# RESPONSIBLE TOURISM GUIDEBOOK

the better india

CBALANCE
carbon ▸ cost ▸ community ▸ climate

# Executive Summary

Tourism can leave various footprints, ranging from soft to hard impacts on destinations and their ecosystems. Soft footprints refer to low-impact, responsible tourism practices that minimize harm to the environment and local cultures while maximizing benefits for communities. Conversely, hard footprints result from unsustainable or unmindful tourism activities that degrade natural resources, disrupt ecosystems, and erode cultural integrity. India, with its rich cultural heritage, diverse landscapes, and vibrant communities, is a compelling destination for tourists both domestic and beyond. Acknowledging the negative impacts of rampant tourism, ranging from environmental degradation to socio-economic disparities, is crucial given that the health and well-being of both the places and people within the country are intrinsically linked to the functioning of the tourism sector. As India's tourism sector continues to grow, it is increasingly imperative for government bodies, tourists, tour operators, and hospitality providers to adopt responsible practices that mitigate harm and foster positive outcomes for destinations, wildlife and communities.

This guidebook primarily focuses on adventure and wildlife tourism in mountainous regions and protected forest areas. It focuses on tourism experiences that span for longer periods of time as compared to shorter one or two day weekend getaways. It aims at making a case for a radical shift in tourism that is 'luxury oriented' which is a manifestation and characteristic of capitalism which is rooted in 'extraction'. In this direction the guidebook presents information on the distresses provoked by unmindful tourism practices on the human and more than human world (comprising flora, fauna, water bodies and other ecosystem components) across four bioregions in India . It evaluates the root causes of these distress and also presents case studies which highlight the need to alter luxury tourism and move towards sufficiency-based responsible tourism which is also rooted in 'reciprocity' i.e. it gives back to the community and other ecosystem components by contributing directly and even indirectly  to conservation and restoration of the place of tourism and the planet as a whole.

The guidebook shares details of already existing responsible tourism practices documented through interviews with tour operators, facilitators and accommodation providers and also presents new solutions which can enable nurturing responsible tourism practices across India through support from policy makers, local service providers, and civil society alike.

The intention of the guidebook is to orient tourists, tourism operators, hospitality providers and policy makers to evaluate the true purpose of tourism and adopt and implement responsible mechanisms, practices and behavior in this context. The guidebook provides a list of resources which includes guidelines and tools as applicable for tourists, tour operators and hospitality providers. It does not share any specific resources for policymakers because this guidebook is intended to be a conversation starter towards the facilitation of the drafting and implementation of policies and tools which warrant co-creation and collaboration with local inhabitants of a place of tourism as a non-negotiable in addition to other stakeholders such as researchers, CSOs and others.

# Guidebook Structure

1. ## <u>The Need for Responsible Tourism in India.</u>

   ### 1.1. Background : An Overview of Bioregions, Tourism Offerings, Value Chain and Indicators of Tourism Induced Distress.

   This section of the guidebook provides and overview of tourism in India by sharing information on the types of bioregions that exist, the tourism offerings the value chain components which provides an overview of the stakeholders conventionally involved in tourism in addition to sharing information on the diversity of distress categories that can be associated with tourism.

   ### 1.2. Distress Mapping : The impact of tourism on the human and more than human world

   This section firstly describes the boundaries of the guidebook in the context of the bioregions, the tourism value chain aspects and the types of tourism it is focusing on. It further provides an overview of the distresses from tourism on society, the economy, ecology and the climate.

   ### 1.3. Evaluation of Tourism Provoked Distresses and their Driving Factors

   This section analyzes the impacts of select value chain components of tourism across 4 bioregions across 8 tourism circuits. The analysis is undertaken to provide examples of the impacts of tourism from a socio-ecological, economic and carbon distress perspective. It further highlights the underlying systemic factors such as policy regulations that contribute to these distresses which need to be understood and checked.

   ### 1.4. Case Studies : Cautionary Tales

   This section will share 2 case studies, one from each bioregion being studied as part of this guidebook i.e. the trans himalayas, the himalayas, the western ghats and the north east. The case studies are aimed at highlighting the detrimental impacts of rampant and unmindful tourism practices and suggest pathways to move towards responsible tourism oriented systems and practices.

2. ## <u>Responsible Tourism : Principles and Solutions.</u>

### 2.1.  Guiding Principles for Responsible Tourism

This section is aimed at highlighting certain perspectives that need to be adopted to facilitate the transformation of tourism from an 'extractive' action to one that is rooted in honoring and also giving back to the local communities, biodiversity and other ecosystem components it is dependent upon. The principles elaborated on as part of this section comprise of 'Sufficiency', 'Participatory Processes', 'Reciprocity' and 'Polluter Pays Principle'.

### 2.2. Existing Responses and Solutions : An overview and analysis

This section will share details of 'existing responses and solutions' for responsible tourism gathered by interviewing tour operators, homestay owners and organizations engaged in offering and facilitating responsible tourism services.  It further analyzes each solution and response from the lens of 'who benefits', 'who pays' and 'who decides'

### 2.3. New Solutions

This section will share recommendations for new solutions and responses which can be adopted for responsible tourism  primarily by civil society, civil society organisations, government bodies and tour operators which go beyond the 'existing responses and solutions' detailed in the previous section.

## 3.  <u>Resources</u>

### 3.1. Responsible Tourism  Resources for Tourists

This section will firstly provide details on the perspectives guiding the resources detailed under this section and will share details of the contexts these resources shared will be applicable to. It will share guidelines and tools ( as relevant) for individuals and groups aiming to embark on a tourism journey either independently or through a tour operator.

### 3.2. Responsible Tourism Resources for Tour Operators

This section will firstly provide details on the perspectives guiding the resources detailed under this section and will share details of the contexts these resources shared will be applicable to. It will share guidelines and tools ( as relevant) for  tour operators to facilitate responsible tourism journeys for adventure tourism activities such as mountaineering, safaris, nature trails & camping and ecotourism.  It shares guidelines on how tour operators can facilitate end-to-end responsible tourism practices.

**3.3. Responsible Tourism Resources for Accommodation Providers.**

This section will firstly provide details on the perspectives guiding the resources detailed under this section and will share details of the contexts these resources shared will be applicable to. It will share guidelines and tools ( as relevant) for  hospitality providers such as hotels and homestays to provide services which are sensitive to the socio-ecological, economic and climatic contexts they are situated in and also dependent  on.

# 1. The Need for Responsible Tourism in India

The health and well-being of both the places and people who fall within the boundary of India and even beyond are intrinsically linked to the functioning of the tourism sector given its potential to contribute to ecological and climatic degradation and socio-economic disparities.  Therefore, as India's tourism sector grows it needs to adopt responsible practices that mitigate harm and foster positive outcomes for the destinations, wildlife and communities it is benefitting from.  A first step in this direction is to understand the context of tourism and then move towards unearthing the 'underlying causes' i.e. the systemic factors fuelling the socio-ecological, economic and climatic distresses emerging from unmindful tourism.

## 1.1. Background: An Overview of Bioregions, Tourism Offerings, Value Chain and Indicators of Tourism Induced Distress.

This section shares an overview of the diversity of bioregions in India which are home to a diversity of ecosystems comprising waterbodies, flora, fauna and humans. There are certain 'Tourism Circuits'[1] demarcated within these bioregions which are nationally recognised. In this context we provide an overview of the factors that contribute to transforming a place within a bioregion into a tourist location. There are a series of interconnected activities and processes that create, deliver, and consume tourism products and services which are associated with the conventional tourism sector which are described as part of the 'Tourism value chain' section. Tourism that follows an extractive model is known to provoke certain distresses that  should be known since they are linked to the distresses that are provoked by tourism related activities. An overview of the indicators of these distresses are mentioned in the 'Distress Phenomenon Identification' section. This section is a building block in the direction of analyzing the impacts of tourism in India leading into navigating pathways to address issues that warrant systemic, collective and individual transformation.

### 1.1.1. Overview of Bioregions in India Identification

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[1] The National Portal of India defines a Tourist Circuit as 'a route having at least three major tourist destinations which are distinct and apart and have well defined entry and exit points' ( Source : *Swadesh Darshan| National Portal of India.*  https://www.india.gov.in/spotlight/swadesh-darshan)

India can be classified into 10 Bioregions and matched to an ecosystem classification system using 'Global Ecosystem Typology[2]', which identifies 'biomes' across three 'Core' ecosystem types: Terrestrial, Marine, and Freshwater. Within each of these bioregions, the main tourism circuits are determined for analysis.

**Transhimalaya:** The Transhimalayan region, lying beyond the Himalayas in northern India, encompasses a rugged landscape characterised by barren high-altitude plateaus, deep valleys, and harsh climatic conditions. This bioregion supports sparse vegetation adapted to extreme cold, including alpine meadows and patches of scrub vegetation. Wildlife such as the elusive snow leopard and the Tibetan wild ass find refuge in this challenging environment, making conservation efforts crucial for preserving their habitats and the delicate ecological balance.

**Himalaya:** The Himalayan region, stretching across India's northern borders, is renowned for its towering peaks, deep valleys, and diverse ecosystems. The Himalayas support a rich array of flora and fauna, from lush temperate forests in the lower foothills to alpine meadows and snow-covered peaks at higher elevations. Endangered species like the Himalayan monal and the Himalayan musk deer inhabit these mountains, while rivers originating from their glaciers sustain millions of people downstream, highlighting the region's ecological and cultural significance.

**Desert:** India's desert bioregion, primarily located in the northwestern state of Rajasthan, is dominated by the vast expanse of the Thar Desert, also known as the Great Indian Desert. Characterised by arid landscapes, sand dunes, and sparse vegetation, this harsh environment hosts unique desert-adapted wildlife, such as the Indian bustard and the spiny-tailed lizard. Nomadic communities rely on traditional knowledge to survive in this challenging terrain, while efforts are ongoing to mitigate desertification and conserve the fragile desert ecosystem.

**Semi-Arid:** The semi-arid regions of India, including parts of Rajasthan, Gujarat, and Maharashtra, feature a transitional landscape between desert and more fertile areas. This bioregion experiences relatively low rainfall and is characterised by scrub vegetation, thorny bushes, and dry deciduous forests. Despite the challenging conditions, semi-arid regions support a variety of wildlife, including antelopes, foxes, and a diverse range of bird species. Sustainable land management practices are essential to mitigate desertification and conserve biodiversity in these semi-arid landscapes.

**Western Ghats:** Along India's western coast, the Western Ghats form a biodiversity hotspot of global significance, renowned for its rich and diverse ecosystems. This bioregion encompasses lush tropical rainforests, montane

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[2] Keith, D. A., Ferrer-Paris, J. R., Nicholson, E., Bishop, M. J., Polidoro, B. A., Ramirez-Llodra, E., ... & Kingsford, R. T. (2022). A function-based typology for Earth's ecosystems. *Nature*, *610*(7932), 513-518.

grasslands, and shola forests, harbouring an exceptional wealth of endemic flora and fauna. Endangered species such as the Malabar civet and the Lion-tailed macaque find sanctuary in these forests, while rivers originating from the Western Ghats sustain agricultural lands and urban centers downstream, emphasising the region's ecological and socio-economic importance.

**Deccan Plateau:** Spanning the central and southern parts of India, it is a vast elevated landmass characterised by its rolling terrain, rocky outcrops, and extensive plateaus. This bioregion supports a variety of habitats, including dry deciduous forests, grasslands, and scrublands. Wildlife, such as the Indian wolf and the sloth bear inhabit these landscapes, which face threats from deforestation, habitat fragmentation, and unsustainable land use practices.

**Gangetic Plain:** The Gangetic Plain, stretching across northern and eastern India, is a fertile alluvial plain formed by the Ganges and its tributaries. This bioregion supports intensive agriculture and sustains a significant portion of India's population. Wetlands, grasslands, and forests along the riverbanks provide habitat for diverse wildlife, including the endangered Ganges river dolphin and the Gharial crocodile. However, pollution, habitat loss, and over-extraction of water pose serious threats to the ecological health of the Gangetic Plain.

**Coasts:** India's vast coastline, extending along the Arabian Sea and the Bay of Bengal, encompasses diverse coastal ecosystems, including mangroves, coral reefs, and sandy beaches. These bioregions support a wealth of marine and terrestrial biodiversity, including various fish species, marine mammals, and seabirds. Mangrove forests act as vital buffers against coastal erosion and provide critical habitat for numerous species. However, coastal development, pollution, and overfishing pose significant challenges to the conservation of India's coastal ecosystems.

**North East:** India's North East region, comprising the states of Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim, and Tripura, is characterized by its rich biodiversity and unique cultural heritage. This bioregion has dense forests, rolling hills, and high biodiversity hotspots. It is home to iconic species such as the Indian rhinoceros, the Asian elephant, and the Hoolock gibbon. However, deforestation, habitat fragmentation, and poaching threaten the region's biodiversity, highlighting the need for concerted conservation efforts.

## 1.1.2. Dimensions of Tourism Offerings

According to Wolfgang Freyer's model (2015)[3], the dimensions of tourism offerings for a given destination can be categorized into six main components:

**Natural Attractions:** This dimension refers to the natural features and landscapes that attract tourists to a destination. It includes mountains, beaches, forests, rivers, wildlife, and geological formations. Natural attractions play a significant role in shaping tourists' perceptions and experiences of a destination.

**Cultural Attractions**: Cultural attractions encompass the heritage, history, traditions, and customs of a destination. This dimension includes historical sites, monuments, museums, art galleries, cultural festivals, performing arts, and local cuisine. Cultural attractions provide insights into the identity and uniqueness of a destination's cultural heritage.

**Infrastructure and Services:** Infrastructure and services refer to the facilities, amenities, and services available to tourists in a destination. This dimension includes accommodation options (hotels, resorts, guesthouses), transportation networks (roads, airports, public transport), dining options (restaurants, cafes), recreational facilities (parks, sports complexes), and tourist information centres. The quality and availability of infrastructure and services influence tourists' satisfaction and overall experience.

**Hospitality and Entertainment:** Hospitality and entertainment encompass tourists' experiences and interactions with local residents and hospitality providers. This dimension includes the friendliness of locals, hospitality services (tour guides, tour operators), entertainment venues (nightclubs, theatres, amusement parks), cultural performances, and recreational activities (sports, adventure tourism). The warmth and hospitality of local communities contribute to tourists' sense of welcome and enjoyment.

**Accessibility and Connectivity:** Accessibility and connectivity refer to the ease of travel and transportation options available to tourists to reach and move around a destination. This dimension includes transportation infrastructure (roads, railways, airports), connectivity (internet access, mobile networks), and travel accessibility for people with disabilities. Convenient accessibility and connectivity enhance tourists' convenience and satisfaction with the destination.

**Safety and Security:** Safety and security are essential considerations for tourists when choosing a destination. This dimension includes measures to ensure tourists' safety and well-being, such as law enforcement, emergency services, health

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[3] Freyer, W. (2011). *Tourismus: Einführung in die Fremdenverkehrsökonomie*. Oldenbourg Wissenschaftsverlag.

facilities, and safety regulations. A destination's reputation for safety and security influences tourists' confidence and willingness to visit.

### 1.1.3. Types of Tourism

The tourism offerings elaborated on in the previous section, form the basis of the 'Types of Tourism' that can be offered in a place. They are classified into five main types:

1. **Adventure Tourism:** This comprises activities such as mountaineering,, motorbiking, kayaking, camping/hiking
2. **Cultural Tourism:** This includes pilgrimages, cultural festivals, and architectural / arts & crafts/ historical tours
3. **Wellness Tourism:** This comprises engaging with, spa & treatment facilities, yoga / meditation and rest and rejuvenation
4. **Wildlife tourism :** This includes safaris and nature trails
5. **Rural Tourism :** This includes nature trails and village stays

### 1.1.4. Tourism Value Chain

The tourism value chain refers to the series of interconnected activities and processes that create, deliver, and consume tourism products and services. It encompasses the journey tourists undertake, from the initial inspiration and planning stages to the actual experience and post-trip activities. The tourism value chain includes various stakeholders, resources, and activities contributing to the overall tourism experience and value creation. These stages of the value chain are mapped in the image below.

| | Planning & Booking | Arriving /Departing | Accomodation | Food and Beverage | Getting Around | Buying Supplies | Recreation Activities | |
|---|---|---|---|---|---|---|---|---|
| **VALUE CHAIN** | Tour Operators, Tour Brokers | Transport Companies | Providers of Accomodation | Catering Establishments | Transport Companies | Trade and Service Providers | Providers of Leisure Activities | Special Providers |
| | Travel Agents | Airlines | Resorts/ Hotels | Restaurants an Cafes | Bus and Train companies | Shops, markets, bakeries | Attraction operators | Conference Providers |
| | Booking Platforms | Train Companies | Holiday Homes/ Apartments | Bars and Night Clubs | Vehicle Hire | Doctors | Gudies, course providers | Exhibition Providers |
| | Insurance | Airports, Stations, Ports | Youth Hostels | Street Food Vendors / Kioask Operators | Taxi companies | Internet | Cultural providers, artists | Swimming Facilities |
| | Journalists / Instagram Influencers | Car Hire Companies | Camping | Food and Beverage Services | Providers of alternate mobility | Laundry Serivce | Equipment Hire | Health and Spa Treatments |

### 1.1.5. Distress Phenomenon Identification

Tourism-related distress takes place as a multi-faceted phenomenon in a place. The locations of distress can be classified according to the following areas of impact-

1. **Carbon distress :** Carbon distress indicators can be classified based on the various stages of tourism activities where carbon emissions are generated, such as transport, accommodation, food and beverage, construction and shopping.

2. **Ecological distress :** Ecological Distress indicators can be classified into different locations - land, biodiversity, wildlife, and water.
3. **Socio-Economic-Political distress:** Socio-economic-political distress indicators can be classified into different locations of ecological distress. They are class-caste, economic, cultural, gender, and political.

# 1.2. Distress Mapping : The impact of tourism on the human and more than human world.

Tourism distress mapping warrants a contextualized approach. This involves understanding the characteristics and dynamics of the tourism activities in a chosen bioregion and circuit and the unique environmental, social, and economic contexts that shape them. By identifying the type of tourism and the specific bioregion, the aim is to be as specific as possible in analyzing each context's nuances and challenges.

For this guidebook, the methodology adopted for tourism distress mapping was to firstly define the boundaries for the distress mapping i.e. narrowing down on the type of tourism, the bioregion, and the tourism circuit within it.

The next step involved choosing the aspect of the tourism value chain whose impact will be identified according to various distress locations - carbon, ecological, and socio-economic & political - using a set of indicators under each. This step entailed selecting the dimensions of the tourism value chain (such as transportation, accommodation, food and beverage) most relevant to the chosen bioregion and tourism circuit. For example, if assessing carbon emissions, indicators may include transportation-related emissions from vehicles or energy consumption in accommodations. Indicators may include habitat degradation, biodiversity loss, or water pollution for ecological impacts. Similarly, socio-economic indicators may focus on income distribution, cultural erosion, or community displacement.

Ultimately, the aim was to align the choice of indicators with the specific characteristics and priorities of the bioregion and tourism circuit. By doing so, we have assessed the impacts of tourism activities and identified areas for intervention and sustainable management.

## 1.2.1. Boundaries for Tourism Distress Mapping

Focusing on analyzing the impact of tourism across the diversity of bioregions and tourism circuits in India is an exhaustive exercise. Therefore, for the intention of providing contextualized assessment and recommendations, this guidebook focuses on 'adventure

and wildlife tourism' in 'protected forest areas' and in 'mountainous regions'. The focus on these nature-based tourism activities is driven by the intention to unearth the underlying socio-economic, ecological and economic and carbon emission factors provoking distress to humans and wildlife who are local inhabitants in a place of tourism. The aim is to draw attention to the fact that it is not just how a tourist shows up in a place of tourism but their journey to and from the place of tourism that has an impact on the human and more than human world (flora, fauna, waterbodies, etc). The intention is to highlight the distress phenomenon in locations where tourism is undertaken for longer time spans and more specifically 'luxuriously', as opposed to weekend getaway locations (i.e. places of mass tourism that are mostly ( not completely) accessible and affordable to people across a diversity of socio-economic classes ).

The methodology adopted to define the boundaries was to 1) Identify bioregions with mountainous and protected forest areas and narrow down on 4 representative regions. 2) List tourism circuits across the selected bioregions 3) Identify significant tourism circuits each across the bioregions where adventure tourism and wildlife tourism are predominant. 4) Select one representative tourism circuit each for wildlife and adventure tourism in each bioregion that has been narrowed down on. 5) Identify value chain components with the highest impact on human-wildlife distress.

## 1.2.1.1. Bioregions and tourism circuits selected:

1. Trans Himalaya - Stok Kangri (Ladakh) and Changtang Wildlife Circuit (Ladakh)
2. Himalaya - Kanchenjunga Base Camp Circuit and Corbett-Kosi-Marchula Circuit (Uttarakhand)
3. Western Ghats- Munnar (Kerala) and Coorg (Karnataka)
4. Northeastern regions - Eaglenest Wildlife Sanctuary Circuit (Arunachal Pradesh) and Dzükou Valley Trekking Circuit (between Manipur and Nagaland)

## 1.2.1.2. Types of Tourism selected:

The Types of Tourism that have been assessed for their impacts in these locations are primarily nature-based tourism, which includes:

● **Adventure Tourism**

- Hiking and Trekking: Exploring remote trails and mountainous terrain on foot, often for multiple days.
- Camping: Overnight stays in tents or shelters in wilderness areas, away from established campsites.

- Mountaineering: Climbing mountains and peaks, ranging from trekking peaks to technical climbs on high-altitude summits.

● **Wildlife Tourism**

   - Safari Tourism:
     ○ Game Drives: Guided tours in open vehicles through national parks, wildlife reserves, and sanctuaries to observe wild animals in their natural habitat.
     ○ Walking Safaris: Guided walks led by experienced rangers or guides to explore the wilderness on foot, observing wildlife and learning about ecosystems up close.

   - Birdwatching Tourism:
     ○ Birding Tours: Guided excursions to bird-rich habitats such as wetlands, forests, and grasslands to observe and identify a diverse range of bird species.
     ○ Birding Festivals: Events organized in birding hotspots to celebrate and showcase local avifauna, featuring guided birdwatching tours, workshops, and lectures.

   - Ecotourism:
     ○ Ecological Tours: Guided tours that emphasize environmental education, sustainability, and conservation, providing opportunities to learn about local ecosystems, biodiversity, and conservation initiatives.
     ○ Community-based Ecotourism: Engaging with local communities to support sustainable livelihoods, community-based conservation projects, and responsible tourism practices that benefit both people and wildlife.

## 1.2.1.3. Tourism Value Chain selected

For this guidebook the aspects of the value chain that have been chosen to assess impact are providers of:

1. Transport - this includes the impact of providers contributing to 'Arriving and Departure' services i.e. to and from an individual's home and the tourist destination and 'Getting Around' within the location of tourism

2. Accommodation - this includes hotels, resorts, homestays, guest houses and hostels
3. Recreational Activities - this includes tour guides, safari operators, adventure operators

## 1.2.2 Overview of Indicators of Tourism Provoked Distress

This section details ecological, socio-economic and carbon distress indicators which are observed from conventional, extractive tourism practices in mountainous and protected forest areas. The distress indicators mentioned under this section informed the distress mapping exercise for 'Value-chain specific evaluation of tourism provoked distresses' which is detailed under 1.2.3.

### 1.2.2.1 Carbon Distress

Carbon distress in this context refers to problems arising from the use of fossil fuel or fossil fuel based products releasing carbon dioxide ($CO_2$) which is one of the many heat trapping gasses contributing to the rise in global temperature. The exponential increase of $CO_2$ and other greenhouse gasses is known to contribute to climate change whose impacts are visible through extreme heat waves, droughts, wildfires, sea-level rise, increased frequency and intense cyclones, and biodiversity loss among other phenomena. Carbon distress in the context of tourism can be linked majorly to tourism activities related to travel ( arriving, departing and getting around) and accommodation in addition to other activities. Given that there are multiple factors contributing to carbon emissions across the world an attempt has been made to identify indicators that can be directly linked to tourism eg. Low Air Quality Index (AQI) during tourist seasons and black layers emerging from emissions settling on glacial caps which have been observed in locations such as Ladakh from the high influx of vehicles in certain locations.

If carbon distress is not controlled and warming of the planet continues at the current rate the impacts of climate chaos will be irreversible and will contribute to augmenting its consequences which manifest in the form of poverty, migration, food and water insecurity[4]. Carbon distress also impacts wildlife for instance increased and intense heat waves and prolonged dry spells impacts water availability in water bodies forcing animals to venture closer to human habitations in search of water. This contributes to human-wildlife distress in multiple forms eg. As wildlife venture into human habitats they start preying upon domesticated animals in the settlements or feed on agricultural crops.

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[4] Stefan Gössling, Ralf Vogler, Andreas Humpe & Ning (Chris) Chen (25 Mar 2024): National tourism organizations and climate change, Tourism Geographies, DOI: 10.1080/14616688.2024.2332368

Carbon distress therefore can be interlinked to ecological distress, water distress, wildlife distress and socio-economic distress. These factors highlight the need for tourism to work towards minimizing its carbon footprint to mitigate its impact on the biodiversity and local communities it benefits from.

## 1.2.2.2 Ecological Distress

**Land-based distress indicators:**

Land distress caused by tourism activities encompasses many indicators, each reflecting the profound impact of human intervention on the environment. Landslides, often triggered by deforestation and improper land management practices associated with tourism development, pose significant risks to natural landscapes and human settlements. Land use change, driven by converting pristine habitats into tourist infrastructure and urban areas, disrupts ecosystems and compromises biodiversity. Soil pollution from waste disposal, chemical runoff, and other anthropogenic activities degrades soil quality and threatens agricultural productivity. Fragmentation of habitats due to infrastructure development and human encroachment leads to the isolation of wildlife populations, hindering their ability to migrate and find resources, thus jeopardizing ecosystem resilience. Flooding and drought, exacerbated by alterations to natural drainage patterns and water diversion for tourism purposes, disrupt hydrological cycles and exacerbate environmental vulnerability. Privatization of commons, such as grazing lands and water bodies, deprives local communities of essential resources and exacerbates socio-economic disparities. Other agrarian distress, including loss of agricultural land, water scarcity, and displacement of rural populations, further exacerbates land degradation and threatens food security. The increase in built-up areas and urbanisation associated with tourism expansion encroaches upon natural habitats and exacerbates environmental degradation. Invasive species introduced through tourism activities outcompete native flora and fauna, disrupting ecosystems and threatening biodiversity. Soil erosion and alteration of natural drainage patterns, exacerbated by construction and land development, degrade landscapes and contribute to sedimentation in water bodies. Disturbance to wildlife, caused by noise pollution, habitat destruction, and direct human interactions, disrupts ecological balance and threatens species survival. Lastly, glacial melting, accelerated by climate change and exacerbated by tourism-related emissions, contributes to water scarcity, habitat loss, and natural hazards in mountainous regions. These indicators underscore the urgent need for sustainable tourism practices prioritising environmental conservation, community engagement, and responsible land management to mitigate land distress and safeguard natural resources for future generations.

**Wildlife Distress**
Wildlife distress resulting from tourism activities manifests through various indicators, reflecting the profound impact of human presence and intervention on natural ecosystems. Deforestation and loss of vegetation, often driven by land clearing for tourism infrastructure and agricultural expansion, disrupts wildlife habitats and diminishes vital

resources for many species. This habitat loss contributes to biodiversity decline as native flora and fauna struggle to survive in fragmented landscapes. Fragmentation of habitats further compounds the issue, isolating wildlife populations and restricting their movement, leading to increased vulnerability and reduced genetic diversity. Human-wildlife conflict arises when tourism encroaches upon wildlife habitats, leading to confrontations between humans and animals over resources, territory, and safety. Invasive species introduced through tourism activities outcompete native species, disrupt ecosystems, and threaten biodiversity. Additionally, disturbances to wildlife caused by noise pollution, habitat destruction, and direct human interactions disrupt natural behaviours and stress wildlife populations. Wildfires, often exacerbated by human activities such as campfires and discarded cigarettes, alter natural fire regimes and destroy critical habitats, further exacerbating the challenges faced by wildlife.

**Water distress**
Wildlife distress resulting from tourism activities extends beyond direct habitat destruction and human-wildlife conflict to encompass various water-related indicators, reflecting the intricate connections between terrestrial and aquatic ecosystems. Water pollution, often stemming from inadequate waste management and runoff from tourist facilities, contaminates freshwater habitats, threatening the health of aquatic organisms and disrupting food chains. Biodiversity decline and habitat degradation exacerbate the impacts of water pollution as compromised ecosystems struggle to support diverse species and provide essential ecosystem services. Lower water tables and alterations to hydrological regimes, exacerbated by excessive water extraction for tourism infrastructure and irrigation, further stress freshwater ecosystems and diminish critical habitats for wildlife. Algal blooms (eutrophication), fueled by sewage and agricultural runoff nutrient pollution, degrade water quality and disrupt aquatic ecosystems, leading to oxygen depletion and fish kills. Invasive species introduced through tourism exacerbate these issues, outcompeting native species and further destabilising fragile aquatic ecosystems. Groundwater exploitation, driven by tourism-related water demands, depletes aquifers and exacerbates water scarcity, posing long-term threats to wildlife and human communities. Erosion and sedimentation, exacerbated by land development and deforestation associated with tourism, degrade aquatic habitats, smothering habitats and impairing water quality. Moreover, water theft and mafia operations, fueled by illegal water extraction and diversion for tourism, exacerbate water scarcity and undermine efforts to manage freshwater resources sustainably.

## 1.2.2.3. Socio-economic distress :

**Class-caste based distress** stemming from tourism activities highlights the intersectionality between social structures and economic opportunities within destinations. Exclusion from jobs or positions based on caste perpetuates systemic inequalities, denying individuals from marginalized castes access to employment and upward mobility within the tourism sector. Overt caste-class discrimination exacerbates social divides, with

discriminatory practices and attitudes reinforcing hierarchies and limiting opportunities for those deemed lower in the caste hierarchy. Caste-based job assignments further entrench these inequalities, with individuals from marginalized castes often relegated to menial or low-paying roles, while higher caste individuals occupy positions of authority and prestige. The entrenchment of caste-class hierarchies within tourism destinations perpetuates social stratification, hindering social cohesion and perpetuating cycles of poverty and marginalization. Forced eviction and passive displacement of marginalized communities to make way for tourism development further exacerbate these inequalities, robbing individuals of their homes, livelihoods, and cultural heritage. Exploitation of marginalized castes, including unfair wages, long hours, and exploitative working conditions, further compound the challenges faced by vulnerable communities. Additionally, segregation in housing, access to facilities such as toilets, and food establishments perpetuates social divisions, denying marginalized groups equal access to basic amenities and services. Moreover, instances of violence, including physical and verbal abuse, harassment, and discrimination based on caste, underscore the entrenched nature of caste-based distress within tourism destinations.

