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SOCIAL WELFARE ADMINISTRATION AND HUMAN-WILDLIFE CONFLICT: A MICRO-STUDY OF COMPENSATION MECHANISMS IN PUDUR VILLAGE

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ABSTRACT

Pudur, in Kerala's Attappadi Taluk, is a critical interface between forest ecosystems and the Irula and Kurumba tribal communities. While the government has launched various developmental interventions, escalating Human-Wildlife Conflict (HWC) remains a formidable barrier to their success. This research contends that the efficacy of welfare schemes is fundamentally dependent on the human security of beneficiaries. Therefore, mitigating human-animal conflict is not merely an environmental task but a primary Administrative Duty and a foundational requirement for all tribal welfare programs.

This study investigates longitudinal conflict trends in Pudur Panchayat over the last decade, analyzing whether administrative interventions have mitigated or inadvertently escalated the crisis. By evaluating the current state of governance, the research identifies systemic gaps in policy execution and existing mitigation strategies. Furthermore, the study proposes transformative administrative reforms aimed at optimizing the government's response. Ultimately, this research seeks to formulate a comprehensive and sustainable governance model that ensures the coexistence of forest ecosystems and indigenous livelihoods, providing a holistic solution to the administrative challenges of human-animal conflict in tribal regions.

Keywords: Public Administration, Human-Wildlife Conflict, Social Welfare Administration, Pudur Village, Attappadi, Human Security, Tribal Development, Compensation Mechanisms, Policy Implementation.

1. INTRODUCTION

Human-Wildlife Conflict (HWC) has transcended local boundaries to become a critical global discourse. From the savannahs of Africa to the tropical forests of Asia, HWC is escalating daily, posing a significant challenge to the achievement of Sustainable Development Goals (SDGs). In the Indian context, while the Wildlife Protection Act of 1972 and subsequent amendments in 2006 provide a robust legal framework for the conservation of flora and fauna, they often create a complex interface between forest preservation and human habitation. Kerala, celebrated globally as "God's Own Country" for its high forest density and mountainous terrain, faces a unique version of this crisis where high population density meets expanding wildlife corridors.

Within Kerala, the Attappadi Taluk in Palakkad District stands out as a dedicated tribal block. It is the ancestral home of three distinct scheduled tribes that is the Irula, Muduga, and Kurumba. While all three communities interact with the forest, the Kurumba community is classified as a Particularly Vulnerable Tribal Group (PVTG). Is the most severely affected due to their residence in the deep interior forest fringes. While the Irula and Muduga populations face periodic encounters, the Kurumbas endure the maximum brunt of wildlife incursions, creating a disparity in their socio-economic stability.

The Government of Kerala has implemented diverse and successful welfare programs focusing on tribal education, nutrition, and healthcare. However, there exists a significant Administrative Paradox, the escalating HWC acts as a "de-multiplier" of these welfare gains. When wildlife incursions lead to crop destruction, property damage, or loss of life, they directly undermine the agricultural livelihoods and psychological well-being of the beneficiaries. Therefore, this research argues that HWC is not merely an ecological or forestry management issue, it is a fundamental Human Rights and Social Welfare crisis.

Attappadi is administratively divided into three villages that is Agali, Pudur, and Sholayur. This study specifically focuses on Pudur Village as its primary research site. Pudur represents the "Interior Frontier" of the taluk, characterized by a high incidence of human-animal encounters and inhabited predominantly by the Kurumba and Irula tribes. By focusing on Pudur, this research seeks to analyze the localized administrative challenges in delivering distributive justice and safety to the most marginalized sections of the state.

2. STATEMENT OF THE PROBLEM

Despite the constitutional mandate and the proactive implementation of various tribal development programs by the Government of Kerala, a significant "Implementation Gap" exists in the forest-fringe hamlets of Pudur Panchayat. While the State has succeeded in establishing physical infrastructure for education, healthcare, and subsidized housing, these developmental gains are consistently neutralized by the escalating Human-Wildlife Conflict (HWC).

