PR124

WILD ANIMAL DIVERSITY
THEMATIC WORKING GROUP

NATIONAL BIODIVERSITY STRATEGY AND ACTION PLAN

FIRST DRAFT
18 May 2002

CO-ORDINATOR

AJITH KUMAR, Salim Ali Centre for Ornithology and Natural History, Coimbatore

TWG MEMBERS and Addresses

SACON Library
PR124

Salim Ali Centre For Ornithology & Natural History
LIBRARY
Date
Coimbatore-10

LIBRARY
Date
Salim Ali Centre For Ornithology & Natural History
Coimbatore-10

CONTENTS

EXECUTIVE SUMMARY I

ACKNOWLEDGEMENTS VI

PREFACE VII

1 INTRODUCTION 1
1.1 THE IMPORTANCE OF SPECIES 1
1.2 MANDATE: THEMATIC CONCEPT NOTE 2
1.3 GOAL OF THIS REPORT 4
1.4 METHODOLOGY 5

2 STATUS OF WILD ANIMAL DIVERSITY 8
2.1 WILD ANIMAL DIVERSITY IN INDIA 8
2.1.1 Status of faunal documentation 8
2.1.2 Faunal species richness and endemism 9
2.1.3 Values of fauna 10
2.2 REASONS FOR SPECIES LOSS 12
2.2.1 Habitat loss 12
2.2.2 Hunting, poaching, harvesting 15
2.2.3 Reduction of habitat quality 16
2.2.4 Dams and barrages 17
2.2.5 Introduction of exctics 18
2.2.6 Use of pesticides 18
2.2.7 Accidental mortality 19
2.2.8 Other factors 19
2.3 THREAT STATUS OF INDIAN FAUNA 20
2.3.1 Recent assessments 20
2.3.1.1 Biodiversity Conservation Prioritisation Project 20
2.3.1.2 National Bureau of Fish Genetic Resources 21
2.3.1.3 Assessment of Indian Avifauna 21
2.3.1.4 Zoological Survey of India 21
2.3.2 Threat status 21
2.3.3 Reasons for endangerment 22
2.3.4 Comparison with global assessment 23

3 CRITICAL INFORMATION GAPS 25
3.1 THE NEED FOR EASILY ACCESSIBLE INFORMATION 25
3.2 AN ANALYSIS OF INFORMATION AVAILABILITY 26
3.3 INFORMATION NEEDS FOR RAINFOREST FAUNA IN INDIA 28
3.3.1 Recommendations of the workshop on research priorities in rainforest fauna 29
3.4 CONSTRAINTS DUE TO LACK OF SPECIES INFORMATION 30
3.5 STRATEGY AND ACTION PLANS 32

4 IDENTIFICATION OF IMPORTANT SPECIES FOR CONSERVATION 37
4.1 THE NEED FOR THREAT ASSESSMENT 37
4.1.1 Strategy and action plans 37

4.2 FRAMEWORK FOR CONSERVATION OF IMPORTANT SPECIES 38
4.3 STRATEGY AND ACTION PLANS 39

5 CONSERVATION OF IMPORTANT SPECIES: GOVERNMENTAL EFFORTS 42
5.1 INTRODUCTION 42
5.2 GOVERNMENTAL EFFORTS 43
5.2.1 Protected area network 43
5.2.2 Prevention of wildlife poaching and trade 44
5.2.3 Focal species conservation 48
5.2.3.1 Project Tiger 48
5.2.3.2 Project Elephant 53
5.2.3.3 Olive Ridley Sea Turtle Conservation 53
5.2.3.4 Other projects 54
5.2.4 Legislation 54
5.2.5 Policies and action plans 55
5.2.5.1 National Wildlife Action Plan 2002-16 56
5.3 NON-GOVERNMENTAL ORGANISATIONS 60
5.4 STRATEGY AND ACTION PLANS 62

6 CONSERVATION OF IMPORTANT SPECIES: IN COMMUNITY AND OTHER LANDS 69
6.1 THE IMPORTANCE OF NON-FOREST LANDS 69
6.2 INLAND WETLANDS 70
6.2.1 Strategy and action plans 71
6.3 CORPORATE LANDS 74
6.3.1 Strategy and action plans 75
6.4 SEMI-ARID GRASSLANDS 76
6.4.1 Strategy and action plan 77
6.5 MARINE HABITAT 79
6.5.1 Strategy and action plans 80

7 LOCAL COMMUNITIES AND CONSERVATION 82
7.1 STATUS OF COMMUNITY CONSERVATION 82
7.2 COMMUNITY KNOWLEDGE OF WILD ANIMAL DIVERSITY 82
7.3 CONSTRAINTS 85
7.4 STRATEGY AND ACTION PLANS 86

