



Ecotourism as a mechanism for achieving a green economy in developing countries: A Case Study of Dudhwa National Park

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Abstract

The green economy has been gradationally honored in the transnational converse as a global approach and a substitute development model in mollifying atmospheric carbon content, reducing poverty and guaranteeing sustainable development (UNEP et al., 2011). Although there is no globally accepted definition of the green economy, one of the most extensively cited delineations is handed by the United Nations Environment Programme (UNEP, 2011, p. 2) which defines the green economy as 'one that results in enhanced human well-being and social equity, while significantly dwindling environmental pitfalls and ecological shortages. It is low carbon, resource effective and social inclusive'. With its focus on poverty decline, social inclusiveness, environmental conservation and carbon emission reduction, the green economy is now regarded as providing a pathway towards achieving sustainable development (UNEP, 2011). While advanced countries are more concerned with carbon emigrations reduction in their transitioning into the green economy, Khor (2010) argues that developing countries are committed to reducing poverty and achieving sustainable growth. With a low carbon profile and rich natural capital assets in developing countries, UNEP et al. (2011) have recognized key sectors that may subsidize to the greening of emerging countries' economies including: energy access, waste, ecotourism, sustainable urbanization and forestry. The focus of this paper is on the potential of ecotourism to contribute to the green economy in a developing country, using a case study from Uttar Pradesh. Ecotourism, as a niche form of tourism and a development philosophy, has grown and gained global influence as a sustainable development and environmental conservation strategy (Courvisanos and Jain, 2006; Western, 2012) and has attracted attention. The state of Uttar Pradesh has come to the lead in utilizing, creating and innovating green solutions in the state. The state government focuses on replacing traditional energy sources like hydrogen-based energy with green energy like solar, wind and green hydrogen. It is also setting up an arrangement to transfer electricity from renewable energy projects as it seeks to increase the output from green sources and meet the state's energy demands. Energy demand has increased significantly in tandem with the state's development. Because conventional energy sources are limited, their misuse is limited, and environmental pollution is increasing, energy production based on the original and renewable energy sources is being given major priority and promotion. New and better chances to engage in mainstream energy generation are becoming obvious.

Keywords: Ecotourism, green economy, dudhwa national park, sustainability

INTRODUCTION

Ecotourism and the green frugality are both sustainable development generalities that seek to cover the natural terrain and deliver sustainable issues to people. Although the conception of sustainable development is largely queried, Kates et al. (2005) assert that it hinges on three crucial pillars profitable development, social development and environmental protection, which are mutually buttressing at the original, public and global situations. Whereas the green frugality is a global strategy for achieving sustainable development, ecotourism is generally an original or community position strategy that has the implicit to contribute to sustainable development. As suggested before, the green frugality focuses on poverty reduction, environmental conservation, social inclusiveness and carbon emigration reduction as the pathway to achieving sustainable development. still, the literature (e.g. Courvisanos and Jain, 2006; Honey, 2008) suggests that ecotourism can contribute to the green frugality through environmental conservation, social inclusiveness and poverty reduction by generating profit/ income, creating employment openings and empowering original communities as well as reducing original communities' dependence on the natural terrain for their livelihood in terms of resource birth. UNEP et al. (2011) fete that the rich natural coffers in numerous developing countries offer the eventuality for ecotourism to be a crucial contributor to growing the green frugality and therefore conserving the terrain by reducing original communities' dependence on natural coffers and generating employment openings, especially important in original communities without the coffers for engaging in artificial conditioning.

