

AN EFFORT TO PROTECT THE ENVIRONMENT AND CONSERVE THE WILD ANIMALS IN INDIA

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Abstract -In this article, an attempt has been made to explore the concept of environmental protection and wildlife conservation particularly wild animals. As witnessed, the excessive exploitation of natural resources by humans has degraded the environment, endangered certain animal species and damaged the ecosystem to a certain extent. Thus, the initiatives taken at the national and international levels to preserve the environment and protect wild animals are the focal concern of the study with the help of contributions made by the Indian legislature and judiciary. Further, the present study also focuses on the issues and challenges related to environmental protection and wildlife conservation.

Keywords: Wildlife Conservation, Environmental Protection, Higher Judiciary, National and International Initiatives, Protected Areas, Issues and Challenges

INTRODUCTION

Wildlife simply means and includes all micro-organisms, plants and undomesticated animal species that evolve and live in the wild environment or in their natural habitat. Wildlife does not have human control. According to Cambridge Dictionary, wildlife means "animals and plants that grow independently of people, usually in natural conditions". According to Collins Dictionary, wildlife refers to "the animals and other living things that live in the wild".

India is home to a large variety of wild animals. Along the species richness, globally India has been ranked seventh in mammals, tenth in birds, seventh in amphibians and fifth in reptiles¹. It is a biodiversity hotspot with various ecosystems ranging from the Himalayas in the north to the evergreen rain forests in the south, the sands of the west to the marshy mangroves of the east. India lies within the Indo-Himalayan realm and is home to various species of mammals, amphibians, birds, reptilians, and of flowering plant species². It is a well-established fact that wildlife plays not only a crucial role in maintaining the balance of our ecosystem but it also serves as a protector of our biological diversities and provides the means for subsistence. In Ancient India, men recognized the importance of wildlife and its conservation. They even protected, loved and worshipped certain animals. This is evident from the ancient art work, paintings and scripts.

However, with an enormous growth of human population, rampant deforestation, a wide range of pollutants and never ending hunger for modernisation, India is also facing severe climate change and these factors have become a great threat to the forest and wildlife living therein. It is observed that the desire of humans to dominate, manipulate and control nature and has caused irreparable harm to nature. As a result, numerous animals and plants species are being driven to extinction by humans in the last couple of decades alone. Hence, it is very important to make people aware of protecting and conserving the environment and the biodiversity in their niche, whether it is animal

¹ Sixth National Report of Convention on Biological Diversity, Country Profile, India. https://www.cbd.int/countries/profile/?country=in

² Indira Gandhi Conservation Monitoring Centre (IGCMC), New Delhi and the United Nations Environmental Programme (UNEP), World Conservation Monitoring Centre, Cambridge, UK. 2001. Biodiversity profile for India.

or plant species³. India is learning about the importance of environment and wildlife conservation. Accordingly, the Government of India has made several efforts by enacting laws pertaining to the wildlife and environment. Therefore, the present study highlights the efforts made to protect the environment and conserve wild animals in India. The study will further throw light on the issues and challenges associated with them.

1. Wildlife Conservation

Wildlife Conservation is the method to protect and conserve wildlife. It involves the practice of preserving and protecting wild plants, animal species and their habitats. Wildlife Conservation is essential to maintain healthy wildlife species and it enables to restore, protect and enhance natural ecosystems.

There are six types of wildlife conservation⁴;

- 1. **Habitat Conservation** It involves preserving habitats that already exist and protecting them from things like deforestation, pollution, and climate change.
- 2. Classification and Protection of Endangered Species- It is another important strategy of wildlife conservation that focuses on species in danger of extinction.
- 3. Conservation of Keystone Species- Certain species have a critical role in their ecosystem and are usually at the top of the food chain. In a forest ecosystem, these species would be the wolf, the elephant or the bear, organisms whose health has significant effects on the dynamics and diversity of the ecosystem as a whole. If the keystone species were removed, a significant loss of biodiversity would occur, through a domino effect on the other species.
- 4. **Prevention of Poaching and Hunting-** Another important part of preserving wildlife is preventing the hunting and capture of animals in the wild.
- 5. **Ex-situ conservation-** It refers to protection efforts that exist outside of that habitat, such as in botanic gardens, zoos, safaris, or wildlife rehabilitation centres. In other words, wild animals are taken from their natural habitat and relocated to a new place for the purpose of protection.
- 6. In- situ conservation- It refers to the conservation of ecosystems wherein the wildlife remains protected in their natural habitats such as the National Park and Wildlife Sanctuary.

The conservation of wildlife is of immense importance to mankind. The extinction of wildlife will ultimately lead to the extinction of the human race itself⁵. Basically, the purpose of wildlife conservation is to protect endangered species and balance the ecosystem. In 2010, the Supreme Court of India gave directions to the Central Government and State Governments and their agencies to make all to preserve India's wildlife and take stringent action actions against those violating provisions of the Wild Life (Protection) Act, 1972, as it is necessary for maintaining the ecological balance in India⁶.

