

Tourism, Conservation and Coastal Livelihoods: A Study of Olive Ridley Nesting Beaches in Agonda and Galgibag, South Goa

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Abstract: Coastal Goa is a place where wildlife conservation, tourism, and local livelihoods meet and sometimes collide. This study examines the relationship between Olive Ridley sea turtle (*Lepidochelys olivacea*) conservation and a tourism-dependent community at Agonda, a popular sea turtle nesting beach in South Goa, in comparison with the quieter sea turtle nesting site of Galgibag. This study takes as its point of entry the High Court-ordered closure of coastal structures at Agonda in March 2025 for Coastal Regulation Zone (CRZ) violations, and the community's response to it. Drawing on ethnographic observation and secondary data, Forest Department records, news reports, and policy documents, to explore how conservation is negotiated among the Forest Department, tourism operators, and locals. This study further documents the conservation practices at the study site: hatchery-based nest relocation, in situ protection, and seasonal regulation of light, noise, and beach use, alongside the participatory role of local stakeholders. Comparing recorded egg numbers at Agonda and Galgibag, the paper finds consistently higher figures at Agonda, but argues, against a simple tourism-friendly reading, that this pattern reflects a combination of factors such as natal philopatry, monitoring effort, beach length, and habitat, together with community participation rather than tourism or conservation effort alone. The paper concludes that abrupt regulatory closures, imposed without regard to their socio-economic impact, risk eroding the community cooperation on which conservation depends, and instead argues for a collaborative framework that reconciles CRZ compliance with livelihoods. It thereby offers a sociological account of conservation and human-wildlife coexistence on a tourism coast.

Keywords: Conservation, Olive Ridley Turtles, Coastal Tourism, Livelihoods

INTRODUCTION

Along India's coast, the protection of nesting sea turtles increasingly unfolds in places that are also sites of tourism and local livelihood, making conservation as much a social and economic negotiation as an ecological one. The olive ridley turtle (*Lepidochelys olivacea*), the most abundant sea turtle in Indian waters, is listed as a Schedule I species under the (Wildlife (Protection) Act, 1972) the highest level of legal protection in India, under which hunting, trade and any form of harm are prohibited and attract the strictest penalties. In Goa, four beaches are recognised as Olive Ridley nesting sites under the Coastal Regulation Zone (CRZ) Notification, 2011, including Agonda and Galgibag in Canacona taluka, South Goa, and in North Goa, Morjim, and Mandrem. At such sites, statutory protection of nesting habitat coexists, often uneasily, with an economy built on coastal tourism.

This tension came into sharp relief in March 2025. On 22nd March 2025 following concerns over environmental compliance, the High Court of Bombay at Goa ordered the closure of 57 structures operating at Agonda in violation of the CRZ Notification, 2011 (Herald Goa, 2025). In response, locals connected to the hospitality sector, beach-shack and guesthouse owners, and allied skilled workers such as carpenters, electricians, plumbers, and vegetable vendors staged a silent protest to voice their solidarity and to highlight the economic hardship the closures caused. As ethnographic researchers present at the site, we observed the protests and documented the community's response. The 22nd March 2025 event frames this paper's central concern, that is, how is turtle conservation negotiated among the Forest Department, tourism operators, and locals on a beach that is at once an ecological hotspot and a tourism economy?

This study addresses this gap through a comparative study of Agonda, a high-coastal-tourism beach, and Galgibag, a low-coastal-tourism beach. In doing so, it pursues three objectives.

- a. To document the conservation practices in Agonda and Galgibag
- b. To interpret the comparative record of nesting of olive ridley nesting in Agonda and Galgibag
- c. To understand the interplay between coastal tourism and turtle conservation in Agonda and Galgibag

STUDY AREA

Agonda Beach stretches approximately 3 km along the Arabian Sea in Canacona taluka, South Goa (15.0456° N, 73.9889° E). A sandy strip backed by coconut palms and casuarina was once a secluded fishing village dependent on artisanal fishing and coconut cultivation, but over recent decades it has become a prominent international tourist destination, with its beachfront lined with shacks, guesthouses, and eco-retreats (Gaunkar et al., 2025; Noronha and Lourenço, 2018). Galgibag Beach (14.9600° N, 74.0496° E) lies further south in the same taluka near the Goa–Karnataka border. Stretching about 1.7 km and bordered by the Talpona River estuary, it is among the state's least disturbed sandy stretches. Locally known as *Turtle Beach*, it supports artisanal fishing, clam collection, and cashew cultivation, with minimal tourism. Both beaches are among the four designated olive-ridley nesting sites protected under the CRZ Notification 2011.

