashmir Flycatcher	VU	VU B1ab(i,ii,iii,iv,v) ver 3.1 (2001)	Downward		IV			E
50	*Francolinus gularis*	Swamp Francolin	VU	VU A2cd+3cd ver 3.1 (2001)	Downward		IV			
51	*Gallinago nemoricola*	Wood Snipe	VU	VU C1 ver 3.1 (2001)	Downward		IV			
52	*Graphium epaminondas*	Andamans Swordtail	VU	VU A2e ver 2.3 (1994)						
53	*Grus antigone*	Sarus Crane	VU	VU A2cde+3cde ver 3.1 (2001)	Downward		IV			

54	*Grus monacha*	Hooded Crane	VU	VU C1 ver 3.1 (2001)	Downward		I(III)	I	I/II	
55	*Grus nigricollis*	Black-Necked Crane	VU	VU C1 ver 3.1 (2001)	Downward		I(III)	I	I/II	
56	*Haliaeetus leucoryphus*	Pallas's Fish-Eagle	VU	VU C1 ver 3.1 (2001)	Downward		I(III)		I/II	
57	*Heliopais personata*	Asian Finfoot	VU	VU A2cd+3cd; C1 ver 3.1 (2001)	Downward		IV			
58	*Hypsipetes nicobariensis*	Nicobar Bulbul	VU	VU C1 ver 3.1 (2001)	Downward		IV			E
59	*Leptoptilos javanicus*	Lesser Adjutant	VU	VU A2cd+3cd; C1 ver 3.1 (2001)	Downward		IV			
60	*Lophophorus sclateri*	Crestless Monal	VU	VU C2a(i) ver 3.1 (2001)	Downward		I(III)	I		
61	*Marmaronetta angustirostris*	Marbled Duck	VU	VU A2cd+3cd ver 3.1 (2001)	Downward		IV		I/II	
62	*Megapodius nicobariensis*	Nicobar Megapode	VU	VU C1 ver 3.1 (2001)	Downward		I(III)			
63	*Paradoxornis flavirostris*	Black-Breasted Parrotbill	VU	VU A2c+3c ver 3.1 (2001)	Downward					
64	*Parus nuchalis*	White-Naped Tit	VU	VU A2c+3c; C2a(i) ver 3.1 (2001)	Downward		IV			E
65	*Pavo muticus*	Green Peafowl	VU	VU A2cd+3cd; C2a(i) ver 3.1 (2001)	Downward		IV	II		
66	*Pelecanus crispus*	Dalmatian Pelican	VU	VU A2c+3c ver 3.1 (2001)	No change		IV	I	I/II	
67	*Pelecanus philippensis*	Grey Pelican	VU	VU A2cde+3cde ver 3.1 (2001)	Downward		IV			
68	*Pellorneum palustre*	Marsh Babbler	VU	VU A2c+3c ver 3.1 (2001)	Downward		IV			
69	*Perdicula manipurensis*	Manipur Bush-Quail	VU	VU A2cd+3cd; B1ab(i,ii,iii,iv,v); C2a(i) ver 3.1 (2001)	Downward		IV			
70	*Phaenicophaeus pyrrhocephalus*	Red-Faced Malkoha	VU	VU C2a(i) ver 3.1 (2001)	Downward		IV			

71	*Ploceus megarhynchus*	Finn's Baya Weaver	VU	VU A2c+3c; C2a(i) ver 3.1 (2001)	Downward		IV			E
72	*Prinia cinereocapilla*	Grey-Crowned Prinia	VU	VU A2c+3c ver 3.1 (2001)	Downward					
73	*Pycnonotus xantholaemus*	Yellow-Throated Bulbul	VU	VU A2c+3c; C1+2a(i) ver 3.1 (2001)	Downward		IV			E
74	*Rhinomyias brunneata*	Brown-Chested Jungle-Flycatcher	VU	VU C1			IV			E
75	*Rynchops albicollis*	Indian Skimmer	VU	VU A2ce+3ce ver 3.1 (2001)	Downward					
76	*Saxicola insignis*	Hodgson's Bushchat	VU	VU C1 ver 3.1 (2001)	Downward					
77	*Saxicola macrorhyncha*	Stoliczka's Bushchat	VU	VU C2a(i) ver 3.1 (2001)	Downward					
78	*Schoenicola platyura*	Broad-Tailed Grassbird	VU	VU B1ab(i,ii,iii,iv,v); C2a(i) ver 3.1 (2001)	Downward					
79	*Sitta formosa*	Beautiful Nuthatch	VU	VU C2a(i) ver 3.1 (2001)	Downward					
80	*Spelaeornis badeigularis*	Mishmi Wren-Babbler	VU	VU B1ab(i,ii,iii,v); C2a(ii); D2 ver 3.1 (2001)	Downward		IV			E
81	*Spelaeornis longicaudatus*	Assam Wren-Babbler	VU	VU B1ab(i,ii,iii,iv,v); C2a(i) ver 3.1 (2001)	Downward		IV			E
82	*Stachyris oglei*	Austen's Babbler	VU	VU B1ab(i,ii,iii,iv,v) ver 3.1 (2001)	Downward		IV			E
83	*Syrmaticus humiae*	Hume's Bar-Tailed Pheasant	VU	VU C2a(i) ver 3.1 (2001)	Downward		I(III)	I		
84	*Tragopan blythii*	Blyth's Tragopan	VU	VU C2a(i) ver 3.1 (2001)	Downward		I(III)	I		
85	*Tragopan melanocephalus*	Black-Headed Tragopan	VU	VU C2a(i) ver 3.1 (2001)	Downward		I(III)	I		
86	*Turdoides longirostris*	Slender-Billed Babbler	VU	VU A2c+3c	Downward		IV			

