



# “Sustainable Eco-Tourism Development In Koraput District”

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## ABSTRACT

Eco tourism is a nature based form of special travel defined by the International Eco tourism Society (TIES) as “responsible travel to natural areas which conserved the environment and sustain the wellbeing of local people.” Ecotourism focuses on socially responsible travel, personal growth, and environmental sustainability. The aim is to assess how eco-tourism can be used as a tool for sustainable development while preserving the ecological integrity and socio-cultural aspect of the area. The research is structured around four core objectives. Firstly to Study the Parameters Considered for Sustainable Eco-tourism Development in Koraput. Secondly to Assess the Natural and Cultural Resources of Koraput for Eco-tourism. Thirdly to Identify the Current Status of Existing Infrastructure Responsible for Sustainable Eco-tourism and lastly to Provide recommendation for Sustainable Eco-tourism Strategies and Policies. This research study explores the potential for developing sustainable eco-tourism in the region known for its unique biodiversity, indigenous cultures, and scenic landscapes. The research approach, including field surveys, interviews with local communities, stakeholders, and tourism officials, as well as an analysis of existing tourism infrastructure and environmental policies. Findings indicate that while Koraput holds significant promise for eco-tourism, challenges such as lack of awareness, inadequate infrastructure, and limited community participation hinder its sustainable growth. The research underscores the importance of a participatory model of eco-tourism that integrates environmental education, capacity building, and policy support. The paper concludes with strategic recommendations aimed at promoting sustainable eco-tourism practices that benefit both the local population and the natural environment.

## KEYWORDS:-

Eco Tourism, Koraput District, Natural Resources, Cultural Heritage, Ecological Sustainability, Policy and Governance

## I. INTRODUCTION:-

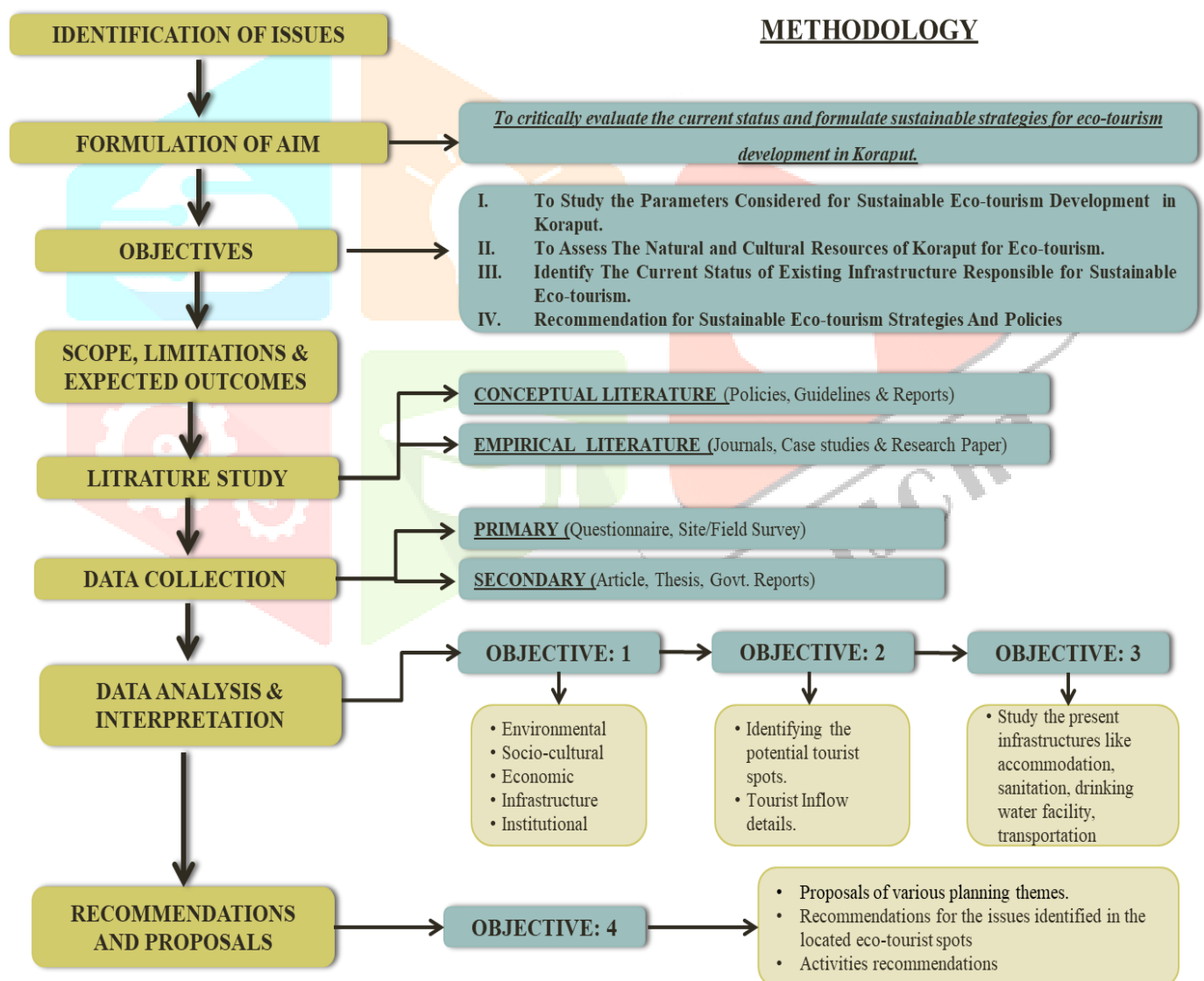
Eco-tourism is a form tourism where the main goal is not to generate wealth, expropriate land and exploit resources of inhabitants and countries in order to benefit big companies. It's established itself within a new concept of tourism, both in socioeconomic items as a practical activity that combines the conservation of natural and cultural sites.

