

Eco-Tourism as a Potential Tool for Biodiversity Conservation and Sustainable Livelihood in Himalayan Region, with Special Reference to Garhwal Region

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Abstract – *The High height lake has been the focal point of the fascination for tourists since antiquated occasions. After the development of Uttarakhand state, High elevation lakes are pulling in vacationer around the globe. In such a situation, tourism area has become the primary source of economy of Uttarakhand. This paper investigates the Ecotourism, as a reasonable income source for mountain networks that lives around these High height lakes. The present examination was directed on the unmistakable component of tourism in Dodi Tal Lake and its effect on socioeconomic status just as effects on the lake condition in some chose towns, Agoda (s1), Dasda (s2) and Dandalka (s3). The essential information was gathered with the assistance of amass poll and furthermore utilizing secondary information from assorted source. The investigation uncovers that agriculture (91%) is unmistakable income source while ecotourism is as second significant income source of these three towns. The ecotourism is being viewed as reasonable source of salary age and seen as entrancing assignment for the adolescent. Ecotourism has averted the young movement in Dodi Tal environ. In spite of agriculture, roughly 85% of the families have their most noteworthy yearly normal salary through tourism exercises. After completely receiving tourism, changes in the conventional expectation for everyday comforts of this territory were taken note. Be that as it may, the tourism rehearses in the Dodi Tal territory has been recognized as a key of natural issues influencing the lake Environment. This discovering recommends that the need of all around arranged and reasonable eco-tourism approach in the locale. This paper supports to make agreement between the mountain network and the high height lake condition.*

Keywords: Eco-Tourism, High Altitude Lake, Sustainable Livelihoods

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INTRODUCTION

The High height lakes have an ecological, stylish, and socioeconomic centrality, not just for those living in the mountain zones, yet in addition for individuals living past them. Here individuals come looking for otherworldliness, strict conviction, retribution and harmony. About 10% of the total populace depends straightforwardly and 40% in a roundabout way relies upon mountain resources for their jobs and prosperity. As indicated by Smith tourism can be characterized into five classes, for example, ethnic tourism, social tourism, chronicled tourism, ecological tourism (ecotourism) and recreational tourism. Ecotourism is a part of economical tourism. From various perspectives, supportable tourism represents

the connection among ecotourism and reasonable improvement. Ecotourism involves a blend of protection and tourism (the economics related with it) to profit nearby networks, particularly concentrating on supportability (Ecotourism advances preservation and economic improvement'. Ecotourism and especially Community-based tourism can possibly be increasingly appropriate employment alternative and to make considerable positive commitment to the executives and protection of backwoods and untamed life.

The regional dimension

High Altitude Lake, Dodi Tal (Uttarkashi) has a brilliant culture of Uttarakhand and the setting of

incalculable legendary accounts of India. Along these lines, the whole zone draws in tourists from the antiquated occasions. Over the most recent couple of years, tourism industry has developed in Uttarkashi and later on, the tourism segment is the well on the way to rise as the quickest developing and manager to give work. In any case, presently days, the nearby condition and condition are being contaminated because of the appearance of tourists more than the limit in Dodi Tal and the wellbeing measures of tourists being embraced by the tourists. Focuses are being gathered at metric tons rough waste, for example, polythene packs, plastic jugs, tin holders, and so forth which are difficult to dispose of. The waste and sewage are allowed to fall in the Dodi Tal, because of which the water of heavenly streams like Bhagirathi and Ganga and so forth are becoming toxic and polluted by expanding the danger of wellbeing for neighborhood inhabitants and tourists.

Since the appearance of tourists, numerous social ideals have begun coming in unknown slope culture, subsequently a circumstance may emerge when any vacationer doesn't care to go to the god place that is known for Uttarakhand. By and by, for the repayment of materialistic offices, there is a great deal of difficulty being exacted by tourism organizations with normal resources because of which, the significance, presence, condition and biodiversity of India are prompting the end and the lives of neighborhood occupants in emergency is deteriorating. Hence in Uttarakhand, tourism ought to be created so that the earth and biodiversity preservation and regular resources have constrained and nonstop employments. In this way, ecotourism official has been framed with regards to the above realities. In the common tourism arrangement of the legislature of India, 1988 and the Uttaranchal woodland strategy 2001, it has been considered as independent work significant enterprises, with the goal that economic improvement begins consequently and jams public activity, culture, biodiversity and ecosystem. So now the ecotourism is assuming a key job in occupation for the mountainous networks of the Dodi Tal region.

REVIEW OF LITERATURE

Many authors have portrayed ecotourism as the way to accomplish preservation and give pay to networks in and around Protected Areas. Many state that it is the main incredible asset to monitor and support tourism for future. The word ecotourism has been characterized and translated differently and is frequently a lot of manhandled in its use. It has been deciphered by specialist organizations to suit their own benefits.

