

ENVIRONMENTAL SUSTAINABILITY AND RESIDENT ATTITUDES TOWARD ECOTOURISM IN THE WESTERN GHATS REGION OF CHIKKAMAGALURU: AN INTEGRATIVE LITERATURE REVIEW

Ashish Parthasarathy¹

Research Scholar, Faculty of Management Studies

CMS Business School, JAIN (Deemed-to-be University)

Dr. Hemanth Kumar S²

Professor, Faculty of Management Studies

CMS Business School, JAIN (Deemed-to-be University)

ABSTRACT

Chikkamagaluru, a district nested in the biodiversity-rich Western Ghats of Karnataka, has emerged over the past two decades as a fast-growing hill-station destination built around coffee-estate homestays, trekking circuits, and proximity to protected areas such as the Bhadra Wildlife Sanctuary and Kudremukh National Park. While tourism has diversified local livelihoods, the ecological fragility of the Western Ghats — a UNESCO World Heritage Site and one of the world's designated biodiversity hotspots — raises pressing questions about whether current tourism growth is environmentally sustainable, and how host residents themselves perceive and respond to this growth. This paper presents an integrative literature review that synthesises resident-attitude theory, sustainable-tourism and ecotourism frameworks, and the limited body of Western Ghats-specific empirical evidence to examine environmental sustainability and resident attitudes toward ecotourism in the Chikkamagaluru region. Drawing on Social Exchange Theory, Doxey's Irritation Index, and Butler's Tourism Area Life Cycle model, the review develops an integrative conceptual framework linking environmental, socio-cultural, and economic impact perceptions to resident support for, or resistance against, sustainable ecotourism. The review finds that while a substantial international literature addresses resident attitudes toward tourism in general, empirical research that directly examines resident perceptions in Chikkamagaluru specifically remains scarce, with most Western-Ghats-focused evidence concentrated in neighbouring districts such as Wayanad and Kodagu. The paper concludes by identifying priority directions for primary research and by outlining policy-relevant implications for destination governance, carrying-capacity management, and community-inclusive tourism planning in ecologically sensitive hill regions of India.

Keywords: *sustainable tourism; ecotourism; resident attitudes; Western Ghats; Chikkamagaluru; Social Exchange Theory; biodiversity conservation; community perceptions*

1. Introduction

Tourism in ecologically sensitive mountain and forest regions occupies an uneasy position between economic opportunity and environmental risk. Nowhere is this tension more visible in peninsular India than in the Western Ghats, a mountain chain that runs roughly 1,600 kilometres along India's western coast and that has been designated a UNESCO World Heritage Site in recognition of its exceptional biodiversity and evolutionary significance (UNESCO, 2012). The Western Ghats–Sri Lanka region is one of only a small number of global

biodiversity hotspots, defined by Myers et al. (2000) as areas containing at least 1,500 endemic vascular plant species that have already lost 70 percent or more of their original habitat; Gunawardene et al. (2007) note that the range hosts extraordinarily high levels of floral and faunal endemism concentrated in its remaining evergreen forest fragments.

Within this broader ecological landscape, Chikkamagaluru district has become one of Karnataka's most visible tourism growth stories. Long known as the birthplace of coffee cultivation in India, the district's cool climate, coffee-estate landscapes, and proximity to peaks such as Mullayanagiri and Baba Budangiri, along with protected areas including the Bhadra Wildlife Sanctuary and Kudremukh National Park, have attracted a rapidly expanding homestay and plantation-tourism industry. This growth mirrors a broader pattern across the Western Ghats, where coffee and tea plantations, hydroelectric development, and tourism together place cumulative pressure on forest ecosystems (Varghese & Natori, 2024).

Yet tourism growth in such settings is rarely evaluated adequately without accounting for the perspectives of the people who live with its consequences daily — the host residents. A substantial international literature has developed since the 1970s around the question of how residents perceive, evaluate, and respond to tourism development in their communities (Ap, 1992; Doxey, 1975; Gursoy, Jurowski, & Uysal, 2002). This literature establishes that resident attitudes are not a peripheral concern but a central determinant of whether tourism development is sustainable in practice: destinations whose residents feel excluded from decision-making or burdened by unshared costs tend, over time, to exhibit declining hospitality, weaker community support for conservation measures, and ultimately reduced destination competitiveness (Sharpley, 2014).

This review addresses three interlocking questions. First, what does the international literature on resident attitudes and sustainable tourism suggest about how environmental, socio-cultural, and economic impacts shape host-community responses to tourism growth? Second, what does the more limited body of Western Ghats-specific and Karnataka-specific research reveal about these dynamics in practice? Third, what does this synthesis imply for Chikkamagaluru specifically, given the relative scarcity of place-based empirical evidence? In addressing these questions, the review aims to provide both a theoretically grounded synthesis for the academic literature and a practically useful evidence bases for destination planners and policymakers.