**Economic distress** resulting from tourism activities encompasses a range of indicators that highlight the complex interplay between economic growth and social inequalities within destination communities. One prominent indicator is the loss of native livelihoods, as traditional occupations and industries are displaced or marginalized by tourism development, leading to unemployment and economic insecurity among local populations. Forced migration often accompanies this loss, as communities are uprooted from their homes and ancestral lands to make way for tourism infrastructure, disrupting social networks and cultural identities. Inflation, particularly during peak tourist seasons, drives up the cost of living for residents, making basic necessities less affordable and exacerbating financial strain. The shift towards a service economy, dominated by tourism-related industries, often perpetuates livelihood precarity among workers, who may face irregular employment, low wages, and limited access to social protections. Contractual work without security further compounds these challenges, leaving workers vulnerable to exploitation and unable to plan for the future. The commodification of nature, driven by tourism demand for pristine landscapes and exotic experiences, often comes at the expense of local communities who are marginalized in the pursuit of profit. Unfair wages, particularly in informal sectors such as hospitality and transportation, exploit workers and perpetuate inequalities within destination economies. Peak season inflation exacerbates these disparities, as prices soar for goods and services, further straining the financial resources of local residents.

**Cultural distress** stemming from tourism activities highlights the delicate balance between preserving cultural heritage and satisfying tourist demands, often resulting in tensions and conflicts within destination communities. One significant indicator is cultural appropriation without compensation, where aspects of local culture are commodified and exploited for commercial gain without adequate recognition or benefit-sharing with the originating community. The commercialization of cultural heritage without equitable

benefit-sharing further exacerbates these disparities, as tourism revenues fail to trickle down to local residents who are the custodians of their cultural traditions. This assault on people's privacy, dignity, and authenticity undermines the integrity of cultural practices and erodes the sense of identity among local populations. Moreover, the modernization of old social ethics and values, driven by external influences and tourist demand for modern amenities, threatens the authenticity of indigenous cultures and fosters social imbalance within communities. Drunken revelry of tourists and disruptions to local customs and traditions further compound these challenges, creating social tensions and conflicts between visitors and residents. The decreasing preference among locals for traditional food reflects the erosion of culinary heritage and cultural identity in the face of globalization and changing consumer preferences. Additionally, disrespect of traditions and local customs by tourists not only offends local sensibilities but also perpetuates stereotypes and reinforces negative perceptions of destination communities.

## 1.2.3. Value Chain Specific Evaluation of Tourism Provoked Distresses and their Driving Factors

This section firstly shares insights on tourism provoked distresses across the value chain aspects the guidebook is focused on based a distress mapping exercise that was undertaken. The section then moves into unpacking systemic factors contributing to furthering unregulated tourism practices which are detrimental to the people and other parts of the ecosystem tourism depends on.

### 1.2.3.1. Mapping distressing in tourism circuits across the value chain

In the endeavor to understand the multifaceted impacts of tourism on both the environment and society, an analysis was conducted that delved into distress indicators spanning carbon emissions, ecological degradation, and socio-economic disparities (ref to 1.2.2) . This comprehensive examination was aimed at mapping these indicators across diverse tourism circuits, discerning the relationships between the activities of travel, accommodation, and recreational pursuits and their collective influence on the landscape. By intertwining these distinct categories, the analysis aims to illuminate the intricate web of impacts or distresses generated by tourism, offering insights crucial for crafting informed strategies to foster sustainable tourism practices and preserve the integrity of our natural and cultural heritage. The distresses have been mapped through an amalgamation of secondary research and primary research through interviews with people who live/work in the tourism circuits which are being focused on.  The distresses mapped may not be exhaustive since they are based on objective and also subjective observations and knowledge of the respondents and authors. The exercise is primarily intended to represent the diversity of issues arising from wildlife and adventure tourism across the accommodation, transportation and recreational activity value chain in mountainous and

protected area regions.The complete list of distress indicators which were identified to support the analysis across all regions and value chains considered for this study can be referred to in Annexure A.

For representation, the tourism circuits considered for this analysis spanned each bio-region with one representation each of a tourism circuit within each bio-region where the predominant type of tourism is either wildlife and adventure tourism, respectively.:

| Sr.No | Bio-region | Type of tourism | Tourism Circuit |
|---|---|---|---|
| 1 | Trans-Himalaya | Adventure | Stok Kangri |
| 2 | Trans-Himalaya | Wildlife Tourism | Changthang Wildlife Sanctuary |
| 3 | Himalaya | Adventure | Kanchenjunga Base Camp |
| 4 | Himalaya | Wildlife Tourism | Corbett-Kosi-Marchula |
| 5 | North East | Adventure | Dzükou Valley |
| 6 | North East | Wildlife Tourism | Eaglenest Wildlife Sanctuary |
| 7 | Western Ghats | Adventure | Coorg |
| 8 | Western Ghats | Wildlife Tourism | Munnar |

The sub-sections below share insights on the diverse socio-economic, ecological and carbon emission contributing impacts of accommodation, transportation and recreational activities . They detail the top 10 distress indicators observed as part of the specific value chain component (accommodation/travel/recreational activities) across 8 tourism circuits based on the number of instances where a particular type of distress was observed across the value chain.

I. **Accommodation induced distress**

The impact of homestays and hotels/resorts, which are two common types of accommodation arrangements prevalent in the tourism sector, have been considered to map the distresses caused by accommodation across the tourism circuits which have been selected for this analysis.

The table below shares specific details on the category of distress i.e. ecological , carbon or socio-economic impacts across the accommodation value chain, the location of the

impact eg. land, economic, biodiversity-wildlife, etc. and the indicator of distress at each location. The disturbance to wildlife indicator is representative of multiple types of disturbances including noise pollution by tourists and distruption in natural food gathering instincts by animals due to feeding by tourists. The table is ordered based on ranking the top 10 distress-indicators from highest to lowest. A complete list of distress indicators within the 'Accommodation' value chain can be referred to in Annexure B.

| Sr. No. | Distress_Category | Area of Impact | Distress Indicators | Instances Count | Rank | % Contribution |
|---|---|---|---|---|---|---|
| 1. | Ecological | Biodiversity and Wildlife | Disturbance to Wildlife | 11 | 1 | 5.98% |
| 2. | Carbon | Accommodation[5] | Rising Electricity demands due to the usage of heating appliances | 9 | 2 | 4.89% |
| 3. | Ecological | Land | Chemical Waste(from soaps/ hand sanitisers, dishwashing soaps, etc.) | 8 | 3 | 4.35% |
| 4. | Socia-Economic-Political | Economic | Contractual work without security | 8 | 3 | 4.35% |
| 5. | Ecological | Land | Land Use Change | 6 | 4 | 3.26% |
| 6. | Ecological | Biodiversity and Wildlife | Fragmentation of habitats | 6 | 4 | 3.26% |
| 7.. | Ecological | Water | Ground water exploitation due to Borewells | 6 | 4 | 3.26% |
| 8. | Ecological | Land | Increase of built up area / Urbanisation | 6 | 4 | 3.26% |
| 9. | Socia-Economic-Political | Economic | Loss of native livelihood | 6 | 4 | 3.26% |
| 10. | Socia-Economic-Political | Class-Caste | Exploitation (wages/hours/type of work) | 6 | 4 | 3.26% |

**Table X:** *Top 10 Distress Indicators within the Accommodation value chain*

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[5] Accommodation is defined as an 'Area of Impact' in this context given that there are multiple factors which contribute to carbon distress which go beyond tourism. Therefore the intention is to present accommodation related factors which can be directly attributed to carbon distress eg. increased used of energy to run luxury accommodation needs such as pool pumps and jacuzzis among others.

**Analysis**

Within the tourism value chain, it can be argued that the accommodation service provider wields the most significant impact on a location. This assertion stems from the extensive resources required throughout the lifecycle of construction and operations. Not only does the accommodation sector have a substantial literal footprint, altering land-use patterns and landscapes, but it also exerts a considerable figurative footprint through resource consumption and carbon-related impacts. The scale of these impacts underscores the critical importance of sustainable practices within the accommodation sector to mitigate environmental degradation. Furthermore, from a socio-economic perspective, while hotels, resorts, and homestays serve as vital sources of local employment, particularly in rural areas, ethical considerations come into play. Issues such as fair wages, caste-class dynamics, and gender equality may arise, prompting a closer examination of the social implications of accommodation operations on the communities they inhabit.

Accommodation as a whole has a major impact on society, the economy and ecology in a given location in addition to impacting the carbon emissions which are responsible for climate chaos. Based on learnings from the distress mapping exercise disturbance to wildlife which comprises factors such as noise pollution by tourists, noise and sound pollution by vehicles traveling to the places of accommodation, etc. Other ecological impacts comprise fragmentation of habitats, water scarcity provoked by ground water extraction to meet tourist demands etc. In addition to ecological distress, accommodation is also responsible for carbon distress which also provoked by factors such as the increased use of electric equipments eg. heating appliances which are needed in colder regions in addition to electricity for pool pumps and jacuzzis which are facilities often provided by luxury hotels/resorts. Furthermore, socio-economic distresses which often impact locals include exploitation due to unfair wages/working hours which can also be linked to the loss of native livelihood provoked by tourism and other historical factors, too. Additionally, the findings of the analysis underscored a clear pattern: hotels and resorts exhibit markedly higher instances of distress compared to homestays owned by locals within tourism destinations.

## II. Travel induced distress

The means of travel play a pivotal role in shaping the impact of tourism on a destination. From the bustling hubs of airports facilitating the influx of tourists to the construction of new roads and transportation infrastructure to accommodate private vehicles, each mode of travel leaves a distinct imprint on the places they connect.

Travel induced distresses are provoked as part of 'arriving and departing' to and from the place of tourism and also through the modes of transport chosen to travel within the tourism location i.e. 'getting around'.

The table below shares specific details on the category of distress i.e. ecological , carbon or socio-economic impacts across the travel value chain. The location of the impact eg. land, economic, biodiversity-wildlife, etc. and the indicator of distress at each location. The disturbance to wildlife indicator is representative of multiple types of disturbances including noise pollution by tourists and distruption in natural food gathering instincts by animals due to feeding by tourists. The table is ordered based on ranking the top 10 distress-indicators from highest to lowest. A complete list of distress indicators within the 'Transportation' value chain can be referred to in Annexure C.

| Sr. No. | Distress_ Category | Area of Impact | Distress Indicators | Instances Count | Rank | % Total Contribution |
|---|---|---|---|---|---|---|
| 1. | Ecological | Biodiversity and Wildlife | Disturbance to Wildlife | 28 | 1 | 16.5% |
| 2. | Ecological | Land | Land Use Change | 19 | 2 | 11.2% |
| 3. | Carbon | Transport | Poor AQI from traffic in tourist season periods. | 17 | 3 | 10.0% |
| 4. | Carbon | Transport | Black emission settling on glacial snow caps | 11 | 4 | 6.5% |
| 5. | Ecological | Water | Water pollution | 11 | 4 | 6.5% |
| 6. | Ecological | Land | Overcrowding or exceeding the carrying capacity | 10 | 5 | 5.9% |
| 7. | Socia-Economic-Political | Economic | Loss of native livelihood | 6 | 6 | 3.5% |
| 8. | Socia-Economic-Political | Class-Caste | Exploitation (wages/hours/type of work) | 4 | 7 | 2.4% |
| 9 | Ecological | Land | Landslide | 3 | 8 | 1.8% |
| 10. | Ecological | Water | Water pollution due to thrown plastics, bottles, wrappers, etc | 2 | 9 | 1.2% |

**Table X:** *Top 10 Distress Indicators within 'Transportation' value chain for both Air and and Road travel across all Tourism circuits*

**Analysis :**

Our analysis encapsulates distresses that can be associated with air travel and road transport by car. These were the two major modes of travel that emerged from the perspective of luxury tourism. Air travel is known to contribute is a key contributor to heightened carbon, socio-economic and ecological distress. From a carbon emission perspective air travel has a very high impact given that over a 1,000 km journey, an air traveler emits 285 kgs of CO2 per kilometer while a railway passenger in even an Air

Conditioned executive-class compartment emits 30 kgs, in a comfortable AC bus the same passenger emits 70 kgs[6].

Additionally in the context of road transport within the place of tourism the development of roads and transportation infrastructure, while crucial for accessibility, can lead to land degradation, habitat fragmentation, and increased pollution. Disturbance to wildlife from noise and soil pollution from vehicles in addition to land use change are two of the top primary contributors to ecological distress. Socio-economic distresses are visible in the form of loss of native livelihoods and also unjust wages, working hours etc resulting from increased dependence on the service economy. Additionally uncontrolled and high influx of tourist vehicles can contribute to carbon distress which often manifests through high AQI levels and also back emissions which have been observed on glaciers in locations such Ladkah.

As a whole, mindful transportation practices are therefore warranted to minimise the negative impacts of tourism on local communities and ecosystems and even beyond as in the case of air travel whose impacts go beyond the place of tourism.

### III.    Recreational Activity  induced distress

Tourism recreational activities prevalent in the tourism circuits being focused on as part of this study include camping, guided tours in nature, mountaineering and safaris. These are dependent on the context and tourism offerings. While these activities offer opportunities for immersive experiences and appreciation of natural wonders, improper conduct can lead to significant adverse effects.

The table below shares specific details on the category or location of distress i.e. ecological , carbon or socio-economic impacts across the recreational activity value chain. The location of the impact eg. land, economic, biodiversity-wildlife, etc. and the  indicator of distress at each location. The disturbance to wildlife indicator is representative of multiple types of disturbances including  noise pollution by tourists and distruption in natural food gathering instincts by animals due to feeding by tourists. The table is ordered based on ranking the top 10 distress-indicators from highest to lowest. A complete list of distress indicators for the 'Recreational Activities' value chain can be referred to in Annexure D.

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[6] Based on independently verified India-specific emissions factors developed by cBalance and audited by  Western State Colorado University (WSCU)

| Sr. No. | Distress_Category | Area of Impact | Distress Indicators | Instances Count | Rank | % Contribution |
|---|---|---|---|---|---|---|
| 1. | Ecological | Biodiversity and Wildlife | Disturbance to Wildlife | 31 | 1 | 16.67% |
| 2. | Ecological | Land | Land Use Change | 15 | 2 | 8.06% |
| 3. | Ecological | Water | Water pollution due to thrown plastics, bottles, wrappers, etc | 12 | 3 | 6.45% |
| 4 | Socia-Economic-Political | Economic | Contractual work without security | 10 | 4 | 5.38% |
| 5 | Socia-Economic-Political | Economic | Unfair wages | 9 | 5 | 4.84% |
| 6 | Ecological | Land | Overcrowding or exceeding the carrying capacity | 7 | 6 | 3.76% |
| 7 | Socia-Economic-Political | Economic | Loss of native livelihood | 7 | 6 | 3.76% |
| 8. | Carbon | Transport[7] | Poor AQI from traffic in tourist season periods. | 5 | 7 | 2.69% |
| 9. | Ecological | Biodiversity and Wildlife | Fragmentation of habitats | 5 | 7 | 2.69% |
| 10. | Ecological | Land | Erosion and sedimentation | 5 | 7 | 2.69% |

*Table X: Top 10 Distress Indicators within Recreational Activities value chain across all Tourism circuits.*

**Analysis :**

While recreational activities offer opportunities for immersive experiences and appreciation of natural wonders, improper conduct can lead to significant adverse effects. For instance, unchecked camping practices can result in habitat degradation, soil erosion, and littering, disrupting fragile ecosystems. Similarly, poorly managed guided tours in natural areas may lead to habitat disturbance, wildlife displacement, and heightened human-wildlife conflicts. Moreover, safaris, if not conducted responsibly, can contribute to habitat destruction, disturbance to wildlife populations, and cultural insensitivity towards indigenous communities.

The analysis across tourism circuits reveals that the impact of recreational activities is contextual and varies depending on the socio-ecological context it is being undertaken in.

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[7] Transport is represented as an 'Area of Impact' to highlight a direct link between tourism and carbon distress provoked by transport eg. high AQI during tourist periods , given that carbon distress is triggered by multiple factors which are not always linked to tourism.

Disturbance to wildlife which is provoked by factors such as noise from tourists, clicking photographs of animals insensitively and feeding animals which impacts their natural food gathering instincts among other factors is one of the highest indicators of ecological distress. Pollution of ecosystems, overcrowding by tourists are other factors contributing to ecological distress. From a socio-economic perspective contractual work without security and unfair wages are the most prevalent impacts.

These learnings demonstrate a clear need to work towards choosing low impact recreational activities when possible and working towards minimizing their impacts through responsible tourism practices.

## 1.2.4. Analysing the Driving Factors of Tourism Provoked Distresses

**An overview of socio-ecological and carbon emission related distresses from tourism based on learnings from value chain analysis.**

The results obtained from the analysis in the previous section offer a comprehensive overview of the locations where significant distress is caused across the tourism value chain. The charts below share a culmination of the topmost carbon, socio-economic and ecological distresses which can be attributed across accommodation, recreational activities and transportation which offer their services to the tourism industry .



**Percentage Distribution of Carbon Distress Indicators**

- Poor AQI from traffic in tourist season periods.
- Black emission settling on glacial snow caps
- Rising Electricity demands due to the usage of heating appliances
- Rising Electricity demands due to usage Air Conditioners
- Emissions from providing amenities like Jaccuzzi, spas, pools.
- Rising Electricity demands due to Pool Pumps
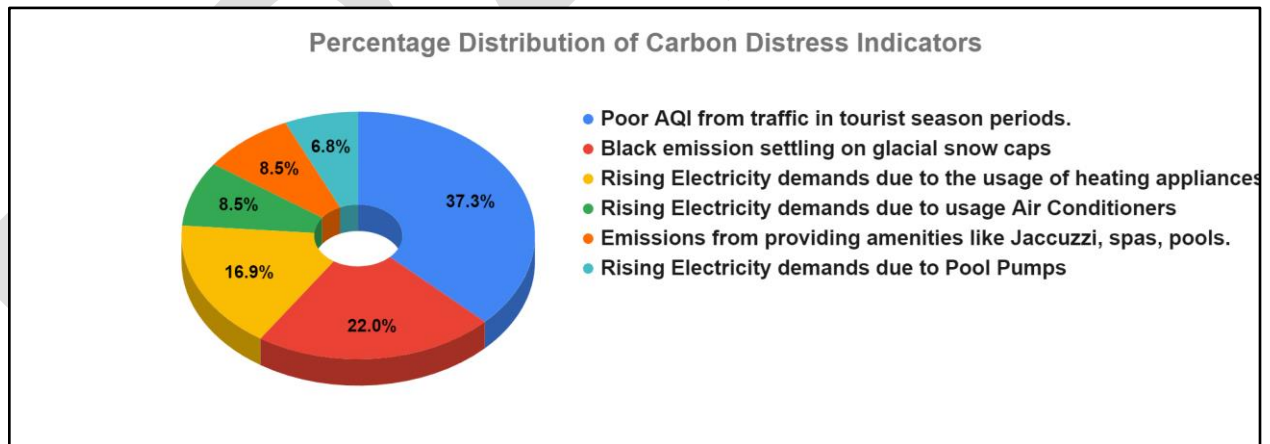
37.3%
22.0%
16.9%
8.5%
8.5%
6.8%

**Chart Y1: Carbon Distress Indicators across all tourism circuits and value chains[8].**

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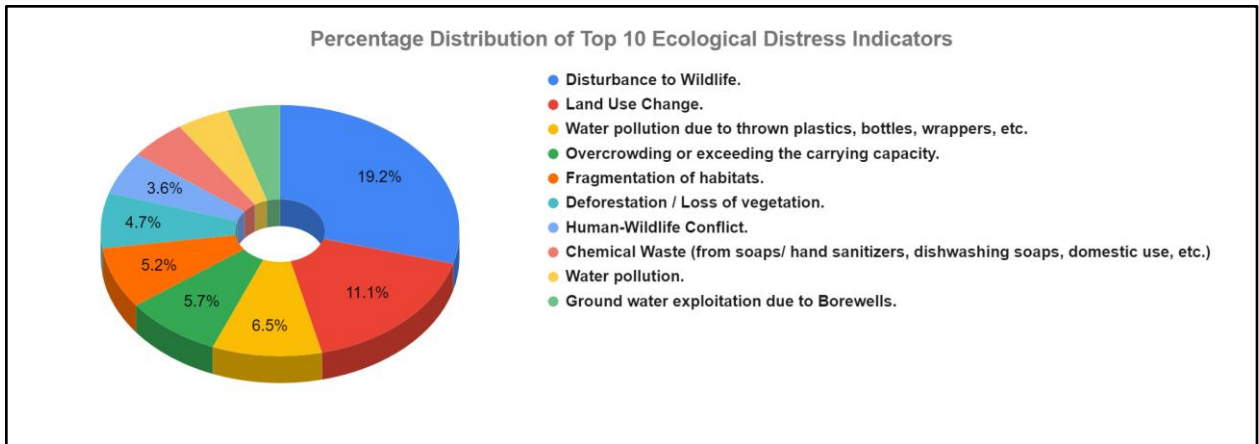[8] For complete data table for chart Y1, please refer to Annexure E.

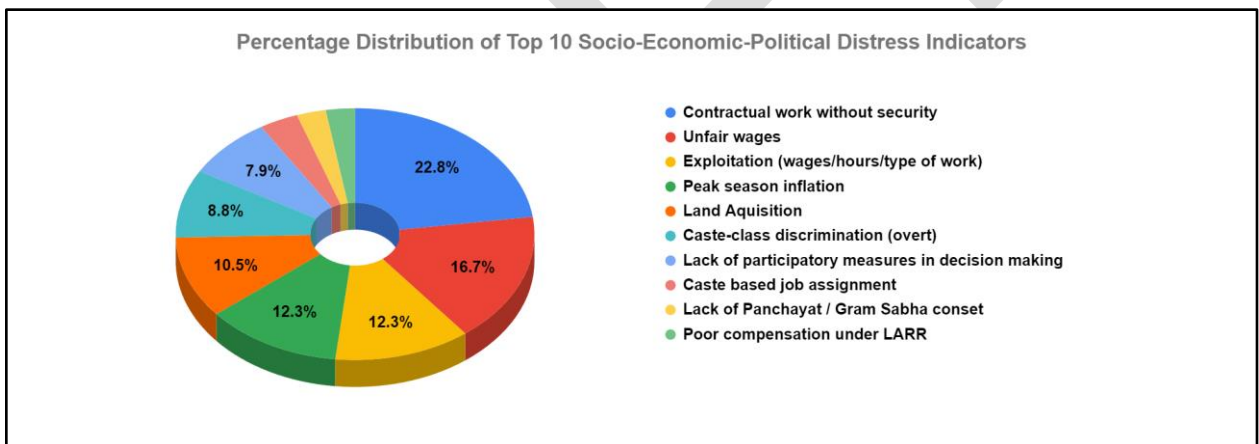**Chart Y2: Top 10 Ecological Distresses Indicators across all tourism circuits and value chains[9].**



**Chart Z2: Top 10 Socio-Economic-Political Distress Indicators across all tourism circuits and value chains[10].**

By meticulously examining various indicators spanning carbon emissions, ecological degradation, and socio-economic disparities, the analysis provides a diagnostic tool to pinpoint the precise areas where the problem lies. These indicators serve as warning highlighting deeper systemic issues and root causes underlying the distresses observed in tourism destinations. By identifying and quantifying these distress indicators, the analysis offers a glimpse into prioritizing the most pressing issues from tourism that warrant immediate attention and intervention. This strategic approach can enable stakeholders to allocate resources effectively, targeting interventions towards addressing the root causes of distress and fostering sustainable tourism practices. Thus, while the identified indicators serve as symptoms of broader challenges within the tourism sector,

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[9] For a complete list of all Ecological Distress Indicators, please refer to Annexure F.

[10] For a complete list of all Socio, economical and political distress indicators, please refer to Annexure G.

they also serve as invaluable tools for guiding proactive measures and promoting holistic solutions for responsible tourism development.

**Policy regulations and tourism provoked distresses**

It's crucial to examine the systemic factors enabling unregulated tourism, which prioritizes extraction over community and ecosystem well-being thereby contributing to tourism provoked distresses as mentioned in the sub-section above. In this context, this section provides few examples of transportation, accommodation, and recreation activity based regulatory factors that contribute to tourism provoked distresses.

I. Transportation :

In the context of air travel, economic deregulation often pursued to attract foreign investment and promote economic growth can lead to the unchecked expansion of tourism without adequate consideration for its climate change, biodiversity collapse and socio-economic disparity provoking impact  eg. India E-Visa has been liberalized and the visa fee has been substantially reduced. To promote tourism, the Government of India has reduced the e-tourist Visa fees for nationals of several countries and further liberalized the procedure. The E-visa facilities have now been extended to 171 nationalities, allowing them to avail of the e-visa with minimal procedural interactions. With this visa, tourists can stay in India for up to 180 days in a calendar year. The government believes that this initiative will help increase the influx of tourists in the post-pandemic world. Although the number of travelers has not yet surpassed pre-pandemic statistics, there were 9.24 million footfalls recorded till Dec 31, 2023, compared to 6.44 million for the corresponding period in 2022[11]. Such initiatives have increased tourist arrivals to remote areas of the Himalayas and Western Ghats, putting pressure on fragile ecosystems and local infrastructure. Overcrowding, traffic congestion, and pollution from vehicles have degraded the natural and cultural heritage of these regions, leading to further ecological distress.

Deregulation also leads to increased competition among airlines, resulting in lower ticket prices and making air travel more accessible to a larger portion of the population. For instance, on the recommendation of the Ministry of Tourism, 59 tourism routes have been awarded to the identified airlines by the Ministry of Civil Aviation under the RCS UDAN Scheme, for which the Ministry of Tourism extends financial support in the form of VGF (Viability Gap Funding). 51 of these routes have been operationalized till date. Tourist destinations like Hampi in Karnataka, Gangtok in

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[11]  Lok sabha sansad question no. 4578,  unstarred , 23rd march, 2021, e-visa for all countries.
2. *Visa*. e. (n.d.). https://indianvisaonline.gov.in/evisa/tvoa.html
3. Welcome to Embassy of India, Washington D C, USA. (n.d.).
https://www.indianembassyusa.gov.in/News?id=24889
4.*Tourism Industry in India - FDI, investment, market share*. Tourism Industry in India - FDI, Investment, Market Share. (n.d.). https://www.investindia.gov.in/sector/tourism-hospitality
5.Chakrabarty, S. (2023, December 18). *Foreign tourist arrivals up, still below pre-pandemic levels*. The Hindu. https://www.thehindu.com/news/national/foreign-tourist-arrivals-up-still-below-pre-pandemic-levels/article67650921.ece

Sikkim, Pithoragarh in Uttarakhand and Shimla in Himachal Pradesh are now easily accessible through UDAN scheme[12]. As a consequence of such schemes, there's a surge in air traffic, leading to higher greenhouse gas emissions, particularly carbon dioxide ($CO_2$), which contributes to climate change. The aviation industry's contribution to climate change can create feedback loops that further exacerbate ecological distress. For example, the melting of polar ice caps due to global warming can open up new aviation routes over previously inaccessible areas, leading to increased emissions and further climate change. This can accelerate the loss of polar habitats and biodiversity, exacerbating ecological distress in these sensitive regions. Additionally, deregulation which incentivizes the expansion of airports and the construction of new ones to accommodate the growing demand for air travel. This often involves land clearing, habitat destruction, and disruption of ecosystems, particularly in areas adjacent to airports. Deforestation, loss of wildlife habitats, and fragmentation of natural landscapes are common consequences, leading to ecological distress.

Similar to airtravel, government subsidies for transport infrastructure projects, such as roads, highways, and railways, can incentivize their construction in ecologically sensitive regions. Subsidies may lead to the expansion of transport networks without adequate consideration of environmental impacts, resulting in habitat destruction, fragmentation, and loss of biodiversity. Privatization of transport infrastructure, such as toll roads, airports, and ports, can result in profit-driven development that prioritizes commercial interests over environmental conservation. Private operators may focus on maximizing revenue through increased traffic and cargo volume, leading to habitat destruction, pollution, and degradation of natural landscapes.

Accommodation

Similar to the transport sector, the accommodation sector benefits from certain systemic financial mechanisms For eg. in a recent effort to bolster the tourism industry, the GST council has decided to reduce the GST on hotel rooms with tariffs ranging from ₹1,001 to ₹7,500 per night to 12%, while those above ₹7,501 will be taxed at 18% [13]. Additionally, Financial deregulation has facilitated speculative investments in tourism-related real estate, driving up land prices and encouraging unsustainable development practices eg. In a recent development 100% foreign direct investment (FDI) is allowed in tourism including investments in tourism construction projects such as hotels, resorts, and recreational facilities[14]. Such financial policies pave the path for rampant construction activities which are known to have negative socio-economic and ecological

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[12] 1. *India received 6.19 million foreign tourist arrivals (ftas) during 2022 as compare to 1.52 million during the same period of 2021.* Press Information Bureau. (n.d.). https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1914516

[13] 1. taxguru_in, & Pipalwa, R. (2023, July 14). *Impact of GST rate cut on hotel and tourism industry in India.* TaxGuru. https://taxguru.in/goods-and-service-tax/impact-gst-rate-cut-hotel-tourism-industry-india.html
2. *India received 6.19 million foreign tourist arrivals (ftas) during 2022 as compare to 1.52 million during the same period of 2021.* Press Information Bureau. (n.d.-a). https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1914516

[14] 1.*Tourism Industry in India - FDI, investment, market share.* Tourism Industry in India - FDI, Investment, Market Share. (n.d.-a). https://www.investindia.gov.in/sector/tourism-hospitality

impacts such as the displacement of indigenous communities, fragmentation of wildlife habitats etc.

Land Use Zoning Changes are another major factor contributing to commercial tourism development. Relaxation of land use zoning regulations has allowed tourism development in previously protected or agricultural areas. In the Himalayan and Western Ghats regions, this has led to the conversion of forests, wetlands, and agricultural land into tourist accommodations and infrastructure, resulting in habitat loss, soil erosion, and disruption of local ecosystems. In addition to this, weakening of environmental regulations has enabled the tourism industry to operate with minimal oversight in terms of waste management, pollution control, and conservation measures. In ecologically fragile regions like the Himalayas and Western Ghats, this has led to pollution of water bodies, deforestation, and loss of biodiversity due to unregulated construction activities and waste disposal.

Recreation Activities :

In a recent move aimed at boosting tourism, the government has unlocked access to 137 mountain peaks for foreign visitors seeking Mountaineering Visas (MX) for mountaineering and trekking. These peaks are located in the states of Jammu and Kashmir, Himachal Pradesh, Uttarakhand, and Sikkim. Furthermore, the issuance of Mountaineering Visas has commenced for individuals keen on undertaking mountaineering expeditions in India[15] The implementation of such facilities when left unchecked without imposing caps on the number of tourists who can visit a place at a particular time contributes to exploitation of the places which are made accessible without any stringent regulations. Additionally, it is vital to note that such provisions contribute to increasing class disparities by increasing access to certain places only to people from economically privileged backgrounds who can afford to pay for these facilities.

