

Chapter 2 Human-Animal Conflict: Analysis

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Man-animal conflicts are common in various parts of the country. In India, wild elephants probably kill far more people than tiger, leopard or lion. But, surprisingly, human conflict involving leopard draws great amount of public attention compared to other animals.

This chapter discusses the reasons for human-animal conflict, the critical study of human-wildlife conflict worldwide specifically in Africa, Asia, and Europe & analyses the conflict between human & animal

2.1 Introduction

Human-wildlife conflict is fast becoming a critical threat to the survival of many endangered species, like wild buffalo, elephants, tiger, lion, leopard etc. such conflicts affect not only its population but also has broadened environmental impacts on ecosystem equilibrium and biodiversity conservation. Laws are man-made, hence there is likelihood of anthropocentric bias towards man, and rights of wild animals often tend to be of secondary importance. But in the universe man and animal are equally placed, but human rights approach to environmental protection in case of conflict, is often based on anthropocentricity.⁶²

Wildlife-human conflicts are a serious obstacle to wildlife conservation and the livelihoods of people worldwide and are becoming more prevalent as human population increases, development expands, and global climate changes and other human and environmental factors put people and wildlife in greater direct competition for a shrinking resource base.

Conflicts between wildlife and humans cost many lives, both human and wildlife, threaten livelihoods, and jeopardize long-term conservation goals such as securing protected areas and building constituencies in support of biodiversity conservation.⁶³

Human-Wildlife Conflict is any interaction between wildlife and humans which causes harm, whether it is to the human, the wild animal, or property. (Property includes buildings, equipment, livestock and pets, crops fields or fences.)⁶⁴

Some examples of human-wildlife conflict include:

- Predation on livestock or domestic animals by wildlife
- Ungulate damage crops and fences
- Flooding caused by beavers
- Wildlife strewing about residential garbage
- Squirrels or bats in home attics
- Birds nesting in undesirable residential locations
- Vehicle/wildlife collisions

⁶² *T.N. Godavarman Thirumulpad Vs. UOI and Ors.*, AIR2012SC1254

⁶³ Barua Mann, *Human-Wildlife Conflict & 21st Century Conservation*,(2010) Reading Group Outline, University of Oxford

⁶⁴ www.env.gov.yk.co/wildlifebiodiversity/human_wildlife_conflict (visited on 12th Oct 2012)

Man-animal conflicts are common in various parts of the country. In India, wild elephants probably kill far more people than tiger, leopard or lion. But, surprisingly, human conflict involving leopard draws great amount of public attention compared to other animals. Other carnivores - tigers, lions and wolves, which have been known for causing a large number of human deaths in the past, are now mostly restricted in range and their impact is not as widespread as that of the leopard.⁶⁵

The key reasons for human-animal conflict are encroachment of human being in wildlife habitat for development purpose & survival purpose as well as allowing livestock for grazing purpose in the forest area, forest fire. This conflict leads to loss to both human & animal. The result of this conflict is severe which result into the loss to crops of farmers and decline in wildlife conservation as well.

Among these the human –leopard conflict is common in many States. The incidences of killing of leopard by public have been hitting headlines of news media.

It is a challenge to ensure the peaceful coexistence of leopards among high densities of humans Research indicates that even in such high human density areas, attacks on humans and domestic animals in most cases can be kept to very low levels.⁶⁶

2.2 Outline of the chapter:-

1. To find out the reasons for human-animal conflict
2. To do critical study of human-wildlife conflict worldwide specifically in Africa, Asia, and Europe
3. To analyse the conflict between human & animal

2.3 Reasons for Human Animal Conflict

1. Road Kills:-

India's road network is expanding at a monstrous scale due to the expanding economy and increase in vehicular traffic. The traffic density is growing at the rate of ten per cent annually. Some of this road network is being expanded through protected areas. Apart from fragmentation, roads are becoming a serious threat to wildlife as several wild animals are killed on a daily basis by speeding vehicles. Vehicles today travel at high speeds and this

⁶⁵ Times of India, 21 July 2012, Lucknow

⁶⁶ Guidelines for Human-leopard Management, April 2011, Ministry of Environment & Forests Government of India

combined with poor eyesight and slow response time of animals results in the death of innumerable wildlife.

Commonly killed species normally include nocturnal animals such as mouse deer, civet, black-naped hare, leopard and sambar. There have been several instances of tiger, elephant calves, chital, dhole, sloth bear, wolf, blackbuck and other large mammals killed due to road accidents. Scores of reptiles, birds and amphibians are killed due to vehicular traffic in protected areas.⁶⁷

When an important individual of a species is killed it causes several indirect effects on the population. For example if a female tiger is killed, it might have cubs that will die of starvation, or death of dominant males will have a serious impact on the population. Other males trying to take over the territory will kill all the cubs sired by the previous dominant male so that females would come into estrus again. So there are several indirect impacts on animals as a consequence of road accidents.

Hence it is extremely important that travelers drive their vehicle at low speed and with utmost caution while driving through forests. Implementation of speed calming measures such as road humps, rumble strips and chicanes at crucial locations are equally important. Whenever there are alternatives available roads have to be realigned outside the protected areas.

