Endangered cobras and conservation politics: Exploring multispecies encounters in agrarian landscapes of West Bengal

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Abstract

This article challenges dominant conservation discourses that frame nature as pristine and separate from humans, critiquing the wilderness paradigm informing Third World environmental planning. While scientific discourses promote holistic planetary visions, they overlook how environmental politics is entangled with human cultural practices and identities. Drawing on ethnographic research in Musharu, a village in East Bardhaman, West Bengal, India, the article locates the role of culture in shaping environmental struggles and identity politics rooted in Third World ecological concerns. Musharu is known for its unique coexistence with poisonous cobras, revered as manifestations of the village deity. This multispecies relationship is increasingly threatened by recent monsoonal irregularities disrupting snake habitats. This climate vulnerability creates discrepancies among national environmental bodies, local conservationists, and village inhabitants with conflicting narratives about their non-human neighbors. Conservationists advocate scientific protection of these snakes through formal protection and spatial segregation, while inhabitants who see them as protective figures reject such interventionist techniques. For them, conservation premised on the idea of wilderness as an autonomous domain devoid of human involvement impinges on their ways of organic relatedness with these divine snakes. The article concludes that viewing human living as distinct from wildlife conservation may lead to misrecognition of the environmental problem.

Keywords: conservation, nature, indigeneity, snakes, landscape, ecology, climate change

Résumé

Cet article remet en question les discours dominants sur la conservation qui présentent la nature comme vierge et séparée des humains, critiquant le paradigme de la nature sauvage qui inspire la planification environnementale dans les pays en développement. Si les discours scientifiques promeuvent des visions holistiques de la planète, ils négligent la manière dont la politique environnementale est intimement liée aux pratiques culturelles et aux identités humaines. S'appuyant sur des recherches ethnographiques menées à Musharu, un village situé à East Bardhaman, dans l'État du Bengale occidental, en Inde, cet article met en évidence le rôle de la culture dans la formation des luttes environnementales et des politiques identitaires ancrées dans les préoccupations écologiques. Musharu est connu pour sa coexistence unique avec des cobras venimeux, vénérés comme des

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manifestations de la divinité du village. Cette relation multispécifique est de plus en plus menacée par les récentes irrégularités de la mousson qui perturbent l'habitat des serpents. Cette vulnérabilité climatique crée des divergences entre les organismes environnementaux nationaux, les défenseurs locaux de l'environnement et les habitants du village, qui ont des discours contradictoires sur leurs voisins non humains. Les défenseurs de l'environnement préconisent la protection scientifique de ces serpents par le biais d'une protection formelle et d'une ségrégation spatiale, tandis que les habitants locaux les considèrent comme des figures protectrices et rejettent les techniques interventionnistes. Pour ces personnes, la conservation fondée sur l'idée d'une nature sauvage comme domaine autonome dépourvu d'intervention humaine perturbe leur relation organique avec ces serpents divins. L'article conclut que le fait de considérer la vie humaine comme distincte de la conservation de la faune sauvage peut conduire à une mauvaise reconnaissance des problèmes posés par la conservation.

Mots-clés: conservation, nature, indigénéité, serpents, paysage, écologie, changement climatique

Resumen

Este artículo cuestiona los discursos conservacionistas dominantes que presentan la naturaleza como prístina y separada de los humanos, criticando el paradigma de la naturaleza salvaje que orienta la planificación ambiental del Tercer Mundo. Si bien los discursos científicos promueven visiones planetarias holísticas, pasan por alto cómo la política ambiental se entrelaza con las prácticas e identidades culturales humanas. Basándose en la investigación etnográfica en Musharu, una aldea en Bardhaman Oriental, Bengala Occidental, India, el artículo ubica el papel de la cultura en la configuración de las luchas ambientales y las políticas de identidad arraigadas en las preocupaciones ecológicas del Tercer Mundo. Musharu es conocido por su singular coexistencia con cobras venenosas, veneradas como manifestaciones de la deidad de la aldea. Esta relación multiespecie se ve cada vez más amenazada por las recientes irregularidades monzónicas que alteran los hábitats de las serpientes. Esta vulnerabilidad climática genera discrepancias entre los organismos ambientales nacionales, los conservacionistas locales y los habitantes de las aldeas, con narrativas contradictorias sobre sus vecinos no humanos. Los conservacionistas abogan por la protección científica de estas serpientes mediante la protección formal y la segregación espacial, mientras que los habitantes, que las ven como figuras protectoras, rechazan estas técnicas intervencionistas. Para ellos, la conservación basada en la idea de la naturaleza como un dominio autónomo, libre de la intervención humana, afecta sus formas de relación orgánica con estas serpientes divinas. El artículo concluye que considerar la vida humana como algo distinto de la conservación de la vida silvestre puede llevar a una percepción errónea del problema ambiental.

Palabras clave: conservación, naturaleza, indigenidad, serpientes, paisaje, ecología, cambio climático

1. Introduction

Recent concerns about climate change in the agrarian communities of East Bardhaman in West Bengal, India cannot be detached from their relatedness with human-environmental relationships. Historically, Bardhaman region was shaped by the river Damodar and its floods and tides, designing its topography of the place for several centuries. Local ecological scenarios depict these catastrophic floods impacting human lives in adverse ways, in the pre-Damodar Valley Corporation (hereafter, DVC) era.[2] Simultaneously, Bardhaman's natural contours have also impacted cultural arrangements in more ways than one, while being equally influenced by it. Indeed, stories about local deities,

[2] The Damodar Valley Corporation is a power generator under the Central Government, functioning in the Indian states of West Bengal and Jharkhand. Established after India gained independence, it was created as a crucial initiative to manage the severe flooding caused by the Damodar River. Currently, it operates in six districts of West Bengal: Hooghly, Howrah, East Bardhaman, West Bardhaman, Purulia, and Bankura.

religious legends and natural disasters have coalesced to provide a strong cultural identity for Bardhaman's local population, most of which are in settled agrarian communities.

Today, however, Bardhaman is not known as much for its cultural or ecological history but rather for its highly fertile agricultural landscape. While Bardhaman's farmers are generally known for their economic prosperity in the agricultural domain, their eco-cultural lives have too often lacked adequate attention. In this study of Bardhaman's agrarian landscape, narratives are brimming with cultural, place-based, and particularly, religious stories, thereby revealing a significant aspect of the inhabitants' lives at the interface of culture, politics and ecology.

The agriculturally active landscape, with its cultural underpinnings, is undergoing significant ecological upheavals owing to irregular rainfall patterns (Bannerji & Bhanja, 2023). The state is highly susceptible to Bay of Bengal cyclones, with severe storms like Amphan and Bulbul causing significant damage to farming systems and infrastructure, particularly in the Sundarbans between 2000 and 2018. Rising sea levels of approximately five centimeters per decade intensify flood risks in coastal and low-lying agricultural regions (Basu, 2020). Thus, the monsoon, has been at the centerstage of global environmental debates concerning Bengal. While scholars have documented the relationship between changing monsoonal patterns and agricultural systems in Asia (Chatterjee & Sengupta, 2023), what the season does to people's cultural lives has seldom been discussed in academic scholarship.

Addressing this gap is this ethnographic exploration of Musharu village in the Mongolkot subdivision of East Bardhaman, where an interplay of the religious and ecological gives rise to an interesting political identity for its indigenous inhabitants.[3] Musharu inhabitants are known for their 'peaceful' cohabitation with poisonous reptiles called *Jhanglai.* While snake-human coexistence is prevalent in several regions of Bengal, what makes Musharu unique is the religious character attributed to these snakes and their climate-threatened lifeworlds. As much as climate change has affected farmers' economic lives in Bardhaman, their cultural lives, especially in the context of Musharu village, have gained immense vibrancy. This is because their religious lifeworlds, which they claim to be the source of their village's identity, are threatened by ecological forces beyond human control. Indeed, the snakes are considered living versions of their *gramdevata Jhankeshwari* (vernacular name for their village deity). and hence their constant vulnerability, their endangered status and their increased scarcity in these regions have altered local views of knowing the world (Saha, 2024).

