



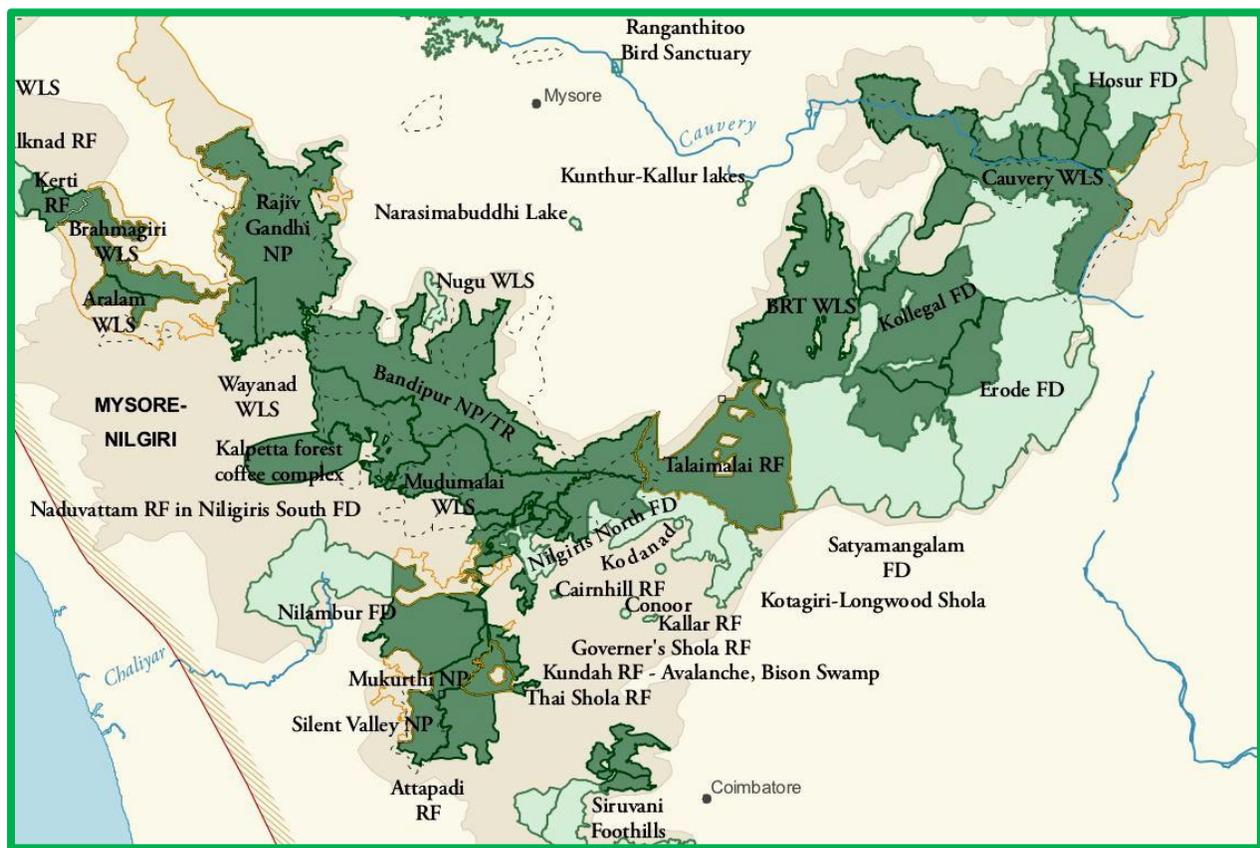
HABITAT MANAGEMENT IN THE NILGIRIS BIOSPHERE RESERVE, AND THE ELEPHANT RESERVES OF SOUTH INDIA

NILGIRIS BIOSPHERE RESERVE (NBR) AND ADJOINING FORESTS.

NILGIRIS BIOSPHERE RESERVE AREA - 5500 SQ KMS,

TOTAL AREA OF ELEPHANT RESERVES OF SOUTH INDIA 12,587 SQ KMS.

ELEPHANT POPULATION APPROXIMATELY 10,000.



PREAMBLE

During the past decade there has been a sharp escalation in incidents and frequency of Human Animal Conflict, involving Elephants, Bears, Gaur, Leopards and Tigers in South India. The major conflicts are related to wild elephants.

In tackling the problem, the concerned agencies and stake holders have largely looked only at the species and not at the degradation of habitat which has actually been the main reason for the intrusion of wild animals to human habitations.

To enable a more speedy analysis of the issue, let us look primarily at Human Elephant Conflict [HEC]. Most discussions are around management of the species, i.e. translocation, setting up barriers, and population management. There is a growing demand and acceptance to the idea of culling of elephants on the grounds that the populations have increased beyond the carrying capacity of the habitat.

