

INTERNATIONAL JOURNAL FOR LEGAL RESEARCH AND ANALYSIS



Open Access, Refereed Journal Multi-Disciplinary
Peer Reviewed

www.ijlra.com

DISCLAIMER

No part of this publication may be reproduced or copied in any form by any means without prior written permission of Managing Editor of IJLRA. The views expressed in this publication are purely personal opinions of the authors and do not reflect the views of the Editorial Team of IJLRA.

Though every effort has been made to ensure that the information in Volume II Issue 7 is accurate and appropriately cited/referenced, neither the Editorial Board nor IJLRA shall be held liable or responsible in any manner whatsoever for any consequences for any action taken by anyone on the basis of information in the Journal.

Copyright © International Journal for Legal Research & Analysis

EDITORIALTEAM

EDITORS

Dr. Samrat Datta

Dr. Samrat Datta Seedling School of Law and Governance, Jaipur National University, Jaipur. Dr. Samrat Datta is currently associated with Seedling School of Law and Governance, Jaipur National University, Jaipur. Dr. Datta has completed his graduation i.e., B.A.LL.B. from Law College Dehradun, Hemvati Nandan Bahuguna Garhwal University, Srinagar, Uttarakhand. He is an alumnus of KIIT University, Bhubaneswar where he pursued his post-graduation (LL.M.) in Criminal Law and subsequently completed his Ph.D. in Police Law and Information Technology from the Pacific Academy of Higher Education and Research University, Udaipur in 2020. His area of interest and research is Criminal and Police Law. Dr. Datta has a teaching experience of 7 years in various law schools across North India and has held administrative positions like Academic Coordinator, Centre Superintendent for Examinations, Deputy Controller of Examinations, Member of the Proctorial Board



Dr. Namita Jain

Head & Associate Professor

School of Law, JECRC University, Jaipur Ph.D. (Commercial Law) LL.M., UGC -NET Post Graduation Diploma in Taxation law and Practice, Bachelor of Commerce.



Teaching Experience: 12 years, AWARDS AND RECOGNITION of Dr. Namita Jain are - ICF Global Excellence Award 2020 in the category of educationalist by I Can Foundation, India. India Women Empowerment Award in the category of "Emerging Excellence in Academics by Prime Time & Utkrisht Bharat Foundation, New Delhi. (2020). Conferred in FL Book of Top 21 Record Holders in the category of education by Fashion Lifestyle Magazine, New Delhi. (2020). Certificate of Appreciation for organizing and managing the Professional Development Training Program on IPR in Collaboration with Trade Innovations Services, Jaipur on March 14th, 2019

Mrs.S.Kalpana

Assistant professor of Law

Mrs.S.Kalpana, presently Assistant professor of Law, VelTech Rangarajan Dr.Sagunthala R & D Institute of Science and Technology, Avadi. Formerly Assistant professor of Law, Vels University in the year 2019 to 2020, Worked as Guest Faculty, Chennai Dr.Ambedkar Law College, Pudupakkam. Published one book. Published 8Articles in various reputed Law Journals. Conducted 1Moot court competition and participated in nearly 80 National and International seminars and webinars conducted on various subjects of Law. Did ML in Criminal Law and Criminal Justice Administration. 10 paper presentations in various National and International seminars. Attended more than 10 FDP programs. Ph.D. in Law pursuing.



Avinash Kumar



Avinash Kumar has completed his Ph.D. in International Investment Law from the Dept. of Law & Governance, Central University of South Bihar. His research work is on "International Investment Agreement and State's right to regulate Foreign Investment." He qualified UGC-NET and has been selected for the prestigious ICSSR Doctoral Fellowship. He is an alumnus of the Faculty of Law, University of Delhi. Formerly he has been elected as Students Union President of Law Centre-1, University of Delhi. Moreover, he completed his LL.M. from the University of Delhi (2014-16), dissertation on "Cross-border Merger & Acquisition"; LL.B. from the University of Delhi (2011-14), and B.A. (Hons.) from Maharaja Agrasen College, University of Delhi. He has also obtained P.G. Diploma in IPR from the Indian Society of International Law, New Delhi. He has qualified UGC – NET examination and has been awarded ICSSR – Doctoral Fellowship. He has published six-plus articles and presented 9 plus papers in national and international seminars/conferences. He participated in several workshops on research methodology and teaching and learning.

ABOUT US

INTERNATIONAL JOURNAL FOR LEGAL RESEARCH & ANALYSIS
ISSN

2582-6433 is an Online Journal is Monthly, Peer Review, Academic Journal, Published online, that seeks to provide an interactive platform for the publication of Short Articles, Long Articles, Book Review, Case Comments, Research Papers, Essay in the field of Law & Multidisciplinary issue. Our aim is to upgrade the level of interaction and discourse about contemporary issues of law. We are eager to become a highly cited academic publication, through quality contributions from students, academics, professionals from the industry, the bar and the bench. INTERNATIONAL JOURNAL FOR LEGAL RESEARCH & ANALYSIS ISSN 2582-6433 welcomes contributions from all legal branches, as long as the work is original, unpublished and is in consonance with the submission guidelines.

THE IMPACT OF HUMAN WILDLIFE CONFLICTS IN KERALA: CHALLENGES AND GOVERNMENT RESPONSES

AUTHORED BY - MEERA S GOPAN

ABSTRACT

Human-Wildlife Conflict (HWC) refers to the challenges that arise when the presence or behaviour of wildlife threatens human interests or needs, resulting in negative impacts on both human populations and wildlife. This includes issues such as crop damage, livestock predation, human injury or death, and harm to endangered species. While the roots of HWC stretch back centuries, the frequency and severity of such conflicts have significantly increased in recent years. In the State of Kerala, the past decade has witnessed a sharp rise in these conflicts, making it a critical issue for the government, which faces public criticism for lapses in policy implementation and response. The need for a comprehensive and effective strategy to address HWC has gained urgent attention, with increasing calls for a balanced approach to safeguard both human and animal welfare. This paper aims to explore the causes, impacts, and public perceptions of HWC in Kerala, emphasizing the necessity of a thoughtful, coordinated response that ensures the protection of human lives while maintaining ecological balance. This paper analyses the issue of human wildlife conflict in Kerala, its causes and impacts, public response on the issue through a survey in an affected area, other public documents, governmental policies and judicial responses to the issue to forward suggestions on how to mitigate the problem in an effective way.

Keywords: Human wildlife conflicts, policy implementation, balanced approach, human rights, ecological balance

1. Introduction

Humans are considered as an integral part of environment. We interact with the environment and these interactions define the existence of life on the Earth. All living beings including man and their environment are mutually dependent and reactive to each other. Any imbalances in these interactions are considered as conflicts and affect the whole environment including the humans. One such interaction which affects the environment and humans is Human Wildlife

Interactions. These interactions can be positive or negative. Human Wildlife Conflicts are one such interaction which had a negative impact on humans and wildlife.

Human Wildlife Conflicts occur in situations where humans and animals pose either direct or implied threat to the interest of each other, often leading to clashes between groups of people and negative impact on wildlife. The major reasons for human wildlife conflicts may be many. These interactions which turn violent or gruesome in most cases are reported all around the world. In India, the reports from the Ministry for Environment Forest and Climatic Change indicates the increasing trend in reported cases of Human Wildlife Conflicts. Whether it is reported in the State of West Bengal where Human- Elephant conflicts are on rise or in Maharashtra where the death tolls due to tiger attacks are higher, the importance of the increasing conflicts are of great importance. The conflict animals may differ and the reasons for the conflict will be different at each place but the impact it exerts in the society remains the same. The State of Kerala which resides in the lap of the biodiversity rich Western Ghats is also facing the same threat of increasing Human Wildlife Conflicts.

2. Human Wildlife Conflicts- Its Causes and Impacts

Human Wildlife Conflict (HWC) refers to struggles that arise when the presence or behaviour of wildlife poses actual or perceived direct, recurring threats to human interest or needs, often leading to disagreements between group of people and negative impacts on people and/or wildlife.¹This can include issues such as crop damage by wild animals, livestock predation, human injury or death caused by wild animals, and harm to wild animals including endangered species. Human Wildlife Conflicts in its core is the interaction which occurs directly or perceived interaction between humans and wildlife which creates disagreements between interested persons. Incidents like crop raiding by elephants leading to poisoning and electrocution of elephants by farmers or loss of livestock to predatory animals like lions and tigers, accidental loss of life of humans in the hands of wild animals are all brought under the canopy of Human Animal Conflicts². Illegal poaching of animals, hitting of animals by vehicles, aggression shown by people to animals are also considered as conflict. Understanding the concept and reasons of these conflicts are to be done in a balanced manner taking

¹ International Union for Conservation of Nature, *IUCN SSC Guidelines on Human-Wildlife Conflict and Coexistence* (1st edn, IUCN 2023).