The research of sustainable eco-tourism development in Koraput district is significant due to its potential to address multiple pressing concerns. Koraput's rich biodiversity and unique tribal cultures which is facing threats from unregulated tourism and environmental degradation. Moreover, eco-tourism presents an opportunity to enhance economic growth by creating sustainable livelihoods for the local communities, empowering them to actively participate in and benefit from tourism activities. The research will aim to provide a framework for the development of eco-tourism that aligns with sustainable practices, local empowerment, and biodiversity conservation. New techniques, new products, new methods & new places can be designed & explored to make the entire globe aware about Odisha & Koraput culture.

The demand of modern tourist led to ecotourism consolidating itself as eco-cultural tourism, which promotes socio-cultural and traditional values, environmental awareness and benefits to rural and urban communities. It is essential to leverage local resources and involve the community to ensure environmental sustainability.

## II. METHODOLOGY:-

The study used the basic methodology of primary surveys, interviews of the local people, tourist, people involved in tourism activities and data collection from various secondary sources like, journals, research papers, government reports. It adopted a mixed-method approach



**Primary Data Collection:** Interviews, field surveys, direct observations, and questionnaires for the local people, tourists and people involved in tourism related activity.

**Secondary Data Analysis:** Analysis of tourist inflows (Statistical Bulletin from Government of Odisha, tourism Department), availability of

accommodations, basic infrastructures like sanitation, drinking water, waste management, transportation.

**Gap Analysis:** Assessment of the issues identified with reference to the parameters considered for the study.

### Recommendations and Proposal:

Recommendations has been made on the basis of issues identified on the tourism locations, and potentiality of the locations with regard to eco-tourism.