The core of the problem lies in the Administrative Paradox: The State provides social welfare with one hand but fails to provide basic Human Security with the other. For the Irula and Kurumba communities, particularly the Kurumbas residing in interior forest fringes. The constant threat from mega-herbivores and wild boars has created a Climate of Fear. This fear acts as a non-physical barrier, preventing children from attending schools, stopping patients from accessing emergency healthcare at night, and driving farmers into a cycle of permanent debt due to recurring crop destruction.

Furthermore, the existing Compensation Mechanisms are plagued by bureaucratic hurdles, including complex documentation requirements, delayed field inspections, and a lack of localized administrative autonomy. When the Safety Net of the government fails to respond in real-time to an animal incursion,

the tribal population loses faith in the administrative machinery. Therefore, the central problem of this research is that Human-Wildlife Conflict has evolved from an ecological issue into a systemic barrier to Social Welfare Administration. Without a fundamental shift in how the government manages HWC as a Primary Welfare Duty, the tribal communities of Pudur will remain trapped in a cycle of vulnerability, regardless of the number of developmental schemes introduced.

3. RESEARCH OBJECTIVES

The primary aim of this research is to analyze the administrative efficiency of Human-Wildlife Conflict mitigation as a component of tribal welfare in Pudur. The specific objectives are:

1. To analyze the longitudinal trends of Human-Wildlife Conflict in Pudur Panchayat over the last decade (2016–2026) to identify shifting patterns of animal incursions.
2. To evaluate the current state of Government Administration and the efficacy of existing mitigation strategies (such as solar fencing, EPTs, and RRT patrolling) in the Pudur forest section.
3. To examine the socio-economic impact of HWC on the Irula and Kurumba communities, specifically focusing on how conflict undermines the Service Delivery of health and education schemes.
4. To identify systemic gaps and bureaucratic hurdles in the existing compensation mechanisms and administrative response times for tribal victims in Pudur.
5. To propose a transformative and sustainable Governance Model for HWC management that integrates indigenous knowledge with modern administrative reforms to ensure Human Security.

4. REVIEW OF LITERATURE

1. Specific Vulnerabilities and Tribal Livelihoods

The impact of Human-Wildlife Conflict (HWC) is disproportionately felt by women in forest-fringe communities, yet this remains an under-researched area in Kerala's developmental discourse. Ramseena (2023) highlights that women, particularly tribal women who depend on the collection of Non-Timber Forest Produce (NTFP) and livestock rearing, face direct physical threats and severe economic hardships. The study emphasizes that HWC restricts women's mobility, preventing them from gathering firewood and participating in forest conservation programs, which further fuels household poverty. This research aligns with Ramseena's findings but extends the argument into the realm of Social Welfare Administration. While Ramseena identifies the loss of income and health, my research study focuses on specifically evaluates how the Government of Kerala's administrative machinery provides the necessary 'Social Security Systems' and compensation to mitigate these gendered impacts in the Pudur Panchayat.

2. Administrative Strategies in Conflict Mitigation and Compensation

Effective management of Human-Wildlife Conflict (HWC) requires a dual administrative approach involving both proactive and reactive strategies. Somu and Palanisamy (2022) categorize these as pre-conflict mitigation (physical barriers like electrified fencing) and post-conflict mitigation (financial compensation). The authors observe that while compensation programs aim to foster coexistence by offsetting economic losses, they are frequently criticized for being insufficient, complex, and administratively expensive. In the South Asian context, the effectiveness of these schemes is often hindered by delays in payments and a lack of local participation in the planning stages. This research builds upon observations by investigating how administrative hurdles identified by Somu and Palanisamy specifically affect social welfare delivery to the Kurumba and Irula tribes in Pudur Panchayat.

3. Economic Implications and Agricultural Vulnerability in Kerala

The economic repercussions of Human-Wildlife Conflict (HWC) on the agrarian economy of Kerala have been extensively documented in the context of high-conflict zones. Shaharban (2022), in a study conducted in Wayanad District, emphasizes that wildlife incursions result in a 'double burden' for farmers: the direct loss of crop yield and the indirect costs of protective measures. The study reveals that for many small-scale and tribal farmers, the recurring destruction of cash crops and staples leads to severe debt traps and a total withdrawal from agricultural activities. Shaharban's findings highlight a critical failure in the current compensation framework, noting that the financial aid provided by the state often fails to cover even a fraction of the actual market value of the lost produce. My research utilizes Shaharban's economic framework to evaluate whether similar agricultural abandonment is occurring among the Kurumba and Irula communities in Pudur, and how this economic destabilization prevents them from utilizing other government welfare schemes.