Green economy initiatives and challenges in Uttar Pradesh

According to Karl Burkart, the green frugality is grounded on six sectors Renewable Energy, Green structures, Sustainable Transport, Water Management and Waste Management. In simple terms, Green Economy is defined as a profitable system that's entirely concentrated on the conception of "green". Uttar Pradesh is one of the fastest growing countries in terms of green structure systems as the state has further than 570 similar systems covering over 1,400 million sq ft area, according to the Indian Green Building Council (IGBC). The acceptance among the inventors to borrow sustainable design, construction and instrument has been wide. The Government of Uttar Pradesh in October 2022, notified the Uttar Pradesh Green Hydrogen Policy to promote growth and employment in the state while prioritizing decarbonization and the state's donation to India's climate pretensions. The policy shall promote green hydrogen/ ammonia product, request creation, and demand aggregation. Uttar Pradesh's energy transition towards green energy is gaining instigation with strong backing from major players investing in renewable energy sources. The state government is fastening on replacing traditional energy sources like hydrocarbon grounded energy with green energy like solar, wind, and green hydrogen. It's also setting up a structure to transmit electricity from renewable energy systems as it seeks to boost the affair from green sources and meet the state's energy demand from them. Large- scale investments in the renewable energy sector are going to change the biosphere of the state in the coming times. Also, the PM-KUSUM scheme has innovative results similar as the structure of solar power shops on barren land, installation of solar pumps for growers, and solarisation of being pumps, with the overall thing of icing energy security for the agrarian sector. Uttar Pradesh has 2.3 gigawatt (GW) of installed solar capacity and another 714 MW on the way. Open access installations are developing in the state due to its favourable cheap land cost and energy storehouse legislation. The state of Uttar Pradesh's budget has set away funding for renewable energy development systems in several sections within the state. The state of Uttar Pradesh has come a favoured destination for investment in renewable and sustainable green energy results due to the state government's favourable climate and backing offered to investors. presently, 23 renewable energy systems are in the workshop in colorful regions around the state, including, Jalaun, Mau, Ballia, Azamgarh, Sitapur, Jhansi, Banda, Fatehpur, Kanpur, Noida, Auraiya, Sonbhadra, Agra, Ambedkar Nagar, Badaun, Mahoba, Mirzapur, Pilibhit, Pratapgarh, Shahjanpur and Unnao. Out of these, Jalaun has two solar shops in townlets that are the subject of the largest systems, each worth further than INR 500 crore. Satluj Jal Vidyut Nigam (SJVN) Limited has also suggested a 100- crore investment in the shape of three solar power systems in the state. The state government has also made several sweats to concentrate on green energy sources similar as solar, wind, and green hydrogen to replace traditional energy sources similar as hydrocarbon- grounded energy. It's also constructing structure to transmit power generated by renewable energy systems to increase green energy affair

and meet the state's energy requirements. Also, around \$ 320 million has been set away to produce enterprise to promote energy from organic waste, including bio-ethanol, biogas, bio-diesel, and bio-coal, among others. A recent offer by the Uttar Pradesh state government also proposes erecting a green energy corridor. During the fiscal time 2022- 23, the government intends to install 15000 solar pumps. In addition, the state government's Babuji Kalyan Singh Gram Unnati Yojana intends to install solar road lights on roads in all of the state's townlets. The state budget for the current financial time has set a way around \$ 2 million for this purpose. Likewise, with the overall thing of icing energy security for the agrarian sector, the Pradhan Mantri Kisan Urja Suraksha evam Utthaan Mahabhiyan (PM- KUSUM) scheme has innovative results similar as the construction of solar power shops on barren land, the installation of solar pumps for growers, and solarisation of being pumps, in addition to reducing irrigation costs.