				ver 3.1 (2001)						
87	*Turdus feae*	Grey-Sided Thrush	VU	VU C1 ver 3.1 (2001)	Downward		IV			
88	*Aegypius monachus*	Cinereous Vulture	NT	NT ver 3.1 (2001)	Downward		I(III)			
89	*Alcedo hercules*	Blyth's Kingfisher	NT	NT ver 3.1 (2001)						
90	*Anhinga melanogaster*	Oriental Darter	NT	NT ver 3.1 (2001)			IV			
91	*Anorrhinus tickelli*	Brown Hornbill	NT	NT ver 3.1 (2001)				II		
92	*Anthracoceros coronatus*	Malabar Pied-Hornbill	NT	NT ver 3.1 (2001)				II		
93	*Anthus nilghiriensis*	Nilgiri Pipit	NT	NT ver 3.1 (2001)						E
94	*Arborophila atrogularis*	White-Cheeked Partridge	NT	NT ver 3.1 (2001)			IV			
95	*Aythya nyroca*	Ferruginous Duck	NT	NT ver 3.1 (2001)			IV		I/II	
96	*Babax waddelli*	Giant Babax	NT	NT ver 3.1 (2001)						
97	*Bradypterus major*	Long-Billed Bush-Warbler	NT	NT ver 3.1 (2001)						
98	*Buceros bicornis*	Great Hornbill	NT	NT ver 3.1 (2001)			I(III)	II		
99	*Caloenas nicobarica*	Nicobar Dove	NT	NT ver 3.1 (2001)			I(III)	I		
100	*Circus macrourus*	Pale Harrier	NT	NT ver 3.1 (2001)	Downward		I(III)			
101	*Columba palumboides*	Andaman Wood-Pigeon	NT	NT ver 3.1 (2001)			IV			
102	*Crossoptilon harmani*	Tibetan Eared-Pheasant	NT	NT ver 3.1 (2001)			I(III)	I		
103	*Dendrocitta bayleyi*	Andaman Treepie	NT	NT ver 3.1 (2001)			IV			E
104	*Dicrurus andamanensis*	Andaman Drongo	NT	NT ver 3.1 (2001)			IV			E
105	*Dryocopus hodgei*	Andaman Woodpecker	NT	NT ver 3.1 (2001)			IV			E

106	*Emberiza aureola*	Yellow-Breasted Bunting	NT	NT ver 3.1 (2001)			IV			
107	*Ephippiorhynchus asiaticus*	Black-Necked Stork	NT	NT ver 3.1 (2001)			IV			
108	*Esacus magnirostris*	Beach Thick-Knee	NT	NT ver 3.1 (2001)			IV			
109	*Eumyias albicaudata*	Nilgiri Flycatcher	NT	NT ver 3.1 (2001)			IV			E
110	*Falco jugger*	Laggar Falcon	NT	NT ver 3.1 (2001)			IV	I		
111	*Ficedula nigrorufa*	Black-And-Rufous Flycatcher	NT	NT ver 3.1 (2001)			IV			E
112	*Gallinago media*	Great Snipe	NT	NT ver 3.1 (2001)	Downward		IV		I/II	
113	*Garrulax jerdoni*	Grey-Breasted Laughingthrush	NT	NT ver 3.1 (2001)						E
114	*Garrulax nuchalis*	Chestnut-Backed Laughingthrush	NT	NT ver 3.1 (2001)						
115	*Graminicola bengalensis*	Rufous-Rumped Grassbird	NT	NT ver 3.1 (2001)						
116	*Haliaeetus albicilla*	Grey Sea Eagle	NT	NT ver 3.1 (2001)			I(III)	I	I/II	
117	*Harpactes wardi*	Ward's Trogon	NT	NT ver 3.1 (2001)			IV			
118	*Ichthyophaga humilis*	Lesser Fish-Eagle	NT	NT ver 3.1 (2001)			I(III)			
119	*Ichthyophaga ichthyaetus*	Grey-Headed Fish-Eagle	NT	NT ver 3.1 (2001)			I(III)			
120	*Indicator xanthonotus*	Yellow-Rumped Honeyguide	NT	NT ver 3.1 (2001)						
121	*Limnodromus semipalmatus*	Asian Dowitcher	NT	NT ver 3.1 (2001)			IV			
122	*Luscinia pectardens*	Firethroat	NT	NT ver 3.1 (2001)						
123	*Macropygia rufipennis*	Andaman Cuckoo-Dove	NT	NT ver 3.1 (2001)						E
124	*Mycteria leucocephala*	Painted Stork	NT	NT ver 3.1 (2001)			IV			
125	*Ninox affinis*	Andaman Hawk-Owl	NT	NT			IV	**?**		E

				ver 3.1 (2001)						
126	*Otus balli*	Andaman Scops-Owl	NT	NT ver 3.1 (2001)						E
127	*Pelargopsis amauroptera*	Brown-Winged Kingfisher	NT	NT ver 3.1 (2001)						
128	*Phoenicopterus minor*	Lesser Flamingo	NT	NT ver 3.1 (2001)			IV	II		
129	*Phylloscopus tytleri*	Tytler's Leaf-Warbler	NT	NT ver 3.1 (2001)	Downward					E
130	*Pipistrellus cadornae*	Cadorna's Pipistrelle	LR/nt	LR/nt ver 2.3 (1994)						
131	*Pipistrellus paterculus*	Mount Popa Pipistrelle	LR/nt	LR/nt ver 2.3 (1994)						
132	*Prinia burnesii*	Long-Tailed Prinia	NT	NT ver 3.1 (2001)						
133	*Prionace glauca*	Blue Shark	LR/nt	LR/nt ver 2.3 (1994)	Indetermina te					
134	*Psittacula caniceps*	Blyth's Parakeet	NT	NT ver 3.1 (2001)			IV	II		E
135	*Psittacula longicauda*	Long-Tailed Parakeet	NT	NT ver 3.1 (2001)			IV	II		
136	*Puffinus persicus*	Persian Shearwater	NT	NT ver 3.1 (2001)	Indetermina te					
137	*Sarcogyps calvus*	Indian Black Vulture	NT	NT ver 3.1 (2001)			I(III)			
138	*Spelaeornis caudatus*	Rufous-Throated Wren-Babbler	NT	NT ver 3.1 (2001)			IV			
139	*Sphenocichla humei*	Wedge-Billed Wren-Babbler	NT	NT ver 3.1 (2001)			IV			
140	*Spilornis elgini*	Andaman Serpent-Eagle	NT	NT ver 3.1 (2001)			I(III)			E
141	*Spilornis klossi*	South Nicobar Serpent-Eagle	NT	NT ver 3.1 (2001)	Downward		I(III)			
142	*Sterna acuticauda*	Black-Bellied Tern	NT	NT ver 3.1 (2001)						
143	*Tetrax tetrax*	Little Bustard	NT	NT ver 3.1 (2001)	Downward		IV			
144	*Threskiornis melanocephalus*	Black-Headed Ibis	NT	NT ver 3.1 (2001)						

145	*Tragopan satyra*	Crimson Horned-Pheasant	NT	NT ver 3.1 (2001)			I(III)			
146	*Tryngites subruficollis*	Buff-Breasted Sandpiper (E)	NT	NT ver 3.1 (2001)					I/II	
147	*Acrocephalus orinus*	Large-Billed Reed Warbler	DD	DD ver 3.1 (2001)						
148	*Otus alius*	Nicobar Scops-Owl	DD	DD ver 3.1 (2001)	Indeterminate					E
149	*Rallina canningi*	Andaman Crake	DD	DD ver 3.1 (2001)	Indeterminate					E