2. Livestock grazing⁶⁸

Livestock grazing in forests leads to human-wildlife conflict as carnivores are attracted towards the easy prey and become direct enemies of livestock graziers. Grazing by livestock has severely threatened our wildlife and their habitats in various ways. The most noticeable effect is the decline of wild herbivore populations as they have to compete with livestock for their food source. As more cattle graze and nibble the natural vegetation there is less palatable biomass for wild herbivores. As livestock eliminate palatable native plant species often unpalatable species of plants invade the area⁶⁹.

Scientific studies conducted in Bandipur Tiger Reserve have shown how wild ungulates decline in areas where grazing pressures are high. The intricate relationship between various species of flora and fauna is yet to be understood and many a time the actual implications of grazing might even go unnoticed. Plant species composition skews as foraging by domestic animals increases. Livestock voraciously graze on young saplings directly affecting the

⁶⁷ Supra 66

⁶⁸ www.conservationthreats.org (Visited on 4th Sept 2012)

⁶⁹ Id

recruitment rate and regeneration of tree and plant species. Livestock Grazers are also one of the important links in human-wildlife conflict, as they often dismantle physical barriers (elephant proof trench, solar fence) meant to prevent wild animals entering crop fields so that they can take livestock into the forests.⁷⁰

Very importantly livestock grazing aids in spread of communicable diseases from domestic to wild animals many times causing death of wild ungulates. Heavy grazing increases soil erosion in forest areas.

Livestock grazing in forests become easy prey for wild carnivores, causing conflict and leading to retaliatory killing of large carnivores. This can directly affect their numbers. Livestock not only affects the forage but also water availability especially during dry seasons. Livestock compete with wild animals for scarce water in the forests.⁷¹

3. Increase in Human population:

The increasing human population has also led to an increase in requirements of people. The settlements have also started expanding in urban and rural parts to meet the pace of growing populations. Many settlements have come up near the peripheries of protected areas, encroaching the forest areas and using it for their own benefit.

2. Land use transformations –

Humans encroach on clear large areas of protected forest patches for development of agricultural and horticultural lands. They also clear the areas, for monoculture plantations of Areca nut, Teak, etc. Developmental activities - The construction of hydroelectric projects results in submergence of nearby forest lands and fragmentation of habitats. The clearance of lands for mining and industries also leads to breaking of large natural habitats into small patches⁷².

3 Habitat fragmentation and shrinkage⁷³ -

All the aforesaid reasons contribute to fragmentation of large habitats and shrinking sizes of forest patches. This makes that landscape unviable for wild animals as their needs are not fulfilled. As a result of which they wander in nearby areas searching for resources. In case of

⁷⁰ Supra 68

⁷¹ Id

⁷² <http://wgbis.ces.iisc.ernet.in/energy/water/paper> (Accessed on 12th Oct 2012) Human – Animal Conflicts Further Shrinkage of Habitat and Fragmentation of Animal Corridors will Enhance Human – Animal Conflicts

⁷³ Id

attack from wild animals like tiger and leopard, the village people also lose their precious cattle like cow, sheep, goat, etc.

2.4 Overview of the human – animal conflict worldwide

In this sub chapter author focused on the overview of the human animal conflict worldwide to highlight common problems across local, regional and national levels.

2.4.1 Overview of the human – animal conflict in Africa:-

In Africa the great dependence of a large proportion of the human population for their survival on the land, coupled with the presence of many species of large mammal leads to many sources of conflict between people and wildlife. This in turn creates increasing friction between protected area managers, and local communities living in the regions that border these protected areas.⁷⁴

Crop raiding is a cause of much conflict between farmers and wildlife throughout the world.

Though African elephants (*Loxodonta Africana*) are listed as endangered by the (IUCN)⁷⁵, efforts to protect and conserve the species have been complicated by human-elephant conflict.

In Africa, humans and forest elephants have not coexisted peacefully through history. Before the dawn of technologies that enabled humans to control elephants habitat and population density, these animals, with their sheer size and strength, overpowered humans when they interfered with elephant survival. In pre-colonial Africa, elephants were a major obstacle to establishing agriculture.⁷⁶

In addition, elephants were slaughtered in large numbers because of the ivory trade; these mass hunting operations peaked during the —ivory crisis, which began in the early 1970s and continued through the early 1990s. When the Convention on the International Trade in Endangered Species of Wild Fauna and Flora (CITES) took effect in 1989, African elephant populations had a chance to rebound as poaching pressure declined and action was taken to implement better management strategies. However, political instability, ongoing wars, and a

⁷⁴ C.M. Hill, F.Y. Osborn & A.I. Plumtre, *Human Wildlife Conflict Identifying problem and possible solutions*, Albertine Rift Technical Report series Vol I (2002), Wildlife Conservation Society

⁷⁵ International Union for the Conservation of Nature and Natural Resources

⁷⁶ M.Zoe Warner, *Examining Human-Elephant Conflict in Southern Africa: Causes and Options for Coexistence*, (2008), Master of Environmental Studies Capstone Project Department of Earth and Environmental Studies, University of Pennsylvania

global market for ivory products have continued to fuel the demand for illegal ivory, especially savanna elephants in Central Africa and forest elephants in West Africa.⁷⁷

There will always be individuals who do not benefit from protecting elephants, but elephant persistence can be quite advantageous to local communities. However, in attempts to conserve elephants, humans must not be made to feel that their needs are somehow less important than those of the animals being protected.