4. Patterns of Crop Depredation and Administrative Mitigation in Kerala

A comprehensive understanding of Human-Wildlife Conflict (HWC) in Kerala requires an analysis of specific conflict patterns across its protected areas. Anoop Das and Nair (2012/2014), in their study of the Peechi-Vazhani Wildlife Sanctuary, found that Indian wild pigs and Indian giant squirrels were responsible for nearly 90% of crop depredation, particularly affecting coconut and plantain plantations. The researchers estimated an economic loss of approximately ₹12,642 per hectare, a significant burden for the 56% of the population dependent on agriculture for their livelihood. Crucially, from an administrative perspective, the study revealed that solar electric fences were often ineffective due to mismanagement and lack of maintenance, whereas traditional protective methods proved more reliable. This finding is vital for the present research as it supports the argument that mere physical infrastructure (like fencing) is insufficient without a robust administrative maintenance framework. By comparing the 'mismanagement' observed in Peechi-Vazhani with the current administrative state of Pudur Panchayat, this study seeks to identify if similar maintenance gaps are hindering tribal welfare today.

5. Public Policy Frameworks and Administrative Governance of HWC in Kerala

A critical evaluation of the administrative response to Human-Wildlife Conflict (HWC) requires an analysis of the existing public policy frameworks. Gopakumar et al. (2023) argue that while Kerala has a long history of forest conservation policies, there is a significant 'Policy-Practice Gap' in managing escalating elephant-human encounters. The study highlights that current administrative strategies often prioritize reactive measures (like ex-gratia payments) over proactive, landscape-level governance. The researchers point out that systemic issues such as inadequate compensation amounts, complex procedural delays, and a lack of inter-departmental coordination have led to increased hostility among forest-fringe communities, sometimes resulting in retaliatory animal deaths. My research builds on Gopakumar's policy analysis by investigating how these specific administrative failures in Public Policy directly obstruct the delivery of Social Welfare in the Pudur Panchayat, particularly for the Kurumba and Irula tribes who lack the political agency to navigate such complex bureaucracies.

5. RESEARCH METHODOLOGY

This study employs a qualitative micro-research design to evaluate the administrative efficacy of Human-Wildlife Conflict (HWC) mitigation in Pudur Panchayat, Attappadi. Given the interior forest-fringe nature of the study area, purposive sampling was utilized to select 20 tribal households from the Irula and Kurumba communities who have been directly impacted by wildlife incursions.