The endangered cobras have drawn a lot of media attention of late, particularly in light of climate change concerns and conservation practices. Newspaper reports are replete with images of these snakes as the harbingers of changing human-animal relations. In 2018, while conducting fieldwork in Bardhaman, I kept encountering interesting insights about the snakes' unique relations with local inhabitants, the snakes' increased vulnerability to monsoonal precarity, and inhabitants' increased spectacular worship of the snakes as sacred deities in the monsoon months. Simultaneously, information on the internet also revealed that visits to Musharu have increased among adventure seekers, travelers and news media. This increased visibility of Musharu's cohabitation story, and the immense media coverage often framing Musharu as the heart of 'peaceful coexistence' of humans with non-humans, makes global environmental debates around conservation even more complicated. This is because of the intersecting concerns of meanings of coexistence in a human-managed, previously flood prone landscape, under increasing threat from climate change, including monsoonal

[3] The term "indigeneity" used in this article refers to the unique cultural identity and lived experiences of agrarian communities in Musharu, West Bengal. In this specific context, the term serves to exemplify how these communities maintain a profound connection to their environment, particularly their coexistence with poisonous cobras, which is interwoven with local myths, legends, and religious beliefs. By exploring indigeneity in this context, we acknowledge the intricate relationship these communities have with the land and the natural world. Their superstitions and narratives surrounding cobras are not mere folklore; they reflect a deep-rooted understanding of their ecological reality and cultural heritage.

precarity. Often, stories about Bardhaman lacked attention to this complex engagement of human-animal-culture nexus, whereby local people who live and inhabit the landscape are ignored in debates on climate change, changing agricultural scenarios and animal conservation concerns.

My previous work addresses some of these concerns, focusing exclusively on human-animal relations in Musharu (Saha, 2024). In comparison, this article shifts focus to examining the intricate relationship between multiple human stakeholder groups involved in local conservation efforts. Thus, while my earlier research focused on the broader concepts of non-human agency and the theoretical framework of posthumanism and materialist ontology, this article emphasizes the ongoing dynamics between conservationists, native communities, governmental bodies and documentary filmmakers. Drawing from these, this article not only builds upon earlier research but also offers a nuanced expansion that incorporates scientific perspectives and new socio-cultural developments.

This article highlights the environmental politics rooted in local understandings of nature, conservation and perceptions of nativity. Musharu's inhabitants' assertions about the native origin of snakes, their essential relatedness to their very native *gramdevata* (village deity), and hence their claims about these cobras as their very own, makes questions about global wildlife conservation ideologies complicated. Considering this, the article documents the narratives of villagers captured through an ethnographic study of Musharu village conducted between 2018-2020. These narratives highlight voices from local inhabitants who are not immediately part of conservation strategies, but whose claims remain very powerful and highly political in the light of current debates on indigeneity and marginality. The article also includes the voices of various stakeholders who believe that they are trying to 'save' monocled cobras (Naja kaouthia) in their own unique ways.

Considering such counter narratives to global conservation discourse, the article discusses several analytical themes emerging out of this human-animal-conservation nexus. The first two sections narrate the parallel history of Musharu and its snakes, about the snakes' local embeddedness and their *posha* (domestic) nature, highlighting the intersection of Musharu's religious beliefs and the material realities of its inhabitants. Although monocled cobras are not classified as endangered in scientific terms, Musharu witnesses a decline of the specific local variety called *Jhanglai* (vernacular term for the local variant). Both inhabitants and experts recognize *Jhanglai* cobras as distinct in their behavior and appearance. Their rapid disappearance from the local landscape is thus interpreted as a sign of ecological transformation, departing from traditional understandings of endangered species. Although recognizing these perspectives as indigenous knowledge systems, the article views these as not entirely separate from western forms of knowledge. Rather, I show how indigenous worldviews are influenced by, and responsive to, colonial experiences and often exist in dialogue with modern epistemologies.

The third section delves into the dichotomy between human and animal spaces, particularly in the context of the wilderness discourse in biodiversity protection and conservation management (Lipschutz, 2003). Traditional scholarly works in these fields have often focused on protected areas, which are typically designated as separate from human influence (Noss, 1994). These studies emphasize the importance of preserving untouched natural environments, leading to a clear division between what is considered 'wild' and 'domestic.' On the other hand, scholars like Ramchandra Guha nd Joan Martinez-Alier (2013) have contested such traditional exclusionary conservation models and argued that they denies local communities' role in shaping what constitutes an environment. Moreover, several scholars working in the Indian context have also challenged rigid separation of human and animal spaces. While Annu Jalais (2014) explores the socio-political dynamics surrounding tigers in the Sundarbans, Radhika Govindrajan (2018) examines multispecies intimacies in the Central Himalayas, and Yamini Narayanan questions the management of animals as 'trespassers' in urban spaces (2017).

The case of Musharu also challenges this traditional conservation paradigm by highlighting a localized agrarian context where wild creatures coexist within human habitats. This setting blurs the lines between wild and domestic animals, emphasizing the intricate relationships and

interdependencies that exist in everyday life. By examining how these wild creatures inhabit domestic spaces, Musharu offers a location for nuanced critique of the historical domestication of species (Ingold, 2000). This article takes a stakeholder-centric approach, examining how different groups shape environmental concerns through inhabitation.

The final section of the article addresses the interface between conservation, modern science and religious myths centered around snakebite treatment, and how various stakeholders have alternative strategies to deal with this. The article concludes with significant insights about this cohabitation scenario post Covid-19 pandemic, when Musharu inhabitants have continuously engaged in an extravagant ritual display of worship related to their deity and its snake consorts. Such a profligate display of their religious lifeworlds, I argue, is essentially political in making claims to their nativist identities; a politically charged effort to oppose the hegemony of outsiders, 'modern epistemes' or 'scientific paradigms' (Gordon & Krech, 2012, p. 2). In doing so, the case of Musharu is a significant example of indigenous knowledge systems which while running counter to modern scientific discourses, often reinforce the dichotomy between science and religion.

2. Methods and study location

The ethnographic data used in this article is largely derived from my doctoral thesis fieldwork which focused on village deities at the interface of the sacred and the ecological.[4] While the focus of my research was to capture meaningful ways in which inhabitants organized their everyday lives around these deities, a greater part also looked at how snakes were as much religious and ecological in their mundane relationships with the land and its people. Efforts were therefore taken to include villages closer to the Birbhum border since it has a rich cultural heritage due to its intersections with several cultural and religious movements over time. Villages, particularly in Mongolkot subdivision of the district, were known to be agriculturally and culturally rich, an interface in which I was particularly interested.

Through interviews, discussions and participation in daily lives, I learned how village inhabitants were eager to discuss the animal-human coexistence story and the ways in which it impacts their religious worldviews, livelihood and community. Most interlocutors were identified through a snowball sampling technique and the study primarily included village residents. Efforts were also taken to differentiate by age and gender, following a purposive sampling approach. This was because village elders had a very distinct notion about nativity, which often differed from the younger population who are mostly migrating to nearby towns and cities for work. At the same time, experiences about cohabitation are different for native men and married women. Since many married women were not natives, they lacked the nativist trope in discussions about snakes, their local identities, and about village elders (Saha, 2024). Village priests also had specific opinions about the snake's native origin and history.