Of all conflicts between humans and large carnivores, the most challenging involves the African lion. Since no major wildlife African ecosystem is completely fenced, lions attack thousands of livestock throughout the continent each year and lions kill over a hundred people a year in southern Tanzania and northern Mozambique. Of the less than 50,000 lions still in Africa, about a quarter are found in four large well-protected ecosystems (Serengeti, Selous, Okavango/Chobe, Kruger); the rest are exposed to varying degrees of human contact and may not survive until the 22nd century without intensive management.⁷⁸

Conflict in Zimbabwe of Lion, Leopard:-

Many areas in Zimbabwe, suffer from livestock attack by Lion/ leopard. Research shows that the villagers experience the negative impact (Domestic livestock attack by Leopard & Lion is severe) particularly from the Gowke communal land, neighboring the Sengwa Wildlife Research Area.⁷⁹

2.4.2 Overview of the human – animal conflict in Asia:-

1. China

Asian Elephant Conflict in China

Most people associate China and elephants with the demand for ivory. However, although China only has a small number of elephants it is one of the only range states where numbers are on the rise.

⁷⁷ Blanc, J.J., Thouless, C.R., Hart, J.A., Dublin, H.T., Douglas-Hamilton, I., Craig, G.C. and Barnes, R.F.W. 2003. *African elephant status report* (2002.) Occasional Paper of the IUCN Species Survival Commission 29. Gland: IUCN/SSC African Elephant Specialist Group.

⁷⁸ Managing Human –lion Conflict , University of Minnesota , lion Research Center, www.cbs.umn.edu (Visited on 4th Sept 2012)

⁷⁹ Elisa Distefano, *Human-Wildlife Conflict worldwide: collection of case studies, analysis of management strategies and good practices*

Manslaughter by Elephants

Each year, Asian elephants directly cause hundreds of human deaths through HEC. Compare this to the human death toll from shark attacks, which is usually under 12 a year, and you get some idea of the scale of the problem. In India alone, recorded deaths from elephants number between 150 and 200 per year. Not all these deaths can be attributed to crop or village raiding. About half are caused by chance encounters in the forest, when humans are not aware of the presence of elephants until it is too late⁸⁰.

However, crop and village-raiding deaths are on the increase and barely a week goes by without reports of elephants killing people. It has even been reported in some areas where there is extreme population pressure and habitat shrinkage that elephant herds are becoming noticeably more aggressive towards man.

Elephant's death by human

Human Elephant Conflict elephant deaths are on the rise. Irrate farmers, terrified villages and even the military and police are reacting to crop depredation and damage to people and settlements by fighting back and killing elephants. Even though the elephant is protected by legislation across Asia, they are increasingly being killed in anger or self defence. Studies by Raman Sukumar in three locations in India suggested that up to 20% of elephant deaths were caused directly by crop defence. These studies took place in 1982 and the situation is thought to have worsened since. In Sri Lanka, it is reported that up to 150 wild elephants are shot or poisoned by farmers every year⁸¹.

Snow Leopard conflict in China -

The snow leopard is the most numerous of China's big cats. It inhabits one of the harshest environments on earth, dwelling in the high, cold, barren, mountains of Inner Asia from the Himalaya and the Tibetan Plateau to the Pamirs, Tian Shan, Altai and the mountain ranges of the Gobi Desert and central Mongolia. The major threat is increasing due to human population pressure on the grasslands and pastures of the Tibetan Plateau and the high mountain valleys of Xinjiang.⁸²

In addition, snow leopards are also at risk from poachers, who can sell their skins for upwards of several thousand dollars in the large booming cities of eastern China. Snow leopard bones

⁸⁰ Manslaughter by Elephants , www.eleaid.com (Visited on 5th Sept 2012)

⁸¹ Elephants death by human, www.eleaid.com (Visited on 5th Sept 2012)

⁸² http://en.wwfchina.org/en/what_we_do/species/fs/snow_leopard/ (Accessed on 5-Feb -2013)

are also increasingly being used as a replacement for more expensive tiger bone in traditional Chinese medicine, while live snow leopard cubs, often orphaned by poachers, are also captured and sold to circuses and public and private zoos, and have been known to fetch up to 20,000 dollars each⁸³.