2. Study Context: Chikkamagaluru and the Western Ghats

Chikkamagaluru district sits in the central Western Ghats of Karnataka, an ecoregion that Gunawardene et al. (2007) describe as retaining only a fraction of its original primary vegetation despite its outsized global conservation importance. The district's economy has historically rested on coffee, spice, and horticultural cultivation, with plantation agriculture shaping both the physical landscape and the social structure of rural communities. Over the past two decades, however, a parallel homestay and plantation-tourism economy has grown rapidly, converting working coffee estates into visitor accommodation and repositioning rural residents as hosts, guides, and small tourism entrepreneurs alongside their agricultural roles.

This trajectory is not unique to Chikkamagaluru. Comparable dynamics have been documented in Wayanad, Kerala, where Varghese and Natori (2024) trace how an agrarian crisis pushed local livelihoods toward tourism, with consequences including encroachment into forest land, rising human–wildlife conflict, and the marginalisation of indigenous Adivasi communities from the benefits of tourism growth. Similarly, in Kodagu (Coorg), the district immediately adjacent to Chikkamagaluru, Ganguly et al. (2025) quantified the carbon footprint associated with resident energy use and tourism-related transport, finding that road transport linked to tourism accounted for the majority of tourism's carbon burden even though the district's overall per-capita footprint remained below the national average. These neighbouring cases matter for a Chikkamagaluru-focused review precisely because they share the same ecoregion, a similar plantation-to-homestay economic transition, and comparable protected-area proximity, making them the closest available proxies for evidence that does not yet exist in comparable depth for Chikkamagaluru itself.

3. Theoretical Framework

Three theoretical traditions anchor this review: Social Exchange Theory as applied to host-community attitudes, stage-based models of destination and resident evolution, and sustainability/ecotourism frameworks that specify what “sustainable” tourism development should achieve.

3.1 Social Exchange Theory and Resident Attitudes

Social Exchange Theory (SET) remains the dominant lens through which tourism scholarship explains resident attitudes. Ap (1992) formalised the application of SET to host-community perceptions, proposing that residents evaluate tourism development according to the balance of benefits they receive (income, employment, infrastructure) against the costs they bear (environmental degradation, congestion, cultural strain), and that residents who perceive a favourable exchange are more likely to support continued tourism development. Jurowski, Uysal, and Williams (1997) extended this logic into a theoretical model in which community attachment, economic gain, and use of the tourism resource base jointly shape residents' perceived social, economic, and environmental impacts, which in turn determine their support for tourism.

Gursoy, Jurowski, and Uysal (2002) subsequently refined this model, arguing that aggregating impacts into broad cost–benefit categories obscured important distinctions; their structural model instead separated perceived impacts into economic benefits, social benefits, social costs, cultural benefits, and cultural costs, each with distinct effects on support for development. Gursoy and Rutherford (2004) further improved this structural approach, while Andereck, Valentine, Knopf, and Vogt (2005) provided large-sample survey evidence that residents simultaneously recognise both positive and negative tourism consequences, with perceived personal benefit and community-level economic importance predicting support independently of awareness of negative impacts. Andereck and Vogt (2000) had earlier shown that residents'

attitudes toward tourism vary systematically with the specific type of development being proposed, while Andereck and Nyaupane (2011) extended the SET tradition to show that tourism's perceived effect on residents' quality of life mediates the relationship between economic benefit and support for tourism. Ap and Crompton (1998) contributed a validated multi-item scale for measuring perceived tourism impacts that remains widely used in subsequent resident-attitude research.

Two important qualifications temper this body of work. First, Nunkoo, Smith, and Ramkissoon (2013), reviewing 140 articles published between 1984 and 2010, observe that the field has moved from largely descriptive early studies toward greater theoretical and methodological maturity, but that competing theoretical lenses — including community attachment theory, growth-machine theory, and social representation theory — continue to coexist with SET rather than converge on it. Second, Sharpley (2014), synthesising several decades of host-perception research, argues that despite this proliferation of studies, the field has struggled to move beyond confirming that residents hold mixed attitudes, and calls for research that more directly connects resident perceptions to actionable destination-management decisions rather than treating attitude measurement as an end in itself.