While my core findings are based on immersive fieldwork from 2018 to 2019, the study reflects shifts in ethnographic practice, capturing post-pandemic data through remote methods. I include data derived from interviews with two local conservationists and two documentary filmmakers, who shared several interesting 'outsider' insights. Also, analyses of newspaper and media reports were undertaken. Efforts were also made to keep in touch with village inhabitants through phone calls and social media through the covid-19 pandemic of 2020-2022, to keep track of any advancement in snake conservation in such adverse situations. Several post-pandemic telephone conversations were also made to capture any change in power dynamics and livelihoods. Methodologically, then, a major aspect in this study is the focus on the post-pandemic shift in the spectacular worship of snakes as

[4] This research was conducted as part of my doctoral thesis at the Department of Sociology, Presidency University, Kolkata, India (2019-2023). It was overseen by a Research Advisory Committee that met biannually to review theoretical, methodological and ethical aspects of the work. My research tools, methodologies, and field protocols, were regularly discussed and approved in the meetings.

sacred deities. This new development, stemming from qualitative insights gathered through telephonic interviews and media reports, provides a fresh lens to analyze how local communities have adapted to or redefined their relationship with the species in the wake of the pandemic. Additionally, since animals, particularly snakes, formed the centerstage of this study, I borrowed the concept of multispecies ethnography in Govindrajan's work on interspecies understanding of care and intimacy (Govindrajan, 2018). In contrast to the more ethnographic focus of my earlier work (Saha, 2024), this article highlights the theoretical implications of these findings, contributing new insights into stakeholder engagement and the complexities of local environmental concerns.

In providing a place-based understanding of Musharu, I do not look at this village as a site of 'primordial ontology' or 'archaic rurality' (Jodhka & Simpson, 2019, pp. 1-35). In fact, in most of my discussions with inhabitants, I see a sharp tension between their traditional knowledge systems and modern scientific epistemes. What has been particularly challenging in such scenarios is to navigate through this science/religion dichotomy to provide an analysis of their perception of environmental justice. This is because my interlocutors could neither be categorized as the 'traditional farmer' nor are they 'modern subjects' detached from their contextual origins (Jodhka & Simpson, 2019, pp. 1-35). Thus, in analyzing between these alternative epistemic domains, I have documented the narratives of 'justice' in ways in which they consider appropriate. In doing so, I have tried to avoid the possibility of 'romanticizing' indigenous worldviews, while also avoiding misrepresentation of them.

In 2017, the Government of West Bengal announced the division of the Bardhaman district into two parts: Purba (East) Bardhaman and Paschim (West) Bardhaman. While West Bardhaman was popular for its industrial character, East Bardhaman was established as the agricultural zone. Although the government cited administrative efficiency as the main reason for the bifurcation, East Bardhaman regions were already popular as major national rice producing areas.

This economic prosperity is, however, largely dependent upon climatic considerations, which of late are a major source of adversity for the agrarian communities. The climate in contemporary Bengal is particularly vulnerable to cyclones originating from Bay of Bengal, with frequent storms causing extensive damage to agriculture and infrastructure. Rising sea levels and changing climate patterns have intensified flood risks, waterlogging and droughts, significantly affecting agricultural productivity. It was this climatic setback which interested me in studying the interface between climate, deity worship and agricultural practice in these regions. The fieldwork started in a cluster of villages anchored by Bhatar town[5], but soon took an interesting turn when village deities became the central figures associated with communities. Although villages were essentially political divisions and subdivisions of larger constituencies, most of the interlocutors drew from their lived experiences with village deities as primary markers of village identity. Thus, while climate united the common experiences of Bardhaman's farmers, village deities gave them unique localized identities. This is equally true of Musharu, popularly known as the snake village of the region.

[5] Lying close to an urban zone (Bardhaman town), Bhatar enjoys relative independence with respect to natural climatic considerations, since it receives ready urban aid if rains are insufficient. The reason that Bhatar became an important site for my ethnography was precisely because of its established agricultural, machinic, and urbane avenues (canal irrigation, embankments, dams, rice mills), which provide it with relative freedom from ecological concerns, in contrast to other agricultural zones, for instance Mongolkot, which still depend heavily on natural rainfall.

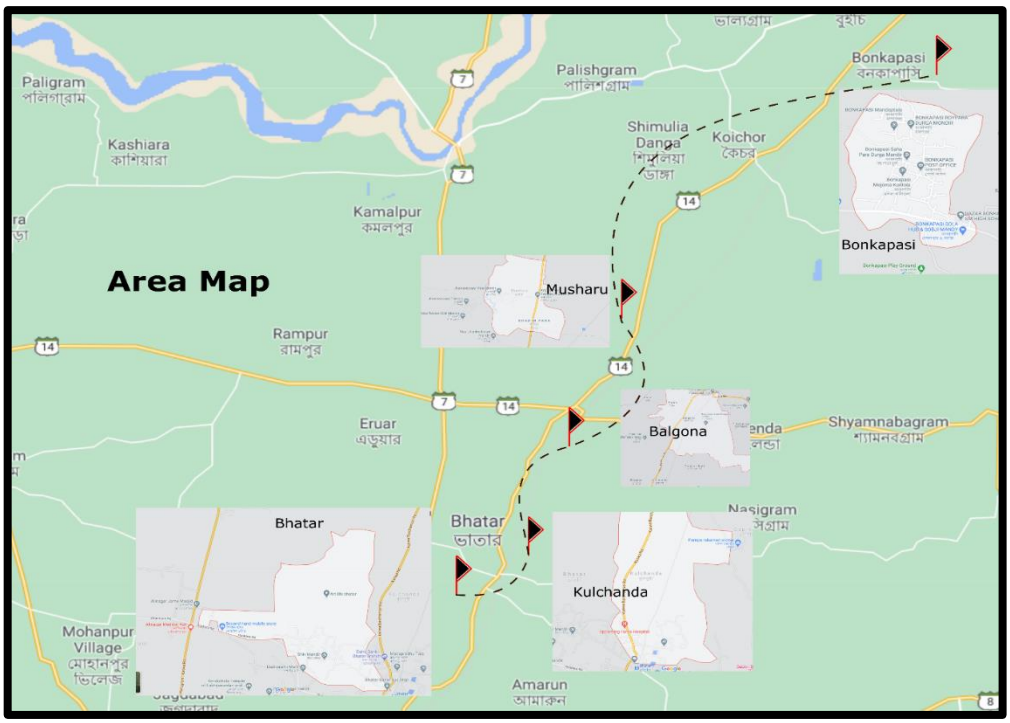

Figure 1: Fieldwork Sites in East Bardhaman District. (not to scale)[6]

Musharu is a small settlement of about a thousand residents situated 23 kilometers from Katwa, a larger anchor town in Bardhaman. Accessible only by a winding mud track branching from the main road, its organic settlement pattern contrasts with villages like Kulchanda and Bhatar in neighboring regions, that lie along the main road. The village's spatial layout reflects socio-economic divisions: larger, multi-storied homes belonging to landowning families stand neatly aligned beside vast stretches of cultivated fields, whereas agricultural laborers reside in scattered straw-and-mud huts along the village path. Moreover, its seclusion from key economic centers like Bhatar and Katwa has contributed to its slower pace of development.

Musharu like other villages in Bardhaman depends on paddy cultivation, with most residents belonging to lower middle class agrarian families. The caste composition reflects overall regional patterns, with Ugra-Kshatriyas as the dominant farming community, alongside groups like Sadgops, Goalas, Namasudras, and Bagdis. Culturally, Musharu stands out due to its unique association with the deity *Jhankeshwari* and the *Jhanglai* snakes which are her direct embodiments.