Figure 1: Location of Agonda and Galgibag on the South Goa coast



Figure 2: Proximity map showing Agonda beach and Galgibag beach, South Goa



Source: Google Maps

REVIEW OF LITERATURE

Existing scholarship on conservation has increasingly moved away from a 'fortress' model that excludes people, towards participatory or community-based approaches in which local stakeholders are partners in protection. In the Indian marine-turtle context, community participation through the reporting of nests, awareness-raising, and adherence to seasonal guidelines has been recognised as an important complement to formal management (Shanker & Pilcher, 2003; Rajagopalan et al., 2016). Studies of Goa, meanwhile, have long noted the paradoxes of tourism, which bring both economic benefit and social and ecological disruption to coastal communities

(Wilson, 1997; Noronha and Lourenço, 2018). However, relatively little sociological attention has been paid to how conservation, tourism, and livelihoods intersect at specific nesting beaches in the state. A beach shack, referred to throughout, denotes a small, often temporary or semi-permanent structure of wood, bamboo, and thatch used commercially in tourism areas as an informal eatery, bar, or resting place (Noronha, 2003).

METHODOLOGY

This study adopts a qualitative ethnographic approach. Primary material was gathered through participant observation, including direct observation of the March 2025 silent protest and conservation activities on the beach, and informal conversations with local stakeholders, including beach-shack operators, residents, and Forest Department personnel. This was combined with secondary data: The Forest Department's Olive Ridley nesting records for Agonda and Galgibag, government policy documents, and current news reports.

RESULTS

The March 2025 Closures and Community Response

Closure orders generate significant uncertainty and distress among local business owners, particularly in the tourism sector, which is a vital component of the local economy. Official reports indicate that such disruptions carry far-reaching consequences for livelihoods that depend on seasonal tourism flows (Government of Goa, Department of Tourism 2025). The silent protest that followed, bringing together shack and guesthouse owners along with allied service providers such as carpenters, builders, fitters, electricians, plumbers, and vendors, expressed both solidarity and the hardship of enforcement. This reflects a wider tension between conservation policy and tourism-dependent livelihoods, and it is this tension, rather than a straightforward story of protection, that the site presents.

Conservation Practices and Stakeholder Participation at Agonda

Conservation in Agonda primarily relies on hatchery-based management. Because Olive Ridley eggs on the beach are vulnerable to predation by dogs and crows, and to anthropogenic threats such as illegal sand extraction and egg collection for local consumption (Times of India, 2015), most clutches are relocated by the Forest Department, the authorised agency to a hatchery sited above the high-tide line, where they are protected from tidal inundation, storm washout, and human disturbance, improving nest survival. Where nests are laid close to the hatchery within an already secure and monitored zone, they are retained *in situ* and protected at their original location. This dual situational strategy balances minimal disturbance of the natural site against effective protection. Hatcheries also serve an educational role, helping locals, tourists, and researchers understand why turtles matter.

Conservation is not confined to hatcheries. During the nesting season, a range of situational measures is applied on the beach: seaward-facing lighting is minimised and its intensity is reduced, since excessive light can deter nesting females and disorient hatchlings; loud music and nocturnal

beach activity are restricted, in effect creating temporary silence zones; stretches of beach are cordoned off and vehicular access is limited in sensitive areas; and forest officials and local volunteers undertake night patrolling and monitoring. These measures, while ecologically necessary, intersect with and constrain tourism practices and are a recurring source of friction. Within this framework, local stakeholders play a supportive yet meaningful role. Shack operators adopt eco-friendly practices, such as reducing light and noise during the season, in line with conservation guidelines (Government of Goa, 2022). Residents and tourists report turtle sightings and tracks to the Forest Department, enabling timely intervention (Rajagopalan et al., 2016; Shanker and Pilcher, 2003). Relocation and hatchery management remain the Forest Department's responsibility, with the community contributing through reporting, awareness, and adherence to guidelines, a participatory model in which formal institutional mechanisms are complemented by community involvement.

Figure 3. Newly hatched Olive Ridley turtle (*Lepidochelys olivacea*) hatchlings were collected in containers with sand as part of conservation efforts in April 2025 prior to release into the sea.