² Gross E, Jayasinghe N, Brooks A, Polet G, Wadhwa R and Hilderink-Koopmans F, *A Future for All: The Needs for Human-Wildlife Coexistence* (WWF 2021).

consideration of the interest of the vulnerable groups³.

2.1 Causes of Human Wildlife Conflicts

The reasons for Human Wildlife Conflicts differ from region to region but the impact and perception remains throughout the world as a challenge to the conservation practices. Climate change poses as a great threat for animals and their habitat thereby increasing human animal conflicts. No serious studies were done on this factor but it is considered that climate change is an amplifier for increasing conflicts between humans and animals. Climate change is reshaping the environment all over the globe affecting the lives of both humans and other species. Increasing drought, water scarcity, loss of vegetation affects the life of wild animals and they seek resources which are available to them outside the forest area⁴. Similarly, the drastic changes in climate lead to changes in the cropping pattern and land use methods.

There arises the conflict for the resources and the animals drive towards the farmlands for food due to its scarcity in the wild. This competition had altered the behaviour of both humans and animals and is a reason for increasing human animal conflicts. For example, elephants need lots of water and its scarcity in the forest due to severe droughts causes the animals to migrate to areas where water is available which maybe sometimes near human settlements. This affects the life of those people who live in the fringes of forest and creates conflicting situations. Climate change had also affected the seasons which in fact lead to changes in the migratory pattern of species and sudden encounters between these species and humans leads to conflicts. The International Union for Conservation of Nature (IUCN) threat classification system identifies 'climate change and altering weather conditions' among 12 categories of threats.⁵

Habitat loss, fragmentation and destruction affect the wildlife distribution in the world and are a major driving force behind the increasing HWC⁶. Habitat loss refers to disappearance of its natural habitat and this loss maybe due to fragmentation, destruction and degradation of the habitat of the animals. Fragmentation occurs when due to human development and interventions in the forest habitat. This led to splitting up of wild areas and it will be converted to small patches. This restricts the movement of animals and their ranges, which places them

³ IUCN (n 1)

⁴ Tobias Thornes, 'Animals and Climate Change' (2016) 6(1) *Journal of Animal Ethics* 81-88

⁵ IUCN Red List of Threatened Species <http://www.iucnredlist.org> accessed 20 December 2024.

⁶ Joseph M Mukeka, Joseph O Ogutu, Erustus Kanga and Eivin Røskoft, 'Spatial and Temporal Dynamics of Human–Wildlife Conflicts in the Kenya Greater Tsavo Ecosystem' (2020) 14(2) *Human-Wildlife Interactions* 255-272

at higher risk of extinction. This will also lead to separate animal population and reduces genetic diversity.

Wide scale deforestation for infrastructure development and hydroelectric projects had been taking place and this reduced the available habitat for the animals. Unavailability and destruction of their habitat forced the wild animals to seek refuge in the human habited areas and this led to conflicts leading to loss of property and livelihood of humans. This made humans retaliate to protect their interest which led to the loss of wildlife in general. This is a continuing phenomenon all over the world. It was reported that since 1990, it is estimated that 420 million hectares of forest have been lost through conversion to other land uses, although the rate of deforestation have decreased over the last three decades. Between 2015 and 2020, the rate of deforestation was estimated at 10 million hectares of land per year, down from 16 hectares per year. The area of primary forest cover had decreased by over 80 million hectares since 1990⁷. Destruction of forest habitat for illegal mining, tourism development, plantations add to the misery. In many places the interiors of forest which are to be protected are cleared and are used for illegal opium plantations⁸. Cutting and clearing of fruit bearing trees and grasslands and planting trees of economic value affects the availability of food and water to the animals. Scarcity of resources leads to competition for available resources between humans and wildlife. Pollution of water sources in the forest area due to use of mechanized boats used for tourism and industrial units makes the availability of water scarce for animals⁹. In many developing nations, large amount of waste is dumped on the fringes or in the interior pockets of forests by people, which includes plastic and food waste. The animals consume these waste materials which affect their health and alter their food structure. All these add fuel to the already existing HWC in these areas.

2.2 Impacts Of Human Wildlife Conflicts

The impact of human animal conflict is multifarious. Its effect can be seen in wildlife and its ecosystem, on local communities, economy and business and the sustainable development goals. The rising rate of human wildlife conflicts (HWC) affects the wildlife species and their

⁷ Food and Agricultural Organization (FAO), *State of Forest Report 2020* <http://www.fao.org.in> accessed 17 December 2024.

⁸ International Fund for Animal Welfare (IFAW), *Deforestation and Wildlife: Causes and Effects*, <https://www.ifaw.org.in> last assessed on 20 December 2024

⁹ Upma Manral, Shruti Sengupta, Syed Ainul Hussain, Sakshi Rana and Ruchi Badola, 'Human Wildlife Conflict in India: A Review of Economic Implication of Loss and Preventive Measures' *Indian Forester* (ISSN No. 2321-094X).

ecosystem in adverse manner. The destruction of forest habitat makes the survival of species difficult. These conflicts result in retaliation by people against wild animals in self-defence. These may cause extinction of certain species in the wild¹⁰.

The absence of anyone specie from an area affects the whole ecosystem negatively as each species have a particular role to play in the habitat. If the top predator animals like lion or tigers were killed, then it affects the prey predator relationship in the ecosystem. The number of herbivores or prey species increases and it will affect the whole ecosystem as well as the humans. Intensive grazing by these animals affects the forest ecosystem and in the absence of rejuvenation of the grasslands, these animals turn to the agricultural lands and it affects the livelihood of humans. In most conflicting situations, the focus is mainly on protected species while general species are neglected even when they create damages. It mainly attributes to the availability of compensation for the loss caused by these protected species.

A major setback of HWC is that in the veil of these conflicts, illegal poaching and trade of wildlife sustains well in the society. The killing of animals in self-defence and for poaching cannot be differentiated in most of the situations and this leads to dwindling of animals in wild habitats¹¹. The Elephants causes crop damages in the area due to loss of habitat and the locals affected by human-elephant conflicts gave information of the presence of elephants in the area to the local poachers. The poachers kill these gentle giants for their tusks and skin.¹² These criminal acts are done in the name of self-defence but actually points towards wildlife crimes. The main impact of HWC is on the local communities who lives in or on the fringes of these protected areas or on wildlife corridors. Most of the people in these areas are depended on livelihood based on agriculture or collection of forest produce. The direct impact on communities is the loss of life of people and livestock. The predatory animals prey on the livestock of these people causing loss to the persons. Herbivores graze on the crops of farmers and causes crop damage. In Asian Countries like India, elephants which move in herds tramples down the houses and vehicles in their path while raiding these villages. In many cases people loss their life due to these attacks. Presence of man-eating carnivores like tigers kills people in numbers which is increasing. In India as per the report from the Ministry of Environment,

¹⁰ Shaurabh Anand and Sindhu Radhakrishna, 'Investigating Trends in Human Wildlife Conflict: Is Conflict Escalation Real or Imagined?' (2017) 10(2) *Journal of Asia Pacific Biodiversity* 154-161.

¹¹ Zyambo P, Zyambo P, Kalaba F, Nyirenda V and Mwitwa J, 'Conceptualising Drivers of Illegal Hunting by Local Hunters Living in or Adjacent to African Protected Areas: A Scoping Review' (2022) 14(18) *Sustainability* 11204.

¹² Gross E (n 2)

Forest and Climate Change (MoEFCC) states that 500 elephants were killed between 2014-15 and 2018-2019 due to human animal conflicts while nearly 2,361 people were killed due to human elephant conflicts, which shows the extend of concerning matter¹³.

3. Human Wildlife Conflicts in Kerala

Human Wildlife Conflicts in India is a matter of great concern in the last decade. The number of cases reported in India regarding these conflicts is rising tremendously. It may vary from place to place and its intensity varies for different communities. In India, HWC is a highly politicized topic and had created various responses from the society. The ever-increasing population of the country, demand for land for expansion of agriculture and industries, mining all add to the reasons of these conflicts. The conflicts are not attributed to a single animal but to a large number of species varying from elephants and wild cats to bats and birds.