## 1.2.4  Case Studies: Cautionary Tales

This section will highlight  2 case studies which are based on tourism circuits that are part of the bioregions focused on as part of this guidebook. The case studies have been documented through conversations with inhabitants and visitors of the place who have been engaging with the contexts the case studies focus on,  for more than a decade.

The case studies are intended to provide an in-depth understanding of the impact of unsustainable and unmindful tourism on the people, biodiversity and the ecosystem that supports them. It aims to highlight tourism practices that need to be checked, avoided and also adopted in

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[15] 137 mountain peaks in four states opened to foreigners for mountaineering and trekking. (n.d.). https://pib.gov.in/newsite/PrintRelease.aspx?relid=192750

the future to ensure that tourism is undertaken responsibly and benefits the local human and more than human communities it is dependent on.

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## Case Study: Tourism in Ladakh

**The Context :**

Ladakh is a union territory in India characterized by rugged mountains and open plains. It is engulfed by the mountain regions of the north of the main Himalaya and south of Karakorum mountains. It displays extreme climatic conditions with temperatures ranging from over 30 degree Celsius (C) in summer to less than -40 degree C in winter and altitudes ranging from 2800m in Kargil to the 7600m Saser Kangri peak in the Karakorum. The region receives very low precipitation. It primarily comprises two types of ecosystems - cold desert and wetland ecosystems. High level of adaptation to high altitude and aridity are idiosyncratic characteristics of the flora and fauna in the desert region of Ladakh. Vegetation across the landscape ranges from from alpine meadow (eg. Kobresia, Carex, Potentilla, Nepeta) to steppe vegetation (Caragana, Artemisia, Stachys, Ephedra, Stipa) to shrublands (Hippophae, Myricaria, Salix) along river courses.  The desert is mostly treeless except for isolated patches of juniper  and birch in some valleys and mostly cultivated varieties of poplar (Populus ssp) and willow (Salix) along the major water courses. The fauna comprises of herbivores such as the Urial, Wild Yaks, Tibetan Gazelle, Tibetan Antelope and birds such as the Tibetan partridge (Perdix hodgsoniae), Tibetan Sandgrouse (Syrrhaptes tibetanus), Snow Pigeon (Columba leuconota) and the Golden Eagle among others.  The wetland ecosystems also host a variety of flora and flora including migratory birds such as the Black-Necked Crane which is a near threatened species as per IUCN status. Several mammals endemic to the Tibetan Plateau such as the Tibetan Wolf, Wolly Hare, Himalayan Marmot etc  also make use of the wetland habitat as feeding or breeding grounds[16].

Farming and livestock rearing are the traditional livelihoods of local communities in Ladakh. Ladakh is home to the nomadic Chang Pa herders who have been traditionally migrating to pasture sources at varying times during  the year. Presently tourism is a major source of livelihood in Ladakh which contributes to the local economy (when the local people are involved), however, this ecologically fragile ecosystem which sustains a diversity of flora, fauna and humans is under threat due to unregulated tourism activities[17].

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[16] From Miller, D.J. (1998) Conserving Biodiversity in Himalayan and Tibetan Plateau Rangelands. Paper prepared for the Himalaya Eco-regional Co-operation Meeting organised by UNDP, February 16-18, 1998, Kathmandu, Nepal in https://kalpavriksh.org/wp-content/uploads/2018/12/Ladkah-sub-state.pdf
[17] https://kalpavriksh.org/wp-content/uploads/2018/12/Ladkah-sub-state.pdf

**Evolution of tourism in Ladakh - The story of a movie and a lake :**

As per government records, when Ladakh first opened for tourism in 1974, there were 527 tourists – 500 foreign visitors and 27 domestic visitors. Fast forward to 2022, as many as 2.5 lakh (250,000) people visited Leh for tourism in just two months i.e. June and July. That's eight times more visitors than Leh city's local population of around 30,870 people (2011 census) and around twice the population of Leh district which is approximately 1.33 lakh (133,000)[18]. Tourism particularly gained momentum in 2008 after Ladakh and particularly Pangong lake was featured in a popular Indian movie. There were about 400-500 vehicles heading to Pangong in a day at one point. This movie followed by the launch of instagram in 2010, has contributed to ballooning tourism in Ladakh, where people were enticed to visit the place and click selfies which could be posted on social media platforms.

Earlier Pangong Lake used to be primarily frequented by trekkers who would stop at the villages and camp there. But now it's mostly visited by domestic tourists who hire a vehicle from Leh and drive there for a day or stay overnight. In the early days of tourism after the release of the film, people started camping on the banks of the lake which was not permitted to protect the lake ecosystem. People also used to drive into the shallow parts of the lake to take photos. Additionally, there are also army bases there given that the lake is located on the Indo-China border. There were instances where people who had some influence in the army were taking rides on army boats which is not permitted. Boating in itself is not allowed on that lake at all except for military purposes given that the wetland area is a habitat for native and migratory birds and other fauna and flora. Boating by tourists was halted after these unmindful practices were featured in the news. Presently, since the temperatures are low and due to tourist restrictions, people who choose to visit Pangong lake and stay overnight spend most of their time in luxurious glamping tents situated away from the banks. They step out to walk around and click photographs.

The rampant influx of tourists to Ladakh as a whole has had multiple impacts on the socio-ecological systems of the region.

**General impacts of tourism on local inhabitants and the ecosystems across Ladakh :**

Restaurants and hotels have mushroomed in Ladakh and roads have been constructed to accommodate and transport tourists which has resulted in habitat fragmentation (eg. loss of grasslands, forests etc) and also soil erosion which increases the vulnerability of the location to natural disasters such as landslides. Habitat fragmentation impacts animals' access to adequate food and shelter. Additionally, practices such as photographing birds from close

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[18] Gupta, V. (2022, October 13). *As tourism grows in Leh, so does the concern about its environmental impact.* Mongabay-India. Retrieved April 17, 2024, from https://india.mongabay.com/2022/09/as-tourism-grows-in-leh-so-does-the-concern-about-its-environmental-impact/

proximity and feeding wild animals such as the Himalayan Marmot while on nature trails which impacts their natural food gathering instincts, are some common practices that threaten fauna. Discarding plastic waste along treks, driving routes and at camping sites, etc. are another major threat to the flora and fauna of Ladakh.

The changing nature of accommodation practices is another threat to the socio-ecological resources of Ladakh, for instance,  a lot of homestays and guest houses have started to come up in the village around Tsomoriri Lake. These used to once be temporary camps in simple tents , but then they started becoming glamping tents with flush toilets. Ladakhis have traditionally used dry toilets which are suitable for the region given the low temperatures and limited water resources, however, the introduction of flush toilets across the region (driven primarily by tourism) has resulted in digging of borewells for groundwater extraction which is a scarce resource. Additionally, chemical detergents used to wash vessels pollute water bodies such as streams and the lakes are connected to. Previously, people used wood ash to wash vessels, but products such as dishwash soaps etc are now privileged due to their convenience to tourists.

In the context of impacting local livelihoods, while tourism is a major source of income, the vulnerabilities it augments warrant introspection too.  For instance, since there is more money involved in tourism than in farming, many people have quit farming.  Youth who cannot afford to go outside to study etc get into tourism, they prefer to become a  guide etc so they can earn money during the summer months which they can save for the winter or it also allows them to travel outside for work during other parts of the year. There are very few people left to farm now. And the farms have to hire labor from nepal. Kashmir etc as the older generation of farmers is now quite old and are unable to engage in laborious work. Additionally, many communities are building guest houses on their fields. "*One friend that I used to visit has a wheat field outside his house and he has now built a guest house there. So the wheat field is no longer available for the family to grow crops unless they have land elsewhere. They would now have to buy food from the market and now depend on the market which they weren't so dependent on earlier*", quoted a tour operator who has been frequenting Ladakh for about a decade. Dependency on external market entities for food products  has therefore increased in certain contexts due to tourism.

Additionally complete dependency on tourism which itself is dependent on visits by people from across the country and internationally can increase the financial vulnerability for e.g. in 2017 there was an earthquake in Ladakh, after which many  people didn't  visit Ladakh out of fear. During covid-19, tourism was impacted again. Therefore a lot of people who may have spent money on buying taxis, furniture etc to support tourism are likely to suffer during time periods when tourism is impacted by factors such as natural calamities.

While there are multiple issues with unregulated tourism practices, few efforts are being made to move towards responsible tourism.

**Existing practices to ensure responsible tourism in Ladakh :**

There is a nominal [environmental fee, red cross fee and wildlife fee](#) for tourists to ensure accountability through monetary contribution. Additionally, the Leh district tourism Management system website has certain guidelines which nudge tourists to behave responsibly while engaging with the local inhabitants and their supporting ecosystems. Eg. walking on designated trails, no feeding wildlife, buying and eating local, , using reusable water bottles etc. All rules can be referred to [here](#).

A major role towards ensuring responsible tourism is played by tour operators who are sensitive to the socio-ecological needs of the tourist spot . For instance, some tour agencies do a clean up trek post the tourist season while some as part of their tour offerings train tourists on to how to behave eg. not to go too close to the birds etc., make arrangements for transport and accommodation that causes least disturbance to local flora, fauna and humans in addition to contributing to the local economy. However, such tour operators are also subject to peer pressure i.e. if a tour operator is trying to behave responsibly then can lose business because other tour operators are willing to allow people to do anything. Eg. If you tell people to carry your own water bottle, tourists might find it an inconvenience and would prefer operators who don't demand such responsible behavior.

While a few steps have been taken to move towards responsible tourism, there is a need for more deliberate actions to mitigate more damage.

**Conclusion**

While tourism in Ladakh contributes to the local economy there is a need to implement mechanisms which ensure that there are limits to the number of tourists visiting a given place at a particular time to ensure that the tourist footfall does not exceed the carrying capacity of the land, the flora and fauna and local inhabitants.

Tour operators and visitors should be mandated to engage in responsible tourism behavior and practices which are rooted in respect for the local ecosystem and its native and migratory inhabitants. Tour operator unions similar to ladakhs taxi unions can be formed to offer standard and responsible tourism services.

Tourism mechanisms which regulate accommodation facilities and food services should be developed and implemented in a participatory approach in consultation with the local community (eg. through the use of appropriate Participatory Rural Appraisal tools)  to ensure that infrastructure is designed and food is offered in a way that is sensitive to the local context. Similarly, ecosystem and livelihood conservation efforts should be co-designed and implemented in consultation with local communities who are most knowledgeable about historical and current practices that can inform the pathway to a healthy balance between dependence on tourism and native livelihoods . Top -down implementation approaches must

be intentionally avoided to ensure contextual implementation of responsible tourism practices and policies which are accepted by local communities without whose consent implementation plans are bound to fail.

# Case Study : Tourism in Wayanad

## Context :

Wayanad is situated in the state of Kerala, India. It is a UNESCO World Heritage Site renowned for its biological diversity, making it a popular destination for nature enthusiasts and adventurers alike. The name 'Wayanad' is derived from the Malayalam words 'Vayal,' meaning swamp, and 'Nadu,' meaning place. Geographically, Wayanad comprises the Wayanad Plateau, covering approximately 3000 square kilometres. This plateau is situated at the convergence of three biologically distinct and diverse regions: the main Western Ghats Mountains, the Nilgiri hills, and the Deccan plateau. While the majority of the plateau falls within Kerala, small parts also extend into Karnataka and Tamil Nadu. The landscape primarily drains into the Kabani River, which originates from the magnificent forests and deep valleys of Wayanad before merging with the river Kaveri, a lifeline of southern India.

Wayanad's landscape comprises verdant hills, dense forests, and numerous water bodies, including rivers, waterfalls, and natural springs. These are home to a diverse array of flora and fauna, including elephants, tigers, leopards, deer, and various species of birds and butterflies. In addition to its natural beauty, Wayanad has a rich cultural heritage, with 12 indigenous tribes such as the Kattunaikkar, Paniyan, Adiyar, Kurichiyans, Kurumas,etc inhabiting the area alongside settlers from different parts of South India. Despite their distinct traditions, rituals, and unique ways of life, these communities coexist harmoniously, contributing to the cultural richness of Wayanad.

Wayanad used to receive abundant rainfall (over 2800 mm) spread over six months, followed by chilly winters and vibrant summers. However, recent changes in local climate patterns induced by human activities have been manifesting through erratic rains with short but intense rainfall periods. Winter seasons have shortened too, placing ecological stress on forests and wildlife. Additionally, apart from historical factors such as clearing of forests since colonial times (for the sake of replication of European forest types in India) which continues even now but for commercial plantation, tourism is another major factor provoking distress towards the forests, wildlife and local human population. This case study elaborates on the driving factors of tourism and the impacts of unregulated tourism activities in Wayanad.

## History of tourism in Wayanad :

Wayanad is renowned for its ecological and cultural richness, attracting travellers seeking its cool climate, lush greenery, rich wildlife, and diverse human communities. One of its major attractions has been the pleasant weather throughout the year, facilitated by its forest cover, mountains, and rivers. Tourists visit Wayanad for forest safaris and village explorations. Forest safaris, often organised by the Kerala forest department, traverse trails in wildlife sanctuaries like Tholpetti range and Muthanga range, rich in charismatic species like Asian elephants, Indian tigers, and Malabar giant squirrels. These areas serve as elephant corridors from the

Nilgiri Biosphere to Wayanad's forests. Village safaris, exploring landscapes and sightseeing, are also popular. As part of this  visitors drive through wildlife sanctuaries, reserve forests, paddy fields, mountain roads, and villages, often guided by local tour operators and homestays/resort owners.

The advent of social media platforms such as instagram in 2010 has been a major driving factor for increasing tourist influx in Wayanad. However, as a job sector, tourism began flourishing in the early 2000s, with an increasing number of local people directly involved in tourism activities. Tourism provided an alternate source of livelihood for local communities. However, now, many infrastructure facilities and businesses are owned by outsiders and operated by locals. Despite the surge in tourists, both operators and tourists are dissatisfied with the industry's current state. Operators struggle to generate returns on investments due to unhealthy competition and practices, while tourists find the recent expansion of tourism infrastructure and changes in local weather compromising the quality of their experiences. Unregulated and extractive tourism practices are increasing socio-ecological distresses threatening indigenous communities and wildlife. Tourism as an industry which is dependent on the local socio-ecological landscape must gravitate towards contributing to the well being of the local communities and the more than human population. Tourism trends in Wayanad however indicate otherwise.

**A  forest community rehabilitation project for wildlife conservation - 2008**

Human-wildlife conflicts are widely prominent in Wayanad. One approach to mitigating these conflicts as determined by the government  was to widen the presence of undisturbed wildlife habitats wherever possible. Relocating of forest dwelling communities was finalized as a solution to be achieved and implemented by officials. In this context, larger issues such as habitat degradation due to construction activities, monoculture plantation activities and wildlife behavior change provoked by tourism (elaborated on in other parts of the case study)  were overlooked.  The relocation process therefore, lacked navigating the root causes of human wildlife-conflict and also biodiversity decline and exhibited the lack of a holistic lens which was sensitive to both wildlife conservation and acknowledgement of the rights of indigenous communities.

To implement the relocation plan, a socio-economic survey was conducted by Kerala Forest Institute (KFRI) in  Wayanad Wildlife Sanctuary  in 2008. Monetary incentives proposed as a compensation to forest dwellers who would  cooperate with the relocation process. Thereafter, the relocation process took place from 2012 to 2018 under the guise of a 'voluntary' rehabilitation project. The project relocated forest-dwelling communities from the core/buffer areas of protected areas/tiger reserves to forest fringe areas or other locations within Wayanad. Approximately 360 households, including tribals from Kattunaikkar, Mullukurumar, and Paniya communities from 14 forest hamlets, were affected. Subsequently, the vacated areas were designated for wilderness and wildlife conservation.

Ironically, even after the relocation of local communities whose traditional way of life and livelihood was impacted due to relocation, some core areas remained open for wildlife tourism

activities. Wildlife safaris and immersive forest stay experiences were organised by the forest department. Fortunately, in the Kurichiyadu tribal village located in the core area, a few families chose not to participate in the voluntary relocation process and continued to reside in the village. These families filed a case which led to the discontinuation of tourism practices in their village. However, villagers report that monetarily privileged persons including the friends, and relatives of forest officials, continue to visit the area for tourism.

Who is benefitting from relocation projects? Who is disadvantaged due to these projects? Why is tourism which is supposed to serve the wellbeing of the local people, wildlife and ecology being privileged over them? - these are some crucial questions that emerge from the 2008 rehabilitation exercise.

With this historical context, the current state of tourism warrants scrutiny to guard against tourism practices that augment issues for wildlife and the communities rather than contributing to their wellbeing.

## Current impacts of tourism on the human and more than human world :

**Impact of wildlife tourism :**

Geographically forests in Wayanad are fragmented and intermingled with human habitats, Wayanad Wildlife Sanctuary (WWS), Kuruva island, Chembra and Brahmagiri peaks are some of the major tourism destinations surrounded by forest vegetation. Their existence is historically challenged by teak, eucalyptus plantations operated by the Department of forest. Furthermore, it is vulnerable to the expansion of invasive tree species like *Senna spectabilis, Lantana camara*,etc. Researchers state that 40 percent of WWS is affected by *Senna spectabilis*. Also the erratic weather patterns, changes in the distribution of rain, etc aggravate the problem of resource scarcity (eg. lack of foraging grass, drinking water). Moreover human made forest fire adds another layer for this complexity. These phenomenon have contributed to faunal wildlife interacting with humans more frequently than earlier, they venture outside the forest areas to the fringes to feed on food, this could be an interpreted adaptive practice for their survival given the decline in forest cover and the reduction in diversity due to the domination of forest areas by invasive species and monoculture plantations. However it is also the result of aggressive and unregulated tourism activities in forests and fringe areas.

Wildlife tourism activities involve measures such as creating a conducive environment for wildlife sighting by making arrangements for luxurious stay in forest rich areas. Researchers report that conducive environments are created through practices such as digging small pits and depositing salt in them to attract elephants near hotels for tourists to sight them and also enticing them through pineapples and salted mangoes. Such activities dilute the wildness of animals and impact their food gathering instincts. Another major issue with wildlife tourism which is reductive in nature is the practice of night safaris with the use of blaring lights which to enable sightseeing. This disturbs animals' travel routes and creates noise and light pollution which impacts their nocturnal behaviour. Such disturbance to wildlife from tourism impacts

traditional farming communities who live in forest fringe areas. For instance, night safaris across elephant corridors and buffer zones are undertaken. This involves back-to-back safari vehicles (maybe 15 or more during tourist seasons) which drive through roads that go through elephant corridors and core areas which according to conservationists is a known fact by forest officials. The light from the safari vehicles and blaring torches used to spot wild animals like elephants and tigers are common practice which is a source of disturbance to the grazing patterns of elephants. The lights also agitate them, many a time provoking them to wander towards human habitations causing distress to local communities. Another distress factor to animals inhabiting forest areas is the gradual change in safari routes moving into core areas which is provoked by *Senna spectabilis* infestation which hampers animal sightseeing.

Another prominent example is that of monkeys who were barely visible in the forest fringes until about 10 years ago, however over the past few years due to feeding by tourists who encounter them when on safari rides and during other tourism activities, monkeys have started moving into forest fringe areas which are inhabited by local communities. Locals report that *"earlier they were shy, then they became beggars and now they became food snatchers and now we need to chase them away regularly."* This was a major issue especially during the covid-19 pandemic when all tourism centres closed and monkeys who were fed by tourists moved towards human habitation in search of food increasing the vulnerability of local communities.These days farmers state that monkeys destroy crops which has overtime made agriculture a challenging livelihood option for communities for whom agriculture is a primary source of livelihood. Villagers state that they have also significantly reduced kitchen gardening and fruit rearing practices due to regular vandalization by monkeys. This reveals the unintended impacts of tourism manifesting as domestication of wildlife further contributing to increased human-wildlife distress.

In addition to wildlife tourism as part of recreation activities, accommodation arrangements are another factor that warrants scrutiny from a tourism perspective in Wayanad.

**Impacts of infrastructure development for tourism :**

Increased construction undertaken for tourism is a major contributing factor towards declining tree cover. Due to the declining tree cover and changes in rainfall patterns where it rains intensely during short spans of time rather than evenly across the monsoon months , the raindrops fall to the ground like gunshots instead of falling in low intensity after being filtered through the leaves of trees. This erodes the soil instead of facilitating groundwater recharge. This is a major factor contributing to floods and will also be a cause of water shortages in the future given the declining capacity of the soil to facilitate groundwater recharge.

Another major impact of unregulated construction activities is rampant constructions for accommodation services in locations of high elevations resulting in deforestation which contributes to loosening the soil increasing the vulnerability of the place to landslides. This impacts local communities who are situated at or in close proximity to these locations.

Land grabbing for resort, hotel and homestay construction and other tourism related activities by urban elites from cities around Wayanad such as Kozhikode, Malappuram and Bangalore is a major reason for the mushrooming of building structures which also impact the traditional farming communities living in forest fringe areas. These construction activities are undertaken without any sensitivity towards the local ecology and human community. Construction entails fencing the land around the resort or hotel which hampers the access of local people to places they could frequent without any impediment. Additionally in the context of paddy fields, villagers used to traditionally support each other in guarding their fields from animals, however, due to fragmentation of the fields due to construction peoples social support is diluted and fields are more vulnerable to wild animals. Another major impact is that the locals work as watch persons and caretakers at these hotels where they are expected to dilute their authenticity. There is also a noticeable decline in traditional knowledge among younger generations who are growing increasingly disconnected from the land organically and even intentionally due to influence by tourists who are not aligned towards exploring and acknowledging local culture thereby discouraging youngsters from continuing traditional ways of living. For instance, the older generations had wisdom on tree species, medicinal species, coexistence with wildlife, etc which the younger generation is not very familiar with. The physical , material and cultural practices which once contributed to a dignified life are being lost and they are discriminated against by tourists. This has even resulted in youth resorting to alcoholism to cope with insecurities created through interactions with tourists which are not sensitive to tribal ways of living.

Another factor contributing to accommodation provoked distress is the construction of structures on the banks of rivers. Rivers are vital for tribals as a source of drinking water, fishing, washing vessels etc. They are also dependent on edible uncultivated weeds, tubers and mushrooms which grow along the river bank and fish for food. Additionally there are some areas in the river and river banks which are sacred to tribals and have therefore been respected and barely disturbed. The cultural practices and spaces are now threatened. For instance, the expansion of structures across rivers and paddy fields has hampered the access of tribals to these spaces and they often have to travel longer than before to reach spaces that have been traditionally accessed by them. They also encounter invasion of privacy when they bathe in rivers that are in clear sight from tourist structures and also frequented by tourists. The sanctity of sacred sites is now impacted by noise made by tourists and also garbage that is left behind eg. food packets, water bottles, etc.

Another major factor that warrants a radical transformation is prioritization of infrastructure development for tourism over meeting the basic needs of locals. This is evident through the case of a bridge crossing Kabani river in Valliyoorkavu near Mananthavdi which has a width of the river is approx. 10 -12 feet and is seemingly unsafe to walk across presently. Villagers have been using this bridge to travel for decades and there have been persistent requests to renovate the bridge which have not been acted upon by local authorities. However to accommodate tourism needs a large bridge with a width of approx 50-60 ft is under construction. This is a clear indication of the fact that infrastructure development for tourism is being prioritized over the needs of locals. Additionally, commercialization has also creeped into the local culture and has impacted even the forest department. For instance, earlier the forest department used to

organise camps for school children and other interested groups which were funded for by the forest department. These camps would involve staying in forest department nature education, accommodation structures, excursions in the wild facilitated by a local guide, etc. However, due to the influence of tourism over the years, these camps have transitioned into paid camps which excludes people who are not economically privileged. Additionally, locals report that the camp structures are mostly used by bikers and other people who stay overnight.

There are therefore innumerable impacts of unregulated tourism practices on the wildlife and human locals of Wayanad which if not controlled will increase the vulnerability of the indigenous inhabitants ( flora, fauna and humans) to natural, cultural and economic disasters.

## Conclusion:

Tourism should benefit the ecosystems and native inhabitants of the ecosystems it is dependent on. Therefore there is a need for radical transformation in the current extractive tourism scenario in Wayanad. Some key observations from the evolution of tourism in Wayanad as shared by locals and conservationists are that even through efforts are being made to enable tourists to spot animals the reductive approach to wildlife sightseeing which is limited to fascination with just a few species is a major limiting factor towards cultivating a sense of respect and reciprocity by tourists towards the wilderness. Another major factor that warrants a radical transformation is prioritization of infrastructure development for tourism over meeting the basic needs of locals. It is catastrophic to witness that the factors that once drew people to the place i.e. the weather, the forests and other biodiversity are increasingly vulnerable to the impacts of tourism while impacting the local culture, livelihoods and lives of the communities who are indigenous inhabitants of the place.

A few steps which can be undertaken in the direction of moving towards healthy tourism practices can include participatory tourism planning and implementation process in consultation with locals should be undertaken. Guidelines should be developed and implemented in consultation with locals on how tourists should interact with locals and the ecology. Certain activities such as nature walks led by tribals should be undertaken to enable acknowledgement and transfer of indigenous knowledge. Tourists should be inducted on how to engage with local individuals and respect local cultural practices and ways of being. Local communities can be consulted on making arrangements for farmstays and homestays which provide traditional food. They should be encouraged to highlight and adopt vernacular architecture methods when they undertake house renovations, upgrades etc which will also highlight the benefits of context appropriate architecture practices for tourists. Farmstays can introduce people to local food growing practices.More resort/homestay/hotel constructions by elites outsiders should be banned and the tourism activities eg. attracting wildlife near tourist resorts, through ecologically disruptive methods should be banned. All tourism efforts should be aligned towards benefitting the local economy and ecology.

Wildlife tourism which is reduced to viewing certain selected species such as elephants and tigers should adopt and cultivate a ecosystem lens which demonstrates the interconnectedness of the diverse parts of the ecosystem such as the trees, grasses, moss, insects, mammals, reptiles, water bodies and soil to ensure that tourists leave the place acknowledging the web of nature that humans are part of that is supporting our survival. In this direction undertaking restoration activities such as planting of native trees in degraded areas, cleaning of polluted spaces should be facilitated through tourist support. Additionally, safari rides should be regulated wherein people are discouraged from feeding animals, vehicles move along designated routes and night safaris without the use of blaring lights are undertaken. There should be limits on the number of vehicles that enter a forest area at a time. Carrying capacity can be a useful tool in this direction however this should be combined with consultation with local communities who are more knowledgeable of their context to finalize on the number of tourists who should be permitted into forest areas and also the suitable time duration for such visits. It is crucial to guard against having monetary regulatory mechanisms in place to limit the number of tourists, the rules devised should be such that they provide equal access to people across all socio-economic classes. Eg. There can be a first come first served booking slot, with online and offline booking facilities for tourists at a sliding scale cost to visit protected areas.

Responsible tourism operators, travel operators and local farmstay and homestay owners should be incentivized by the government. Additionally there should be tourism operator unions and travel unions who offer standard services to tourists rooted in responsible tourism practices.

# 2. Responsible Tourism: Principles and Solutions.

This section shares principles that can guide the transition from extractive and luxury-based to responsible tourism followed by sharing existing practices that are being implemented by responsible tourism practitioners. It further shares recommendations for new strategies and solutions which can be experimented with to enhance the prevalence of responsible tourism in India. Case studies demonstrating the implementation and benefits of responsible tourism are shared at the end of this section.

## 2.1. Guiding Principles for Responsible Tourism

Tourism practices must embody accountability towards limiting the negative impacts of tourism on the ecology, local cultures and communities, ensuring the equitable dispersal of tourism's benefits. Responsible tourism therefore entails supporting local economies, limiting carbon footprints, respect and conservation of landscapes and the wildlife and indigenous communities inhabiting these landscapes. The guiding principles elaborated on below aim to present a few lenses that must be adopted in tourism-related decision making to ensure that the root causes of tourism related issues are addressed as opposed to mere 'management' of problems which address only the symptoms of unhealthy tourism practices.

Given the context of this guidebook a major focus will be on lenses needed to the mitigation of the causal factors of human-wildlife distress in addition to other tourism related symptoms which manifest as diverse social, ecological, economic and climatic injustices.

The guiding principles described are aimed at drawing attention to the following questions-
1. How is tourism contributing to the conservation and restoration of the ecosystems and landscapes it is dependent on?
2. Is it taking more than it is giving back to the indigenous inhabitants (humans and more than humans e.g. flora, fauna, waterbodies, etc.) of a place of tourism?
3. How can the needs for a healthy tourism experience be met through minimal extraction and disruption of natural resources?
4. How can the necessary resources be harvested (if needed) in a spirit of reciprocity to the place of tourism and its indigenous inhabitants?

### 2.1.1 Sufficiency in Tourism

A planet with finite resources warrants that the beings treading the earth are oriented towards 'sufficiency' which from a tourism perspective would mean honoring the ecological, social, and emission limits of tourism spaces and the means to get to these spaces. This concept is in stark contrast to capitalist industrial society's attitudes, systems and practices that create the need for and fuel hyper-individualistic gratification of wants and infinite economic growth that is predatory

towards social equity and ecological sustainability. Tourism practices that causes distresses that arise in mountainous and forest based ecosystems such as increasing human-wildlife conflicts are symptoms of habitat fragmentation, water scarcity, wildlife disturbance due to irresponsible and extravagant tourist behaviour among other factors which can be linked to the attitudes, systems and practices of capitalism.

*Munnar and its surrounding areas are characterized by fragile ecosystems with limits to the extent of construction activities they can sustain. Despite this ecological sensitivity, the tourism-based economy has surpassed the environmental considerations of Munnar. As a result, many construction projects have been carried out despite the area's ecological vulnerability. This has heightened the risk of landslides, as evidenced by the increasing frequency of such events and related floods and calamities.- Homestay owner, Munnar*

Tourism that is rooted in 'sufficiency' can ensure the health of the local ecology and society in addition to mitigation of emissions as compared to luxury tourism which is characterized by catering to and encouraging unmindful wants at the cost the health of the location of tourism and the paths that support reaching the place of tourism. Sufficiency in tourism should be ensured across the value chain actors and is a vital factor to consider before deciding to engage in tourism.

## 2.1.1.1 Travel based sufficiency

"Can I do without this trip?", "Can I combine this trip with any other trip", "How many trips in a year?" are some of the questions to address while making a decision on travel, which can be instrumental in cultivating a behavior of purposeful and reduced travel at an individual level.
From a tour operator's perspective a few questions that can be asked are - how can I encourage tourists to minimize their travel impacts while traveling from their homes to their place of tourism? How can I offer low-impact travel options at the place of tourism?