Data collection was carried out through triangulation, involving,

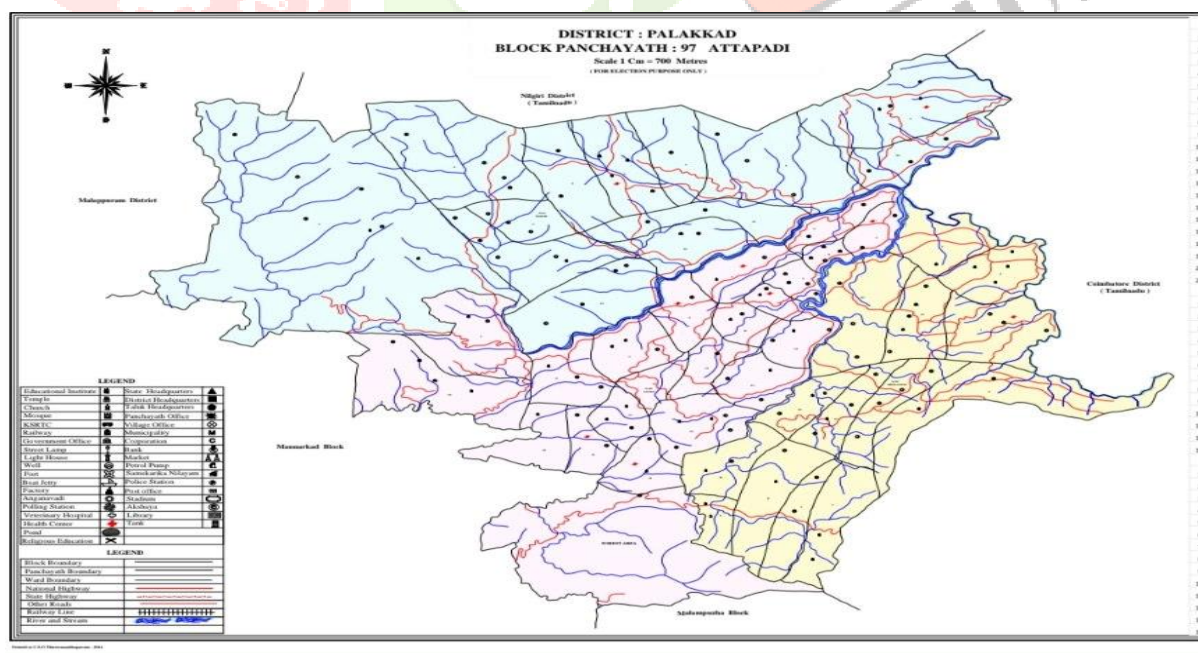
- **Primary Interviews:** A structured interview schedule was administered to tribal residents to assess the 10-year trend of conflict and the socio-economic barriers to accessing government welfare
- **Key Informant Interviews:** Semi-structured interviews were conducted with five administrative stakeholders, including Forest Range Officers and Panchayat representatives, to identify bureaucratic bottlenecks in compensation delivery.
- **Field Observation:** Physical verification of mitigation infrastructure (solar fencing and trenches) was performed to assess maintenance standards.

The collected data was analyzed using thematic content analysis to identify the Implementation Gaps between state welfare policy and ground-level security in Pudur.

6. PROFILE OF THE STUDY AREA

Geographical and Administrative Location

Pudur is one of the three administrative panchayats in the Attappadi Tribal Development Block of Palakkad District, Kerala. Located in the rain-shadow region of the Western Ghats, Pudur is characterized by its hilly terrain and proximity to the Silent Valley National Park and the Mannarkkad Forest Division. Administratively, it is an interior "tribal taluk" frontier, making it one of the most remote governance units in the state.



Map shows Area of Attappadi taluk

Demographic Profile: The Irula and Kurumba Tribes

The study area is primarily inhabited by two distinct scheduled tribes,

- The Irula Community: The largest tribal group in Attappadi, traditionally involved in settled agriculture.
- The Kurumba Community: Classified as a Particularly Vulnerable Tribal Group (PVTG). They reside in the interior hamlets (Oorus) deep within the forest fringes. Due to their location, the Kurumbas in Pudur face the highest frequency of wildlife encounters, impacting their traditional livelihoods like ragi cultivation and Non-Timber Forest Produce (NTFP) collection.



A Small tribal hamlet in Pudhur Village

The Conflict Landscape

Pudur is a high-intensity Conflict Hotspot. The area serves as a vital corridor for the Asian Elephant and is home to wild boars, leopards, and gaurs. The transition from forest to agricultural land in Pudur is often blurred, leading to frequent crop depredation and threats to human life. This geographical reality creates a Service Delivery Challenge for the government, as the physical danger often prevents the smooth implementation of health and education welfare schemes.

7. ANALYSIS AND FINDINGS

The field investigation in Pudur Panchayat revealed a complex and multi-layered conflict landscape. The findings are categorized below to highlight the administrative challenges and the socio-economic impact on the tribal communities.

- Biodiversity of Conflict: A Typology of Threats

Unlike other regions where conflict is limited to a single species, Pudur faces a Spectrum of Threats. The research identifies a wide array of wildlife that directly impacts the Human Security of the Irula and Kurumba tribes. These can be classified into some administrative categories.,

- Mega-Herbivores and Large Mammals: The Asian Elephant and Indian Gaur are the primary drivers of large-scale crop destruction and threats to housing infrastructure.
- Apex Predators and Carnivores: The presence of Tigers, Leopards, Sloth Bears, and Wild Dogs (Dholes) creates a persistent threat to livestock rearing, which is a secondary livelihood for tribal women.
- Daily Conflict Species: Wild Boars and Bonnet Macaques cause chronic, daily agricultural losses that are often under-reported in official statistics.
- Venomous Reptiles: The high prevalence of Pythons and venomous snakes. It including the Spectacled Cobra (Colora), Russell's Viper (Anali), and other Vipers, poses a severe public health challenge, especially during night-time mobility.