The *Jhanglai's* origin is closely tied to Bardhaman's environmental history, with oral narratives linking their arrival to past floods that once shaped the region's landscape. Locals believe the snakes arrived with floodwater, carried from distant lands as rivers overflowed. Over time, as floodwaters receded, they took refuge in the village's numerous ponds and wetlands, forging an enduring relationship with the aquatic landscape. This story highlights a key environmental reality that snakes, water bodies, and human settlements have coexisted in a delicate balance shaped by Bardhaman's volatile climate. As Bardhaman evolved into an agrarian hub through irrigation and land reclamation, the transformation concealed its continued ecological fragility. However, the presence of *Jhanglai*

[6] This figure provides a rough spatial overview of the five villages where fieldwork was conducted, reflecting their spatial distribution on Bardhaman's landscape, as experienced during my fieldwork journey. It is not a geographically accurate map.

serpents in Musharu serves as a reminder that place-making is an ongoing process, shaped by ecological change and human intervention. Once brought by flood waters, these snakes now face threats from declining rainfall and climate shifts, challenging Bardhaman's status as a stable agrarian landscape.

Despite cobras being commonly sighted across agricultural fields in Bardhaman, they have only become an everyday presence in domestic spaces in Musharu, inhabiting kitchens, courtyards, cupboards, and even bedrooms. This deeply embedded coexistence has evolved over generations but has become increasingly precarious in recent times due to environmental challenges. Climate vulnerability has not only placed these snakes at risk but has also drawn renewed attention to Musharu's unique ecological-religious dynamic, with occasional coverage in newspaper reports and conservation discussions. However, despite gaining scientific interest there has been no significant study exploring the intersection of religion and environment in this region. The intricate overlapping of local belief systems and ecological concerns in Musharu remains largely unexamined, despite its potential to offer new insights into how agrarian communities conceptualize conservation and cohabitation.

3. Theoretical engagements

Human and natural spaces: A post-colonial critique

Global environmental discourse has perpetuated the notion of 'wild nature' as separate from human spaces, suggesting that it requires protection from human interference (Noss, 1991). This distinction, while highlighting the human/nature divide, has been criticized by scholars such as Ramchandra Guha and Joán Martínez-Alier (1997), among many others, for neglecting the role of local communities in defining what constitutes the environment. Guha's critique of American environmentalism also argues against the application of deep ecological models in Third World contexts (Guha, 1989). He argues that the concept of 'deep ecology' is uniquely American and hence will be inappropriate for countries with differing cultural contexts like India (Guha, 1989, p. 71). Thus, opponents of the 'wilderness' model argue that the concept traces back to the European Enlightenment which "saw the widespread establishment of colonial agendas that sought to enlighten the rest of the world by conquering wildness and bringing order and rationality to uncivilized peoples and nature" (Fletcher *et al*., 2021, p. 2).

As Armiero and Sedrez (2014, p. 7) contend, "The wilderness ideal represents the most traditional environmentalism approach, emphasizing the preservation of 'untouched' nature through protected areas and environmental regulations." It inherently maintains a stark divide between natural spaces and human activity. Thus, the origins of these conservation laws can be traced back to 19th-century European contexts. Nancy Lee Peluso (1992) also points out that many concepts related to contemporary conservation and resource management originated in the West and continue to shape environmental policies in the Global South. Accordingly, recent studies also show similar connotations applied to different contexts under the guise of wildlife protection and deep ecology. For instance, in her book *Forest of tigers* (2010), Annu Jalais argues that "the earlier negative connotations of wilderness have now been replaced by a positive view – endorsed both for ecological and wildlife conservation purposes as well as for tourism; the implications of this shift are profound" (2014, p. 200).

Responding to the wilderness debate, several scholars have raised concerns. Bill Adams, in his book *Against extinction: The story of conservation* (2013), raises the critical issue of balancing preservation efforts with the human rights and subsistence needs of marginalized communities. Similarly, Sudha Vasan (2018) differentiates between two kinds of ecological issues: one framed purely in environmental terms, often linked to developed countries, and the other viewed as a human crisis, predominantly affecting developing nations. Environmental anthropologists too are examining how cultural values shape environmental ethics and struggles in diverse local contexts, and exploring

identity politics related to ecological issues (Bollig & Krause, 2023). Many of these studies adopt an anti-conservationist perspective, focusing on cultural transformations of nature and framing environmental problems as human-centric ones, rather than planetary.

Notably, wildlife managers today are also faced with multiple challenges not only concerning biological and ecological dimensions but also the serious political, social and economic challenges to species conservation (Kadykalo, *et al*., 2020). Several scholars have looked at the management of wildlife in conjunction with indigenous populations. In East Africa, some conservationists have realized the importance of local skills and strategies in conservation efforts. Selemani explores the intersection between indigenous knowledge systems and biodiversity conservation in Tanzania (Selemani, 2020). His work recognizes the relevance of different indigenous pastoral communities' efforts in conservation of biodiversity hotspots. Similarly, Goldman brings into conversation the diverse epistemologies of Maasai communities, scientists and conservation practitioners, arguing for the need to decolonize environmental knowledge (Goldman, 2020).

Drawing from the contemporary discourse on environmental politics and its critique, I locate how this discourse has also played out in a local context like Musharu and the emerging themes of indigeneity, identity and power dynamics. I explore the discourse of endangerment, a key focus of contemporary environmental politics, which has also emerged in Musharu. The translation of *Jhanglai* into the modern language of monocled cobras (a term applied to cobras having a monocle shaped marking on the hood, commonly found in South and Southeast Asia), illustrates how these everyday rural inhabitants are being integrated into global environmental and scientific conversations. Local people struggle to repel the effects of conservation discourse, which often loses significance in their everyday local reality.

Conflictual cohabitation: Human-animal interactions

In South Asia, and more specifically in India, scholars have primarily looked at political ecological struggles in forested regions and the human-animal conflicts therein (see Jalais, 2014; Barua, 2021). For instance, Oliver Springate-Baginski traces the differing perspectives of forest management and local forest users in Nepal and India, arguing that "forest-dependent livelihoods can and should be minimized through alternative livelihoods, such as 'eco-development, recognizing the importance of livelihood concerns for forest-adjacent users'" (Springate-Baginski & Blaikie, 2007, p. 14). Where human-wildlife conservation efforts exist, scholars have also reflected on more-than-human understandings of human-animal cohabitation (Govindrajan, 2018). While Sunila de Silva & Krithika Srinivasan explore human-elephant cohabitation in Sri Lanka to gain "an understanding of everyday experiences and perceptions of human-elephant conflict" (2019, p. 5), Miho Ishii (2022) examines the experiences of *Kunbi* people "… living in a tiger reserve, located in the Uttara Kannada district in the Indian state of Karnataka," analyzing ways in which the community nurture their emotional ties to the forest and simultaneously negotiating the modern political arena to fight for their rights (p. 725).

There are many other studies which look at the complexities of human-wildlife cohabitation and conflict, that has received a lot of attention from conservation biologists, environmentalists and wildlife managers. In India, Jared Margulies (2019) identified a form of animal-human conflict rooted in necropolitics rather than biopolitics, where certain 'surplus populations' are rendered disposable. The state shapes this dynamic by framing plantations which also have 'man-eater tigers' as spaces where this disposability is legitimized. Maan Barua (2013) looked at the political dimensions of human-animal relations through a complex interplay of humans, elephants, and alcohol in the Sundarpur region, arguing that political agency emerges from the local intertwining of identity and material reality. In a similar vein, Annu Jalais (2014) explores how forest communities in the Sundarbans perceive the Royal Bengal Tiger, highlighting a deep-rooted connection between local identities and the non-human world. These communities mourn the loss of traditional interactive

spaces with tigers. Conservation laws have recreated tigers as symbols of state power, and embodiments of the cult of wilderness that excludes a human presence.

