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An Analysis of Land Degradation Resulting from the Conversion of Agricultural Land to Commercial Use Due to Tourism in Swat District, Khyber Pakhtunkhwa

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ABSTRACT

This study aimed at finding the association of tourism influenced land conversion (dependent variable) with land degradation (independent variable). The study was conducted in seven tehsils and fourteen village councils of District Swat, Khyber Pakhtunkhwa. A sample size of 345 respondents was selected through simple random sampling. Data was collected on a two level likert scale interview schedule. The association of study variables was tested by using chi-square test statistics. The association community perception regarding the effect of agriculture land conversion into commercial use due to tourism was found significant with agriculture land conversion to commercial use is the land degradation aspects a highly-significant ($p=0.000$) and Positive ($T^b=0.459$) association was established between Frequent visits of tourist has not only disturbed the eco-system but has also brought other related miseries the noise pollution and Tourism influenced land conversion. A highly-significant ($p=0.000$) and Positive ($T^b=0.493$) association was explored between Tourism affect land degradation and important land resources, including minerals, fossil fuels, fertile soil, forests, wetland and wildlife and Tourism influenced land conversion. highly-significant ($p=0.000$) and Positive ($T^b=0.459$) association was confirmed between Economy due to tourism development, poses a threat to the livelihoods of the indigenous people who mostly work as farmers and Tourism influenced land conversion.

Key Words: Tourism, agriculture land conversion into commercial use, and land degradation

INTRODUCTION

Land degradation due to tourism is a significant environmental concern that can have long-lasting impacts on ecosystems and local communities. The development of tourism infrastructure such as hotels, resorts, and recreational facilities often leads to land conversion, deforestation, and habitat destruction. Additionally, the influx of tourists can put pressure on natural resources such as water, energy, and waste management systems, leading to increased pollution and degradation of land quality. Activities such as off-road driving, hiking, and waste disposal can further contribute to land degradation in popular tourist destinations. Land being an important resource and center of human existence, is more sensitive to human activities that may change it physically and have an impact on the service value of ecosystem (ESV). Studies of rapid tourism development in China have shown that urban ESV has a crucial impact on the development of the visitor economy. Rapid urbanization in China has changed natural landscapes to be replaced by construction (McMichael, 2013). As a result, rapid urban development is no longer compatible with preservation of areas of tourist attraction which play an important role in urban economies. For this reason, relationship between usages of land and visitor economy has recently received much attention due to the need of sustainable models development (McMurry, 1930). Such studies put emphasis on describing the over-all impacts of tourism development so that past mistakes should be avoided (Hammes, 1994 and Hovorka, 2005).

LITERATURE REVIEW

In addition, land degradation can also affect the cultural and spiritual significance of the land for indigenous communities, disrupting traditional practices and connections to the environment. This can have social and

economic consequences for local people who depend on the land for their cultural identity and well-being. It is essential for sustainable tourism practices to be implemented to mitigate the negative impacts of land degradation on local communities. Land degradation due to tourism can have significant implications for local communities who rely on the land for their livelihoods Packer, (2017).

The development of tourism infrastructure and activities can lead to soil erosion, deforestation, and habitat destruction, which can impact the availability of resources for local people such as food, water, and fuel Weaver (2014), after studying the spatial structure of land use in the urban areas, developed its spatial model. His model puts the urban core in its center with its suburbs, adjoining rural and remote areas making up concentrated circles around it. His study shows that over time, improved transportation, leisure time and increased incomes as well as government policies the urban areas grow exponentially towards the periphery. In the end, all lands in the model are appropriated and its use is specifically made to serve urbanization. Thus all agricultural and wild lands vanish whose attraction have led people to these areas in the first place. Tyrväinen, *et al.* (2014) also found a close correlation of increase in tourism with the degradation of environmental quality of the destinations for the tourists over time as it changes the landscapes.

Dang, (2015) studies the same problem in China where the land is titled to the state. In the name of uplifting regions, local government acquired large swaths of wild or agricultural land and turned them into urban or industrial centers. The same process is also explored by Fang, (2014) who considers the professed aim of development of tourism as the reason behind acquiring and conversion of rural lands.