As per the data given by the Ministry of Environment and Climate Change of India, nearly 2,950 people were killed by elephants and tigers in India since 2018. It was elephant attacks which claimed most of the lives in 2022 that is 605 deaths. 148 deaths alone were reported from the state of Odisha on elephant deaths. The death rate due to tiger attacks also increased from 59 in 2021 to 103 in 2022. The highest number of deaths from tiger attack was reported from Maharashtra that is 85.¹⁴ Between 2018-19 and 2020-21, nearly 222 elephants were killed by electrocution across the country, 45 by trains, 29 by poachers and 11 by poisoning. Similarly, 29 tigers were killed by poachers while 197 deaths are under scrutiny.¹⁵ The main reasons for these conflicts are habitat loss and degradation, climate change and food scarcity. Other reasons like human settlements in wildlife corridors, expansion of agricultural lands, land acquisition for infrastructure and tourism developments aggravated the already sensitive situation in India.

While considering the case of HWC in Western Ghats States especially in Kerala, the scenario is not so different from the above-mentioned statistics. The number of HWC reported in Kerala shows increasing trends. The total forest area of the state accounts to 11524.149 sq.km which amounts to 29.65% of the total land area of the state. The State of Kerala has 14 Wild Life Sanctuaries (WLS), 6 National Parks (NP), 2 Biosphere Reserves (BR) and 2 Tiger Reserves

¹³ *Down to Earth*, <http://www.downtoearth.org.in> accessed 23 December 2024.

¹⁴ Tribune India, 'Nation' (last visited 22 July 2024) <http://www.tribuneindia.co/news/nation> .

¹⁵ The Indian Express (last visited 29 July 2024) <http://indianexpress.com>

(TR).¹⁶ The Human Wildlife Conflicts (HWC) is common along the fringes of these forest areas in the state. According to Government of the State nearly 730 tribal settlements are there in the fringes of these forests and a lot more people live inside the forest. They are mostly affected by HWC. The Forest Department under the Government of Kerala had identified certain areas within the forest divisions of the State as conflict prone areas in concern with the Human wildlife conflicts as shown in Fig 3.1.¹⁷

In the recent decade, the nature of Human Wildlife Conflicts in Kerala had become a topic of great discussion as well as political conflicts. The ever-increasing number of such incidents in the State points towards certain unidentified and unresolved issues in the conservation practises. The study conducted by the Forest Department of the State of Kerala identified nearly 273 panchayats of the State to be conflict zones where 30 are identified as areas of severe conflicts.¹⁸ The forest department of the State of Kerala states that the number of casualties due to human wildlife interactions in the year 2024 amounts to nearly 22 deaths and several fatal casualties¹⁹. The Union Ministry of Environment and Forests stated in the Parliament about the severity of the conflict situation in Kerala by citing the data- 486 people killed in wildlife attacks in Kerala between 2019 and 2024. The highest number of deaths recorded in Kerala occurred during the period of 2021-22 with a total of 114 deaths, of which nearly 35 was caused by elephant attacks.²⁰

¹⁶ Kerala Forest Report, (last visited 12 December 2024) <http://forests.kerala.gov.in>

¹⁷ Proposal for Management of Human-Wildlife Conflict in Kerala (last visited 12 December 2024) <https://forest.kerala.gov.in>

¹⁸ The Hindu, (last visited on 23 December 2024), <https://www.thehindu.com> , 273 human wildlife conflict zones in Kerala.

¹⁹ Press Information Bureau, *Wild Animal Attacks*, <https://pib.gov.in> accessed 24 December 2024.

²⁰ Government of India, Ministry of Environment, Forest and Climate Change, *Digital Sansad*, <https://sansad.in> accessed 24 December 2024.

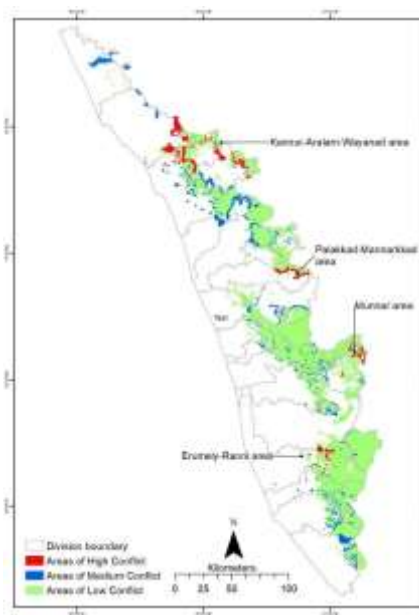


Fig 3.1 Map showing conflict area in the Forest Divisions of Kerala

The impact of human wildlife conflicts is not limited to the human deaths but extends beyond that. The Forest Department of the State of Kerala along with the Kerala Development and Innovation Strategic Council (K- DISC) published a report ‘Safe Habitat Hack- Human Animal Conflict’ which emphasizes the need for coexistence as the need of the hour. The report presents a numerical data on the impact of Human Wildlife Conflicts in Kerala including the number of deaths, causative animals and other damages faced by people due to such Conflicts as shown in Table 3.1.²¹

YEAR	HUMAN DEATHS	CATTLE LOSS, CROP DAMAGE, DEATHS & OTHER DAMAGES	COMPENSATION PAID (Rs Lakhs)
2019-20	102	6063	714.2
2020-21	97	7077	785.6
2021-22	152	7094	1056
2022-23	99	5800	803.1
2023-24	105	4555	161.1
TOTAL	555	30589	3519.90

TABLE 3.1 Human deaths and damage to cattle and crops in Kerala

²¹ Safe Habitat Hack – Human Animal Conflict, Kerala Development and Innovation Strategic Council, 2024

3.1 Empirical Study At 301 Colony, Anayirangal, Chinnakanal, Munnar, Kerala

To understand the extend on the impact of Human Wildlife Conflicts in the daily life of the people, a survey was conducted at 301 Colony, Anayirangal, Chinnakanal, Munnar in the Idukki district of Kerala. The mode of survey was through interview method with pre-determined questions regarding the conflicting situation in the locality. The 301 colony is situated on the hilly forest covered slopes of the Western Ghats. Anayirangal is a place situated in the catchment area of Anayirangal dam constructed on Panniyar river. The forest in the area is part of the shola forest in the State. The forest in the area is the home of Asiatic Elephants, Nilgiri tahr, gaur, langurs, sambar deers and many other endemic flora species. The area is having boundary with Anamudi Shola, Mathikettan Shola, Pampadum Shola, Chinnar Wildlife Sanctuary and the forest area of the State of Tamil Nadu. The Munnar- Chinnakkanal-Shantanpara area is widely known for extensive tea plantations where thousands of plantation workers work for their daily wages. The National Highway 49 known as the Kochi-Dhanushkodi National Highway passes through this tract of land connecting the States of Kerala and Tamil Nadu.

The 301 Colony in the Anayirangal Village of Chinnakanal came into existence as part of the Government Scheme of rehabilitating the 301 tribal family in 2001-02 as a solution for their agitation before the Kerala Secretariat (Kudilketti Samaran). Most of the families left the place and now only 98 families are present in the colony. Among these 98 families, only 40 families are residing in the colony while the others don't reside there but only use the land for cultivation.

The tribal settlement is located in decades old the Elephant Corridor connecting the Chinnar Wildlife Sanctuary in the Idukki district of the State to the Periyar Tiger Reserve in the same district. The settlement of the tribal families in the Elephant corridor led to the fragmentation of habitat and limited the range of animals in that locality. The name of the reservoir itself is 'Anayirangal' which means where the elephants descend. The settlement of the people in the traditional elephant corridor obstructed the path of the animals and it led to conflicts between the people and the animals. This became a common scene for the people of this settlement and for others in the area. The tribal settlement in Anayirangal came into forefront with the mass agitation for the capture of the thirty-five-year-old rogue tusker named "Arikomban" who had a pungent for rice.

While more than 60% of the people who we interviewed had faced wildlife attacks during their life, the intensity and the damage differ from person to person and from family to family. The data is shown graphically in Fig 3.2. The problems they mainly point out is the recurrent raids by the wild elephants, loss of property including the destruction of their house either fully or partly, damages to the crops and loss of life of their family members or severe injuries caused by the attacks. As per the words of the people of 301 Colony, many of people in their colony lost life due to the attack of wild elephants.