(Source: Authors, Fieldwork, 2025)

Nesting at Agonda and Galgibag: Interpreting the Comparison

The Forest Department's records showed consistently higher egg numbers at Agonda than at the quieter Galgibag (Table 1). It is appealing to read this as evidence that responsibly managed tourism causes no harm. That human presence, when well governed, is compatible with nesting. The participation of local stakeholders and business owners in conservation is indeed a positive development, and a reduction in disturbance plausibly supports nest survival. However, the comparison itself must be read with caution.

Table 1: Olive Ridley eggs incubated at Agonda and Galgibag, 2020–2026.

Year	Agonda (egg count)	Galgibag (egg count)
2020	1,000–1,500	500–1,300
2021	2,000–3,000	400–700
2022	2,662	1,162
2023	7,000	2,100–2,500
2024	18,011	4,369
2025	14,483	4,603
2026	5,504	2,189

Source: Forest Department, Government of Goa (2026).

Several caveats apply. First, the figures are egg counts rather than counts of clutches or nesting females, which would be a more informative measure of nesting activity; egg totals are sensitive to clutch size and how many nests are relocated. Second, hatchery counts may include clutches relocated from adjacent stretches; therefore, they do not map neatly onto nesting on the two beaches. Third, the low figures for 2020 and 2021 coincide with the COVID-19 period when monitoring was constrained, introducing a likely downward bias for those years.

More fundamentally, from an ecological standpoint, a higher number of nests in Agonda is not surprising and cannot be attributed solely to tourism-compatible practices. Olive ridleys display natal philopatry, a tendency to return as adults to the region where they hatch. Today's nesting partly reflects the conditions at Agonda one to three decades ago, when current nesters emerged (Tripathy and Pandav, 2008). As solitary nesters, olive ridleys show only moderate and variable beach fidelity, with nests distributed across beaches within and between seasons (Plotkin 2007). Beach length and morphology, sediment and moisture, and differences in monitoring efforts further shape the counts: a longer, more intensively patrolled beach will record more nests. Therefore, higher numbers at Agonda are best read as the product of several ecological and observational factors alongside community participation, rather than as proof that tourism and nesting are straightforwardly compatible.

DISCUSSION

Livelihoods, Tourism and the Socio-economic Stakes

The stakes in enforcement are clear from the role of tourism in local livelihoods. For many families in Agonda, tourism is not a seasonal supplement but the primary, and sometimes sole, source of income, supporting a chain of occupations from shack and guesthouse operations to transport, food supply, handicrafts, and beach services. Closures for CRZ violations disrupt not only business owners but also cooks, cleaners, taxi drivers, vendors, artisans, skilled workers, and the families who depend on them, producing a community-level ripple effect. Many of these establishments have operated for years and have contributed to both the local economy and turtle conservation; abrupt closures that do not weigh this socioeconomic impact risk severe hardship for hundreds of villagers.

Towards a Collaborative Conservation Framework

The difficulty is that such closures may also undermine the cooperation on which conservation depends. While temporary shutdowns can reduce immediate disturbances to nesting turtles, they strain the long-standing partnership between local stakeholders and conservation authorities that has underpinned turtle protection in Agonda and Galgibag. A more durable approach would replace blanket closure with a collaborative framework that secures CRZ compliance while allowing responsible tourism to continue through regular environmental audits, clearer and stricter construction guidelines, and closer cooperation among local authorities, conservation agencies, and business owners. Such a framework would protect nesting sites without jeopardising the livelihoods bound up with them.

CONCLUSION

Agonda offers a suggestive, if qualified, case of coexistence between a tourism economy and a protected nesting beach. Its consistently higher recorded egg numbers should not be read, on their own, as proof that tourism and conservation are simply compatible. Natal philopatry, beach morphology, and monitoring effort all shape the comparison, and egg counts are an imperfect measure of nesting. The present study shows that community participation, effective reporting, community awareness, and the seasonal moderation of light, noise, and beach use can meaningfully support nest survival and that the cooperation of residents and business owners is an asset worth protecting. Abrupt regulatory closures, imposed without regard to their socio-economic consequences, risk eroding cooperation. A negotiated, participatory framework that reconciles CRZ compliance with livelihoods offers a more sustainable path in which the people of the coast remain partners in, rather than casualties of, the protection of its turtles.

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