Addaney, (2015) also describes another phenomenon he calls “Tourism gentrification”, which refers the conversion of a middle class environment into that of entertainment companies and tourism elite. This was apparent in the Tawangmangu District in Central Java that attracted huge investments into the area in the wake of the development of tourism. The net result was drastic change in the use of land that transformed from a pristine natural attraction to one dotted with concrete structures. Ocejo (2011) further studied the Tourism Gentrification not only in Tawangmangu but also Kalisoro and Blumbang areas of the Central Java that he found to be responsible for the fading away of indigenous villages and their life style due to the disappearance of their tribal land that was being transformed into urban pockets by immigrants and investments. According to Evans KL, (2007) tourism industry changes lands from social and physical production to consumption of foreign products and ways. The agriculture-based livelihoods shift to trade or tourism related services.

Mahonge (2015), while discussing the necessity and modality of collaboration between locals and experts for sustainable use of land in tourist centers, also cites the dynamics between tourism and socio-economic, technological and institutional activities. Even though population is essential for development as provider of labor force, it is also recognized as a major culprit of environmental degradation when its excessive to the local support system. Population not only impacts natural environment by also produces wastes and pollution. Tourism unnaturally increases the population of an area in shortest possible time and thus its effects are multiplied in shape of poverty, land degradation and disappearance of ecological system.

MATERIALS AND METHODS

This study was conducted in seven tehsils namely Tehsil, Babuzai, Matta, Kabal, khwazakhela, Behrain, Barikot and Charbagh in District Swat, Khyber Pakhtunkhwa, Pakistan. Total population (House hold heads) of potential respondents came out to be 3205. For a population size of 3205 a sample size of 346 suffices as per criterion devised by Sekaran (2003). The study design was single-shot and data was collected through interview schedule covering both the variables. A conceptual framework was devised comprising of two study variables i.e. Tourism influenced land conversion (Dependent Variable) and threat to biodiversity (Independent Variable) (Table 1). For the measurement of study variables the attitudinal statements were pooled from the existing literature and two level likert Scale was constituted for each study variable. The indexed dependent variable (Commercialization of agricultural lands for tourism) was cross tabulated with independent variable (threat to biodiversity) to measure the association between study variables. Chi-square test was used to test the level of association between these variables at bi-variate Level.

$$\chi^2 = \sum_{i=1}^c \sum_{j=1}^r \frac{(O_{ij} - e_{ij})^2}{e_{ij}}$$

Table 1 Conceptual Frame Work

Independent variable	Dependent variable
Land degradation	Tourism Influenced Land Conversion

OBJECTIVES OF THE STUDY

- To ascertain land degradation regarding agriculture land conversion to commercial use due to tourism
- To ascertain tourism influenced land conversion
- To measure the association between land degradation and tourism influenced land conversion

RESULTS AND DISCUSSION

1.1 FREQUENCY AND PERCENTAGE DISTRIBUTION ON THE BASIS OF LAND DEGRADATION

Urban economy considers with growth and development but its major intervention have crippled the existing physical and economic growth social system entailing the ecosystem as well. Thus it is deem detrimental to the co-existence of both the preservation of local heritage and up to dry of the growth initiative some other natural factors could also contribute to the disturbance of this nature phenomena such as the recent flood in swat and lower and upper Dir badly affected the wildlife species due to the man made efforts in the shape of construction of tourist resort along river sides. Some wildlife species like Markhors bodies were viewed from flood water indicating it, extreme damages to the wildlife in the area an reported by Ali Z. (2010). Moreover, partridge's population in Dir also saw a reduction of 30% due to conductive and threating environments of flood attending towards its habitat disturbance (Naeem, 2017). The data further dismantled that almost 55 thousand (55,000) acres of land has been washed away by this flood along with a number of livestock have being taken away resulting into enormous losses to the farming community while leaving the land unable for cultivation, (Kalhor, 2022, Qureshi, 2019).