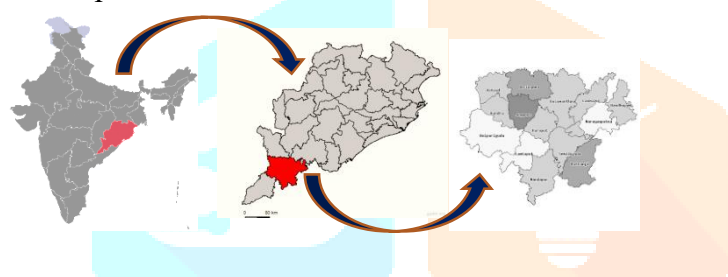
The methodology follows 4 key objectives:

1. To Study the Parameters Considered for Sustainable Eco-tourism Development in Koraput.

2. To Assess the Natural and Cultural Resources of Koraput for Eco-tourism.
3. To Identify the Current Status of Existing Infrastructure Responsible for Sustainable Eco-tourism.
4. Recommendation for Sustainable Eco-tourism Strategies and Policies.

### III. STUDY AREA:-

Koraput district, located in the southern part of Odisha, is a region of immense natural beauty, cultural diversity, and ecological significance. It is home to several indigenous tribal communities and offers tremendous potential for eco-tourism, cultural tourism, and community-based development initiatives.



### DEMOGRAPHIC PROFILE:

Total Population (2011)	1,379,647	Total Population(2024)	16,38,360
Male	678,809	Female	7,00,838
Sex Ratio	1,031 females per 1,000 males	Population Density	157 persons per sq. km
Urban Population	17.41%	Rural Population	82.59%
Scheduled Tribe (ST) Population	698,115 (50.6% of total population)	Scheduled Caste (SC) Population	219,139 (15.9% of total population)
Literacy Rate (Total)	49.21%	Working Population	660,412 (47.89% of total)
Main Workers	392,180	Marginal Workers	268,232
Major Languages Spoken	Odia, Kui, Desia, Bhatari, Telugu	Major Languages Spoken	Odia, Kui, Desia, Bhatari, Telugu
Tribal Communities	Paraja, Bonda, Gadaba, Kondh, Mali, Didayi		
Tribal Communities	Paraja, Bonda, Gadaba, Kondh, Mali, Didayi		
Religions Practiced	Hinduism (majority), Tribal faiths, Christianity		

### IV. DISCUSSION:-

The study approaches including field surveys, interviews with local communities, stakeholders, and tourism officials, as well as an analysis of existing tourism infrastructure and environmental policies. For the primary survey we prepared questionnaire for the local communities involved in tourism activities tourists. Findings indicate that while Koraput holds significant promise for eco-tourism, challenges such as lack of

awareness, inadequate infrastructure, and limited community participation hinder its sustainable growth. The study aim to provide a framework for the development of eco-tourism that aligns with sustainable practices, local empowerment, and biodiversity conservation.

Here is a table outlining the key parameters considered for the sustainable development of eco-tourism in Koraput district, Odisha, India.

	CATEGORY	KEY PARAMETERS
01.	ENVIRONMENTAL	<ul style="list-style-type: none"> <li>Biodiversity Conservation</li> <li>Waste Management</li> <li>Environmental Education</li> </ul>
02.	SOCIO-CULTURAL	<ul style="list-style-type: none"> <li>Cultural Preservation</li> <li>Capacity Building</li> <li>Respect for Local Customs</li> </ul>
03.	ECONOMIC	<ul style="list-style-type: none"> <li>Employment Opportunities</li> <li>Support for Local Enterprises</li> </ul>
04.	INFRASTRUCTURE	<ul style="list-style-type: none"> <li>Eco-Friendly Accommodation</li> <li>Road and Access Improvements</li> <li>Basic Amenities</li> </ul>
05.	INSTITUTIONAL	<ul style="list-style-type: none"> <li>Policy &amp; Regulation</li> <li>Awareness</li> <li>Promotion and Marketing</li> </ul>

### POTENTIAL TOURIST LOCATIONS FOR ECO TOURISM:

- Gulmi waterfall:** It is not a traditional waterfall with a vertical drop, but a natural whirlpool and river cascade area that is both mystically beautiful and culturally important.
- Duduma Waterfall:** It is a blend of natural beauty, tribal culture, and renewable energy, making it a prime candidate for sustainable eco-tourism development in Koraput.
- Balda Cave:** It is a mystical blend of nature, history, and tribal spirituality, making it a

potential site for low-impact tourism, archaeological research, and community-based eco-tourism initiatives.