3.2 Stage-Based Models: Doxey's Irridex and Butler's Tourism Area Life Cycle

A complementary, older tradition models resident attitudes as evolving predictably over a destination's growth trajectory. Doxey (1975) proposed an “Irritation Index” (Irridex) in which host communities pass through four sequential stages — euphoria, apathy, irritation, and antagonism — as tourist numbers and the associated strain on local resources increase. Butler (1980) proposed a parallel six-stage Tourism Area Life Cycle (TALC) model — exploration, involvement, development, consolidation, stagnation, and eventual decline or rejuvenation — describing how destinations evolve as visitor numbers and infrastructure investment grow. The two models are frequently read together: as a destination progresses through Butler's TALC stages, community irritation is expected to track Doxey's Irridex, with unmanaged growth eventually generating antagonism that undermines the very hospitality that made the destination attractive.

Figure 3 summarises the Irridex model. Its relevance to Chikkamagaluru is direct: a district that has moved within a relatively short period from a modest, agriculture-centred visitor economy to a densely marketed homestay destination is, on this model's logic, a plausible candidate for accelerating transition through these stages — a hypothesis that, notably, has not yet been tested with primary resident survey data specific to the district.

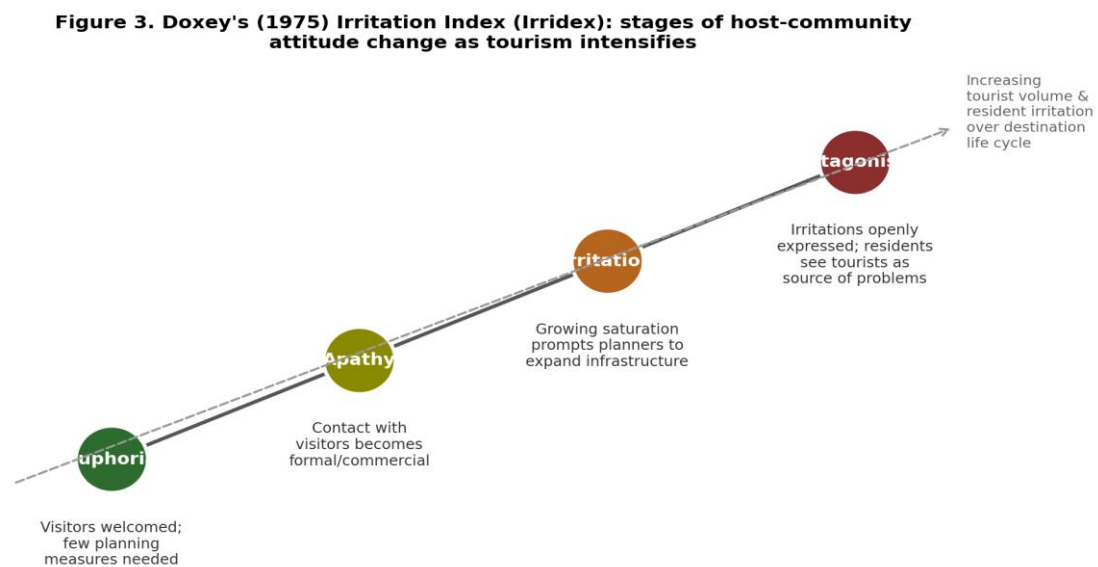


Figure 3. Doxey's (1975) Irritation Index (Irridex): stages of host-community attitude change as tourism intensifies.

3.3 Ecotourism and Sustainable Tourism Frameworks

The environmental dimension of this review draws on the ecotourism and sustainable-tourism literatures specifically. Ceballos-Lascuráin (1987) provided one of the first formal definitions of ecotourism as travel to relatively undisturbed natural areas for the purpose of studying, admiring, and enjoying scenery, wildlife, and associated cultural features, conducted in a manner that supports conservation and the socio-economic involvement of local communities. Weaver (2001) documents how this definition subsequently broadened to incorporate explicit conservation, community-benefit, and educational criteria, reflecting the field's shift from a narrowly defined niche product toward a set of operating principles that could, in theory, apply across the wider tourism sector.

At the level of destination management, Choi and Sirakaya (2006) developed a widely cited set of sustainability indicators for community tourism, organised around six interdependent dimensions — political, social, ecological, economic, technological, and cultural — derived through a Delphi process with tourism experts. This framework is useful for a Chikkamagaluru-focused review because it explicitly treats ecological and community/social dimensions as parallel, mutually reinforcing pillars rather than competing priorities, consistent with the broader sustainable-development principle, first articulated at the international policy level by the World Commission on Environment and Development (1987), that development should meet present needs without compromising the ability of future generations to meet their own. The World Tourism Organization and United Nations Environment Programme (2005) later operationalised this principle specifically for tourism, defining sustainable tourism as tourism that takes full account of its current and future economic, social, and environmental impacts, addressing the needs of visitors, industry, the environment, and host communities alike. The International Ecotourism Society (2015) subsequently distilled these principles into practice-oriented guidance emphasising minimal physical and social impact, environmental and cultural respect, and direct financial benefit for conservation and local people. Finally, Murphy (1985)

had earlier argued, in an influential community-approach framework, that tourism planning succeeds only when local communities are treated as central stakeholders in destination decision-making rather than as passive hosts — an argument that anticipates much of the subsequent resident-attitude literature reviewed in Section 3.1.