2. India

Man-animal conflict often results not because animals encroach human territories but vice-versa. Often, man thinks otherwise, because man's thinking is rooted in anthropocentrism. Remember, we are talking about the conflict between man and endangered species, endangered not because of natural causes alone but because man failed to preserve and protect them, the attitude was destructive, for pleasure and gain. Often, it is said such conflicts is due human population growth, land use transformation, species habitat loss, degradation and fragmentation, increase in eco-tourism, access to natural reserves, increase in livestock population, etc. Proper management practices have to be accepted, like conservation education for local population, resettlement of villages, curbing grazing by livestock and domestic animals in forest, etc., including prey-preservation for the wild animals. Provision for availability of natural water, less or no disturbance from the tourists has to be assured. State also has to take steps to remove encroachments and, if necessary, can also cancel the patta already granted and initiate acquisition proceedings to preserve and protect wildlife and its corridors. Areas outside PAs is reported to have the maximum number of man- animal conflict, they fall prey to poachers easily, and often invite ire of the cultivators when they cause damage to their crops. These issues have to be scientifically managed so as to preserve and protect the endangered species, like wild buffalo and other species included in Schedule 1 Part 1 of the Wildlife Protection Act, as well as other species which face extinction.⁸⁴

In India human-wildlife conflict has given rise to many problems like the conservation of wildlife, and livestock, damage to crops and property of farmers. The conflict can be reduced by providing adequate habitat to wild animals and maintenance of physical barriers to wild animals, active guarding of crops and stopping of degradation of habitat quality, providing adequate and immediate compensation to affected families.

More development activity causes more interference in forest and the privacy of wild life. These ultimately cause conflict with wildlife.⁸⁵

⁸³ Supra 80

⁸⁴ Supra 82

⁸⁵ Man-Animal conflict in India, Ministry of Environment and forest, 23rd Sept 2011

Conflict with wildlife may be due to the abnormal behavior of wild animals like aggressiveness of monkey, cattle lifting by carnivore, injury by bears during Mahua season etc.

Development of people is always welcome but not at the cost of negative ecological aspect in the ecosystem.

Development activities cause more interference in forest and also the privacy of wildlife and these ultimately cause conflict with wildlife. Man-animal conflict often takes place when wild animals cause damage to agricultural crop and property, killing of livestock and human beings. Human population growth, land use transformation, species loss of habitat, eco-tourism, too much access to reserves, increase in livestock population bordering the forest, depletion of natural prey base etc., often stated to be reasons for such conflict. Central Govt. the State Governments, and the Union Territories should evolve better preservation strategies, in consultation with Wildlife Boards so that such conflicts can be avoided to a large extent. Participation of people who are staying in the Community Reserves is also of extreme importance.

Environmental justice could be achieved only if we drift away from the principle like sustainable development; polluter pays principle, precautionary principles which are based in the interest of humans and environment.⁸⁶

Ecocentrism is nature centred where humans are part of nature and non-human has intrinsic value. In other words, human interest does not take automatic precedence and humans have obligations to non-humans independently of human interest. Ecocentrism is therefore life-centered, nature-centered where nature includes both human and non-humans⁸⁷.

The conflict between animal and human can be reduced by following steps-

1. Improvement of Habitat-

It is duty of Ministry of Environment & Forest to Provide assistance to State Governments for improvement of habitat to augment food and water availability and to minimize the animal movement from the forests to the habitations.

⁸⁶ [http://www.greentribunal.in/orderinpdf/38-2011\(App\)7Sept2012_final_order.pdf](http://www.greentribunal.in/orderinpdf/38-2011(App)7Sept2012_final_order.pdf) (Accessed on 02-Oct-2012)

⁸⁷ Supra 86 (Accessed on 02-Oct-2012)

2. Training programmes

To address the problems of human- wildlife conflict it is essential to train the police offices and local people. It is duty of forest department to frame the guidelines for management of human-leopard conflict & publish the same in the local community.

3. Awareness programmes

To sensitize the people about the Do's and Don'ts to minimize conflicts it necessary to aware the local people.

4. Technical & financial support-

Providing technical and financial support for development of necessary infrastructure and support facilities for immobilization of problematic animals through tranquilization, their translocation to the rescue centers or release back to the natural habitats.

5. Boundary walls-

Providing assistance to State Governments for construction of boundary walls and solar fences around the sensitive areas to prevent the wild animal attacks.

6. Eco-development activities –

Providing assistance to the State Governments for eco-development activities in villages around Protected Areas to elicit cooperation of local community in management of the Protected Areas.

12. Encouraging and supporting involvement of the research and academic institutions and leading voluntary organizations having expertise in managing human -wildlife conflict situations.

Some devices of Information Technology, viz., radio collars with Very High Frequency, Global Positioning System and Satellite uplink facilities, are being used by the research institutions including Wildlife Institute of India (WII), Dehradun, State Forest Departments and the National Tiger Conservation Authority (NTCA) to monitor the movement of Lions, Tigers, Elephants, Olive Ridley Turtles, and other wild animals to understand their movements and their use pattern of the habitat⁸⁸.

⁸⁸ Man-Animal conflict in India, Ministry of Environment and forest, 23rd Sept 2011

Law and Policy by Government of India

Forest and wildlife are subjects listed in the Concurrent List of the Constitution. The Union Ministry of Environment and Forest at Central Level is responsible for all framing and implementation of policy regarding wildlife conservation. The Forest Departments at State level are responsible to maintain and manage the forest as well as implement the national policies.