A pertinent understanding of the nature of human-wildlife interactions is also provided by Radhika Govindrajan (2018). Her work on care and intimacy in animal-human interactions in the Central Himalayan mountains develops the very powerful concept of the "otherwild," which is not human-defined and truly resonates with the idea of animal agency. The present article focuses on similar concerns around domestic snakes in Musharu's agrarian communities, rather than in forested areas and wildlife encounters within those spaces. This literature, for example Lobo *et al.* (2023) also use a 'place-based approach' to studying tiger-inhabited geographies and subaltern communities.

The literature on forest conflicts also deals with cases where humans encroach upon wild habitats or when wildlife intrudes upon human settlements, often leading to damage and strife, while at other times shared spaces lead to a sense of co-belonging (e.g. Margulies & Karanth, 2018; Margulies, 2019). But there remains a significant gap in understanding animal-human cohabitation in more everyday settings. There are interactions with species like snakes that lie at the wild/domestic boundary and have historically cohabited with humans in domestic spaces. This article explores the nuances of these relationships and how they inform our understanding of human-animal dynamics in lesser-known everyday environments.

Integrative political ecologies: Expanding beyond traditional frameworks

Political ecological theories have largely focused on State development and resistance to it from marginalized communities (Kumar, 2024), and how power is exerted in conservation (Carpenter, 2020). There are important relationships between environmental groups and the political system, and the trajectory of environmental movements and activism (Saunders, 2020; Pickard, 2020). Political ecologists have primarily examined political structures like national governments and international development agencies in understanding their implications for development policies. However, recently the field has captured the rise of climate change adaptation as a novel and multifaceted area of knowledge generation and development practice (Taylor, 2015). Moreover, several political ecology scholars have also started to understand power dynamics between differing forms of knowledge systems as a response to climate change and adaptation. For instance, Carol Carpenter (2020) investigates the connections between Western (global) and indigenous (local) knowledge or discourses as relations of power. In methodological terms too, while political ecology has largely focused on qualitative, and particularly ethnographic modes of enquiry, it has recently also turned to storytelling about issues of environmental justice, moving away from analyzing discourses on environmental governance (Shinn, 2024, p. 236). One area that has remained relatively underexplored in political ecology studies is religion. Dominic Wilkins (2020) notes that the lack of critical engagement with religion has caused political ecologists to overlook key elements in their analyses. This, he argues, leads to partial understandings of interpersonal power dynamics. Likewise, others have long argued that political ecology "has eclipsed its predecessor and cognate field of cultural ecology", but neglecting the cultural, symbolic and religious dimensions of human environment relations (Walker, 2005, p. 73).

In India too, the interface between political and religious ecology has been sparsely documented. Some have looked at the intersection of Hinduism with nature from a political ecological lens; for instance, the cultural politics centered around hydroelectric development on the Ganga that reveals the everyday experiences of local people (Drew, 2017). Others have also explored bovine-human relations centered around religious politics and law (Adcock & Govindrajan, 2019; Narayanan, 2019), or have come closer to depicting forest ecology as reflecting deep-seated religious beliefs and myths. Of importance here is Annu Jalais's exploration of the Bonbibi legend in her book *Forest of tigers: People, politics and environment in the Sundarbans* (2014). The narrative of Bonbibi, as documented in the book, symbolizes the delicate balance between the human inhabitants and the wild. Believed to be protecting the locals from the tiger's wrath and other forest dangers, the

book explores the interface between environmental concerns and the political and cultural history of the region.

While Jalais explores the complex human-tiger relations in the Sundarbans, in this article, I explore more everyday human-snake interactions in agrarian contexts. The effort is to embrace such new narratives at the crossroads of ecological and social dimensions. This approach challenges the ongoing dominance of fortress-style and neo-protectionist environmental strategies, emphasizing that conservation is fundamentally linked to the various ways humans and non-human entities perceive their environments. Thus, it advocates for a place-based perspective of political ecological concerns.

This emphasis on local and multispecies perspectives is not a recent development. Since the 1990s, there has been significant growth in animal-human studies across various disciplines, including anthropology, sociology, gender studies, environmental studies, and geography. Anthropology, has played an interesting historical role, as animals have been integral to its narratives about human societies and cultures. In contexts such as hunting-gathering communities and totemic symbols, animals have held considerable significance. However, as noted by Marvin and McHugh (2014), a major transformation in animal-human relationships emerged with the 'posthuman' intellectual movement. This shift has led to viewing animals not merely as human-like subjects or inanimate objects, but as active participants with their own agencies.

Although animals form an integral part of kinship and subsistence livelihoods in several Indian contexts, what makes Musharu's context unique is the domestic nature of this relationship, coupled with the conservationist propagandas at play from various stakeholders in the region. Snakes have historically been viewed as "problem species", "boundary crossers" (Oommen, 2021, p. 2), and objects of reverence. In Bardhaman, snakes are feared due to the frequency of snake bites, but also revered as folk and local deities of protection and well-being. While human-wildlife interactions in protected areas fall within the purview of environmental scholars and political ecologists, Musharu is an agrarian scenario and shows the micro power dynamics that operate in such settings.

This article synthesizes different approaches – political ecology, environmental history, religious ecology and anthropology – to develop a holistic understanding of conservation politics in India. It explores the complexities of human-animal interactions by integrating multiple theoretical strands. It critiques the global-local disjuncture in environmental discourse, incorporating the need to integrate local struggles. It highlights concerns over exclusionary conservation efforts, focusing on overlooked cohabitation in agrarian spaces, particularly with species like snakes. In doing so, it captures the notion of multispecies justice, where justice is understood through everyday shifts in temporality and spatiality (see Kirskey & Chao, 2022).

4. Insights from the field: Emerging key themes

Although the introduction outlined Bardhaman's agrarian landscape, this section further explores the specific ethnographic setting, encompassing a diverse range of participants- farmers, agricultural laborers, animals, local deities, priests and conservationists. The discussion highlights how animals, as integral components of the natural environment, and deities, as central figures in the cultural realm, remain deeply entwined with the physical landscape and human histories. It therefore brings to light significant theoretical questions and ethical considerations in defining the natural-cultural continuum. Fundamentally, it contends that engaging with Musharu's environment involves sacralizing a subsistence-based ecology; an ecological system that is now evolving in response to the shifting environmental challenges posed by climate change.

Bardhaman's inhabitants anticipate the arrival of the monsoon, and navigate fluid, ever-changing lifeworlds through religious rituals and experiences. However, the village of Musharu stands apart from others of the region due to its distinctive deity-complex centered around snake worship, including their village deity *Jhankeshwari*. Snake worship is a widespread tradition across Bengal, with several villages in east Bardhaman also venerating serpents, including Boro Poshla, Chhoto Poshla, and Palsana. Musharu stands out among these for its direct association of local

serpents with their village deity. In other villages, snakes are easily associated with regional goddesses like Manasa. Snakes thus introduce a unique ecological layer to Bardhaman's overall village deity worship traditions. While other villages symbolically invoke divine protection against climate uncertainties through seasonal fertility rituals, in Musharu this connection is more immediate and tangible, manifesting in the everyday presence of snakes as sacred beings. This direct connection between the village deity and serpents has been instrumental in shaping their cultural history and, in turn, reinforcing their claims of indigeneity.

The narratives surrounding serpents unfold across four interwoven themes, each offering a deeper understanding of their place within local belief systems and ecological discourse. First, the local history of the monocled cobra in this region challenges conventional species classification, as inhabitants assert that these snakes possess distinct physical and behavioral traits that set them apart from their widely recognized counterparts globally. This unique species-level understanding forms the foundation from which other themes emerge. I now integrate scientific perspectives at the species level, offering a clearer understanding of their ecologically sensitive status. A social understanding of the species was presented in Saha (2024).