4. Review Methodology

This paper adopts an integrative, narrative literature review methodology rather than a fully systematic review, reflecting both the interdisciplinary scope of the topic (spanning tourism management, conservation biology, and rural development) and the deliberately place-specific focus on Chikkamagaluru and the wider Western Ghats. The review nonetheless followed a structured, semi-systematic search and screening process, summarised in Figure 1.

Search terms combined the destination (“Chikkamagaluru” / “Chikmagalur”, “Western Ghats”, “Karnataka”, “Kodagu”, “Wayanad”) with topical terms (“sustainable tourism”, “ecotourism”, “resident perceptions/attitudes”, “host community”, “carrying capacity”, “biodiversity hotspot”) across academic search engines and publisher repositories. Records were screened first by title and abstract to remove non-scholarly material (travel-industry blogs, homestay marketing pages, and tourism-board promotional content, which appear prominently in general web searches on this topic but do not constitute peer-reviewed evidence), and then assessed in full text for direct relevance to resident attitudes, environmental sustainability, or ecotourism theory. The final synthesis draws on 24 sources spanning foundational resident-attitude theory, ecotourism and sustainability frameworks, Western Ghats conservation science, and the small set of empirical case studies located in the Western Ghats region itself.

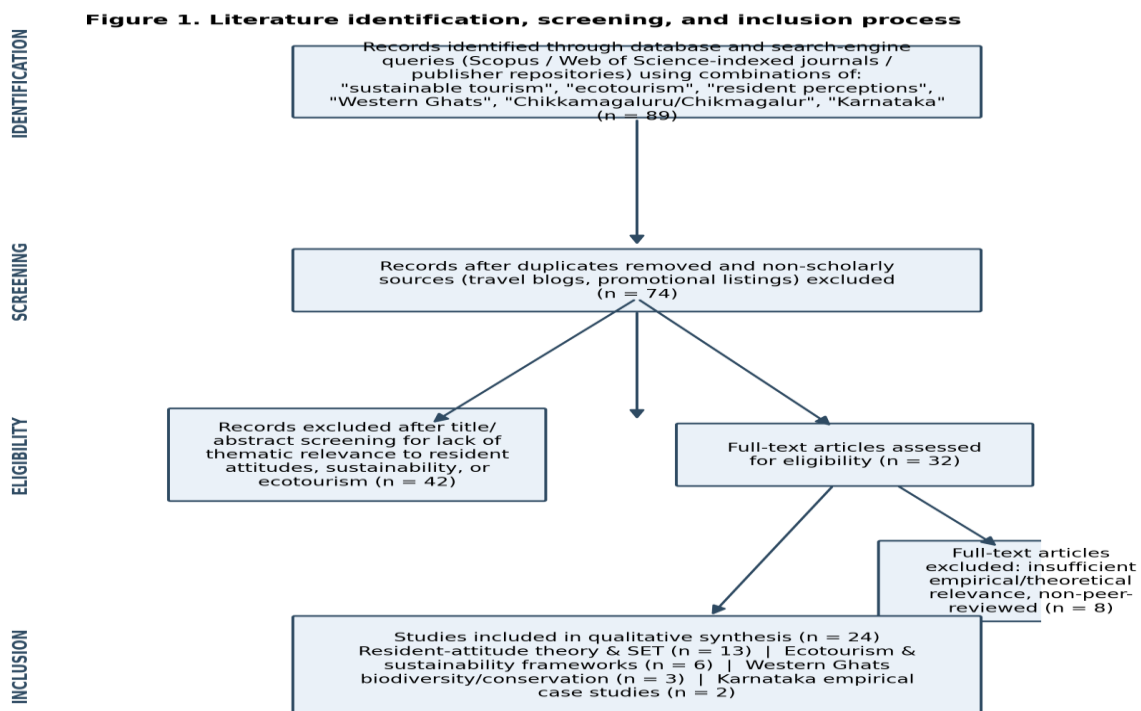


Figure 1. Literature identification, screening, and inclusion process.