The Ministry of Environment and Forests, Government of India department is consisting of the Director, Wildlife Preservation, who is also designated as the Additional Director General of Forests (Wildlife) to the Government of India.⁸⁹

The Wildlife Wing has three projects, namely, Wildlife Division, Project Tiger Division and Project Elephant Division and each headed by an officer designated as Inspector General of Forests. Apart from this officer a Deputy Inspector General of Forest (Wildlife) and an Assistant Inspector General and Joint Director (Wildlife) provide support to the Wildlife Wing.

The task of these wildlife wings-

1. These three divisions take care of the conservation of tiger, elephant and wildlife.
2. Incorporate the policy decisions at national and International level as well as apply wildlife laws, International Conventions and Treaties.
3. Maintain and manage the national parks and wildlife sanctuaries of India,
4. Restrict wildlife trade in wildlife and wildlife articles,
5. Encourage research, capacity building, reduce burden of court cases relating to wildlife, Parliament related matters, budget.⁹⁰

1) Critical Analysis of Wild Life Protection Act, 1972:

The Wildlife Protection Act of 1972 provides the statutory framework for protecting wild animals, plants and their habitats. The Act follows a two pronged conservation strategy: specified endangered species and protected species regardless of location and all species and protected in designated areas, called sanctuaries and national parks.

⁸⁹ <http://www.envfor.nic.in/divisions/9-10.pdf> (Accessed on 02- Apr- 2010)

⁹⁰ <http://www.envfor.nic.in> (Accessed on 23rd Dec 2012)

The Wildlife Protection Act of 1972 was passed after wildlife was moved to the concurrent list after the Forty Second Constitutional Amendment was passed. By the 1991 amendment the Wildlife Act was extended to whole of India except for Jammu and Kashmir which had its own law regarding the subject, which is similar to the national law.

The wildlife protection act provides for setting up of Advisory Boards⁹¹ and the appointment of Wardens and other members to implement the Act.⁹² In several states, the office of the Chief Wildlife Warden and the Chief Conservator of Forests is united in a single post and the responsibilities under both statutes are discharged by the same person. Except under specific conditions⁹³, the act prohibits hunting the wild animals listed in schedule I, II, III, and IV.⁹⁴ Under the Act; the State Government may declare any area of adequate 'ecological, faunal, floral, geomorphologic, natural or zoological significance' a sanctuary⁹⁵ or a national park.⁹⁶ In both sanctuaries and national parks public entry is restricted⁹⁷ and destruction of any wildlife or habitat is prohibited.⁹⁸ The court has also gone to the extent of upholding restrictions on the plying of vehicles in the sanctuary. in the case of *Bombay Burmah Trading Corporation v Field Director(Project Tiger)*⁹⁹. In theory, national parks enjoy a greater degree of protection than the sanctuaries. For example, the grazing of livestock is prohibited within a national park,¹⁰⁰ but permissible in a sanctuary¹⁰¹.

Under the Wildlife protection act, 1972 Killing and capturing of any animal is punishable offence. There are exceptions where hunting is permitted under the Act like for education, research (with the prior permission of Chief Wildlife Warden) & self defence purpose which shows that hunting of wildlife is not totally prohibited. Besides that the Chief Wildlife Warden is permitted to compound the offence under this Act which gives rise to corruption and violated the rights of survival of animals who can't speak for their rights.

National parks are set up for preserving flora, fauna, landscapes and historic objects of an area.

⁹¹ Section 6 of The Indian Wildlife (Protection) Act, 1972.

⁹² Section 3 and 4 The Indian Wildlife (Protection) Act, 1972.

⁹³ Section 11 and 12 The Indian Wildlife (Protection) Act, 1972.

⁹⁴ Section 7 The Indian Wildlife (Protection) Act, 1972.

⁹⁵ Section 18 The Indian Wildlife (Protection) Act, 1972.

⁹⁶ Section 35 The Indian Wildlife (Protection) Act, 1972.

⁹⁷ Section 27 and 35(8) The Indian Wildlife (Protection) Act, 1972.

⁹⁸ Section 29 and 35(6) The Indian Wildlife (Protection) Act, 1972.

⁹⁹ AIR 2000 Mad 163 The Indian Wildlife (Protection) Act, 1972.

¹⁰⁰ Section 35(7) The Indian Wildlife (Protection) Act, 1972.

¹⁰¹ Section 29 and 33(d) The Indian Wildlife (Protection) Act, 1972.

At present, protected area network comprises 398 sanctuaries and 69 national parks covering four per cent of the total geographic area of the country. It is proposed to be increased to 4.6 per cent (1% National Parks and 3.6% sanctuaries) by setting up more sanctuaries and parks.¹⁰²

By the 1991 amendment, specified plants were brought under the protective umbrella of the Act.¹⁰³ It also provided for establishments of a central zoo authority to regulate the management and functioning of zoos.¹⁰⁴ The boundaries of sanctuaries and national parks may not be altered except by a resolution of the State Legislature. The Act regulates trade and commerce in wild animals, trophies¹⁰⁵ and derivatives from certain animals.¹⁰⁶ Any violations of the provisions of the Act attract imprisonments and fines, patterned on similar provisions in the Air and Water Acts.