Table. No. 1. Land Degradation Due to Tourism

S. No	Attribute	Yes (%)	No (%)	Total
	Tourism activity directly causes land degradation	270(78.3%)	75(21.7%)	345(100)
2	Tourism impact directly on natural resources, both degradable and non-degradable	290(84.1%)	55(15.9%)	345(100)
3	Tourism causes deforestation.	259(75.1%)	86(24.9%)	345(100)
4	A tourism activity also demolishes cultivated land.	271(78.6%)	74(21.4%)	345(100)
5	Agricultural lands are gradually transforming by tourism due to absence of non-existing of any relevant law.	279(80.9%)	66(19.1%)	345(100)
6	Construction and reconstruction, infrastructure transformation, and landscape transformation has put immense pressure on the existing pattern of land.	284(82.3%)	61(17.7%)	345(100)
7	Economy due to tourism development, poses a threat to the livelihoods of the indigenous people who mostly work as farmers.	268(77.7%)	77(22.3%)	345(100)
8	Tourism affect land degradation and important land resources, including minerals, fossil fuels, fertile soil, forests, wetland and wildlife.	258(74.8%)	87(25.2%)	345(100)
9	Frequent visits of tourist has not only disturbed the eco-system but has also brought other related miseries the noise pollution.	262(75.9%)	83(24.1%)	345(100)
10	Land degradation is also visible in the form of changing housing patterns like conversion to big farm houses.	279(80.9%)	66(19.1%)	345(100)
11	Non-local influential like law enforcing agencies have also constructed their own colony, which further converted the existing land.	270(78.3%)	75(21.7%)	345(100)

Urban economy considers with growth and development but its major intervention have crippled the existing physical and economic growth social system entailing the ecosystem as well. Thus it is deem detrimental to the co-existence of both the preservation of local heritage and up to dry of the growth initiative some other natural factors could also contribute to the disturbance of this nature phenomena such as the recent flood in swat and lower and upper Dir badly affected the wildlife species due to the man made efforts in the shape of construction of tourist resort along river sides. Some wildlife species like Markhors bodies were viewed from flood water indicating it, extreme damages to the wildlife in the area an reported by Ali Z. (2010). Moreover, partridge's population in Dir also saw a reduction of 30% due to conductive and threating environments of flood attending towards its habitat disturbance (Naeem, 2017). The data further dismantled that almost 55 thousand (55,000) acres of land has been washed away by this flood along with a number of livestock have being taken away

resulting into enormous losses to the farming community while leaving the land unable for cultivation, (Kalhoro, 2022, Qureshi, 2019).

Majority of the respondents 78.3% were Supported the statement that Tourism activity directly causes land degradation while, 21.7% respondents negated the statement. Land degradation is the indispensable aspect of any intervention being adopted country to the prevalent ecological culture. Although a number of activities taken for the sake of development and economic growth of the local human land to be at the cost of local environment, China as one of the leading example where focus is being made to be not to destroy the existing ecological structure though development initiatives are undertaken Yang, (2010), Weaver (2014) has also focused on showing the detrimental aspect of urbanization. Its succeeded in displaying that all the periphery land around any urban intervention is being converted to urban sprawl, including the agriculture land and wild land due to transformation and leisure activities increased tourism is directly related environment degradation, landscape and ecosystem Tyrväinen, *et al.* (2014) and Firouzjaie, (2022).

Moreover, majority of the respondents 81.1% were agreed that Tourism impact directly on natural resources, both degradable and non-degradable while, 15.9% negated the statement. These findings endorse the fore mentioned results further Zhang, (2021) has also pointed out towards the lethal outcomes of the development initiatives over wildlife and agriculture land. The development of tourism means the conversion of the real lands into mass oriented activities like entertainment such entertainment activities being along the construction of new buildings, roads and other related infrastructure with influx of people from around resulting into challenging the existence of local culture patterns, (Fang 2004).

In addition most of the respondents 75.1% favored the statement that tourism causes deforestation While, 24.9% against the statement. It is obvious that forest cover is under tremendous threat of the urbanization with special reference to tourism. Studies conducted in various point of the had come up with in fence that tourism resulted activities have faded away the indigenous life style, new schedule the local tribal culture and transformed the local dwelling or houses industrial hubs as outlined by Henning, (2011) and Ocejo (2011) by referring to example of central java Indonesia.