The sections on 'arrival and departure' and 'Getting around (within tourism locations)' highlight the need to implement travel based sufficiency as a non-negotiable component of tourism.

**Arrival and Departures**

**Air travel :**

Tourism's environmental footprint is estimated to be responsible for a significant 8%-10% of global greenhouse gas emissions. Most activities undertaken during holidays, especially abroad, contribute to greenhouse gas emissions, with air travel being the most damaging[1]. An average medium-haul domestic return flight from Bangalore to Mumbai emits Climate Pollution (i.e. Greenhouse Gases) that neutralizes the benefit of 100 trees – essentially, cut down forever. This can be seen as personally chopping down 1 tree at the end of the return flight, each time we fly[4].

Over a 1,000 km journey, an air traveler emits 285 kgs of CO2 per kilometer while a railway

passenger in even an Air Conditioned executive-class compartment emits 30 kgs, in a comfortable AC bus the  same passenger emits 70 kgs[3].Clearly Air Travel, irrespective of its efficiency benefits, is the most climate-polluting way to travel devised by  humankind.

EJAtlas- Global Atlas of Environmental Justices reports 14 cases of socio-environmental conflicts related to expansion or creation of new airports in India[7]. Most airport projects listed in EJAtlas report biodiversity loss (wildlife, agro-diversity), food insecurity (crop damage), loss of landscape/aesthetic degradation, noise pollution, soil degradation, deforestation and loss of vegetation cover, surface water pollution, decreasing water (physico-chemical, biological) quality, groundwater pollution or depletion, large-scale disturbance of hydro and geological systems and reduced ecological / hydrological connectivity[7]. The airport projects also report displacement, loss of livelihood, loss of traditional knowledge/practices/cultures, specific impacts on women, land dispossession, militarization and increased police presence,  and loss of landscape/sense of place[7].  The social image associated with flying and  also has influenced more flying which is the least sustainable mode of traveling and unethical as it is impacting farmers livelihood and is threatening to wildlife.

The Dutch government in March 2024 has announced a cap on the number of flights which would takeoff from Schiphol Airport, the 9th busiest airport in the world, resulting in 17% flight reduction[14]; climate change, noise and air pollution being the reasons for this measure. A similar effort of resistance is being staged for Paris airport citing "reduction" as an effective sufficiency tool.  Responsible travel, although a necessary attitude to adapt to, encourages energy efficient travel by switching to sustainable aviation biofuels, low carbon fleets; which can lead to rebound effects (the less we consume, the more we can fly with the same amount of fuel).  Aviation does not rule out the use of first generation biofuels from crops, which are proven to cause very serious environmental and social impacts such as biodiversity loss, rising food prices and water scarcity[13]. The recent protests by farmers for the newly proposed Parandur and Gaggal airports and many more such land conflict issues(landconflictwatch.org) due to infrastructure growth, demands an attitude of sufficiency, a behavioral change to travel less and being mindful of the reasons for the travel.

**Getting Around (within tourism locations):**

*"It is imperative to regulate the influx of tourists to tourist destinations, taking into account factors such as ecological sensitivity and carrying capacity. Policy formation should include measures such as setting caps on the number of visitors and private vehicles allowed in certain areas during specific seasons to prevent overcrowding and mitigate environmental impact"- Sustainability Practitioner and Homestay Owner, Munnar.*

Local area travel should be aligned towards minimizing the impact of emissions and disturbance to habitats. While the luxurious option would be to travel in independent cars or bikes, which have a high pollution impact, increase the number of vehicles in a tourist spot augmenting the negative impacts of transportation (eg. high noise pollution, traffic etc) on local communities and biodiversity, a sufficiency oriented approach to getting around would involve traveling by bus or

other forms of public transport as far as possible.  This also warrants government investment in public infrastructure to ensure comfortable travel services that will encourage people to opt for public transport.  Additionally, exploring places on foot would be the most advisable way to ensure sufficiency, given the context.

## 2.1.1.2. Accommodation based sufficiency

The establishment of hotels result in the alteration and destruction of natural ecosystems and not just in the location where the structure is built but also for the extraction of material used to build the hotel. The more space and facilities a hotel offers the more resources it consumes. A crucial pathway to ensure sufficiency in accommodation is limitations to the size of establishments. Following are the guest room sizes for a standard double/twin room approved as per the Hotel & Restaurant Approval & Classification Committee (HRACC) :

### GUEST ROOM SIZES AS PER HRACC

| ROOM TYPE | 1 STAR | 2 STAR | 3 STAR | 4 STAR | 5 STAR |
|---|---|---|---|---|---|
| Standard Double/ Twin Room: | | | | | |
| Bedroom: Minimum size of bedrooms excluding bathroom in sq. ft. | 120 | 120 | 140 | 140 | 200 |
| Bathroom: Minimum size of bathroom in sq. ft. | 30 | 30 | 36 | 36 | 45 |
| Suite Room: Minimum excluding bathroom in sq. ft. | - | - | - | - | 300 |
| Suite bathroom minimum in sq. ft. | - | - | - | - | 45 |

*Source : https://www.ihmnotessite.net/layout-of-guest-rooms*

How large a room and what facilities does a tourist need while visiting a place of tourism for a short time period? Eg. What purpose does a suite room serve at a tourist location?  - These are vital questions to ponder while factoring accommodation arrangements in tourism places.

Small accommodation lodgings have the potential to contribute to the sustainability objectives of the tourism destinations within which they are located (Morrison et al., 2010).  Homestay arrangements  in community homes which repurpose already built space are more sufficiency oriented.

In addition to size other factors such as the design of facilities which impact water, energy consumption and waste management are relevant. For instance, in the context of water consumption, Ladakh tourism has resulted in the replacement of traditional dry toilets with modern flush toilets. Conventional dry toilets are especially preferred by farmers as it helps conserve water for farming and other non-negotiable needs. However transitioning to water intensive flush toilets is known to be one of the major factors contributing to water scarcity in the Ladakhi desert. Water shortage is known to force locals to leave their generational homes and give up their agrarian-based economy. In the past Leh used to receive water from glacial meltwater and springs however the excess demand for water exceeds the capacity of these water ecosystems has led to dependency on borewells for groundwater extraction which further depletes the water table[19].

*"When I used to go to Ladakh in 2010-11 there used to be no flush toilets and only dry toilets and now you see western style flush toilets coming up in hotels and homestays. There are even glamping tents with flush toilets - Where is the water coming in to flush? And where is it going? It is out of sight and out of mind ... The groundwater is very scarce, and yet there are many borewells which have been dug and scarce groundwater is being used. People tend to have an issue with using dry toilets because they don't look like the toilets back home. There have been experiments with different designs where the toilets have a western style seating arrangement and instead of flushing water you flush sand. We can therefore look at creating a better design of a dry toilet instead of promoting western style toilets" - Tour operator.*

Architectural principles and practices based on vernacular architecture prioritize sustainability, resource efficiency, sufficiency and integration with the natural environment can ensure that basic accommodation needs through the use of minimal resources. Few of these architectural principles are articulated below:

1. **Local Materials**: Vernacular architecture utilizes materials readily available in the local environment, reducing the need for transportation and minimizing embodied energy. This principle can be adopted by the tourism industry through sourcing construction materials locally, supporting local economies, and reducing carbon emissions associated with material transportation.
2. **Climate Adaptation**: Traditional building techniques are often tailored to local climate conditions, maximizing thermal comfort and minimizing energy consumption for heating and cooling. Tourism developments can adopt similar strategies by designing buildings that are responsive to local climate patterns, incorporating natural ventilation, shading, and passive heating and cooling strategies to reduce energy use.
3. **Low-Tech Solutions**: Vernacular architecture often relies on simple, low-tech solutions for construction and infrastructure, reducing reliance on energy-intensive technologies. Tourism developments can incorporate low-tech solutions such as rainwater harvesting, composting toilets, and passive solar design to minimize environmental impact and promote self-sufficiency.

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[19] Aggarwal, M. (2021, July 20). *The toxic love for Ladakh is weighing heavy on its natural resources*. Mongabay-India. https://india.mongabay.com/2021/07/the-toxic-love-for-ladakh-is-weighing-heavy-on-its-natural-resources/

4. **Adaptability and Flexibility**: Traditional buildings are often designed to be adaptable and flexible, allowing for modifications and additions over time in response to changing needs and conditions. Tourism developments can embrace this principle by designing modular and flexible structures that can be easily expanded, modified, or repurposed as demand and circumstances evolve, reducing the need for demolition and reconstruction.
5. **Cultural Sensitivity**: Vernacular architecture reflects the cultural identity and traditions of local communities, fostering a sense of place and connection to the environment. Tourism developments can promote cultural sensitivity by incorporating local architectural styles, materials, and design elements, respecting indigenous knowledge and traditions, and engaging local communities in the design and management of tourism infrastructure.

## 2.1.1.3. Recreation or experiential activity based sufficiency

*"Now tourism is getting into more secluded wild zones which is dangerous. For instance, wild animals are eating waste food such as biscuits and bananas which are thrown on roads by tourists which alters their eating habits"- Homestay Owner, Uttarakhand*

Tourism in forest areas and mountains impacts local communities and biodiversity, through noise pollution from vehicles, habitat fragmentation, alteration in travel routes of locals and animals, etc. A crucial step from a sufficiency perspective would be controlling the number of visitors to a specific area at a given time similar to Bhutan which has caps on the number of tourists that can visit its places of tourism[20]. Off-season tourism and visits to less famous places can ensure that the negative impact on the socio-ecological systems in the place of tourism is limited,too. In this context it is vital to be careful not to recreate problems experienced in one place in another and therefore a strategy needs to be developed in consultation with local communities about what a place wants or needs from tourism. Diversifying into low-impact recreation activities which involve walking and cycling (based on the context), can ensure minimal disturbance in the places of tourism and will also enable a deeper connection to the landscape and the people.

Some 'Leave No Trace Practices' described below can ensure sufficiency oriented behavior while engaging in recreational activities,too:

1. **Staying on Designated Trails**:

   Staying on designated trails is of great ecological significance as it can help prevent soil erosion, protect fragile vegetation, and minimize disturbance to wildlife habitats. Clear signage and markers can help guide tourists along established paths, while interpretive materials can explain the reasons behind trail restrictions and encourage compliance.

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[20] ECOCALL CONSULTANCY SERVICES, THIMPHU, BHUTAN. (2021). *ASSESSMENT OF TOURISM CARRYING CAPACITY FOR BHUTAN.* Tourism Council of Bhutan. Retrieved April 16, 2024, from https://www.tourism.gov.bt/uploads/attachment_files/tcb_ESvy8uZO_Assessment%20of%20Tourism%20Carrying%20Capacity%202021.pdf

2. **Respecting Wildlife**:

*Sometimes, when large group size of tourists comes in during the tourist season (which is also breeding season for birds), birds change their nesting areas and go deeper in forest. Clicking of photographs and loud noise also tend to disturb birds. - Tour Operator, Eaglenest Wildlife Sanctuary*

Encouraging visitors to observe wildlife from a safe and respectful distance helps minimize stress and disturbance to animals, allowing them to carry out natural behaviors undisturbed. The use of binoculars or spotting scopes can enhance wildlife viewing opportunities while maintaining a respectful distance. Education about wildlife behavior and the potential consequences of approaching or feeding animals can help foster a culture of respect and appreciation for wildlife among tourists.

3. **Minimizing Campfire Impacts**:

Guides can demonstrate and promote alternative cooking and heating methods that have minimal impact on the environment, such as portable stoves or solar cookers. Encourage visitors to use established fire rings or designated cooking areas when campfires are permitted, and educate them about the ecological importance of preserving dead and downed wood for wildlife habitat and soil nutrients. Emphasize the importance of fully extinguishing campfires before leaving the area and packing out any leftover ashes or debris.

4. **Use of biodegradable and reusable products :**

The use of nature based cleaning products (eg bioenzymes, wood ash etc as applicable) will prevent the discharge of chemical residues of handwashes, dishwashing soaps etc. water bodies and the soil. Additionally the use of nature based toothpastes/powders (eg. charcoal powder) and products can facilitate efforts aligned towards leaving no trace behind in the place of tourism. Practices revolving around carrying reusable water bottles, cutlery and packing foods responsibly while participating in recreational activities in tourist spaces are vital from the perspective of recreation activity based sufficiency, too.

## 2.1.2. Participatory Processes in Tourism

*In some places in Nagaland there are almost 150 year old councils. The forest and biodiversity is conserved because of local councils. Plus many forests are marked as sacred forests. When tourists see that the locals are treating the forest like God they start believing in the energy of the forests and trees and respect them too.   -  Tourism operator.*

Community participation in tourism planning is of immense significance since tourism impacts the lives and livelihoods of indigenous community members. Locals are the most knowledgeable of their socio-ecological contexts given that they and their ancestors too may have grown in already

existing and future spaces of tourism. Taking locals' perspectives into account throughout the tourism planning can balance economic development and the need for conservation when preventing the overexploitation of resources upon which the community relies. Tourism should therefore be community driven, wherein community members have the autonomy to govern the tourism infrastructure and facilities available in their surroundings. Additionally from a cultural perspective, representation of local residents and indigenous cultures in the tourism planning process can ensure that the traditional lifestyles and values of locals are respected and remain intact. Overall, community-based tourism makes space for  locals to control tourism development, operate tourism facilities and infrastructures, implement tourism-developing strategies, manage indigenous  resources, minimize economic leakages and increase tourism acceptance[21].

*"Local communities have their own local governance rules. Policies are mostly drafted not considering the locals. What is applicable in one place won't be applicable in another. Policymakers and other authorities therefore need to learn how to work with people because the locals are most knowledgeable of their context. Once people know that something is wrong then they can work towards that. We need to find solutions with people." -  XYZ.*

In this context, Free, Prior, and Informed Consent (FPIC) is a fundamental principle recognized in international law, particularly in the context of indigenous rights and environmental governance. It asserts that indigenous peoples and local communities have the right to give or withhold their consent to proposed projects or activities that may affect their lands, territories, and resources. This consent must be obtained freely, without coercion, prior to any project implementation, and with full and accurate information provided to the affected communities. FPIC ensures that indigenous peoples and local communities have the autonomy to make decisions about developments that could impact their lives, cultures, and environments, and it is essential for promoting equitable and sustainable development while respecting the rights and dignity of these communities.

In instances where tourism projects or activities are being undertaken in areas inhabited or utilized by indigenous peoples or local communities by external stakeholders such as  tourism operators and developers, they should engage in meaningful consultation processes with communities. This involves providing comprehensive and understandable information about the proposed project, its potential impacts on the environment, culture, and livelihoods of the community, as well as alternative options. Communities must have the opportunity to express their consent or refusal to the project freely, without coercion, and with a full understanding of the implications. By incorporating FPIC into tourism planning and development processes, the industry can foster respectful and mutually beneficial relationships with local communities,

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[21] Kala, D., & Bagri, S. C. (2018). Barriers to local community participation in tourism development: Evidence from mountainous state Uttarakhand, India. *Tourism: An International Interdisciplinary Journal*, *66*(3), 318-333. https://hrcak.srce.hr/file/303072

promote sustainable tourism practices, and contribute to the preservation of cultural heritage and natural environments.

## 2.1.3. Reciprocity with humans and more than humans in the tourism location

*"Tourists think that once they pay money they can do what they want in a place" - Tourism Operator, Guwahati*

One of the primary factors driving irresponsible behavior in places of tourism is the lack of connection between the tourist and the world around. The more humans concretize the world the more the connection between them and the land, the trees, the animals, the water bodies and other more than humans who belong to the earth and support its survival is lost. A lack of connection, leads to a lack of acknowledgement of the earth's gifts which promotes degradation. Responsible tourism therefore should be rooted in rebuilding connections that have been lost between humans and the world around. It must demonstrate the need to not just extract benefits from but also give back to the ecosystems and communities it is dependent on. The capitalistic economy which focuses solely on extraction and sidelines reciprocity towards the resources it feeds on can be checked through responsible tourism initiatives which facilitate a culture of mutual exchange between all human and more than human stakeholders.

Robin Wall Kimmerer in her book 'Braiding Sweetgrass'[22] shares the rules of the *Honorable Harvest* which illustrate guidelines which can be followed while harvesting anything from the earth. In the context of tourism these rules can serve as guidelines for humans who are both at the receiving and offering ends of tourism services :

- Know the ways of the ones[23] who take care of you, so that you may take care of them.
- Introduce yourself.
- Be accountable as the one who comes asking for life.
- Ask permission before taking. Abide by the answer.
- Never take the first. Never take the last. Take only what you need.
- Take only that which is given.
- Never take more than half.
- Leave some for others.
- Harvest in a way that minimizes harm.
- Use it respectfully. Never waste what you have taken.
- Share.
- Give thanks for what you have been given.
- Give a gift, in reciprocity for what you have taken.
- Sustain the ones who sustain you and the earth will last forever.

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[22] Kimmerer, R. W. (2015). Braiding sweetgrass. Milkweed Editions.
[23] Here 'ones' refers to plants, animals, water and any other being that supports survival.

*"From the overall tourism income 10% goes to natural conservation like awareness creation, plantation, planting in the jhum plot for restoration, and 10% for community development - repairing the road, bridge, socio-cultural event in the village in a way contribute to the village or the societal development. The activity that we do is leading to the restoration of the ecosystem which in turn ensure better eco-tourism in future, with wildlife and biodiversity and better forests and water security of the village and downstream into Kaziranga National Park" - Responsible tourism facilitator, Assam.*

## 2.1.4. Polluters Pays Principle

The "polluter pays" principle is an environmental policy concept that assigns the responsibility for the costs of pollution control and remediation to those who are responsible for generating the pollution. Essentially, it means that those who cause environmental damage should bear the costs of managing and mitigating that damage, rather than society as a whole. This principle aims to incentivize polluters to adopt cleaner practices and technologies by internalizing the costs of their pollution, thereby promoting environmental protection and sustainability. It's often implemented through various regulatory mechanisms, such as pollution taxes, or liability laws.

The "polluter pays" principle can be applied to the tourism industry's value chains by holding various stakeholders accountable for their environmental impacts. For example, hotels can be incentivized to reduce their energy consumption and waste generation through policies such as carbon taxes or waste disposal fees. Tour operators can implement measures to minimize the ecological footprint of their excursions, such as choosing eco-friendly transportation options or supporting local conservation projects. Similarly, transportation providers can be required to invest in cleaner technologies. By integrating these principles across the entire tourism value chain, the industry can mitigate its environmental impact while promoting sustainable practices and responsible tourism.

## 2.2. Existing Responses & Solutions :  An overview and analysis

This section will examine currently 'practiced' solutions to ameliorate the socio-ecological harm of unregulated tourism. This list of responses and solutions has been populated through stakeholder consultations with entities encapsulating tour operators, accommodation providers and organizations, working in the bioregions that the guidebook focuses on. The list is therefore limited to learnings from these stakeholder consultations and might not encapsulate all practices that exist in the responsible tourism realm in entirety.

The existing practices and solutions have been critically analyzed for their 'practical' merits and demerits in terms of addressing directly observed distresses articulated earlier in the guidebook. The analysis is an amalgamation of perspectives shared as part of the stakeholder consultations and the authors evaluations.

## 2.2.1 Practices to facilitate rciprocity to the human and more than human world :

This involves practices that directly and intentionally contribute to a mutual-exchange between tourists and the local communities, biodiversity and supporting ecosystems and landscapes which support tourism.

1. Mandatory contribution to conservation, restoration and local public infrastructure development as part of tour package budgets.

   **Description:** This involves integrating monetary contribution to sustainability efforts as a non-negotiable cost component of tourism packages. These initiatives encompass various efforts focused on protecting and rejuvenating habitats, species, and ecosystems that are vulnerable or have suffered degradation due to human activities or environmental factors. ( Source : Encamp Adventures and Aaranyak)

   Examples :
   - Encamp Adventures  practices allocating 2.5% of the trip cost to support local sustainability initiatives.
   - Aaranyak  allocates 10% of income from each tourism package for conservation and restoration efforts, such as native tree plantation and environmental education activities. Additionally, 10% of the income is allocated for community development, which includes repairing roads, bridges, and organizing socio-cultural events in the village.
   .

   **Analysis:** Dedicating a portion of a tour package budget to support local ecosystem conservation and restoration activities ensures that the economic benefits derived from tourism are directed towards activities aimed at preserving and restoring natural ecosystems and biodiversity which is one method of repaying nature for the services it offers to tourism. This also ensures the sustainability of tourism by contributing to the conservation of biodiversity, water, land and other contributors to tourism. Additionally contribution to community public infrastructure development ensures that communities services to tourism are contributed to by tourists. Tour operators however should make efforts to communicate to tourists that their monetary contribution is not a  gateway to engage in unmindful tourism practices given the capitalist mindset  which makes people believe that money is a compensation for any damage they inflict to the land and its people. Monetary compensation to the land and its communities should be viewed as a necessary addition to responsible tourism behavior i.e. as an act of reciprocity to the humans and more than humans offering their services to tourists, rather than a compensation for extractive and exploitative behavior.

## 2.2.2. Practices to offer responsible tourism services (end-to-end):

This refers to practices which are aimed at minimizing the diversity of negative socio-ecological and economic impacts that are known to arise from tourism activities across different aspects of the value chain.

1. **Informed Decision Making : Introducing carbon footprint calculation as a tool to plan a tourist journey.**

   **Description:** This involves sharing a carbon footprint calculator with tourists during the process of finalizing the travel itinerary. This process facilitates quantification of the amount of greenhouse gasses emitted directly or indirectly through various aspects of the tourist journey. On filling the calculator and receiving results tourists are offered suggestions on how they can offset their carbon footprint by contributing to local community initiatives at the tourist destination in addition to incorporating eco-friendly transportation, energy-efficient accommodations as integral components of their visit (Source : Encamp Adventures).

   **Analysis**: By understanding the carbon footprint, tourists can take steps to reduce emissions and mitigate their environmental impact. Carbon footprint exercise gives real time exposure and raises awareness about the environmental impact of various activities. This may encourage individuals and groups to take responsibility for their carbon emissions. By quantifying carbon footprints, tourists and tour operators can identify areas where emissions can be reduced or mitigated through changes in behavior, adapting appropriate technology, or practices.Carbon footprint calculation as a whole can be used as a tool to bring more accountability across various stakeholders in the tourism sector. The concept of carbon offsetting however needs to be approached mindfully and there needs to be a gradual transition towards 'sufficiency' oriented visits which are rooted in mitigating negative impacts as opposed to 'offsetting' which is undertaken as a compensation for damage that is done

2. **Responsible travel choices : Promoting group transportation over private transport.**

   **Description:** This involves tour operators arranging for travel through vehicles which can accommodate groups of people eg. buses, tempos, as compared to bikes and private cars (Source: Edventure Ladakh).

   **Analysis**: Choosing transport like buses, tempo travelers, shared taxis, etc., supports reducing travel-induced carbon emissions, alleviating traffic congestion, and ensuring reliable accessibility, especially in mountainous destinations like the Himalayas and the Western Ghats. In the long run, this practice contributes to reducing the demand for

transport-related infrastructure development and minimizes the damages it may bring to the local ecosystem.

## 3. Responsible Food and Accommodation :

### 3.1. Prioritizing locally run homestays accommodation over hotels/resorts

**Description**: This involves making accommodation arrangements with support from local homestay owners. As part of this initiative tour operators collaborate with local homestay owners who provide food, water and accommodation services. (Source : Aaranyak, Edventure Ladakh and Encamp Adventures) .

**Analysis**: Collaborating with local homestay owners allows tourists to immerse themselves in the local food and culture and also contribute to the local economy. Homestays also occupy less space and consume less energy and water as compared to hotels and resorts. Homestays which provide refillable water services and tourists who avail these services help mitigate waste generation in the place of tourism.  Homestay owners however often succumb to tourism demands that might not be favorable in the long run eg. replacement of traditional dry toilets with water toilets in places of high altitude such as Ladakh.  Sensitization of tourists to the local culture is a vital step towards ensuring a fulfilling experience for both tourists and the local community.

### 3.2. : Prioritizing local cuisine and adopting food waste management practices

**Description :** This refers to serving local food which is cooked traditionally and managing the food waste responsibly.

Example :

- The food for the visitors on trails is served at lunch point where it is been cooked traditionally with bamboo shoots. (Source :Aaranyak)
- The raw waste generated by cooked and uncooked food is managed at the homestay itself as the food waste is fed to farm animals such as goats, cows etc, (Source : Swargamedu Camping, Munnar)

**Analysis :** Serving local food which is cooked using traditional methods and makes use of local food products can help mitigate the carbon  footprint from transporation of food products over long distances. This can also enable knowledge sharing on the local culture between food service providers and tourists. Additionally making arrangements for management of food waste locally can ensure minimzing the amount of waste that goes to landfills.

## 4. Responsible exploratory activities

Excursions and tour activities are structured outings crafted for leisure and exploration. These activities, often determined by the tour operator, entail visits to diverse points of interest like landmarks, historical sites, natural wonders, or cultural attractions. Excursions vary from brief day trips to expansive tours lasting days or even weeks. This period sees increased interaction between tourists and the local culture and ecosystem, resulting in a direct impact. Thus, fostering mindful and conscious engagement becomes essential in responsible tourism operations.

### 4.1. Local life and livelihood immersion

**Description:** These activities are characterised by intentional involvement of travelers in the day-to-day activities and economic pursuits of the local community they are visiting. It goes beyond mere observation or superficial interaction, aiming to provide tourists with authentic experiences that deeply connect them to the destination's culture, traditions, and way of life. This type of tourism involves travelers actively participating in or learning about the various livelihoods that sustain the local population.

Examples:

- Organizing immersion programs that facilitate meaningful exchanges between tourists and the local community based on the local livelihood activities. As part of this travelers engage directly with local residents and join workshops or classes to learn traditional crafts and skills from local artisans. This involves engaging with pottery making, textiles weaving, wood carving, or creating traditional artwork. (Souce : Edventure Ladakh).
- Offering the opportunity to experience life alongside nomadic tribes eg. the Changpa people, who maintain their unique way of life in the remote regions of Ladakh. This involves staying with the nomads in Changthang and embarking on hikes with the shepherds as they lead their yaks to graze in the high mountains. This immersion exercise also involves learning firsthand about traditional methods for making local cheese and butter (Source : Edventure Ladahk).
- The tourist engages with the community in farming activities to understand in depth about the diverse food practices of the region this ensures that the tourist understands the culture and emotions attached with food practices of the region. Sometime a group of homestay collectively cook together in the community kitchen where they engage with the other wage earning groups who serves food or catering services which helps the wage earning group to have a decent earning along with promoting their regional food and its associated values. Additionally, village walks are organized where visitors can observe the village and engage with villagers to understand their traditions, culture, livelihoods, way of living and understand practices such as weaving, sericulture etc. (Source: Aaranyak)

**Analysis** : Immersion activities which involve engaging with the day-to-day lives of communities and their local livelihoods and crafts have multiple benefits as they foster cultural exchange, economic development, and environmental conservation within destination communities. This approach enables meaningful interactions with residents, nurturing mutual understanding and respect for diverse cultures and perspectives. Moreover, the validation from outsiders can encourage the continuation of traditional livelihood practices.

## 4.2. Limiting tourist footfall and adopting leave no trace practices

**Description:** Engaging responsibly in exploratory activities caters to respecting the carrying capacity of the location of tourism and engaging in leave no trace practices.

Examples :

- If a group with more than 10 people visit a forest as part of a trek then food is not provided in the forest as it will cause more disturbance in the forest area and therefore food is served at the edge of the forests and village. In the case of large student groups, students are made into smaller groups and they go on different trek trails, and food is provided within the forest range. (Source : Aaranyak)
- Many people are not taken to high altitude regions. Whoever goes is not allowed to carry plastic wrappers. If it is necessary then it is ensures that the plastic comes back. Tourists are not allowed to make noise since the local community are nature worshippers and believe that if too much noise is made it will lead to heavy rains etc because it will anger the deities,( Source : Homestay owner, Dzongu village)

**Analysis**: Conscious exploratory practices are crucial in today's tourism landscape to ensure a holistic and responsible approach to exploring natural environments while minimizing negative impacts on ecosystems and local communities. Limiting the number of tourists and groups that visit a location especially those which are ecologically sensitive is a necessity in the social-media era which has resulted in unregulated influx of tourists in many tourist places which disturbs wildlife and their habitats. Additionally, adhering to principles such as Leave No Trace ensures that wildlife habitats are not disturbed due to waste and other traces tourists are conventionally known to leave behind when not following responsible behaviour which has a detrimenta impact on the local ecology and those dependent on it for survival.

## 4.3. Educational Nature Walks

**Description:** Educational nature walks comprise of walking through forests, parks, or wildlife reserves, and appreciating and connecting with the natural environment. During a

nature walk, participants may encounter diverse flora and fauna, hear birdsong, spot wildlife, and observe natural features such as streams, rocks, and trees. Guides or interpreters often provide information about the local ecology, pointing out interesting plants, animal tracks, or geological formations along the way.

Example :

- Encamp Adventures organises nature walks where students learn about various aspects of the ecosystem, including trees, mosses, creepers, and the intricate mycelial network of fungi .

- Nature Trails are operated by local communities, with support from other experts from locality including traditional expert, BODO experts, other animal experts is conducted. On forest trails the guides share folks stories, with regards to plants, animals, and point out evidences of animals, pug marks of cats, elephant dung marks etc. They explain how Jhum is carried out and people can experience or try it out. (Source : Aaranyak)

**Analysis:** Nature walks offer a respite from the fast-paced routines of daily life, allowing individuals to slow down and immerse themselves in the serenity of natural settings. Moreover, they serve as invaluable opportunities for education and exploration, enabling participants to discover and appreciate local flora and fauna, geological formations, and ecological dynamics. Additionally, nature walks facilitate the process of re-building connections to the more than human world which has eroded over time with increased urbanization. Nature walks can evoke a sense of wonder and reverence for the web of life that humans are part of and are supported by. This deepened connection can also inspire a desire to protect and conserve the environment for the future generations. Importantly, nature walks provide tangible settings to impart and share values of harmonious coexistence with nature and responsible utilization of its natural offerings.

5. **Collaborations among tour operators:**

**Description :** This refers to working in collaborating with other local tour operators to ensure that all locals involved in the same income generation activity have access to income from tourism ( Source : Encamp Adventures).

Example : The Encamp Adventure team collaborates with other local tour operators recognising that they all have their own strengths and can benefit from each other's support. While all tour operators are not open to such collaborations they have a network of entrepreneurs who work in collaboration with each other.

**Analysis :** A spirit of collaboration among tour operators can ensure that all locals involved in the same income generation activity have access to income from tourism and that there is equal

for all other service providers assocated with different agencies to benefit from touism. Collaboration is a healthy apparoch for the economy and the ecosystem eg. tour operators can have dedicated nature trails which they allocate among themselves which can help minimize pressure at a central location. Collaboration  can also ensure standardized tourism offerings which has the potential to make responsible tourism behaviour as a non-negotiable for tourists and other stakeholders who are dependent on tour operators for their services.