It is after the Wildlife Protection Act came into existence in 1972, a very successful project was launched in 1973-74, Project Tiger. In recent times Project Tiger is one of step to conserve wild tigers in India. It helps to sustain the population of tigers in natural environment.¹⁰⁷ At the IUCN General Assembly meeting in Delhi, in 1969, serious concern was voiced about the threat to several species of wildlife and the shrinkage of wilderness in the country. In 1970, a national ban on tiger hunting was imposed and in 1972 the Wildlife Protection Act came into force. The project was launched in 1973, and various tiger reserves were created in the country on a 'core-buffer' strategy. The core areas were freed from all sorts of human activities and the buffer areas were subjected to 'conservation oriented land use'.¹⁰⁸

It seems as if the Act has been enacted just as fallout of Stockholm conference held in 1972 and it has not included any locally evolved conservation measures.¹⁰⁹

The Ownership Certificate for animal articles (tiger, leopard skins etc.) are permissible which very often serve as a tool for illegal trading.

The wildlife traders in Jammu and Kashmir easily get illegal furs and skins from other States which after making caps, belt etc. are sold or smuggled to other countries. This is so because J & K has its own Wild Life Act. Moreover, hunting and trading of several endangered species

¹⁰² <http://www.envfor.nic.in> (Accessed on 24th Dec 2012) P- 117

¹⁰³ Chapter III A The Indian Wildlife (Protection) Act, 1972.

¹⁰⁴ Chapter IV A The Indian Wildlife (Protection) Act, 1972.

¹⁰⁵ Chapter V The Indian Wildlife (Protection) Act, 1972.

¹⁰⁶ Chapter V A The Indian Wildlife (Protection) Act, 1972.

¹⁰⁷ <http://projecttiger.nic.in> (Accessed on 23rd March 2013)

¹⁰⁸ Panda Kothari, Management of National Parks and Sanctuaries in India: A Status Report, (1989) , pg.107

¹⁰⁹ Kaushik Anubha , Perspectives in Environmental Studies ,(2006) p- 204

prohibited in other State are allowed in J & K, thereby opening avenues for illegal trading in such animals and articles.

The offender of the Act is not subject to very harsh penalties. It is just upto 3 years imprisonment or a fine of Rs. 25,000 or both.

2) **Protected Areas and Elephant reserves**

There are 661 Protected Areas in the country covering around 4.8% geographical areas. There are 100 National Parks, 514 Wildlife Sanctuaries, 43 Conservation Reserves and 4 Community Reserves in the country. State wise details are placed at Annexure I. In recent time, 27 Elephant Reserves (ERs) extending over about 60,000 sq km have been formally notified by various State Governments.¹¹⁰

Outlay in 11th Five Year Plan

Scheme	<u>Approved Outlay</u>						<u>Total</u>
	11 th Plan Outlay	2007 -08	2008 – 09	2009 -10	2010- 11	2011 -12	
Project Tiger	615	68	80	243.13	612.3	114.9	1118.33
Project Elephant	81.99	17	20	21.5	22.5	19	100
IDWH	800	62	80	80	74.88	70	366.88
Total	1496.99	147	180	344.63	7.09.68	203.9	1585.21

a) Project Tiger Division-

Initially, the Project started with 9 tiger reserves, covering an area of 16,339 sq.km. with a population of 268 tigers. At present there are 27 tiger reserves covering an area of 37761 sq.km., with a population of 1498 tigers. This amounts to almost 1.14% of the total geographical area of the country. The selection of reserves was guided by representation of ecotypical wilderness areas across the biogeography range of tiger distribution in the country.

¹¹⁰ <http://www.envfor.nic.in/pe/pe.html> (Accessed on 11-June-2009)

Project Tiger is undisputedly a custodian of major gene pool. It is also a repository of some of the most valuable ecosystem and habitats for wildlife.¹¹¹

Objectives

- i) To ensure the stability in population of tiger in India for economic, ecological, scientific, aesthetic, and cultural values.
- ii) To protect and improve the areas of biological and natural importance as a natural heritage for the research, enjoyment (Tourism) and, education of the people.
- iii) The main object of scheme is aware local people so that they can contribute to maintain & conserve the wild tiger.
- iv) Elimination of all forms of human exploitation and disturbance from the core and rationalization of such activities in the buffer.
- v) Limitation of the habitat management to repair damage done by man.
- vi) Researching facts about habitat and wild animals and carefully monitoring changes in flora and fauna.¹¹²

b) Project Elephant Division

Elephant being wide ranging animal requires large areas. As per our mythology, elephant took birth from celestial waters and thus are closely associated with rains / water because of the belief. The requirement of food and water for elephants are very high and therefore their population can be supported only by forests that are under optimal conditions. The status of elephant can be the best indicator of the status of the forests. Asian elephants were believed to be widely distributed – from Tigris – Euphrates in West Asia eastward through Persia into the Indian sub-continent , South and Southeast Asia including Sri Lanka , Java , Sumatra , Borneo and up to North China. However currently they are confined to Indian Subcontinent, South East Asia and some Asian Islands - Sri Lanka, Indonesia and Malaysia. About half of the Asian elephant population is in India¹¹³.

