

DOI: 10.5281/zenodo.20030355

SACRED LANDSCAPES, SUSTAINABLE FUTURES: A REVIEW OF CBET MODELS FROM THE SIKKIM HIMALAYAS

Deepa Gurung^{1*}, Sasmita Mohanty², Ashish Mohanty³, Kunga Tenzing Wangyal⁴,
Sheetal Pradhan⁵

¹PHD Scholar- Siksha 'O' Anusandhan (Deemed to be University, Bhubaneswar, Odisha,
<https://orcid.org/0009-0008-9572-0938>, deepagurung26@gmail.com

²Professor-Siksha 'O' Anusandhan (Deemed to be University, Bhubaneswar, Odisha, smohanty@soa.ac.in

³Associate Professor, Institute of Business & Computer Studies, Faculty of Management Sciences, Siksha 'O'
Anusandhan (Deemed to be University), Bhubaneswar, Odisha
<https://orcid.org/0001-7767-7771>, ashishmohanty@soa.ac.in

⁴PHD Scholar, Amity University Rajasthan, <https://orcid.org/0009-0004-5962-5416>, kunga11@gmail.com

⁵Assistant Professor, Department of Chinese, Sikkim University, Sikkim, Pradhansheetal14@gmail.com

Received: 21/12/2025

Accepted: 18/04/2026

Corresponding Author: Deepa Gurung
(deepagurung26@gmail.com)

ABSTRACT

The Khangchendzonga environment of Sikkim is a blend of sacred culture alongside rich biodiversity, although CBET effects still experience disjointed education and weak governance. This literature review presents a Himalayan CBET 4P model, People, Planet, Policy, Partnership, to guide the propositional ecological sustainability, inclusive leadership, transparent systems, and equitable partnerships. It also describes both short-term and long-term interventions, which are backed by a streamlined scorecard to track visitor limits, waste, and revenue transparency, and local benefits. The strategy prioritises sacredness as governance capital, which is a scalable model for equitable and sustainable Himalayan ecotourism.

KEYWORDS: Sikkim, Community-Based Ecotourism, Sacred Natural Sites, 4P Framework, Governance, Carrying Capacity.

INTRODUCTION

Sikkim, a sacred landscape, is found in the eastern Himalaya and is a meeting point of ritual geographies, lakes, groves and mountains with culturally important sites alongside world-important biodiversity and provides an excellent basis of community-based ecotourism (CBET) that nurtures conservation, culture and livelihoods. The Khangchendzonga National Park (KNP), one of the rare mixed natural-cultural World Heritage Sites, which formalises this duality by acknowledging the presence of two distinct layers of both ecological richness and living sacred culture that define the meaning of stewardship, as well as visitor behaviour (UNESCO World Heritage Centre, 2025; IUCN, 2020). CBET is strongly embedded in the Lepcha and Bhutia cultural practices. The studies indicated both the erosion and revitalisation of narratives and place-based meanings and established that sacred landscapes have a normative power and cultural vitality that is incompatible with touristic authenticity (Bentley, 2020). Conservation outcomes of forest-cover dynamics and community reactions in high-altitude regions are ecologically related to the strength and incentives of institutions, but the impact is disproportional and challenging to provide (Chakraborty and Chanda, 2022). Governance is made more difficult due to climate volatility. Consistent evaluations record reports escalated intense rainfall, landslides, and hydrological

inequalities that reduce the trekking seasons, pilgrim traffic, and exert strain on waste and water systems that serve the homestays and trailheads (Sharma *et al.*, 2024). In another incident of severe tourist arrivals in 2024, lethal hazard occurrences and their stranding of thousands of people revealed the weaknesses of access, emergency response, and carrying capacity (Times of India, 2024; Agarwala, 2024). The Sikkim Tourism Policy 2018 encourages responsible tourism, community involvement, and environmental conservation without specifying how this is to be achieved, Free, Prior and Informed Consent (FPIC), visitor control and community funds as well as grievance mechanisms (Tourism and Civil Aviation Department, Government of Sikkim, 2018). The stakeholder communities, the authorities of protected areas, NGOs, and, due to the commodification of the sacredness, the private operators are balancing on the tensions of value leakages, seasonality, crowding, and commodification (UNESCO World Heritage Centre, 2025; Tourism and Civil Aviation Department, Government of Sikkim, 2018). In response to this, the review develops a Himalayan CBET 4P lens, People, Planet, Policy, Partnerships positioning on sacred norms with the help of such tools as transparent ledgers, carrying-capacity thresholds, and fair contracts (Forest, Environment & Wildlife Management Department, Government of Sikkim, 2014; IUCN, 2020; UNESCO World Heritage Centre, 2025).