2. Wildlife Conservation Efforts

Considering the increasing threat to wild animals, the Government of India has taken the followings initiatives for its conservation;

| SI. No. | Initiatives | Started in | Number of Projects as on 2023 | Aims and Objectives |
|------------|----------------|---------------|----------------------------------|---|
| 1. | Project Hangul | 1970 | 1 National Park | To protect and conserve the critically endangered Kashmir Red Stag and its habitat. |

³ Choudhury Neelanjana., Arun Rathod, 'Wildlife Conservation-A Challenge under Present Scenario' (AkiNik Publications: New Delhi, 2022) 17

⁴https://www.buildastash.com/post/types-of-wildlife conservation

⁵ P.S Jaswal., N.Jaswal., V. Jaswal, 'Environmental Law', 4th edn, (Allahabad Law Agency: Faridabad, 2014) 277

⁶ Sansar Chand v. State of Rajasthan, [2010] 10 SCC 604

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| 2. | Project Lion | 1972 | 5 Protected Areas (Wildlife Sanctuaries and National Parks). | To secure and restore the habitat of lions and to address human-lion conflict. |
|-----|--------------------------------------|------|---|---|
| 3. | Project Tiger | 1973 | 53 Tiger Reserves | To ensure the survival and maintenance of the tiger population (endangered species). |
| 4. | Crocodile Conservation Project | 1975 | 2 Protected Areas (Wildlife Sanctuary and National Park) | To protect the endangered crocodile and its habitat by establishing a wildlife sanctuary. |
| 5. | Project Himalayan Musk Deer | 1981 | 2 Wildlife Sanctuaries | To protect and conserve the endangered Himalayan Musk Deer and its habitat. |
| 6. | Project Elephant | 1992 | 33 Elephant Reserves | To preserve elephants and their corridors and habitat. To prevent human-elephant conflicts. To protect domesticated elephants. |
| 7. | Sea Turtle Project | 1999 | Coastal Areas of 8 States and 2 Union Territories | To conserve olive ridley turtles and other species of endangered sea turtles. |
| 8. | Project One Horn Rhino | 2005 | 7 Protected Areas (Wildlife Sanctuaries and National Parks) | To increase the population of one horn rhino. |
| 9. | Project Vulture | 2006 | 9 Conservation and Breeding Centres | To increase the vulture population. |
| 10. | Project Snow Leopard | 2009 | 7 Protected Areas (Wildlife Sanctuaries and National Parks) | To conserve such animals and their habitat. |
| 11. | Project Leopard | 2017 | 8 Wildlife Sanctuaries | To conserve leopards by improving their population and such big cat prey base, mitigating human-leopard conflict and stop poaching. |
| 12. | Ganges Dolphin Project | 2021 | 1 Dolphin Sanctuary | To conserve riverine and oceanic dolphins. |

There are other programmes adopted and initiated by the Government of India to conserve and protect the endangered wild animals i.e., Captive Breeding of a wild species, South Asia Wildlife Enforcement Network (SAWEN) which controls the trans-boundary wildlife crime.

As on 1st January 2023, there are 106 National Parks, 567 Wildlife Sanctuaries, 105 Conservation Reserves, 220 Community Reserves and 129 Marine Areas as a part of protected areas in India⁷.

Protected Areas of India from 2000 to 2022 (As on December, 2022)⁸

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⁷ http://wiienvis.nic.in/Database/npa_8231.aspx

⁸ These data are based on availability of data & Gazette Notification of Protected Areas from State Forest Department. Community Reserves and Conservation Reserves have been established in India from 2006 onwards. Hence these values are zero.

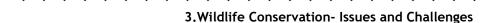
Tot Area Area Area Under Area Under No. of No. of Wild No. of No. of No. of Under Under u Wild Life Conservation Protected Pro Year National **National** Life Community Community Conservation Sanctuaries Reserves **Parks Parks** Sanctuaries Reserves Reserves A Reserves **Areas** (km²)(km²) ((km²)(km²) 2000 89 37803.10 485 108862.50 574 146 2006 96 38392.12 503 111229.48 1 0.31 4 42.87 604 149 2007 98 38428.88 507 111529.04 5 21 7 94.82 617 150 99 153 2008 39441.74 510 113123.35 5 21 45 1259.84 659 99 2009 39441.74 512 5 21 1259.84 154 113395.36 45 661 102 40283.62 155 2010 516 113842.87 5 21 47 1382.28 670 2011 102 40283.62 518 113998.75 21 1801.29 677 156 5 52 2012 103 40500.13 526 114933.44 5 21 59 2012.93 693 157 2013 102 40500.13 532 117123.63 19 30.94 64 2232.61 717 159 2014 103 40500.13 535 118290.66 43 58.22 2232.61 745 161 64 2015 103 40500.13 541 118866.44 71 2548.82 759 161 44 59.51 2016 103 40500.13 543 45 59.66 2566.20 763 162 118917.71 72 2017 103 40500.13 544 118931.80 46 72.61 76 2587.95 769 162 2018 104 40501.13 544 118931.80 46 72.61 77 2594.03 771 162 2019 101 40,564.03 553 119,756.97 163 833.34 86 3,858.25 903 1,65 2020 104 43,716 1,22,420 214 1,302 97 981 566 4,483 1,7 106 44,372.42 1,22,509.33 99 4,726.24 987 1,73 2021 564 218 1,445.71 2022 106 44,402.95 567 1,22,564.86 220 1,455.16 105 5,206.55 998 1,73

Source: National Wildlife Database, Wildlife Institute of India.

