

"સમય ફરી ગયો છે, હવે આ આપણો સમય નથી."
"THE TIMES HAVE CHANGED, AND THESE ARE NOT OUR TIMES"

-Vala Kaka

A Rabari Maldhari elder who has seen the tides turn



Predators and Pastoralists: Towards Coexistence in Gujarat's Grasslands

A White Paper on Conflict Dynamics and Community-Led Conservation in Surendranagar

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Executive Summary

Gujarat's open natural ecosystems (ONEs), particularly in Surendranagar's Chotila and Thangadh blocks, are vital habitats for endangered carnivores like the Indian leopard (*Panthera pardus fusca*), Indian grey wolf (*Canis lupus pallipes*), and striped hyaena (*Hyaena hyaena*). However, pastoralist communities living in and around these grasslands face increasing conflict with these predators, often resulting in livestock loss and economic hardship. There are a multitude of challenges that threaten these grasslands, such as mining of sand, clay and stone, land-use change by agriculture intensification, tourism development, development works like construction, and biological invasion by alien invasive species.

This policy brief outlines the key findings and recommendations from a year-long project aimed at understanding predator-pastoralist conflict and laying the foundation for a participatory conservation action plan.

Key Challenges Identified

1. High Incidence of Livestock Predation

Data collected from Devsar and Reshamiya villages highlighted a disturbing trend for the past five years: repeated and increasing attacks by Indian leopards on livestock. These incidents often involved high-value animals such as calves and goats, which form the economic backbone of pastoralist households. Most attacks occurred near corrals or grazing areas, often in the early morning or late evening, pointing to the predators' adaptation to human-dominated landscapes. In the absence of structured deterrent systems or predator-proof infrastructure or prevention measures, communities remain vulnerable, and retaliatory attitudes towards wildlife are beginning to take root. The economic impact of such attacks is not only direct but also emotional and cultural, as herding is closely tied to community identity and traditional livelihoods.

2. Gaps in Compensation Mechanisms

Although the Gujarat Forest Department offers compensation for livestock losses due to wildlife attacks, the mechanisms for accessing these benefits are fraught with bureaucratic complexity. Affected families, particularly those from marginalized pastoralist communities, often lack the literacy, mobility, or digital access required to complete claim procedures. Even when claims are filed, delays in verification and disbursement lead to diminished trust in the system. Field data and consultations revealed significant underreporting of incidents due to fear of retaliation, social stigma, or simply resignation to systemic failure. These gaps contribute to a perception that wildlife conservation comes at the cost of pastoralist well-being, an unsustainable dynamic in any conservation effort.

3. Inadequate Veterinary Access

In the wake of predator attacks, injured livestock require immediate veterinary attention. However, remote villages such as Devsar and Reshamiya have limited access to veterinary professionals, supplies, or transportation infrastructure. In one documented case, a calf attacked by a leopard received basic care but eventually died due to delayed and insufficient treatment. This incident, among others, reflects a broader trend: the absence of mobile veterinary units or community-based para-vets leaves herders with no choice but to absorb the loss. Furthermore, the high cost of treatment deters most families from seeking professional help, reinforcing a cycle of fatalism and economic vulnerability. Without adequate livestock care, any co-existence strategy remains incomplete.

4. Underutilised Traditional Knowledge

Maldhari pastoralist communities in the Surendranagar grasslands possess generations of traditional ecological knowledge (TEK) regarding predator behaviour, seasonal wildlife movement, and safe grazing practices. However, this knowledge is rarely consulted or integrated into formal conservation planning. In this project, community insights directly informed successful camera trap placements, demonstrating that TEK is not only relevant but essential. The continued exclusion of this knowledge from state policies and scientific processes represents a missed opportunity to build effective, culturally respectful conservation models. Recognising and formalising this knowledge could pave the way for more adaptive, context-sensitive management of open natural ecosystems.

Community-Centred Interventions for Human-Wildlife Coexistence

1. Youth Engagement and Capacity Building

To embed conservation practices within the fabric of local communities, five youth from pastoralist families were trained in essential ecological monitoring techniques. The training covered camera trap deployment, systematic data collection, and the basics of wildlife behaviour and identification. This approach did more than enhance fieldwork; it empowered the youth by building technical skills, fostering a sense of ownership, and generating local stewardship. As a result, the quality and consistency of data improved significantly, and the involvement of community members lent credibility and trust to the intervention.