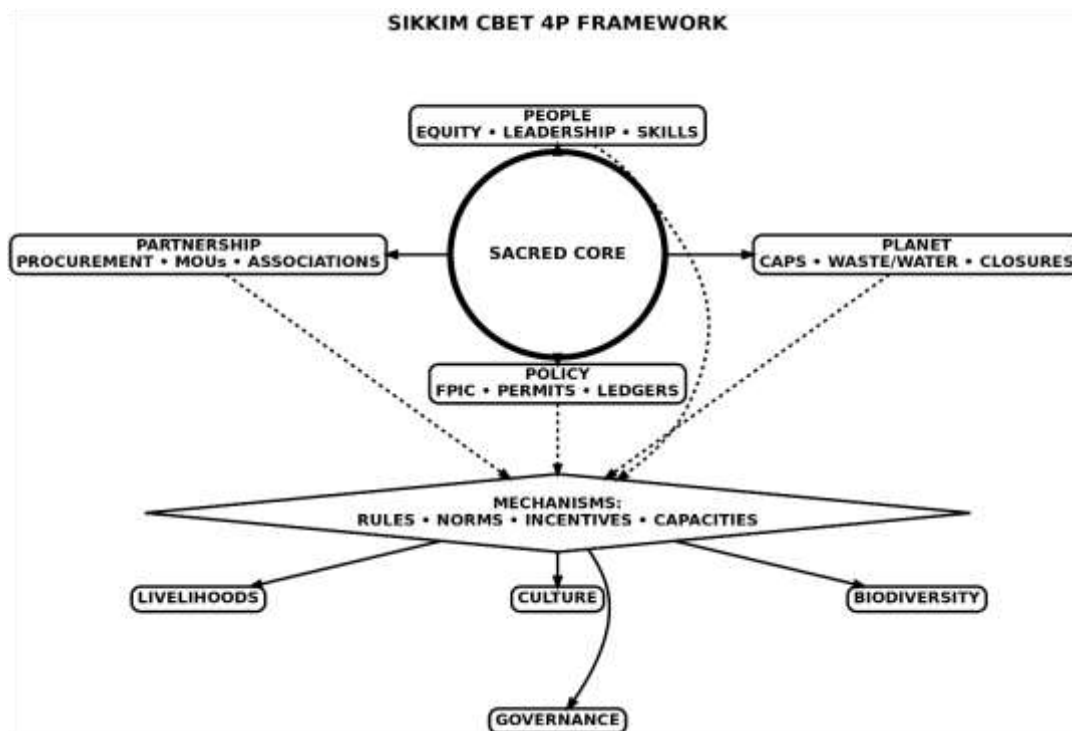


Figure 1. The Himalayan CBET 4P Framework for Sikkim (Source: Authors)

Place-sensitive system of Sikkim that makes sacredness the capital of governance, as illustrated in Figure 1. The core (sacred norms) relates to 4P levers, which energise processes (rules, incentives) to provide outcomes in livelihoods, cultural vitality, biodiversity and governance.

Objectives:

- (i) to situate CBET in Sikkim within its sacred ecological and cultural context and recent policy trajectory
- (ii) to synthesise key challenges and opportunities under climate and market volatility, highlighting operational risks for communities and managers
- (iii) to propose and justify a 4P framework tailored to Sikkim that links sacred norms to implementable rules, indicators, and partnership templates
- (iv) to identify near-term design and monitoring

priorities that protect sacred values while improving livelihood resilience.

SIKKIM CBET CONTEXT & LANDSCAPE

Socio-Cultural Backdrop: Sacred Geographies and Living Stewardship

The Sikh sacred lakes, groves, and peaks create stewardship based on the ritual calendar and taboos, and the Lepcha and Bhutia livelihoods and traditional regulations integrate care-places in the identity (Chakraborty and Chakma, 2016). International designations reinforce culturally aligned tourism (UNESCO, 2025). CBET is capable of revitalising the cultural aspects on the condition of clear enforcement of the access protocols, ritual protection, and codes of conduct (Forest, Environment and Wildlife Management Department, Government of Sikkim, 2014).

Table 1: Socio-Cultural Backdrop

Key source	What it covers	Implication for CBET	Indicator example
(UNESCO, 2025)	Mixed natural-cultural status and sacred-site framing	Use sacred-protocol briefings and signage to align visitor conduct with ritual norms	% tours delivering sacred-protocol briefings (UNESCO, 2025)
(Forest, Environment & Wildlife Management Department, Government of Sikkim, 2014)	KNP zonation, pilgrimage corridors, and community-use rules	Map itineraries to zones; co-design site rules with custodians	% trips compliant with zonation (Forest, Environment & Wildlife Management Department, Government of Sikkim, 2014)
(Chakraborty and Chakma 2016)	Socio-economic baselines and rural equity context	Target inclusive participation (women/youth; marginalised groups)	% households benefiting; Gini of tourism income (Chakraborty and Chakma 2016)

Table 1 demonstrates the operation of sacred geographies and provisions in the current management as visitor protocols and inclusion targets.

Tourism Patterns: Homestays, Trekking, Pilgrimage, and Seasonality

The Sikkim tourism industry has shifted its focus to homestays and village-based tourism, where

tourists have been demanding authenticity and responsible tourism, despite gaps in training, quality of service provision, and market accessibility (Yadav et al., 2018; Kannan and Singh, 2021). More intense seasonality leads to increased volatility of incomes, which makes it necessary to have CBET models that involve the combination of capacity management and livelihood smoothing (Forest, Environment & Wildlife Management Department, Government of Sikkim, 2014).

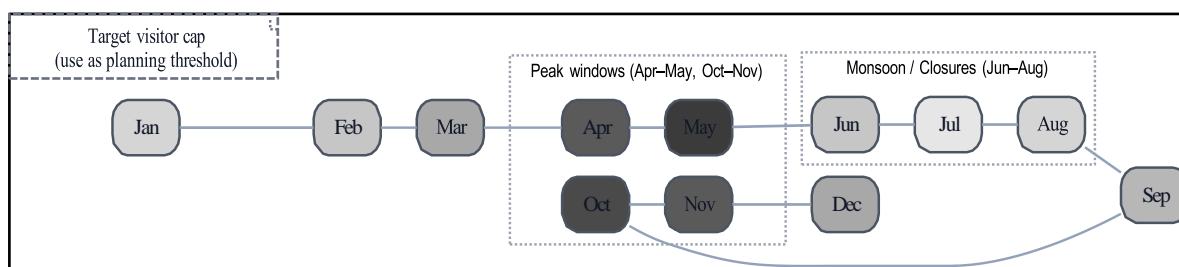


Figure 2. Seasonality and Load Management in Sikkim CBET

Illustrative monthly visitor-load profile with a target cap (dashed) and monsoon/closure shading. As illustrated in Figure 2, dynamic caps, off-season

recovery days, and contingency measures must be put in place to maintain use within the carrying capacity.

Table 2: Tourism patterns

Key source	What it covers	Implication for CBET	Indicator example
(Yadav et al., 2018)	Homestay demand drivers and service gaps	Establish training ladders; standardise quality with local context	Guest satisfaction $\geq 4/5$; repeat-stay rate (Yadav et al., 2018)
(Kannan and Singh, 2021)	Tourists' perceptions of homestays	Embed cultural protocols in guest onboarding	% guests acknowledging cultural dos/don'ts (Kannan and Singh, 2021)
(Kaur and Gautam, 2024)	Sustainability practices in Sikkim tourism	Institutionalise waste/water routines; track seasonality stress	Waste per visitor-night; % days within visitor cap (Kaur and Gautam, 2024)

Table 2 indicates the conversion of the demand and perception studies into the practical training, onboarding and load-management indicators of homestays and treks.

Institutional Setting: Protected Areas, Permits, and Community Roles

CBET in Sikkim has multiple levels of governance.