This paper does not attempt to make a case against species management. However, it is for consideration that in the cacophony of discussions, debates and opinions on species management, we have lost sight of the fact that the elephant is in many ways acting as a messenger to tell us that there are serious problems in the habitat.

The habitat in South India is in essence the Nilgiris Biosphere Reserve [NBR] and adjoining Elephant Reserves spanning over 12000 sq km in the three states of Karnataka, Tamil Nadu and Kerala. The elephant reserves are namely the Mysore Elephant Reserve, Wayanad Elephant Reserve and the Nilgiris Elephant Reserve. This is perhaps one of the largest networks of Elephant habitat in South Asia. It is also home to the largest population of wild Asian Elephants with an estimated number of about 10,000 elephants.

The degradation of habitat is due to a number of reasons including teak mono-culture, proliferation of invasive species, forest fires, and loss of forest cover due to development projects. Critical migration routes have also been cut off due to projects such as the Kabini Dam. Over the years, the problem has only increased because the basic concept has been to 'Shoot the Messenger' rather than to heed

the message. The improper implementation of the Forest Dwellers Act is also a major problem.

It is important to understand that if we improve the migration corridors and quality habitat in the Nilgiris Biosphere Reserve, and the Elephant Reserves, it will benefit all forms of wildlife, improve watersheds and catchment areas and provide the region with greater resilience from the effects of climate change.

On the other hand, if we fail to act and if there is continued degradation of this forest landscape, wildlife species will increasingly fall prey to inbreeding and genetic disorders that will degrade the species within a few generations. This in turn will again contribute to forest degradation.

Isolated interventions in scattered pockets will not yield long term results and therefore we have to look at the entire landscape covering the elephant range in South India.

The project for management of the Nilgiris Biosphere Reserve and the three elephant reserves will require the cooperation of the three states under the direction of MoEF. There will also be a need for the involvement of various agencies such as WTI; WWF; Coorg Wildlife Society; College of Forestry Ponnampet, Kodagu, Karnataka; Centre for Ecological Sciences [IISC Bangalore]; IUCN India; IUCN Commission for Protected Areas; other conservation agencies, and agencies dealing with Forest Land Restoration such as RECOFTC [Thailand], Global Partnership for Forest Land Restoration, Bonn Challenge etc.

PROPOSAL FOR HABITAT MANAGEMENT IN THE NILGIRIS BIOSPHERE RESERVE AND THE ELEPHANT RESERVES OF SOUTH INDIA

Introduction

1. The Nilgiris Biosphere Reserve [NBR] and adjoining forest areas span a vast area of over 12,000sq kms across the three states of Karnataka, Kerala and Tamil Nadu India. This is one of the largest net-work of Elephant Habitat in South Asia. ***Apart from immense value as a prime habitat for wildlife it also provides vital hydrological services to South India in terms of***

Watersheds and Catchment areas. Moreover, this forest landscape should also be viewed as a vitally important component in providing resilience to the impending effects of climate change in this region of South India, which is home to several million people.

Against this background, it is a matter of serious concern that the sharp escalation of Human- Animal Conflict in areas adjoining the NBR in South India indicates high levels of habitat degradation in this vitally important network of PAs.

2. A 'business as usual' attitude will lead to serious consequences for the region in the coming decades. It is therefore extremely important to come to grips with the problems and challenges in Habitat Management in the NBR.

It would be extremely important to understand that while efforts are under way for taking steps for improving the habitat, there should not be any further degradation of the habitat by means of linear development projects, dams etc., that require further diversion of these forest areas.

MAJOR PROBLEMS AND CHALLENGES IN THE NBR AND ADJOINING ELEPHANT RESERVES

The major problems and challenges facing the NBR and the three elephant reserves can be summarized as below:

(a) Forest Degradation - The main causes of Forest degradation are given below.

(b) Teak Monoculture - vast portions of the NBR and adjoining area are under teak monoculture. These Teak monoculture plantations have changed the original forest regime and adversely affected the microclimate. Teak also deprives fodder for elephants though elephants have now been compelled to feed on Teak bark. Teak restricts natural regeneration of other indigenous tree species. Moreover, dry teak leaves form a thick carpet on the forest floor and forest fires in Teak dominated areas are very intense and extremely difficult to control.

There is a need to phase out teak monoculture and this should to be permitted in PAs in the NBR.

(c) Invasive Weeds - Massive proliferation of invasive weed species such as Senna Spectabilis, Lantana Camara and Eupatorium are principal causes of forest degradation. This results in a stifling of indigenous tree and plant species and restricts the fodder available for elephants and other wildlife species.