8 CROSS BORDER ISSUES 88
8.1 INTRODUCTION 88
8.2 MIGRATION ACROSS INTERNATIONAL BORDERS 88
8.3 NON-MIGRATORY MOVEMENT ACROSS INTERNATIONAL BORDERS 91
8.4 STRATEGIES AND ACTION PLAN 92

9 IDENTIFYING RELATIVELY UNKNOWN LOCATIONS OF WILD TAXA DIVERSITY 94
9.1 THE USE OF INDICATORS 94
9.2 USE OF INDICATORS IN INDIA 94
9.3 STRATEGY AND ACTION PLANS 96

REFERENCES 97

APPENDIX 8.1 105

SACON Library
PR124

EXECUTIVE SUMMARY

The conservation of wild animal diversity is an important component of NBSAP. The concern for a few animal species is what has driven conservation effort in India for the last many decades. A qualitative change in this effort is now in the making among the officials, forest managers and researchers following a better appreciation of wild animal diversity *per se*, especially following the Rio Convention. This also follows a better understanding and appreciation of the importance of species diversity in ecosystem functioning. The mandate given to the Thematic Working Group on Wild Animal Diversity reflects this change of perception to a large extent.

The conservation of a few species such as the tiger and elephant, and the protected area network has been a subject of considerable attention for the last several decades, including focal species projects, special committees, reports and action plans. It was felt that the effort of the TWG was better spent on major issues that have not been addressed adequately till now, while accepting the various common recommendations and actions plans that already exist. This report is based on a review of these recommendations and action plans, mandates of ongoing major projects which address the conservation of Indian fauna, review of scientific literature and working papers, one workshop which addressed conservation issues of rainforest fauna, and discussions with individuals and at meetings.

KEY ISSUES AND STRATEGIES

ISSUE 1. Non-implementation of recent recommendations and action plans: During the last decade or more, several focal animal projects (Project Tiger, Project Elephant), special committees (*e.g.* Subramanian Committee on Prevention of Illegal Trade in Wildlife), and recently the National Wildlife Action Plan have made several recommendations for the conservation of wild animal diversity. The most important ones are common to all and pertain to providing adequate man power, timely funding and other resources, control of poaching, extension of protected area network *etc.* The non-implementation of these recommendations and action plans would undermine all other efforts for conservation, including those that follow from NBSAP.

Strategy 1: Implement the important recommendations that have been suggested by several committees and action plans, some appointed specifically to address critical issues.

ISSUE 2: The lack of a legal framework for conservation of species: Although existing legislation protect individual animals of threatened species and their habitats, these are not sufficient to ensure the survival of species. As a result no worthwhile effort is being made to ensure the survival of several critically endangered species. It should be, therefore, mandatory for conservation actions to be based on a scientific assessment of the threat processes operating on the species.

Strategy1: Enact legislation making it mandatory to develop and implement threat reduction and recovery plans that are based on a scientific assessment of the threat processes operating on the species. It would be also necessary to have mechanisms to reassess periodically and scientifically the threat status of species and for such assessments to have legal validity.

ISSUE 3: Lack of species information and accessibility to information: There is at present a serious paucity of the most basic spatial and ecological information on a vast majority of species including several mammalian taxa. Such information is required for protected area design, preparation of management plans *etc.* Moreover, whatever information is available is not readily accessible in way that facilitates decision making by various agencies involved in conservation. National institutions entrusted with the task of collecting and disseminating this information have seen a drastic reduction in manpower, expertise and funding in recent years.

Strategy 1. A systematic compilation of species data into national fauna database in a format that allows decision making transparent, and facilitates protected area design and management, environment impact assessment, conservation education, and scientific analysis *etc.* Existing data holders should be identified and strengthened so as to contribute towards this national effort. Several international databases would serve as models in this effort.

Strategy 2. Promote the collection of spatially referenced inventory data on small mammals, birds, lower vertebrates, and invertebrates. This would involve capacity building both in quality and quantity, increased funding, and mandating data collection in a format that allows easy compilation into a database.

ISSUE 4. Gaps in protected area coverage of species and populations: A protected area network that covers only about 5% of the country, and nearly 20% of the forested area, can

hardly be expected to adequately cover all the wild species in the country. Preliminary analysis shows that even mammals and lower vertebrates may be poorly covered. Moreover, large populations of several threatened species occur outside the protected area network. It is necessary, therefore, that an effort is made to include as many wild species and much populations of threatened species as possible within the protected area network. It is also necessary that each protected area is seen as a part of the network, each of them therefore with a unique role it.