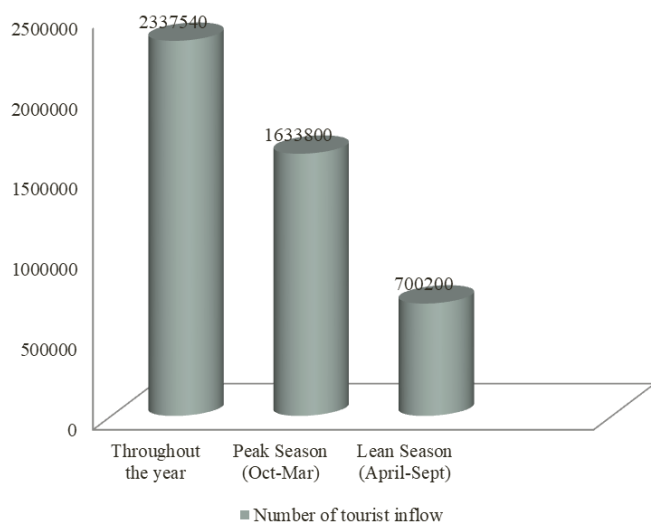
**d. Deomali:** It is not just Odisha's highest point but also a symbol of natural pride and tribal heritage, offering immense scope for

sustainable eco-tourism and cultural preservation in Koraput.

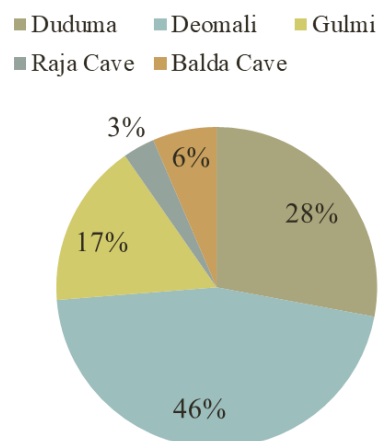
**e. Raja Cave:** It offers a unique combination of natural mystery, tribal mythology, and geological interest, making it a promising site for sustainable exploration and eco-cultural tourism.



**ANNUAL AVERAGE OF TOURIST INFLOW OF THE DISTRICT:**



**AVERAGE ANNUAL TOURIST INFLOW 2023**



**Peak Season (October-March):** This period typically see higher tourist activities due to favorable weather conditions, around 14-15 lakh, which 70% of the annual tourist flow occurred in this season. Whereas **Lean Season (April-Sept):** Tourist Inflow generally decreases during these months, attributed to hotter climates and monsoon rains, around 5.5-7 lakh, which 30% of the annual tourist flow occurred in this season.

**CURRENT STATUS OF EXISTING INFRASTRUCTURE:**

Tourist mostly prefers to stay for maximum 5-6 days, that too in peak seasons. Around 70% of tourist or visitors stay for maximum 2-3 days and approximately 40% people stays for more than 2-4 days.

NAME	PRESENT HOTEL	PRESENT PANTHANIVAS	HOMESTAYS & FARM STAYS	RESORTS & ECO CAMPS
KORAPUT	6	1	1	2
JEYPORE	4	0	0	0
SEMILIGUDA	4	0	1	0
NANDAPUR (DEOMALI)	1	0	2	1
BOIPARGUDA (GUPTESWAR TEMPLE)	0	1	1	0
SUNABEDA	0	1	0	1

In recent times, most of the people come to visit koraput for recreation purpose like trekking, sightseeing and site visit the religious places situated in the towns. As of Koraput town with temples like Sabara Shrikhetra, tribal Museums mostly have the highest no. of stays. Places like Deomali and Nandapur have limited no. of eco stays, which provide a accommodation the tourist to stay to explore more. Seasonal initiatives like Eco Retreat Putsil which held near Nandapur Block of Koraput provide a very adventurous and pleasant acomodations for the tourist.