In addition, majority of the respondents 78.6% showed the statement that A tourism activity also demolishes cultivated land. In contrast, 21.4% had negated the statement. These results indicated towards the transformation of local dynamics due to inception of tourism related business. The local socio-economic and cultural dynamics undergo a shape along altogether in an institutionalized manner. Although labor force statement from the population however, being deemed on the culprits of environmental degradation and a pressure group of eroding the local system. By the creation of population and production of waste land degradation and emergence of inequalities on the basis of earning and in some cases breeding property are the investment outcomes (J. A. A. (2010, Mahonge, 2015 and Dorokhov, 2021).

Likewise majority of the respondents 80.9% were supported the statement that Agricultural lands are gradually transforming by tourism due to absence of non-existing of any relevant law whereas 19.1% did not agree to the statement. Due to rise of tourism and increase in population has put pressure immeasurable pressure in the high attitude recreational areas like study area. Their activities have put disturbance into the existing environments especially in the hot season coming from May to September has endangered the birds migratory cycles, animals and plant growth etc. Couples with traversing mountains trails to the ecosystems and landscape alternations these transformations are the direct out comes the prevalence of relevant laws and regulation to protect the agriculture land while imposing restriction in the conversion and tourism related activities. Encroachment infrastructural development in agricultural land are leading to loss of agriculture land and lack of coherent model have all pushed the tourism and agricultural land degradation as eco existential and paradox in nature (Wall, 2016 and Vass, 2006).

However, most of the respondents 82.3% were reported the statement that Construction and reconstruction, infrastructure transformation, and landscape transformation has put immense pressure on the existing pattern of land while 17.1% had negated the idea of the respondents. Ecosystem means protecting the flora and fauna with preservation of the existing environment and inhabiting human with sense commercialism by not compromising upon the existence of one another. However, it has been noticed that the rise in tourism especially in the mountainous regions have badly destroyed this assumption as envisaged from these findings. The establishment of industry and conversion of the areas into urban dwelling has no more guaranteed the co-existence rather dominating the local culture and ecological dynamics by urbanization trends Possingham, (2008).

Moreover, majority of the respondents 77.7% had the favored of the statement that Economy due to tourism development, poses a threat to the livelihoods of the indigenous people who mostly work as farmers while 22.3% negated the statement. these findings express about the transition where local profession has been undergoing changes. People together traditional profession and professing focusing the new trends of life Geels, (2010) has also similar conclusion that human activities based on urbanization and industrialization have turned the

prevalent mode of direction into the new ways of life hand on industry. It could be done to for their way of life sustaining from the trade routes, (Browne, 2022).

Furthermore, majority of the respondents 74.8% reported the statement that Tourism affect land degradation and important land resources, including minerals, fossil fuels, fertile soil, forests, wetland and wildlife while 25.2% had against the statement. these findings were inconsonance to the proceeding outcomes such huge situation necessities the importance of making local people nature of their property which may wonder as catalyst towards restricting the rising trend in urbanization due to tourism Cobbinah, (2017) which may marginalized these physical and urban activities are altered at the cost of the local ways of life (Nguyen, 2022). Furthermore, as the new laws cannot protect the property right of their indigenous communities (Van Westen, 2017). The tourism has been driven by the sense of capitalist approach which dictates surrounding the property rights into the hands of wealthy investors so demolishing or ending the local livelihood property or rights (Mangione, 2010). Notwithstanding, most of the respondents 75.9% were agreed the statement that Frequent visits of tourist has not only disturbed the eco-system but has also brought other related miseries like the noise pollution while 24.1% did not the favor the statement. Urbanization in Ghana has been found characterized with encroachment of the ecological sensitive areas, slums rise of informal economic activities unauthorized use of land urban spaces with no exception to these changes, Owusu, (2019). Such developments have resulted into synergism in risk rising, uncertainties due to urban activities shortage of potable water sanitation etc. coupled with emergence of informal economy and health hazard. All these often negatively co-related with proper so culture sustainability and indigenous local social system, (Oteng-Ababio *et al.* 2012, Amoako *and* Inkoom 2018 *and* Long, 2022).

Majority of the respondents 80.9.% were supported the statement that Land degradation is also visible in the form of changing housing patterns like conversion to big farm houses while, 19.1% respondents negated the statement. Rising tendencies in residential settlement based on own living and commercial purposes have turned around the whole map of the study area. These findings has close resembles to the inferences of (Cobbinah, 2017). Those changes in socio-cultural and demographic profile have created a havoc or chaos in various new settlements across the globe. These unbridled activities have turned everything into commercial consideration squeezing down the existing spaces which has disorganized the traditional socio-economic activities due to tourism poor's were felt with more non-existential threats in the cities.