Conflict Category	Species Identified	Primary Impact on Community	Administrative/ Policy Challenge
Mega-Herbivores	Asian Elephant, Indian Gaur	Destruction of housing; Large-scale crop raiding.	High cost of physical barriers (fences/trenches) and 24/7 RRT patrolling.
Apex Predators	Tiger, Leopard, Sloth Bear, Wild Dog (Dhole)	Persistent threat to livestock; Risk to human life.	Complexities in proving livestock loss for compensation claims.
Daily Conflict Species	Wild Boar, Bonnet Macaque	Chronic, daily agricultural loss (Ragi, Plantain).	Significant under-reporting in official statistics; perceived as "minor" by state.
Venomous Reptiles	Spectacled Cobra, Russell's Viper, Pythons	Severe public health risk; Restricted night-time mobility.	Lack of anti-venom accessibility in interior hamlets; "invisible" conflict.

The conflict in Pudur is not limited to a single species but is a multi-species crisis. While the state administration focuses heavily on Mega-Herbivores (Elephants) due to their high visibility, the Daily Conflict Species like Wild Boar cause a steady erosion of tribal income that often goes uncompensated. Furthermore, the inclusion of venomous reptiles in this typology highlights a critical Public Health Gap in the forest-fringe administration, where basic mobility is compromised, effectively acting as a barrier to the successful delivery of other social welfare services.



Conflict animals in pudur village

Analysis of Factors Driving Conflict Escalation (2016–2026)

The research identifies a significant increase in the frequency and intensity of Human-Wildlife Conflict (HWC) in Pudur over the last decade. The following factors are identified as the primary drivers of this 10-year escalation.

Ecological & Climatic Shifts

- **Climate Change & Water Scarcity:** Over the last 10 years, changing rainfall patterns in the rain-shadow region of Attappadi have led to the drying up of natural water holes deep inside the forest. This forces animals, especially elephants and gaurs, to move toward human settlements in search of water.
- **Forest Fires:** Increased frequency of summer forest fires has destroyed large patches of natural fodder, pushing herbivores into the greener agricultural lands of the Irula and Kurumba tribes.

Behavioural Changes in Wildlife

- **Aggression Cycle:** A critical finding from forest officers is the change in animal psychology. The consistent use of high-decibel firecrackers and amplifier speakers by residents has caused auditory stress to elephants. This has resulted in animals becoming more aggressive and prone to retaliatory attacks rather than retreating.
- **Habituation to Human Crops:** Animals have developed a preference for high-energy human food (like Ragi, Plantain, and Coconut) over forest fodder. Once a herd becomes habituated to these crops, the conflict becomes chronic.

Administrative & Structural Gaps

- **Habitat Fragmentation:** Linear infrastructure development (roads and fences) has blocked traditional elephant corridors. When an animal's path is blocked by an Administrative Barrier, it is forced to divert through tribal hamlets.
- **The Maintenance Lag:** While the government installed solar fences and trenches years ago, a lack of consistent budget for maintenance has rendered these barriers ineffective. This failed infrastructure gives a false sense of security while allowing animals easy access to farms.

Existing Governmental Mitigation Strategies

The Government of Kerala, through the Forest Department and the local Panchayat, has implemented a multi-tier strategy to manage Human-Wildlife Conflict (HWC) in Pudur. These strategies are broadly categorized into Structural, Operational, and financial interventions.

Structural Interventions (Physical Barriers)

To prevent the entry of mega-herbivores into tribal hamlets, the following infrastructure has been established.

- **Solar Powered Fencing:** High-voltage (non-lethal) pulse fences are the primary defense for many hamlets in Pudur.