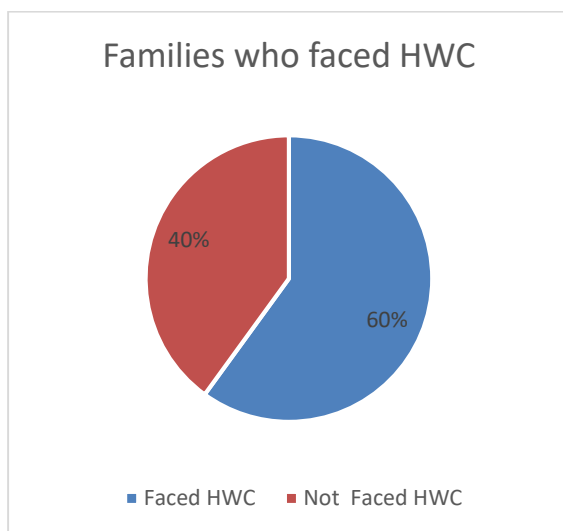


Fig 3.2: Families who faced HWC

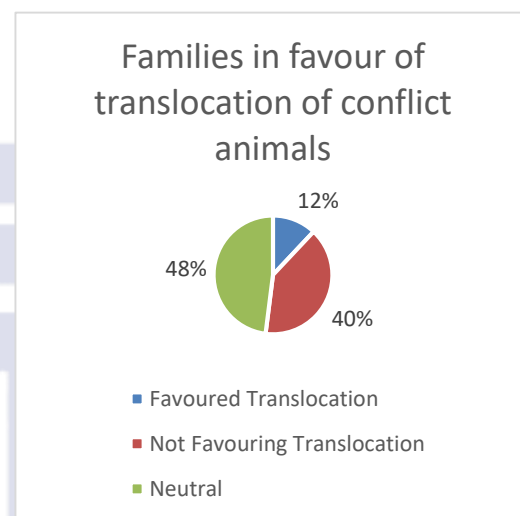


Fig 3.3: Families favouring translocation of Conflict animals

Every person in the Colony is of the view that their hardships due to the elephant attacks will not be removed or decreased by the capturing of one rogue elephant as the area had more than 30 wild elephants roaming either alone or as herds. While a less than 15% of the families took the view that the attacks had reduced after the capturing and translocation of Arikomban but majority held that other elephants are still raiding and destroying their houses and agricultural produces. Fig 3.3 shows the graphical representation of the response of people on translocation of conflict animals from the area.

The main reasons for the recurring conflicts in the area according to the inhabitants of the colony are the passing of the Elephant corridor in the area. On the other hand, unavailability of food in the deep forest, availability of water in the reservoir leads the animals to leave the forest cover. The inhabitants of the 301 Colony points out that the dumping of hotel waste in a pit commonly called “waste kuzhy” in local language attracts the animals to scavenge food from

the waste. According to them this creates a pungent for human food on these animals as this was pointed as a reason for rice loving nature of rogue tusker Arikomban. While a small percentage of the people in the Colony talks about illegal opium plantations in the deep forest as a reason for scarcity of food for elephants, most of the people refused to comment on the same either due to fear or lack of knowledge.

The people in the Colony had got habituated with the presence of wild jumbos in their area but their fear for live still persists. Since the people living in the colony are socially and financially backward their only way of protecting themselves from these attacks is the constant vigilance. They adopt the method of solar fencing, tying up of glass bottles etc to protect their property and to detect the presence of wild animals in the area. Presence of hunting dogs in the Colony also helps in alerting the people about the presence of elephants in the area. The Forest Watchers deployed by the Forest Department of the State is a constant presence in the area and they have a social media group through which they alert the people about the presence of elephants in the locality. Everyone in the colony had the view that the Government has to create long trenches and effective solar fencing to add more protection to their dwellings. Fig 3.4 shows the percentage of families who adopted precautionary measures to protect themselves from human wildlife conflicts.

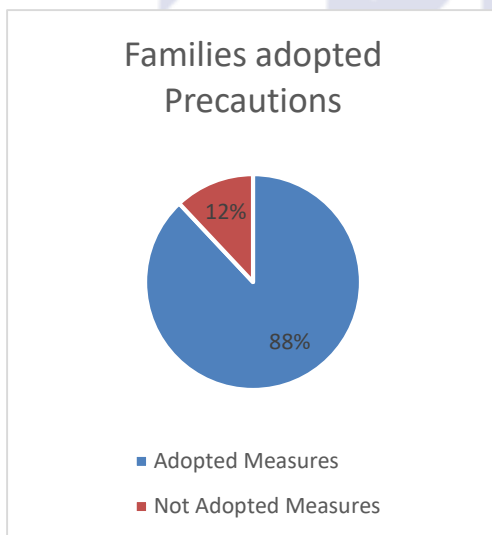


Fig 3.4: Families who adopted precautionary

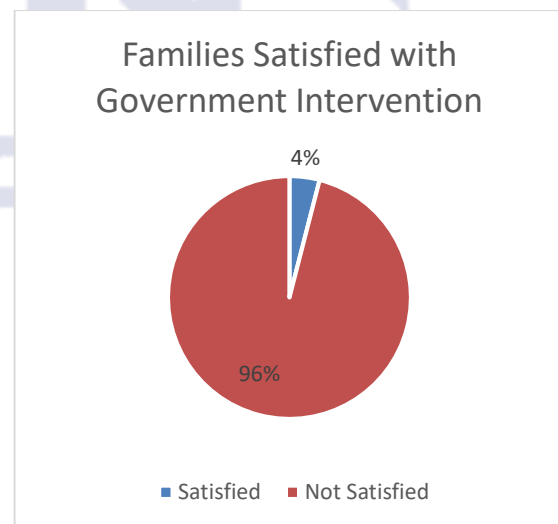


Fig 3.5: Families satisfied with measures Governmental interventions

The first response to any kind of exigencies in the area comes from the Local Self Government authorities in the area. The inhabitants of the colony had the view that the help and other facilities provided by the authorities are inadequate and are not sufficient. Fig 3.5 shows the graphical representation of people's response to different governmental interventions in the face of human wildlife conflicts in the area. The Government disperses compensation as part of the Victim Compensation Scheme to those persons who are affected by these conflicts. But the people of the Colony in majority are of the view that the compensation they receive is inadequate and, in most cases, they don't receive any help. The time taken to receive the compensation for the loss and the procedures are cumbersome for the poor people of the Colony.

The fear of elephant attacks persuaded most of the initial inhabitants to translocate to other safer places. Availability of work and better living conditions also became the reason for this migration. The people of the Colony are in a mixed opinion regarding the idea of translocating to a better and safer place of living. While a percentage of people are willing to translocate to a safer place but the older generation are of the view that they had spent all their life and savings to create a life at this place so they wish to continue their life. Emotional attachment to the land is also a reason for continuing to live in such unsafe conditions. Another reason pointed by the natives for being against translocation is the minimum compensation offered by the Government to them for leaving the land. Fig 3.6 shows the graphical representation of the data regarding the willingness of the people of 301 colony to relocate to better places to lead a peaceful life.

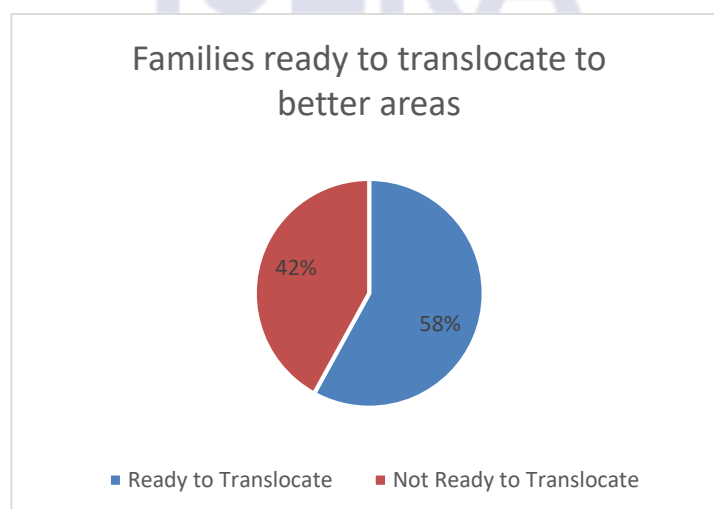


Fig 3.6 Families willingness to relocate to better places

A few of the people in the Colony for about less than 10% is of the opinion that all the animals in the locality should be captured and translocated from the area while the majority had a compassionate view that as the forest is the habitat of those animals, they should be left to live in their own birth place. The tribals of the 301 Colony has the view that the menace of the elephant attacks can be reduced by making available food for the animals in the forest itself. They strongly argue for the conservation of forest from illegal encroachments and other activities. Planting of grasses and fruit bearing trees and making water available to animals will help in preventing the conflicts to an extent. Better protection structures like solar fencing and trenches are also considered as barrier for protecting their life and property.

3.3 Causes and Impacts of Human Wildlife Conflicts in Kerala

The main reasons for the increasing Human Wildlife Conflicts in Kerala are the loss of habitat and habitat fragmentation, expansion of agriculture and plantations, climatic changes, unavailability of food and water for animals, unconventional development activities including tourism and infrastructure developments, invasion of alien species of flora and monoculture²². Climatic changes affect everyone around the world and similar is the case for the animals. Extreme climates make the life of animals in deep forest without food and water difficult and they leave the forest cover in search of food and water which will be easily available in the human settlement areas where agriculture and water sources are available²³.