Further, initiatives like Animal Welfare Board of India (1962), National Wildlife Action Plan (1983), Wildlife Trust of India (1998), Wildlife Crime Control Bureau (2007), State Police Departments and State Forest Departments complement the efforts of the government towards the welfare and protection of animals in the country.

At the International level, several efforts have been made to conserve wildlife. Convention on International Trade in Endangered Species (CITES) (1973), the Convention on Migratory Species (CMS) (1979), the Convention on Biological Diversity (CBD) (1992), the Ramsar Convention (1971), and the World Heritage Convention (1972) are known as 'Big Five' global instruments on international wildlife. Further, regional instruments, such as those focusing on Africa, Antarctica, or Europe, are also conspicuous features of the conservation arena. Other international wildlife agreements focus on particular species, such as polar bears or albatrosses, or particular trans-boundary protected areas, such as the huge Kavango-Zambezi Trans-frontier Conservation Area. These agreements are collectively known as International Wildlife Law. The binding agreements themselves are typically accompanied and informed by an evolving set of non-binding instruments, such as Conference of the Parties (COP) decisions and action plans⁹. Non-Governmental Organisations like Trade Record Analysis of Flora and Fauna in Commerce (TRAFFIC) and World Wildlife Fund (WWF) in collaboration with the Governments and others, have been continuously working towards effective conservation of biodiversity, wildlife and its habitat by implementing programmes and policies.

⁹ A. Trouwborst, A. Blackmore, L. Boitani, M. Bowman, R. Caddell, G. Chapron, A. Cliquet, E. Couzens, Y. Epstein, E.F.Galiano, F.M. Fleurke, R. Gardner, L. Hunter, K. Jacobsen, M. Krofel, M. Lewis, J.V.López-Bao, D.Macdonald, S.Redpath, G.Wandesforde-Smith, J.D.C. Linnell, 'International Wildlife Law: Understanding and Enhancing Its Role in Conservation' (2017) 67 Bio-Science Journal 784



Wildlife conservation has become a major area of concern throughout the world. The conservation of animals and plant species mainly aims at protecting endangered species from becoming extinct because of various human activities. The wild animals are facing many threats due to human encroachment and their activities as well as a few natural factors such as habitat loss by destruction, fragmentation and degradation; illegal trading, illegal hunting and poaching of endangered species; climate change; over-exploitation of resources and increasing pollution level due to human activities and industrial operations¹⁰. Wildlife experts believed that illegal hunting and poaching are the major threat to wild animals.

Another emerging threat is wildlife crime which refers to the taking, trading (i.e. supplying, selling or trafficking), importing, exporting, possessing, processing, obtaining, and consuming wild fauna and flora, in contravention of national and international law¹¹. According to the National Crime Records Bureau report (Data from 2014-2021) shows that the highest number of wildlife crime cases have been registered in the following seven states of India viz. Uttar Pradesh, Rajasthan, Maharashtra, Assam, West Bengal, Madhya Pradesh, and Karnataka. It is pertinent to note that wildlife crime has become a transnational organised crime due to increasing globalisation and the advancement of information technology. Illegal wildlife trade is being carried out directly or indirectly from one country to another.

The recent developmental activities of human and their encroachment into the wild animals habitat has raised the question of the survival of wild animals, especially to species such as the Asiatic Lion, the Bengal Tiger, the Indian White-rumped Vulture, the Nilgiri Leaf Monkey etc. 172 wildlife and endemic species of India are also included in the International Union for Conservation of Nature (IUCN) designated threatened species of the world which accounts for 2.9% of the number of threatened species of the world¹².

Moreover, accidental deaths of wild animals due to road kill and collusion with trains have posed a grave danger to wild animals. Several wild animals mortalities have been reported owing to road and rail accidents in protected areas like Kaziranga National Park (Assam), Jaisalmer Desert National Park (Rajasthan), Chapramari Wildlife Sanctuary (West Bengal), and Gir National Park (Gujarat). According to the Wildlife Protection Society of India, in 2018 a total number of 161 wild animals died in rail and road accidents. It further reported that approximately 1,300 wild animals had died across India due to electrocution between 2010 and 2020. Thus, developmental activities in the form of dams, eco-tourism, illegal mining and new highways in and around the protected areas have also become a major issue and challenge to conserve wild animals.

Despite the enactment of laws, the exploitation of wildlife continues because of ineffective enforcement of wildlife legislation, punishment and penalties provided for the offences committed under the Act are not stringent, and the officials of the forest department are not adequately trained or have adequate resources and they lack manpower¹³. Even the human-wild animal conflict for instance increasing human settlements near peripheries of national parks and wildlife sanctuaries leading to encroachment of and livestock grazing in forest lands are increasing across the country. The effects of such conflict often result in deaths and injuries to wild animals and humans. Whereas, the village tribal community of India especially North-East India has the tradition of hunting, the conservation of wild animals is challenging in such regions.

¹⁰ L. Klappenbach., 'Understanding the Threats to Animals and Wildlife - Examining Natural Threats and Man-made Threats', (2014) http://animals.about.com/od/animalswildlife101/a/threats.htm.