Background of Ecotourism in Uttar Pradesh

In an attempt to achieve the dual objective of boosting ecotourism and increasing employment opportunities, the Uttar Pradesh government has identified 56 ecotourism sites in 56 districts under the One District, One Destination (ODOD) scheme. The concept, inspired by the state government's One District, One Product (ODOP) scheme, is about identifying one destination in every district that could be branded as an ecotourism spot to attract nature enthusiasts. UP has several ecotourism spots but the most prominent are the tiger reserves, wildlife sanctuaries and wetlands. The Katarniya Ghat Wildlife Sanctuary, located in the Upper Gangetic plain falling in Bahraich, boasts of having tigers and a mosaic of sal and teak woods. The Hastinapur Wildlife Sanctuary is notable for being the natural habitat of 'barasingha (swamp deer). Similarly, the Majhauri Sagar of Siddharthnagar, Badela Tal (lake) of Azamgarh and the Ghoomar Tal of Jaunpur will get special recognition as ecotourism destinations soon. Besides, many such areas endowed with serene natural beauty will be seen on the map of ecotourism. The 56 destinations include Dudhwa National Park in Lakhimpur Kheri, Chandra Prabha Wildlife Sanctuary in Chandauli, Katarniaghat Wildlife Sanctuary in Bahraich, Ranipur Wildlife Sanctuary in Chitrakoot, Mahavir Swami Wildlife Sanctuary in Lalitpur, Soorsarovar Bird Sanctuary in Agra, Kaimur Wildlife Sanctuary in Mirzapur, Hastinapur Wildlife Sanctuary in Meerut, Amangarh Tiger Reserve in Bijnor, Sohelwa Wildlife Sanctuary in Balrampur, Turtle Breeding Centre in Varanasi, Pilibhit Tiger Reserve in Pilibhit, Nawabganj Bird Sanctuary in Unnao, Samaspur Bird Sanctuary in Rae Bareilly, Lakhbhosli Bird Sanctuary in Kannauj, Sandi Bird Sanctuary in Hardoi, Bakhira Bird Sanctuary in Sant Kabir Nagar, Okhla Bird Sanctuary in Gautam Buddha Nagar, Saman Bird Sanctuary in Mainpuri, Parvati Arga Bird Sanctuary in Gonda, Vijay Sagar Bird Sanctuary in Mahoba, Patna Bird Sanctuary in Etah, Dr Bhimrao Ambedkar Bird Sanctuary in Pratapgarh, Shekha Lake Aligarh in Aligarh, zoological parks in Lucknow, Kanpur Nagar and Gorakhpur, Lion Safari in Etawah, Mini Zoo Izzat Nagar in Bareilly, Dakhan Lake in Ambedkar Nagar, Badela Tal in Azamgarh, Khanpur Forest Block in Auraiya, Magahi Lake in Kanpur Dehat, Alwara Wetland in Kaushambi, Shahganj Wetland (Ghoomar Tal) in Jaunpur, Akhnai Lake in Fatehpur, Kuthila Lake in Farrukhabad, Samada Lake in Ayodhya, Sindhuwa Tal in Deoria, Diabani Temple Pailani in Banda, Bhaghar Wetland in Barabanki, Samdha Tal in Bhadohi, Jodhpur Tal in Mathura, Elephant Reserve in Saharanpur, Majhauri Sagar in Siddharthnagar, Ajjaipur Lake in Sitapur, Kaimur Wildlife Sanctuary in Sonbhadra, Kandunala Forest Block in Amethi, Maudha Dam in Hamirpur, Nagla Shekha Wetland in Hathras, Sant Ravidas Van Vihar in Basti, Van Devi Temple in Mau, Municipal Corporation Biodiversity Park in Shahjahanpur, Chandanpur Ghatiyari Biodiversity Park in Kasganj, Chand Khamaria Krishna Deer Conservation Area in Prayagraj and Jai Prakash Narayan Bird Sanctuary (Surhatal) in Ballia.

Rich natural/cultural resources and geographical diversity: Ecotourism spots in Uttar Pradesh are divided in 09 circuits.

1. Circuit of Western Wildlife
2. Riverine Circuit Lion Safari
3. Circuit Terai Tiger
4. Adventure Circuit of Bundelkhand
5. Mountain Path Vindhya

6. Circuit of West Bird/Wetland
7. Circuit of Central Bird/Wetland
8. Circuit of the Ganges Basin
9. Circuit of the East Wildlife

Uttar Pradesh is able to attract a good number of domestic and international visitors in this field with 35 ecotourism destinations on this 09 circuit. Uttar Pradesh's top ecotourism destinations

- Dudhwa National Park
- Pilibhit Tiger Reserve
- Katerniaghat Wildlife Sanctuary
- National Chambal Sanctuary
- Lion Safari Etawah
- Nawabganj Bird Sanctaury

From these over 06 ecoturism destinations, 04 destination (Dudhwa National Park, Pilibhit Tiger Reserve, Katerniaghat Wildlife Sanctuary and Lion Safari Etawah) are situated within driving range of metro cities, such as Delhi, Noida and Gurgaon.

Methodology

A qualitative research approach was adopted for this study using semi-structured interviews, in-depth interviews and secondary data analysis. This research has made an attempt to examine the contribution of ecotourism to green economy by interviewing local communities, service providers, government officials and local business units. It identifies the expectations of local communities, effectiveness of supporting services and community commitment in environmentally sustainable activities. This paper is based on a case study of ecotourism as a mechanism for green economy development. The study used qualitative research methodology through interviews and focus group discussions to gather data. The data were collected by face-to-face interviews and focus group discussions. A total of 50 respondents constituting local government authorities, Ecotourism destination coordinator and local people, village life experience package participants, police and security officers, hotels, provides more clarity about the environmental sustainability challenges in Uttar Pradesh. Both primary and secondary data was used.