III-Reptilia:

	Scientific name	Common name	Category	Criteria	Population trends	CAMP	IW(P)	CITES	CMS	Endemic
1	*Batagur baska*	Batagur	CR	CR A1cd ver 2.3 (1994)			I(II)	I		
2	*Dermochelys coriacea*	Leatherback	CR	CR A1abd ver 2.3 (1994)				I	I(II)	
3	*Eretmochelys imbricata*	Hawksbill Turtle	CR	CR A1bd ver 2.3 (1994)	Downward		I(II)		I/II	
4	*Kachuga kachuga*	Bengal Roof Turtle	CR	CR A1cd ver 2.3 (1994)			I(II)	II		
5	*Caretta caretta*	Loggerhead	EN	EN A1abd ver 2.3 (1994)			I(II)		I/II	
6	*Chelonia mydas*	Green Turtle	EN	EN A2bd ver 3.1 (2001)	Downward		I(II)	I	I/II	
7	*Chitra indica*	Narrow-Headed Softshell Turtle	EN	EN A1cd+2cd ver 2.3 (1994)				II		
8	*Gavialis gangeticus*	Fish-Eating Crocodile	EN	EN C2a, E ver 2.3 (1994)			I(II)	I		
9	*Geoemyda silvatica*	Cane Turtle	EN	EN B1+2c ver 2.3 (1994)	Indeterminate					
10	*Indotestudo elongata*	Elongated Tortoise	EN	EN A1cd+2cd ver 2.3 (1994)						E
11	*Kachuga dhongoka*	Three-Striped Roof	EN	EN A1cd+2cd ver 2.3 (1994)				II		

		Turtle								
12	*Kachuga sylhetensis*	Assam Roofed Turtle	EN	EN B1+2c ver 2.3 (1994)				II		
13	*Lepidochelys olivacea*	Olive Ridley	EN	EN A1bd ver 2.3 (1994)			I(II)		I/II	
14	*Manouria emys*	Asian Giant Tortoise	EN	EN A1cd+2cd ver 2.3 (1994)						
15	*Pelochelys cantorii*	Cantor's Giant Softshell	EN	EN A1cd+2cd ver 2.3 (1994)				II		
16	*Pyxidea mouhotii*	Jagged-Shelled Turtle	EN	EN A1d+2d ver 2.3 (1994)						
17	*Aspideretes gangeticus*		VU	VU A1d+2d ver 2.3 (1994)				I		
18	*Aspideretes hurum*		VU	VU A1cd+2d ver 2.3 (1994)				I		
19	*Aspideretes leithii*	Leith's Softshell Turtle	VU	VU A1c ver 2.3 (1994)	Indeterminate					
20	*Crocodylus palustris*	Marsh Crocodile	VU	VU A1a, C2a ver 2.3 (1994)			I(II)	I		
21	*Cuora amboinensis*	South Asian Box Turtle	VU	VU A1d+2d ver 2.3 (1994)						
22	*Geoclemys hamiltonii*	Black Pond Turtle	VU	VU A1d+2d ver 2.3 (1994)			I(II)	I		
23	*Hardella thurjii*	Crowned River Turtle	VU	VU A1cd+2cd ver 2.3 (1994)						
24	*Indotestudo travancorica*		VU	VU A1cd ver 2.3 (1994)			I(II)			
25	*Melanochelys tricarinata*	Three-Keeled Land Tortoise	VU	VU B1+2c ver 2.3 (1994)				I		
26	*Morenia petersi*	Indian Eyed Turtle	VU	VU A1cd+2d ver 2.3 (1994)						
27	*Cyclemys dentata*	Asian Leaf Turtle	LR/nt	LR/nt ver 2.3 (1994)						
28	*Kachuga smithii*		LR/nt	LR/nt ver 2.3 (1994)				II		
29	*Melanochelys trijuga*	Indian Black Turtle	LR/nt	LR/nt ver 2.3 (1994)						
30	*Python molurus*	Asiatic Rock Python	LR/nt	LR/nt ver 2.3 (1994)			I(II)	I		

31	*Elachistodon westermanni*	Indian Egg-Eater	DD	DD ver 2.3 (1994)			I(II)	II		
32	*Naja naja ssp. oxiana*	Central Asian Cobra	DD	DD ver 2.3 (1994)				II		
33	*Oligodon nikhili*		DD	DD ver 2.3 (1994)			IV			

IV-AMPHIBIA:

	Scientific name	Common name	Category	Criteria	Population trends	CAMP	IW(P)	CITES	CMS	Endemic
1	*Philautus travancoricus*		EX	EX ver 3.1 (2001)		DD				E
2	*Fejervarya murthii*		CR	CR B1ab(iii) ver 3.1 (2001)						
3	*Indirana gundia*		CR	CR B1ab(iii) ver 3.1 (2001)	Downward	DD	IV			
4	*Indirana phrynoderma*		CR	CR B1ab(iii) ver 3.1 (2001)	Downward		IV			
5	*Micrixalus kottigeharensis*		CR	CR B2ab(iii) ver 3.1 (2001)	Downward	DD				
6	*Philautus chalazodes*		CR	CR B1ab(iii)+2ab(iii) ver 3.1 (2001)	Downward	VU B1, 2c; D2				E
7	*Philautus griet*		CR	CR B1ab(iii) ver 3.1 (2001)	Downward					
8	*Philautus sanctisilvaticus*		CR	CR B1ab(iii)+2ab(iii) ver 3.1 (2001)	Downward					
9	*Philautus shillongensis*		CR	CR B1ab(iii) ver 3.1 (2001)	Downward	CR(B1, 2abc)				E
10	*Philautus sp. nov. 'Amboli Forest'*		CR	CR B1ab(iii) ver 3.1 (2001)	Downward					
11	*Philautus sp. nov. 'Munnar 2'*		CR	CR B1ab(iii) ver 3.1 (2001)	Downward					
12	*Philautus sp. nov. 'Munnar'*		CR	CR B1ab(iii) ver 3.1 (2001)	Downward					