Second, narratives of nativity and indigeneity arise that are shaped by a concern about the snakes' survival and also the proliferation of their sacred endurance (since in local belief snakes are associated with antiquity and longevity, that elevate them beyond the mortal realm), reinforcing a deep-rooted connection between the serpents and the land. Third, these assertions of indigeneity bring into focus the fluid boundary between human and wild spaces, complicating the traditional dichotomy between domesticated and untamed environments. Finally, from these tensions a compelling dialogue emerges that dissolves rigid distinctions between myth and reality, science and religion, indigenous knowledge and scientific discourse.

Musharu: A local history of Monocled Cobras

Locals in Musharu believe that *Jhanglai*, or the local cobras, are distinct from other monocled cobras in that they are less aggressive and more tolerant of human presence. The scientific classification identifies these snakes as monocled cobras, but experts believe that the ones found in this region exhibit distinct local characteristics. While locals believe them to be less venomous, experts disagree, as their toxicity has been scientifically tested. The reason for their perceived docility, experts explain, is their long-term coexistence with humans, which has led them to become less aggressive over time. This behavioral adaptation is evident when observing infant *Jhanglais*, who tend to be highly aggressive. In contrast, adults have adapted to human presence, recognizing familiar scents and understanding that humans in their vicinity pose no threat.

Despite this, narratives about the "snake's disappearance" frequently surfaced. I was particularly interested in understanding whether local communities were familiar with the concept of endangerment, given its roots in global conservation discourse. For the villagers and experts that I spoke with, the concern was not about official conservation status but a noticeable decline in cobra sightings and breeding patterns. Climate change, particularly rising temperatures, has been cited by experts as a major factor threatening their survival in these regions. It is this regional variant of the monocled cobra that is becoming increasingly rare, a phenomenon that locals interpret as a sign of ecological change.

Experts also acknowledge that these snakes are under threat. Their survival rates have declined due to habitat loss, a shortage of food sources, and the depletion of burrowed spaces for shelter. Thus, experts recognize the snakes' vulnerable existence. However, there is uncertainty about the degree of endangerment. It is possible that they are not officially classified as endangered because as per scientific categorization, they do not differ from other monocled cobras, which remain widespread. Yet, in these specific regions, the variant of monocled cobras that locals insist is physically and behaviorally unique are indeed facing significant threats.

What it does mean if these once-common snakes are disappearing from agricultural landscapes, yet their status as a scientifically discrete population is contested? As political ecologists have pointed out, there is a politics to this ambiguity. Species endangerment assessments often privilege broad species-level categorizations, while ignoring subspecies and culturally significant distinctions, influenced by "assumptions, opinions and consensus" (Petitpas, 2025, pp. 63-73). The localized *Jhanglai* exhibits culturally distinct characteristics and a localized climate threat, which although not acknowledged scientifically, means the snakes are still considered endangered, according to locals. While the monocled cobra, as classified in global scientific discourse, is not endangered, the *Jhanglai* of these agricultural regions are experiencing significant habitat loss and the local community understand them to be in decline.

There are two key findings. One is the disconnect between localized ecological knowledge and scientific classification, i.e., between the *Jhanglai* cobra and the monocled cobra category. While science identifies these snakes as monocled cobras (Naja kaouthia), locals including some experts distinguish *Jhanglai* as a regionally adapted variant. The second is that while officially not endangered, *Jhanglai's* significant disappearance challenges conventional conservation frameworks that rely on global assessments rather than local environmental realities. The story of the *Jhanglai* then, is not simply about a disappearing snake but about the erasure of a historically evolving relationship between species and place, meaning there is an urgent need to recognize such entanglements within conservation discourse.

Climate, indigeneity and religion: Differing stakeholders' narratives

The rising endangerment of *Jhanglai* is of utmost concern for both inhabitants and local conservationists. As I have explained, natives and experts differ in their approaches towards the snakes. In my ethnographic narratives, one of the common themes that emerged was that concerns about the snakes' disappearance are often met with heightened ritualistic arrangements to negotiate climatic imbalance. Indeed, it is interesting that local inhabitants who believe that climate change affects the snakes adversely, also pacify outsiders about the snakes' intense power to control climatic changes. As a middle-aged male resident of Musharu, and a Jhankeshwari devotee, explained while performing rituals to goddess *Jhankeshwari* in the monsoon month of July 2019:

> "These snakes are capable of maintaining climatic equilibrium because they are not ordinary snakes, they are holders of natural balance in the universe."
>
> "Then what about this endangerment story? Isn't it true that they are disappearing fast from the village?" I asked.
>
> He replied, "They are not completely absent…you get to see but a few…that is because of the warm weather I agree, but it does not mean disappearance…their existence is still felt in everyday life…"

Such narratives describe the inhabitants' response to the endangerment debate, as much as they highlight strategies and negotiation to cope with loss. It is not surprising therefore that the rising ritualistic fervor related to the snakes and their increased documentation and media coverage coincide. In other words, it is precisely a concern for the snakes' material and religious existence that has proliferated more display of their religious meanings and power. At other times, however, the response to similar questions about the snakes' chances of survival is met with hesitation. As one of my interlocutors commented, "considering that there are very few snakes that we get to see these days on a regular basis, I am afraid…. if it will show itself to us on the auspicious festival… although we are hopeful."

Such conversations reveal deep-seated anticipation of the snake's actual disappearance from religious lives. Such narrations suggest local people try to provide outsiders with a pleasant story about the snakes: how friendly and homely they are; their significance for climatic balance; and how they are a source of nativist pride. Although they make some effort to conserve the snakes in their natural habitats within human spaces (even removing ticks, which can affect cobras), their narratives construct a different idea of indigeneity. Snakes take on religious and historical importance to assist people to claim nativist identities. Much like human-wildlife interactions in protected areas, where marginal forest-dependent communities continually seek to maintain resource access, Musharu inhabitants also claim *Jhanglai* to be their source of identity and local origin. Moreover, the multispecies interface also reveals contradictory imaginations about these animal neighbors, sometimes as vulnerable victims of climate change and at other times powerful agents who nurture the climate.

Since the Covid-19 pandemic there has been a notable resurgence in the celebration of Musharu's village deity *Jhankeshwari,* during annual worship in the monsoon month of Sravan. This event has garnered significant media attention, with local and social media prominently featuring rituals that involve snakes, which are bathed in milk and displayed for public viewing. The increased visibility of these traditions in news articles and online platforms reflects a broader cultural revival of local religious practices and multispecies engagement, particularly since 2021. This heightened awareness underscores the intricate cohabitation between humans and the natural world, especially as the pandemic illuminated the consequences of our interactions with non-human entities.

In contrast, my discussions with some documentary filmmakers in February 2020 interested in filming this unique coexistence offered a different perspective. The filmmakers argue that improved transportation, communication, and the influx of international media have spotlighted Musharu as a model of harmonious human-animal coexistence. Consequently, the villagers' protests to keep the sacred snakes in their home territory can be viewed as a reflection of their territorial claims and evolving identity politics. They claimed that the pandemic, coupled with social media presence, has made the coexistence story even more displayable, and hence special. In other words, such counter narratives served to 'deromanticize' snake worship in these regions, believing that the inhabitants need more exposure to scientific knowledge. For instance, while locals view snakebites as sacred offerings, outsiders often interpret this as 'superstition' and a lack of scientific judgement. However, as noted by Gordon and Krech (2012), these simultaneous scientific and counter scientific perspectives disrupt conventional categories of knowledge, blurring the lines between science and religion while simultaneously reaffirming those distinctions. Rather than framing beliefs about snake-bite treatments in terms of a science/religion divide, we must understand that the term 'indigenous' carries a moral weight, reflecting a resistance to external hegemony.

