

## **Livelihood Diversification in *Gandak Diara* of West Champaran District of Bihar**

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### **ABSTRACT**

This paper attempts to study the livelihood diversification in Gandak Diara region of West Champaran district of Bihar. Flood and drought negatively affect the livelihood of people residing in riverbeds (Diara). A study is needed to understand the ground reality of livelihood challenges in riverbeds at micro level. The findings of the study suggest that the livelihood of people residing in the Gandak Diara region is vulnerable as a large share of the households were found not diversified or less diversified in terms of livelihood. A large share of the population opt for out migration in search of safe and secure livelihood. The livelihood diversification among weaker sections was found poor as compared to other sections of the society. The sole source of livelihood in the Gandak Diara region is agricultural and it is incapable of fulfilling the basic economic needs of people.

**Keywords:** *Gandak Diara*, Livelihood Diversification, Occupation, Flood and Drought, Coping Strategy

### **INTRODUCTION**

Livelihood diversification is a process whereby a household adopts different types of economic activities for better livelihood outcomes (Kimengsi *et al.*, 2019). Livelihood diversification is regarded as an important coping strategy for people living in distressed regions. The fulfilment of economic needs is an essential aspect of human development. Disaster-prone regions are vulnerable in terms of providing adequate livelihood opportunities to the people. This becomes more sensitive and insecure when the lone source of livelihood is agriculture. Flood and drought directly make destructive impact on agriculture subsequently snatching the people's source of livelihood. In these challenging conditions, diversification of livelihood plays a vital role in coping with flood and drought (Kumar and Baraik, 2019).

Rural households' primary source of livelihood is agriculture and its related activities. When households find it difficult to fulfill its need, they tend to opt for multiple forms of economic activities. Households adopting

multiple forms of economic activities, such households can be termed as a household with diversified livelihoods (Warren, 2002). Diversified livelihood occurs when the traditional or regular source of livelihood is inadequate to fulfill the economic needs of the household. Regions, which are vulnerable due to flood and drought, often practice diversified livelihood because their traditional source of livelihood is always in danger (Kumar and Baraik, 2019).

Rural livelihood diversification generally occurs when farmers cultivate unconventional agricultural products for the market or there is increased importance of off-farm wage labour for the household. This diversification can be of a temporary period or this could be a strategic diversification (Fao.org). According to Reardon *et al.* (1998), the share of non-farm income sources of the rural household in Asia and Africa is 32 per cent and 40-45 per cent respectively. We can sense that almost 68 per cent of Asian rural households are dependent on farm activities for their income and livelihood. This is why any natural catastrophe occurring

in these regions snatches away the livelihood of millions of rural households (Kumar and Baraik, 2019).

Households involved in heterogeneous sets of economic activities are more resilient than agriculture-dependent households. This diversification of livelihood is regarded as a powerful coping strategy in flood and drought-affected regions. A household may adopt a diversified livelihood as a coping response to regain the capital loss, which is needed to undertake their conventional forms of economic activity. Diversification of livelihood is needed when there is a decrease in arable land, environmental deterioration, and economic debt, etc. Most of the household members choose to migrate when there is an economic and political shock. Ellis (1993; 2000), explains that one of the important elements of livelihood diversification choice is the maximization of return per unit of labour (Kumar and Baraik, 2019). A rural household will be interested to choose such economic activities which are most effective and which can ensure the maintenance of their consumption level. Past experience of crop failure or market failure forces households to diversify their livelihood. This practice of livelihood diversification reduces the impact of loss (Chamber, 1997, Reardon, 1992).