13	*Philautus sp. nov. 'Ponmudi 3'*		CR	CR B1ab(iii) ver 3.1 (2001)	Downward					
14	*Rana charlesdarwini*		CR	CR B1ab(iii)+2ab(iii) ver 3.1 (2001)	Downward		IV			
15	*Rhacophorus pseudomalabaricus*		CR	CR B1ab(iii) ver 3.1 (2001)	Downward					
16	*Ansonia ornata*		EN	EN B1ab(iii) ver 3.1 (2001)	Downward	EN B1, 2c				E
17	*Bufo beddomii*		EN	EN B1ab(iii) ver 3.1 (2001)	Downward	LRlc				E
18	*Bufo koynayensis*		EN	EN B1ab(iii) ver 3.1 (2001)	Downward	EN B1, 2c				E
19	*Bufoides meghalayanus*		EN	EN B1ab(iii) ver 3.1 (2001)	Downward	CR B1, 2abc				E
20	*Fejervarya nilagirica*		EN	EN B2ab(iii) ver 3.1 (2001)	Downward					E
21	*Indirana brachytarsus*		EN	EN B1ab(iii) ver 3.1 (2001)	Downward	VU B1, 2b	IV			
22	*Indirana diplosticta*		EN	EN B1ab(iii) ver 3.1 (2001)	Downward	VU B1, 2c	IV			
23	*Indirana leptodactyla*		EN	EN B1ab(iii) ver 3.1 (2001)	Downward	VU B1, 2c	IV			
24	*Melanobatrachus indicus*	Black Microhylid	EN	EN B1ab(iii) ver 3.1 (2001)	Downward	VU B1, 2c,3c;D2				E
25	*Micrixalus gadgili*		EN	EN B1ab(iii) ver 3.1 (2001)	Downward	EN B1, 2c				E
26	*Microhyla sholigari*		EN	EN B1ab(iii) ver 3.1 (2001)	Downward					
27	*Minervarya sahyadris*		EN	EN B1ab(iii) ver 3.1 (2001)	Downward					
28	*Nasikabatrachus sahyadrensis*		EN	EN B1ab(iii) ver 3.1 (2001)	Downward					
29	*Nyctibatrachus aliciae*		EN	EN B1ab(iii) ver 3.1 (2001)	Downward	VU B1, 2c				
30	*Nyctibatrachus beddomii*		EN	EN B1ab(iii) ver 3.1 (2001)	Downward	LR-nt				E
31	*Nyctibatrachus hussaini*		EN	EN B1ab(iii)+2ab(iii) ver 3.1 (2001)	Indeterminate					

32	*Nyctibatrachus minor*		EN	EN B1ab(iii) ver 3.1 (2001)	Downward	VU B1, 2c; D2				E
33	*Nyctibatrachus sanctipalustris*		EN	EN B1ab(iii) ver 3.1 (2001)	Downward	EN B1, 2c				E
34	*Nyctibatrachus vasanthi*		EN	EN B1ab(iii) ver 3.1 (2001)	Downward					
35	*Pedostibes tuberculosus*	Malabar Tree Toad	EN	EN B1ab(iii) ver 3.1 (2001)	Downward	VU B1, 2c				
36	*Philautus charius*		EN	EN B2ab(iii) ver 3.1 (2001)	Downward	LR-nt				E
37	*Philautus signatus*		EN	EN B1ab(iii) ver 3.1 (2001)	Downward	VU B1, 2c				E
38	*Philautus sp. nov. 'Athirimala'*		EN	EN B1ab(iii) ver 3.1 (2001)	Downward					
39	*Philautus sp. nov. 'Kalpatta'*		EN	EN B1ab(iii) ver 3.1 (2001)	Downward					
40	*Philautus tinniens*		EN	EN B1ab(iii) ver 3.1 (2001)	Downward					
41	*Philautus wynaadensis*		EN	EN B1ab(iii) ver 3.1 (2001)	Downward					
42	*Polypedates insularis*		EN	EN B1ab(iii)+2ab(iii) ver 3.1 (2001)	Indeterminate	EN B1, 2abc				
43	*Ramanella mormorata*		EN	EN B1ab(iii) ver 3.1 (2001)	Downward	VU B1, 2bc; D2				E
44	*Rhacophorus calcadensis*		EN	EN B1ab(iii) ver 3.1 (2001)	Downward	DD				E
45	*Rhacophorus lateralis*		EN	EN B1ab(iii) ver 3.1 (2001)	Downward	EN B1, 2c				E
46	*Ansonia rubigina*		VU	VU D2 ver 3.1 (2001)	No change	EN B1,2c,3b				E
47	*Bufo microtympanum*		VU	VU B1ab(iii)+2ab(iii) ver 3.1 (2001)	Downward	LR-nt				
48	*Indirana leithii*		VU	VU B1ab(iii) ver 3.1 (2001)	Downward	LR-nt	IV			E
49	*Micrixalus nudis*		VU	VU B1ab(iii) ver 3.1 (2001)	Downward	VU B1, 2c				E
50	*Micrixalus*		VU	VU B1ab(iii)	Downward	VU B1,				E

	phyllophilus			ver 3.1 (2001)		2c				
51	*Micrixalus saxicola*		VU	VU B1ab(iii) ver 3.1 (2001)	Downward	LR-nt				E
52	*Nyctibatrachus deccanensis*		VU	VU B1ab(iii) ver 3.1 (2001)	Downward	VU B1, 2c				E
53	*Nyctibatrachus humayuni*		VU	VU B1ab(iii) ver 3.1 (2001)	Downward	EN B1 2c				E
54	*Nyctibatrachus major*		VU	VU B1ab(iii) ver 3.1 (2001)	Downward	LR-nt				E
55	*Nyctixalus moloch*		VU	VU B1ab(iii) ver 3.1 (2001)	Downward	EN B1, 2abc				
56	*Occidozyga borealis*	Northern Frog	VU	VU B2ab(iii) ver 3.1 (2001)	Downward					
57	*Paa minica*		VU	VU B2ab(iii) ver 3.1 (2001)	Downward	DD				
58	*Philautus bombayensis*		VU	VU B1ab(iii)+2ab(iii) ver 3.1 (2001)	Downward	EN B1, 2c				E
59	*Philautus garo*		VU	VU B1ab(iii) ver 3.1 (2001)	Downward	CR B1, 2bc				E
60	*Philautus glandulosus*		VU	VU B1ab(iii) ver 3.1 (2001)	Downward	VU B1, 2c				E
61	*Philautus sp nov. 'Ponmudi 2'*		VU	VU D2 ver 3.1 (2001)	No change					
62	*Philautus sp. nov. 'Eravikulam NP'*		VU	VU D2 ver 3.1 (2001)	No change					
63	*Philautus sp. nov. 'Ponmudi Hills'*		VU	VU D2 ver 3.1 (2001)	No change					
64	*Philautus sp. nov. 'Tholpetti Forest'*		VU	VU B1ab(iii) ver 3.1 (2001)	Downward					
65	*Pterorana khare*	Indian Flying Frog	VU	VU B1ab(iii) ver 3.1 (2001)	Downward					
66	*Ramanella triangularis*		VU	VU B1ab(iii) ver 3.1 (2001)	Downward	VU B1, 2c; D2				E
67	*Rana aurantiaca*		VU	VU B1ab(iii) ver 3.1 (2001)	Downward	LR-nt	IV			E
68	*Amolops viridimaculatus*		NT	NT ver 3.1 (2001)	Downward					