¹¹ United Nations Office on Drugs and Crime, 2015

¹² J. Baillie and B. Groombridge, 'The 1994 IUCN Red List of Threatened Animals' (ed.), (IUCN, Gland, Switzerland and Cambridge U.K., and Conservation International, Washington, D.C., U.S.A., 1996) 286

¹³ V.K. Soni, 'Wildlife Conservation in India: Issues and Challenges' 21 Journal of Interdisciplinary Cycle Research 798



The environment has been defined as the outer physical and biological system in which man and other organisms live as a whole¹⁴. Therefore, there is a close connection between human beings and the environment. The history of mankind reflects that the human race has immensely benefited from the produce of mother earth. With the growing necessity and demands man has exploited the resources available with modern technologies to such an extent that it has disturbed the environment and created an ecological imbalance. It is evident that with the growing levels of pollution at an alarming rate have caused the depletion of the ozone layer and leading to global warming. These endanger the very existence of all the living things on the planet Earth.

5. Environmental Protection Efforts

Apart from the several legislative enactments related to the environment, certain important principles and concepts pertaining to environmental protection have been accepted, evolved, and recognised in India. It reflects the efforts and measures taken by the government and higher judiciary of the country to minimise the damage being done to the environment;

- 1. **Polluter Pays Principle-** This principle has been enacted to make the party responsible for producing 'pollution' to pay for the damage done to the natural environment. 'Polluter Pays Principle' is also known as 'Extended Producer Responsibility' (EPR). This concept was described by Thomas Lindhqvist for the Swedish Government in 1990. The credit for popularizing the 'Polluter Pays Principle' for the first time goes to Organisation for Economic Co-operation and Development (OECD). The Environment Protection Act, 1986 expressly and impliedly enforce the said doctrine for the purpose of protecting and improving the quality of the environment. This principle also finds a prominent place in Principle 16 of 'Rio Declaration of 1992' and it has been incorporated in Article 102 Rule 2 of the European Community Treaty¹⁵.
- 2. **Precautionary Principle** It plays a significant role in determining whether the development process is sustainable or not. It underlies sustainable development which requires that the developmental activity must be stopped and prevented if it causes serious and irreversible environmental damage. The Principle is based on the theory that it is better to be on the side of caution and prevent environmental harm which may indeed become irreversible. The Precautionary Principle has been given utmost importance in the United Nation's Conference on Environment and Development held at Rio in 1992¹⁶. The Supreme Court of India in the case of *Vellore Citizens' Forum v. Union of India*¹⁷, held that the Precautionary Principle is a part of the environmental law of the country.
- 3. **Public Trust Doctrine-** According to this doctrine certain resources such as land, water, sea and forest must be preserved for public use instead of making them wholly subject of private ownership. Such natural resources must be available to every individual irrespective of background. The government is required to maintain them for the reasonable use of public rather than private ownership¹⁸. The Doctrine was first mentioned by the Honourable Supreme Court in the case of *M.C Mehta v Kamal Nath*¹⁹ wherein the court applied the 'Doctrine of Public Trust' with regard to the protection and preservation of natural resources.
- 4. **Sustainable Development** In 1987, the United Nations released the Brundtland Report, which included what is now one of the most widely recognised definitions of Sustainable

¹⁴ The State of World Environment, United Nations Environment Programme: Annual Review (1986) at P.6

¹⁵https://www.nios.ac.in/media/documents/SrSec338New/338_Introduction_To_Law_Eng/338_Introduction_To_Law_Eng_L26.pdf

¹⁶ See www.nios.ac.in, above n.12 at 38,39

¹⁷ (1996) 5 SCC 647

¹⁸ See www.nios.ac.in, above n.12 at 40

^{19 [1997]1} SCC 388

Development. According to the report, "It is the development that meets the needs of the present without compromising the ability of future generations to meet their own needs"20. Recognising the principle the Supreme Court of India in Dehradun Quarrying Case²¹ emphasised the need for reconciling the development goals and conservation of the environment in the larger interest of the country.

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The signing of the Stockholm Declaration (Sweden) in 1972 for the first time drew the attention of the world community for the preservation and protection of the human environment²². This is also known as the First Earth Summit and it was considered to be the Magna Carta of environmental protection. The Paris Agreement adopted in 2015 is the most recent international agreement on climate change and environmental protection.

Apart from these, the followings are the other major international agreements wherein legal measures were taken for the protection of the environment viz. World Heritage Convention (1972); Convention on International Trade in Endangered Species of Wild Flora and Fauna (CITES) (1973); Montreal Protocol on Substances that Deplete the Ozone Layer (1987); Convention on Biological Diversity (CBD) (1992); Rio Declaration (1992); Kyoto Protocol (1997); Johannesburg Summit on Sustainable Development (2002).

6. Environmental Protection-Issues and Challenges

The protection of environmental pollution is a global issue and it is not an isolated problem of any area or nation²³. The major environmental concerns of India today contributed by humans are ²⁴;

- air pollution resulting from industrial development;
- ii. water pollution from industrial and domestic effluents;
- soil erosion, deforestation, and desertification due to the brutal exploitation of natural iii. resources;
- i۷. burgeoning population, and;
- ٧. noise pollution in cities.