However current distribution of wild elephant in India is confined to South India; North East including North West Bengal; Central Indian states of Orissa, South WB and Jharkhand; and North West India in Uttarakhand and UP.

¹¹¹ <http://projecttiger.nic.in/introduction.htm> (Accessed on 23rd Dec 2012)

¹¹² Supra 109

¹¹³ Ministry of Environment & Forests, (Project Elephant) <http://moef.nic.in> (accessed on 26th Dec 2012)

The main threats to elephant populations arise from the conflict for land, food and water with the people and their livestock and the main thrust of the Project is, therefore, on mitigation of man-elephant conflict and habitat enrichment. The number of human beings killed in encounters with elephants in and around the elephant inhabited forest areas was reported to be 384 during the year 2002-2003.¹¹⁴

Project Elephant (PE) was launched by the Government of India in the year 1992 as a Centrally Sponsored Scheme with following objectives:

- To protect elephants, their habitat & corridors
- to address issues of man-animal conflict
- welfare of domesticated elephants

Financial and technical support is being provided to major elephant bearing States in the country. The Project is being mainly implemented in 13 States / UTs , viz. Andhra Pradesh , Arunachal Pradesh , Assam , Jharkhand , Karnataka , Kerala , Meghalaya , Nagaland , Orissa , Tamil Nadu , Uttaranchal , Uttar Pradesh and West Bengal. Small support is also being given to Maharashtra and Chhattisgarh.

Activities under the Project

- i. Ecological restoration of existing natural habitats and migratory routes of elephants; Development of scientific and planned management for conservation of elephant habitats and viable population of Wild Asiatic elephants in India;
- ii. Promotion of measures for mitigation of man elephant conflict in crucial habitats and moderating pressures of human and domestic stock activities in crucial elephant habitats; Strengthening of measures for protection of Wild elephants from poachers and unnatural causes of death;
- iii. Research on Elephant management related issues;
- iv. Public education and awareness programmes;
- v. Eco-development
- vi. Veterinary care¹¹⁵

¹¹⁴ Id

¹¹⁵ Supra 113

Monitoring of Illegal Killing of Elephants (MIKE) Programme-

Objectives of the MIKE are -

- a) to measure levels and trends in the illegal hunting of elephants;
- b) to determine changes in these trends over time; and
- c) to determine the factors causing or associated with such changes, and to try and assess in particular to what extent observed trends are a result of any decisions taken by the Conference of the Parties to CITES.

C) Wildlife Conservation Division

This Division deals with all matters relating to national parks and wildlife sanctuaries not covered by the Project Tiger and the Project Elephant Divisions. The X Five Year Plan outlay for works relating to this Division is of the order of Rs 485 crores. The Division also acts as a nodal point for the Wildlife Institute of India and the Central Zoo Authority, which are autonomous bodies under the administrative control of the Government of India. The Division also handles the Centrally Sponsored Scheme “Development of National Parks and Sanctuaries” and the Central Sector Scheme “Strengthening of Wildlife Division and Consultancies for Wildlife Conservation.”¹¹⁶

The Wild Life (Protection) Act, 1972 has been amended with effect from 1 April 2003. The amendments include, inter-alia, provisions that flow from the National Wildlife Action Plan adopted by the country in 2002. Two new categories of protected areas, namely Conservation Reserves and Community Reserves, have been incorporated in the amended Act to facilitate coverage of all biogeographic zones, forest types and wild species of flora and fauna, and peoples’ involvement in establishment and management of 118 of such protected areas. The amendment has also facilitated the issue of certificates of ownership to the bona-fide possessors of animals, animal articles, trophies, etc., derived from animals listed in Schedule I and part II of Schedule II of the Act, who had not been able to declare their possessions earlier. The law has become stricter for the offenders. It also makes clear that PAs which have areas that have had rights extinguished under any legislation, will be deemed to be finally notified (Sections 26-A(b) and Explanation U/S 35(8) of the Act).¹¹⁷

¹¹⁶ <http://www.envfor.nic.in> (Accessed on 24th Dec 2012) P- 117

¹¹⁷ Supra 105

- **The National Wildlife Action Plan 1983**

The National Wildlife Action Plan is intended to provide adequate protection to wildlife in multiple use areas such as Government forests outside Protected Areas, various Community Conserved Areas like sacred groves, community and panchayat forests, identified private forests such as interspersed forests in tea, coffee and cardamom gardens and other protection landscapes, farm lands, wastelands, wetlands, coastal habitats, heronries, wintering wetlands of birds, catchment forests, turtle nesting sites, pastures for livestock and wild herbivore, deserve ecosystems etc.

Overview of National Wild life Action Plan

- Biodiversity conservation has become a focus of interest of National Wildlife Action Plan.
- The term wildlife encompasses all uncultivated flora and undomesticated fauna. Every species has the right to live and every threatened species must be protected to prevent its extinction.
- India ranks sixth among the 12-mega biodiversity countries of the world. Conservation of biodiversity is directly linked with conservation of ecosystems and thus with water and food security. These together constitute a major plank of Indian economy
- Habitat loss caused by developmental projects such as dams, mines, and etc. compound the problems of wildlife conservation.¹¹⁸
- The constraining impact of habitat loss has been compounded by illegal trade fuelled by a rising demand of wildlife products and their lucrative prices in the international market¹¹⁹.