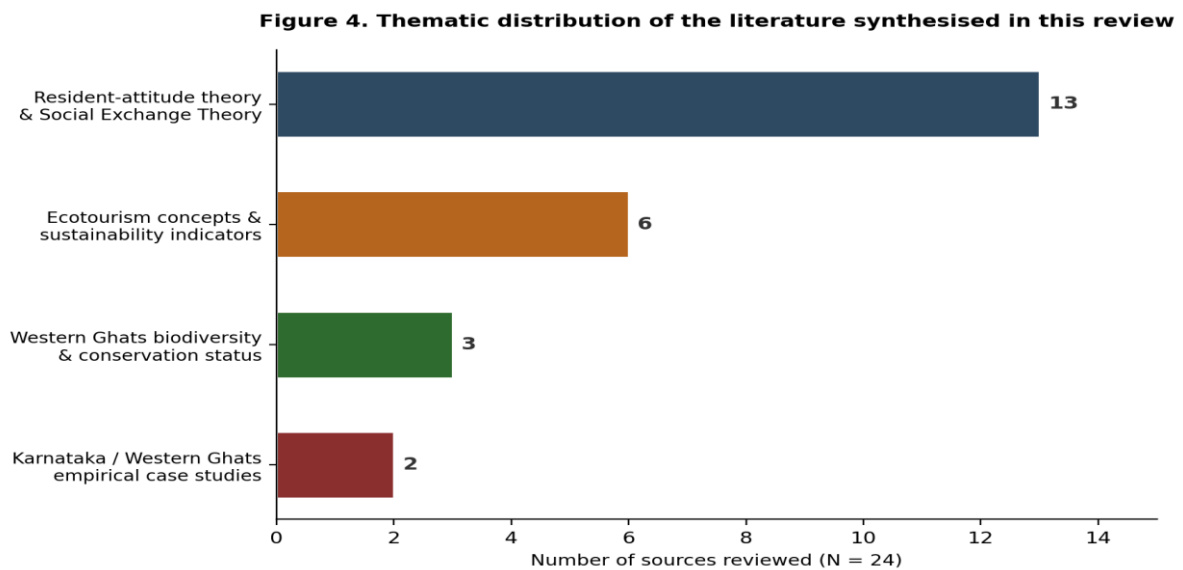


Figure 4. Thematic distribution of the literature synthesised in this review.

As Figure 4 indicates, the available literature is heavily weighted toward general resident-attitude theory (13 of 24 sources) developed largely in North American, European, and other international contexts, with a comparatively thin layer of Western Ghats-specific biodiversity and conservation science (3 sources) and an even thinner layer of directly relevant empirical case studies situated within the Western Ghats region (2 sources). This imbalance is itself a substantive finding of the review and is discussed further in Section 6.

5. Literature Review

5.1 Environmental Sustainability Dimensions

The environmental case for caution in Western Ghats tourism development rests on the region's exceptional and already-diminished biodiversity. Myers et al. (2000) situate the Western Ghats among a small number of global hotspots defined by extreme endemism combined with severe habitat loss, and Gunawardene et al. (2007) note that only a small remaining fraction of the original evergreen forest cover persists across the range, concentrated in fragmented patches under continuing pressure from agriculture, plantation expansion, hydroelectric projects, and tourism infrastructure. The UNESCO (2012) World Heritage designation itself was granted specifically in recognition of the Western Ghats' role in representative montane forest ecosystem processes and its evolutionary significance, rather than as a scenic or recreational designation — an important distinction, since tourism marketing of the region frequently foregrounds scenery and climate rather than the underlying conservation rationale for its protected status.

Empirical evidence on tourism's direct environmental footprint in the Chikkamagaluru–Kodagu–Wayanad corridor remains limited but instructive. Ganguly et al. (2025) provide the most directly quantified evidence available for a district adjoining Chikkamagaluru, finding

that tourism-related road transport was responsible for the large majority of the tourism sector's carbon footprint in Kodagu, even though residents' overall energy-related emissions remained comparatively modest relative to national averages. This finding is significant for Chikkamagaluru because its tourism economy exhibits a similar structure: a large share of visitors arrives by private vehicle from Bengaluru and other urban centres, several hours away, meaning that transport-related emissions and road congestion — rather than on-site accommodation impacts alone — may constitute the dominant environmental burden associated with the district's tourism growth.

At the broader landscape level, Varghese and Natori (2024) document a wider pattern of tourism-linked environmental degradation in Wayanad, including forest encroachment for resort and homestay construction, disruption of wildlife corridors leading to increased human–animal conflict, and unregulated construction in ecologically fragile zones. While their study is not located in Chikkamagaluru, the underlying drivers they identify — conversion of agricultural and forest-adjacent land into tourism infrastructure, and the treatment of tourism as a categorically “clean” industry exempt from the same environmental scrutiny applied to mining or industrial development — are structurally comparable to development pressures reported anecdotally around Chikkamagaluru's high-altitude tourism nodes such as Mullayanagiri and Kemmangundi, where unregulated homestay proliferation and vehicular congestion during peak season have become recurring concerns without yet having been the subject of rigorous published research.