2. Integration of Traditional Ecological Knowledge (TEK)

Camera trap sites were not chosen solely through ecological modelling but were informed by decades of pastoral knowledge about predator movement, preferred pathways, and seasonal behaviour. This participatory approach led to the strategic placement of traps that successfully captured critical predator activity, such as leopard crossings, demonstrating the efficacy of TEK in scientific data collection. These outcomes reinforce the idea that conservation science, when aligned with indigenous knowledge systems, becomes both more effective and more equitable.

3. Non-Lethal Deterrent Testing

To reduce conflict without harming wildlife, solar-powered light-emitting devices called Parabraksh by Katidhan, were installed in high-risk grazing areas. These devices emit intermittent flashing lights designed to disorient and deter predators, especially leopards, during nighttime hours. Initial monitoring suggests a noticeable decline in leopard presence near these installations, indicating that non-lethal deterrents can be a viable alternative to lethal control or permanent displacement. Continued testing is underway to evaluate long-term efficacy and animal habituation responses.

4. Awareness and Claim Support Workshops

Recognising the bureaucratic and informational barriers pastoralists face in accessing government compensation schemes, a series of workshops were conducted to guide families through the process of filing and verifying predation-related claims. These sessions covered legal entitlements, documentation requirements, and follow-up procedures. As a direct result, the number of successful compensation claims increased, reducing the economic burden of livestock loss and restoring some level of faith in formal institutions. The workshops also opened up a space for dialogue on policy gaps, particularly in cases where predator-proofing measures are not factored into assessments.

Policy Recommendations for Strengthening Human-Wildlife Coexistence and Grassland Governance

1. Streamline Compensation Processes

Current compensation schemes for livestock loss due to predation are mired in paperwork, delays, and complex verification protocols, leading to frustration and underreporting. Simplifying claim forms into vernacular, pictorial formats and minimising documentary requirements would enhance accessibility. Additionally, decentralising verification mechanisms, such as empowering local panchayats or trained community volunteers to authenticate claims, can expedite the process. Deploying mobile help units staffed with trained facilitators in remote pastoral villages will ensure real-time support, increase claim-filing rates, and improve institutional trust among affected families.

2. Establish Village-cluster-based Grassland Health and Conflict Monitoring Cells

To institutionalise grassroots surveillance and stewardship, dedicated Grassland Health and Conflict Monitoring Cells should be established at the village cluster level. These can be composed of trained pastoral youth and local leaders, and equipped with GPS tools, biodiversity logbooks, and conflict tracking registers. These cells can:

- Monitor predator movement and ecosystem changes,
- Maintain seasonal biodiversity records,
- Report illegal grazing or encroachment, and
- Serve as a liaison between communities and the forest department, ensuring two-way communication and faster response to emerging conflicts.

Such cells would formalise community participation in ecological governance and provide employment-linked pathways for rural youth.

3. Scale Participatory Conservation Models

Conservation frameworks must evolve from exclusionary models to participatory stewardship, especially in open ecosystems like grasslands. Integrating trained community stewards and youth into state-led grassland management programs can bridge the gap between policy and lived reality. This integration should be supported by regular capacity-building modules, including training in ecological monitoring, legal literacy, and climate adaptation techniques. By doing so, communities become long-term partners in restoration, not just passive beneficiaries.

4. Invest in Mobile Veterinary Infrastructure

A major cause of resentment among pastoralists toward predators stems from high livestock mortality due to both predation and preventable diseases. Timely access to affordable veterinary care is often absent in remote or mobile pastoral routes. The government must invest in mobile veterinary units equipped with cold chains, trained staff, and indigenous knowledge of livestock health. This would reduce livestock loss, improve overall animal productivity, and lower the economic vulnerability of pastoralist families, thereby reducing retaliatory killings and improving attitudes toward wildlife.

5. Recognise and Conserve Open Natural Ecosystems (ONEs)

India's conservation policies have historically prioritised forests and protected areas, while Open Natural Ecosystems (ONEs), such as grasslands, scrublands, and desert margins, are misclassified as "wastelands" and remain unprotected. These ecosystems are biodiversity-rich and serve as critical habitats for both wildlife and pastoralist livelihoods. Immediate steps must be taken to:

- Map ONEs with community participation,
- Develop region-specific conservation frameworks that align with pastoral land use,
- Prevent their diversion for industrial, infrastructural, or monoculture plantation purposes, and
- Ensure legal recognition of customary access rights.

Preserving ONEs is not just an ecological necessity but a socio-cultural imperative for sustaining pastoralist identity and intergenerational knowledge.