LITERATURE ON ECOTOURISM

Ceballos-Lascurain (2011) created one of the meanings of ecotourism, Traveling to moderately undisturbed or polluted territories with the particular object of examining respecting and getting a charge

out of the view and its wild plants and creatures just as any social sign (over a wide span of time) found in these zones .

Head servant Healy (2012) expressed that nature tourism indicates all tourism legitimately subject to the utilization of normal resources in a generally lacking state, including landscape, geography, water highlights, vegetation and untamed life and so on. Along these lines it incorporates chasing, field engine biking, and wilderness boating, regardless of whether the utilization of the characteristic resources by the vacationer is neither savvy nor practical. Like conventional tourism, it tends to be contrarily affected by different outside variables. This record for its precariousness as a source of Income.

Lindberg and Hawkins (2013) The Ecotourism Society's definition is most generally acknowledged, capable travel to normal zones that saves nature and improves the prosperity of neighborhood individuals

The National Ecotourism Strategy NES (2014) characterize ecotourism as a nature based tourism that includes instruction and translation of the common habitat and is figured out how to be ecologically manageable.

As indicated by **Ceballos-Lascurain (2015)** of the World Conservation Union (IUCN), Ecotourism is ecologically mindful travel and appearance to generally undisturbed normal territories, so as to appreciate and acknowledge nature (and any going with social highlights – over a wide span of time) that advances preservation, has low guest negative effect and accommodates advantageously dynamic financial association of neighborhood populaces.

David Barkin (2015) recommend that ecotourism, to be effective, must advance economic improvement by building up a sturdy profitable base that permits neighborhood occupants and ecotourism specialist organizations to appreciate rising ways of life. An ecotourism venture must consolidate the social elements of beneficial association and natural preservation. In light of the experience of the over wintering stores of the Monarch Butterfly in west-focal Mexico he propose that except if ecotourism effectively fuses the neighborhood society into administration arranging and arrangement, and incorporates projects to meet the central requirements for money and work 32 for all individuals in the area, the exceptional characteristics of the site and its vegetation might be hopelessly harmed

Atmosphere and agro biodiversity

(Semwal et al., 2014; Singh et al., 2018). Editing designs in the Himalaya are worked around two seasons: the rainstorm/blustery season and the winter season. With a conviction of event of

supreme yield disappointment because of terrible atmosphere just in one trimming season in a year¹, ranchers will in general stock staple nourishment required for a time of a half year. In the course of the most recent 50 years, ranchers could review total disappointment of the two harvests just in 1966-67 out of a couple of high rise towns. Individuals adapted such a circumstance by devouring wild staple nourishment like dried products of *Pyrus pashia* and *Aesculus indica* and by selling non-timber woods items and by gaining compensation in faraway places. Notwithstanding, strategy of providing an amount of staple nourishment at sponsored cost since 1970s have kept farmers from noticing neighborhood generation based nourishment security framework. Despite the fact that planting of winter crops has been deferred by about a month because generally winter precipitation as of late, reaping time appear to be unaltered potentially as a result of warming.

Wearing (2017) is of view that in light of the meaning of customary tourism, ecotourism can be talked about as an alternate substance dependent on the inclusion of nearby populaces in all parts of tourism. Indigenous populaces are the most educated about the zone, and they have the commonsense and familial information on the characteristic highlights of the zone.

In an examination by **Spenserian (2017)** information was gathered by organized survey to evaluate the disposition and idea of Micronesians towards ecotourism.

OBJECTIVES OF THE STUDY

1. To identify and evaluate the effects of ecotourism on economy, cultural and the environment of local people in Garhwal.
2. To identify factors that lead to satisfaction and dissatisfaction of tourists who visits the destinations

RESEARCH METHODOLOGY

Materials and Methods Study Area

The Garhwal Himalaya has rich water resources as a few streams, waterways and lakes. A high height lake, Dodi Tal (Uttarkashi) is significant freshwater ecosystem of the Garhwal Himalaya. It is situated between scope $30^{\circ} 52'31.99''$ N and longitude $78^{\circ} 31'12.47''$ E at an elevation of 3,075 m asl. The three towns: Agora, Dasda and Dhandlaka (Bhatwari square) Uttarkashi, which are found closest to the Dodi Tal were considered for the investigation, which are arranged between $30^{\circ}50'49.50''$ N, $78^{\circ}28'58.58''$ E at 2300-2540 m asl. It is encompassed by thick oak (*Quercus*) backwoods and mountains at three sides. The lake is sustained

by two snow bolstered streams started from an elevated glade - Bakariya Khagi Pass (Figure 1). The main outlet of Dodi Tal in part frames the stream Asi Ganga, a significant tributary of Bhagirathi waterway. Dodi Tal, the lake with a ton of legendary history is known to the origin of Lord Ganesha.