Increasing population in the State demands more land for settlement and agricultural expansion. The area under cultivation in and around the forest had increased and the crops like sugarcane, plantain and rubber gives food and cover to wild animals. This causes human wildlife conflicts leading to loss of life and damage to crops. For example, vast areas of forest land were converted for agriculture and mass scale plantations in Munnar. The areas which was once forest was changed into plantations of different crops including tea, cardamom and commercial wood trees. The loss of the natural habitat forces the animals to seek refuge in the available area and they mass pass through the area. The plantation workers who live in groups of small settlements in the nearby or inside the plantation face the wrath of animals who passes through the area. Most of the destruction of houses and shops occurred in such settlement areas causing loss of life as well as property.

²² Daniel Münster and Ursula Münster, 'Human-Animal Conflicts in Kerala: Elephants and Ecological Modernity on the Agrarian Frontier in South India' (2012) 5 RCC Perspectives 41.

²³ Ramakrishnan Korakandy, 'State of the Environment in Kerala: What Price the Development Model?' (2000) 35(21/22) Economic and Political Weekly 1801.

Invasion of alien species of plants and weeds like *Senna spectabilis*, *Lantana camara*, *Mikania micrantha* into the forest ecosystem had destroyed the habitats of elephants, tigers, deer and gaurs by pushing out the natural flora. A report submitted to the forest officials of the State says that the invasive species are spread around 17,483 hectare of forest land in the State.²⁴ This accelerates the degradation of the natural habitat and habitat fragmentation. Loss of habitat and lack of food in their natural habitat pushes the animals to seek in the areas where it is available which lead to human wildlife interactions²⁵.

With the increasing HWC in Kerala, one of the main reasons pointed out by people was the increase in the number of animals in the wild due to strict conservation measures adopted by the State. Social conflicts between the interest groups even lead to the argument for policies which give permission for culling the excessive animals or the conflict animals in the affected areas. But the recent survey reports based on the census in the Wayanad Wildlife Sanctuary states that the number of wild tigers has decreased to 58% and Wayanad Sanctuary had only 84 tigers left which were 120 in 2018²⁶. Similarly, there is a sharp decline in the number of wild elephants also. As per the enumeration done in 2017-18, Kerala had 5,706 wild elephants but the population declined to 2,306 in 2023. A statewide enumeration done by the Forest Officials of the State points out that the wild elephant population has decreased by 58.19% in Kerala in the last five years²⁷. Even though the reason stated to this decrease in numbers was due to migration of animals due to unfavourable climatic conditions in Kerala, the study is an eye-opener for the authorities to look into the matter with great concern.

Another important factor that can be seen in the forests of Kerala is the monoculture of exotic species like eucalyptus, acacia, teak, wattle, mangium in vast hectares of land by clearing forest area had led to the loss of natural habitat, food and fodder for animals²⁸. As time changes the tolerance level of new generations to the animals also had reduced to the older generations which they attained through traditional practices. Coexistence between animals and humans are rejected and conflict arises due to competition and vested interests on resources²⁹.

²⁴ Kerala Forest Research Institute, Are Invasive Species a Threat to Forests of Kerala <http://docs.kfri.res.in> accessed 24 December 2024.

²⁵ Wildlife Institute of India, *Management of Human-Wildlife Interactions and Invasive Species in India* (2015).

²⁶ Kerala Forest Report 2022 <http://forests.kerala.gov.in> accessed 27 December 2024

²⁷ Ibid 26

²⁸ Safe n(21)

²⁹ Kerala Forest Department, Proposal for Management of Human-Animal Conflicts in Kerala <https://forest.kerala.gov.in> accessed 25 December 2024.

The intensity of conflict and the effects of it vary in different parts of the state. The animals which cause these conflicts include mainly wild elephants, wild cats including tigers, leopards, dogs, monkeys, peafowl, wild boars and buffaloes. Snake bites are also reported in great numbers in the State³⁰. Leopards and tigers are wild cats belonging to genus *panthera*. They both are included IUCN Red List as vulnerable and endangered species respectively³¹. Destruction of habitat affects the prey-predator relationship and unavailability in prey leads these animals to easily available livestock in the near areas. This affects the life of humans who depend on these livestock for their livelihood and in some cases retaliation by humans causes loss of life for these animals also³². The capturing of the man-eating tiger from Sulthanbathery in the Wayanad District of Kerala in the starting of 2023 after its attack and his death due to cardiac arrest received public outcry for better mitigation plans in the State³³.

In case of Elephants which are considered as gentle giants in forests are herbivores and depends on grasslands for their food. Loss of these grasslands and scarcity of water in the interiors of forest causes elephants to migrate to the available resource areas³⁴. Kerala is one of the states in India having rich population of Asian Elephants which is included as endangered species in the IUCN Red List³⁵. The conflict between humans and wild elephants are reported daily in Kerala and is a topic of great sensitivity. Mass protests and conflicts for the mitigation and curbing of the attacks of wild elephants in Kerala had drawn attention worldwide. Capturing of the wild bull elephants PT7 (Palakkad Tusker 7), PM2 (Pandalur Makhna 2) and their translocation got wide media coverage in Kerala³⁶. Mission Arikomban at Chinnakanal region of Munnar in the Idukki District of Kerala created great controversy in the State which led to the intervention of the High Court of Kerala and the Supreme Court of India. Chemical tranquilization and translocation of these rogue elephants either to another natural habitat or to a protected enclosure does not seem to be the final solution of the increasing HWC in Kerala³⁷.

³⁰ The New Indian Express, 'Kerala Faces Rising Snake Bite Threat, Demand Grows for Viper Anti-Venom' <https://www.newindianexpress.com> accessed 24 December 2024

³¹ International Union for Conservation of Nature Red List of Threatened Species, <https://www.iucnredlist.org> accessed 24 December 2024.

³² Elavuthungul Antony Jayson, *Assessment of Human-Wildlife Conflict and Mitigation Measures in Northern Kerala* (2016) ResearchGate.

³³ Prowling tiger caught in trap in Wayanad' *The Hindu* (23 December 2024) <https://www.thehindu.com> accessed 23 December 2024.

³⁴ Ibid n(32)

³⁵ Ibid n (31)

³⁶ Asha Prakash, 'Kerala needs long-term plans, not quick fixes, for human-elephant conflict' *Mongabay India* (14 July 2023) <https://www.indiamongabay.com> accessed 24 December 2024

³⁷ Meryl Sebastian, 'Arikomban: The painful story of India's rice-loving elephant' *BBC* (12 December 2024) <https://www.bbc.com> accessed 24 December 2024.

Loss of habitat and lack of food is considered as the main reason for these animals to wander in settlements³⁸. The main issue related to the increasing Human Wildlife Conflict as identified in 301 Colony is habitat loss and fragmentation is an example for the impact of habitat destruction leading to human wildlife conflicts in Kerala. The settlement of families in the decades old Elephant Corridor connecting the Chinnar Wildlife Sanctuary in Idukki with the Periyar Tiger Reserve passes through the Chinnakanal area led to the fragmentation of habitat for the wild animals. When the settlement came into existence and the construction of houses and the expansion of agriculture in the area effectively caused habitat destruction of the animals.

Property loss caused by HWC is also of great importance as it creates instability in the life of affected person³⁹. Most of the loss created is attributed to elephants and wild boars. Crop damage affects farmers in many ways such as loss of livelihood and financial instability. Elephants, wild boars, monkeys and other animals cause crop damage to a great extent. A total sum of all these impacts will be so high every year such that it affects the society in a number of ways. The amounts spend by the Government as victim compensation is also in rise, which impact the public expenditure and the amount available for other constructive developmental activities. The real-life experience of the affected people of HWC also indicates towards the same hardships. Loss of life of loved ones leave an emotional impact in the lives of the near ones. Injury imparted due to the conflicts creates long term medical treatments and financial burden on common man.

4. Governmental Policies, Interventions and Judicial Responses to Human Wildlife Conflicts

Governments play a crucial role in addressing human-wildlife conflict (HWC). They implement policies and strategies that aim to mitigate the negative impacts on both human communities and wildlife populations. Thus, they ensure the harmonious coexistence of humans and wild animals. Governments offer a comprehensive framework to tackle human-wildlife conflict (HWC), encompassing a holistic approach that addresses the underlying factors leading to such conflicts⁴⁰. This includes the formulation and management of preventive

³⁸ K A Shaji, 'No food in forests: Lack of food is driving Kerala's wild animals into human settlements' Down to Earth (17 January 2024) <https://www.downtoearth.org.in> accessed 24 December 2024.