## 2.2.3. Practices for community-centered tourism :

This refers to practices which are rooted in planning for and offering tourism services 'by and or with' local communities who are primary human stakeholders who are most knowledgeable of the tourism context. Local communities are both impacted by and have the potential to impact tourism in a given location, therefore, community-centered tourism practices are vital to further responsible tourism initiatives .

1. **Participatory planning with locals**

    **Description:** Participatory planning involves collaborating with locals to engage in designing and planning tours and the approach to offering services.

    Example:

    ● Aaranyak has certain processes in place to ensure that community members are not burdened by tourism activities and also not taken for granted by tourists. These processes are all outcomes of participatory planning with communities  eg. Once a tourist chooses an activity they want to engage in as part of their tour package, the community is given time to prepare for these activities and any immediate requests by tourists are not entertained since this will warrant that locals abstain from their daily activities to make space for untimely requests.
    ● Edventure Ladakh consults local artisans such as weavers or farmers on their availability before fianlizing if tourists can visit them to observe them engage in their livelihood and to learn from them, to avoid unplanned visits by tourists which can impact the schedule of the weavers, farmers,etc. .

    **Analysis:** Participatory planning and collaborations with locals foster a more inclusive, sustainable, and enriching approach to tourism development that maximizes benefits for both visitors and host communities. It can ensure managing tourism in a way that it incorporates resting periods. This is essential to prevent tourism from eroding the essence of local indigenous  life. Engaging locals in the planning stages ensures that tour packages authentically reflect the destination's culture, traditions, and lifestyle, enriching the visitor experience and fostering deeper connections between travelers and the local community. Furthermore, this engagement  active participation by the community and shaping the future of tourism mindfully.

## 2. Working with local tour guides

**Description:** From a responsible tourism perspective, tour operators or organisations collaborate with or train local residents of the place of tourism to offer their services as tour guides over having external stakeholders support tourists in engaging with exploratory activities such as hiking, nature walks, etc. (Source : Encamp Adventures, Aaranyak, Edventure Ladakh)

Example :

- Tour guides are predominantly girls and women from the locality. This is an intentional step that is being undertaken to reflect the local culture where women lead decisions in their communities and are treated with respect. (Source : Encamp Adventures)
- Guides and instructors associated with Edventure Ladakh range from Buddhist monks to shepherds.

**Analysis:** Working with local tour guides ensures that the revenue generated from tourism benefits local communitues. Furthermore, initiatives which encourage women to undertake roles in the tourism sector such as that of tour guides which are mostly male-dominated, create opportunities for tourists themselves to question traditional gender perceptions thereby influencing their perspective on women in society at lage.

## 3. Working with local transport providers :

**Description :** This involves working with transportation providers who are locals of a given tourist region and avoiding contracting transportation services to non-local transport providers.

Example :

- Encamp Adventures makes sure that the vehicle provider is a local provider and also convey that the vehicle provider should restrict themselves to offering services within their own region eg. People from Assam refrain from driving in meghalaya.This however is not followed by many vehicle providers and is therefore challenging to implement.

**Analysis :** Working with local vehicle providers ensures that the income generated from tourism flows within the community, additionally a system where all vehicle providers restrict themselves to their own local areas can ensure that there is minimal competition and mutual understanding which can ensure that people across different locations have the opportunity to earn income.

## 4. Local accommodation and food

**Description:** This involves collaborating with local families who live in the tourist location to offer accommodation and food services to tourists. Farmstays refer to locals whos homes where they offer homestay services are located on their farmland, as opposed to farmers whos lands are located away from their place of habitation.

Examples :

- Edventure Ladakh collaborates with community members who have homes with traditional house structures, families engaged in farming activities who provide amenities and facilities that reflect their traditions and the cultural value of the region are prioritized for collaboration.
- When tourists come the local cuisine is promoted such as momos, etc. however options for simple food such as roti, vegetable and dal are also available incase people are not comfortable with the local food. (Source : Mayalmit, homestay owner, Dzongu village)
- Local mountain food and whole grains are prioritized over non-local cuisines ( Souce: Bhupender Bhist, homestay owner, Uttarakhand)
- Homestays made of soil, wood and other plant materials which are locally sourced are promoted (Source : Swargmedu Camping, Munnar)

**Analysis:** Homestays with vernacular architecture promote the culture, tradition and their way of living and also ensure mindful use of local resources and micro-climate. It facilitates connection building between tourists and locals. Providing amenities and food which is sensitive to the ecology and geography of the region facilitates enhancing the tourism experience without degrading the ecosystem. Farmstays enable farm-to-plate food offerings and can also encourage tourists to engage in farming activities which can help them connect to the soil.

**Description:** This involves facilitating collaboration with local people or groups to offer food to tourists through homestays or other accommodation and/or food providers. .

Example : A self help group which consists of unemployed women work with the homestay owners offer the community food catering services to the tourists. Sometimes 4-5 homestays form a group and the food services is offered to the tourists at a community gathering which is cooked by a group of women who are unemployed, marginalized and are unable to go out of the town for work. (Aaranyak)

**Analysis:** Food can act as a great medium to exchange traditional knowledge and traditional practices. Additionally, collaboration with locals to offer food services can ensure that the money earned is absorbed in the local economy. In the case of the example mentioned above the system of collaboration with self-help-groups can ensure increased agency and autonomy among the women.

5.  **Community capacity building**

**Description :** This refers to engaging with community members to enhance their capacity to offer responsible tourism services which ensure that both the community and tourists are comfortable with what is being offered and received. (Source : Aaranyak & Encamp Adventures)

Example: Aaranyak engages in capacity building of local communities to offer eco-cultural tourism services in villages. Their approach is to work with the community and build their capacity and hand-hold them and gradually handover leadership to the community.

**Analysis :** Engaging in capacity building of local communities which is undertaken with the intention of ensuring complete leadership by the community overtime can be instrumental in ensuring enduring self-sustenace by the community. This ensures that the ones who are impacted by tourism have control over how much they allow it to impact them and can ensure a healthy balance between tourism, the other parts of their lives and other sources of livelihood.

## 2.2.4. Practices for stakeholder sensitization :

This section shares practices which intentionally aim at stakeholder sensitization to facilitate responsible tourism behaviour. Certain practices covered under other sections would be relevant here too, however they haven't been integrated to avoid repetition. The practices are divided as overt sensitization practices which adopt straightforward practices, while the subtle sensitization practices refer to efforts undertake for sensitization through indirect approaches.

1.  **Overt Sensization Practices**

    1.1. Organizing periodic sustainability and tourism oriented training programs for tourism based-organisations and the hosting community

**Description:** This refers to conducting periodic training sessions focused on building sustainability-oriented capacity and knowledge and related tourist engagement trainings for both organisation members and the local community who are involved in hosting tourists.

Example :

- Encamp Adventures organizes training sessions to internalize sustainability principles among its staff members. These sessions provide periodic guidance, training, and information to all team members regarding their roles and responsibilities concerning internal environmental practices. Additionally, they offer guidance to local service providers such as tour guides and transportation providers on how to interact with people and facilitate conversations with tourists to curate meaningful and enjoyable experiences. Trainings also cover topics such as waste management and environmental conservation mechanisms.

**Analysis**: Sustainability and tourism -oriented training programs play a crucial role in promoting responsible tourism practices, fostering a culture of sustainability, and ensuring the long-term viability of tourism destinations. By raising awareness, instilling a sense of responsibility, and providing relevant information, training programs empower both staff and community members to actively contribute to the preservation of the environment, protection of local cultures, and support for host communities. This holistic approach to sustainability education is essential for creating a positive impact and ensuring that tourism remains beneficial for all stakeholders involved, in the present and future, both .By providing such education and training, participants can develop the necessary skills to actively contribute to sustainable tourism efforts. These initiatives not only empower individuals to make responsible decisions but also foster a culture of sustainability within the organization and the broader community.

1.2. Offering educational sessions in tour packages :

**Description :** This involves organising sessions such as film screenings on the local ecology developed in collaboration with local film makers, in addition to hosting talks with experienced generations in the villages etc.  It also involves inviting NGOs and other knowledgeable entities to share information to facilitate an inclination towards conservation and restoration activities. ( Source : Edventure Ladakh)

**Analysis :** Integrating educational components which are aimed at direct transfer of knowledge sch as through film screenings and sessions hosted by locals and NGOs etc is a direct method of encouraging responsible behaviour towards the ecosystem and local communities through exploring the tourism location through the eyes of local film makers, experienced elders and other entities. This can be a useful tool to facilitate responsible behaviour by tourists as they embark on excursions.

1.3. Pre-tour sensitization for tourists :

**Description :** This involves sharing direct guidelines with tourists to facilitate responsible behaviour while interacting with local communities and also wildlife while participating in exploratory activities or otherwise. This involves sharing information on 'leave no trace' practices eg. clearing up a campsite after a campstay, behaving minduflly in the presence of wildlife eg. not feeding animals and exhibiting respect towards local culture and traditions while interacting with communities, etc.  All homestay providers and tour operators who were interviewed as part of stakeholder consultations engage in direct sensitization in their respective contexts. .

**Analysis :** Pre-tour sensitization is an essential practice to ensure a proactive approach to mitigating tourism provoked distresses on wildlife and local communities. Pre-tour sensitzation should be a non-negotiable practice implemented by tour operators and other service providers to contribute to furthering responsible tourism behaviour in  a tourism location.


## 2. Subtle Sensitization Practices

2.1. Sensitization towards using non-chemical based hygiene products

**Description :** While participating in activities such as camping, people are offered two types of hand wash options - a chemical based hand wash option (eg. dettol) and a ecologically responsible hand wash option (eg. bioenzyme or soap nut based hand wash). Near the soapnut/bioenzyme based hand wash a note with information on the benefits of using non-chemical based hand wash are written down to catalyse people to make a conscious choice towards the type of hygiene products they use on camp sites. This knowledge is shared to also encourage the usage of ecologically responsible products after people head back home. *(Source : Encamp Adventures)*

**Analysis :** Providing people with two options for hygiene products eg. one which is not ecologically responsible and one which is ecologically responsible is a behavioral change technique which creates space for both sensitization and action. It does not attempt to enforce the use of a certain type of product rather facilitates informed decision making by the tourist. Furthermore, the impact of this sensitization (based on the individual's receptivity) can be carried forward to the place the individual inhabits wherein they might transition from the use of chemical-based hygiene products to ecologically responsible products at home. This might also lead to them exploring other alternatives to the products they use (eg. house cleaning products, clothes washing products, etc).

From an ecological perspective, promoting the use of ecologically responsible products in places of tourism will contribute to the mitigation of soil and water pollution from the use

of chemical based products which will contribute to maintaining the health of the ecosystem and its local inhabitants such as the flora, fauna and humans from the place.

**Description:** Apart from initial sensitization conducted for tourists on how to be sensitive to the local culture, and ecology initiatives are undertaken to facilitate reflection by tourists through participation in activities such as clean up drives eg. tour guides carry gloves when they go for nature trails. They start collecting garbage on the way and invite tourists to do the same to catalyze people to reflect on their ways of living (Source: Encamp, Dzouku Valley)

**Analysis:** Combining recreational activities with clean-up drives helps in connecting the tourist with deeper issue that affect the balance of the ecosystem in the place of tourism and beyond possible catalysing tourists to embark on a journey aimed at responsible travel and living as a whole.

# 2. 3. New Solutions Design

The solutions proposed in this section are based on learnings from the stakeholder consultation and also secondary research to evaluate  micro and macro level systems which are in place to support 'Responsible tourism' in the Indian context. The solutions shared below can serve as starting points for the establishment of systems that can ensure sustained responsible tourism endeavours by government bodies, tour operators and civil society.

## For Civil Society, Civil Society Organisations and Government Bodies

**Tourism Watch - A civil society driven open source and open access online platform and offline centres to monitor a destination's socio-ecological health to enable informed action by tour operators, tourists and government level tourism authorities.**

While there are assessments undertaken to monitor ecological transformations in a location (eg. biodiversity decline, water and soil health decline, increased occurances of landslides,  human-wildlife encounters which have the potential to create conflict etc) by diverse stakeholders such as forest departments, independent researchers, in addition to lived experience observations by indigenous communities all of which provide information on the ecological health of a given region, there is no known digital platform in the public domain which reports these observations and

learnings on a single portal which can provide a holistic  and exhaustive view of the ecological health of a destination.

The establishment of such a portal can facilitate providing an overview of and identifying ecological distresses across tourism locations which can be a starting point to undertsand the need to regulate tourism activities in a given area eg. tourist activities such as animal feeding is known to alter the food habits of animals who then venture toward human habitations in search of food which is known to lead to damage to agricultural fields. While this could be reported as human wildlife conflicts, indigenous communities and researchers with a political ecology lens would know that one of the factors provoking animals to venture towards agricultural fields could be unregulated tourist behavior. This can then guide tourism departments and local operators to mandate that tourists refrain from feeding animals sooner than later. Furthermore, there could be other factors such as decline in forest cover due to rampant constructions for tourism accommodation facilities such as luxury hotels and resorts which induce animals to venture frequently towards human habitations which can result in human-wildlife conflict. While the interlinkages between tourism related constructions and unregulated tourist behaviour might not be evident or even observed by macro-level authorities, timely reporting by researchers and local communities who are most vulnerable to ecological distress and who more often than not are the first to notice how unmindful human behaviour provokes ecological distress can be useful in implementing regulatory measures sooner than later to minimize ecological and related social distresses provoked by tourism.

The information upload and tracking of ecological distress can be facilitate through the establishment of an open access online tracking portal (similar to [open street map](#))  where researchers and locals can upload their observations. The establishment of offline centres within tourism circuits would be a non-negotiable to ensure that people who do not have access to digital services can go and share their observations which can be uploaded to the portal by people experienced with the digital world. These centres can be run by local NGOs who may be operating in the place of tourism.

Additionally, local monitoring committees comprising residents, local vendors, health officials, etc can be set up to identify 'hotspot' activities that need special attention based on the most prevalent form of tourism violations eg.  monitoring wildlife feeding, etc. Hot spot activities can particulary be assessed periodically (once every 4 months annually) and  can then be analysed  to establish the interlinkages between tourism and distresses endured by  human and wildlife in the local area and report violations to authorites. The government should impose strict sanctions for non-compliance on service providers such as tour operators and accommodation providers who are known to violate responsible tourism norms.

Additionally, a portion of revenue generated from tourism should be set aside by the government to contribute to conservation and restoration activities to address and mitigate distresses endured by the local flora and fauna exhibit reciprocity towards the ecosystem which supports tourism. Compensation for distress caused to locals due to unregulated tourism activities (eg. crop loss

due to wildlife venturing into human habitation due to tourism) should feature as part of the national and state tourism departments plans too.

**Carrying capacity regulating mechanisms:**

It is imperative to regulate the influx of tourists to any tourist destination sites, taking into account factors such as ecological sensitivity, natural resource availability for tourism and the social carrying capacity of the region. The ecological carrying capacity for places of tourism should be annually determined with support from local communities and governing bodies, researchers, the local tourism department and other stakeholders[24]. In this direction a decentralized mapping platform which maps the location of service providers, especially accommodation providers and shares details on the vulnerability of the location from overtourism can be established to determine the tourist caps that need to be allocated to certain areas. The 'Tourism Watch' portal described in the section above can be one of many tools to facilitate determining the carrying capacity of a location. Additionally social audits and group discussions can be undertaken to gather the communities perception.

Determining the carrying capacity can enable identifying the number of tourists who can visit a particular place of tourism and the types of tourism services they need to limit themselves too. It is mandatory to ensure that implementation of carrying capacity limits do result in granting inequitable access to people from privileged socio-economic classes. Therefore implementing high fees to limit tourist numbers would be an inequitable solution. There is a need to brainstorm equitable approaches to imposing carrying capacity eg. having a tourism portal similar to the railway ministries IRCTC portal which has a limited number of seats which are granted to people on first come, first served basis. There can be a minimal registration fee at which people can book their spots and receive a ticket to visit a tourist location based on the number of people the place has the capacity to accommodate given the carrying capacity of the ecology and local communities at a particular point in time.

## For Tour Operators:

**Establishment of responsible tour operator unions**

 Tour operator unions should be established at the city, village or district level, as needed and applicable in locations which offer tourism services.  These should be unions of operators who are dedicated to offering responsible tourism services at a standard price or a sliding scale which is based on certain pre-determined criteria to ensure equitable contribution by people across all socio-economic classes, can help ensure that tourists have no other option but to opt for services rooted in sufficiency and reciprocity to the human and more than humans offering their services to tourism in a given place. This will ensure that all tour operators have equal

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[24] Tourism Stakeholders include local governing municipal bodies, hospitality service providers, tour operators and providers, tourist community, local community, transport providers, local administration.

leverage and do not need to compete with each other, thereby ensuring a spirit of collaboration which is essential to implement, enhance and also sustain responsible tourism practices.

# 3. Resources - Tools and Guidelines for Responsible Tourism

Tourism should be rooted in serving the socio-ecological systems it is dependent on. Unregulated or unmindful tourism practices are known to have detrimental impacts on the wildlife, local communities, waterbodies, land and other parts of the ecosystem. Biodiversity loss, human-wildlife conflict, water scarcity, loss of native livelihoods and increased dependence on service economy are few of the many negative impacts of tourism. Therefore there is a need for conscious efforts geared towards ensuring that tourism is responsible rather than extractive.

The resources are aimed at sharing responsible tourism practices particularly in the context of wildlife and adventure tourism. They comprise tools to guide responsible tourism behaviour by tourists, tour operators and accommodation providers specifically in the context of mountainous regions and protected forest areas. Each section begins with a background to orient readers to the context the resources are relevant to and the principles the resources shared are based on. This is followed by detailing the 'resources' which span questions for reflection, guidelines, checklists, and other tools as relevant.

While the information shared below is mostly exhaustive, readers must be mindful to filter information that would be relevant to their context and are also encouraged to undertake further research for informed contextual action.

## 3.1. Tools and Guidelines for Tourists

Background :

Tourists who are at the receiving end of tourism services have a non-negotiable role to play in ensuring that their tourism journey is more beneficial than detrimental to the place of tourism ( which includes the humans and more than humans who are residents of the place) and also that they cause minimal harm during their arrival and departure to and from their destination. Water and land pollution, distrubance to wildlife, increased human-wildlife conflict, unjust payments are few of the many distresses which are associated with unmindful tourist behaviour in the context of wildlife and adventure tourism.

The guidelines and tools shared under this section are therefore aimed at sharing information on responsible practices that should be followed while availing tourism services, specifically in mountainous regions and protected forest areas such as wildlife sanctuaries, national parks etc. The information shared as part of the resources span questions for reflection, behavioural practices including guidelines on how to engage mindfully and respectfully with both humans and more than humans. Tools as relevant, have been suggested based on the guidelines . These resources are rooted in the principles of sufficiency and reciprocity which aims at ensuring that tourism does not extract more than it gives back to the community and ecology in the places it is benefitting from.

The guidelines and tools shared below provide information for two scenarios -
1. For situations where individuals/groups want to visit a tourism destination with support

from a 'Responsible' Tour Operator
2. For situations where individuals/groups want to self-organize a visit to a tourism destination.

Resources :

> **QUESTIONS TO GUIDE THE JOURNEY OF A RESPONSIBLE TOURIST :**
>
> 1. **WHY do I want to visit a place as a tourist? WHAT do I truly want to achieve by visiting a place as a tourist?**
> 2. **HOW can I ensure that I am causing minimal harm to flora, fauna and humans I will be interacting with both directly and indirectly as part of my journey?**
> 3. **WHAT can I do to contribute to the socio-economic and ecological wellbeing of the place I am visiting?**

1. **Guidelines for selection of a responsible tour operator for adventure and wildlife tourism in mountainous and protected areas.**

1. Conduct a websearch for responsible/sustainable tour operators
2. Scan the operators website for a written responsible/sustainable tourism policy or guidelines which shares details on how the operator adopt responsible tourism practices

   **In the operators responsible tourism policy or guidelines check for the following :**

   **General guidelines :**

   - ➢ Promotion of zero-waste practices (eg. use of reusable cutlery, use of refillable bottles, avoids single use plastic)
   - ➢ Provision of tools to ensure informed decision making (eg. carbon footprinting)
   - ➢ Percentage of tour contribution is allocated to conservation and restoration activities .
   - ➢ Mention of a responsible sustainable tourism certification from entities such as the Global Sustainable Tourism Council (GSTC). (While this can be a useful indicator of a responsbile tour operator it must be noted that this should not be the only factor which determines your decision to approach a tour operator. A tour operators commitment to responsible tourism can be gauged through other parameters which are detailed under theis section.)

**Measures taken for exploratory activities :**

- ➢ Group size cap for each tour to minimize stress on the local communities, biodiversity and other ecosystem components.
- ➢ Balance of sightseeing activities such as safaris, nature walks and community engagement activities as part of recreational activity packages which is an in indicator of respect towards the ecology and community by minmizing frequency to wildlife areas and also facilitating community interaction so that tourists explore local lives, livelihoods arts and crafts which can also contribute to the livelihood of the local community.
- ➢ Pre-visit training on how to interact responsibly with wildlife
- ➢ Pre-visit training on how to interact responsibly with communities
- ➢ Leave no trace practice training (eg. clearing campsites, picking up garbage after forest walks, etc)

**Measures taken for accomodation and food**
- ➢ Accomodation is provided with local homestays rather than hotel chains
- ➢ Tour operator recommends consumption of local food
- ➢ Tour operator shares recommendations of eating places run by locals.

**Measures taken for transport**
- ➢ Arrangements are made for transport by vehicles such as buses over private cars
- ➢ If cars are the only mode to travel to a given destination, carpooling is undertaken
- ➢ Tour operator recommends that tourists prefer train travel or bus travel over airtravel as part of their arrival and departure to minimize carbon footprint

**Measures taken to ensure that the local community benefits:**
- ➢ Collaboration with local guides
- ➢ Collaboration with local transport providers
- ➢ Collaboration with local food service providers
- ➢ Ensures just wages and working hours for service providers
- ➢ Organises sessions with the local communities to learn about their culture through local livelihood exploration sessions etc.
- ➢ Part of tour contribution is allocated to supporting local schools, renewable energy projects, cultivating sustainable practices

2. **Guidelines while planning a self-organized trip:**

   **2.1. Selecting a destination**
   - ➢ Prioritize locations that receive less tourist footfall during the time period of your visit (this will help minimize stress on locations that receive high footfall which can increase stress on the tourist location)
   - ➢ Prioritize locations that are closer to where you are located ( greater the distance the greater your carbon footprint!)
   - ➢ Prioritize locations that are easily accessible by all modes of long distance transport (eg. trains and buses are always preferable to flights).

   **2.2. Selection of Mode of Transportation :**

   *Mode of arrival and departure to and from the destination*

   - ➢ Most preferred to least preferred transport options:
     1. Road - Trains and Buses
     2. Sea
     3. Air

   - ➢ If air travel is the only option then :
     1. You can use open source carbon footprinting platforms like google flights (generic) or other relaible software to help you identify your flight emissions and make an infomed choice
     2. Choose economy class over business class travel
     3. Opt for a non-stop flight over multi-stop flights
     4. Try a combination of flight and train/ buses wherever possible to avoid taking more than 1 flight to reach the destination.

   *Modes of 'getting around' the location*

   - ➢ Use public transport to move in and around the city
   - ➢ Preferred transport mode: toy train, car pooling to reach the mountain top, walk wherever convenient, hire bike, hire private car

   **2.2. Selection of accommodation :**

   - ➢ The primary preference should always be for homestays which are owned and operated by local residents who offer local food options.

➢ If homestays are not available, the priority should shift to community-run hostels, followed by local hotels.
➢ Star hotels should be considered as a last resort for accommodation. 5 start options are best avoided.

## 2.3. Food and Beverage Preferences :
➢ Prefer local and traditional food options
➢ Ask for reusable cutlery (wherever possible and if applicable)
➢ Prefer homestay cooked meal over restaurant food.
➢ Prefer community run canteens, cafes and restaurants over luxury restaurants and ordering food online

## 2.4. Guidelines for Interaction with locals

➢ Respect local culture and traditions.
➢ Engage empathetically i.e. listen and speak to people the way you would like to be listened and spoken too.
➢ Ensure that you pay just wages to people you may seek support from.
➢ Engage with people (even if language is barrier) and offer to support with activities cooking, helping on the farm etc.This is a good way to connect and build relationships with people and go beyond transactional interactions. It is also a meaningful way to expose yourself to a new culture and way of living.

## 2.5. Guidelines for engagement in exploratory activities ( recreational activities)

○ Prefer to undertake your exploratory activities through a local guide so that you contribute to the local economy.
○ Be mindful while walking through nature trails or while going on safaris so as not to disturb wildlife :
○ Follow leave no trace practices. Few of which are detailed below. You can conduct your own research to explore more:

● **Stay on Designated Trails**:

Staying on designated trails which would most likey be indicated through signboards  is of great ecological significance as it can  help prevent soil erosion, protect fragile vegetation, and minimize disturbance to wildlife habitats.

● **Respecting Wildlife**:

Observe wildlife from a safe and respectful distance to minimize stress and disturbance to animals, allowing them to carry out natural behaviors undisturbed. The use of binoculars or spotting scopes can enhance wildlife viewing opportunities while maintaining a respectful distance. You must also avoid feeding animals and avoid clicking photographs such as selfies which will disturb animals. Moving silently is another crucial element to respect wildlife. .

- **Minimizing Campfire Impacts**:

Use established fire rings or designated cooking areas when campfires are permitted, and preserve dead and downed wood for wildlife habitat and soil nutrients. Fully extinguish campfires before leaving the area and pack out any leftover ashes or debris.

- **Use of biodegradable and reusable products :**

The use of nature based cleaning products (eg bioenzymes, wood ash etc as applicable) will prevent the discharge of chemical residues of handwashes, dishwashing soaps etc. water bodies and the soil. Additionally the use of nature based toothpastes/powders (eg. charcoal powder) and products can facilitate efforts aligned towards leaving no trace behind in the place of tourism.  Practices revolving around carrying reusable water bottles, cutlery and packing foods responsibly while participating in recreational activities in tourist spaces are vital from a responsible tourism perspective.

**2.6. Pointers for Mindful Packing**

- ➢ Carry refillable water bottles
- ➢ Carry your own reusable cutlery: Coffee cups, bamboo or steel straw, food containers, spoon
- ➢ Carry a cloth bag
- ➢ Carry zero waste toiletries.

# 3.2. Tools and Guidelines for Tourism Operators

## Background:

Tour operators especially those who offer end-to-end tourism services must play a pivotal role in furthering responsible tourism practices given that they can contribute to minimizing the negative impact of conventional tourism practices along almost all aspects of the value chain.

Unregulated or unmindful tourism practices  are known to have detrimental impacts on the wildlife,

local communities, waterbodies, land and other parts of the ecosystem. Tourism should therefore be rooted in serving the socio-ecological systems it is dependent on.

The 'resources' shared under this section  are  intended to guide tour operators to make responsible decisions as relevant across the services they offer either in collaboration with stakeholders such as accommodation providers, transport providers , etc or in cases where they might provide services in the context of one aspect of the value chain eg. a safari tour operator would be involved in providing safari tours in particular while tourists might need to look at other arrangements related to travel, food and accommodation themselves.

These resources are rooted in the principles of sufficiency which aims at ensuring that tourism does not extract more than it gives back to the community and ecology in the places it is benefitting from.  They focus on facilitating responsible tourism primarily in the context of mountainous regions and protected areas. Tools as relevant, have been suggested based on the guidelines.

The guidelines for identification of tourism locations, arrival and departure arrangements, accommodation, food and beverage and local transportation are applicable to all types of tour offering end-to-end services, the practices they can adopt in the context of organising 'exploratory activities' however depend on the nature of the activity.

*Note - the steps detailed below are exhaustive and the implementation can vary based on whether this is being read by a tour operator who is a local or an external tour operator.*

## Resources :

**1. Identification of appropriate tourism locations.**

- **Conduct a detailed study about the destination.**

It is vital to develop an understanding about the proposed site before initiating any responsible tourism activities. This entails gathering information of the location through primary and secondary research.

Secondary research involves gathering information from various sources such as travel literature, online resources, academic studies, and local publications to gain insights into the destination's cultural heritage, environmental features, and social dynamics.

Primary research can involve conducting interviews and group discussions with local experts, community members, and stakeholders to gather perspectives on the destination's history, traditions, environmental conservation efforts, and social issues. Additionally, engaging with these stakeholders can help gathering information related to their interests, concerns, and priorities related to tourism development. Also, conducting field visits allows firsthand observation of cultural practices, environmental conditions, and community dynamics, providing deeper insights into the destination's unique characteristics. As a whole, engaging with local communities through participatory activities, cultural exchanges, and responsible tourism initiatives fosters mutual

understanding and collaboration can ensuring that tour packages are developed in a manner that respects and benefits local cultures, environments, and communities.

● **Establish and sustain engagement from the local community and other relevant stakeholders to offer responsible tourism services in a given destination.**

For the sustenance of any responsible tourism project it is vital to ensure the involvement of the local community, especially indigenous residents. Tourism initiatives should be undertaken only if the community consents to having their location provide tourism offerings. Providing livelihood opportunities in a dignified manner is critical to engagement with the community. Therefore, involving the community in a responsible tourism project requires a thoughtful and inclusive approach.

Few guidelines to foster meaningful engagement with the communities in the context of responsible tourism are detailed below :

a) Build Relationships: Foster open and transparent communication channels with community members. Build trust and rapport through regular dialogue, meetings, and participatory decision-making processes.
b) Listen and Learn: Take the time to listen to the perspectives, knowledge, and aspirations of community members. Seek their input on tourism initiatives, development plans, and potential impacts on their lives and livelihoods. If the community does not want to get involved in tourism activities the appropriate response would be to respect their decision and not proceed with planning for tourism in that location.
c) Collaborate on Planning and Decision Making: If communities are interested in proceeding with incorporating tourism offerings in their locality, work with them to plan, design, and implementation of tourism projects. Seek their input on project goals, strategies, and outcomes to ensure alignment with community needs and aspirations.
d) Support Community Initiatives: Partner with local organizations and initiatives that promote community development, environmental conservation, and cultural preservation. Provide financial support, technical assistance, or volunteer resources to bolster community-led efforts. Involve local artisans, performers, and cultural experts in tourism activities to showcase authentic cultural experiences.
e) Promote Inclusivity: Ensure that tourism benefits are distributed equitably among community members, including marginalized groups and vulnerable populations. Promote gender equality, social inclusion, and opportunities for all.
f) Provide Capacity Building: Offer training, education, and skill development opportunities to enhance the capacity of community members to participate in tourism activities.Guide sustainable tourism practices, hospitality skills, and entrepreneurship.
g) Monitor and Evaluate Impact: Regularly assess the social, economic, and environmental impact of tourism activities on the community. Solicit feedback from community members and adjust strategies as needed to address concerns and maximize positive outcomes.