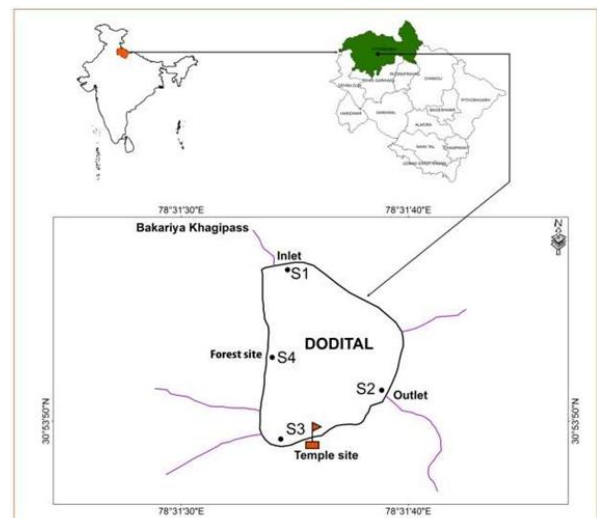


Figure 1: Location map of the Study area

Data collection

The subjective examination was led utilizing both primary and secondary information in 2014-2015. A primary study was directed to survey different factors in three towns for whole families (160), which exemplify Socio-economic information, occupation rehearses, tourism exercises and yearly salary utilized for the portrayal of Dodi Tal areas. Thirty surveys were conveyed in every one of the three towns arbitrarily inside every classification. The secondary information were gathered from various Government divisions, for example, Forest Department, Department of Tourism, District Statistical Department, Gram Panchayat, and so on, Annual pay and kind of tourists flood Bar and Pie Charts were utilized for the delineations.

DATA ANALYSIS

Socio-economic status shows the scenario of livelihood standard of that Dodi Tal environment.

Human pressure: village population

The total 160 family unit with a populace of 771 peoples both male and females contain three towns. The absolute populace is made out of 51% of female and 49% of male people A sum of 78% of people are educated while 28% are ignorant The female proficiency rate was 59%, while male proficiency rate was 83% among the populace (Figure 2). This is the all-out populace of this district. Yet, expanding the quantity of tourists, this delicate ecosystem might be hurt. Along these

lines, the conveying limit can be sustained by the ecotourism approach.

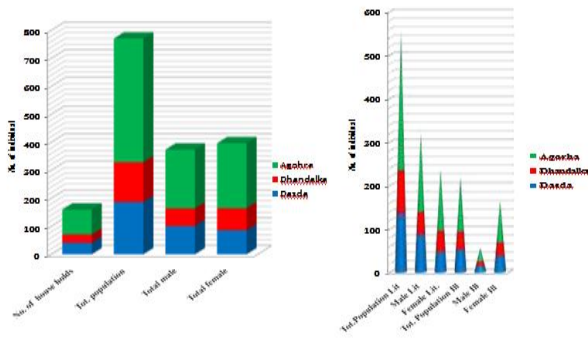


Figure 2: Demographic and Literacy profile of the households

Village livelihood practices and Annual average income

All families were engaged with various types of occupation rehearses. The vast majority of the families producing salary from agriculture (91%), tourism (85%) and farming (61%) for their work in this area. A few family units are likewise profiting by working (53%) and Govt. administrations. From these parts, the families are satisfying their needs with great gaining. The information demonstrate that the normal salary is expanding by the vast majority of the agriculture yet tourism is additionally step by step becoming great source of procuring. The normal yearly salary of families in these three towns was assessed around INR 36,700 The normal yearly pay of family units occupied with Tourism related activities has grown up to many overlap than the family units subordinate just on agriculture and creature farming (Figure 3). The expectation for everyday comforts of network is ascending due to procuring from tourism. However, there is additionally a negative impact on Digital condition. In such a circumstance, ecotourism should be an activity.

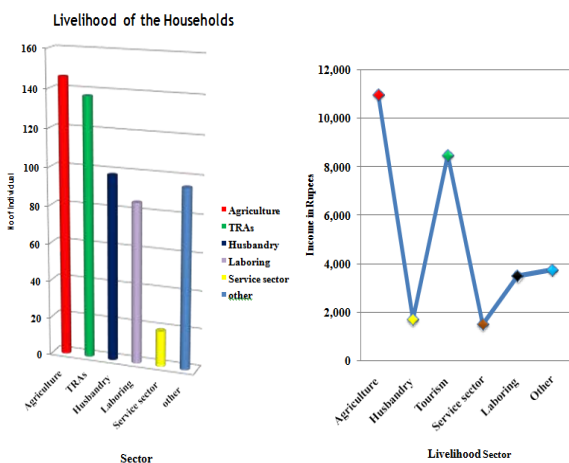


Figure 3: Livelihood and Annual average income of the households

Tourism related action and Tourist influx: average floating population

Present investigation uncovered that the vast majority of the family units included tourism related activity, for example, direct (35%), Cook (15%), watchman (15%), Dhaba proprietor (9%), Group coordinator (9%) hold up proprietor (7%), donkey proprietor (6%) and so on and visitor activities like trekking, mountaineering, rock ascending, skiing, calculating, camps, and so on., are running easily in the territory of Dodital. On account of these tourism activities, Digital condition is having an awful impact. It is in this way obligatory to focus on the ecotourism activities. Those activities like neighborhood makes, conventional music and investigation of verifiable spots ought to be supported by ecotourism