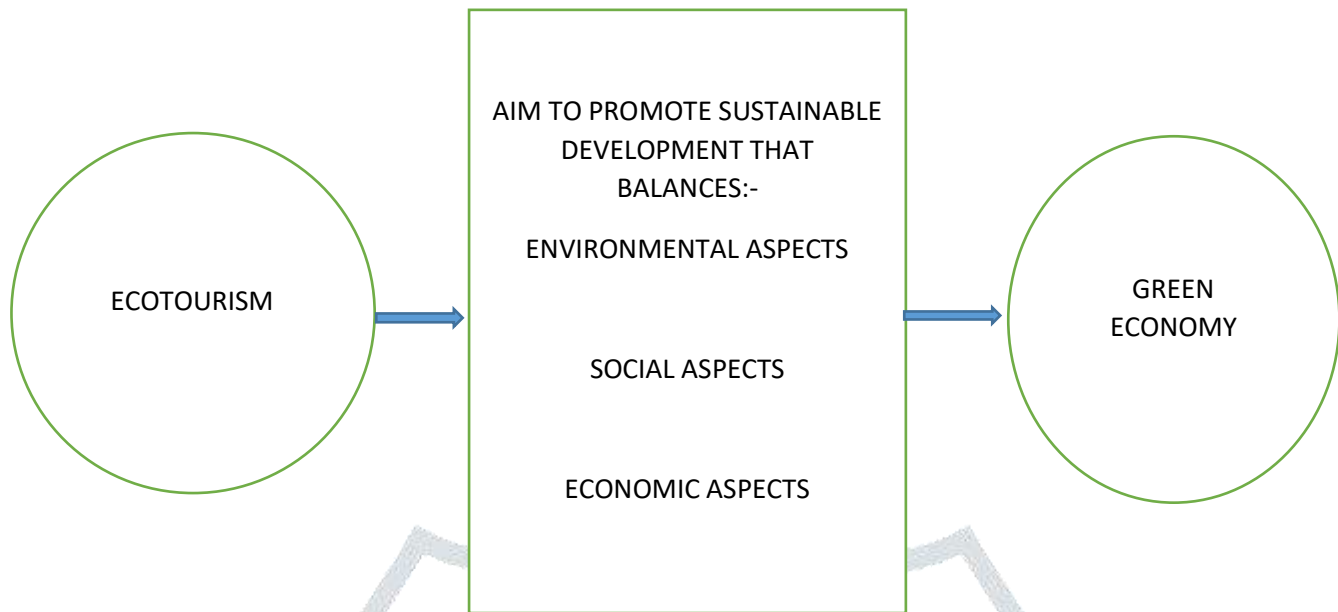
Ecotourism and the green economy: the case of the Dudhwa National Park, Uttar Pradesh

Ecotourism and green economy are two concepts that share some similarities, but also have some differences. Both ecotourism and green economy aim to promote sustainable development that balances economic, social, and environmental aspects. Both ecotourism and green economy can generate income, create jobs, and support conservation efforts. However, ecotourism and green economy also have some differences, such as:

Scope: Ecotourism is a specific form of tourism that focuses on conserving the environment, sustaining the well-being of the local people, and educating the visitors about the natural and cultural aspects of the destination. Green economy is a broader concept that encompasses all sectors of the economy that contribute to low-carbon, resource-efficient, and socially inclusive development.

Approach: Ecotourism is mainly driven by the demand of tourists who seek authentic and responsible travel experiences that minimize their environmental impact and maximize their positive contribution to the local communities. Green economy is mainly driven by the supply of goods and services that meet the needs of consumers while reducing environmental risks and ecological scarcities.

Challenges: Ecotourism faces challenges such as complex model, prone to misuse, lack of certification, capacity building, and implementation deficit. Green economy faces challenges such as policy coherence, financing, innovation, governance, and behavioral change.



Physical characteristics of the dudhwa national park

The Dudhwa Tiger Reserve is a protected area in Uttar Pradesh that stretches mainly across the Lakhimpur Kheri and Bahraich districts and comprises the Dudhwa National Park, Kishanpur Wildlife Sanctuary and Katarniaghat Wildlife Sanctuary. It covers an area of 1,284.3 km (495.9 sq mi) and includes three large forest fragments amidst the matrix dominated by agriculture. It shares the north-eastern boundary with Nepal, which is defined to a large extent by the Mohana River. Dudhwa National Park or Dudhwa Tiger Reserve is great paradise near Nepal border. Quite impressively, the northern boundary of the park is being constituted by the Mohana River flowing along the Indo-Nepal border whilst the Southern boundary is formed by the river Suheli. The Kishanpur Sanctuary lies in the Lakhimpur- Kheri and Shahajahanpur districts in Uttar Pradesh. Spreading across an expanse of 811 sq km beholding the nature lovers with marshes, grasslands and dense forests, the area is actually meant for tremendous counts of Swamp Deer and Tigers species. The area of the Park is composed of a vast alluvial plain along the tributaries of Mohana and Suheli, interspersed with numerous rivulets, lakes and pools. The rich and extremely fertile Indo-Gangetic plains support a flamboyant growth of forests diversity of fauna. The park has some of the best forests of 'Sal' tree in the world, amongst other flora; and is a virtual unexplored paradise for nature lovers, wildlife enthusiasts and bird watchers.