## 2. Curation of tour packages

### 1. Define the package

Once the initial research on the destination and engagement with the community has commenced and if the community consents to engaging in tourism, the program can be curated. This involves detailing the unique features and highlights of the destination and its people. Additionally, it entails outlining potential packages with comprehensive information on activities, ideal seasons for travel, prerequisites, and other offerings. It is imperative to articulate ecosensitive policies and initiatives aimed at reducing environmental impact, such as carbon emission calculations, upfront to ensure transparency and promote responsible tourism practices.

### 2. Define the role of each stakeholder and offer necessary support and guidance as a tour operator

Clearly defining the role of each stakeholder in crafting a tour package is vital to foster collaboration, align goals, and ensure successful execution. Each stakeholder offers distinct expertise, resources, and viewpoints, collectively enriching the package's quality and impact.

a. **Destination Authorities:** These are crucial stakeholders in tour package preparation, to offer regulatory oversight, issue permits, and grant permissions essential for activities within the destination. Their responsibility lies in guaranteeing adherence to local laws, regulations, and environmental conservation policies.

b. **Local community members :** Upon establishing contact with the local community and engaging with them in a participatory manner; it is imperative co-define their roles and transparently communicate these once finalized. Necessary support and guidance to enable locals to fulfill their offerings effectively should be provided by tour operators eg. techniques on how to offer homestay services, engage as tour guides, food service providers etc. This approach fosters mutual understanding, collaboration, and empowerment within the community.

c. **The operations team :** An operations team should be formed to ensure adherence to standard operational procedures, should be equipped to arrange all essentials such as local transport and accommodation. Moreover, they should provide guidelines infused with an eco-conscious perspective, ensuring that every aspect of the tour is mindful of its environmental impact. And transparent communication channels to facilitate effective collaboration and mutual understanding between the accommodation providers and other stakeholders involved in the tour package. The operations team would also be responsible for capacity building programs and communications activities.

d. **Accommodation and food providers :** This would involve local accommodation providers, including homestays, hotels, and hostels, who are are aligned with the principles of responsible tourism.

e. **Local transport providers :** This would involve local people who provide transport services such as bus operators, taxi operators etc. in adherence to responsible tourism guidelines.

f. **Exploratory activity providers :** Activity providers involved those offering a variety of excursions for travelers to participate in during the tour, including cultural tours, wildlife safaris, and adventure activities. It's crucial to ensure that these providers align with responsible tour principles by conducting induction sessions and promoting sustainable practices.

3. **Publishing detailed tour package information in print or online**

It's crucial to offer comprehensive details about the package with clarity, transparency, and a commitment to eco-conscious practices. This includes providing information about the itinerary, accommodations, activities, and costs in a transparent manner. Highlighting sustainable initiatives such as eco-friendly accommodations, low-impact activities, and community support empowers travelers to make informed decisions. Moreover, emphasizing cultural sensitivity and respecting local customs fosters meaningful interactions and mutual respect. Communicating efforts to minimize environmental impact, like reducing carbon emissions and supporting conservation initiatives, underscores dedication to responsible tourism. Additionally, offering guidelines for responsible travel, feedback mechanisms, and ensuring inclusivity enriches the overall experience. To manage trip intake, set maximum and minimum thresholds for each trip, and specify maximum participant numbers for each season. This information should be clearly stated on the website to ensure transparency and facilitate booking.

4. **Provide pre-travel consultation and guideline to the tourist.**

This involves providing comprehensive information and advice to travelers before their journey begins. During these consultations, travelers can learn about the destination's cultural norms, environmental sensitivities, and responsible behavior expectations. They receive guidance on how to minimize their environmental footprint, respect local customs, and support community initiatives. Additionally, tourists can gain insights into safety measures, health considerations, and any specific requirements for the trip. Please refer to those sections. Before the trip, educate tourists on responsible behavior and travel etiquette. This includes respecting local traditions, adhering to dress codes and attire norms, minimizing waste by reducing the use of plastics and luggage, carrying reusable daily items like water bottles and personal care items, avoiding high-energy equipment, and supporting local businesses.By equipping travelers with knowledge and resources, pre-travel consultations empower them to make informed decisions and contribute positively to the destinations they visit. For specific activities such as mountaineering, trekking, and safaris, detailed prerequisites and guidelines are provided in their respective sections.

5.  **Details on organizing transport, accommodation, food and exploratory activity services :**

### 5.1. Organizing arrival and departures

1.  **Stagger Arrival and Departure Times:** To reduce congestion and minimize the strain on local resources and infrastructure, consider staggering arrival and departure times. This strategy can be achieved by promoting off-peak travel seasons or offering incentives like extra day accommodation, free meals, etc for visitors to arrive and depart during less busy times.
2.  **Do not encourage Air travel :** During the initial contact with international tourists, it's crucial to discuss the environmental impact of air travel. Suggestions could include promoting routes with lower environmental impact and providing incentives for choosing less carbon-intensive travel options. For domestic tourists, encourage the use of public transportation such as trains and buses to reduce carbon emissions. Additionally, consider offering gifts or souvenirs to incentivize eco-friendly travel choices.
3.  **Integration of Public Transport services :** Integrate public transport facilities with points of arrival/departure for air travel and long-distance train travel, making it convenient and accessible for tourists to opt for sustainable transportation options.
4.  **Collaborate for Combined Packages:** Collaborate with peer operators to offer combined packages, providing tourists with comprehensive sustainable travel experiences. For example clubbing the local travels together, In cases where a specific tour fails to meet the minimum threshold number of participants, an exchange of tourists between peers can be facilitated, etc.

### 5.2. Organizing accommodation

1. The accommodation aspect directly contributes to creating livelihood opportunities for the local community while offering tourists memorable experiences by immersing them in remote villages and hamlets. Therefore, a series of consultations with accommodation partners is necessary. The points outlined in subsections on 'Identification of appropriate tourism locations and curation of tour packages' can serve as a guide for these consultations.
2. The primary preference should always be for homestays that are established through community engagement. These homestays are owned and operated by local residents and adhere to sustainable building requirements, including water and energy conservation measures, and are constructed using local or vernacular materials. Additionally, they should offer traditional, low-impact meals to guests i.e. seasonal dishes made from locally sourced products which have a lower carbon footprint.
3. If homestays are not available, the priority should shift to community-run hostels, followed by local hotels. Just like with homestays, it's crucial to establish contact with these

accommodations prior to the tour operation. Ensure that they adhere to all protocols for sustainable accommodation facilities, with active involvement from the local community.

4.  Star hotels should be considered as a last resort for accommodation. When engaging with them, it's essential to ensure that they adhere to industry-standard certifications such as LEED and have published policies for sustainability actions.

5.  When engaging with established entities such as hostels and star hotels ( it would be ideal to avoid collaborations with resource intensive 5 star hotels), the following points should be considered:

    a.  Ensure that there is a signed sustainability contract with the partner, outlining their commitment to responsible practices.
    b.  Verify that the partner implements water-saving, energy-saving, and waste management programs to minimize environmental impact.
    c.  Confirm that the partner has adopted an energy reduction system to further reduce their carbon footprint.
    d.  Encourage the partner to integrate sustainable practices into their supply chain, promoting environmentally friendly sourcing and procurement methods.
    e.  Ensure that the partner organizes training for employees in sustainability practices, as well as health and safety practices, to ensure a well-rounded approach to responsible tourism.

6.  Transparent communication : Make sure that accommodation objectives are clearly and transparently conveyed to the partner, ensuring that partners understand the expectations and commitments involved. Additionally, incorporate sustainability clauses into communication channels to formalize the commitment.

7.  Integrity of Basic Services: terminate cooperation with accommodations that jeopardize the provision or integrity of basic services such as food, water, energy, healthcare, or soil to neighboring communities.

8.  Monitoring and Evaluation: Regularly assess the performance of accommodations in meeting sustainability goals and make adjustments as needed. This may involve tracking metrics such as energy and water usage, waste diversion rates, guest satisfaction, and contributions to local community development.

## 5.3. Organizing food and beverages

Organizing food and beverages for a responsible tourism program requires careful attention to promote sustainability, support local communities, and minimize environmental impact. Several precautions must be taken into account when arranging food options, including eco-consciousness, local availability, waste reduction, and the use of reusable utensils. These basic parameters should be met regardless of the type of tour, whether it be a wildlife safari, or trekking adventure.

1.  Key considerations to guide the selection and decision-making process for food services :

a) Community Engagement: Involve local communities in food and beverage initiatives by collaborating with local chefs, food producers, and cultural organizations. This fosters a sense of connection and promotes authentic culinary experiences for visitors

b) Cultural Sensitivity: Respect local culinary traditions and customs when designing menus and selecting dishes. Use this space to appreciate the uniqueness of food tradition. Offer opportunities for tourists to learn about the cultural significance of local foods and beverages.

c) Local Sourcing: Prioritize sourcing food and beverages locally from local farmers to support regional farmers, producers, and artisans. This reduces carbon emissions associated with transportation and contributes to the local economy.

d) Sustainability-oriented Menu: Offer menus that feature seasonally sourced and organically grown ingredients like seasonal fruits and vegetables This helps reduce the food prints.

e) Waste Reduction: Implement strategies to minimize food waste, such as portion control, and donation programs for surplus food. Choose suppliers and partners committed to reducing packaging waste and using eco-friendly packaging materials and those who engage in composting.

f) Water Conservation: Encourage the use of water-saving practices in food and beverage preparation and service. Provide guests with access to filtered tap water and offer refillable water stations to reduce reliance on single-use plastic bottles.

g) Educational Initiatives: Provide educational opportunities for tourists to learn about the environmental and social impact of their food choices. Offer cooking classes, farm visits, or tastings that highlight sustainable practices and local food culture.

## 5. 4. Organizing exploratory activities (recreational activities) :

From a responsible tourism perspective, it is vital to prioritize the impact of exploratory activities on the local ecosystem and communities. The focus should be on designing activities that foster a sense of wonder, connection with and respect for nature. In a world where convenience often overshadows appreciation, activities should encourage effortful understanding and gratitude for the beautiful earth we inhabit. It's important that these activities embody values such as 'paying forward', to ensure that future generations have the opportunity to explore and appreciate the very same destination. Also, there should be a component of 'paying back', where the events contribute positively to the local community and the more than human beings in the place of tourism. By integrating these values, exploratory activities can serve as a platform for tourists to reflect on their lifestyle choices and their connection to the more than human world. This approach encourages a holistic understanding of responsible tourism, where visitors not only appreciate the beauty of their surroundings but also actively contribute to its preservation and well-being. From a responsible tourism perspective, tour operators should collaborate with local tour guides who are residents of the place of tourism over having external stakeholders guide tourists as they engage in exploratory activities such as hiking, nature walks, etc.

1. **Determining exploratory activity offerings:**

Determining the type of exploratory activity offerings warrants a thoughtful and comprehensive approach that considers the environmental, social, and cultural impact of each activity.

The following steps can be undertaken to determine exploratory activities which ensure accountability to the people, more than humans and supporting ecosystem in the place of tourism :

1. **Destination Assessment:** Conduct a thorough assessment of the destination's natural environment, cultural heritage, and community dynamics. Identify unique features, attractions, and resources that can be highlighted through exploratory activities. Some useful assessment tools to undertake this assessment can be transect walks, literature reviews, interviews with community to document folk stories and prepare terrestrial map using tools such as google earth.
2. **Stakeholder Engagement:** Engage with local communities, indigenous groups, conservation organizations, and relevant stakeholders to understand their perspectives, needs, and concerns. Involve them in the decision-making process to ensure activities are culturally appropriate and socially responsible.
3. **Evaluate potential impact:** Evaluate the potential environmental impact of each activity, considering factors such as habitat disturbance, wildlife disruption, carbon emissions, and resource consumption. Prioritize activities that minimize negative environmental effects and promote conservation and sustainability.
4. **Cultural Sensitivity:** Ensure that exploratory activities respect and celebrate local cultures, traditions, and customs. Avoid activities that could be perceived as disrespectful or exploitative of cultural heritage.
5. **Educational and Interpretive Opportunities:** Identify activities that provide opportunities for educational enrichment and interpretation of the destination's natural and cultural heritage. Consider offering guided tours, nature walks, cultural workshops, and interactive experiences that enhance visitors' understanding and appreciation of the environment and local communities.
6. **Community Benefits:** Evaluate the potential socio-economic benefits of each activity for local communities, such as job creation, income generation, and capacity building. Prioritize activities that empower local residents, support small businesses, and contribute to community development and resilience.
7. **Monitoring and Evaluation:** Implement a monitoring and evaluation system to assess the effectiveness and impact of exploratory activities over time. Collect feedback from participants, stakeholders, and local communities to continuously improve and adapt activity offerings in line with responsible tourism principles.

### 2. Planning and organizing :

Planning and organising should deliberately aim at ensuring minimal negative impact on the environment, wildlife, and local communities. It involves careful consideration of factors such as carrying capacity, visitor management strategies, and responsible behavior guidelines.

Following are guidenlines to support planning and organizing :

1. Route plan and permits:  Thoroughly research the forest/mountain/trails or route plan to climb/walk/truck, including weather conditions, terrain, and potential hazards and obtain necessary permits and permissions
2. Choose Responsible Tour Operators/guide: If the visit is organized in collaboration with a local tour operator/guide, then choose tour operators that prioritize safety, eco-sensitivity, and ethical practices. Look for operators with experienced guides, proper certifications, and a commitment to environmental conservation.
3. Group size management : Limit the size of groups to ensure they are small and suitable for the activity and the wildlife species being observed, to minimize disturbance. Additionally, restrict the duration of wildlife viewing at each site by regulating the time and number of vehicles allowed to  promote responsible wildlife encounters.
4. Respect Local Culture and Communities: Guide the group about respecting the customs, traditions, and cultural heritage of local communities near the mountain. Seek permission before entering sacred sites or private property, and engage respectfully with locals you encounter along the way.
5. Minimize Environmental Impact: Minimize the environmental impact by using low-impact camping techniques, such as camping on durable surfaces away from water sources and properly disposing of human waste using Leave-No-Trace methods. Train the group about the same before leaving the base camp.
6. Practice Safety Measures: Prioritize safety at all times by suggesting appropriate gear to tourists and stay informed about weather conditions and route conditions, in consultation with locals and support from digital communication as necessary. On the trip carry essential safety equipment such as navigation tools, first aid supplies, and emergency communication devices.
7. Respect Wildlife: Prepare a zero-tolerance policy for respecting wildlife. Inform the group about the policy and expectations before leaving the base camp. The guidelines can include : a) observe wildlife from a distance b)  avoid disturbing animals through noise or photographs c) Keep food stored securely to prevent wildlife encounters d) and no collection of flora and fauna during the trip.
8. Educate the group: Take this time to educate the travellers about the natural and cultural significance of the location and its surrounding areas. Try and cultive an ecosystem lens to highlight the web of life that supports survival.
9. Leave Positive Impact: encourage the group to leave a positive impact on the destination by participating in conservation or restoration projects, volunteering with local organizations, or leaving a donation to support environmental or community initiatives.

**3. Adventure and Wildlife tourism activity specific guidelines :**

- **Use Sustainable Gear and Equipment:** Hire gear and equipment that are durable, long-lasting, and made from sustainable materials from local vendor. Or provide the group eco-friendly options when available, and repair or recycle gear instead of disposing of it.
- **Use Public transport :** Arrange for locally available public transport like share taxi, bus, truck to reach the base point.
- **Practice Ethical Climbing Practices:** Minimize impact on delicate rock formations. Emphasize adherence to route closures and restrictions to protect endangered species and sensitive habitats both before and during the journey.
- **Restrict the number of climbers/walkers/campers :** Enforce strict limitations on the number of people permitted during each visit and throughout the season.Leave the trail as you found it, or strive to leave it even better than before.
- **Follow leave no trace principles :** which involve carrying out all trash, minimizing any impact from campfires, sticking to designated trails, and ensuring proper disposal of human waste.
- **Educational experience :** Have local guides accompany tourists to share information on the socio-ecological significance of the location being explored. Folk stories, songs and facts on the significance of the various ecosystem components can be valuable additions to ensure that tourists are sensitized to the local human and more than human world catalyzing them to live more responsibly and contribute to the wellbeing of ecosystems in the tourist location and beyond.
- **Provide eco-conscious facilities for the group throughout the trip, including:**
  - Eco-friendly toiletries with biodegradable packaging and chemical-free ingredients.
  - Source water supplies from safe local sources or carry in reusable containers.
  - Require each member to carry a reusable water bottle.
  - Enforce a strict no-littering policy throughout the journey.
  - Adhere to the principle of "pack in, pack out" by ensuring everything brought into the area is carried out.
- Ensure that all group members remain within the confines of the lodge or camp at all times. Due to the dense wildlife population, it's important to use common sense and avoid wandering off without guidance. Additionally, ensure that guides are available to accompany individuals during walks around or outside the camp.

## 3.2. Safaris

The main goal of a wildlife safari is to witness and appreciate animals in their natural environments while maintaining respect for their behaviors and ecosystems. Enhancing the eco-consciousness of wildlife safaris entails embracing practices that prioritize environmental sustainability, reduce ecological impact, and contribute to conservation efforts.

1. **Pre-trip directions:**

    1.1. For tourists :

Prior to the trip, conduct a dedicated session to inform participants about wildlife viewing policies and practices. As part of this session:

  a. Begin by sharing details about the destination, including its ecosystems, wildlife, and local communities.
  b. Discuss trip etiquette and familiarize participants with the local culture, politics, and beliefs.
  c. Encourage learning a few words in the native language, such as greetings and expressions of gratitude, to demonstrate respect and foster connections with the local community.
  d. Ensure the group adheres to the dress code, wearing appropriate colors while traversing natural landscapes like such as camouflage or light brown and green hues when exploring natural habitats like forests, and refraining from attire or behavior that may offend local residents.
  e. Refrain from gathering souvenris from the forest such as stones, plants, etc
  f. Offer the option to report any instances of poor eco-conscious behavior by guides or safari staff directly to the management.


1.2. For drivers/guides :

Before the trip sensitize drivers / guides to :
  a. Avoid approaching animals too closely or put them under pressure.
  a. Prevent deviating from designated tracks and traveling off-road.
  b. Refrain from making noises to attract or frighten wildlife.
  c. Respect the privacy of indigenous communities and refrain from imposing on their daily lives or visiting their hamlets without invitation.

2. **On - trip directions :**

2.1. Ensure that each member of the group adheres to forest etiquette:
  a. Maintain a sufficient distance to avoid disturbing animals
  b. Keep noise and sudden movements to a minimum, even when in vehicles, to prevent alarming wildlife.
  c. Exercise extra caution near wildlife with young; avoid separating parents and offspring, and refrain from approaching breeding sites such as nests, dens, or burrows. Instead, observe them from a distance.
  d. Prohibit feeding or touching wildlife, leaving food for them, or picking plants, flowers, or other objects.
  e. Ensure that the group does not disrupt wildlife or interfere with the supporting staff or local guides within the wildlife habitat by:
3. Night Safari Precautions: Organize night safaris with meticulous care, thorough training, and comprehensive preparation. Avoid using any equipment or methods that may

disrupt the natural movements of wildlife, particularly nocturnal species. Conduct these safaris in confined areas under the guidance of experienced and trained experts.

4. Adhere strictly to wildlife and park regulations; ensure that the group complies with rules set in national parks, reserves, and conservation areas to safeguard wildlife, the environment, and visitors.

5. Remind the group to be courteous and ask for permission before taking photographs of locals, as many may prefer not to have their picture taken. If locals request payment for a photograph, advise the group to refrain from taking the picture.

## 3.3. Tools and Guidelines for Accommodation Providers

**Background:**

Accommodation providers play a pivotal role in furthering responsible tourism.

Unregulated or unmindful tourism practices associated with accommodation include the rampant construction of hotels and construction of buildings by non-locals which are intended to serve as homestays. Disturbance to wildlife, local human beings through factors such as habitat fragmentation, pollution, increased vulnerability to phenomena such as landslides etc are few of many consequences of unregulated accommodation constructions in tourist spots. Additionally the establishment of infrastructure such as roads which have their own merits and demerits depending on the extent to which these infrastructure interventions are undertaken can also be associated with accommodation. In addition to this, unmindful building design contributes to excessive energy consumption to meet heating, cooling and lighting requirements. Water scarcity and pollution from waste are a few other among many more detrimental factors associated with unmindful accommodation practices. Accommodation providers more often than not also make arrangements for food and beverages which again can be associated with multiple negative impacts.

Tourism should be rooted in serving the socio-ecological systems it is dependent on and from this perspective it is vital that accommodation providers engage in practices that minmize detrimental impacts on the local human and more than human world in the tourist location.

The 'resources' shared under this section are intended to guide existing and aspirational accommodation providers make responsible decisions as relevant across the services they offer or intend to offer. The resources are rooted in the principles of sufficiency and reciprocity which aims at ensuring that tourism does not extract more than it gives back to the community and ecology in the places it is benefitting from. They focus on facilitating responsible tourism primarily in the context of mountainous regions and protected areas. Tools as relevant, have been suggested to support responsible tourism practices.

While the information shared below is mostly exhaustive, readers must be mindful to filter information that would be relevant to their context and and also encouraged to undertake further research for informed action.

# Resources :

**Guidelines to transition towards providing responsible accommodation services :**

*1.  Earth Care Practices*

**1.1  Physical Infrastructure**

**a)  For Existing Hotels/Resorts**

- Ensure buildings are retrofitted with appropriate passive architectural mechanisms[25] to reduce energy consumption in the building.
- If buildings are to be upgraded then they should upgraded with use of local materials with support from local masons and workers, thereby contributing to local livelihood generation.
- Repurpose bigger luxurious rooms into smaller rooms with minimal amenities which are necessary for a simple and comfortable stay.
- Ensure car parking space is available within hotel boundaries and open car parkings are avoided so local roads, communities and wildlife are not disturbed during tourism peak season.

**b)  For New Hotels/Resorts**

- Ensure that Environmental Impact Assessment (EIA) is done for Hotels and Resorts, built considering ecological sensitivity of the region  and have all necessary permissions from local Housing governing body and panchayat.
- Ensure before building a new hotel or resort that owners have permission and fair support from local panchayat and local communities. If there is any protests against building a hotel in the region, then all concerns be heard, understood, resolved in fair manner and appropriate final decision be made.
- Ensure buildings adopt appropriate passive architecture techniques[26] to reduce energy consumption and bring enough thermal comfort in the building.
- Ensure room sizes are medium to small with amenities just sufficient for comfortable stay. When rooms are bigger, the

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[25] https://citizenmatters.in/retrofitting-multi-storeyed-individual-buildings-for-energy-efficiency/
[26] https://citizenmatters.in/retrofitting-multi-storeyed-individual-buildings-for-energy-efficiency/

amenities are more which in general brings higher maintenance efforts and higher carbon footprint[27] from to air conditioners, lightings and other electrical appliances.

● Ensure car parking space is available within hotel boundaries and open car parkings be avoided so local roads and communities are not disturbed during tourism peak season.
● Ensure sufficient outdoor space is kept for putting up tent based accomodation option for guests, as this option drastically reduces overall carbon footprint[28].
● Ensure interiors and exteriors within hotel/resorts are simple, minimal[29] and represent vernacular art and culture of the region.
● Ensure buildings are made with as much as local materials and with local masons and workers.
● Ensure water intensive modern amenities like swimming pools, jacuzzis, spas, etc are completely avoided.

### c) For Existing Homestays

● For new homestays, ensure for any kind of upgrades or maintenance, it undertaken with local materials and support from local labours and masons.
● Ensure interiors and exteriors are simple and minimal[30] and represent vernacular art and culture of the region.

### d) For New Homestays

● Ensure building with local materials, local labours and mason, thereby enriching local livelihood and economy.
● Ensure architecture is influenced from local vernacular designs, building better connections of guests with the place.

## 1.2. Water Management

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[27] Bigger rooms require higher tonnage air conditioning refrigerators thereby more Fugitive emission (gas leakage) from them and also more power is required to cool bigger rooms.

[28] As electricity consumption from ACs, lightings, Televisions are avoided and thereby reducing carbon footprint.

[29] Big Luxurious rooms demands to have more and bigger amenities like big size mirrors, big wardrobes, big Chandeliers, king size beds,etc. Examples of simple and minimal amenities would be small-medium size beds, chandeliers, wardrobes, inhouse plants, etc.

[30] Big Luxurious rooms demands to have more and bigger amenities like big size mirrors, big wardrobes, big Chandeliers, king size beds,etc. Examples of simple and minimal amenities would be small-medium size beds, chandeliers, wardrobes, inhouse plants, etc.

### a) For Hotel/Resorts

- Ensure hotels avoid offering unnecessary water intensive modern luxuries like swimming pools, spas and jacuzzis.
- Introduce efficient water saving bathroom fittings (like dual flush, water saving toilet bank[31], pedal operated taps[32], low flow water showerhead[33] )
- Water meter should be introduced to monitor water usage per room. Appropriate actions (eg: extra cost charged) be taken if guests consumes more water than set limit, especially in summer season. This should be communicated on hotel's website.
- Alternative option of dry toilet be given to guests[34], especially in water scarce regions.
- Regular checking and repair work be carried out for entire water piping system to ensure no water leakages are happening.

### b) For Homestays

- Build new homestays based on vernacular architecture priciples built from local materials and local mason and labours thereby enriching local economy.
- Wherever possible, reutilize/repurpose existing spaces as homestays and make provisions for tents options as well.

## 1.3 Energy Usage

### a) For Hotels

- Incorporate passive cooling and heating mechanisms which minimize energy consumption[35].
- Implement energy metering for every room to track energy usage for rooms. If consumption surpasses prescribed limits, then appropriate actions (eg: extra charge) be taken, especially in summer season. This should be standard norm of practise and be

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[31] https://eco365store.com/products/water-saving-toilet-bank

[32] https://www.news18.com/news/buzz/these-foot-operated-taps-help-save-water-maintain-hygiene-and-avoid-contact-amid-covid-19-scare-2536167.html

[33] Low-Flow Showerhead Advantage: https://www.webmd.com/a-to-z-guides/what-to-know-low-flow-showerhead

[34] http://www.eco-solutions.org/ladakh.html

[35] https://citizenmatters.in/retrofitting-multi-storeyed-individual-buildings-for-energy-efficiency/

well communicated on Hotel's website and sustainability guidebook.

- Energy efficient Air conditioning models with natural refrigerants should be fitted in all AC Rooms.[36] to reduce energy consumption and fugitive emissions (gas leakage) from air conditioners. .
- Regular maintenance and repair works for entire electrical systems be carried out to avoidany electricity leakages in the building.
- To reduce emissions from grid electricity consumption and save cost, hotel can switch to Solar Energy by implementing rooftops or ground mounted solar panels.[37]

### b) For Homestays

- Avoid offering AC services to guests when temperatures are cool (eg: in winter season)
- Energy Efficient heating appliances should be fitted.
- To reduce emissions from grid electricity consumption and save cost, homestays can switching to Solar Energy by having rooftop or ground mounted solar panels.[38]

## 1.4. Waste Management

### a) For Hotels

- Implement 3-R's rule of waste management: Reduce , Reuse and Recycle at every level.
- Reduce  all plastic straws, paper napkins, plastic cling wrap, etc
- Recycle Waste - Dry waste and recyclable waste such as paper, plastic, metal and glass be sent out for third-party recycling.
- Introduce in-house vermiculture unit in the backyard and utilize the generated food waste and convert it into rich compost manure . This organic manure can then be used for internal gardening and organic farming.
- Soap recycling - Guests used soaps can be sent for recycling, which then can given to local NGOs for distribution and usage.
- 'Segregation at source' principle be strictly adopted, i.e. all waste be segregated at the source of origin within Hotel and should not be mixed together.

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[36]https://fairconditioning.org/knowledge/sustainable-cooling-technologies/natural-refrigerant-air-conditioner/#:~:text=The%20initial%20cost%20of%20Godrej,and%20environmental%20long%20term%20benefits.

[37] https://ornatesolar.com/blog/5-reasons-why-hotels-should-opt-for-solar-energy

[38] https://ornatesolar.com/blog/5-reasons-why-hotels-should-opt-for-solar-energy

- Ensure appropriate number all types of bins are available for different kind of waste[39]. Two bins be two bins in every guest room to segregate wastes at the source.
- Ensure the hotel gives waste to local municipal waste collectors or authorized waste collectors in the region and not throw away in open.

### b) For Homestays

- Seperate binsshould provided for dry and green waste in rooms.
- Ensure green organic waste is composted.

## 1.5. Cleaning Supplies

### a) For Hotels and Homestays

- Introduce alternate eco-friendly cleaning supplies for kitchen, handwash, floor, toilets (Eg: Bioenzyme based multi purpose natural cleaning liquid.[40])
- At homestay level, bio-enzyme based eco-friendly cleaning supplies can be made at home as well.
- For laundry care, soapnuts can be used as an replacement to chemical based washing soaps and powders.[41]

## 1.6. Food and Beverages

### a) For Hotels

- Serve appropriate food portion to guests, so as to minimize wastage of food and thereby lowering harmful methane and other gas emissions food waste in landfills.[42]
- Offer local cuisine, food and drinks to guests giving them real taste and experience of local delicacies. Avoid serving popular regular food options like North or South Indian cuisines[43])
- Collaborate with local community to source food materials thereby supporting and enriching local economy.
- Completely avoid import of food and beverages outside of region, thereby minimising transport emissions from their imports.

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[39] https://www.orchidhotel.com/our-ecotel-policy/solid-waste-management.html

[40] https://www.architecturaldigest.in/story/what-are-bio-enzyme-natural-cleaners/

[41] https://www.kitchenstewardship.com/my-favorite-non-toxic-laundry-option-soap-nuts-review/

[42] https://consciouscharcha.com/food-waste-india-problem/

[43] Example of popular food options (North India cuisine - Parathas, paneer vegetables, South Indian - Dosas)

- Ensure regular sensitization of all stakeholders of Hotels (owners, staffs, vendors, guests, etc) on complete life cycle of food be made. This will help remind everyone about entire journey of food from farm to table to soil and have deep reverence for farmers, more than humans and other unknown actors in the journey.

### b) For Homestays
- Offer local cuisine, food and drinks to guests giving them real taste and experience of local delicacies.
- Collaborate with local community to source food materials thereby supporting and enriching local economy.

*2. People care Practices*

### a) For Guests in Hotels and Homestays

- Have a code of conduct to ensure that guests behave respectfully with hotel/homestay care takers
- Introduce guests to sustainable practices carried with hotel or homestay.
- All feedbacks of guests be made available in physical registry and/or on web portal of the hotel or homestay.