Strategy 1. Make a systematic assessment of species occurrence in protected area network and outside so as to expand the protected area network wherever possible. A similar assessment of the populations of threatened species is also needed. Data that have accumulated in the last several decades on several taxa allow a meaningful gap analysis.

Strategy 2. The relative importance of each or a set of protected areas should be clearly stated with reference to the target taxa that they are expected to conserve. Management measures should then attempt to ensure persistence of these taxa.

Strategy 3. Evolve innovative measures to involve local community (which might be locality specific) in protection and management in order to overcome shortages in manpower and funding, poor accessibility, and also to elicit local support.

ISSUE 5: Conservation of species in community and other lands: Even if all the remaining forest land is enclosed within protected area network, major gaps would remain in terms of species and population coverage, and other aspects such as corridors. The major examples are the semi-arid grasslands that are privately or community owned, inland wetlands with highly complex ownership, and privately or corporate owned lands in the Western Ghats and northeast. All of these contain substantial or the only populations of several hundred wild species. They also form critical corridors in the seasonal movements of several species either within or between protected areas. There is thus an urgent need to device ways and means of managing large, sometimes the only, populations of many species that are confined to these lands. The drastic decline in several species of common birds in rural and urban landscape is also a matter of concern.

Strategy 1. Promote conservation in corporate and private lands in the Western Ghats and northeast India through a combination of legal measures and economic incentives that would prevent rapid land use changes, for example from coffee to tea in the Western

Ghats. There is sufficient scope for promotion of eco-friendly products such as natural shade grown coffee an eco-tourism in such lands.

Strategy 2. Strengthen community conservation in semi-grassland and inland wetland areas. Recent studies show rapidly declining community knowledge on biodiversity and conservation efforts and that governmental interventions in recent years have often served to accelerate the decline. These studies have also revealed the need for devising new contexts and framework (especially mechanisms for conflict resolution, and need for economic benefits) for community conservation to be effective. Any governmental intervention such as designating new 'community reserves' or 'conservation areas' (as proposed in the amendment to the Wildlife Protection Act (1998) should take into account the above findings.

Strategy 3. Inclusion in new categories of conservation areas to be based on a set of criteria, including those on wild animal diversity. There are several hundreds of candidates for inclusion in the new conservation areas (currently proposed) or those eligible for other kinds of public support. Resources available for this purpose area limited, however. Therefore, the occurrence of species not represented in the protected area network and substantial populations of threatened species should be important criteria in the selection of sites for inclusion in the new conservation areas.

Strategy 4. Monitoring of indicator species in the rural and urban landscape. Long term monitoring and research are required to measure the extent of decline in several species (*e.g.*, birds such as vulture, house sparrow) and to identify the major reasons. This would also have major implications for human health.

ISSUE 6. The need for agreements, legislation, policies and action plans for the conservation of migratory species: India has for long been a signatory to several international conventions and treaties on the conservation of migratory species. All these conventions and treaties mandate bilateral or multilateral agreements among range countries on collaborative management, research and monitoring of migratory species and their habitats. The range countries are also called up on to have domestic legislation, policies and action plans for the conservation of migratory species and their habitats. However, India is yet to take any major measures in any of these, except for a recently signed MoU with Russia on migratory birds, and a belated MoU on the Siberian Crane.

Although migratory birds and marine turtles have received some attention, some others like marine mammals and Gangetic dolphin have received no attention.

Strategy 1. Enter into bilateral or multilateral agreements with range countries so as to promote the conservation of migratory species including marine mammals, Gangetic dolphin and gharial, through collaborative research and monitoring.

Strategy 2. Develop action plans for species-groups and globally threatened species of waterbirds, including measures to effectively manage networks of sites that are internationally important for migratory birds, as recommended by the Asia-Pacific Migratory Waterbird Conservation Strategy: 2001-2005 (AMWCC 2001). Substantial progress in this regard is expected by two ongoing projects.

Strategy 3. Promote studies of distribution, population, and threat assessment of marine mammals, the least studied among the migratory species in India.

ISSUE 7. Biodiversity assessment in relatively unknown areas: While a considerable part of India has never been surveyed (*e.g.*, in northeast and trans Himalaya), vast stretches of potentially species rich areas, including marine areas, have never been surveyed for invertebrates and lower vertebrates. The number of new species being recorded every year is an indication of this. It is therefore necessary to have mechanisms to rapidly identify areas of high species richness and endemism, especially among lower vertebrates and invertebrates, while we await systematic surveys. Most of the indicators that are currently identified, besides being inconsistent, are useful only at scales larger than at which our protected areas are designed. It is therefore necessary that we identify indicators that suit our purpose.

Strategy 1. Promote scientific studies in order to identify biotic and abiotic indicators of high taxic diversity in India.