From a management-theory standpoint, Choi and Sirakaya's (2006) sustainability-indicator framework offers a template for what environmentally grounded monitoring in Chikkamagaluru could look like in practice: ecological indicators tracking forest-cover change, water availability, and waste generation alongside, rather than subordinate to, the economic indicators (visitor arrivals, homestay occupancy, revenue) that currently dominate district tourism reporting.

5.2 Socio-Cultural Dimensions of Resident Attitudes

The socio-cultural literature on resident attitudes emphasises that community attachment and the nature of host–guest contact shape how residents interpret tourism's cultural consequences. Jurowski, Uysal, and Williams (1997) identify community attachment as a key antecedent of perceived social impact, while subsequent studies summarised by Nunkoo, Smith, and Ramkissoon (2013) have produced mixed findings on whether longer-term residents are systematically more positive or more critical of tourism than newer arrivals, suggesting that attachment operates differently depending on local context rather than in a single universal direction.

For Chikkamagaluru, the socio-cultural stakes are tied closely to the transformation of working coffee estates into homestay accommodation. This shift changes the nature of host–guest interaction from an incidental, occasional encounter into a structured commercial relationship in which “Malnad hospitality” and plantation life are themselves packaged and sold as the visitor experience. Andereck, Valentine, Knopf, and Vogt (2005) found that residents who feel

personally embedded in and knowledgeable about tourism's benefits tend to view its social and cultural consequences more favourably even while acknowledging costs, a pattern plausibly relevant to estate-owning families who have converted their own land into homestays, but far less certain for non-owning agricultural labourers or residents in surrounding villages who may experience the same cultural commodification without a comparable share of its economic upside — a distinction the existing literature, being largely aggregate in its survey design, is not well positioned to resolve without primary fieldwork disaggregated by socio-economic position within the host community.

Doxey's (1975) Irridex again offers a useful interpretive lens here: the model's "apathy" stage, in which host–guest contact becomes increasingly formalised and commercial, corresponds closely to descriptions of Chikkamagaluru's homestay sector transitioning from personal hospitality toward standardised, agency-mediated bookings, package pricing, and scripted "plantation tour" experiences — a transition that, per the model, typically precedes rather than follows the emergence of resident irritation.

5.3 Economic Dimensions

Economic-impact perception is the dimension most consistently linked to resident support for tourism across the SET literature. Ap (1992) and Gursoy, Jurowski, and Uysal (2002) both find that perceived economic benefit is typically the strongest single predictor of positive resident attitudes, a finding echoed in Andereck and Vogt's (2000) observation that support for tourism development varies according to the specific economic opportunity a given development option is perceived to offer. Ap and Crompton's (1998) tourism impact scale operationalises this distinction by separately measuring perceived benefits such as employment and infrastructure investment against perceived costs such as price inflation and increased cost of living — both of which are commonly reported concerns in fast-growing Indian hill-station economies, where land values and the cost of basic goods often rise sharply once a destination becomes fashionable among urban weekend travellers.

The Kodagu evidence assembled by Ganguly et al. (2025), while primarily an environmental carbon-accounting study, also implicitly documents an economic dependency dynamic: tourism-linked transport activity has become substantial enough in the district's overall energy and emissions profile to indicate that tourism now constitutes a significant, rather than marginal, component of the local economy. Structurally, Chikkamagaluru's coffee economy provides an important point of contrast with many international resident-attitude case studies, most of which examine communities transitioning from limited or no prior economic base into tourism dependency (Jurowski, Uysal, & Williams, 1997). Chikkamagaluru instead presents a case of tourism layering onto and partially displacing an already well-established agricultural economy — raising distinct questions, unaddressed in the existing SET literature, about whether resident attitudes are shaped less by tourism dependency per se and more by the perceived trade-off between coffee cultivation and tourism as competing uses of the same land and household labour.

5.4 Integrating the Three Dimensions: What the SET Literature Suggests About Sustainable Ecotourism Support

Read together, the resident-attitude literature converges on a central conclusion directly relevant to sustainable ecotourism specifically: residents do not evaluate environmental, socio-cultural, and economic impacts independently, but rather form an integrated judgement about the overall fairness of the exchange tourism represents (Ap, 1992; Gursoy, Jurowski, & Uysal, 2002). Sharpley (2014) further argues that this integrated judgement is shaped as much by perceived governance and inclusion — whether residents feel they have a voice in how tourism is planned and regulated — as by the raw magnitude of any single impact category. This is consistent with Murphy's (1985) earlier community-approach argument that sustainable tourism outcomes depend on treating residents as active planning partners rather than passive recipients of externally designed development.