69	*Bufo parietalis*		NT	NT ver 3.1 (2001)	Downward	LRnt				E
70	*Micrixalus fuscus*		NT	NT ver 3.1 (2001)	Downward					E
71	*Paa annandalii*		NT	NT ver 3.1 (2001)	Downward	EN B1, 2abc	IV			
72	*Philautus beddomii*		NT	NT ver 3.1 (2001)	No change	VU B1, 2c)				E
73	*Polypedates gongshanensis*		NT	NT ver 3.1 (2001)	Downward					
74	*Ramanella montana*		NT	NT ver 3.1 (2001)	Indetermina te	LRnt				E
75	*Rana curtipes*		NT	NT ver 3.1 (2001)	Downward	LR-nt	IV			E
76	*Rana temporalis*		NT	NT ver 3.1 (2001)	Downward		IV			
77	*Amolops chakrataensis*		DD	DD ver 3.1 (2001)	Indetermina te					E
78	*Amolops jaunsari*		DD	DD ver 3.1 (2001)	Indetermina te					E
79	*Bufo brevirostris*	Short-Nosed Toad	DD	DD ver 3.1 (2001)	Indetermina te	DD				E
80	*Bufo hololius*		DD	DD ver 3.1 (2001)	Indetermina te	LR-nt				E
81	*Bufo silentvalleyensis*	Silent Valley Toad	DD	DD ver 3.1 (2001)	Indetermina te	VU D2				E
82	*Bufo stuarti*		DD	DD ver 3.1 (2001)	Indetermina te	LR-nt				
83	*Chirixalus cherrapunjiae*		DD	DD ver 3.1 (2001)	Indetermina te					
84	*Chirixalus dudhwaensis*		DD	DD ver 3.1 (2001)	Indetermina te	VU D2				E
85	*Chirixalus shyamrupus*		DD	DD ver 3.1 (2001)	Indetermina te					
86	*Euphlyctis ghoshi*		DD	DD ver 3.1 (2001)	Indetermina te	EN B1, 2abc				E
87	*Fejervarya assimilis*		DD	DD ver 3.1 (2001)	Indetermina te					
88	*Fejervarya brevipalmata*		DD	DD ver 3.1 (2001)	Indetermina te					

89	*Fejervarya mysorensis*		DD	DD ver 3.1 (2001)	Indeterminate					
90	*Fejervarya parambikulamana*		DD	DD ver 3.1 (2001)	Indeterminate					
91	*Fejervarya sauriceps*		DD	DD ver 3.1 (2001)	Indeterminate					
92	*Gegeneophis carnosus*		DD	DD ver 3.1 (2001)	Indeterminate	VU B1, 2c				E
93	*Gegeneophis danieli*		DD	DD ver 3.1 (2001)	Indeterminate					
94	*Gegeneophis fulleri*		DD	DD ver 3.1 (2001)	Indeterminate	VU B1, 2ac				E
95	*Gegeneophis krishni*		DD	DD ver 3.1 (2001)	Indeterminate					
96	*Gegeneophis seshachari*		DD	DD ver 3.1 (2001)	Indeterminate					
97	*Ichthyophis bombayensis*		DD	DD ver 3.1 (2001)	Indeterminate	EN B1, 2c				E
98	*Ichthyophis garoensis*		DD	DD ver 3.1 (2001)	Indeterminate					
99	*Ichthyophis husaini*		DD	DD ver 3.1 (2001)	Indeterminate					
100	*Ichthyophis longicephalus*		DD	DD ver 3.1 (2001)	Indeterminate	VU B1, 2c				E
101	*Ichthyophis malabarensis*		DD	DD ver 3.1 (2001)	Indeterminate	VU B1, 2c				E
102	*Ichthyophis peninsularis*		DD	DD ver 3.1 (2001)	Indeterminate	VU B1, 2c; D2				E
103	*Ichthyophis sikkimensis*		DD	DD ver 3.1 (2001)	Indeterminate	VU B1, 2c				E
104	*Ichthyophis subterrestris*		DD	DD ver 3.1 (2001)	Indeterminate	VU B1, 2c				E
105	*Indirana longicrus*		DD	DD ver 3.1 (2001)	Indeterminate					
106	*Indirana tenuilingua*		DD	DD ver 3.1 (2001)	Indeterminate	DD	IV			E
107	*Indotyphlus battersbyi*		DD	DD ver 3.1 (2001)	Indeterminate	CR — (B1, 2bc)				E
108	*Kalophrynus*		DD	DD	Indetermina					

	orangensis			ver 3.1 (2001)	te					
109	*Limnonectes doriae*		DD	DD ver 3.1 (2001)	Indeterminate	VU D2				
110	*Limnonectes khasianus*		DD	DD ver 3.1 (2001)	Indeterminate	DD				E
111	*Limnonectes mawlyndipi*		DD	DD ver 3.1 (2001)	Indeterminate	CR B1, 2ac				E
112	*Limnonectes mawphlangensis*		DD	DD ver 3.1 (2001)	Indeterminate	CR B1 2ac				E
113	*Micrixalus elegans*		DD	DD ver 3.1 (2001)	Indeterminate					
114	*Micrixalus narainensis*		DD	DD ver 3.1 (2001)	Indeterminate					
115	*Micrixalus silvaticus*		DD	DD ver 3.1 (2001)	Indeterminate	VU B1, 2c				E
116	*Micrixalus swamianus*		DD	DD ver 3.1 (2001)	Indeterminate					
117	*Micrixalus thampii*		DD	DD ver 3.1 (2001)	Indeterminate	EN B1, 2c				E
118	*Microhyla chakrapanii*		DD	DD ver 3.1 (2001)	Indeterminate	VU D2)				E
119	*Nyctibatrachus kempholeyensis*		DD	DD ver 3.1 (2001)	Indeterminate	DD				E
120	*Nyctibatrachus sylvaticus*		DD	DD ver 3.1 (2001)	Indeterminate	DD				E
121	*Paa mokokchungensis*		DD	DD ver 3.1 (2001)	Indeterminate		IV			
122	*Pedostibes kempi*	Garo Hill Tree Toad	DD	DD ver 3.1 (2001)	Indeterminate	CR B1, 2abc				E
123	*Philautus dubius*		DD	DD ver 3.1 (2001)	Indeterminate					
124	*Philautus flaviventris*		DD	DD ver 3.1 (2001)	Indeterminate	DD				E
125	*Philautus jerdonii*		DD	DD ver 3.1 (2001)	Indeterminate					
126	*Philautus kempiae*		DD	DD ver 3.1 (2001)	Indeterminate	CR B1, 2abc				E
127	*Philautus luteolus*		DD	DD ver 3.1 (2001)	Indeterminate					