The realities of the villagers are thus not incompatible with modernity; rather, they are critically engaged with it. During fieldwork, I observed that villagers frequently interacted with local conservationists dedicated to snake preservation and often employed scientific methods themselves. For instance, removal of ticks from snakes demonstrated their belief that they need human care. Local experts noted that villagers were trained in techniques to keep the snakes parasite-free, and many shared effective home remedies, such as using turmeric powder to treat ticks. These conservation practices were commonly integrated into their daily lives. My discussions revealed that the sacredness of their beliefs sometimes conflicted with scientific approaches to snake protection. Thus, their negotiations between religious and scientific views on snakes are dilemmas for villagers, as well as comfortable adaptations in their particular cultural context.

Human and animal spaces: Narratives on human/wild separation

When national environmental experts engage with the Musharu community, the narrative often becomes subsumed under the rubric of global environmental discourses. Recent visits from international and national media, including the National Geographic Society, alongside Indian

organizations like the Zoological Survey of India (ZSI), have introduced new conservation-focused viewpoints. According to my interlocutors, the snakes in question are now seen as needing urgent protection, prompting calls for further research in controlled laboratory settings. However, local residents vehemently oppose the idea of relocating these sacred snakes from their natural habitats. An elderly woman from Musharu illustrates this sentiment: "We've had many visitors, including those from the Zoological Survey of India, who wanted to take the snakes away for research. But we refused. They are native, and how will they survive elsewhere?" Moreover, the villagers assert their authority over the snakes not only as co-inhabitants of the land but also as revered religious symbols. The *Jhanglai* is considered sacred and protective of the community. Thus, as an elderly native woman expressed, "She is our protector; how can anyone take her away?" Elderly natives particularly insist that their sacred beliefs should not be disregarded by 'outsiders' who have no '*itihas*' (history) with those snakes. What constitutes ecologically sustainable coexistence is intertwined with a divine relationship where snakes protect humans, and vice versa.

These responses highlight ongoing debates surrounding conservation policies in contemporary India, echoing colonial-era perspectives that view wildlife not just as resources to be preserved but as entities requiring scientific protection. The concern for the monocled cobras' survival aligns with what Ramchandra Guha and Joan Martinez Alier (1997) term the "cult of wilderness," which fosters a division between human and natural spaces. In contrast, the villagers' narratives reveal a complex reality where their sacred relationship with *Jhanglai* and their environment is constantly threatened. While they recognize the risk of losing this deity from their ecological lives, they remain reluctant to surrender her to outsiders who might see themselves as superior. Their shared vulnerability with the snakes and land fosters a belief that *Jhankeshwari* will find a way to survive, reflecting their deep connection to the divine and to their environment.

This critique of wilderness raises important questions about the traditional understanding of species classification and the implications of such divisions. It challenges the notion that domestication is a straightforward process that separates humans from wildlife, instead suggesting that these relationships are complex and context-specific. In Musharu, wild animals are not merely objects to be conserved in isolation, but are integral components of the community's identity and daily existence.

Faced with interventionist conservation strategies, the inhabitants' opposition to differentiating between human and natural spaces informs current environmental debates in justice movements. The case of Musharu exemplifies the intricate relationship between human and animal spaces, revealing the challenges that arise when conservation efforts are imposed without considering local realities. The conflict between the ZSI and the villagers highlights the necessity of integrating traditional ecological knowledge into conservation strategies and emphasizes the importance of recognizing local livelihoods in global conservation dialogues. Ultimately, the case reminds us that effective conservation must bridge the gap between scientific authority and the lived experiences of communities, fostering a more inclusive and sustainable approach to biodiversity preservation.

A localized approach also encourages a reevaluation of conservation strategies, advocating for practices that recognize the value of coexistence rather than separation. By situating wildlife within human-dominated spaces, the narrative in Musharu illustrates the potential for sustainable conservation practices that respect both human livelihoods and animal welfare. This narrative ultimately advocates for a more holistic understanding of biodiversity that embraces the realities of shared spaces, highlighting the need for inclusive conservation efforts that reflect the complexities of these interspecies relationships. However, while this section has emphasized 'shared spaces' and 'peaceful coexistence' among human-nonhuman actors, coexistence is a complex and contested issue (Pooley *et al*., 2021). Thus, there are often tensions, fears and occasional conflicting interests underlying these narratives. The next section delves deeper into this theme by exploring the varied responses to snake bites by multiple stakeholders.

Snake bites, modernity and negotiable myths: Narratives on conservation strategies

When examining religious texts about serpents, a notable tension arises between Christian interpretations, which often cast snakes as malevolent beings, and the significance of snakes in other cultural traditions. African literature, for example, frequently celebrates their positive attributes, such as healing and the removal of illness. In contrast to the Christian view of the serpent as a symbol of evil and cunningness, many African narratives portray the serpent as a "spiritual medium and traditional healer" (Kaoma, 2017, p. 168). In India, snakes are often revered as symbols of fertility (Maity, 1966) as symbols of sustenance and abundance (Bhattacharyya, 1965), and as healers (Jash, 1986). In Bengal folk and literary representations, we find snakes depicted as holders of the universe, and as symbols of sustenance (Chatterjee, 2000).

For the villagers of Musharu, snakes are indeed perceived as dangerous, yet this does not equate to them being evil. The *Jhanglai* is a common sight throughout the village, often found burrowing in homes, under beds, and within cupboards. Its origin story is linked to one of Bengal's most cherished and enduring religious-cultural myths about the famous couple, *Behula* and *Lakhindar*.[7] As one informant remarked, "We fear only our enemies, but the snake is not our enemy."

This sentiment underscores a sense of sacred nativism, where the true enemy is seen as an outsider, even if the dangers lurk within their own environment. For instance, the snakebite inflicted by *Jhanglai* is viewed as a form of the deity's *prasad*, a sacred blessing bestowed upon individuals. In this belief, the body becomes an offering to *Jhanglai*, and the snakebite signifies her acknowledgment of devotion. This revered blessing is considered so sacred that it must be kept confidential. An elderly woman shared with me at the beginning of my fieldwork, that "If someone receives the *prasad*, they must bathe in the holy pond by the village temple… Seeking hospital treatment is not advisable… we handle it ourselves."

As my discussions with the villagers progressed, they explained that this practice has historically been a customary and effective way to manage snake bites. One woman in her late fifties recounted how their mothers and grandmothers would tightly bind the affected area to stop the poison from spreading. Furthermore, applying mud from Musharu to the bite site symbolizes their connection with these snakes as co-inhabitants of the land. Thus, villagers consistently expressed that snakebites should be treated within the community, rather than in city hospitals. Initially, I thought this was merely a superficial claim about the deity and her powers made for the benefit of outsiders. However, I was astonished to learn how rigorously these traditions were adhered to when it came to addressing snakebites.

This treatment practice is in sharp contrast to the perspectives of local conservationists who instead draw attention to the poisonous nature of the snakes and snakebite treatment through medical assistance. Conservationists and medical professionals are adamant about raising awareness regarding the detrimental effects of snakebites. Many conservationists are quick to characterize *Jhanglai's* sacredness as either a superstitious tradition that must be eradicated through scientific understanding or as a negotiable myth that aligns with their conservation goals while supplemented by scientific explanations. There are significant shortcomings in this line of reasoning, however. Firstly, conservationists often presume that there is a straightforward reality underlying these myths. For example, some local environmentalists believe that if villagers were to seek treatment for snakebites in hospitals, their belief systems would shift away from superstitions. This perpetuates a colonial mindset, suggesting that all indigenous peoples are inherently religious and can be corrected through exposure to scientific knowledge (Whitt, 2009).