. Moreover, majority of the respondents 78.3% were agreed that Non-local influential like law enforcing agencies have also constructed their own colony, which further converted the existing land while, 21.7% had negated the statement. Likewise, one of the major impact of large scale tourism is the exerting pressure on the local social life pressing hand the religion practices and beliefs of the local population. A local food consumption pattern has also undergone changes. These findings were similar to Vadell *et al.*, (2018) that overcrowding burden on the civil facilities of the local social life (García *et al.*, 2016, Johnson, 2009, *and* Alshuwaikhat, 2005).

Table No. 1.2. Land Degradation Due to Tourism

S. No	Independent Variable	Dependent variable	Statistics x ² , (p-value) &tau-b
1	Tourism activity directly causes land degradation	Tourism influenced land conversion.	X ² =118.170 P=0.000 Tb=0.585
2	Tourism impact directly on natural resources, both degradable and non-degradable	Tourism influenced land conversion.	X ² =97.472 P=0.000 Tb=0.532
3	Tourism causes deforestation.	Tourism influenced land conversion.	X ² =76.522 P=0.000 Tb=0.471
4	A tourism activity also demolishes cultivated land.	Tourism influenced land conversion.	X ² =84.184 P=0.000 Tb=0.494
5	Agricultural lands are gradually transforming by tourism due to absence of non-existing of any relevant law.	Tourism influenced land conversion.	X ² =72.930 P=0.000 Tb=0.460
6	Construction and reconstruction, infrastructure transformation, and landscape transformation has put immense pressure on the existing pattern of land.	Tourism influenced land conversion.	X ² =105.547 P=0.000 Tb=0.553
7	Economy due to tourism development, poses a threat to the livelihoods of the indigenous people who mostly work as	Tourism influenced land conversion.	X ² =72.624 P=0.000

	farmers.		$T^b=0.459$
8	Tourism affect land degradation and important land resources, including minerals, fossil fuels, fertile soil, forests, wetland and wildlife.	Tourism influenced land conversion.	$X^2=53.230$ $P=0.000$ $T^b=0.393$
9	Frequent visits of tourist has not only disturbed the ecosystem but has also brought other related miseries the noise pollution.	Tourism influenced land conversion.	$X^2=24.394$ $P=0.000$ $T^b=0.259$
10	Land degradation is also visible in the form of changing housing patterns like conversion to big farm houses.	Tourism influenced land conversion.	$X^2=86.367$ $P=0.000$ $T^b=0.500$
11	Non-local influential like law enforcing agencies have also constructed their own colony, which further converted the existing land.	Tourism influenced land conversion.	$X^2=118.170$ $P=0.000$ $T^b=0.585$

1.2. Association between land degradation and Tourism influenced land conversion.

Forest resources of a country play a pivotal zone in sustainable use and preservation of environment to mountain and help the ecosystem survival population on the other hand is deemed culprit in destroying the environment by degrading the land as the socio-economic activities loom in order to satiate the growing needs, Of growing population. Although population increase warranty the pressure of labor force for market mechanism. However, its surge in number has led to extra pressure on resources creating pollution and water which are degrading the environment. Moreover, along with the waste pollution road and building construction to meet air increased population residence and mobility could not also be ruled out as propelling agents of degradation, District Swat, the study area is comprised of diverse biophysical social and economic characteristics and it is usually portrayed that forest cover has been increased due to afforestation. However, contrary to the claims deforestation has been taking place as certain other statistics also augmented it, the major deforestation factors are counted as the use in tourism. It has been concluded that increases tourism has unnaturally increased the population in a shortage period time with multifaceted results like poverty, loss of biodiversity and ecological disorder and land degradation respectively, (Shahbaz, 2006, Rompaey, 2022 and Qasim, 2013).