### b) Caring for care takers in Hotels

- Include people from local communities only thereby supporting and enriching local economy and revenue earned from hotels stays in the region.
- Ensure staffs undergoes regular trainings or capacity building provided by regional or state tourism boards or by private hotel management institutes.
- Ensure that ontime fair wages are given to all staff members as per the labor laws of the country.
- Ensure that 8 hours working shifts for staff are fairly followed as per labor laws of the country[44].
- Ensure hotel is carrying all appropriate measures to for Staff welfare and safety[45]
- Ensure no child labour or exploitation is carried out in the hotel or at its vendor locations.

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[44] Employees have 8-hours shift and overtime be paid for extra hours.
https://www.business-standard.com/article/news-ani/8-hours-work-shift-first-time-in-hospitality-industry-119080600798_1.html

[45] Example: Paid leaves, washing facilities like restrooms and toilets, First-Aid facilities, uniforms, proper footwears, paid leaves - weekly, insurance, health and safety
https://ebooks.inflibnet.ac.in/hsp04/chapter/labour-laws-applicable-to-catering-establishments/

- Ensure that robust grievances management systems are in place and staff are regularly educated about this.
- Consider all staffs, helpers, managers as equal partners in delivering positive guest experience and promoting responsible tourism.

*3. General guidelines*

### a) Hotels

- Hotels should have appropriate licenses for operation and follows all laws defined for hotels in the country[46] (Eg: Licensing And Fire Security Certificate, Food Safety And Standards, Consumer Protection, Environmental Regulations, Anti-Discrimination Laws, Liquor Laws, etc)
- Ensure that hotels have digital presence on social media, showing all services offered (food served, amenities available, stay guidelines, sustainability practices, expectation from guests, etc). This can attract the right customers to hotel who are already on their sustainability journey , create a positive impact on social media and thereby increase their good will and overall business.
- Ensure that regular meetings with local communities are conducted to collect feedback and complaints about hotel or resort's operation. See to it that complaints/disputes are amicably resolved.
- Ensure that the hotel actively and regularly participates in environmental conservation activities and works towards ensuring sufficiency in practice to mitigate environmental damage.
- Ensure that the hotel exhibits respect for the human and more than huma communities staying outside of the hotel boundary i.e. late night loud parties, evening night lightings should be banned so as to not disturb local community and local biodiversity (flora and fauna) of the region.
- Conduct life cycle assessment[47] of the hotel atleast once in 3-5 years from a certified environmental consultant for auditing all hotel operations and upgrades. Learnings from the assessment  can support build appropriate plan to reduce unwarranted negative impacts by the hotel .[48]
- Ensure to implement all feasible sustainable practices as defined in guidelines of Responsible Tourism Society of India.[49]

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[46]https://qloapps.com/hotel-laws-in-india/#:~:text=The%20hotel%20owners%20must%20follow,issues%20that%20hoteliers%20will%20face.

[47] Life cycle assessment, also known as life cycle analysis, is a methodology for assessing environmental impacts associated with all the stages of the life cycle of a commercial product, process, or service https://en.wikipedia.org/wiki/Life-cycle_assessment

[48] https://www.carbongate.io/en/blog/oteller-ve-karbon-ayak-izi-surdurulebilir-konaklamaya-giden-yol

[49]https://rtsoi.org/wp-content/uploads/2021/10/RTSOI-Sustainability-Self-Audit-Tools-For-Accommodation-Providers-27-07....pdf

● Ensure that hotels acquire certifications such as *EcoTel certification*.[50] which provides a framework for evaluating hotels areas such as environment commitment, water management, waste management, energy management, community engagement and employee education.

**b) Homestays**

● Implement relevant feasible sustainable practices as defined in the guidelines of Responsible Tourism Society of India.[51]
● If there is digital presence, ensure that the homestay provides information on type of food served, amenities available, stay guidelines, sustainability practices, expectation from guests, etc so that the customers who avail services adhere to the guidelines and know what they are signing up for. .
● Avoid investment in homestays from privileged non-locals to ensure that revenue earned from tourism benefits the local economy.

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[50]https://certificationinindia.com/ecotel-certification-benefits-of-ecotel/#:~:text=The%20Ecotel%20certification%20is%20based,waste%20management%2C%20and%20environmental%20commitment.
[51]https://rtsoi.org/wp-content/uploads/2021/10/RTSOI-Sustainability-Self-Audit-Tools-For-Accommodation-Providers-27-07....pdf

# ANNEXURES

A. Complete list tourism distress indicators.

| Sr.No | Distress Category | Area of Impact | Distress Indicators |
|---|---|---|---|
| 1. | Carbon | Transport | Poor AQI from traffic in tourist season periods. |
| 2. | Carbon | Transport | Black emission settling on glacial snow caps |
| 3. | Carbon | Accomodation | Rising Electricity demands due to the usage of heating appliances |
| 4. | Carbon | Accomodation | Rising Electricity demands due to usage Air Conditioners |
| 5. | Carbon | Accomodation | Emissions from providing amenities like Jaccuzzi, spas, pools. |
| 6. | Carbon | Accomodation | Rising Electricity demands due to Pool Pumps |
| 7. | Ecological | Land | Landslide |
| 8. | Ecological | Land | Land Use Change |
| 9. | Ecological | Land | Erosion and sedimentation |
| 10. | Ecological | Land | Soil pollution |
| 11. | Ecological | Land | Overgrazing by pack animals leading to land degradation |
| 12. | Ecological | Land | Soil pollution from badly managed compost toilets |
| 13. | Ecological | Land | Flooding |
| 14. | Ecological | Land | Drought |
| 15. | Ecological | Land | Privitisation of commons |
| 16. | Ecological | Land | Other agrarian distress |
| 17. | Ecological | Land | Increase of built up area / Urbanisation |
| 18. | Ecological | Land | Invasive Species |
| 19. | Ecological | Land | Soil Erosion |
| 20. | Ecological | Land | Unoccupied stay places in non-seasonal periods |
| 21. | Ecological | Land | Unmanaged Solid waste |
| 22. | Ecological | Land | Unmanaged non-biodegradedable waste |
| 23. | Ecological | Land | Chemical waste |
| 24. | Ecological | Land | Landfills due to food waste |
| 25. | Ecological | Land | Over use of fertilizer to grow food irrespective of season and region |
| 26. | Ecological | Land | Chemical Waste(from soaps/ hand sanitisers, dishwashing soaps, etc.) |
| 27. | Ecological | Land | Overcrowding or exceeding the carrying capacity |
| 28. | Ecological | Land | Plastic and food littering |
| 29. | Ecological | Land | Air Pollution from open waste burning. |

| | | | |
|---|---|---|---|
| 30. | Ecological | Biodiversity and Wildlife | Infestation of invasive Species |
| 31. | Ecological | Biodiversity and Wildlife | Deforestation / Loss of vegetation |
| 32. | Ecological | Biodiversity and Wildlife | Human-Wildlife Conflict |
| 33. | Ecological | Biodiversity and Wildlife | Biodiversity decline |
| 34. | Ecological | Biodiversity and Wildlife | Fragmentation of habitats |
| 35. | Ecological | Biodiversity and Wildlife | Wildfires /Alteration of Natural Fire Regimes |
| 36. | Ecological | Biodiversity and Wildlife | Invasive Species |
| 37. | Ecological | Biodiversity and Wildlife | Disturbance to Wildlife |
| 38. | Ecological | Biodiversity and Wildlife | Disturbance to Plant and Animal Habitats due to human interactions |
| 39. | Ecological | Biodiversity and Wildlife | Disturbance to Wildlife - Impact on breeding patterns |
| 40. | Ecological | Biodiversity and Wildlife | Disturbance to Wildlife - Behavioural shift of wildlife from diurnal to nocturnal habits |
| 41. | Ecological | Biodiversity and Wildlife | Disturbance to wildlife - Vehicular Noise pollution and light pollution |
| 42. | Ecological | Biodiversity and Wildlife | Overgrazing by pack animals leading to ecosystem degradation |
| 43. | Ecological | Biodiversity and Wildlife | Disturbance to Wildlife - Change in Nesting Areas of Birds |
| 44. | Ecological | Biodiversity and Wildlife | Disturbance to Wildlife - Noise pollution by tourists |
| 45. | Ecological | Biodiversity and Wildlife | Disturbance to Wildlife - Clicking of photographs by tourists |
| 46. | Ecological | Biodiversity and Wildlife | Disturbance to Wildlife - Loss of natural food collection insticts of animals due to feeding by tourists |
| 47. | Ecological | Water | Water pollution |
| 48. | Ecological | Water | Biodiversity decline |
| 49. | Ecological | Water | Lower water table |
| 50. | Ecological | Water | Algal blooms / Altered nutrient dynamics / Eutrophication |
| 51. | Ecological | Water | Alteration of hydrological regimes |
| 52. | Ecological | Water | Ground water exploitation due to Borewells |
| 53. | Ecological | Water | Habitat degradation |
| 54. | Ecological | Water | Water theft/mafia |
| 55. | Ecological | Water | Impact to Aquatic fauna |
| 56. | Ecological | Water | Water pollution due to land faecal matters in monsoon |

| 57. | Ecological | Water | Improper adapation of Aquatic fauna on dumping of waste (kitchen waste, solid waste, faecal waste) |
|---|---|---|---|
| 58. | Ecological | Water | Water pollution due to thrown plastics, bottles, wrappers, etc |
| 59. | Ecological | Water | Water stress due to laundry services in Resorts and Hotels |
| 60. | Ecological | Water | Water Scarcity |
| 61. | Ecological | Water | Degradation of watersheds and water sources |
| 62. | Socia-Economic-Political | Class-Caste | Exclusion to jobs/positions based on caste |
| 63. | Socia-Economic-Political | Class-Caste | Caste-class discrimination (overt) |
| 64. | Socia-Economic-Political | Class-Caste | Caste based job assignment |
| 65. | Socia-Economic-Political | Class-Caste | Entrenchment of caste-class hierarchies |
| 66. | Socia-Economic-Political | Class-Caste | Forced Eviction |
| 67. | Socia-Economic-Political | Class-Caste | Passive Displacement |
| 68. | Socia-Economic-Political | Class-Caste | Exploitation (wages/hours/type of work) |
| 69. | Socia-Economic-Political | Class-Caste | Segregation (housing, toilets, food) |
| 70. | Socia-Economic-Political | Class-Caste | Other violence |
| 71. | Socia-Economic-Political | Economic | Loss of native livelihood |
| 72. | Socia-Economic-Political | Economic | Forced migration |
| 73. | Socia-Economic-Political | Economic | Inflation |
| 74. | Socia-Economic-Political | Economic | Increased dependence on service economy |
| 75. | Socia-Economic-Political | Economic | Livelihood precarity |
| 76. | Socia-Economic-Political | Economic | Contractual work without security |
| 77. | Socia-Economic-Political | Economic | Commodification of nature |
| 78. | Socia-Economic-Political | Economic | Unfair wages |
| 79. | Socia-Economic-Political | Economic | Peak season inflation |
| 80. | Socia-Economic-Political | Cultural | Cultural Appropriation (without compensation) |

| | | | |
|---|---|---|---|
| 81. | Socia-Economic-Political | Cultural | Commercialization of cultural heritage without equitable benefit-sharing |
| 82. | Socia-Economic-Political | Cultural | Assault of people's privacy, dignity, and authenticity |
| 83. | Socia-Economic-Political | Cultural | Modernization of old social ethics and values |
| 84. | Socia-Economic-Political | Cultural | Social imbalance and disturbance of local population |
| 85. | Socia-Economic-Political | Cultural | Assault of people's privacy and dignity |
| 86. | Socia-Economic-Political | Cultural | Disturbances to indegenious culture and values of local society |
| 87. | Socia-Economic-Political | Cultural | Drunken Revelry of Tourists |
| 88. | Socia-Economic-Political | Cultural | Decreasing preferences among locals for traditional food. |
| 89. | Socia-Economic-Political | Cultural | Disrespect of traditions and local customs by tourists |
| 90. | Socia-Economic-Political | Cultural | Drug Trafficking |
| 91. | Socia-Economic-Political | Gender | Unequal wages |
| 92. | Socia-Economic-Political | Gender | Sexual Harassment |
| 93. | Socia-Economic-Political | Gender | Gender Stereotyping |
| 94. | Socia-Economic-Political | Gender | Unequal Access to Opportunities |
| 95. | Socia-Economic-Political | Political | Lack of Panchayat / Gram Sabha conset |
| 96. | Socia-Economic-Political | Political | Land Aquisition |
| 97. | Socia-Economic-Political | Political | Poor compensation under LARR |
| 98. | Socia-Economic-Political | Political | Lack of participatory measures in decision making |
| 99. | Socia-Economic-Political | Political | Liberlising law (ex, building law, enviornmental protection law) |
| 100. | Laws_Policy | Environmental | Sound/light/air pollution |
| 101. | Laws_Policy | Environmental | The Forest (Conservation) Amendment Bill, 2023 |
| 102. | Laws_Policy | Socio-economic | Displacing indigenous communities in the name of wildlife and forest ecology protection while simultaneously sanctioning the same area for tourism. |

B. List of all distress indicators within 'Accomodation' value chain across all tourism circuits.

| Sr. No. | Distress_Category | Area of Impact | Distress Indicator | Instances Count | % Contribution | % Cumm.. Contribution |
|---|---|---|---|---|---|---|
| 1. | Ecological | Biodiversity and Wildlife | Disturbance to Wildlife | 11 | 6.0% | 6.0% |
| 2. | Carbon | Accommodation | Rising Electricity demands due to the usage of heating appliances | 9 | 4.9% | 10.9% |
| 3. | Ecological | Land | Chemical Waste(from soaps/ hand sanitisers, dishwashing soaps, etc.) | 8 | 4.3% | 15.2% |
| 4. | Socia-Economic-Political | Economic | Contractual work without security | 8 | 4.3% | 19.6% |
| 5. | Ecological | Land | Land Use Change | 6 | 3.3% | 22.8% |
| 6. | Ecological | Biodiversity and Wildlife | Fragmentation of habitats | 6 | 3.3% | 26.1% |
| 7. | Ecological | Water | Ground water exploitation due to Borewells | 6 | 3.3% | 29.3% |
| 8. | Ecological | Land | Increase of built up area / Urbanisation | 6 | 3.3% | 32.6% |
| 9. | Socia-Economic-Political | Economic | Loss of native livelihood | 6 | 3.3% | 35.9% |
| 10. | Socia-Economic-Political | Class-Caste | Exploitation (wages/hours/type of work) | 6 | 3.3% | 39.1% |
| 11. | Ecological | Land | Overcrowding or exceeding the carrying capacity | 5 | 2.7% | 41.8% |
| 12. | Ecological | Water | Water Scarcity | 5 | 2.7% | 44.6% |
| 13. | Ecological | Water | Water stress due to laundry services in Resorts and Hotels | 5 | 2.7% | 47.3% |
| 14. | Socia-Economic-Political | Economic | Peak season inflation | 5 | 2.7% | 50.0% |
| 15. | Socia-Economic-Political | Class-Caste | Caste-class discrimination (overt) | 5 | 2.7% | 52.7% |
| 16. | Carbon | Accommodation | Rising Electricity demands due to usage Air Conditioners | 4 | 2.2% | 54.9% |
| 17. | Carbon | Accommodation | Emissions from providing amenities like Jaccuzzi, spas, pools. | 4 | 2.2% | 57.1% |
| 18. | Ecological | Biodiversity and Wildlife | Human-Wildlife Conflict | 4 | 2.2% | 59.2% |

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| 19. | Ecological | Water | Water pollution | 4 | 2.2% | 61.4% |
|---|---|---|---|---|---|---|
| 20. | Ecological | Biodiversity and Wildlife | Deforestation / Loss of vegetation | 4 | 2.2% | 63.6% |
| 21. | Ecological | Land | Unmanaged non-biodegradedable waste | 4 | 2.2% | 65.8% |
| 22. | Ecological | Biodiversity and Wildlife | Biodiversity decline | 4 | 2.2% | 67.9% |
| 23. | Socia-Economic-Political | Economic | Unfair wages | 4 | 2.2% | 70.1% |
| 24. | Carbon | Accommodation | Rising Electricity demands due to Pool Pumps | 3 | 1.6% | 71.7% |
| 25. | Ecological | Land | Landslide | 3 | 1.6% | 73.4% |
| 26. | Ecological | Land | Privitisation of commons | 3 | 1.6% | 75.0% |
| 27. | Ecological | Land | Unmanaged Solid waste | 3 | 1.6% | 76.6% |
| 28. | Ecological | Land | Unoccupied stay places in non-seasonal periods | 3 | 1.6% | 78.3% |
| 29. | Ecological | Water | Lower water table | 3 | 1.6% | 79.9% |
| 30. | Socia-Economic-Political | Political | Land Aquisition | 3 | 1.6% | 81.5% |
| 31. | Socia-Economic-Political | Political | Lack of participatory measures in decision making | 3 | 1.6% | 83.2% |
| 32. | Socia-Economic-Political | Economic | Livelihood precarity | 3 | 1.6% | 84.8% |
| 33. | Socia-Economic-Political | Economic | Commodification of nature | 3 | 1.6% | 86.4% |
| 34. | Ecological | Land | Landfills due to food waste | 2 | 1.1% | 87.5% |
| 35. | Ecological | Land | Erosion and sedimentation | 2 | 1.1% | 88.6% |
| 36. | Ecological | Land | Flooding | 2 | 1.1% | 89.7% |
| 37. | Ecological | Land | Soil pollution | 2 | 1.1% | 90.8% |
| 38. | Ecological | Land | Soil Erosion | 2 | 1.1% | 91.8% |
| 39. | Ecological | Land | Over use of fertilizer to grow food irrespective of season and region | 2 | 1.1% | 92.9% |
| 40. | Ecological | Water | Alteration of hydrological regimes | 2 | 1.1% | 94.0% |
| 41. | Socia-Economic-Political | Class-Caste | Caste based job assignment | 2 | 1.1% | 95.1% |
| 42. | Socia-Economic-Political | Political | Poor compensation under LARR | 2 | 1.1% | 96.2% |
| 43. | Ecological | Water | Algal blooms / Altered nutrient dynamics / Eutrophication | 1 | 0.5% | 96.7% |
| 44. | Ecological | Water | Water theft/mafia | 1 | 0.5% | 97.3% |
| 45. | Ecological | Biodiversity and | Wildfires /Alteration of Natural Fire Regimes | 1 | 0.5% | 97.8% |

| | | Wildlife | | | | |
|---|---|---|---|---|---|---|
| 46. | Socia-Economic-Political | Political | Liberlising law (ex, building law, enviornmental protection law) | 1 | 0.5% | 98.4% |
| 47. | Socia-Economic-Political | Class-Caste | Entrenchment of caste-class hierarchies | 1 | 0.5% | 98.9% |
| 48. | Socia-Economic-Political | Class-Caste | Forced Eviction | 1 | 0.5% | 99.5% |
| 49. | Socia-Economic-Political | Class-Caste | Segregation (housing, toilets, food) | 1 | 0.5% | 100.0% |
| 50. | Carbon | Transport | Poor AQI from traffic in tourist season periods. | 0 | 0.0% | 100.0% |
| 51. | Carbon | Transport | Black emission settling on glacial snow caps | 0 | 0% | 100% |
| 52. | Ecological | Water | Water pollution due to thrown plastics, bottles, wrappers, etc | 0 | 0% | 100% |
| 53. | Ecological | Land | Air Pollution from open waste burning. | 0 | 0% | 100% |
| 54. | Ecological | Water | Improper adapation of Aquatic fauna on dumping of waste (kitchen waste, solid waste, faecal waste) | 0 | 0% | 100% |
| 55. | Ecological | Land | Soil pollution from badly managed compost toilets | 0 | 0% | 100% |
| 56. | Ecological | Land | Plastic and food littering | 0 | 0% | 100% |
| 57. | Ecological | Land | Overgrazing by pack animals leading to land degradation | 0 | 0% | 100% |
| 58. | Ecological | Land | Invasive Species | 0 | 0% | 100% |
| 59. | Ecological | Biodiversity and Wildlife | Invasive Species | 0 | 0% | 100% |
| 60. | Ecological | Water | Impact to Aquatic fauna | 0 | 0% | 100% |
| 61. | Ecological | Water | Water pollution due to land faecal matters in monsoon | 0 | 0% | 100% |
| 62. | Ecological | Land | Drought | 0 | 0% | 100% |
| 63. | Ecological | Land | Other agrarian distress | 0 | 0% | 100% |
| 64. | Ecological | Land | Chemical waste | 0 | 0% | 100% |
| 65. | Ecological | Biodiversity and Wildlife | Disturbance to Habitats due to human interactions | 0 | 0% | 100% |
| 66. | Ecological | Biodiversity and Wildlife | Disturbance to breeding patterns of Wildlife | 0 | 0% | 100% |
| 67. | Ecological | Biodiversity and Wildlife | Behavioural shift of wildlife from diurnal to nocturnal habits | 0 | 0% | 100% |
| 68. | Ecological | Biodiversity and Wildlife | Disturbance to wildlife due to noise pollution and light pollution from Cars and Buses | 0 | 0% | 100% |
| 69. | Ecological | Biodiversity and Wildlife | Overgrazing by pack animals leading to ecosystem degradation | 0 | 0% | 100% |
| 70. | Ecological | Biodiversity and Wildlife | Change in Nesting Areas of Birds | 0 | 0% | 100% |
| 71. | Ecological | Biodiversity and | Disturbance to natural food habits of fauna due to tourists | 0 | 0% | 100% |

| | | Wildlife | interaction | | | |
|---|---|---|---|---|---|---|
| 72. | Ecological | Biodiversity and Wildlife | Disturbance to Wildlife due to tourist interaction | 0 | 0% | 100% |
| 73. | Ecological | Biodiversity and Wildlife | Loss of natural food collection insticts of animals due to feeding from tourists | 0 | 0% | 100% |
| 74. | Ecological | Biodiversity and Wildlife | Disturbance to wildlife due to noise pollution | 0 | 0% | 100% |
| 75. | Ecological | Water | Biodiversity decline | 0 | 0% | 100% |
| 76. | Ecological | Water | Habitat degradation | 0 | 0% | 100% |
| 77. | Ecological | Water | Degradation of watersheds and water sources | 0 | 0% | 100% |
| 78. | Laws_Policy | Environmental | Sound/light/air pollution | 0 | 0% | 100% |
| 79. | Laws_Policy | Environmental | The Forest (Conservation) Amendment Bill, 2023 | 0 | 0% | 100% |
| 80. | Laws_Policy | Socio-economic | Displacing indigenous communities in the name of wildlife and forest ecology protection while simultaneously sanctioning the same area for tourism. | 0 | 0% | 100% |
| 81. | Socia-Economic-Political | Economic | Increased dependence on service economy | 0 | 0% | 100% |
| 82. | Socia-Economic-Political | Political | Lack of Panchayat / Gram Sabha conset | 0 | 0% | 100% |
| 83. | Socia-Economic-Political | Economic | Forced migration | 0 | 0% | 100% |
| 84. | Socia-Economic-Political | Class-Caste | Exclusion to jobs/positions based on caste | 0 | 0% | 100% |
| 85. | Socia-Economic-Political | Class-Caste | Passive Displacement | 0 | 0% | 100% |
| 86. | Socia-Economic-Political | Class-Caste | Other violence | 0 | 0% | 100% |
| 87. | Socia-Economic-Political | Economic | Inflation | 0 | 0% | 100% |
| 88. | Socia-Economic-Political | Cultural | Cultural Appropriation (without compensation) | 0 | 0% | 100% |
| 89. | Socia-Economic-Political | Cultural | Commercialization of cultural heritage without equitable benefit-sharing | 0 | 0% | 100% |
| 90. | Socia-Economic-Political | Cultural | Assault of people's privacy, dignity, and authenticity | 0 | 0% | 100% |
| 91. | Socia- | Cultural | Modernization of old social ethics and values | 0 | 0% | 100% |

| Sr. No. | Distress_Category | Area of Impact | Distress Indicator | Instances Count | % Contribution | % Cumm.. Contribution |
|---|---|---|---|---|---|---|
| | Socia-Economic-Political | | | | | |
| 92. | Socia-Economic-Political | Cultural | Social imbalance and disturbance of local population | 0 | 0% | 100% |
| 93. | Socia-Economic-Political | Cultural | Assault of people's privacy and dignity | 0 | 0% | 100% |
| 94. | Socia-Economic-Political | Cultural | Disturbances to indegenious culture and values of local society | 0 | 0% | 100% |
| 95. | Socia-Economic-Political | Cultural | Drunken Revelry of Tourists | 0 | 0% | 100% |
| 96. | Socia-Economic-Political | Cultural | Decreasing preferences among locals for traditional food. | 0 | 0% | 100% |
| 97. | Socia-Economic-Political | Cultural | Disrespect of traditions and local customs by tourists | 0 | 0% | 100% |
| 98. | Socia-Economic-Political | Cultural | Drug Trafficking | 0 | 0% | 100% |
| 99. | Socia-Economic-Political | Gender | Unequal wages | 0 | 0% | 100% |
| 100. | Socia-Economic-Political | Gender | Sexual Harassment | 0 | 0% | 100% |
| 101. | Socia-Economic-Political | Gender | Gender Stereotyping | 0 | 0% | 100% |
| 102. | Socia-Economic-Political | Gender | Unequal Access to Opportunities | 0 | 0% | 100% |

C. List of all distress indicators within the 'Recreational Activities' value chain across all tourism circuits.

| Sr. No. | Distress_Category | Area of Impact | Distress Indicator | Instances Count | % Contribution | % Cumm.. Contribution |
|---|---|---|---|---|---|---|
| 1. | Ecological | Biodiversity and | Disturbance to Wildlife | 31 | 16.8% | 16.8% |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | Wildlife | | | | |
| 2. | Ecological | Land | Land Use Change | 15 | 8.1% | 24.9% |
| 3. | Ecological | Water | Water pollution due to thrown plastics, bottles, wrappers, etc | 12 | 6.5% | 31.4% |
| 4. | Socia-Economic-Political | Economic | Contractual work without security | 10 | 5.4% | 36.8% |
| 5. | Socia-Economic-Political | Economic | Unfair wages | 9 | 4.9% | 41.6% |
| 6. | Ecological | Land | Overcrowding or exceeding the carrying capacity | 7 | 3.8% | 45.4% |
| 7. | Socia-Economic-Political | Economic | Loss of Native Livelihood | 7 | 3.8% | 49.2% |
| 8. | Carbon | Transport | Poor AQI from traffic in tourist season periods. | 5 | 2.7% | 51.9% |
| 9. | Ecological | Biodiversity and Wildlife | Fragmentation of habitats | 5 | 2.7% | 54.6% |
| 10. | Ecological | Land | Erosion and sedimentation | 5 | 2.7% | 57.3% |
| 11. | Socia-Economic-Political | Economic | Livelihood precarity | 5 | 2.7% | 60.0% |
| 12. | Ecological | Land | Unmanaged non-biodegradedable waste | 4 | 2.2% | 62.2% |
| 13. | Socia-Economic-Political | Economic | Peak season inflation | 4 | 2.2% | 64.3% |
| 14. | Socia-Economic-Political | Political | Land Aquisition | 4 | 2.2% | 66.5% |
| 15. | Socia-Economic-Political | Political | Lack of participatory measures in decision making | 4 | 2.2% | 68.6% |
| 16. | Socia-Economic-Political | Political | Liberlising law (ex, building law, enviornmental protection law) | 4 | 2.2% | 70.8% |
| 17. | Ecological | Biodiversity and Wildlife | Human-Wildlife Conflict | 3 | 1.6% | 72.4% |
| 18. | Ecological | Water | Algal blooms / Altered nutrient dynamics / Eutrophication | 3 | 1.6% | 74.1% |
| 19. | Ecological | Land | Air Pollution from open waste burning. | 3 | 1.6% | 75.7% |
| 20. | Ecological | Water | Improper adapation of Aquatic fauna on dumping of waste (kitchen waste, solid waste, faecal waste) | 3 | 1.6% | 77.3% |
| 21. | Socia-Economic-Political | Economic | Commodification of nature | 3 | 1.6% | 78.9% |
| 22. | Socia-Economic- | Political | Lack of Panchayat / Gram Sabha conset | 3 | 1.6% | 80.5% |

| | Political | | | | | |
|---|---|---|---|---|---|---|
| 23. | Carbon | Transport | Black emission settling on glacial snow caps | 2 | 1.1% | 81.6% |
| 24. | Ecological | Land | Chemical Waste(from soaps/ hand sanitisers, dishwashing soaps, etc.) | 2 | 1.1% | 82.7% |
| 25. | Ecological | Biodiversity and Wildlife | Deforestation / Loss of vegetation | 2 | 1.1% | 83.8% |
| 26. | Ecological | Land | Flooding | 2 | 1.1% | 84.9% |
| 27. | Ecological | Land | Unmanaged Solid waste | 2 | 1.1% | 85.9% |
| 28. | Ecological | Land | Soil pollution from badly managed compost toilets | 2 | 1.1% | 87.0% |
| 29. | Ecological | Land | Plastic and food littering | 2 | 1.1% | 88.1% |
| 30. | Laws_Policy | Environmental | Sound/light/air pollution | 2 | 1.1% | 89.2% |
| 31. | Laws_Policy | Environmental | The Forest (Conservation) Amendment Bill, 2023 | 2 | 1.1% | 90.3% |
| 32. | Socia-Economic-Political | Class-Caste | Exploitation (wages/hours/type of work) | 2 | 1.1% | 91.4% |
| 33. | Socia-Economic-Political | Class-Caste | Caste-class discrimination (overt) | 2 | 1.1% | 92.4% |
| 34. | Socia-Economic-Political | Economic | Forced migration | 2 | 1.1% | 93.5% |
| 35. | Ecological | Water | Water pollution | 1 | 0.5% | 94.1% |
| 36. | Ecological | Land | Landfills due to food waste | 1 | 0.5% | 94.6% |
| 37. | Ecological | Land | Landslide | 1 | 0.5% | 95.1% |
| 38. | Ecological | Land | Privitisation of commons | 1 | 0.5% | 95.7% |
| 39. | Ecological | Land | Soil pollution | 1 | 0.5% | 96.2% |
| 40. | Ecological | Land | Soil Erosion | 1 | 0.5% | 96.8% |
| 41. | Ecological | Water | Alteration of hydrological regimes | 1 | 0.5% | 97.3% |
| 42. | Ecological | Water | Water theft/mafia | 1 | 0.5% | 97.8% |
| 43. | Ecological | Land | Invasive Species | 1 | 0.5% | 98.4% |
| 44. | Ecological | Biodiversity and Wildlife | Invasive Species | 1 | 0.5% | 98.9% |
| 45. | Ecological | Water | Impact to Aquatic fauna | 1 | 0.5% | 99.5% |
| 46. | Ecological | Water | Water pollution due to land faecal matters in monsoon | 1 | 0.5% | 100.0% |
| 47. | Carbon | Accommodation | Rising Electricity demands due to the usage of heating appliances | 0 | 0.0% | 100.0% |
| 48. | Carbon | Accommodation | Rising Electricity demands due to usage Air Conditioners | 0 | 0% | 100% |
| 49. | Carbon | Accommodation | Emissions from providing amenities like Jaccuzzi, spas, pools. | 0 | 0% | 100% |
| 50. | Carbon | Accommodation | Rising Electricity demands due to Pool Pumps | 0 | 0% | 100% |
| 51. | Ecological | Water | Ground water exploitation due to Borewells | 0 | 0% | 100% |
| 52. | Ecological | Land | Increase of built up area / Urbanisation | 0 | 0% | 100% |