According to World Air Quality Report 2022, India became the world's eighth most polluted country, with an annual average PM2.5 concentration of 53.3 micrograms per cubic meter, more than 10 times the WHO's recommended levels. Delhi has been ranked the fourth most polluted city and the second most polluted capital city globally, with an annual average PM2.5 concentration of 92.6 micrograms per cubic meter²⁵.

Water pollution is among the most pressing environmental issues in India. The country's waterways have become extremely polluted, with around 70% of surface water estimated to be unfit for consumption. Illegal dumping of raw sewage, silt, garbage into rivers and lakes severely contaminated India's waters. The near-total absence of pipe planning and an inadequate waste management system are only exacerbating the situation every day. A staggering 40 million litres of wastewater enter the water bodies and only a tiny fraction is adequately treated due to a lack of adequate infrastructure²⁶.

Among the most pressing environmental issues in India is also waste. As the largest population in the world, 277 million tonnes of municipal solid waste (MSW) are produced every year. Experts estimate that by 2030, India is likely to reach 387.8 million tonnes and will more than double its

²⁰ Our Common Future; Brundtland Report 1987

²¹ AIR 1987 SC 359

²² K. Thakur, Environmental Law and Policy in India, Reprint, (Deep and Deep Publications Pvt. Ltd: New Delhi, 2007)

²³ M.C Mehta v. Union of India [1991] 2 SCC at 354

²⁴ A.K. Jain, 'Law and Environment' 3rd Edn. (Ascent Publication: New Delhi, 2012) 4

https://www.indiatoday.in/opinion-columns/story/why-air-pollution-in-india-is-a-public-healthcrisis-and-demands-urgent-action-opinion-2347548-2023-03-16

²⁶ https://earth.org/environmental-issues-in-india /#:~:text= In%202021 %2C%20India% 20was%20 among, returned%20to%20pre%2Dpandemic%20levels.

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current value by 2050. India's rapid urbanisation makes waste management extremely challenging. Currently, about 5% of the total collected waste is recycled, 18% is composted, and the remaining is dumped at landfill sites. The plastic crisis in India is one of the worst on the planet. According to the Central Pollution Control Board (CPCB), India currently produces more than 25,000 tonnes of plastic waste every day on average, which accounts for almost 6% of the total solid waste generated in the country. India stands second among the top 20 countries having a high proportion of riverine plastic emissions nationally as well as globally. Brahmaputra and Ganges rivers are known as the 'highways of plastic flows' as they carry and drain most of the plastic debris in the country ²⁷.

Factors like illegal sand mining and the expansion of palm oil plantations are also adversely damaging the environment. Excessive sand mining impacts the habitat of micro-organisms and increased river erosion thereby changing the course of water. To meet the increasing demand for palm oil, forests are being destroyed for plantations. As a result, it's leading to deforestation, loss of biodiversity and ultimately climate change.

Furthermore, the construction of large dams also impact the environment such as changing land to salinity, changes in water quality, demolishing animal habitats, destroying the ecosystem of microorganism and decline in fish populations²⁸. Even the nuclear power plant and nuclear waste is a major threat to the environment. As witnessed by two major nuclear accidents in Chernobyl (1986) then USSR (Now Ukraine) and Fukushima (2011), Japan, the impact made by such disasters on living being and the environment can still be seen in those areas. The amount of nuclear waste contained in some of the Chernobyl nuclear plant reactors is considered as dangerous till date.

Global warming and the depletion of the ozone layer resulted in environmental changes such as changes in monsoon patterns, hotter summers, rise in sea levels, colder winters, and floods are the major environmental issues before the nations across the world.

7.Indian Legislations on Environment and Wildlife Protection

The Government of India has enacted several laws and formulated policies to protect the environment and conserve wildlife such as;

- 1. The Indian Penal Code, 1860 It criminalises the killing, poisoning, maiming, or rendering useless any animal or animals. Hence, provides animal protection and makes any form of cruelty towards animals as a punishable offence²⁹.
- 2. The Indian Forest Act, 1927- This Act provides protection of forest land including wildlife by declaring any forest land or waste land as reserved forest³⁰ and protected forests. Certain activities such as quarrying, cultivation, grazing and hunting are prohibited within the reserved forest area and impose penalties and provide for imprisonment for offences committed under this Act.
- 3. The Constitution of India -Article 48A and 51(A)(g) mandates that the State and citizens shall protect and improve the environment, wildlife and have compassion towards living creatures. List III of the Seventh Schedule contains the following entries under which both Centre and State Governments can make laws viz. Entry 17 Prevention of cruelty to animals, Entry 17-A Forests, Entry 17-B Protection of wildlife and birds, Entry 29 Prevention of the extension from one State to another of infectious or contagious diseases of pets affecting men, animals or plants³¹. The Supreme Court of India impliedly treated the right to live in pollution free

²⁷ See earth.org/environmental-issues-in-india, n.22

²⁸ S. P. Ahirrao, 'A Research Paper on Impact of Large Dams on Environment in India' (2021) 9 International Journal of Creative Research Thoughts (IJCRT) 627

²⁹ The Indian Penal Code, 1860, S. 428 and 429

³⁰ The Indian Forest Act, 1927, S.3 and 4

³¹ See Jaswal, Above n. 4 at 280,281

environment as a part of the fundamental right to life under article 21 of the Indian Constitution³².