**CURRENT STATUS OF AVAILABILITY OF RESTAURANTS, PUBLIC TOILETS, DRINKING WATER FACILITIES:**

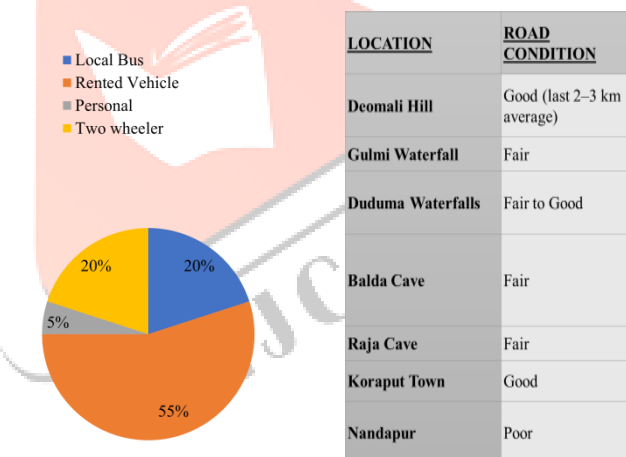
NO. OF PUBLIC TOILETS (APPROX.)	
NAME	PRESENT PUBLIC TOILET
BALDA CAVE	0
RAJA CAVE	0
GULMI WATERFALL	0
DEOMALI	0
KORAPUT	13
MACHHKUND (DUDUMA WATERFALL)	0
NANDAPUR	0

NO. OF RESTAURANTS (APPROX.)	
NAME	PRESENT RESTAURANTS
BALDA CAVE	3
RAJA CAVE	0
GULMI WATERFALL	0
DEOMALI	1
KORAPUT	31
MACHHKUND (DUDUMA WATERFALL)	0
NANDAPUR	13

AVAILABILITY OF DRINKING WATER FACILITIES		
LOCATION	AVAILABILITY	DESCRIPTION
Deomali Hill	Limited	Despite plans for infrastructure development, basic amenities like drinking water are currently lacking. (Available at the resort and eco stay sites only.)
Gulmi Waterfall	Not Available	
Duduma Waterfalls	Limited	No such facilities available, People carry personal water supplies or buy from nearby village shops, if available.
Balda Cave	Not Available	
Raja Cave	Not Available	
Koraput Town	Available	Treated tap water supply is available year-round.
Nandapur	Available	Treated tap water supply is available year-round.

**CURRENT STATUS OF ROAD CONNECTIVITY AND TRANSPORTATION:**

Around 20% of the people prefer the local buses available from the main town to the tourist spots, till a certain distance. 55% people mostly prefer rented vehicles to visit the tourist locations. Local People or people with personal vehicle prefer their own cars, bikes to reach the places.



(this Chart shows the Mode of transportation preferred to reach tourist location)

Deomali have a decent no. of resorts and eco stays, the roads are quite good to few sites. Gulmi waterfall is mainly accessible by ghat roads. For Duduma waterfall good concrete roads are starts from the koraput town to the location till 1-2 km away from the spot. Balda cave is located 66 km from Koraput and the roads are motor friendly but may be narrow and less maintained in certain stretches. Whereas, Raja caves are accessible by narrow unpaved rural roads. Talking about the Koraput town and Jeypore tow, major roads are well-maintained. If we look for areas around Nandapur which is mostly a hilly region, road conditions are deteriorated, leading to difficulties for commuters and residents.

From an environmental standpoint, unregulated tourism poses risks, including waste accumulation and habitat disturbance, due to the absence of strict environmental management practices. While the region's ecological richness is a major asset, its sustainability is threatened by the lack of long-term planning.