| 53. | Ecological | Biodiversity and Wildlife | Biodiversity decline | 0 | 0% | 100% |
|---|---|---|---|---|---|---|
| 54. | Ecological | Water | Water Scarcity | 0 | 0% | 100% |
| 55. | Ecological | Water | Water stress due to laundry services in Resorts and Hotels | 0 | 0% | 100% |
| 56. | Ecological | Land | Unoccupied stay places in non-seasonal periods | 0 | 0% | 100% |
| 57. | Ecological | Land | Over use of fertilizer to grow food irrespective of season and region | 0 | 0% | 100% |
| 58. | Ecological | Water | Lower water table | 0 | 0% | 100% |
| 59. | Ecological | Land | Overgrazing by pack animals leading to land degradation | 0 | 0% | 100% |
| 60. | Ecological | Biodiversity and Wildlife | Wildfires /Alteration of Natural Fire Regimes | 0 | 0% | 100% |
| 61. | Ecological | Land | Drought | 0 | 0% | 100% |
| 62. | Ecological | Land | Other agrarian distress | 0 | 0% | 100% |
| 63. | Ecological | Land | Chemical waste | 0 | 0% | 100% |
| 64. | Ecological | Biodiversity and Wildlife | Disturbance to Habitats due to human interactions | 0 | 0% | 100% |
| 65. | Ecological | Biodiversity and Wildlife | Disturbance to breeding patterns of Wildlife | 0 | 0% | 100% |
| 66. | Ecological | Biodiversity and Wildlife | Behavioural shift of wildlife from diurnal to nocturnal habits | 0 | 0% | 100% |
| 67. | Ecological | Biodiversity and Wildlife | Disturbance to wildlife due to noise pollution and light pollution from Cars and Buses | 0 | 0% | 100% |
| 68. | Ecological | Biodiversity and Wildlife | Overgrazing by pack animals leading to ecosystem degradation | 0 | 0% | 100% |
| 69. | Ecological | Biodiversity and Wildlife | Change in Nesting Areas of Birds | 0 | 0% | 100% |
| 70. | Ecological | Biodiversity and Wildlife | Disturbance to natural food habits of fauna due to tourists interaction | 0 | 0% | 100% |
| 71. | Ecological | Biodiversity and Wildlife | Disturbance to Wildlife due to tourist interaction | 0 | 0% | 100% |
| 72. | Ecological | Biodiversity and Wildlife | Loss of natural food collection instics of animals due to feeding from tourists | 0 | 0% | 100% |
| 73. | Ecological | Biodiversity and Wildlife | Disturbance to wildlife due to noise pollution | 0 | 0% | 100% |
| 74. | Ecological | Water | Biodiversity decline | 0 | 0% | 100% |
| 75. | Ecological | Water | Habitat degradation | 0 | 0% | 100% |
| 76. | Ecological | Water | Degradation of watersheds and water sources | 0 | 0% | 100% |
| 77. | Laws_Policy | Socio-economic | Displacing indigenous communities in the name of wildlife and forest ecology protection while simultaneously sanctioning the same area for tourism. | 0 | 0% | 100% |
| 78. | Socia-Economic-Political | Economic | Increased dependence on service economy | 0 | 0% | 100% |
| 79. | Socia- | Class-Caste | Caste based job assignment | 0 | 0% | 100% |

| | | | | | | |
|---|---|---|---|---|---|---|
| | Economic-Political | | | | | |
| 80. | Socia-Economic-Political | Political | Poor compensation under LARR | 0 | 0% | 100% |
| 81. | Socia-Economic-Political | Class-Caste | Entrenchment of caste-class hierarchies | 0 | 0% | 100% |
| 82. | Socia-Economic-Political | Class-Caste | Exclusion to jobs/positions based on caste | 0 | 0% | 100% |
| 83. | Socia-Economic-Political | Class-Caste | Forced Eviction | 0 | 0% | 100% |
| 84. | Socia-Economic-Political | Class-Caste | Segregation (housing, toilets, food) | 0 | 0% | 100% |
| 85. | Socia-Economic-Political | Class-Caste | Passive Displacement | 0 | 0% | 100% |
| 86. | Socia-Economic-Political | Class-Caste | Other violence | 0 | 0% | 100% |
| 87. | Socia-Economic-Political | Economic | Inflation | 0 | 0% | 100% |
| 88. | Socia-Economic-Political | Cultural | Cultural Appropriation (without compensation) | 0 | 0% | 100% |
| 89. | Socia-Economic-Political | Cultural | Commercialization of cultural heritage without equitable benefit-sharing | 0 | 0% | 100% |
| 90. | Socia-Economic-Political | Cultural | Assault of people's privacy, dignity, and authenticity | 0 | 0% | 100% |
| 91. | Socia-Economic-Political | Cultural | Modernization of old social ethics and values | 0 | 0% | 100% |
| 92. | Socia-Economic-Political | Cultural | Social imbalance and disturbance of local population | 0 | 0% | 100% |
| 93. | Socia-Economic-Political | Cultural | Assault of people's privacy and dignity | 0 | 0% | 100% |
| 94. | Socia-Economic-Political | Cultural | Disturbances to indegenious culture and values of local society | 0 | 0% | 100% |

| Sr. No. | Distress Category | Area of Impact | Distress Indicator | Instances Count | % Contribution | % Cumm.. Contribution |
|---|---|---|---|---|---|---|
| 95. | Socia-Economic-Political | Cultural | Drunken Revelry of Tourists | 0 | 0% | 100% |
| 96. | Socia-Economic-Political | Cultural | Decreasing preferences among locals for traditional food. | 0 | 0% | 100% |
| 97. | Socia-Economic-Political | Cultural | Disrespect of traditions and local customs by tourists | 0 | 0% | 100% |
| 98. | Socia-Economic-Political | Cultural | Drug Trafficking | 0 | 0% | 100% |
| 99. | Socia-Economic-Political | Gender | Unequal wages | 0 | 0% | 100% |
| 100. | Socia-Economic-Political | Gender | Sexual Harassment | 0 | 0% | 100% |
| 101. | Socia-Economic-Political | Gender | Gender Stereotyping | 0 | 0% | 100% |
| 102. | Socia-Economic-Political | Gender | Unequal Access to Opportunities | 0 | 0% | 100% |

D. List of all distress indicators within the 'Transportation' value chain across all tourism circuits.

| Sr. No. | Distress_Category | Area of Impact | Distress Indicator | Instances Count | % Contribution | % Cumm.. Contribution |
|---|---|---|---|---|---|---|
| 1. | Ecological | Biodiversity and Wildlife | Disturbance to Wildlife | 28 | 16.5% | 16.5% |
| 2. | Ecological | Land | Land Use Change | 19 | 11.2% | 27.6% |
| 3. | Socia-Economic-Political | Economic | Loss of native livelihood | 6 | 3.5% | 31.2% |
| 4. | Socia-Economic-Political | Class-Caste | Exploitation (wages/hours/type of work) | 4 | 2.4% | 33.5% |
| 5. | Carbon | Transport | Poor AQI from traffic in tourist season periods. | 17 | 10.0% | 43.5% |
| 6. | Carbon | Transport | Black emission settling on glacial snow caps | 11 | 6.5% | 50.0% |

| 7. | Ecological | Land | Overcrowding or exceeding the carrying capacity | 10 | 5.9% | 55.9% |
|----|------------|------|------------------------------------------------|----|------|-------|
| 8. | Ecological | Water | Water pollution due to thrown plastics, bottles, wrappers, etc | 2 | 1.2% | 57.1% |
| 9. | Ecological | Water | Water pollution | 11 | 6.5% | 63.5% |
| 10. | Ecological | Land | Landslide | 3 | 1.8% | 65.3% |
| 11. | Ecological | Land | Flooding | 2 | 1.2% | 66.5% |
| 12. | Socia-Economic-Political | Economic | Contractual work without security | 4 | 2.4% | 68.8% |
| 13. | Socia-Economic-Political | Economic | Unfair wages | 3 | 1.8% | 70.6% |
| 14. | Socia-Economic-Political | Economic | Peak season inflation | 2 | 1.2% | 71.8% |
| 15. | Socia-Economic-Political | Class-Caste | Caste-class discrimination (overt) | 3 | 1.8% | 73.5% |
| 16. | Socia-Economic-Political | Economic | Increased dependence on service economy | 5 | 2.9% | 76.5% |
| 17. | Carbon | Accommodation | Rising Electricity demands due to the usage of heating appliances | 0 | 0.0% | 76.5% |
| 18. | Carbon | Accommodation | Rising Electricity demands due to usage Air Conditioners | 0 | 0.0% | 76.5% |
| 19. | Carbon | Accommodation | Emissions from providing amenities like Jaccuzzi, spas, pools. | 0 | 0.0% | 76.5% |
| 20. | Carbon | Accommodation | Rising Electricity demands due to Pool Pumps | 0 | 0.0% | 76.5% |
| 21. | Ecological | Biodiversity and Wildlife | Fragmentation of habitats | 9 | 5.3% | 81.8% |
| 22. | Ecological | Biodiversity and Wildlife | Biodiversity decline | 9 | 5.3% | 87.1% |
| 23. | Ecological | Land | Soil pollution | 8 | 4.7% | 91.8% |
| 24. | Ecological | Land | Chemical Waste(from soaps/ hand sanitisers, dishwashing soaps, etc.) | 0 | 0.0% | 91.8% |
| 25. | Ecological | Biodiversity and Wildlife | Human-Wildlife Conflict | 4 | 2.4% | 94% |
| 26. | Ecological | Land | Increase of built up area / Urbanisation | 2 | 1.2% | 95% |
| 27. | Ecological | Biodiversity and Wildlife | Deforestation / Loss of vegetation | 3 | 1.8% | 97% |
| 28. | Ecological | Water | Ground water exploitation due to Borewells | 0 | 0% | 97% |

| 29. | Ecological | Land | Unmanaged non-biodegradedable waste | 0 | 0% | 97% |
|---|---|---|---|---|---|---|
| 30. | Ecological | Land | Landfills due to food waste | 0 | 0% | 97% |
| 31. | Ecological | Land | Erosion and sedimentation | 0 | 0% | 97% |
| 32. | Ecological | Land | Privitisation of commons | 1 | 1% | 98% |
| 33. | Ecological | Land | Unmanaged Solid waste | 0 | 0% | 98% |
| 34. | Ecological | Water | Water Scarcity | 0 | 0% | 98% |
| 35. | Ecological | Water | Water stress due to laundry services in Resorts and Hotels | 0 | 0% | 98% |
| 36. | Ecological | Land | Soil Erosion | 1 | 1% | 98% |
| 37. | Ecological | Water | Algal blooms / Altered nutrient dynamics / Eutrophication | 0 | 0% | 98% |
| 38. | Ecological | Land | Unoccupied stay places in non-seasonal periods | 0 | 0% | 98% |
| 39. | Ecological | Land | Over use of fertilizer to grow food irrespective of season and region | 0 | 0% | 98% |
| 40. | Ecological | Land | Air Pollution from open waste burning. | 0 | 0% | 98% |
| 41. | Ecological | Water | Lower water table | 0 | 0% | 98% |
| 42. | Ecological | Water | Alteration of hydrological regimes | 0 | 0% | 98% |
| 43. | Ecological | Water | Water theft/mafia | 0 | 0% | 98% |
| 44. | Ecological | Water | Improper adapation of Aquatic fauna on dumping of waste (kitchen waste, solid waste, faecal waste) | 0 | 0% | 98% |
| 45. | Ecological | Land | Soil pollution from badly managed compost toilets | 0 | 0% | 98% |
| 46. | Ecological | Land | Plastic and food littering | 0 | 0% | 98% |
| 47. | Ecological | Land | Invasive Species | 0 | 0% | 98% |
| 48. | Ecological | Biodiversity and Wildlife | Invasive Species | 0 | 0% | 98% |
| 49. | Ecological | Biodiversity and Wildlife | Wildfires /Alteration of Natural Fire Regimes | 0 | 0% | 98% |
| 50. | Ecological | Water | Impact to Aquatic fauna | 0 | 0% | 98% |
| 51. | Ecological | Water | Water pollution due to land faecal matters in monsoon | 0 | 0% | 98% |
| 52. | Ecological | Land | Overgrazing by pack animals leading to land degradation | 0 | 0% | 98% |
| 53. | Ecological | Land | Drought | 0 | 0% | 98% |
| 54. | Ecological | Land | Other agrarian distress | 0 | 0% | 98% |
| 55. | Ecological | Land | Chemical waste | 0 | 0% | 98% |
| 56. | Ecological | Biodiversity and Wildlife | Disturbance to Habitats due to human interactions | 0 | 0% | 98% |
| 57. | Ecological | Biodiversity and Wildlife | Disturbance to breeding patterns of Wildlife | 0 | 0% | 98% |

| | | | | | | |
|---|---|---|---|---|---|---|
| 58. | Ecological | Biodiversity and Wildlife | Behavioural shift of wildlife from diurnal to nocturnal habits | 0 | 0% | 98% |
| 59. | Ecological | Biodiversity and Wildlife | Disturbance to wildlife due to noise pollution and light pollution from Cars and Buses | 0 | 0% | 98% |
| 60. | Ecological | Biodiversity and Wildlife | Overgrazing by pack animals leading to ecosystem degradation | 0 | 0% | 98% |
| 61. | Ecological | Biodiversity and Wildlife | Change in Nesting Areas of Birds | 0 | 0% | 98% |
| 62. | Ecological | Biodiversity and Wildlife | Disturbance to natural food habits of fauna due to tourists interaction | 0 | 0% | 98% |
| 63. | Ecological | Biodiversity and Wildlife | Disturbance to Wildlife due to tourist interaction | 0 | 0% | 98% |
| 64. | Ecological | Biodiversity and Wildlife | Loss of natural food collection insticts of animals due to feeding from tourists | 0 | 0% | 98% |
| 65. | Ecological | Biodiversity and Wildlife | Disturbance to wildlife due to noise pollution | 0 | 0% | 98% |
| 66. | Ecological | Water | Biodiversity decline | 0 | 0% | 98% |
| 67. | Ecological | Water | Habitat degradation | 0 | 0% | 98% |
| 68. | Ecological | Water | Degradation of watersheds and water sources | 0 | 0% | 98% |
| 69. | Laws_Policy | Environmental | Sound/light/air pollution | 0 | 0% | 98% |
| 70. | Laws_Policy | Environmental | The Forest (Conservation) Amendment Bill, 2023 | 0 | 0% | 98% |
| 71. | Laws_Policy | Socio-economic | Displacing indigenous communities in the name of wildlife and forest ecology protection while simultaneously sanctioning the same area for tourism. | 0 | 0% | 98% |
| 72. | Socia-Economic-Political | Political | Land Aquisition | 1 | 1% | 99% |
| 73. | Socia-Economic-Political | Political | Lack of participatory measures in decision making | 0 | 0% | 99% |
| 74. | Socia-Economic-Political | Economic | Livelihood precarity | 0 | 0% | 99% |
| 75. | Socia-Economic-Political | Economic | Commodification of nature | 0 | 0% | 99% |
| 76. | Socia-Economic-Political | Political | Liberlising law (ex, building law, enviornmental protection law) | 0 | 0% | 99% |
| 77. | Socia-Economic-Political | Class-Caste | Caste based job assignment | 0 | 0% | 99% |

| 78. | Socia-Economic-Political | Political | Lack of Panchayat / Gram Sabha conset | 0 | 0% | 99% |
|---|---|---|---|---|---|---|
| 79. | Socia-Economic-Political | Political | Poor compensation under LARR | 0 | 0% | 99% |
| 80. | Socia-Economic-Political | Class-Caste | Entrenchment of caste-class hierarchies | 1 | 1% | 99% |
| 81. | Socia-Economic-Political | Economic | Forced migration | 0 | 0% | 99% |
| 82. | Socia-Economic-Political | Class-Caste | Exclusion to jobs/positions based on caste | 1 | 1% | 100% |
| 83. | Socia-Economic-Political | Class-Caste | Forced Eviction | 0 | 0% | 100% |
| 84. | Socia-Economic-Political | Class-Caste | Segregation (housing, toilets, food) | 0 | 0% | 100% |
| 85. | Socia-Economic-Political | Class-Caste | Passive Displacement | 0 | 0% | 100% |
| 86. | Socia-Economic-Political | Class-Caste | Other violence | 0 | 0% | 100% |
| 87. | Socia-Economic-Political | Economic | Inflation | 0 | 0% | 100% |
| 88. | Socia-Economic-Political | Cultural | Cultural Appropriation (without compensation) | 0 | 0% | 100% |
| 89. | Socia-Economic-Political | Cultural | Commercialization of cultural heritage without equitable benefit-sharing | 0 | 0% | 100% |
| 90. | Socia-Economic-Political | Cultural | Assault of people's privacy, dignity, and authenticity | 0 | 0% | 100% |
| 91. | Socia-Economic-Political | Cultural | Modernization of old social ethics and values | 0 | 0% | 100% |
| 92. | Socia-Economic-Political | Cultural | Social imbalance and disturbance of local population | 0 | 0% | 100% |
| 93. | Socia-Economic-Political | Cultural | Assault of people's privacy and dignity | 0 | 0% | 100% |

| | | | | | | |
|---|---|---|---|---|---|---|
| 94. | Socia-Economic-Political | Cultural | Disturbances to indegenious culture and values of local society | 0 | 0% | 100% |
| 95. | Socia-Economic-Political | Cultural | Drunken Revelry of Tourists | 0 | 0% | 100% |
| 96. | Socia-Economic-Political | Cultural | Decreasing preferences among locals for traditional food. | 0 | 0% | 100% |
| 97. | Socia-Economic-Political | Cultural | Disrespect of traditions and local customs by tourists | 0 | 0% | 100% |
| 98. | Socia-Economic-Political | Cultural | Drug Trafficking | 0 | 0% | 100% |
| 99. | Socia-Economic-Political | Gender | Unequal wages | 0 | 0% | 100% |
| 100. | Socia-Economic-Political | Gender | Sexual Harassment | 0 | 0% | 100% |
| 101. | Socia-Economic-Political | Gender | Gender Stereotyping | 0 | 0% | 100% |
| 102. | Socia-Economic-Political | Gender | Unequal Access to Opportunities | 0 | 0% | 100% |

E. List of carbon distress indicators across all value chains and tourism circuits.

| Sr. No | Distress_Category | Area of Impact in value chain | Distress Indicator | Instances Count | % Contribution | % Cumm.. Contribution |
|---|---|---|---|---|---|---|
| 1. | Carbon | Transport | Poor AQI from traffic in tourist season periods. | 26 | 44.1% | 44.1% |
| 2. | Carbon | Accommodation | Rising Electricity demands due to the usage of heating appliances | 10 | 16.9% | 61% |
| 3. | Carbon | Transport | Black emission settling on glacial snow caps | 9 | 15.3% | 76.3% |
| 4. | Carbon | Accommodation | Rising Electricity demands due to usage Air Conditioners | 5 | 8.5% | 84.7% |
| 5. | Carbon | Accommodation | Emissions from providing amenities like Jaccuzzi, spas, pools. | 5 | 8.5% | 93.2% |
| 6. | Carbon | Accommodation | Rising Electricity demands due to Pool Pumps | 4 | 6.8% | 100% |

F. List of ecological distress indicators across all value chains and tourism circuits.

| Sr. No. | Distress_ Category | Area of Impact in value chain | Distress Indicator | Instances Count | % Contribution | % Cumm.. Contribution |
|---|---|---|---|---|---|---|
| 1. | Ecological | Biodiversity and Wildlife | Disturbance to Wildlife | 71 | 20.2% | 20.2% |
| 2. | Ecological | Land | Land Use Change | 43 | 12.2% | 32.4% |
| 3. | Ecological | Water | Water pollution due to thrown plastics, bottles, wrappers, etc | 20 | 5.7% | 38.1% |
| 4. | Ecological | Land | Overcrowding or exceeding the carrying capacity | 18 | 5.1% | 43.2% |
| 5. | Ecological | Biodiversity and Wildlife | Fragmentation of habitats | 18 | 5.1% | 48.3% |
| 6. | Ecological | Biodiversity and Wildlife | Human-Wildlife Conflict | 13 | 3.7% | 52.0% |
| 7. | Ecological | Biodiversity and Wildlife | Deforestation / Loss of vegetation | 12 | 3.4% | 55.4% |
| 8. | Ecological | Land | Chemical Waste(from soaps/ hand sanitisers, dishwashing soaps, etc.) | 11 | 3.1% | 58.5% |
| 9. | Ecological | Water | Water pollution | 11 | 3.1% | 61.6% |
| 10. | Ecological | Water | Ground water exploitation due to Borewells | 11 | 3.1% | 64.8% |
| 11. | Ecological | Land | Increase of built up area / Urbanisation | 9 | 2.6% | 67.3% |
| 12. | Ecological | Land | Unmanaged non-biodegradedable waste | 8 | 2.3% | 69.6% |
| 13. | Ecological | Land | Landfills due to food waste | 8 | 2.3% | 71.9% |
| 14. | Ecological | Biodiversity and Wildlife | Biodiversity decline | 8 | 2.3% | 74.1% |
| 15. | Ecological | Land | Landslide | 7 | 2.0% | 76.1% |
| 16. | Ecological | Land | Erosion and sedimentation | 7 | 2.0% | 78.1% |
| 17. | Ecological | Land | Unmanaged Solid waste | 7 | 2.0% | 80.1% |
| 18. | Ecological | Water | Water Scarcity | 7 | 2.0% | 82.1% |
| 19. | Ecological | Land | Flooding | 6 | 1.7% | 83.8% |
| 20. | Ecological | Land | Privitisation of commons | 6 | 1.7% | 85.5% |
| 21. | Ecological | Land | Soil pollution | 5 | 1.4% | 86.9% |
| 22. | Ecological | Water | Water stress due to laundry services in Resorts and Hotels | 5 | 1.4% | 88.4% |
| 23. | Ecological | Land | Soil Erosion | 4 | 1.1% | 89.5% |
| 24. | Ecological | Water | Algal blooms / Altered nutrient dynamics / Eutrophication | 4 | 1.1% | 90.6% |
| 25. | Ecological | Water | Improper adapation of Aquatic fauna on dumping of waste (kitchen waste, solid waste, faecal waste) | 4 | 1.1% | 91.8% |

| 26. | Ecological | Land | Unoccupied stay places in non-seasonal periods | 3 | 0.9% | 92.6% |
|-----|-----------|------|--------------------------------------------------|---|------|-------|
| 27. | Ecological | Land | Over use of fertilizer to grow food irrespective of season and region | 3 | 0.9% | 93.5% |
| 28. | Ecological | Land | Air Pollution from open waste burning. | 3 | 0.9% | 94.3% |
| 29. | Ecological | Water | Lower water table | 3 | 0.9% | 95.2% |
| 30. | Ecological | Water | Alteration of hydrological regimes | 3 | 0.9% | 96.0% |
| 31. | Ecological | Water | Water theft/mafia | 3 | 0.9% | 96.9% |
| 32. | Ecological | Land | Soil pollution from badly managed compost toilets | 2 | 0.6% | 97.4% |
| 33. | Ecological | Land | Plastic and food littering | 2 | 0.6% | 98.0% |
| 34. | Ecological | Water | Water pollution due to land faecal matters in monsoon | 2 | 0.6% | 98.6% |
| 35. | Ecological | Land | Overgrazing by pack animals leading to land degradation | 1 | 0.3% | 98.9% |
| 36. | Ecological | Land | Invasive Species | 1 | 0.3% | 99.1% |
| 37. | Ecological | Biodiversity and Wildlife | Wildfires /Alteration of Natural Fire Regimes | 1 | 0.3% | 99.4% |
| 38. | Ecological | Biodiversity and Wildlife | Disturbance to Plant and Animal Habitats due to human interactions | 1 | 0.3% | 99.7% |
| 39. | Ecological | Water | Impact to Aquatic fauna | 1 | 0.3% | 100% |
| 40. | Ecological | Land | Drought | 0 | 0% | 100% |
| 41. | Ecological | Land | Other agrarian distress | 0 | 0% | 100% |
| 42. | Ecological | Land | Chemical waste | 0 | 0% | 100% |
| 43. | Ecological | Biodiversity and Wildlife | Infestation of invasive Species | 0 | 0% | 100% |
| 44. | Ecological | Biodiversity and Wildlife | Disturbance to Wildlife - Impact on breeding patterns | 0 | 0% | 100% |
| 45. | Ecological | Biodiversity and Wildlife | Disturbance to Wildlife - Behavioural shift of wildlife from diurnal to nocturnal habits | 0 | 0% | 100% |
| 46. | Ecological | Biodiversity and Wildlife | Disturbance to wildlife - Vehicular Noise pollution and light pollution | 0 | 0% | 100% |
| 47. | Ecological | Biodiversity and Wildlife | Overgrazing by pack animals leading to ecosystem degradation | 0 | 0% | 100% |
| 48. | Ecological | Biodiversity and Wildlife | Disturbance to Wildlife - Change in Nesting Areas of Birds | 0 | 0% | 100% |
| 49. | Ecological | Biodiversity and Wildlife | Disturbance to Wildlife - Noise pollution by tourists | 0 | 0% | 100% |
| 50. | Ecological | Biodiversity and Wildlife | Disturbance to Wildlife - Clicking of photographs by tourists | 0 | 0% | 100% |
| 51. | Ecological | Biodiversity and Wildlife | Disturbance to Wildlife - Loss of natural food collection insticts of animals due to feeding by tourists | 0 | 0% | 100% |
| 52. | Ecological | Water | Biodiversity decline | 0 | 0% | 100% |
| 53. | Ecological | Water | Habitat degradation | 0 | 0% | 100% |
| 54. | Ecological | Water | Degradation of watersheds and water sources | 0 | 0% | 100% |

G. List of Socio-Economic-Political distress indicators across all value chains and tourism circuits.

| Sr. No. | Distress_Category | Area of Impact in value chain | Distress Indicator | Instances Count | % Contribution | % Cumm.. Contribution |
|---|---|---|---|---|---|---|
| 1. | Socia-Economic-Political | Economic | Contractual work without security | 27 | 44.1% | 44.1% |
| 2. | Socia-Economic-Political | Economic | Unfair wages | 19 | 16.9% | 61.0% |
| 3. | Socia-Economic-Political | Class-Caste | Exploitation (wages/hours/type of work) | 15 | 15.3% | 76.3% |
| 4. | Socia-Economic-Political | Economic | Peak season inflation | 15 | 8.5% | 84.7% |
| 5. | Socia-Economic-Political | Political | Land Aquisition | 12 | 8.5% | 93.2% |
| 6. | Socia-Economic-Political | Class-Caste | Caste-class discrimination (overt) | 10 | 6.8% | 100% |
| 7. | Socia-Economic-Political | Political | Lack of participatory measures in decision making | 10 | 0% | 100% |
| 8. | Socia-Economic-Political | Class-Caste | Caste based job assignment | 4 | 0% | 100% |
| 9. | Socia-Economic-Political | Political | Lack of Panchayat / Gram Sabha conset | 3 | 0% | 100% |
| 10. | Socia-Economic-Political | Political | Poor compensation under LARR | 3 | 0% | 100% |
| 11. | Socia-Economic-Political | Class-Caste | Entrenchment of caste-class hierarchies | 2 | 0% | 100% |
| 12. | Socia-Economic-Political | Class-Caste | Exclusion to jobs/positions based on caste | 1 | 0% | 100% |
| 13. | Socia-Economic-Political | Class-Caste | Forced Eviction | 1 | 0% | 100% |
| 14. | Socia-Economic-Political | Class-Caste | Segregation (housing, toilets, food) | 1 | 0% | 100% |
| 15. | Socia-Economic-Political | Class-Caste | Other violence | 0 | 0% | 100% |
| 16. | Socia-Economic-Political | Class-Caste | Loss of native livelihood | 0 | 0% | 100% |
| 17. | Socia-Economic-Political | Class-Caste | Forced migration | 0 | 0% | 100% |
| 18. | Socia-Economic-Political | Class-Caste | Inflation | 0 | 0% | 100% |

| 19. | Socia-Economic-Political | Class-Caste | Increased dependence on service economy | 0 | 0% | 100% |
|---|---|---|---|---|---|---|
| 20. | Socia-Economic-Political | Class-Caste | Livelihood precarity | 0 | 0% | 100% |
| 21. | Socia-Economic-Political | Economic | Cultural Appropriation (without compensation) | 0 | 0% | 100% |
| 22. | Socia-Economic-Political | Economic | Commercialization of cultural heritage without equitable benefit-sharing | 0 | 0% | 100% |
| 23. | Socia-Economic-Political | Economic | Assault of people's privacy, dignity, and authenticity | 0 | 0% | 100% |
| 24. | Socia-Economic-Political | Economic | Modernization of old social ethics and values | 0 | 0% | 100% |
| 25. | Socia-Economic-Political | Economic | Social imbalance and disturbance of local population | 0 | 0% | 100% |
| 26. | Socia-Economic-Political | Cultural | Assault of people's privacy and dignity | 0 | 0% | 100% |
| 27. | Socia-Economic-Political | Cultural | Disturbances to indegenious culture and values of local society | 0 | 0% | 100% |
| 28. | Socia-Economic-Political | Cultural | Decreasing preferences among locals for traditional food. | 0 | 0% | 100% |
| 29. | Socia-Economic-Political | Cultural | Disrespect of traditions and local customs by tourists | 0 | 0% | 100% |
| 30. | Socia-Economic-Political | Cultural | Drug Trafficking | 0 | 0% | 100% |
| 31. | Socia-Economic-Political | Gender | Unequal wages | 0 | 0% | 100% |
| 32. | Socia-Economic-Political | Gender | Sexual Harassment | 0 | 0% | 100% |
| 33. | Socia-Economic-Political | Gender | Gender Stereotyping | 0 | 0% | 100% |
| 34. | Socia-Economic-Political | Gender | Unequal Access to Opportunities | 0 | 0% | 100% |
| 35. | Socia-Economic-Political | Class-Caste | Passive Displacement | 0 | 0% | 100% |
| 36. | Socia-Economic-Political | Economic | Commodification of nature | 0 | 0% | 100% |
| 37. | Socia-Economic-Political | Cultural | Drunken Revelry of Tourists | 0 | 0% | 100% |