- 4. **Prevention of Cruelty to Animal Act, 1960 -** This Act was enacted to prevent the infliction of unnecessary pain or suffering on animals and for that purpose to amend the law relating to the prevention of cruelty to animals³³. Any person shall be punished for committing an act in contravention of the provisions of sections 22, 25 and 26 of the Act. Thus, constitute an offence.
- 5. The Wildlife (Protection) Act, 1972- This Act was passed by the Parliament of India under Article 252 of the Indian Constitution³⁴ with an aim and object to protect and conserve wildlife specifically endangered species, preservation of flora and fauna. This Act aggressively deals with the declaration and establishment of protected areas such as Wildlife Sanctuaries, National Parks, Tiger Reserves; the management of zoological parks; the prohibition of hunting, commercialisation and possession of wild animals and birds and their products; conservation of wildlife habitats and establishment of Community Reserves and Conservation Reserves.

Further, this Act is the parent legislation on wildlife crime. It provides the punishment for committing an offence of hunting [S. 2(16), 9 and 17A], offence pertaining to unauthorized possession, transport and trade of animals and its articles (S. 40, 42 - 44, 48, 48A, and 49), offence pertaining to protected areas [S.27, 29 - 32, 33-A, 34, 35(6), 35(7), 35(8), 36-A(2), 36-C(2), and 38-V(2)] and penalties for contravening provisions of the Act (S.51). In *Moti Lal v. Central Bureau of Investigation and Another*³⁵ the Supreme Court has stated that offences punishable under the Wildlife (Protection) Act, 1972 can be investigated by Central Bureau of Investigation as per the provisions of Criminal Procedure Code 1973.

- 6. The Environment (Protection) Act, 1986- This Act authorizes the central government to constitute authorities to protect and improve the quality of the environment, control and reduce pollution and prohibit or restrict the operation of any industrial unit on environmental grounds. It was enacted in 1986 with the objective of providing for the protection and improvement of the environment and for matters connected therewith³⁶. The Environment (Protection) Act, 1986 is a special law and extends to the whole of India. The Supreme Court of India in M.C. Mehta v. Union of India³⁷ held that the directions given by the Environment Pollution (Prevention and Control) Authority constituted under section 3 of the Environment (Protection) Act, 1986 are final and binding on all persons and organisations concerned and they are bound to follow the same.
 - This Act penalises for contravening the provisions, rules made, orders issued (S.15), and offences committed by the Companies and Government Department (S.16-17).
- 7. The Biological Diversity Act, 2002- This Act was enacted for the preservation of biological diversity in India, and provides a system for equitable sharing of benefits arising out of the use of traditional biological resources and knowledge. It was enacted to meet the obligations under the United Nations Convention on Biological Diversity (UNCBD) 1992 because India is one of the signatories of the said convention. This Act strengthened the other laws enacted for the protection and conservation of wildlife and forest.
- 8. Green Highways (Plantation, Transplantation, Beautification and Maintenance) Policy 2015- This policy was framed with the aims and objectives to promote greening of National Highways, reduce the impact of air and noise pollution, arrest soil erosion and create employment opportunities.

³² M.C Mehta v. Union of India AIR [1987] SC 1086

³³ Prevention of Cruelty to Animal Act, 1960, Preamble

³⁴ Pradeep Krishen v. Union of India, AIR 1996 SC 2040

³⁵ (2002) 4 SCC 713

³⁶ The Environment (Protection) Act 1986, Preamble

^{37 [2002] 4} SCC 356



Apart from the aforementioned laws and policies, there are several other relevant legislations on the subject viz., The Mining And Mineral Development Regulation Act 1957, The Arms Act, 1959, The Water (Prevention and Control of Pollution) Act, 1974, The Criminal Procedure Code, 1974, The Air (Prevention and Control of Pollution) Act, 1981, The Forest (Conservation) Amendment Act, 1988, The Public Liability Insurance Act, 1991, The Prevention of Money Laundering Act, 2002, The Marine Fishing Policy, 2004, The Wildlife (Protection) Amendment Act 2006, Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Rights) Act 2006, The National Green Tribunal Act, 2010, Wetlands (Conservation and Management) Rules 2017,

8. Higher Judiciary on Environment Protection and Wildlife Conservation

The higher judiciary of India has also immensely contributed to the protection of the environment and conservation of wild animals by pronouncing several relevant judgments.

M.C Mehta v. Union of India (AIR 1987 SC 965)

This case is known as Shriram Gas Leak Case. In this case, the Supreme Court of India applied the principle of 'Absolute Liability'. The court held that the industries that are engaged in inherently hazardous activities that cause harm to the environment or the people through any accident would be held absolutely liable.

In this case, the court also expressed the desire to establish an 'Environment Court' to deal with cases on environmental related matters.

State of Bihar v. Murad Ali Baig (AIR 1989 SC 1)

The issue of this case was whether the hunting of elephants is justified under section 429 of the Indian Penal Code, 1860 and section 2(16) of the Wildlife Protection Act, 1972. The Supreme Court of India held that since the elephant was an animal covered under the list of animals provided under Schedule I of the Act, therefore, the hunting of elephants is strictly prohibited. The Court also took the view that the offence of "hunting" as defined under the Wildlife Protection Act is different from the offence which is committed under Section 429 of the Indian Penal Code.