To develop sustainable eco-tourism in Koraput, it is essential to invest in eco-friendly

### GAP ANALYSIS ON THE BASIS OF PARAMETERS CONSIDERED

PARAMETER	CURRENT STATUS	GAP IDENTIFIED	SUSTAINABLE STATUS (should be)
Environmental Management	Littering, no waste management, habitat disturbance	Lack of environmental controls	Waste segregation, carrying capacity planning, eco-code for tourists
Waste Management	Tourism hotspots like Duduma, Deomali, lack organized waste disposal systems. .	Absence of waste management -Inadequate awareness among tourists and locals.	Install waste bins with segregation at key locations. - Enforce solid waste bylaws.
Cultural Preservation	Risk of cultural dilution, tourist disrespect for tribal customs	Cultural sensitivity missing	Respectful, immersive tribal tourism experiences
Capacity Building	Limited or no involvement of local tribal communities	Low community engagement	Community-owned and managed eco-tourism initiatives
Employment opportunities	Limited number and types of eco-tourism jobs available	Lack of skill Inadequate Vocational qualification	Develop targeted eco-tourism training and capacity-building programs
Tourism Infrastructure	Poor roads, lack of toilets, no signage, minimal amenities	Infrastructure gap	Eco-friendly infrastructure (trails, rest stops, sanitation, signage)
Marketing & Promotion	Poor online presence, under-promoted destinations	Visibility gap	Strategic eco-tourism marketing, storytelling, use of digital platforms
Safety & Accessibility	Unsafe trekking paths, no rescue or first-aid facilities	Safety infrastructure lacking	Marked safe trails, emergency plans, basic medical aid at sites
Transportation	Inadequate access to key eco-sites like Deomali, Gulmi, Balda Cave	Lack of transportation options for budget and eco-conscious tourists	Regular, affordable, and accessible public transport (e.g., buses, shared vans)

### V. RECOMMENDATIONS:-

For the sustainable development of eco-tourism in Koraput, a multi-dimensional approach is essential. Proposals should begin with the development of eco-friendly infrastructure, such as solar-powered accommodations, waste management systems, and improved road connectivity to key tourist sites, ensuring minimal ecological disruption. Community participation must be at the core of tourism planning—promoting homestay programs, tribal-guided tours, and local handicraft markets can create inclusive income opportunities while preserving cultural identity. Training and capacity-building initiatives for local youth as eco-guides and hospitality professionals would enhance service quality and deepen local engagement. Furthermore, conservation

infrastructure, strengthen community-based tourism models, and enforce conservation measures. With a focused strategy that balances tourism growth with environmental and cultural preservation, Koraput has the potential to become a model for sustainable development in tribal and eco-sensitive regions.

education programs for tourists and locals can foster environmental awareness and responsible tourism practices. Introducing regulatory frameworks that cap tourist numbers in ecologically sensitive areas, along with biodiversity monitoring, will help maintain ecological balance. Collaboration between government bodies, NGOs, and private stakeholders can ensure coordinated efforts, with periodic assessments to measure sustainability outcomes. These integrated proposals can transform Koraput into a leading example of eco-tourism that is both economically viable and environmentally responsible.

To align with sustainable eco-tourism parameters in Koraput, a variety of activities can be introduced that promote conservation, cultural preservation, and community involvement. Nature-based activities like guided treks through

Deomali Hills, bird watching at forest reserves, and waterfall trails can attract environmentally conscious tourists while ensuring ecological sensitivity. Tribal village tours led by local residents can offer immersive cultural experiences, including traditional music, dance, and cuisine, creating pride and economic benefit for indigenous communities. Tourists can also participate in craft-making workshops, where local artisans teach traditional weaving, pottery, and bamboo art, supporting heritage preservation.

Eco-educational activities such as forest conservation walks, organic farming demonstrations, and biodiversity awareness

camp for both tourists and local youth can build long-term environmental stewardship. Setting up eco-parks, nature interpretation centers, and community museums can provide educational content while minimizing impact on natural areas. Encouraging volunteer tourism where visitors engage in local sustainability projects like waste management, tree plantation, or water conservation can deepen their connection to the place. All activities should follow strict eco-guidelines, ensure community leadership, and respect the carrying capacity of sensitive zones, thereby fulfilling the key parameters of sustainable eco-tourism in Koraput.