The KNP Management Plan lays down zonation, pilgrimage routes, the rules of community-use, and trekking guidelines (Forest, Environment & Wildlife Management Department, Government of Sikkim, 2014). The Sikkim Ecotourism Policy encourages the involvement of the community and cultural environmental protection (Government of Sikkim, 2011).

Table 3: Institutional Setting

Key source	What it covers	Implication for CBET	Indicator example
(Sikkim Ecotourism Policy: Government of Sikkim, Department of Forest, Environment & Wildlife Management, 2011)	Community participation and environmental safeguards	Constitute representative committees; publish benefit ledgers	% revenue disbursed via community fund (Sikkim Ecotourism Policy: Government of Sikkim, Department of Forest, Environment & Wildlife Management, 2011)
(Forest, Environment & Wildlife Management Department, Government of Sikkim, 2014)	Permit procedures, guiding/trekking norms	Align permit stacks; professionalise guide associations	Average permit turnaround; certified guides (%) (Forest, Environment & Wildlife Management Department, Government of Sikkim, 2014)
(UNESCO, 2025)	Legitimacy via international recognition	Integrate mixed (natural-cultural) values into CBET messaging	% products using mixed-value interpretation (UNESCO, 2025)

Table 3 demonstrates that the state policy, park plans, and international recognition can be transformed into clear committee mandates, transparent funds and simplified permits.

Opportunities and Pain Points: Markets, Equity, and Environmental Services

The strengths of CBET, charismatic landscapes, well-developed place identities, and supportive policies of Sikkim (Government of Sikkim, 2011;

UNESCO, 2025) are mitigated by the ongoing frictions. Value leakage in the absence of procurement is a threat to market accessibility (Kannan and Singh, 2021; Kaur and Gautam, 2024). Without representative committees, social inclusion issues are a challenge (Chakraborty and Chakma, 2016). Some of the environmental stressors that have led to interventions include the plastic-bottle ban and tightened waste byelaws during the season (Government of Sikkim, 2021; 2019).

Table 4: Opportunities and Pain Points

Key source	What it covers	Implication for CBET	Indicator example
(Plastic-bottle ban: Government of Sikkim, Forests & Environment Department, 2021)	Source reduction of single-use plastics (≤ 2 L bottles)	Install refill points; include reusable bottles in packages	Refill points per site; plastic bottles/visitor (Plastic-bottle ban: Government of Sikkim, Forests & Environment Department, 2021)
(Urban solid-waste byelaws: Government of Sikkim, Urban Development & Housing Department, 2019)	Segregation, collection, and disposal standards	Set up village-level segregation and buy-back logistics	% homestays segregating at source (Urban solid-waste byelaws: Government of Sikkim, Urban Development & Housing Department, 2019)
(Kaur and Gautam, 2024; Yadav et al., 2018)	Market access, leakage, and sustainability gaps	Add local-procurement clauses; monitor leakage to intermediaries	Local procurement share; leakage ratio (Kaur and Gautam, 2024; Yadav et al., 2018)

Table 4 demonstrates how regulatory devices and market evidence can be operationalised into refill cultures, compliance with the segregation and controls of leakage.

Evidence Snapshot

The selection of evidence was based on sources that: (a) have a specific focus on the Sikkim situation on CBET or Himalayan settings; (b) shed light on at least one aspect of the 4P lens People, Planet, Policy, Partnership and have credible site-level implications; and (c) have empirical detail or policy-operational advice. The resulting corpus spans a doctoral dissertation on tourism planning in Sikkim (Bhutia, 2024), an operational comparison of waste-management systems in rural homestays and urban hotels (Chhetri, 2025), a guest-experience study on environmentally conscious homestay practices (Dutta and Amir, 2024), a conservation outlook for Khangchendzonga National Park (IUCN, 2020), and a national policy brief reshaping the homestay pathway relevant to Sikkim (NITI Aayog, 2025).

People and Partnership levers are informed by homestay and tourist-experience evidence (Dutta and Amir, 2024), which explains the expectations and behavioural reactions towards credible green practices by the guests. Zoning, capacity, and

participation indicators, Zoning, capacity, and participant insights essential to operationalising Policy levers and leading the maturity of the community are provided by Planning and development insights (Bhutia, 2024). Environmental operations research (Chhetri, 2025) provides pragmatic guidance on segregation, collection, and cooperative hauling, directly strengthening Planet indicators and carrying-capacity assessments. The evidence base is decision-friendly, supplying actionable levers (segregation at source, refill cultures), measurable indicators (protocol awareness, waste per visitor-night, procurement shares), and institutional cues such as committee composition, FPIC documentation, and transparent ledgers. Triangulation across genres reduces single-method bias (Bhutia, 2024; Chhetri, 2025; IUCN, 2020; NITI Aayog, 2025).

There are several limitations, including short time-series constraint attribution (IUCN, 2020); FPIC and benefit-sharing documentation is often unauditible; publication asymmetry favours positive cases; site heterogeneity limits generalisation; and measurement diversity limits aggregation (Chhetri, 2025; Dutta and Amir, 2024). Ecological preservation experiences guarantee the control of activities and seasonal closure on ecological grounds (IUCN, 2020).

Table 5: Profile of Core Evidence Sources and Their 4P Relevance

Source (APA in-text)	Type & method	Primary 4P relevance	Key operational insight for Sikkim CBET	Noted caveat/limitation
(Bhutia, 2024)	Doctoral dissertation; mixed qualitative planning & policy analysis	Policy, Partnership	Align destination planning with community bodies; formalise benefit ledgers and committee mandates.	Limited longitudinal outcome data
(Chhetri, 2025)	Comparative operational analysis (rural homestays vs. urban hotels)	Planet, People	Standardise waste segregation, cooperative hauling, and refill cultures in homestays.	Site-specific logistics may limit generalisation.
(Dutta and Amir, 2024)	Visitor-satisfaction study focused on "green" homestay practices	People, Partnership	Embed cultural/waste protocols in guest onboarding; communicate "green" features.	Self-reported perceptions; potential response bias
(IUCN, 2020)	Conservation Outlook Assessment for Khangchendzonga NP	Planet, Policy	Use ecological sensitivity and threat profiles to set visitor caps and closure periods.	Park-scale lens; limited micro-site granularity
(NITI Aayog, 2025)	National policy brief on homestay pathways	Policy, Partnership	Simplify permits, improve market access, and finance upgrades with community safeguards.	National scope; requires Sikkim-specific adaptation.