³⁹ Safe n(21)

⁴⁰ Mahesh Rangarajan, 'The Politics of Ecology: The Debate on Wildlife and People in India, 1970-95' (1996) 31(35/37) *Economic and Political Weekly* Special Number.

measures to minimize HWC occurrences and mitigate their impact on both human populations and wild animals. This also includes the development of infrastructure such as wildlife corridors, fencing and warning systems to minimize interactions between humans and wildlife. It is attained through a participatory, inclusive, and integrated approach involving key relevant stakeholders and sectors emphasizing the responsible management of natural resources and the protection of ecosystem⁴¹. Furthermore, government also provide compensation programs for communities affected by wildlife damage, incentivizing locals to support conservation efforts rather than resorting to retaliatory measures against wildlife by involving communities in the development of strategies for coexistence and conflict resolution is vital to ensure that solutions are socially acceptable and sustainable⁴².

The protection of wildlife and biodiversity through the recognition of wildlife sanctuaries, biosphere reserves, reserve forests, national parks and other protected areas plays a vital role in the conservation of biodiversity and preventing the encroachment and other illegal activities in forest area. the enactment of various legislations such as the Wildlife Protection Act 1972 (WLPA), Environmental Protection Act (EPA)1986, Biodiversity Act 2002 acts a framework for protecting the wildlife and conserving the nature. The WLPA 1972 unequivocally prohibits the hunting of all species listed in Schedule I and Schedule II of the act⁴³. Schedule I encompasses species that are critically endangered, while Schedule II comprises other species facing endangerment. The penalty for the offences against wild animals included in schedule 1 or part two of schedule II and hunting or alters the boundaries of national park or sanctuary is minimum imprisonment of 3 years which may extent to 7 years and a minimum fine of Rupees 10,000⁴⁴.

The Act also lays down directions for activities within sanctuary to ensure the conservation of wildlife and their habitats. These regulations may include restrictions on hunting, grazing, logging, and any other activities that could harm wildlife or their habitats⁴⁵. Through the provisions of the Act, it permits designation of specific zones as closed areas within wildlife sanctuaries, where human actions are limited to safeguard delicate habitats. It gives particular

⁴¹ Adrian Treves, R B Wallace, and S White, 'Participatory Planning of Interventions to Mitigate Human-Wildlife Conflicts' (2009) 23(6) *Conservation Biology* 1577-1587.

⁴² McKenzie F Johnson, Krithi K Karanth, and Erika Weintal, 'Compensation as a Policy for Mitigating Human-wildlife Conflict Around Four Protected Areas in Rajasthan, India' (2018) 16(3) *Conservation & Society* 305-319

⁴³ The Wild Life (Protection) Act, § 9, No. 53, Acts of Parliament, 1972 (India).

⁴⁴ The Wild Life (Protection) Act, § 51, No.53, Acts of Parliament, 1972 (India)

⁴⁵ The Wild Life (Protection) Act, § 2(17), No. 53, Acts of Parliament, 1972 (India)

significance for endangered species that necessitate specific environments for their sustenance and reproductive processes.

The EPA introduces the Environmental Impact Assessment process, which is designed to evaluate the potential environmental impacts of developmental projects before their approval and implementation. The objective is to ensure that developmental activities do not harm the environment and that adequate mitigation measures are in place to minimize adverse effects.⁴⁶

The presence of a specialized team led by well-trained experts, equipped to manage conflict situations, provides people with a sense of security. It is through the perceptible presence of humans that the protection is ensured. The State has established around thirteen RRTs in diverse locations⁴⁷. Jana Jagratha Samithis, composed of elected officials, representatives from the farming community, and Forest Range Officers, are established and operate at the Panchayath level. Efforts have been made to create ward-level Samithis to address localized concerns⁴⁸. These Samithis have demonstrated effectiveness due to their comprehensive discussions of conflict related matters, resulting in proposed solutions. Physical measures like solar fencing, physical fencing, trenches, bio fencing helps in reducing human wildlife interactions. The maintenance of these preventive structures by different departments of Government along with the Local Self Government Institutions plays a crucial role in mitigating human wildlife conflicts in Kerala⁴⁹.

A significant but frequently overlooked approach to minimizing harm to both humans and wildlife involves the state providing suitable and timely compensation to those affected. Research has indicated that distributing compensation to victims of wildlife conflicts, when coupled with other precautionary measures, has the potential to diminish instances of retaliatory harm inflicted upon wildlife. So, this strategy can contribute to diminishing the lack of tolerance towards wildlife among the communities directly impacted. Insurance schemes and Ex gratia compensation are adopted to help the victims to recover from the financial losses¹⁰⁶. In the 1980s and 1990s, decentralization programs were implemented by the Central Government attributing power to state government to address local issues. Thereby, each state

⁴⁶ Ministry of Environment, Forest and Climate Change, 'Environmental Impact Assessment' <https://moef.gov.in> accessed 24 December 2024

⁴⁷ Kerala Forest Department, *Human Wildlife Interface* <https://forest.kerala.gov.in> accessed 25 December 2024.

⁴⁸ Kerala State Planning Board, *Human Wildlife Conflicts* (Kerala State Planning Board, 2022) <https://spb.kerala.gov.in> accessed 25 December 2024.

⁴⁹ Ibid n(49)

in the country has their own compensation policies.

The Kerala Forest (Compensation to Victims) Rules, 2015 was introduced to give compensation to victims of wildlife-related incidents in the state of Kerala. The rules outline the conditions and procedures for giving compensation damages caused by wildlife. The rules categorize compensation into three main types: crop compensation, property damage compensation, and compensation for personal injury or death caused by wildlife attacks.⁵⁰

If crops are destroyed by wildlife, distressed farmers can claim compensation based on the extent of damage and the type of crop affected. Compensation rates are regulated on the basis of various factors, including the type of crop, stage of growth, and extent of damage. Compensation is provided for damage to property caused by wildlife. This could include damage to houses, livestock shelters, or other structures resulting from wildlife activity. In cases where individuals are killed or injured due to wildlife attacks, compensation is given to the victim or their family members. Forest officials conduct on-site evaluation to verify the claims and determine the extent of damage caused by wildlife. Once the assessment is complete and the claim is confirmed, compensation is disbursed to the affected individuals⁵¹.

The CAMPA Act, also referred to as the Compensatory Afforestation Fund Act, is an Indian legal framework designed to establish effective institutional structures to ensure the swift and transparent utilization of funds released as compensation for the conversion of forest land to non-forest purposes at both the national and regional levels⁵². This mechanism aims to counterbalance the depletion of forested areas and uphold sustainability. In 2001, the Supreme Court of India issued a directive to establish the Compensatory Afforestation Fund and the Compensatory Afforestation Fund Management and Planning Authority (CAMPA). This legislation establishes both the National Compensatory Afforestation Fund within India's Public Account and a State Compensatory Afforestation Fund within the Public Account of each state. The underlying concept is that the degradation of these forested lands necessitates a compensatory effort to restore forests in other areas that are not originally designated as forested⁵³.

⁵⁰ Down To Earth, *The Problem with Kerala's Compensation Rules for Human-Wildlife Conflict* <https://www.downtoearth.org.in> accessed 24 December 2024.

⁵¹ Kerala Compensation Rules (1996) Rule 4.

⁵² National CAMPA (Acts, Rules and Rules) (Parivesh, n.d.) <https://parivesh.nic.in> accessed 21 December 2024.

⁵³ Mongabay, *Compensatory Afforestation Unlikely to Make Up for the Loss of Carbon Stocks*, <https://india.mongabay.com>

India's National Human- Wildlife Conflict Mitigation Strategy and Action Plan (HWC-NAP) and its accompanying four supplementary frameworks were officially unveiled by the Ministry of Environment, Forest, and Climate Change in 2021⁵⁴. The development of the HWC-NAP and these supplementary frameworks has been a collaborative effort between the Environmental Ministry, GIZ (Deutsche Gesellschaft für Internationale Zusammenarbeit), and the Wildlife Institute of India (WII), made possible through the Indo-German Technical Cooperation Project focused on Human-Wildlife Conflict Mitigation in India. The formulation of the HWC-NAP has adhered to a comprehensive and inclusive process that spanned four years. HWC-NAP aims to initiate and pilot test strategies, plans, and guidelines for mitigating human-wildlife conflicts through a participatory approach that involves all relevant sectors and stakeholders.