## VI. RECOMMENDATION AND PROPOSAL:-

The aim is to enhance sustainable tourism practices through cultural preservation, economic inclusion, and ecological management, & community management. Below is a table summarizing the types of initiatives that can be taken to promote community involvement in eco-tourism.

### KEY RECOMMENDATIONS

- To develop sustainable eco-tourism in Koraput, actively involve local tribal communities in managing homestays, guiding, and cultural programs.
- Build eco-friendly infrastructure using natural materials and renewable energy sources, avoiding ecologically sensitive zones.
- Promote cycling, trekking, and thematic tourism circuits to reduce environmental impact and enhance visitor experience.
- Implement waste management systems, visitor caps, and digital permit tools to protect biodiversity. Lastly, ensure tourism revenue is transparently shared with local communities to support conservation and livelihoods.

<u>PLANNING THEME</u>	<u>PROPOSALS</u>	<u>PURPOSE / IMPACT</u>
<b>Environmental Conservation</b>	<ul style="list-style-type: none"> <li>• Create community forest watch groups.</li> <li>• Promote eco-volunteering programs for visitors.</li> <li>• Implement waste management and plastic-free tourism zones.</li> </ul>	<ul style="list-style-type: none"> <li>• Preserves the ecological integrity of sites and builds pride in environmental stewardship.</li> </ul>
<b>Community Engagement &amp; Participation</b>	<ul style="list-style-type: none"> <li>• Form Eco-Tourism Management Committees with tribal and women representatives.</li> <li>• Conduct regular Gram Sabha meetings for tourism decisions.</li> </ul>	<ul style="list-style-type: none"> <li>• Builds ownership, ensures inclusiveness, and respects local traditions and rights.</li> </ul>
<b>Capacity Building &amp; Training</b>	<ul style="list-style-type: none"> <li>• Train local youth as certified eco-guides, storytellers, and homestay operators.</li> <li>• Offer courses on hospitality, sanitation, and financial literacy.</li> </ul>	<ul style="list-style-type: none"> <li>• Empowers community members with employable skills; ensures quality experiences for visitors.</li> </ul>
<b>Infrastructure Development</b>	<ul style="list-style-type: none"> <li>• Develop low-impact, eco-friendly infrastructure: trails, solar lighting, compost toilets, drinking water facilities.</li> <li>• Set up information centers and way finding signage in local languages.</li> </ul>	<ul style="list-style-type: none"> <li>• Enhances tourist access and experience without harming the environment.</li> </ul>
<b>Marketing &amp; Branding</b>	<ul style="list-style-type: none"> <li>• Develop a “Tribal Trails of Koraput” campaign using regional identity and storytelling.</li> <li>• Use digital platforms, eco-tourism websites, and social media for outreach.</li> </ul>	<ul style="list-style-type: none"> <li>• Attracts responsible tourists seeking authentic experiences and creates a distinct market identity.</li> </ul>
<b>Policy &amp; Institutional Support</b>	<ul style="list-style-type: none"> <li>• Integrate CBET into the District Tourism Plan.</li> <li>• Establish partnerships with NGOs, Forest Department, and academic institutions.</li> </ul>	<ul style="list-style-type: none"> <li>• Provides long-term support, coordination, and legitimacy for community tourism initiatives.</li> </ul>
<b>Education &amp; Youth Engagement</b>	<ul style="list-style-type: none"> <li>• Initiate eco-clubs and school tourism awareness programs.</li> <li>• Involve youth in conservation, storytelling, and digital marketing.</li> </ul>	<ul style="list-style-type: none"> <li>• Builds the next generation of eco-tourism leaders and local pride.</li> </ul>

## VII. CONCLUSION:-

The study infers that Koraput district possesses significant potential to develop sustainable eco-tourism owing to its unique natural landscapes and rich tribal culture. However, the current limitations in infrastructure, community engagement, and environmental management need urgent attention to harness this potential effectively. Sustainable eco-tourism in Koraput can contribute substantially to local economic development while preserving ecological balance and cultural heritage, but this requires integrated planning, capacity building, and strong policy support.

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