128	*Philautus microdiscus*		DD	DD ver 3.1 (2001)	Indeterminate					
129	*Philautus namdaphaensis*		DD	DD ver 3.1 (2001)	Indeterminate					
130	*Philautus similipalensis*		DD	DD ver 3.1 (2001)	Indeterminate					
131	*Philautus terebrans*		DD	DD ver 3.1 (2001)	Indeterminate					
132	*Philautus tuberohumerus*		DD	DD ver 3.1 (2001)	Indeterminate					
133	*Polypedates naso*		DD	DD ver 3.1 (2001)	Indeterminate					
134	*Ramanella anamalaiensis*		DD	DD ver 3.1 (2001)	Indeterminate	DD				E
135	*Ramanella minor*		DD	DD ver 3.1 (2001)	Indeterminate	DD				E
136	*Rhacophorus namdaphaensis*		DD	DD ver 3.1 (2001)	Indeterminate	VU B1,2c:D2				E
137	*Rhacophorus translineatus*		DD	DD ver 3.1 (2001)	Indeterminate					
138	*Rhacophorus tuberculatus*		DD	DD ver 3.1 (2001)	Downward	LRnt				E
139	*Rhacophorus variabilis*		DD	DD ver 3.1 (2001)	Downward					
140	*Sphaerotheca leucorhynchus*		DD	DD ver 3.1 (2001)	Indeterminate					
141	*Uraeotyphlus interruptus*		DD	DD ver 3.1 (2001)	Indeterminate					
142	*Uraeotyphlus malabaricus*		DD	DD ver 3.1 (2001)	Indeterminate	EN B1,2c				E
143	*Uraeotyphlus menoni*		DD	DD ver 3.1 (2001)	Indeterminate	VU B1, 2c; D2				E
144	*Uraeotyphlus narayani*		DD	DD ver 3.1 (2001)	Indeterminate	VU B1, 2c				E
145	*Uraeotyphlus oxyurus*		DD	DD ver 3.1 (2001)	Indeterminate	VU B1, 2c				E
146	*Xenophrys kempii*		DD	DD ver 3.1 (2001)	Indeterminate					

147	*Xenophrys robusta*		DD	DD ver 3.1 (2001)	Indeterminate					
148	*Xenophrys wuliangshanensis*	Wuliangshan Horned Toad	DD	DD ver 3.1 (2001)	Indeterminate					

V-PISCES:

	Scientific name	Common Name	Category	Criteria	Population trends	CAMP	IW(P)	CITES	CMS	Endemic
1	*Carcharhinus hemiodon*	Pondicherry Shark	CR	CR A2acd; C2a(i) ver 3.1 (2001)	Indeterminate	-	II{partII(A)}	-	-	-
2	*Glyphis gangeticus*	Ganges Shark	CR	CR A1cde+2cde, C2b ver 2.3 (1994)	-	VU D2	II{partII(A)}	-	-	-
3	*Anoxypristis cuspidata*	Knife Tooth Sawfish	EN	EN A1acde+2cde ver 2.3 (1994)	Downward	-	II{partII(A)}	-	-	-
4	*Cheilinus undulatus*	Giant Wrasse	EN	EN A2bd+3bd ver 3.1 (2001)	Downward	-	-	II	-	E
5	*Pristis microdon*	Freshwater Sawfish	EN	EN A1bcde+2bcde ver 2.3 (1994)	Downward	-	II{partII(A)}	-	-	-
6	*Pristis pectinata*	Smalltooth Sawfish	EN	EN A1bcd+2cd ver 2.3 (1994)	Indeterminate	-	-	-	-	-
7	*Pristis zijsron*	Green Sawfish	EN	EN A1bcd+2cd ver 2.3 (1994)	Downward	-	II{partII(A)}	-	-	E
8	*Aetomylaeus nichofii*	Banded Eagle Ray	VU	VU A2d+3d+4d ver 3.1 (2001)	Downward	-	II{partII(A)}	-	-	-
9	*Carcharias taurus*	Sand Tiger Shark	VU	VU A1ab+2d ver 2.3 (1994)	Indeterminate	-	II{partII(A)}	-	-	-
10	*Epinephelus lanceolatus*	Giant Grouper	VU	VU A2d ver 2.3 (1994)	-	-	II{partII(A)}	-	-	-
11	*Hemipristis elongatus*	Fossil Shark	VU	VU A2bd+3bd+4bd ver 3.1 (2001)	Downward	-	II{partII(A)}	-	-	-
12	*Hippocampus comes*	Tiger Tail Seahorse	VU	VU A2cd ver 3.1 (2001)	Downward	-	II{partII(A)}	-	-	-
13	*Hippocampus kuda*	Common Seahorse	VU	VU A4cd ver 3.1 (2001)	Downward	-	II{partII(A)}	-	-	-
14	*Hippocampus*	Flat-Faced Seahorse	VU	VU A4cd ver 3.1 (2001)	Downward	-	II{partII(A)}	II	-	-