The HWC-NAP is organized around five key strategic priorities: tackling the underlying causes, lessening the immediate stresses, enhancing data and insights for informed choices and swift action, minimizing the effects on both humans and wildlife, and fortifying the institutional and financial frameworks to ensure successful execution and these focal points are augmented by 24 strategic objectives, 88 targeted outcomes and accomplishments (spanning outcomes and outputs), and 56 indicators meticulously crafted to gauge advancement across various stages (ranging from processes and outputs to impacts)⁵⁵. Considering the broader landscape is crucial when devising strategies to mitigate human-wildlife conflicts, especially for species that cover extensive territories, holistic and integrated plans for mitigating human-wildlife conflicts are applied across multiple forest divisions within the landscape. Otherwise the issue may simply relocate from one area to another. A participatory approach will be employed to collaboratively plan, develop, and execute measures to mitigate human-wildlife conflicts. This approach ensures that the perspectives and input of stakeholders are thoroughly incorporated into the design and execution of these mitigation measures. The primary emphasis will be on addressing the skill and knowledge development requirements of key stakeholders⁵⁶.

⁵⁴ *National Human-Wildlife Conflict Mitigation Strategy and Action Plan of 2021-2026* (Ministry of Environment, Forest, and Climate Change, 2021)

⁵⁵ *National Human-Wildlife Conflict Mitigation Strategy and Action Plan of 2021-2026* (Ministry of Environment, Forest, and Climate Change, 2021)

⁵⁶ *Ibid* n (55)

5. Judicial Responses to Rising Human Wildlife Conflicts

The Supreme Court of India and the High Courts of the States are the constitutional courts in the country. They interpret the provisions of the Constitution when there arises any ambiguity regarding any of the statutes and regulations made by either the Union Government or the State Governments is challenged before them. Article 32 and Article 226 of the Constitution of India give the Courts the power of judicial review. With the increasing Human Wildlife Conflicts in different parts of India, the need for protecting the life of people as well the protection of wildlife was emphasized by the courts in different cases. The Supreme Court while interpreting the Article 21 of the Constitution in *Rural Litigation and Entitlement Kendra v. State of Uttar Pradesh*⁵⁷ and later in *Subhash Kumar v. State of Bihar*⁵⁸ held that life in Article 21 includes environmental protection. Healthy and wholesome environment is essential for the better life of the people. Article 48 A and Article 51 (1)(g) of the Constitution of India give importance to protection of environment and wildlife.

One of the main reasons for the rising HWC is the habitat loss for the animals. Encroachment of forest and wildlife corridors affects the life of animals in the forest and in the unavailability of space and restricted movement, the animals come in conflict with the humans. This issue was considered by the Supreme Court in the I.A Nos. 1433 and 1477 of 2005 in the case *T.N Godavarman Thirumulpad v. Union of India & others*⁵⁹. In this case the protection of Asiatic Wild Buffaloes and their habitat in the Western and Eastern ghats came into the purview of the court especially in the Udanti Wildlife Sanctuary in Chhattisgarh, India. The Court held that it is the duty of the State to protect and conserve the wildlife and its habitat. The Court took the view that with the increasing Human Wildlife Conflicts, it is a threat to the survival of many endangered species like wild buffalo, elephant, tigers etc and this has broadened the environmental impacts on the ecosystem equilibrium. Here the Court pointed out that the HWC occurs mostly because the humans encroach the habitat of wildlife not vice versa and human rights approach on conflicts should change from anthropogenic to ecocentric concept.

In the case, *Hospitality Association of Mudumalai v. In Defense of Environment and animals and others*⁶⁰, the restoration of elephant corridors in Sigur plateau of Nilgiris district of Tamil

⁵⁷1985 AIR 652, 1985 SCR(3)169

⁵⁸ 1991 AIR 420, 1991 SCR(1) 5

⁵⁹ (1997) 2 SCC 267

⁶⁰ 2020 SCC 10 589

Nadu was challenged on various grounds. The Court in this case held that elephants are keystone species as identified by the Wildlife Trust of India because of their nomadic nature, they act as landscape architects by clearing in the forests thus preventing overgrowth of certain species of plants, helps in seed dispersal, their dung provides breeding ground for insects and sustains the food chain for predator animals. So, elephant corridors had to be protected for preserving the nomadic life of the elephants and this will help in preventing extinction of these species.

Recently the issue of the capturing and translocation of the wild rogue tusker Arikomban from Chinnakanal, Munnar from the State of Kerala gained the attention of Judiciary as well as the general public. The Court in *In Re: Bruno (Suo Moto) Public Interest Litigation*⁶¹ prevented the translocation of the elephant to elephant shelter and asked the Government to find a habitat similar to the animal's original habitat. Similarly in *Prerna Singh Bindra & Others v. Union of India & others*⁶², the Supreme Court considered the Human Wildlife Conflicts in the State of West Bengal especially of elephants. The Court heard the case on use of fireballs and spikes against wild elephants to drive away animals and directed the State Forest Department of West Bengal to make effective plans to curb the human animal conflict. The Apex Court in the Interlocutory Application (IA) filed in this case empowered a High-Power Committee to conduct necessary checks concerning the import, transfer, procurement, rescue and rehabilitation of wild elephants including those in captivity in India. The protection of wildlife and its conservation was given utmost importance by our courts. While their rights are protected, the life of humans who are affected by these rising human animal conflict are also to be considered. Loss of life, livelihood, damage to crops and shelters, injury in conflicts are all to be addressed by the concerning authorities. The rights of these interest groups are of prime importance.

The Kerala High Court in *M.T Thomas & Others v. Principal Chief Conservator of Forests, Thiruvananthapuram*⁶³, while considering the matter of spoiling agricultural produces by wild animal attacks held that it is the duty of the State to make remedial measures to prevent straying of wild animals and also suitably compensate the farmers for the damage they faced. One of the problems related to the increasing HWC is the settlement and extensive agricultural

⁶¹ WP.(C).No .13204 of 2021 Kerala High Court

⁶² WP.(C). No. 480 of 2018 Supreme Court

⁶³ WP.(C).No.8442 of 2010, Kerala High Court

practices in and around the forest area. The solution for resolving this issue is to relocate those affected people to other areas by providing compensation for the losses they faced and reimbursement for the relocation to another place. But in most cases the distribution of the funds to the affected people face laxity.

The High Court of Judicature, Madras in *Manoj Immanuel v. Union of India*⁶⁴ held that the Union Government should provide funds by releasing the same to the National Tiger Conservation Authority (NTCA) and to the State Government which is to be distributed among the villagers for relocation from the fringes of the Mudumalai Tiger Reserve in Tamil Nadu. The Court held that the non -availability of fund is not an excuse for not distributing the compensation allowances as it is against the provisions in the Directive Principles of State Policy. The Court held that the animals have the right to live free from fear and distress and ordered the Government to relocate the 495 families in the settlement and to pay each family Rs 15 lakhs each as compensation. The fund is to be found through the Compensatory Afforestation Fund Management and Planning Authority (CAMPA) funds to the NTCA.

6. Challenges in implementing Governmental Policies and Plans in Kerala

It is evident that existing compensation mechanisms, especially in the case of Kerala, are fraught with structural deficiencies, inefficiencies, and bureaucratic complexities. This legislation should aim to streamline the compensation application process, introduce clear evaluation standards, and establish concise timelines for claim processing. By doing so, the state can expedite compensation disbursement, providing much-needed relief to those affected by these conflicts, especially in socio-economically vulnerable circumstances. In analysing this landscape of conservation efforts, it becomes evident that a comprehensive and adaptive approach is required. Adequate funding, enhanced public awareness, and more collaborative efforts are vital to ensure the sustainability of these initiatives. Furthermore, a re-evaluation of the ethical and practical aspects of wildlife management and human-wildlife interactions is imperative.

The Government spends nearly more than 100 million every year to compensate the victims of the Human Wildlife Conflicts reported at different parts of the State. The real question is how much amount is reaching the persons affected and whether the amount is sufficient in

⁶⁴ W.M.P (MD)No.1962 of 2022, order date 08.08.2023, High Court of Judicature, Madras

accordance with the loss they incurred. The compensation to the affected people is not sufficient or at par with the loss that they faced in most of the cases. The procedure for allotting the money after assessing the intensity and quantity of loss is time consuming and the bureaucratic hurdles further aggravate the struggles of the affected persons. The timely disposal of the compensation amount and proper and structured mitigating strategies help in managing the HWC in a more effective manner in the State.

In Kerala, the victim compensation for wildlife attacks is dealt by the Kerala Rules for Compensation to Victims of Attack by Wild Animals, 1980. These rules were amended time to time. The latest Amendment of the rules provides that the total payable compensation for the loss of crops due to attack of wild animals was increased from Rs 50,000 to Rs75,000 and the payment to a particular individual for loss has been restricted to 4 times a year⁶⁵. The Government had increased the victim compensation to the victims of wild animal attacks including the injuries and death. The people injured by wildlife attacks will be compensated upto Rs One lakh while if the victim is from Scheduled categories, then their complete medical expenses during the crisis will be dealt by the Government. An amount of Rs 10 lakhs is given as compensation for the victims in case of mortal fatality⁶⁶.