Table 5 indicates that each of the core sources provides unique and complementary pieces of evidence to at least one of the 4P pillars, rendering research and policy into tangible CBET lever and indicators and flagged caveats.

The Himalayan CBET 4P Framework

The framework views sacredness as a capital of governance, in which the established norms and

taboos reinforce adherence and decrease the cost of enforcement in case of combination with the existing rules, equitable allocation, and reputable cooperation. The various levers, locally monitored indicators, and guardrails contained in each of the "P" facilitate the alignment of tourism development with cultural sovereignty and ecological limits. In Sikkim, decision-making should go beyond mere symbolic inclusion of women and tribal people to

meaningful power, which should be assisted by cultural-protocol briefing in the guest onboarding and such indicators as household benefit share, women/youth leadership, and the guest protocol awareness (Nayak, 2024).

The concept of sustainability is now nationally and state-wide entrenched; Sikkim has 2025 regulations, and India has Swadesh Darshan 2.0 regulations, which focus on caps, standards and monitoring (Tourism and Civil Aviation Department, Government of Sikkim, 2025; Ministry of Tourism, Government of India, 2022). The ecological thresholds can be predicted with the help of indicators like waste per visitor-night, percentage days within caps, water-use per guest, and compliance with closure. Policy becomes operational through simple permit stacks, FPIC documentation,

grievance pathways, and public benefit ledgers (Tourism & Civil Aviation Department, Government of Sikkim, 2025). There is evidence that shows increased effectiveness of local capture with the help of cooperative contracts, procurement clauses and guide associations (Responsible Tourism Partnership, 2017), and youth stewardship and conservation volunteering add extra benefits (World Wildlife Fund, 2025). The indicators include procurement share, rates of renewing contracts, time signal partnership health grievance-resolution. The modular 4P framework enables “no-regrets” actions and a Seed → Grow → Steward pathway aligned with state and national guidelines, embedding equity and cultural integrity as foundations for durable cooperation (Nayak, 2024; Responsible Tourism Partnership, 2017; World Wildlife Fund, 2025).

Table 6. The 4P Framework Design Levers, Practical Indicators, and Anchor References

Pillar	Core levers (what to do)	Practical indicators (what to track)	Key references
People	Representative CBET committee with women/tribal leadership; skill ladders; cultural-protocol briefings in guest onboarding	% households benefiting; % women/youth in leadership; % guests acknowledging cultural protocols	(Nayak, 2024)
Planet	Visitor caps; refill stations & buy-back logistics; water-prudence routines; off-season recovery days	Waste per visitor-night; % days within cap; water-use per guest; closure compliance	(Ministry of Tourism, Government of India, 2022) (Tourism & Civil Aviation Department, Government of Sikkim, 2025)
Policy	Simple permit stacks; FPIC clauses in contracts; public ledgers for community funds; grievance redressal SOPs	Avg. permit turnaround; FPIC documentation score; % revenues disclosed; grievance resolution time	(Tourism & Civil Aviation Department, Government of Sikkim, 2025)(Ministry of Tourism, Government of India, 2022)
Partnership	Standardised MOUs; local-procurement clauses; guide associations; shared booking/payment dashboards	Local procurement share, contract renewal rate, on-time payments, grievance rate	(Responsible Tourism Partnership, 2017) (World Wildlife Fund, 2025)

Table 6 demonstrates the minimum viable actions and lightweight indicators that each community can engage in within the framework of the 4P pillars, with references to which site-level practice is adjusted to the state regulations, national destination standards, and responsible-tourism tactics that have proven themselves to be effective.

APPLYING 4P IN SIKKIM ILLUSTRATIVE MINI-CASES

In this section, three mini-cases of Sikhism are described in which the application of the 4P framework can be demonstrated using site-level sequencing of the levers of People, Planet, Policy, and Partnership. Both of them share the Ecotourism Policy (2011).

Case A: Community Homestay Cluster Near a Sacred Lake

People: A CBET committee with clear by-laws, role rotation and quarterly open meetings that are led by women is elected. A youth guide and host cohort

facilitates and leads guest orientation, which involves sacred-protocol briefings (quiet time, ritual space).

Planet: The cluster installs public refill points and phases out single-use bottles in packages, aligning with the state’s bottle ban; homestays keep waste/visitor-night logs and adopt dry/wet segregation at source (Government of Sikkim, Forests & Environment Department, 2021; Government of Sikkim, Urban Development & Housing Department, 2019).

Policy: A benefit ledger is published (noticeboard + WhatsApp PDF), and revenues flow to a community fund; the committee documents Free, Prior and Informed Consent (FPIC) for any third-party contracts, echoing the Ecotourism Policy’s participation ethos (Government of Sikkim, Department of Forest, Environment & Wildlife Management, 2011).

Partnership: An MOU with a local transport union sets transparent fares; a light-touch OTA partnership retains a community channel for direct bookings.

Lesson learned: Small, visible practices, protocol briefings, refill points, ledgers raise guest satisfaction and rule legitimacy while cutting plastic and clarifying “who benefits” (Government of Sikkim, Forests & Environment Department, 2021; Government of Sikkim, Urban Development & Housing Department, 2019; Government of Sikkim, Department of Forest, Environment & Wildlife Management, 2011).

Case B: Trekking/Guide Association Adjoining a Protected Area

People: The association uses a guide code that deals with the cultural behaviour at the shrines and no-go areas; the elected positions are held by women and young guides.

Planet: A carrying-capacity cap (permits/day) is introduced for two erodible trails; outfitters operate a buy-back for segregated waste returned from camps, and publish trail-condition alerts. The practices address the compliance curve of MSW and byelaw anticipations of the state directly (Government of Sikkim, Chief Secretary, 2018; Government of Sikkim, Urban Development and Housing Department, 2019).

Policy: Permit stacks are simplified (one-stop desk and weekly cut-off); violation reporting is standardised with 48-hour resolution targets; contracts with outfitters include FPIC and grievance clauses (Government of Sikkim, Department of Forest, Environment & Wildlife Management, 2011).