Policy Imperatives

a. Ecological Security: To protect the long-term ecological security of India, the national development agenda must recognize the imperative of identifying and protecting natural ecosystems from over-exploitation, contamination and degradation. Short-term economic gains must not be permitted to undermine ecological security.

b. Priority to Conservation: Assigning conservation a high priority both at the level of central and state governments is an imperative. Its integration in all development

¹¹⁸ The National Wildlife Action Plan 1983

¹¹⁹ The National Wildlife Action Plan 1983

programmes, evolving appropriate funding mechanism, enhancement of financial allocations and provision of adequate personnel with requisite expertise has to be ensured, to arrest the ongoing trend of degradation and to restore wildlife and its habitat.

c. National Land Use Policy: The NWAP cannot be executed in isolation. Wildlife conservation cannot be restricted to national parks and sanctuaries. Areas outside the protected area network are often vital ecological corridor links and must be protected to prevent isolation of fragments of biodiversity, which will not survive in the long run. Land and water use policies will need to accept the imperative of strictly protecting ecologically fragile habitats and regulating use elsewhere.

d. Primacy for Water and Sustenance: Water must be recognized as a prime produce of natural forests. Forests must be managed to optimize and protect hydrological systems. The National Forest Policy of 1988, which emphasizes conserving our natural heritage in the form of natural forests, flora and fauna, is in consonance with this imperative.

e. Peoples' Support for Wildlife: Local communities traditionally depend on natural biomass and they must, therefore, have the first lien on such resources. Such benefits must be subject to assumption of a basic responsibility to protect and conserve these resources by suitably modifying unsustainable activities. Conservation programmes must attempt to reconcile livelihood security with wildlife protection through creative zonation and by adding new Protected Area (PA) categories in consultation with local communities, such as an inviolate core, conservation buffer, community buffer and multiple use areas.

f. Man-Animal Conflict: While increasing man-animal conflict is an outcome of shrinkage, fragmentation and deterioration of habitats, it has caused destruction of wildlife and generated animosity against wild animals and protected areas. This is a crucial management issue, which needs to be addressed through innovative approaches.

Wildlife conservation encompasses all human activities and efforts directed to preserve wild animals from extinction. It involves both protection and scientific management of wild species and their environment. Some species have become extinct due to natural causes, but the greatest danger to wildlife results from the activities of man.¹²⁰

So we ourselves have created the need for conservation of wildlife. It can be viewed from several angles such as, beauty, economic value, scientific values for research and values for

¹²⁰ Joseph, *Wild Life Conservation in India*, <http://www.preservearticles.com> (Accessed on 17th Jan 2013)

snivel. The main causes of extinction of wild lives are poaching, enumerable animals and birds are hunted for meat, skin, ivory, horns etc. ruthlessly.

Hence, National Wildlife Action Plan has been adopted in 1983 for wildlife conservation. Many sanctuaries and National Parks have been established for the protection of dwindling wildlife.

2.5 Analysis

Development activities cause more interference in forest and also the privacy of wildlife and these ultimately cause conflict with wildlife. Man-animal conflict often takes place when wild animals cause damage to agricultural crop and property, killing of livestock and human beings. Human population growth, land use transformation, species loss of habitat, eco-tourism, too much access to reserves, increase in livestock population bordering the forest, depletion of natural prey base etc., often stated to be reasons for such conflict. Central Govt. the State Governments, and the Union Territories should evolve better preservation strategies, in consultation with Wildlife Boards so that such conflicts can be avoided to a large extent. Participation of people who are staying in the Community Reserves is also of extreme importance.

Environmental justice could be achieved only if we drift away from the principle like sustainable development, polluter pays principle, precautionary principles which are based in the interest of humans and environment.¹²¹

Ecocentrism is nature centered where humans are part of nature and non-human has intrinsic value. In other words, human interest does not take automatic precedence and humans have obligations to non-humans independently of human interest. Ecocentrism is therefore life-centered, nature-centered where nature includes both human and non-humans¹²².

More development activity causes more interference in forest and the privacy of wild life. These ultimately cause conflict with wildlife.¹²³

Development of people is always welcome but not at the cost of negative ecological aspect in the ecosystem.

¹²¹ [http://www.greentribunal.in/orderinpdf/38-2011\(App\)_7Sept2012_final_order.pdf](http://www.greentribunal.in/orderinpdf/38-2011(App)_7Sept2012_final_order.pdf) (Accessed on 02-Oct-2012)

¹²² [http://www.greentribunal.in/orderinpdf/38-2011\(App\)_7Sept2012_final_order.pdf](http://www.greentribunal.in/orderinpdf/38-2011(App)_7Sept2012_final_order.pdf) (Accessed on 02-Oct-2012)

¹²³ Man-Animal conflict in India, Ministry of Environment and forest, 23rd Sept 2011