Tarun Bharat Sangh, Alwar v. Union of India [1992 Supp (2) SCC 448]

In this case, the state government of Rajasthan had issued licenses for conduction of mining activity in the wildlife sanctuary. The Supreme Court took cognizance of this activity and directed the state government that no further mining operations could be conducted within the demarcated area as "protected".

V. Lakshmipathy v. State of Karnataka (AIR 1992 Kar 57)

The Karnataka High Court observed that the right to enjoy pollution free water and air is a fundamental right under Article 21 of the Indian Constitution and Article 32 of the constitution entitles a citizen by filing a writ petition to remove such pollution which is detrimental to the quality of life.

Vellore Citizens' Welfare Forum v. Union of India [(1996) 5 SCC 647]

The Supreme Court ruled that all efforts should be made to maintain harmony between the natural environment and human developmental activities. Thus, the principle of sustainable development was adopted as a balancing concept. The Hon'ble Court also emphasized on the constitution of a special bench viz. 'green benches' in the High Courts in dealing with matters related to the protection of the environment.

M.C. Mehta v. Union of India [(1997) 2 SCC 353]

This case is popularly known as Taj Trapezium case. In this case, the Supreme Court applied and based its judgment on the Precautionary Principle, Polluter Pays Principle and Sustainable Development Principle. The court observed that environmental pollution caused by the industries located nearby the Taj Mahal has damaged and degraded the national heritage. The people residing in the vicinity are at risk due to air pollution. The Court ordered the neighbouring industries to either shut down the operations or relocate outside the zone. The court also ordered that the workers of these industries have fundamental rights to receive wages during the time taken for relocation. Further, the polluter should be held liable to pay exemplary cost for the damaging ecology and loss caused to any person despite the polluter's reasonable care while carrying on the activities.



N.R. Nair and Ors. v. Union of India and Ors [(2001) 6 SCC 84]

In this case, the Hon'ble Supreme Court held that trapping and restricting the free movement of wild animals, abused and confined them in a cell shall amount to cruelty under the Prevention of Cruelty to Animals Act, 1960. The court dismissed the appeal by stating that the right to carry out any trade or business which deals with wildlife is not guaranteed as fundamental right under Article 19(1)(g) of the Constitution of India.

The Chief Forest Conservation (Wildlife) v. Nisar Khan [(2003) 4 SCC 595]

The Supreme Court held that licensing authority has a right to refuse to issue and renew the license for carrying on a business which deals with the breeding of birds in captivity by procuring them trapping as such practice is prohibited under section 9 read with section 2(16) of the Wild Life (Protection) Act, 1972.

T.N. Godavarman Thirumulpad v. Union of India & Ors. [(2006) 1 SCC 1]

In this case, the Supreme Court held that the deforestation of the government or any private individual's property is illegal without obtaining the prior permission of the central government or the forest department of the concerned district or area. However, such a ruling can be relaxed when developmental projects have to be carried out in the public interest such as the railways, roadways or waterways. Further, the court observed that it is equally essential to maintain the proper ecological balance and to preserve bio-diversity when any developmental activity takes place.

Ajay Dubey v. National Tiger Conservation Authority and Ors. [(2012) 13 SCC 789]

In this case, the Supreme Court directed ten states to issue notification for the creation of Core Areas and Buffer Areas in and around critical tiger habitats.

Goa Foundation v. Union of India [(2014) 6 SCC 590]

The Supreme Court held that all mining within a distance of one kilo-meter from National Parks and Sanctuaries are prohibited.

OBSERVATION AND CONCLUSION

It is observed that the protection of the environment and wildlife has become extremely difficult in India with the growing population and demands for natural resources. In India, due to excessive destruction of animal habitats, poaching, hunting and illegal wildlife trade led to the extinction of certain animal species such as Indian Aurochs, Pink-Headed Duck, Sunderban Dwarf Rhinoceros, Northern Sumatran Rhinoceros and Asiatic Cheetah. And many more animals are placed under the endangered list. According to the International Union for Conservation of Nature (IUCN) Red List 2020, there are approximately 30,000 species of plants and animals in India are listed as endangered and some are critically endangered such as Asiatic Lion, Snow Leopard, One Horned Rhinoceros, Musil, etc.

The insatiable human greed and their rampant poaching activities cause loss to the indigenous and endangered species of flora and fauna in forest ranges; in particular, many vertebrates are on the verge of extinction. According to data available from the Wildlife Crime Control Bureau (WCCB) and attached police authorities, over 9253 poachers were arrested in different poaching cases during 2012-2018 in India, but the rate of conviction was just 2 percent³⁸. It shows that despite the arrest, the offenders easily get away it without prosecuting in the court. Since the punishment and penalty under the Wildlife Protection Act, 1972 are not severe, the authorities and the offenders lack seriousness towards the wildlife crime. As a result, wildlife is still subject to exploitation i.e., hunting and trading.