Partnership: Quarterly coordination with PA managers aligns seasonal closures and training; a joint “mountain manners” campaign foregrounds sacred-site etiquette.

Lesson learned: Operational discipline caps, buy-backs, and rapid grievance handling reduce ecological stress and keep operators aligned with

state compliance signals (Government of Sikkim, Chief Secretary, 2018; Government of Sikkim, Urban Development & Housing Department, 2019).

Case C: Private-Community Venture in A Pilgrimage Corridor

People: Initial benefits skew to a few gatekeepers. After community meetings, this is followed by community representation and co-signing a cultural-protocol charter.

Planet: Refill kiosks in the trailheads are co-funded by the venture, and the collection in the urban byelaws is contracted in settlements at the festivals; staggering of visitors during the week of the festival is implemented (Government of Sikkim, Urban Development and Housing Department, 2019; Government of Sikkim, Forests and Environment Department, 2021).

Policy: An MOU would be renegotiated to incorporate FPIC documents, a publicly available revenue-share formula, a grievance mechanism with response time limits, and expectations of the issues of transparency and community control in Ecotourism Policy (Government of Sikkim, Department of Forest, Environment and Wildlife Management, 2011).

Partnership: he level of transparency in pricing will decrease leakage; a local-procurement provision of food and craft vendors is introduced; quarterly dashboards will display the booking, payment, and grievance.

Lesson learned: Contract clarity + public ledgers convert a contested venture into a credible partnership, stabilising both sacred-site protocols and livelihoods (Government of Sikkim, Department of Forest, Environment & Wildlife Management, 2011; Government of Sikkim, Forests & Environment Department, 2021).

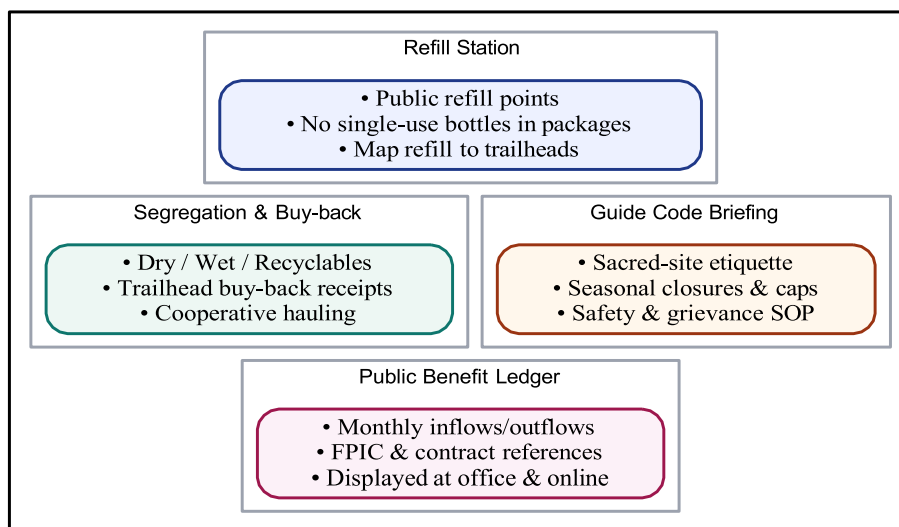


Figure 3. 4P in Action in Refill, Segregation & Buy-back, Guide Code, Public Benefit Ledger

A practical, four-panel montage of minimum-viable actions: public refill station, source segregation with buy-back, guide code briefing, and a public benefit ledger shown in Figure 3.

Table 7. Mini-Cases Mapped to 4P Levers, Indicators, and Policy Anchors

Case	4P levers enacted (examples)	Practical indicators to track	Policy anchors/references
A. Sacred-lake homestays	Women-led CBET committee; protocol briefings; refill points; benefit ledger; direct-booking channel	% households benefiting; % guests acknowledging protocols; waste per visitor-night; on-time fund disclosures	(Government of Sikkim, Forests & Environment Department, 2021) (Government of Sikkim, Urban Development & Housing Department, 2019); (Government of Sikkim, Department of Forest, Environment & Wildlife Management, 2011)
B. Trek/guide association	Guide code; permit cap; camp buy-back; one-stop permits; 48-hour grievance SOP	% days within cap; kg waste returned per trekker; permit turnaround (days); grievance resolution time	(Government of Sikkim, Chief Secretary, 2018) (Government of Sikkim, Urban Development & Housing Department, 2019); (Government of Sikkim, Department of Forest, Environment & Wildlife Management, 2011)
C. Pilgrimage-corridor PPP	FPIC-based MOU; public revenue shares; local-procurement clause; refill kiosks; festival staggering	% revenue publicly reported; local procurement share; plastic bottles avoided; disputes resolved/quarter	(Government of Sikkim, Department of Forest, Environment & Wildlife Management, 2011) (Government of Sikkim, Forests & Environment Department, 2021); (Government of Sikkim, Urban Development & Housing Department, 2019)

Table 7 indicates the operationalisation of three realistic types of sites based on the 4P framework using just a few minimum viable actions and lightweight indicators that the whole framework is cross-walked across the Sikkim policies in place to enable compliance, funding eligibility, and community legitimacy.

CROSS-CUTTING THEMES & TRADE-OFFS

The CBET trend of Sikkim is characterised by the growing tourist demand in the region and the growing hydro-climatic variability. According to the State Action Plan on Climate Change, the following pressures are predicted: extreme precipitation, slope instability, water shortage, and tourism must treat climate risk as an operational priority (Government of Sikkim, 2012).

Sacredness vs. Commercialisation

The 4P response is a mix of the cultural protocols, environmental boundaries, explicit FPIC-grounded regulations, and responsible partnerships to safeguard sacred locations and control tourism in a sustainable manner.

Short Seasons vs. Stable Incomes

The climate variability has led to narrow weather windows, which are now focusing footfall and increasing ecological and livelihood risks (Government of Sikkim, 2012). In 2024, there are inflows of record inflows that encounter hazard closures that left visitors behind (Times of India, 2024; Agarwala, 2024).

Gendered Labour; Youth Aspirations and Skill Pathways

CBET depends on invisible, gendered labour and risks losing youth talent; a 4P approach adds women/youth leadership quotas, care-work stipends, and skill-building partnerships to reduce inequities.