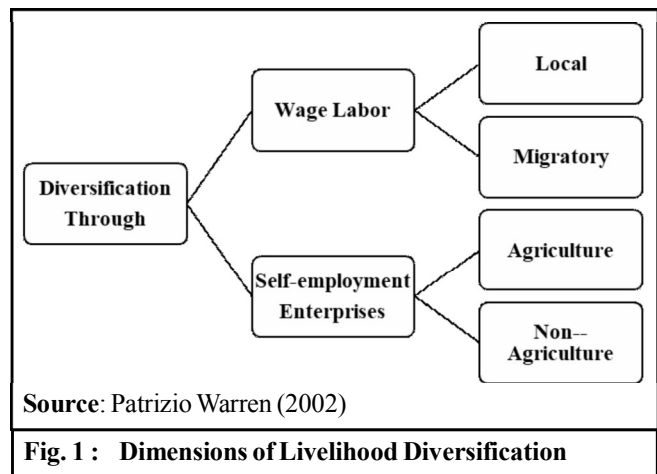
Diversification of livelihood is driven by multiple factors. Households tend to choose the second-best opportunity of economic activity. It is adopted when a household requires to strengthen its natural capital (Natural Capital includes land, forest, marine resources, water, air, biodiversity, etc.). When households get a better opportunity of economic activity, they welcome diversification. The younger generation is often attracted to city life, hence they move to the city and earn their livelihood. The gendering of economic activities also plays a vital role in determining the structure of diversification. Females are often found to be involved in agricultural activities and males migrate to the city. Caste-based occupation has been another important feature of Indian society. *Brahmins* are traditionally assigned to perform rituals and produce knowledge, *Kshatriyas* are assigned to fight the war and protect, *Vaisyas* are assigned to do business and trade and *Shudras* are assigned to provide service to all three communities. *Untouchables* are assigned to clean the dirt and do manual labour. This pattern of caste-wise occupation is still evident in the current time (Kumar and Baraik, 2019). Dr. Ambedkar has rightly said that the caste system is not merely the division of labour, it is also a division of laborers

(Ambedkar, 1936).

Livelihood diversification activities are classified in multiple forms (Hussein *et al.*, 1999; Ellis, 2000; Webb *et al.*, 2002):

- (1) Farm-based activities vs Non- Farm activities
- (2) On Farm activities vs Off Farm activities
- (3) Activities at the local level vs Migratory activities
- (4) Self-employment vs Wage labor

Households diversify their livelihood through various ways. One can find examples of daily wage earnings in construction as well as agriculture work in the same households. The daily wager can either stay in their locality or move seasonally to other places for work. Grocery shops, street vending, and small business can also be found as important livelihood practices. Self-employment enterprises can be opened in agriculture as well as the non-agriculture sector (Fig. 1). Some of the households install grain grinding machines within the village, keep agricultural machinery which are offered to other fellow farmers on rent basis (Kumar and Baraik, 2019). Dependence on a lone livelihood activity is incapable of reducing poverty in rural households, and the need of carrying out multiple options of livelihood activities is necessary to prosper life particularly in *Diara* region where agriculture gets affected by frequent flood and drought and region's proximity to the river also increases the possibility of vulnerability. *Diara* region is socially and economically the most backward area in Bihar and flood related vulnerability puts added burden on the people, therefore, livelihood diversification could be an important coping strategy to minimize the impact of flood (Udas *et al.*, 2018). Livelihood diversification has been proved to be critical in alleviating rural poverty



and increasing levels of resilience (Kimengsi *et al.*, 2019).

*Diara* is a high flood prone area. Flood in the region directly and indirectly negatively affects livelihood. Diversification of the livelihood is seen as a coping mechanism against natural disaster in general and flood in particular. People of *Diara* also adopt various kinds of livelihood strategies by diversification. In this background, it is important to analyze what kind of livelihood diversification people of *Diara* adopt and to what extent the livelihood is diversified and what is the levels of livelihood diversification in the region. A safe and secure livelihood protects families against poverty and deprivation. The study of livelihood diversification will enable policy makers and government bodies to act against flood led livelihood vulnerability and in providing welfare measures that address livelihood challenges of people of *Diara*. There is no study in records that analyzes the Livelihood Diversification in *Diara* region of West Champaran district of Bihar, therefore, this study is needed (Kumar and Baraik, 2019).

### Objectives of the Study:

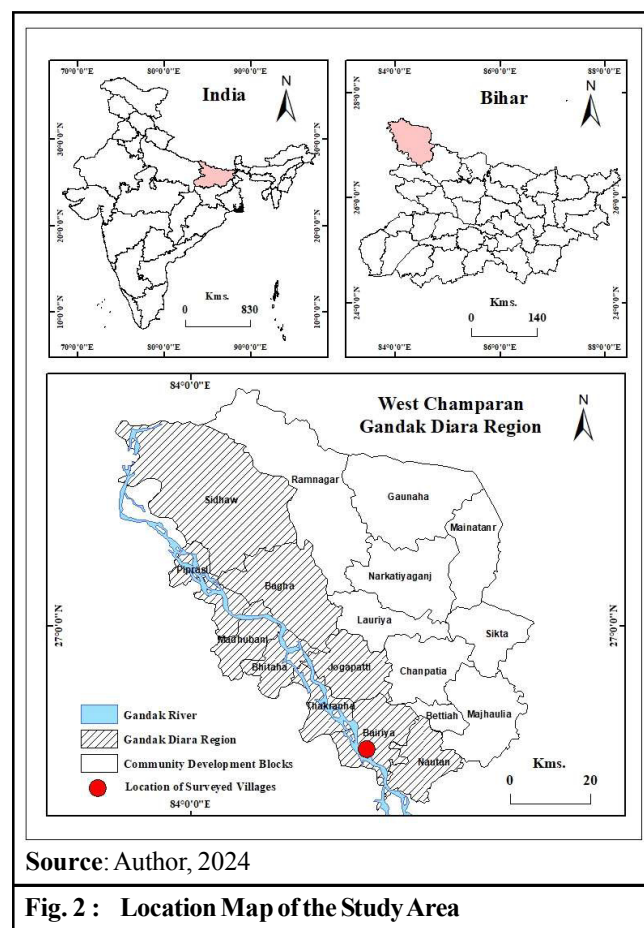
The present study aims at the following objectives:

- To study the livelihood practices and occupational structure of people of *Gandak Diara*.
- To examine the nature of livelihood diversification in *Gandak Diara*.
- To examine the levels of livelihood diversification among people of *Gandak Diara*.
- To examine the livelihood diversification by different social groups in *Gandak Diara*.

### Area of Study:

“*Diara*” is a local term widely used in the state of Bihar, Uttar Pradesh, West Bengal, etc. which refers to the region lying between river embankments (Hill, 1987). The *Diara* region faces flood and drought every year and the region is the most inaccessible and least developed area in the state of Bihar. *Diara* region, which is vulnerable due to flood and drought, often practices diversified livelihood because their traditional source of livelihood is always in danger. Households involved in heterogeneous sets of economic activities are more resilient than agriculture-dependent households. The diversification of livelihood is regarded as a powerful coping strategy in flood and drought-affected regions. *Gandak Diara* region of the West Champaran district of Bihar is a large geographical entity lying in the bed of

the Gandak, a major river in the district which enters India from Nepal and flows southward and joins the river Ganga in Sonpur (Fig. 2). West Champaran is listed in the fifteen most flood-affected districts of Bihar (NRSC, 2013). The sample households are located between river embankments of the Gandak flowing in the West Champaran district. Locally people call this *Diara* region “*Reta*” which means sand. Due to rapid river erosion, deposition, and shifting of river channels several unique geographical features get created such as braided channels, oxbow lakes, sand bars, and vast grasslands. Sustaining a stable life in the *Diara* region is not always easy. There is always a threat of recurrent flood and drought. The absence of minimum basic facilities and infrastructures increases the extent of vulnerability in the region. According to a study, 44 per cent (94100 hectares) of the total area of the district has been characterized as *Diara* land (Kumar and Baraik, 2022). Out of a total of 585 villages in the district, there are a total of 125 villages that have been identified as *Diara* villages. The total population of *Diara* villages of West Champaran district



is 359575, which is 9 per cent of the district's total population (Kumar and Baraik, 2019).

## METHODOLOGY

The villages were selected for the survey through geospatial technique and field observations. A semi-structured schedule was used to collect information related to livelihood and its challenges in the region at household level. A multi-stage sampling technique was used to select the samples for survey. Villages which were falling under *Gandak Diara* region in the district were identified using geospatial techniques, afterwards, a development index was measured across *Diara* villages and less developed villages were identified. Moreover, the villages which were located at the vulnerable locations were selected for the survey (Kumar *et al.*, 2020; 2022; 2023). Field observations, group discussions, in-depth interviews, and narratives were also found to be very helpful. Descriptive statistics were applied to examine the frequency of various indicators. Both quantitative and qualitative methods were opted for the data analysis. Microsoft Excel and SPSS software were used for data analysis. Most of the figures were converted into percentages and depicted with graphs and tables (Kumar and Baraik, 2019).

For the analysis of livelihood diversification at the household level, a new indicator of livelihood diversification was formulated using the occupational status of household members. Household family members involved in different economic activities were assigned weightage scores. Households were given weightage scores based on their dependency on a variety of occupations. Households that are economically less diversified were given low scores and households, which are economically more diversified (livelihood sources) were given high scores. Hence, levels of livelihood diversification were generated at the household level (Kumar and Baraik, 2019).

Households whose family members are only dependent on one type of occupational activities are categorized as not diversified households. Households, where family members are engaged in two different types of occupational activities, are categorized as moderately diversified households and households whose family members are engaged in more than two different economic activities are categorized as highly diversified households (Kumar and Baraik, 2019).