Section 6 develops this convergence into an explicit conceptual framework (Figure 2) intended to guide future empirical research specifically in Chikkamagaluru.

6. Integrative Conceptual Framework

Building on the theoretical synthesis in Sections 3 and 5, Figure 2 proposes an integrative framework for studying resident attitudes toward sustainable ecotourism in Chikkamagaluru and comparable Western Ghats destinations. The framework positions the three impact domains reviewed above — environmental, socio-cultural, and economic — as parallel antecedents feeding into a central social-exchange evaluation process, consistent with the structural logic established by Gursoy, Jurowski, and Uysal (2002) and Jurowski, Uysal, and Williams (1997). This evaluation is proposed to be moderated by community attachment, length of residence, degree of economic dependency on tourism, and physical proximity to tourist zones — moderators drawn from the broader SET literature (Nunkoo, Smith, & Ramkissoon, 2013) but not yet tested with Chikkamagaluru-specific data.

The resulting resident attitude is modelled as producing behavioural outcomes ranging from active support and participation to passive acceptance or open resistance, mirroring Doxey's (1975) Irridex stages, with a feedback loop (dashed arrow) representing Butler's (1980) TALC logic: today's resident attitudes and behavioural responses become tomorrow's environmental, socio-cultural, and economic conditions, such that unmanaged growth can shift a destination from euphoria toward antagonism over successive tourism seasons. This framework is deliberately intended as a proposition for empirical testing rather than a finding in itself — no primary survey data from Chikkamagaluru residents currently exists to populate or validate it, which is precisely the gap identified in Section 7.

Figure 2. Integrative conceptual framework linking environmental, socio-cultural, and economic dimensions to resident attitudes toward sustainable ecotourism

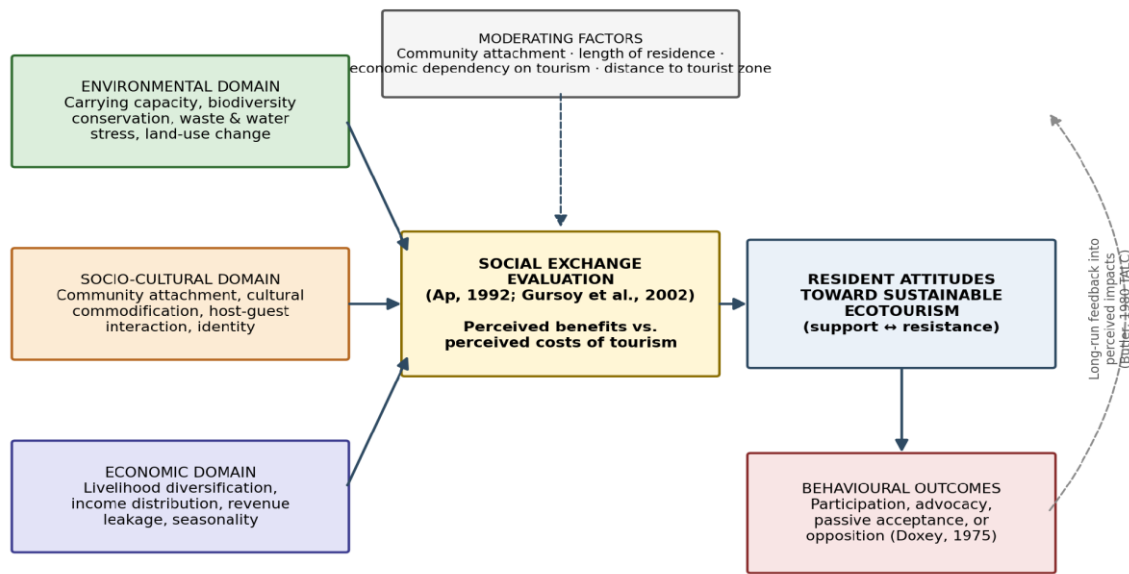


Figure 2. Integrative conceptual framework linking environmental, socio-cultural, and economic dimensions to resident attitudes toward sustainable ecotourism.

7. Research Gaps

This review identifies four priority gaps in the existing literature relevant to Chikkamagaluru specifically.