Market Access vs. Leakage: Infrastructure vs. Ecological Disturbance

Digital platforms increase visibility and are a risk of value leakage, whereas infrastructure may aggravate runoff not yet climate-proofed (Government of Sikkim, 2012). There is a 4P response that entails incorporating local procurement, FPIC-based MOUs, green infrastructure, and inclusion provisions, which are framed by disruptions in 2024 (Agarwala, 2024; Times of India, 2024).

Table 8. Cross-Cutting Trade-Offs, Risk Signals, and 4P Responses Relevant to Sikkim CBET

Trade-off	Risk signal/context	4P response (examples)	Practical indicators	Key references
Sacredness vs. commercialisation	Festival peaks, ritual spaces commodified	People: protocol charter & briefings; Planet: no-go zones, seasonal closures; Policy: FPIC clauses in permits/MOUs; Partnership: sanctions for breaches	% tours with protocol briefing; closure compliance; grievances resolved ≤48h	(Government of Sikkim, Department of Science & Technology and Climate Change, 2012)
Short seasons vs. stable incomes	Compressed weather windows; hazard closures disrupt earnings	People: off-season skill ladders; Planet: recovery days; Policy: dynamic caps & contingency SOPs; Partnership: shoulder-season packages, micro-insurance	% days within cap; off-season income share; time-to-reopen after events	(Times of India, 2024; Agarwala, 2024; Government of Sikkim, Department of Science & Technology and Climate Change, 2012)
Gendered labour & youth pathways	Unpaid care burden; youth exit to cities	People: leadership quotas + stipends; Policy: transparent ledgers & grievance SOPs; Partnership: youth roles in guides/digital; Planet: paid roles for waste/water logs	% women/youth in paid leadership; stipend hours; youth retention rate	(Government of Sikkim, Department of Science & Technology and Climate Change, 2012)
Market access vs. leakage	Intermediary margins reduce local capture.	Partnership: local-procurement clauses; transparent pricing; Policy: public revenue-share formula; People: vendor training	Local procurement share; leakage ratio; on-time payments	(Government of Sikkim, Department of Science & Technology and Climate Change, 2012)
Infrastructure vs. ecological disturbance	Roads/parking intensify runoff, landslide risk.	Planet: green-infrastructure (drains, permeable surfaces); Policy: EHS standards in permits; Partnership: co-fund maintenance	Runoff control compliance; erosion hotspots resolved/quarter	(Government of Sikkim, Department of Science & Technology and Climate Change, 2012)

Table 8 demonstrates how the most significant trade-offs to Sikkim CBET may be de-risked by a few no-regrets 4P actions and lightweight indicators based on the disruptions that will be noticed in 2024, as well as the climate-risk profile of the state.

PRACTICE ROADMAP FOR SIKKIM

This roadmap is aligned with the Sikkim Tourism Policy (2018), the 2025 Trade Rules and updates. Government of Sikkim, 2018; Tourism & Civil Aviation Department, Government of Sikkim, 2025; Ministry of Tourism, Government of India, 2022; NITI Aayog, 2025; Responsible Tourism Partnership, 2017; World Wildlife Fund, 2025).

Ninety-Day Quick Wins (Low-Cost, High-Credibility)

Codify cultural protocols through a one-page “sacred-protocol charter” embedded in guest onboarding and signage (Tourism and Civil Aviation Department, Government of Sikkim, 2018). Publish benefit-ledgers and grievance SOPs with clear timelines (Tourism and Civil Aviation Department,

Government of Sikkim, 2018). Install refill points, remove single-use bottles, and log waste per visitor-night (Ministry of Tourism, Government of India, 2022). Run guide refresher clinics (Tourism & Civil Aviation Department, Government of Sikkim, 2025), enable direct community bookings (NITI Aayog, 2025).

One-Two Year Actions (Institutionalisation and Scaling)

Simplify Permit Stacks and Digitise Workflows (Policy). Move to a one-stop desk or weekly cut-off for permits with clear checklists and fee transparency, consistent with the state’s 2025 updates; integrate seasonal caps and closure calendars in the system (Tourism & Civil Aviation Department, Government of Sikkim, 2025).

Audit and Formalise Community Funds (Policy/People). CBET is audited by a third-party on an annual basis, which includes public meetings. Condition payments on acceptable social priorities (e.g., scholarships for the skills of women, water points). This internalises responsibility that is

ensured by state policy (Tourism and Civil Aviation Department, Government of Sikkim, 2018).

Institutionalise Carrying-Capacity Management (Planet/Policy). Convert pilot caps into dynamic thresholds using simple pressure indicators (waste/visitor, trail wear) as required by responsible-destination frameworks (Ministry of Tourism, Government of India, 2022).

Upgrade Homestay Quality and Safety (People/Partnership). Use national guidance to standardise minimum amenities, hygiene, and safety; aggregate procurement for linens, filters, and refill infrastructure; bundle micro-loans where needed (Ministry of Tourism, Government of India, 2022; NITI Aayog, 2025).

Local Procurement and Fair-Contracting Regime (Partnership/Policy). Insert local-procurement clauses (food, crafts, transport) and transparent margin disclosures into all MOUs; review annually.

These reflect responsible-tourism award standards that reward inclusive value chains (Responsible Tourism Partnership, 2017).

Youth Pathways and Green Jobs (People/Partnership). Create paid roles data stewards, nature interpreters, content creators and a certification ladder in partnership with NGOs and PA managers (World Wildlife Fund, 2025).

Roles and Responsibilities (who does what)

Local government integrates refill and waste systems with byelaws and funds small infrastructure. NGOs/CSOs provide training and monitoring tools, while operators/OTAs co-brand protocols and follow procurement quotas. Supported by national templates and funding (Ministry of Tourism, 2022; NITI Aayog, 2025; Responsible Tourism Partnership, 2017; World Wildlife Fund, 2025).