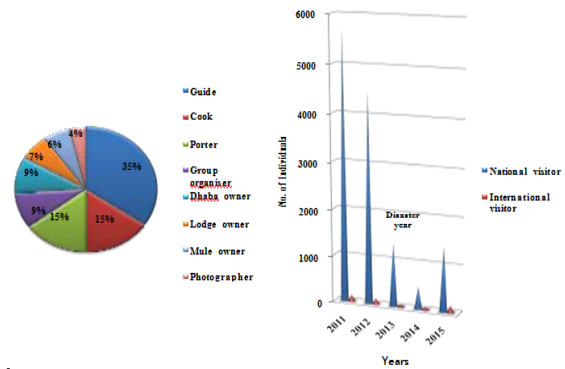


Figure 4: Tourism related actions and Tourist influx of Dodi Tal

Table 1: Tourist influx: average floating population, Source: District tourism department

Year	No of tourist		Total
	National visitor	International visitor	
2011	5681	133	5814
2012	4503	109	4611
2013 (disaster year)	1353	20	1373
2014	478	46	524
2015	1407	148	1555
Total	13422	456	13877

Tourism convergence information above (table 1) demonstrated that normal gliding populace was 13422 national and 456 global tourists in Digital during 2011-2015. Be that as it may, because of the calamity in 2013-2014, there was enormous decrease in the quantity of visitor. In such a circumstance it shows up, that cataclysmic events directly affect tourism. We can say that the purpose behind such a ruinous catastrophe is additionally a spontaneous tourism activities like over foundation, cutting tree, over populace deluge, over request from normal resources and so forth in such a case, reasonable ecotourism can be redressal process.

Households perception on role of tourism in livelihood

The survey information uncovered that (56.50%) family units recognition on tourism as amazing in instruction, changes in way of life, youth strengthening, limiting youth movement, mindfulness, logical research or correspondence. However, at same time (8.70%) of family unit's recognition are normal, they accepted that tourism badly affects their way of life and customs because of changes in their expectation for everyday comforts. through the ecotourism, the way of life and conventions can be monitored in the district.

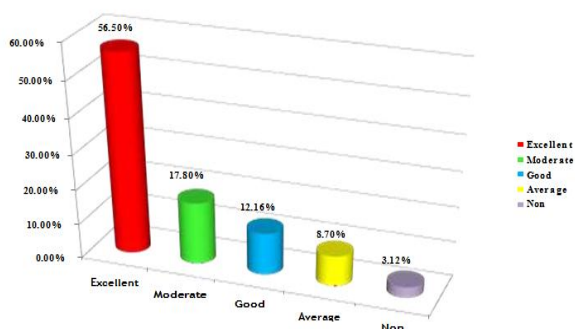


Figure 5: Households perception on role of Tourism in livelihood

DRIVERS OF DEGRADATION

In spite of the fact that the lake doesn't have any point source of anthropological contamination, it is generally influenced by the activities of tourists. Consistently, the lake is visited by thousands of school/undergrad and worldwide tourists during harvest time and summer breaks. These understudy gatherings and visitor from various nations used to remain at the lake for a few days. During this, strong waste creates is finished by most like container, sticks, and plastic and nourishment wrappers. Burrowing of neighboring catchment for fitting of tents quickens the dirt disintegration as well as the stylish excellence of the lake. Other factor is strict assembly. There is a sanctuary committed to master Ganesha here. There is enormous gathering of individuals around the lakes for satisfying the strict beliefs. On the one day of Ganesh chaturthi (birthday of ruler Ganesha), a large number of individuals from Gharwal used to gather at the bank of Dodi Tal consistently. The individuals wash up in the lake water and perform strict customs. By doing this they additionally contribute significantly to the debasement of the amphibian condition of the lake Dodi Tal.

The natural effects of mountain tourism have been noted in various past productions, especially

deforestation and woods corruption brought about by tourism related activities.

CONCLUSION

Ecotourism is a reasonable activity to expand the work for the mountain network just as to spare the earth. To change such creative mind into the real world, there is a desperate requirement for common resources protection and tourism suitable approaches. An all-around arranged Eco-tourism rehearses and their advancement for the locale will fill in as an instrument for feasible social and economic improvement.

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