Table 4.3.1 Showed a high-significant association ($p=0.000$) and Positive ($T^b=0.585$) association was found between Tourism activity directly causes land degradation and Tourism influenced land conversion. Infrastructure development like roads, hotel construction and provision of other facilities proved to be has begun to a seldom use in population. This surge in population require extra resources to satiate their accommodate needs. However, to comply with meeting these needs a number of undesirable results often in the shape of property loss of biodiversity, disarray in the ecology and land degradation. These findings were in line with Immacolata, (2018) results that infrastructural development results into the elimination of natural habitats along with soil erosion and deforestation respectively. All these negative implications are directly related with the advent of tourism. Pressure on local resources in the shape of their overuse may also results in their shortage like water energy and food are required into more quantities to address this growing number of population. Depletion of resources and land degradation often are associated with high quantity of waste generation like use of plastic, bags, packing material etc. which are frequently used but its proper management and dumping is usually lacking. Moreover, consistent use in tourism also keeping up the agriculture land conversion into residential units, all such trends pervasively existed with proper emergence of commercialization of land leading to lesser production in agriculture. Moreover, soil erosion, ecological disorder and road congestion, (Chang, Y., 2022, Sevilla, 2019, and Mihai, 2020).

However, a high-significant ($p=0.000$) and Positive ($T^b=0.532$) association was discovered between Tourism impact directly on natural resources, both degradable and non-degradable and Tourism influenced land conversion. Rapid use in tourism feels around changes to the existing structural and functional dynamics. All activities arising out of the tourism are new and to be accommodated with in the spatial parameters while pushing apart the existing structure. The space to be occupied ought to put pressure leading to the denary which certain neglect impacts on the service value of the existing eco-system. These findings were in close alignment to Deng, (2021) that urbanization in China is responsible for altering the existing land scape with construction activities. Such development are assessed as not compatible with the preservation of environmental drivers sans its economic importance as the relationship between land use and use in economy is gaining a sound importance in the community (Haibo, 2020). Tourism has feeling behind degradation of environment such as water and air pollution and land erosion. Moreover, prevalent ecosystem and biodiversity are also at stake due to pressure on energy use food and infrastructural requirements. Moreover, deforestation is yet another factors emerging in a holistic manner, affecting the natural environmental topography and marine water life negatively in an

unprecedented manner. Moreover, the left behind waste is adding further stress with no proper disposal strategies, (Das, 2018, Hammes, 1994, and Adhikari, 2015).

Furthermore, a highly- significant ($p= 0.000$) and Positive ($T^b=0.471$) association was confirmed between Tourism causes deforestation and construction activities had led to reduction in agriculture land and Tourism influenced land conversion. These findings emanated the using tourism has comprehensively changed the physical, social, economic and cultural map of the study area. The inception of tourism and its abrupt escalation is the, major driver of land divergence as the commercial path with so prices particularly focusing on agricultural land conversion into commercial hubs. These findings were similar to Xiao.T, (2018) who identified similar drivers behind the land changes patterns in China due to host in its tourism industry. Tourism is primarily transporting the rural land into urbanized housings. Moreover, that under stress ecosystem may also vanish if proper sustainable initiatives are not owned to protect the existing biodiversity and animal and plant species by proving a congenial co-existing milieu between them and human beings. Although the economic returns of tourism is more beneficial and seem to overshadow these initiatives of maintaining a balance but still hopes are alive, as humans have succeeded in maintaining a balance between earning and protecting environment, Raihan, (2022) has also alluded towards deforestation and agriculture land reduction as resultant factor tourism while destroying the natural habitats and vegetation, (Corona, 2016).

Whereas, a highly significant ($p=0.000$) and Positive ($T^b=0.394$) association was found between A tourism activity also demolishes cultivated land and Tourism influenced land conversion. These findings emanated a strong liaison with the fore mentioned outcomes and were in consonance to weaver, (2014) conclusion that impact of cities expansion emerging with its sprawls to usurp the adjustment. Mal areas while extending and transport and structural development logo are potentially endangering the mal set up. These mal set up are supposed to the custodians of preservation of rural life, local ecosystem preserving the biodiversity. Moreover, a close and intimate land also prevailed between tourism and degradation of environment (Tyrväinen, *et al.*, 2014) by destroying the clean air, water and social fabrics and new model of infrastructural growth are encouraged to replace the traditional local social system. These changes are deemed properly ideal by the local land owner to leave out their land on hefty i.e. earning more from a limited piece of land due to land commercialization, (Jarah, S., 2019).