Table 9. Practice Roadmap Actions, Leads, Indicators, and Policy Anchors

Horizon	Action (4P)	Lead actor(s)	Practical indicator(s)	Policy/Program anchor
90 days	Protocol charter + host briefings (People/Partnership)	CBET committee; guides	% tours delivering protocol briefing; grievance resolution ≤14 days	(Tourism and Civil Aviation Department, Government of Sikkim, 2018)
90 days	Public benefit ledger + grievance SOP (Policy)	CBET committee; local govt	% revenue disclosed; time-to-acknowledge ≤48h	(Responsible Tourism Partnership, 2017)
90 days	Refill points + waste baseline (Planet/Partnership)	CBET committee; vendors; ULB/GP	Waste per visitor-night; refill uptake rate	(Ministry of Tourism, Government of India, 2022)
90 days	Guide refresher + code (People/Policy)	PA authority; tourism dept; associations	# certified guides; code violations/quarter	(Tourism & Civil Aviation Department, Government of Sikkim, 2025)
90 days	Direct booking channel (Partnership)	CBET committee; operator/OTA	Share of direct bookings; leakage ratio	(NITI Aayog, 2025)
90 days	Youth stewardship teams (People/Partnership)	Schools/CSOs; PA authority	# paid youth stewards; data logs submitted	(World Wildlife Fund, 2025)
1-2 yrs	One-stop permits + digital workflows (Policy)	State tourism; PA authority	Avg. permit turnaround (days); % online	(Tourism & Civil Aviation Department, Government of Sikkim, 2025)
1-2 yrs	Audited community funds (Policy/People)	Local govt; CBET committee	Clean audit; attendance at public hearings	(Tourism and Civil Aviation Department, Government of Sikkim, 2018)
1-2 yrs	Dynamic visitor caps (Planet/Policy)	PA authority; CBET committee	% days within cap; closure compliance	(Ministry of Tourism, Government of India, 2022)
1-2 yrs	Homestay upgrades & finance (People/Partnership)	State tourism, banks, CBET group	% units meeting standard; loan uptake	(NITI Aayog, 2025)
1-2 yrs	Local-procurement & fair-contracting (Partnership/Policy)	Operators; CBET committee	Local procurement share; on-time payments	(Responsible Tourism Partnership, 2017)
1-2 yrs	Youth green-jobs ladder (People/Partnership)	NGOs; PA authority; tourism dept	# certified youth; retention across seasons	(World Wildlife Fund, 2025)

Table 9 presents a sequence of minimised viable plans, 90-day quick wins and 1-2 year institutional steps combined with simple indicators and clear policy anchors to enable the communities to take action now and at the same time maintain in line with state and national directions.

LIMITATIONS & FUTURE WORK

Scope & Evidence Limits

Coverage of benefit-sharing and FPIC can be descriptive, not auditable, and financial records of the public, employment agreement terms, and

consequences of grievances are not regularly reported. Measures are still heterogeneous (different units of waste, satisfaction scales), which makes it difficult to add them together. Lastly, the situation is complicated by the fact that the mixed natural-cultural status of Khangchendzonga does not allow generalisation.

FUTURE WORK BY THE 4P LENS

- **People:** Measure distributional equity (household income shares, participation by women/youth, representation of marginalised groups), track leadership trajectories, and monitor cultural vitality (ritual continuity, use of Indigenous toponyms).
- **Planet:** Establish visitor-cap baselines, routine waste-per-visitor audits, water-quality spot checks, trail-wear indices, and biodiversity proxies aligned with sacred-site protection and Outstanding Universal Value.
- **Policy:** Map tenure/rights clarity; institute FPIC audits within contracts; standardise public benefit ledgers; and evaluate permit simplification for compliance and revenues.
- **Partnership:** Compare contract templates (co-ops, PA-community, NGO-facilitated, private-community); quantify value-chain leakage vs. local procurement; and examine platform effects on pricing power and seasonality.

Methods & Data

Pilot a 4P scorecard in 3-5 sites, testing content validity and inter-rater reliability. Use mixed-methods small-N designs/QCA to identify

configurations that co-produce livelihoods, cultural integrity, and ecological compliance. Apply outcome harvesting to capture unanticipated effects.

Practice Experiments

A/B test visitor-cap signage, waste buy-back incentives, and guide re-certification refreshers; trial green-fee designs that feed community funds with transparent ledgers; evaluate local-procurement clauses and on-time payment dashboards.

Transferability & Reflexivity

Undertake structured comparisons with adjacent Himalayan states and transboundary contexts to identify which 4P levers travel and which are sacred-norm specific.

CONCLUSION

Ecotourism in the Himalayan Religious Sights of Sikkim. In the Himalayan Religious Sights, community-based ecotourism can only be successful when cultural integrity and ecological thresholds are considered conditions of success. It is necessary to have a balanced 4P strategy; it is: People: Build legitimacy; Planet: Guardrails sustain carrying capacity; Policy: Tools convert norms into enforcing rules; Partnerships: Retain local value. Sikkim can advance quickly through 90-day “no-regrets” actions protocol briefings, refill points, public ledgers, guide refreshers, community bookings, while pursuing 1-2-year reforms such as digitised permitting, dynamic caps, audited funds, and youth green-jobs pathways. A light 4P scorecard is able to normalize indicators and enable adaptive culturally grounded CBET.

REFERENCES

- Agarwala, T. (2024, June 14). *Heavy rain, landslides kill 6 in India's Sikkim, 2,000 tourists stranded*. Reuters. <https://www.reuters.com/world/india/heavy-rain-landslides-kill-6-indias-sikkim-2000-tourists-stranded-2024-06-14/>
- Bentley, J. (2020). *Vanishing Lepcha: Change & cultural revival in Sikkim*. *Bulletin of Tibetology*.
- Bhutia, J. N. (2024). *Sustainable Tourism Planning and Development: A Study of Selected Tourist Destinations of Sikkim* (Doctoral dissertation).
- Chakraborty, S., & Chakma, N. (2016). Economy and social development of rural Sikkim. *Space and Culture, India*, 4(2), 61-79.
- Chakraborty, S., & Chanda, A. (2022). Assessment of forest cover change, community responses, and conservation strategy: evidence from North Sikkim District, India. In *Conservation, management and monitoring of forest resources in India* (pp. 221-257). Cham: Springer International Publishing.
- Chhetri, R. (2025). Comparative Study of Solid Waste Management in Rural Homestays and Urban Hotels in Sikkim, India. *Resilient Community Microgrids*, 347-368.
- Dutta, D., & Amir, M. (2024). Exploring Tourist Satisfaction in Homestay Tourism: A Focus on Environmentally Conscious Practices And 'green' initiatives.
- Forest, Environment & Wildlife Management Department, Government of Sikkim. (2014). *Management plan of the Khangchendzonga National Park, 2008-2018 (Updated 2014)* [PDF]. ENVIS Centre Sikkim. <https://sikenvic.nic.in/WriteReadData/LatestNewsData/KNP-Management%20Plan%20->