(d) Forest Fires - Large scale forest fires occur frequently in the dry season and destroy large areas of forests. Forest fires also encourage the proliferation of invasive weed species. There is a need to establish a proper integrated system for prevention and tackling forest fires. Available expertise could also be taken from other countries such as Canada where the Canadian Forest Service provides training in setting up early warning systems. Technological systems such as the Fire Detection Robot developed by China would also be very useful.

(e) Employment of Ecological Territorial Army Units - These units are formed with a core staff of serving personnel and the bulk of the manpower is from able bodied retired army personnel. There are about 8 such units in different states of India and they have done excellent work in forest land restoration. These could also be deployed in the South Indian states for forest land restoration as well as for prevention of forest fires.

(f) Grazing pressures - Grazing pressures by live stock prevents natural forest rejuvenation and is a potential threat to herbivores through spread of diseases such as foot and mouth disease that could wipe out entire herds of wildlife. The local communities need to be provided alternative grazing areas and training and capacity building for stall fed cattle and dairy cooperatives. There is also scope for cultivation of millets etc in fallow paddy lands for use as cattle fodder. The project by Anna Hazare Model in the Ahmednagar region of Maharashtra is an excellent success story in stall-fed cattle and dairy cooperatives for rural areas.

(g) Disruption of Elephant corridors and Migration routes - Fragmentation of habitat and disruption of elephant corridors and migration routes will have severe and irreversible damage to genetic health of all forms of wild life and this will in turn contribute to further degradation of habitat.

MAJOR CAUSES OF DISRUPTION OF CORRIDORS & MIGRATION ROUTES:

(a) Forest Land encroachment - Improper implementation of the Forest Dwellers Act has resulted in a situation where large settlements have sprung up in forest areas, blocking elephant movement and forcing the elephants to move out into areas outside the forests. While it is a politically sensitive issue, this trend must be checked before the situation crosses the point of no return.

(b) Linear intrusions and development projects - This has also led to further degradation and blocking of elephant corridors. Large swathes of forests are also lost due to Forest Conversion for these projects. The issue of forest land diversion in critical wildlife habitat for roads, railways lines and power lines has to be addressed. The background paper for the National Board for Wildlife on 'Framing ecologically sound policy on linear intrusions affecting wildlife habitats' prepared by the Nature Conservation Foundation in Jan 2011 needs to be ratified.

(c) Blocking of Migration routes - Migration routes have been blocked due to projects such as the Kabini Dam. There is a need to analyze the feasibility of restoring these routes at least partially through engineered structures. For example, over four hundred overhead wild life crossing places have been built across a highway in the Netherlands.

(d) CAMPA Funds - There is a need to stop CAMPA (Compensatory Afforestation Fund Management and Planning Authority) funds being used for any monoculture plantations. On the other hand, CAMPA funds should be utilized for conserving diversity of over 200 floral species.

(f) Tourism - Excessive tourist pressure in protected areas cause disturbance to wildlife and drive elephants out of forest areas. This is another cause of HEC. Movement of tourists in PAs has to be regulated to the extent possible.

(g) Elephant population - This note is primarily about habitat management. However there is one aspect regarding elephant population that needs consideration.

While some experts state that there is no major increase in the overall population of elephants, there is also a growing perception that the population of elephants in this region has increased considerably over the past few decades. This is a matter that needs to be addressed. There have been some suggestions regarding sterilization of female elephants, but the practicability of such measures will need to be validated.

PROJECT PROPOSAL

A project proposal has to be prepared for addressing all the issues as mentioned above. There must be a time bound program for:

- (a) Preparing the proposal, obtaining funding and other resources
- (b) Capacity building
- (c) Project implementation

After the capacity building phase, the project implementation phase should be completed in five years. The Forest Restoration program

will need to continue over a longer period of time. This could be reviewed during the third year of the implementation phase.

PROJECT PARTNERS AND STAKE HOLDERS

Project partners and stake holders would include MOEF India, WWF, IUCN India, Wildlife Institute of India, Coorg Wildlife Society, Forest Departments of Karnataka, Kerala & Tamil Nadu, RECOFTC, Global Partnership for Forest Land Restoration, Bonn Challenge Program, IUCN Commissions on Species [Asian Elephant Support Group] and Protected Areas, etc. One of the project partners, perhaps WWF, could set up a coordination centre at a suitable location

CONCLUSION

It is obvious that urgent action is required to implement measures to restore and preserve the NBR and adjoining Elephant Reserves. Delay and procrastination will only increase the degree of difficulty. On the other hand, a coordinated effort by all concerned agencies offers hope for the future of this precious forest landscape. The success of this program will also serve as a model for other degraded forest areas both in India and other regions of the world.

Col CP Muthanna (Retd)
Former President, Coorg Wildlife Society
& Vice Chair, Kodagu Model Forest Trust

Founder and Hon Secretary
Environment and Health Foundation [India]