The need for enhancing these compensation amounts were raised by different stakeholders for a long time. The sufficiency of the amount for the loss incurred is determined in an assessment without a clear standard or rules. There are no clear criteria for the assessment of the loss and the determination of the loss is done by some officers. There are no criteria for determining the value of the cattle loss occurred by HWC⁶⁷. No determination regarding the type, milking capability and age of the cattle is done which affects the determination of the value of the lost property. So, there is no discrete criteria for clear determination of the loss incurred rather than the subjective determination by the officers concerned which is arbitrary in nature. The time consumption regarding the procedures for the release of the compensation had time and again received public ire⁶⁸.

⁶⁵ The Kerala Rules for Compensation to Victims of Attack by Wild Animals Rules (1980), Government Order (GO) No: 02/2015/F&WLD, 8 January 2015

⁶⁶ Kerala G.O n(65)

⁶⁷ Down to Earth n(55)

⁶⁸ The New Indian Express, Human-Wildlife Strife in Kerala Calls for Collective, Qualitative Steps <https://www.newindianexpress.com> accessed 31 December 2024.

As per the Rule 4 of the Compensation Rules in Kerala, the victims need to address the application to different officers including the Divisional Forest Officer, Wardens and other officers regarding the loss they faced. Then these applications will be further forwarded to higher officers for scrutiny. Then one of the officers will conduct an inquiry regarding the same and if they find it necessary to order the release of compensation, then an order for compensation will be passed⁶⁹. In effect there exist a three-tier compensation determination and release criteria in the State which is time consuming and cumbersome for the common man. There does not exist any particular or fixed time frame for redressal of these applications which add misery to the plight of the common man especially persons who depend on agriculture for their living. It will add financial burden and emotional agony to them. Many of the affected families are eluded from receiving the help due to all these problems.

The amount spend by the Government as compensation for victims of HWC and curbing the increasing wildlife conflicts is worth crores of money, the effectiveness of these measures are still a debatable topic. The need for solar fencing and trenches in most areas are been demanded by people, the devising of a more technically effective methods to tackle the increasing HWC in the State is a glaring reality. The public fund that is utilized by the Government for these measures have to be done with proper and effective planning with keeping short term and long-term impacts.

The Indian Judiciary had taken an active role in the protection of environment and recognizing the need for the conservation of plants and wildlife for the future generations. The right for healthy environment as part of Article 21 of the Constitution shows the judicial activist role of the Supreme Court in identifying the need for environmental protection. Identifying and acting on the environmental issues by the judiciary is a way of protecting the basic human rights. But the drawback in the judicial precedents is the restricted approach on the issues of affected people of conflicts of human wildlife interactions. Non issuance of proper guidelines for the implementation of conservation policies and dispensation of compensation to the affected makes the life of people in a negative way. The judicial approach to the question of the right to life available to animals as well as humans in the face of conflicts is not considered as a clear vision of the existing ground situations. The decision of the Courts in the translocation of conflict animals drew criticism from different wakes of life recently. The need for a

⁶⁹The Kerala Rules for Payment of Compensation to Victims of Attack by Wild Animals 1980 (Kerala Forest Department, 1980) <https://forest.kerala.gov.in> accessed 31 December 2024

comprehensive and active role of Judiciary in resolving such conflicts will help the policy makers as well as other stakeholders in reaching a way handling such situations.

7. Ways To Mitigate Human Wildlife Conflicts

A need for better understanding and developing mitigating strategies seems necessary to tackle the issue. Technical advancement and improving and changing the existing laws pave a better way to tackle the increasing Human Wildlife Conflicts. Understanding the reasons for the increasing conflicts and then studying the issues in a scientific manner helps in resolving the conflicting situation in a better manner.

Early Warning Systems (EWS) are crucial tools in mitigating human-animal conflicts by providing timely alerts to communities about the proximity of wildlife. These systems are designed to detect and communicate the movement of animals in and around human settlements, giving people advanced notice and enabling them to take preventive actions⁷⁰. Establishing and strengthening Rapid Response Teams (RRTs) is a critical strategy in mitigating human-animal conflicts. These teams should be specially trained and equipped groups of individuals tasked with responding swiftly and effectively to situations where conflicts arise between humans and wildlife. The Kerala Forest Department had established the scheme of Rapid Response Teams in Kerala and 15 teams are active around Kerala as per the Forest Statistics Report 2021. They should be given better standards in wages and insurance coverage should be made to protect their interests.

Wildlife corridors enable animals to exhibit natural behaviours, such as migration and foraging, without being confined to smaller habitats. Protecting wildlife corridors is a crucial strategy to reduce human-wildlife conflicts while ensuring the safe movement and genetic exchange of wildlife populations. These corridors are essential pathways that connect fragmented habitats, allowing animals to travel between different areas in search of food, mates, and suitable habitats. By safeguarding these corridors, we can promote coexistence between humans and wildlife. The development of infrastructure including roads, power plants, hydroelectric project and tourism facilities should be made in view of minimum ecological impact. Any developmental activities in the forest vicinity should be done with the view of sustainability of the natural resources for the future generations.

⁷⁰ World Bank, Early Warning Systems for Human-Wildlife Conflict, Zoonotic Spillover, and Other Conservation Challenges (April 2024) <https://thedocs.worldbank.org> accessed 31 December 2024.

The concept of coexistence was put forwarded in the IUCN SSC Guidelines for mitigating Human Wildlife Conflicts in the world. The idea of coexistence imparts the foundation and principles to tackle the conflicts and is based on good practice principles⁷¹. Understanding the conflict, its reasons and its impact on the concerned community helps in managing the conflict. The idea of managing a conflict in one case is non-transferable to another and the interest of each stakeholder is to be considered. Involvement of the local community in understanding and tackling the conflict is essential or coexistence. Community participation is the key for coexistence of humans and wildlife⁷².

Scientific research and analysis of the situation pertaining to each area should be done and the mitigation strategies should be adopted in accordance with it. Conducting research and monitoring wildlife behaviour and conflict patterns is a fundamental component of effective human-wildlife conflict management and conservation strategies. This process involves systematic data collection, analysis, and interpretation to gain insights into how wildlife species interact with their environment and human activities.

No states in India including Kerala had passed a specific and detailed victim compensation laws for the people affected by the attacks of wild animals. Laws should be passed regarding victim compensation and it will help the affected parties to overcome their loss in a speedy manner⁷³. Similarly bureaucratic hurdles can be reduced if there exists a specific law for the compensation as in the case of victim compensation in legal cases. Appellate authorities and adjudicatory bodies on the same will also provide the concerned parties to bring forth their grievances in a forum for adjudication. A expert committee or a body should be constituted to revise the terms and amount of compensation to be disbursed to the victims of HWC.

8. Conclusion

Human Wildlife Conflicts (HWC) is the interactions between humans and wild animals which turns negative when the interest of both parties is challenged or disturbed. These conflicts define the type of coexistence that prevails in our nature which affects its stability. The nature's

⁷¹ IUCN n(1)S

⁷² Adrian Treves, R. B. Wallace, S. White, *Participatory Planning of Interventions to Mitigate Human-Wildlife Conflicts* (2009) 23(6) *Conservation Biology* 1577-1587.

⁷³ McKenzie F. Johnson, Krithi K. Karanth, Erika Weinthal, *Compensation as a Policy for Mitigating Human-Wildlife Conflict Around Four Protected Areas in Rajasthan, India* (2018) 16(3) *Conservation & Society* 305-319.

law of the survival of the fittest cannot be attributed here as the survival of one is the elimination of the other. Here the elimination or extinction of any one species will affect the life on Earth in the long run, which was well depicted in many cases. The Earth is facing mass extinctions and loss of biodiversity in the recent times and the need for protection and preservation of existing species is relevant. The life of human beings is so advanced and so is their life expectancy and need for resources. The demands for more resources and development for mankind is putting pressure on Earth and its specie rich biological environment. The conflict for resources among the species is affecting the existence of ecological balance in nature. Human Wildlife Conflicts which are increasing with time shows this competition between the species for their survival. The need for measures to tackle the conflict and ways to mitigate their impact need greater research and policy framework from grass root level. Community involvement and understanding the conflict will provide a ground breaking format to deal with these issues. All the measures should keep in mind the need for sustainability with the importance of coexistence of species as the core of every action.