Operational Interventions (Response Systems)

- **Rapid Response Team (RRT):** A specialized wing of the Forest Department equipped with vehicles and deterrents to drive animals back to the forest. In Pudur, they start active patrolling after 6:00 PM.
- **Primary Response Team (PRT):** An innovative community-based model where local tribal youth are recruited as volunteers. They act as the First Responders to alert the department and monitor animal movement.
- **SMS/Alert Systems:** Integration of technology to send bulk SMS alerts through what's app to farmers when elephant herds are spotted near a specific *Ooru* (hamlet).

Financial Interventions (Relief Measures)

- Ex-gratia/Compensation: Financial assistance provided for crop loss, property damage, livestock loss, and human injury/death.
- Compassionate Employment: In cases of human fatality due to elephant attacks, the government provides a job to a dependent family member and a compensation of ₹15 Lakhs.

Evaluating the State's Response: The Decadal Mission Framework

1. Mission FFW/Mission Food, Fodder and water

The project aims to ensure food and water availability for wild animals within the forest. This can be achieved by increasing the storage capacity of ponds, check dams, and other water reservoirs in forest areas, eliminating invasive plants like Senna, and promoting the growth of indigenous fruit trees.

2. Mission Tribal Knowledge

There are many traditional practices and knowledge adopted by the tribal communities of Kerala to reduce human-wildlife conflict. A good part of these are unique and unknown to the outside world. The aim is to collect these practices, conduct scientific studies on their effectiveness, and then implement a project called Gotrabheri or Mission Tribal Knowledge in collaboration with the Kerala Forest Research Centre to use and disseminate them creatively.

3. Mission Solar fencing

Solar fences are an effective way to prevent wild animals from entering human settlements. The Forest Department is undertaking a massive programme to repair and make operational all the solar fences installed so far. 848 km of solar fences that were already inoperative have been made operational under Mission Fencing 2024.

4. Mission Primary Response Team

The project aims to form PRTs by including volunteers from the local population to initiate systematic conflict mitigation activities even before the RRT team reaches the areas where human-wildlife conflict is reported. PRTs will be formed by including Sarpa Volunteers, Panchayat-level BMC members, Civil Defense members, volunteers, VSS members, Biodiversity Management Committee members, etc., who have received expert training in the areas of ensuring public safety and controlling conflict, as per the instructions of the Jana Jagratha Samiti. In addition, the participation and cooperation of existing volunteer members in local self-government institutions will be ensured under this project.

5. Mission Real Time Monitoring

The proper use of modern technology can be helpful in forest and wildlife management. Systems are currently being implemented in most forest areas of the state to provide basic information to the public to be aware of the presence of human wildlife in advance, so that they can take proactive measures and stay safe.

6. Mission Sensitization to Public

The spread of misinformation related to human-wildlife conflict often causes panic among people in conflict-affected areas. Such misinformation can also lead to unnecessary accidents in conflict situations. As a solution to this, this project aims to organize knowledge awareness programs on human-wildlife conflict that are tailored to local conflict situations and to make people aware of the importance of wildlife conservation and related issues.

7. Mission Science of Human Wildlife Conflict

As part of the prevention of human-wildlife conflict, the Mission Science on Human Wildlife Conflict project is conducting research and studies in collaboration with various research institutions such as Kerala Forest Research Institute, Tropical Botanical Garden and Research Institute, Wildlife Institute of India, Salim Ali Center, Kerala Agricultural University, Kerala Veterinary Animal Science University, etc., and taking the initiative to study changes in the behavior of wild animals due to climate change and various causes of conflict. The objective of this project is to take steps to accurately convey the findings of the research programs to officials and the public, and to make appropriate changes in forest training based on the results of the study.

8. Mission Bonnet Macaque

Since it has been noticed that the nuisance of native monkeys is increasing in many parts of Kerala, it is imperative to find ways to solve them scientifically. At present, studies on this subject are lacking. The truth is that the presence of native monkeys and the problems caused by them exist in various parts of Kerala, including not only forest areas, but also urban areas. The aim of the project is to prepare a detailed proposal to practically eliminate the problems and difficulties caused by native monkeys by identifying the real causes of conflicts caused by native monkeys and the measures that can be taken as a remedy, both in general and according to local characteristics.