Likewise, a highly-significant ($p=0.000$) and Positive ($T^b=0.460$) association was confirmed between agricultural lands are gradually transforming by tourism due to absence of non-existing of any relevant law and Tourism influenced land conversion. Zhang, A., (2015) has also indicated towards similar situation like the study area that land transportation was on used, people were shifting from the agrarian culture to a more advanced commercialized culture for the sole purpose of more earning in china. These could be attributed prevalence of change based on economic return from lands at the cost of altering the prevailing social, cultural and economic milieus. These changes are rising as these site middle class who are participating as behavior, small scale business men and also service providers in the shape of guides etc. However, it has also been noted that the local historical indigenous ways of life are fading gradually and soon to be replaced with a more dynamics and urbanized value system where source of production and consumption would both struggle for meeting the rising challenges in their respective domains, (Klosi, 2020, and Ocejo, 2011).

Similarly, a highly-significant ($p=0.000$) and Positive ($T^b=0.553$) association was detected between Construction and reconstruction, infrastructure transformation, and landscape transformation has put immense pressure on the existing pattern of land and Tourism influenced land conversion. These results highlighted the adverse effects of land transportation in light of tourism due to the advent of tourism as industry, these dynamics of change pertaining to land use patterns are mostly socio-economic inclination in on industrialized way. Mahonge (2015) has also discussed the development and growths (infrastructural) are the resultant factors of population boom, industry installation leading to environmental degradation. This degradation is related to that production of wastes generated through these activities. Moreover, it has also prone be harbingers to multifaceted miseries like poverty, loss of habitat and vegetation and local degradation and disappearance of cultural norms of the local communities. This swim reality of diminishing local produce is adverse through reliance on imported goods. Moreover, the indigenous food production is also started with further erode the traditional mechanism of social life by threatening the cultural traits of the local communities. A sustainable strategy with preservation of local culture, produce and surge of population is a needed synergy to cope with the situation on the sustainable grounds, (Lisle, 2000, and Yilmaz, 2016).

Similarly, highly-significant ($p=0.000$) and Positive ($T^b=0.459$) association was confirmed between Economy due to tourism development, poses a threat to the livelihoods of the indigenous people who mostly work as farmers and Tourism influenced land conversion. It's also referred with a similar circumstance when he met with the emergence of situational realities in the light of tourism industry. He further concluded that up gradation and development of new facilities for addressing the tourist's requirement had put at stake the locals culture diminishing of local profession by replacing with sophisticated ways of earning (business). However, the local

cultural alternations are eminent with threat to wildlife elimination as a major cause. Thus tourism is intrusive with progression like transportation of profession, infrastructure and land use patterns the under to cope with the tourist needs and requirements (Zhang B, 2009, Ogra, 2015). However, Sang (2011) and Sun R, (2009) have also pointed towards the loss of biodiversity due to consistent influx of humans with demanded capacity in food provision, spatial accommodation and other infrastructural facilities, (Rasul, 2021) and commercialization has further put pressure on resources like land being with up ticking prices gradually eliminating the agriculture, forests and mal based profession with active and profitable businesses along with associated perks, (Smith, R. A., 2016).

While, a highly-significant ($p=0.000$) and Positive ($T^b=0.493$) association was explored between Tourism affect land degradation and important land resources, including minerals, fossil fuels, fertile soil, forests, wetland and wildlife and Tourism influenced land conversion. Land degradation with eroding of biodiversity, natural habitats and ecosystem are eliminated soon after the emergence of tourism as acknowledged by the respondents. Moreover, this process is for the accelerated due to the non-existence of sustainable strategies devised by the policy makers Gazta, (2018) has linked the resources depletion with uncontrolled, unregulated and unplanned activities (tourism). These activities entail the destruction of habitant with relation to hotels, resorts and road construction. Furthermore, water shortage, contamination pressing hand for more water to satiate the growing needs of the population Calaretu, (2012). Tourism organization all the major economic activities in a particular area, shaping itself into a greater hub who major majority of investors to participate, however all these economic endeavors altered with social and ecological changes have gradually eroded the physical dynamics like grass land elimination and land scopes disappearances. Moreover, the mountainous region were found more prone to damaging outcomes in the aftermath of hiking, disturbing the wildlife, trampling the social and vegetation loss, (Chandel, 2022, Calaretu, 2012 and Kumar, Ph.D., 2018).