There are more than 100 Central and State legislations pertaining to environmental protection and wildlife conservation yet the strict enforcement of such laws becomes difficult and challenging. National Green Tribunal which was established in 2010 to deal with environment and forest related matters has completely failed to deliver justice. The major loophole of this specialised tribunal is that it has only five benches which are unable to dispose of the case in a speedy manner. Due to its

³⁸ A.K, Rana, N. Kumar., 'Current Wildlife Crime (Indian Scenario): Major Challenges and Prevention Approaches, (2023) 32 Biodiversity and Conservation 1473-1491

limited benches, the numbers of pending cases are mounting. Moreover, being a quasi-judicial body it's not empowered to deal with the matter that falls within the purview of the Indian Forest Act, 1927 and Wildlife Protection Act 1972. Another statutory body i.e., Pollution Control Board (PCB) does not have an adequate amount of staff, expertise and power to prevent pollution. Therefore, limitations like acute shortage of staff, insufficient funding, local communities in conflict with the forest authorities, inaction in forest check gates, make it even more difficult to strictly enforce such laws.

Compare to developed countries, animal welfare in developing countries still have a long way to go in order to achieve sensible results, despite the enormous efforts done by organizations and individuals, due to the various economic and cultural issues in these countries. And without proper awareness and education to the masses, implementing laws won't make a significant difference on how animals are treated in these countries³⁹. Unless, there is a self-realisation and awareness about the importance of wildlife and the environment among the masses no matter how many laws are enacted and enforce it, the exploitation of natural resources will continue. Even though many attempts have been made to protect the environment and wildlife through various means yet the outcome has not been satisfactory. Being the most advanced form of life on the planet Earth, we ought to take all possible steps to have the quality environment and need to learn to live with nature.

Though we have enough welfare legislations, programmes and policies on wildlife and the environment, the need of the hour is to take concrete steps to mitigate the damage done to the environment and wildlife in the form of a blanket ban on the manufacturing of civilian arms and ammunition, terms of punishments and amount of penalties should be increased by making it non-bailable offence, no human developmental projects should be allowed in and around the protected areas, routine wise central forces along with forest officials should be stationed at the forest check gates for effective checking, more environment courts should be established in accordance with an independent judiciary, local communities should be involved in conservation initiatives, the explosion of the human population should be controlled, and lastly, the alternate substance should be developed to replace all non-biodegradable products.

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REFERENCES

[1] Ahirrao, S. P. (2021) 'A Research Paper on Impact of Large Dams on Environment in India' 9 International Journal of Creative Research Thoughts (IJCRT)

- [2] Jaswal, P.S., Jaswal, N, Jaswal., V, (2014). Environmental Law, Allahabad Law Agency: Faridabad
- [3] Neelanjana, C., Rathod, A (2022). Wildlife Conservation-A Challenge under Present Scenario, AkiNik Publications: New Delhi
- [4] Trouwborst, A., Blackmore, A., Boitani, L., Bowman, M., Caddell, R., Chapron, G., Cliquet, A., Couzens, E., Epstein, Y., Galiano, E.F., Fleurke, F.M., Gardner, R., Hunter, L., Jacobsen, K., Krofel, M., Lewis, M., López-Bao, J.V., Macdonald, D., Redpath, S., Wandesforde-Smith, G., Linnell, J.D.C., (2017) 'International Wildlife Law: Understanding and Enhancing Its Role in Conservation' 67 Bio Science Journal
- [5] Soni, V.K., (2021) 'Wildlife Conservation in India: Issues and Challenges' 21 Journal of Interdisciplinary Cycle Research
- [6] Rana, A.K., Kumar, N., (2023) 'Current Wildlife Crime (Indian Scenario): Major Challenges and Prevention Approaches', 32 Biodiversity and Conservation
- [7] Abdulhaleem, M., (2022) 'Animal Welfare in the Developing Countries' 4 Acta Scientific Veterinary Sciences

³⁹ M. Abdulhaleem., 'Animal Welfare in the Developing Countries' (2022) 4 Acta Scientific Veterinary Sciences 19

- [8] Neelanjana, C., Rathod, A., (2022) 'Wildlife Conservation-A Challenge under Present Scenario', AkiNik Publications: New Delhi
- [9] Thakur, K., (2007) 'Environmental Law and Policy in India', Reprint, Deep and Deep Publications Pvt. Ltd: New Delhi
- [10] Jain, A.K., (2012) 'Law and Environment' (3rd Edn.), Ascent Publication: New Delhi
- [11] Baillie, J., Groombridge, B., (1996) 'The 1994 IUCN Red List of Threatened Animals' (ed.), lUCN, Gland, Switzerland and Cambridge U.K., and Conservation International, Washington, D.C., U.S.A
- [12] Klappenbach, L., (2014), 'Understanding the Threats to Animals and Wildlife Examining Natural Threats and Man-made Threats'
- [13] Indira Gandhi Conservation Monitoring Centre (IGCMC), New Delhi and the United Nations Environmental Programme (UNEP), World Conservation Monitoring Centre, Cambridge, UK. Biodiversity profile for India, 2001
- [14] The State of World Environment, United Nations Environment Programme: Annual Review, 2022
- [15] United Nations Office on Drugs and Crime, 2015
- [16] Our Common Future; Brundtland Report, 1987