9. Mission Wild Pig

Local self-government bodies are currently empowered to eliminate wild boars that pose a threat to the lives and property of people in populated areas and to avoid conflicts. Under this scheme, the Forest Department will provide training and technical assistance to the Panchayats to implement such decentralization of power more efficiently. In addition, this scheme envisages providing technical assistance to the Shooters M-panels by the Panchayats and preparing revised guidelines.

10. Mission SARPA

If we look at the current figures, it is clear that the majority of deaths due to human-wildlife conflicts occur outside the forest, due to snakebites. Recognizing this, the Forest Department has prepared a mobile app called Sarpa and the services of trained volunteers since 2020 with the aim of safely catching snakes from populated areas and avoiding accidents. Through this, it has been possible to reduce the number of deaths due to snakebites from 123 in 2019 to 30 in 2024. The aim of Mission Sarpa is to achieve the goal of not having a single death due to snakebite.

8. RECOMMENDATIONS

Based on the findings of this study, the following administrative and policy interventions are proposed to bridge the implementation gap in Pudur Panchayat:

➤ Formalization of Primary Response Teams (PRT)

The government should transition from a purely volunteer model to a Honorarium-based model for PRTs. Providing a monthly stipend and mandatory life insurance for tribal youth in PRTs will ensure long-term sustainability and administrative accountability.

➤ Decentralized Compensation Cells

To resolve the 1 to 2-year delay in agricultural compensation, a Fast-Track Compensation Cell should be established at the Pudur Panchayat office. Empowering local officials to verify and sanction claims up to a certain limit will reduce the bureaucratic lag currently caused by the centralized forest hierarchy.

➤ Shift to Non-Aversive Deterrents

Following the finding that high-decibel crackers increase elephant aggression, the administration should promote the use of Bio-fencing (e.g., chili fences or beehive fencing) and Light-based deterrents. These methods are scientifically proven to be less stressful for animals and safer for humans.

➤ Integration of SARPA with Local Health Centers

While the SARPA app is successful, it must be integrated with the Pudur PHC. The health department should ensure that anti-venom stocks are linked to real-time hotspot data provided by the app to ensure immediate treatment for interior hamlets.

➤ In-situ Water Resource Management

To reduce the push factor that drives wildlife into tribal hamlets, the Forest Department must prioritize internal water security.

1. Strategic Infrastructure: Construction of solar-powered bore-wells and concrete water troughs deep within the forest interior.
2. Goal: Providing a year-round water supply ensures that elephant herds do not venture into Pudur during the peak summer months (February–May) specifically for hydration.
3. benefit: This proactive measure minimizes human-animal encounters and reduces the operational burden on the Rapid Response Teams (RRT).

➤ Administrative Capacity Building & Staff Strengthening

Effective mitigation is impossible without a robust and motivated workforce.

- Human Resources: Increasing the number of permanent sanctioned posts for the RRT in the Attappadi block to reduce reliance on temporary staff.
- Incentives & Safety: Implementation of Difficult Terrain Allowances and comprehensive high-risk insurance for all field-level staff and PRT volunteers.
- Training: Providing specialized training in animal psychology and modern, non-aversive deterrent technology to replace high-stress methods like firecrackers.

CONCLUSION

This study of Pudur Panchayat reveals that Human-Wildlife Conflict (HWC) has transcended being a mere ecological issue to become a primary Public Administration crisis. The investigation highlights that the persistent threat from a diverse spectrum of wildlife ranging from elephants to venomous reptiles. It acts as a de-multiplier for social welfare, effectively stalling progress in tribal education, health, and economic stability.

While the Government of Kerala's Decadal Mission Framework offers a visionary and multi-dimensional approach to mitigation, its success in the interior forest fringes depends on bridging the Implementation Gap. The research concludes that relying on unpaid tribal volunteers (PRT) and managing a two-year delay in agricultural compensation are unsustainable administrative practices that deepen the vulnerability of the Irula and Kurumba communities.

Ultimately, achieving a state of Sustainable Coexistence in Attappadi requires a shift from reactive, top-down bureaucracy to a decentralized, community-centric model. By formalizing volunteer roles, ensuring internal forest water security, and streamlining the financial relief process, the administration can ensure that the goals of Viksit Bharat reach the most marginalized residents of the forest-frontier.

Human security must be recognized not as a luxury, but as the foundational requirement for all tribal welfare initiatives.

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