1. Absence of place-based primary data. No peer-reviewed study identified in this review directly surveys or interviews Chikkamagaluru residents regarding their attitudes toward tourism or ecotourism; the closest available evidence is drawn from the neighbouring districts of Kodagu (Ganguly et al., 2025) and, at greater geographic distance, Wayanad (Varghese & Natori, 2024). A dedicated resident-attitude survey applying validated instruments such as Ap and Crompton's (1998) tourism impact scale would substantially strengthen the evidence base.
2. Disaggregation by socio-economic position within host communities. Existing SET studies (Andereck, Valentine, Knopf, & Vogt, 2005; Gursoy, Jurowski, & Uysal, 2002) largely report aggregate community-level attitudes, obscuring likely differences between estate-owning homestay operators, agricultural labourers, and non-tourism residents — a distinction of particular importance in Chikkamagaluru's estate-based economic structure.
3. Environmental monitoring linked explicitly to tourism activity. Beyond the Kodagu carbon-footprint study (Ganguly et al., 2025), quantitative environmental data connecting tourism visitor volumes to forest-cover change, water stress, or waste generation specifically within Chikkamagaluru's protected-area buffer zones has not been located in the peer-reviewed literature.

4. Longitudinal application of stage-based models. Although Doxey's (1975) Irridex and Butler's (1980) TALC offer testable predictions about how resident attitudes should evolve as Chikkamagaluru's tourism sector matures, no longitudinal study has yet tracked resident attitudes in the district over time to evaluate whether these predictions hold.

8. Discussion and Implications for Policy and Practice

Three implications follow from this synthesis for destination governance in Chikkamagaluru and comparable Western Ghats hill-station economies. First, the Choi and Sirakaya (2006) sustainability-indicator framework suggests that district tourism authorities should track ecological and social indicators — forest-cover change, water availability, waste generation, and resident-perceived fairness — with the same rigour currently applied to arrival numbers and homestay occupancy rates, since economic indicators alone cannot signal an approaching Doxey (1975) irritation threshold before it is reached.

Second, Murphy's (1985) community-approach argument and Sharpley's (2014) emphasis on perceived governance and inclusion together suggest that formal mechanisms for resident participation in tourism planning — for instance through gram panchayat-level consultation on homestay licensing, road development, or protected-area buffer-zone tourism activity — may do more to sustain long-run resident support than economic benefit-sharing alone, since the SET literature indicates that residents' overall evaluation of tourism hinges on perceived fairness of process as well as distribution of outcomes.

Third, the transport-dominated carbon footprint documented in neighbouring Kodagu by Ganguly et al. (2025) implies that environmental sustainability initiatives in Chikkamagaluru focused solely on homestay-level practices (waste segregation, water conservation) are likely to address only a secondary share of tourism's environmental footprint; managing vehicular access, promoting shared or low-emission transport options for the Bengaluru–Chikkamagaluru corridor, and limiting private-vehicle congestion at high-altitude viewpoints during peak season may represent a comparatively higher-leverage intervention than accommodation-level measures alone.

9. Limitations

This review is subject to several limitations. Most significantly, the near-absence of peer-reviewed, Chikkamagaluru-specific empirical research means that much of the district-level discussion in Sections 5 and 8 is necessarily inferential, extrapolating from evidence gathered in ecologically and economically comparable but geographically distinct districts (Kodagu, Wayanad) rather than from Chikkamagaluru itself. Readers should treat these extrapolations as plausible hypotheses for primary research rather than as established findings about Chikkamagaluru. Second, as an integrative rather than fully systematic review, the search process, while structured and documented in Figure 1, does not claim the exhaustive coverage of a formal systematic review or meta-analysis; some relevant grey literature, unpublished dissertations, or non-English-language regional studies may not have been captured. Third, the

conceptual framework presented in Figure 2 remains theoretical and has not been empirically validated with primary data from the study region.

10. Conclusion

Chikkamagaluru sits at the intersection of two powerful and potentially conflicting forces: rapid, market-driven growth in coffee-estate and hill-station tourism, and the ecological obligations attached to its location within a globally significant, already-degraded biodiversity hotspot. The international resident-attitude and sustainable-tourism literatures reviewed here converge on the conclusion that environmentally sustainable outcomes in such settings depend not only on ecological carrying-capacity management but equally on whether host residents perceive the exchange represented by tourism as fair across environmental, socio-cultural, and economic dimensions simultaneously. At present, this conclusion rests on evidence gathered elsewhere in the Western Ghats — principally Kodagu and Wayanad — rather than on primary research conducted in Chikkamagaluru itself. Closing this evidence gap through resident surveys, longitudinal attitude tracking, and tourism-linked environmental monitoring represents both the most pressing research priority and the most direct route toward evidence-based, community-inclusive sustainable tourism governance in the district.

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