%20WEB.pdf

- Government of Sikkim, Chief Secretary. (2018). *PPT by Chief Secretary, State of Sikkim in OA No. 606 of 2018 (Compliance of MSW Management Rules, 2016)* [PDF slides]. National Green Tribunal (India). [https://www.greentribunal.gov.in/sites/default/files/news_updates/PPT%20BY%20CHIEF%20SECRETARY,%20STATE%20OF%20SIKKIM%20IN%20OA%20NO.%20606%20of%202018%20\(COMPLIANCE%20OF%20MSW%20MGT.%20RULES,%202016\).pdf](https://www.greentribunal.gov.in/sites/default/files/news_updates/PPT%20BY%20CHIEF%20SECRETARY,%20STATE%20OF%20SIKKIM%20IN%20OA%20NO.%20606%20of%202018%20(COMPLIANCE%20OF%20MSW%20MGT.%20RULES,%202016).pdf)
- Government of Sikkim, Department of Forest, Environment & Wildlife Management. (2011). *Sikkim ecotourism policy* [PDF]. Sikkim Biodiversity Conservation & Forest Management Project. <https://www.nsws.gov.in/s3fs/2022-12/Sikkim%20Ecotourism%20Policy.pdf>
- Government of Sikkim, Department of Science & Technology and Climate Change. (2012). *Sikkim State Action Plan on Climate Change (2012-2030)* [PDF]. Ministry of Environment, Forest and Climate Change (MoEFCC), Government of India. <https://www.moef.gov.in/uploads/2017/09/Sikkim.pdf>
- Government of Sikkim, Forests & Environment Department. (2021, December 29). *Notification No. 135/GOS/F&ED/PCCF-ACS: Ban on plastic water bottles of capacity 2 litres and below* [PDF]. https://www.sikkim.gov.in/uploads/Notifications/Notification_Plastic_Water_Bottles_29_20220110.pdf
- Government of Sikkim, Urban Development & Housing Department. (2019, April 29). *Solid Waste Management Cleanliness and Sanitation Byelaws, 2019* (Gazette No. 185; Notification No. 5/UD&HD) [PDF]. https://www.sikkim.gov.in/uploads/Notifications/SBM_Byelaws_of_solid_waste_management_48_20190710.pdf
- International Union for Conservation of Nature. (2020). *Khangchendzonga National Park: Conservation Outlook Assessment 2020*. IUCN World Heritage Outlook. <https://worldheritageoutlook.iucn.org/node/1186/pdf?year=2020>
- Kannan, R., & Singh, M. (2021). Tourists' perception about Homestay Tourism in Sikkim.
- Kaur, M., & Gautam, A. K. (2024). Sustainable tourism practices in Sikkim: A comprehensive study. *International Journal of Tourism and Hotel Management*, 6(1), 18-21.
- Ministry of Tourism, Government of India. (2022, April). *Swadesh Darshan 2.0: Scheme guidelines Developing sustainable and responsible destinations* [PDF]. <https://tourism.gov.in/sites/default/files/2023-04/Swadesh%20Darshan%20%20Guideline%20Booklet.pdf>
- Nayak, K. B. (2024) POLITICAL EMPOWERMENT OF TRIBAL WOMEN IN INDIA THROUGH PRIS OF LOCAL-SELF GOVERNANCE.
- NITI Aayog. (2025, August 22). *Rethinking homestays: Navigating policy pathways* [PDF]. <https://www.niti.gov.in/sites/default/files/2025-08/Rethinking-Homestays-Navigating-Policy-Pathways.pdf>
- Responsible Tourism Partnership. (2017). *RT Awards Sikkim: Responsible Tourism Award Winners for Sikkim, India*. Retrieved September 16, 2025, from <https://responsibletourismpartnership.org/rt-award-winners-in-india/rt-awards-sikkim/>
- Sharma, S., Arya, A. K., & Bachheti, A. (2024). The Impact of Climate Change in the Eastern Himalayan State of Sikkim, India: A Review. *Climate Crisis and Sustainable Solutions: Strategies for Adaptation, Mitigation and Sustainable Development*, 265-283.
- Times of India. (2024, April 29). *Sikkim witnesses record tourist influx; projected to reach 1.2 million visitors by year's end*. Times Travel. <https://timesofindia.indiatimes.com/travel/travel-news/sikkim-witnesses-record-tourist-influx-projected-to-reach-1-2-million-visitors-by-year-end/articleshow/109699110.cms>
- Tourism & Civil Aviation Department, Government of Sikkim. (2025). *The Sikkim Registration of Tourist Trade Rules, 2025* [PDF]. Government of Sikkim. https://sikkimtourism.gov.in/DownloadableFiles/DeptManual/DM25A008_manual.pdf
- Tourism and Civil Aviation Department, Government of Sikkim. (2018). *Sikkim Tourism Policy 2018* [PDF]. Government of Sikkim. https://www.nsws.gov.in/s3fs/2022-12/Sikkim_Tourism_Policy_2018.pdf
- UNESCO World Heritage Centre. (2025). *Khangchendzonga National Park*. Retrieved September 16, 2025, from <https://whc.unesco.org/en/list/1513>
- UNESCO. (2025). *Khangchendzonga - Man and the Biosphere Programme (MAB)*. Retrieved September 16, 2025, from <https://www.unesco.org/en/mab/khangchendzonga>
- World Wildlife Fund. (2025). *A young generation in India takes stewardship of their environment*. Retrieved September 16, 2025, from <https://www.worldwildlife.org/stories/a-young-generation-in-india-takes-stewardship-of-their-environment>
- Yadav, C. S., Gupta, P., & Lama, R. (2018). Potential of Homestays as a tourism product in Sikkim. *Challenges & Strategic Interventions for Tourism*, 5, 36-46.