	trimaculatus									
15	*Horaglanis krishnai*	Cave Catfish	VU	VU D2 ver 2.3 (1994)	-	CR D2;B1, 2ac	-	-	-	-
16	*Mobula mobular*	Devil Fish	VU	VU A1cd ver 2.3 (1994)	Indeterminate	-	-	-	-	-
17	*Nebrius ferrugineus*	Tawny Nurse Shark	VU	VU A2abcd+3cd+4abcd ver 3.1 (2001)	Downward	-	II{partII(A)}	-	-	-
18	*Negaprion acutidens*	Sharptooth Lemon Shark	VU	VU A2abcd+3bcd+4abcd ver 3.1 (2001)	Downward	-	II{partII(A)}	-	-	-
19	*Rhina ancylostoma*	Bowmouth Guitarfish	VU	VU A2bd+3bd+4bd ver 3.1 (2001)	Downward	-	-	-	-	-
20	*Rhincodon typus*	Whale Shark	VU	VU A1bd+2d ver 2.3 (1994)	Downward	-	II{partII(A)}	II	-	-
21	*Rhinobatos typus*	Common Shovelnose Ray	VU	VU A2bd+3bd+4bd ver 3.1 (2001)	Downward	-	II{partII(A)}	-	-	-
22	*Rhynchobatus djiddensis*	Whitespot Giant Guitarfish	VU	VU A1bd+2d ver 2.3 (1994)	Downward	-	II{partII(A)}	-	-	-
23	*Rhynchobatus laevis*	Smoothnose Wedgefish	VU	VU A2bd+3bd+4bd ver 3.1 (2001)	Indeterminate	-	-	-	-	-
24	*Schistura sijuensis*		VU	VU D2 ver 2.3 (1994)	-	-	-	-	-	-
25	*Stegostoma fasciatum*	Leopard Shark	VU	VU A2abcd+3cd+4abcd ver 3.1 (2001)	Downward	-	II{partII(A)}	-	-	-
26	*Thunnus obesus*	Bigeye Tuna	VU	VU A1bd ver 2.3 (1994)	Downward	-	-	-	-	-
27	*Urogymnus asperrimus*	Porcupine Ray	VU	VU A1bd, B1+2bcd ver 2.3 (1994)	Indeterminate	-	II{partII(A)}	-	-	-
28	*Atelomycterus marmoratus*	Coral Catshark	NT	NT ver 3.1 (2001)	Indeterminate	-	II{partII(A)}	-	-	-

29	*Carcharhinus amblyrhynchoides*	Graceful Shark	LR/nt	LR/nt ver 2.3 (1994)	Indeterminate	-	II{partII(A)}	-	-	-
30	*Carcharhinus brevipinna*	Spinner Shark	LR/nt	LR/nt ver 2.3 (1994)	Indeterminate	-	II{partII(A)}	-	-	-
31	*Carcharhinus dussumieri*	Whitecheek Shark	NT	NT ver 3.1 (2001)	Downward	-	II{partII(A)}	-	-	-
32	*Carcharhinus leucas*	Bull Shark	LR/nt	LR/nt ver 2.3 (1994)	Indeterminate	-	II{partII(A)}	-	-	-
33	*Carcharhinus limbatus*	Blacktip Shark	LR/nt	LR/nt ver 2.3 (1994)	Indeterminate	-	II{partII(A)}	-	-	-
34	*Carcharhinus longimanus*	Oceanic Whitetip Shark	LR/nt	LR/nt ver 2.3 (1994)	Indeterminate	-	II{partII(A)}	-	-	-
35	*Carcharhinus macloti*	Hardnose Shark	NT	NT ver 3.1 (2001)	Indeterminate	-	II{partII(A)}	-	-	-
36	*Carcharhinus melanopterus*	Blacktip Reef Shark	LR/nt	LR/nt ver 2.3 (1994)	Indeterminate	-	II{partII(A)}	-	-	-
37	*Carcharhinus sealei*	Blackspot Shark	NT	NT ver 3.1 (2001)	Indeterminate	-	II{partII(A)}	-	-	-
38	*Chiloscyllium griseum*	Grey Bamboo Shark	NT	NT ver 3.1 (2001)	Indeterminate	-	II{partII(A)}	-	-	-
39	*Chiloscyllium indicum*	Catshark	NT	NT ver 3.1 (2001)	Indeterminate	-	II{partII(A)}	-	-	-
40	*Chiloscyllium punctatum*	Brown-Spotted Catshark	NT	NT ver 3.1 (2001)	Downward	-	II{partII(A)}	-	-	-
41	*Eleotris melanosoma*	Broadhead Sleeper	LR/nt	LR/nt ver 2.3 (1994)	-	-	-	-	-	-
42	*Epinephelus coioides*	Estuary Cod	NT	NT ver 3.1 (2001)	Downward	-	-	-	-	-
43	*Epinephelus fuscoguttatus*	Brown-Marbled Grouper	NT	NT ver 3.1 (2001)	Indeterminate	-	-	-	-	-
44	*Eusphyra blochii*	Slender Hammerhead	NT	NT ver 3.1 (2001)	Indeterminate	-	-	-	-	-
45	*Galeocerdo cuvier*	Tiger Shark	LR/nt	LR/nt ver 2.3 (1994)	Indeterminate	-	II{partII(A)}	-	-	-
46	*Heptranchias perlo*	One-Finned Shark	NT	NT ver 3.1 (2001)	Indeterminate	-	II{partII(A)}	-	-	-
47	*Isurus oxyrinchus*	Shortfin Mako	LR/nt	LR/nt ver 2.3 (1994)	Indeterminate	-	-	-	-	-
48	*Mobula eregoodootenkee*	Pygmy Devilray	NT	NT ver 3.1 (2001)	Indeterminate	-	II{partII(A)}	-	-	-

49	*Mobula japanica*	Japanese Devilray	NT	NT ver 3.1 (2001)	Indeterminate	-	II{partII(A)}	-	-	-
50	*Scoliodon laticaudus*	Spadenose Shark	LR/nt	LR/nt ver 2.3 (1994)	Indeterminate	-	II{partII(A)}	-	-	-
51	*Sphyrna lewini*	Scalloped Hammerhead	LR/nt	LR/nt ver 2.3 (1994)	Indeterminate	-	-	-	-	-
52	*Sphyrna zygaena*	Smooth Hammerhead	LR/nt	LR/nt ver 2.3 (1994)	Indeterminate	-	-	-	-	-
53	*Taeniura lymma*	Blue-Spotted Stingray	LR/nt	LR/nt ver 2.3 (1994)	Indeterminate	-	II{partII(A)}	-	-	-
54	*Triaenodon obesus*	Whitetip Reef Shark	LR/nt	LR/nt ver 2.3 (1994)	Indeterminate	-	II{partII(A)}	-	-	-
55	*Aetobatus narinari*	Spotted Eagle Ray	DD	DD ver 2.3 (1994)	Indeterminate	-	II{partII(A)}	-	-	-
56	*Alopias vulpinus*	Thresher Shark	DD	DD ver 3.1 (2001)	Indeterminate	-	II{partII(A)}	-	-	-
57	*Bythaelurus hispidus*	Bristly Catshark	DD	DD ver 3.1 (2001)	Indeterminate	-	II{partII(A)}	-	-	-
58	*Carcharhinus amboinensis*	Java Shark	DD	DD ver 2.3 (1994)	Indeterminate	-	II{partII(A)}	-	-	-
59	*Centrophorus cf. uyato*	Little Gulper Shark	DD	DD ver 3.1 (2001)	Indeterminate	-	II{partII(A)}	-	-	-
60	*Centrophorus moluccensis*	Endeavour Dogfish	DD	DD ver 3.1 (2001)	Downward	-	-	-	-	-
61	*Cromileptes altivelis*	Humpback Grouper	DD	DD ver 2.3 (1994)	Indeterminate	-	-	-	-	-
62	*Echinorhinus brucus*	Bramble Shark	DD	DD ver 3.1 (2001)	Indeterminate	-	II{partII(A)}	-	-	-
63	*Eurypegasus draconis*	Little Dragonfish	DD	DD ver 2.3 (1994)	Indeterminate	-	-	-	-	-
64	*Indoreonectes evezardi*		DD	DD ver 2.3 (1994)	-	-	-	-	-	-
65	*Macrognathus aral*	Spiny Eel	DD	DD ver 2.3 (1994)	-	LRnt	-	-	-	-
66	*Manta birostris*	Manta Ray	DD	DD ver 3.1 (2001)	Indeterminate	-	II{partII(A)}	-	-	-
67	*Monopterus indicus*		DD	DD ver 2.3 (1994)	-	-	-	-	-	-
68	*Notorynchus cepedianus*	Broadnose Sevengill Shark	DD	DD ver 2.3 (1994)	Indeterminate	-	II{partII(A)}	-	-	-