Background and purpose of the DNP

Dudhwa became a tiger reserve in 1979. The area was established in 1958 as a wildlife sanctuary for swamp deer. Thanks to the efforts of Billy Arjan Singh the area was notified as a national park in January 1977.^[2] In 1987, the park was declared a tiger reserve and brought under the purview of the 'Project Tiger'. Together with the Kishanpur Wildlife Sanctuary and the Katarniaghat Wildlife Sanctuary it forms the Dudhwa Tiger Reserve. The area of the park falls within the Upper Gangetic plains and is a vast alluvial plain ranging in altitude from 150 m (490 ft) in the farthest southeast to 182 metres (597 ft) in the extreme north. The park's mosaic of high forest interspersed with grasslands is characteristic of the Terai ecosystems in India and the area is, probably, the last prominent remnant of this type of ecosystem. The forests, especially the sal forests, have always been very dense and can be categorized into northern tropical semi-evergreen forest, northern Indian moist deciduous forest, tropical seasonal swamp forest and northern tropical dry deciduous forest. The main flora comprises sal, asna, shisham, jamun, gular, sehore and bahera. The grasslands comprise about 19% of the park. The wetlands constitute the third major habitat type and include the rivers, streams, lakes and marshes. While many of the major wetlands are perennial with some amount of surface moisture retained round the year, some dry up

during hot summer. The park is home to one of the finest forests in India, some of these trees are more than 150 years old and over 70 ft (21 m) tall.

Characteristics of communities around Dudhwa National Park

Tharu Tribal Community Dudhwa Tiger Reserve in Uttar Pradesh is famous for its wilderness and wildlife. But the legend of Dudhwa is incomplete without the Tharu community. The unique folk culture of the Tharu tribe living in and around the forests of Dudhwa National Park also attract a lot of tourists. There is a great demand for handicraft materials made by the skilful hands of Tharu women. For this, a centre for the sale of Tharu products will be available in the Dudhwa tourism complex.

Management of the DNP and ecotourism

The management of DNP has been government responsibility to promote ecotourism and also conserve the environment. The main partners in DNP are local government, tour operators, Restaurants and hotels, Transportation Partners and local people. There is an official website of UP Ecotourism and dudhwa national park for booking and detailed information.

Contribution of ecotourism to the green economy in DNP

As earlier identified, ecotourism has the potential to contribute to sustainable development by engaging local communities, reducing poverty and conserving the environment, though this has not always been the experience. The following section explores the experiences of communities around DNP on the implementation of ecotourism and interprets these in the context of successes and challenges in its contribution to the green economy.

Successes of ecotourism's contribution to the green economy

Healthy economic growth and increasing income levels: Favourable growth in the Indian economy, rise in urban middle-class population and increasing levels of disposable income with increased affinity for leisure and wellness tourism are some of the driving forces.

Changing consumer way of life and changing likings of tourists: More than 65 per cent of the Indian population fall in the age group of 15-64 years, Indian travelers are more open to natural places where they can feel close to nature and also can enjoy peace. Ecotourism destinations of Uttar Pradesh can provide a good option to these tourists.

Encourages sustainable development – Eco travels encourages sustainable development goals as through this needs of present travelers are met without compromising the nature and needs of local people.

Conclusion

The introduction of the green economy as an alternative development paradigm has encouraged the international community, national and local governments and NGOs to adopt new development strategies that focus on poverty reduction, social inclusiveness, carbon emission reduction and environmental sustainability. Although the green economy literature has identified ecotourism as one opportunity for greening the economy, studies on ecotourism show that there are well-known negative impacts of ecotourism such as depletion of natural and ecological resources (Ormsby and Mannie, 2006) and indoctrination and invasion of foreign culture into local communities (Clifton and Benson, 2006). In addition, the lack of ecotourism policies in many developing countries has resulted in a situation where many attractions remain either undeveloped or underdeveloped (e.g. Bediako, 2000; Charnley, 2005). Future research regarding ecotourism's potential to contribute to the green economy especially in developing countries could focus on understanding the green economy concept from the perspective of local institutions on the role of community engagement as well as the practicability of the ecotourism concept as an alternative development paradigm in local communities. In addition, the barriers that impede ecotourism implementation towards transitioning into the green economy could be explored.

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