Notwithstanding, a highly-significant ($p=0.000$) and Positive ($T^b=0.459$) association was established between Frequent visits of tourist has not only disturbed the eco-system but has also brought other related miseries the noise pollution and Tourism influenced land conversion. Development of tourism is regarded a holistic endeavor containing in itself economic returns but damaging the local environments has also linked the tourism to development initiatives. However, the public spots (scenic spots) are under constant pressure of damaging due to the influx of human based activities, encouraged by the tourism industry (Lanya, 2017). These civic activities require regulation through municipal or a centralized patronage in order to arrange counseling for tourists regarding different parts of a tourism resort. These may include mountainous tourism where the surface ecosystem and vegetation preservation is essential to facilitate the existing flora and fauna in their survival efforts (Blaikie, 2015).

However, the other hand, a non-significant ($p=0.053$) and Positive ($T^b=0.500$) association was established between Land degradation is also visible in the form of changing housing patterns like conversion to big farm houses and Tourism influenced land conversion. These results could be attributed to the particular type of topography existed in the study area. The study area is mostly mountainous tourists spots are scattered and big farm houses are not ideal to the local physical environment. Moreover, loss of biodiversity (both animal and plant species) and ecosystem disturbance some of the obvious reasons of non-existence of big farm houses. However, the existence and prevalence of tourism and other altered activities are related as infused from the above findings and confirmed the loss of soil, water scarcity and land inability to produce more to need the rising requirement of the visitors, (Raleigh, 2007). A sand sustainable and productive model by ensuring all the needs in the existing and anticipative vision is essential to ensure its striving, (Balsiger, 2015).

However, a significant ($p=0.006$) and Positive ($T^b=0.585$) association was discovered between Non-local influential like law enforcing agencies have also constructed their own colony, which further converted the existing land and Tourism influenced land conversion. These findings indicated towards the boom of tourism in the area and displacement of local communities as land being expensive is mostly sold out to non-local investors. This investor either civil or military presumes have not only required land but also generated business activities mostly tourism related which have resulted into the emergence of on social imbalance in the area (Safransky, 2014, Hayes, 2010). These locals feel themselves marginalized as being ignored in design making resulting into a dense to soil environment. The Labe of soil congeniality and pressure of visitors on basic resource like food energy and infrastructure divert support the idea congenial coexistence between the locals and non-locals and supply and demand of the local resources as well, (Aung, 2007).

CONCLUSION

The land degradation in the advent of high population and commercialization of agriculture rural land for tourism related activities The study dilated on responses reviewed from the respondent accursed that land conversion was primarily exploring the tourism phenomena to be the major driving force as tourism had dilated

upon construction of building, infrastructure while reducing the agriculture land emanating the land and soil degradation and deforestation as well. It was further noticed in the study findings that land degradation and ecosystem was at stake due to changing cultural and social structural dynamics. The local had access to market economy, an up ticking on the economic profile of the locals was explored however at the cost of local culture, degradation of environment soil erosion and loss of natural resources like scenic beauty, and serenity was found being compromised upon.

RECOMMENDATIONS

Land degradation was found another threat to biodiversity and enhanced the chances of flooding during the rainy season. A strict vigilance by the local government representative through enforcement of relevant rules and imposing tax, to be collected by locals, ought to serve for development of these rivers bee/bombs would serve as a major rehabilitation initiative. Moreover, yardsticks like establishment of spires if attracted may also work towards containment of flood in the rainy season. Environmental pollution including both air, water was on rise in the study area. The major contributing fallen were vehicular exhausts in the shape of CO₂ and matter releasing. Moreover, throwing of litters by the visitors had also contaminated the local environment i.e. water springs etc. to avoid this unpleasant reality and comprehensive code of ethics entraining the awareness campaign in local media, bill loadings on the major entrust at hotels etc. is the need of the day. Moreover, imposition of time upon violation may further and strength to mitigation of environmental pollution.

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