69	*Pegasus volitans*		DD	DD ver 2.3 (1994)	Indeterminate	-	-	-	-	-
70	*Schismatogobius deraniyagalai*	Redneck Goby	DD	DD ver 2.3 (1994)	-	-	-	-	-	-
71	*Sphyrna mokarran*	Great Hammerhead	DD	DD ver 2.3 (1994)	Indeterminate	-	-	-	-	-
72	*Squalus mitsukurii*	Green Eyes Spurdog	DD		Indeterminate	-	-	-	-	-
73	*Syngnathoides biaculeatus*	Alligator Pipefish	DD	DD ver 2.3 (1994)	Indeterminate	-	-	-	-	-
74	*Thunnus alalunga*	Albacore Tuna	DD	DD ver 2.3 (1994)	-	-	-	-	-	-
75	*Xiphias gladius*	Swordfish	DD	DD ver 2.3 (1994)	-	-	-	-	-	-

VI-CRUSTACEA:

	Scientific name	Common Name	Category	Criteria	Population trends	CAMP	IW(P)	CITES	CMS	Endemic
1	*Allodiaptomus satanas*		VU	VU D2 ver 2.3 (1994)						E
2	*Arctodiaptomus euacanthus*		VU	VU D2 ver 2.3 (1994)						
3	*Arctodiaptomus michaeli*		VU	VU D2 ver 2.3 (1994)						E
4	*Eodiaptomus shihi*		VU	VU D2 ver 2.3 (1994)						
5	*Heliodiaptomus kolleruensis*		VU	VU D2 ver 2.3 (1994)						
6	*Heliodiaptomus pulcher*		VU	VU D2 ver 2.3 (1994)						
7	*Neodiaptomus intermedius*		VU	VU D2 ver 2.3 (1994)						
8	*Neodiaptomus physalipus*		VU	VU D2 ver 2.3 (1994)						
9	*Phyllodiaptomus wellekensae*		VU	VU D2 ver 2.3 (1994)						
10	*Birgus latro*	Coconut Crab	DD	DD ver 2.3 (1994)						

11	*Carcinoscorpius rotundicauda*	Horseshoe Crabs	DD	DD ver 2.3 (1994)						
12	*Tachypleus gigas*	Horseshoe Crab	DD	DD ver 2.3 (1994)						

VII-MOLLUSCA:

	Scientific name	**Common Name**	**Category**	**Criteria**	**Population trends**	**CAMP**	**IW(P)**	**CITES**	**CMS**	**Endemic**
1	*Pseudomulleria dalyi*		EN	EN B1+2c ver 2.3 (1994)	Indeterminate					
2	*Tricula montana*		EN	EN B1+2ce ver 2.3 (1994)						
3	*Hippopus hippopus*	Bear Paw Clam	LR/cd	LR/cd ver 2.3 (1994)			I(IV)(B)			
4	*Tridacna maxima*	Small Giant Clam	LR/cd	LR/cd ver 2.3 (1994)			I(IV)(B)			
5	*Tridacna squamosa*	Fluted Clam	LR/cd	LR/cd ver 2.3 (1994)			I(IV)(B)			

VIII-HYMENOPTERA:

	Scientific name	**Common Name**	**Category**	**Criteria**	**Population trends**	**CAMP**	**IW(P)**	**CITES**	**CMS**	**Endemic**
1	*Monomorium effractor*		VU	VU D2 ver 2.3 (1994)						
2	*Myrmica ereptrix*	Common Bentwing Bat	VU	VU D2 ver 2.3 (1994)						
3	*Pheidole lanuginosa*		VU	VU D2 ver 2.3 (1994)						
4	*Pheidole parasitica*		VU	VU D2 ver 2.3 (1994)						
5	*Rhoptromyrmex mayri*		VU	VU D2 ver 2.3 (1994)						

IX-LEPIDOPTERA:

	Scientific name	Common Name	Category	Criteria	Population trends	CAMP	IW(P)	CITES	CMS	Endemic
1	*Idea malabarica*	Malabar Tree-Nymph	LR/nt	LR/nt ver 2.3 (1994)						
2	*Parantica nilgiriensis*	Nilgiri Tiger	LR/nt	LR/nt ver 2.3 (1994)						
3	*Teinopalpus imperialis*	Kaiseri Hind	LR/nt	LR/nt ver 2.3 (1994)						
4	*Cephalopholis boenak*	Chocolate Hind	DD	DD ver 2.3 (1994)	Indeterminate					

X-ODONATA:

	Scientific name	Common Name	Category	Criteria	Population trends	CAMP	IW(P)	CITES	CMS	Endemic
1	*Burmagomphus sivalikensis*		CR	CR A1c ver 2.3 (1994)						
2	*Cephalaeschna acutifrons*		VU	VU B1+2c ver 2.3 (1994)						
3	*Epiophlebia laidlawi*	Relict Himalayan Dragonfly	VU	VU B1+2c ver 2.3 (1994)			I(IV)			

XI-ANOPLURA:

	Scientific name	Common Name	Category	Criteria	Population trends	CAMP	IW(P)	CITES	CMS	Endemic
1	*Haematopinus oliveri*	Pygmy Hog Sucking Louse	CR	CR A1c, B1+2cd, E ver 2.3 (1994)						-