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[7] In this legend, *Behula* is a devoted follower of the goddess Manasa. When her husband *Lakhindar* is bitten and killed by a snake sent by Manasa on their wedding night, *Behula* embarks on a journey across Bengal's waterways to revive him. Thus, in Bengali folklore, snakes embody both destructive and protective qualities. The name *Jhanglai* is believed to come from the jingling of *Behula*'s bangles.

গায়ে এঁটুলির বাসা, কমছে ঝঙ্কেশ্বরী

রানা সেনগুপ্ত ● বর্ধমান

ঝঙ্কেশ্বরী। নিজস্ব চিত্র।

Figure 2: A newspaper report on the endangered status of *jhanglai* in Musharu and its adjoining areas. (Courtesy: Anandabazar Patrika)

Secondly, it is important to consider how and why snakes have become sacred symbols for the villagers. It would be inaccurate to assume that they lack practical understanding of their relationship with snakes. Many villagers have developed innovative and effective strategies, such as providing separate spaces for snakes within their homes, to manage their coexistence with these creatures. Additionally, some snake origin myths recount significant environmental events that have historically shaped the village. For instance, as previously noted, floods have profoundly impacted older generations, creating chaos but also leading to unique interactions with these revered reptiles. Thus, contrary to scientific narratives, explanations for the presence of snakes are as much rooted in environmental factors as they are in religious beliefs. In this context, religion and environment are intricately intertwined, both playing vital roles in the villagers' sacred understanding of their world.

Local conservationists also believe that ritualistic arrangements organized around *Jhankeshwari* worship can ensure the survival of snake species. The conservationists I interviewed raised a very interesting question of whether indigeneity, worship and conservation could go hand in hand. In my conversation with a primatologist-conservationist popularly known in the region, they noted that snakes are nurtured and cared for, although still threatened as a species. The implication was that the religious beliefs of Musharu's residents offer valuable strategies for species conservation. The villagers view the snakes, particularly the goddess *Jhankeshwari*, as their protectors, while some conservationists believe that the villagers' reverence for these snakes helps prevent them from becoming endangered by refraining from harming their village guardian.

However, although local conservationists recognize and appreciate the villagers' spiritual practices and their coexistence with nature, they agree that pressing issues like climate change – manifested through decreased rainfall and extreme heat – pose significant threats to the cobras' survival. According to them, the snakes thrive in monsoonal climates, which are essential for their breeding. The presence of rain not only increases their activity but also makes them more visible in the villagers' daily lives. Furthermore, they note that rising temperatures lead to decreased aggression in the snakes, hindering their ability to survive in an increasingly hostile environment.

There are multiple stakeholders striving to comprehend the role of snakes and the strategies for their conservation in Musharu. The local inhabitants perceive them as integral to their human habitat,

advocating for conservation efforts that occur within these shared spaces. Their belief in the snakes' survival is deeply intertwined with their religious worldviews and indigenous identity, which frames their resistance to outside interventions as inherently political acts aimed at preserving their cultural heritage. Their efforts to maintain the snakes as part of their everyday environment reflect a commitment to safeguarding their identity.

Conversely, state-level medical professionals focus on raising awareness about the venomous nature of these snakes, prioritizing human safety and advocating for proper medical treatment in the event of a snakebite. Their approach centers on protecting people rather than fostering a symbiotic relationship with wildlife. As noted above, national agencies, such as the Zoological Survey of India, take a different stance, insisting that snakes should be removed from their natural habitats for intensive study in controlled environments. Promoting such a separation between wildlife and human dwellings often disregards the interconnectedness of these spaces.

In contrast, individuals outside of Musharu's community offer a different viewpoint. One filmmaker pointed out that improved transportation, enhanced communication, and the influx of international media have positioned Musharu as a notable example of harmonious coexistence between humans and animals. As a result, locals are leveraging this attention to assert their rights. Their protests to protect the sacred snakes in their native habitat reflect their territorial claims, becoming a component of their evolving 'identity politics.'

In this complex landscape, local conservationists therefore seek to mediate between these diverse interests; snake reverence, and raising awareness about effective snake-bite treatments. They argue that ritualistic interactions with snakes are not inherently regressive but can, in fact, contribute to their survival. They advocate for community-based initiatives to prevent these snakes from becoming endangered, emphasizing the need for active participation from the Musharu villagers. They maintain that it is crucial to draw a distinction between ritual and superstition, opposing the notion of treating snake bites solely within the community. Instead, they assert that medical science and hospital treatment are essential for effectively addressing snake bite incidents. This unique interplay of differing ideologies – from environmentalists and medical experts to indigenous perspectives and wildlife managers – creates a distinctive situation in Musharu, highlighting the complexity of conservation efforts in a context where cultural beliefs and ecological realities intersect.

5. Conclusion

The most contested understanding that emerges from these themes is the notion of human-wildlife coexistence. Typically, in everyday discourse and policy narratives, such relationships are framed in binaries: either as dangerous when species stray from designated wild spaces, or as harmonious when integrated within human-inhabited environments. However, recent scholarship shows how coexistence encompasses a range of experiences. Pooley *et al.* (2021) argues that coexistence calls for living with wildlife in ways that allow both to survive while accepting some risks. Glikman *et al*. (2021) and Fiasco and Massarella (2022) caution us about the word 'coexistence,' focusing on making it more meaningful and empirically driven. Meanwhile, Jolly and Stronza (2025) view coexistence as involving both positive and negative interactions, decentering humans in multispecies landscapes.

The case of Musharu similarly reveals that coexistence is dynamic, multi-layered, and context dependent. While narratives of peaceful human-snake interactions dominate local discourse, they do not negate the presence of tension, fear, and occasional conflict. Different actors thus interpret coexistence in differing ways. Similarly, while external conservation narratives may romanticize coexistence, overlooking its nuances, the article has shown that coexistence could mean an ongoing negotiation determined by changing topographical and socio-cultural dynamics. Acknowledging these complexities allows for a more nuanced discussion on multispecies justice.

In conclusion, the conservation of snakes in Musharu presents a compelling case that transcends the conventional narratives often associated with climate change and agrarian challenges

in the region, Bardhaman. While discussions about climate change typically focus on agricultural problems, they often neglect the broader implications for species and wildlife conservation. The situation in Musharu is a unique form of human-snake cohabitation, reflecting post-humanist trends that recognize the interconnectedness of all living beings. Moreover, as one local village informant poignantly remarked during my visit, "COVID has made us aware of what *prakriti* (nature) can do to us," emphasizing the significance of nature in our lives. Ultimately, this emerging theme suggests that the pandemic has prompted a reevaluation of our place within an ecosystem, reminding humans of our interdependence and the necessity of honoring the broader environment represented by these revered creatures. This sentiment resonates deeply with the community's understanding of their relationship with snakes, symbolizing a harmonious coexistence, often with conflicting interests of various stakeholders, but nonetheless highlighting human vulnerability and the need for alternative voices in the entire debate on wilderness protection.

The article has questioned the dichotomy between humans and environments, emphasizing that conservation is not merely about delineating boundaries but is also intricately linked to concepts of environmental justice. Movements advocating for environmental justice seek to address the inequities faced by humans and wildlife, promoting a more holistic approach to conservation that honors local beliefs and practices. By understanding the cultural and ecological significance of snakes, we can appreciate the nuanced dynamics of coexistence that define the relationship between the human-environment relationship. Ultimately, the conservation efforts in Musharu are a vital reminder that effective conservation must consider the intricate ties between humanity and the natural world, paving the way for more inclusive and just environmental practices.

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