## RESULTS AND DISCUSSION

### Demographic Characteristics of the Respondents:

A total of 115 households were part of the primary survey, which covers a population size of 969. Out of 969 persons, 543 persons are male and 426 persons are female with a sex ratio of 784. The district's average sex ratio is 909 as per the Census of India, 2011. 87 % of the respondents were Hindus and the rest 13 % were Muslims.

49.6 per cent of the total households belong to the Other Backward Caste, 23.5 per cent of the households belong to the Extremely Backward Caste, and 17.4 per cent of the households belong to the Other Caste. 8.7 per cent of the households belong to the Scheduled Caste and only 0.9 per cent of the households belong to the Scheduled Tribe group.

70 per cent of the total population of *Diara* was found to be illiterate and only 30 per cent of the total population is found to be literate. On the other hand the literacy rate at the district level is 55 per cent (Census of India, 2011). The level of education was also found to be poor as 51 % of the total literate population have primary education, 28 % have secondary education, 19 % have higher secondary education and only 2 % have graduation and above education (Kumar and Baraik, 2019).

### Livelihood Practices:

As Table 1 reveals, a total of 31 different kinds of livelihood practices were recorded during the field survey. These livelihood practices are recorded in the following table:

**Table 1: Livelihood Practices in Gandak Diara of West Champaran, Bihar**

Livelihood Practices in Diara	Agriculture-related practices: Cattle rearing, household chores + arranging fodder, farming, agriculture labour, plowing with traditional equipment
	Non-Agriculture practices: Bullock cart driving, Drummer, thatched house building, Cook, Ice cream selling, Tractor Driver, Maid, Contractor, Hawker, Cycle repairing, Tent decorator, cloth designing, School teacher, Milk Business, Confectioner, Priesthood, Witchcraft, Army man, Tailoring, Daily wage labour, Construction work, Plumber, Electrician, Mason, Welding, Carpenter,

Source: Primary Survey (2019)

### Occupational Structure:

As Table 2 reveals, 23 per cent of the population in *Diara* is occupationally engaged as agricultural labourers and daily wage labourers. 14 per cent of the population is engaged in housework activities. Housework activities include cooking and looking after children and the home. Women are mostly engaged in household activities (Kumar and Baraik, 2019).

Table 2 : Occupational Status of People of Gandak Diara of West Champaran, Bihar	
Occupational Status	Percentage of Population
Dependent	34.5
Agriculture labor and daily wage labor	22.6
House Work	13.7
Student	10.8
Agriculture	10.2
Skilled Labor	5.9
Small Business	1.2
Unemployed	0.6
Service	0.4
Total	100.0

Source: Primary Survey (2019)

As Fig. 3 reveals, 10 per cent of the population is categorized as cultivators (agriculture). 6 per cent of the population is categorized as skilled labour. 1.2 per cent of the population is involved in small-scale businesses and 0.4 per cent of the population is engaged in the service sector (Kumar and Baraik, 2019).

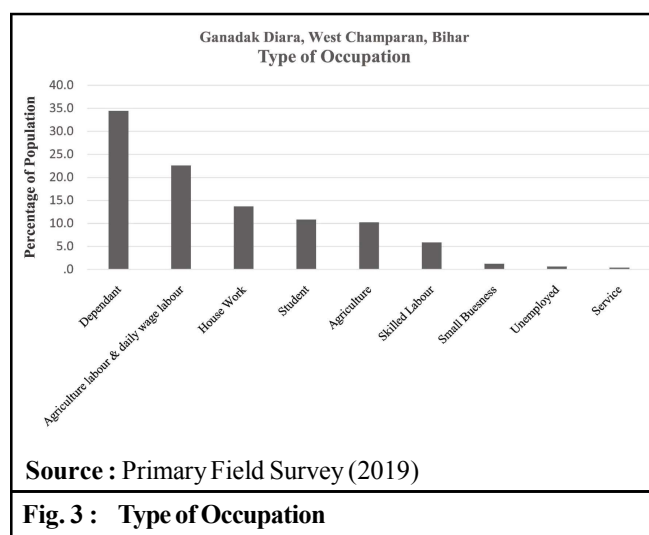


Fig. 3 : Type of Occupation

### Family Member Working Outside *Diara*:

There has been a pattern of migration in search of livelihood in Bihar. As most of the population is suffering

from poverty, agriculture has been the only sector that is providing livelihood opportunities in *Diara*. Bihar is well known for facing disaster every year, particularly North Bihar gets badly affected by the flood and the lack of industrial development provides insignificant opportunities for livelihood in Bihar. Agricultural land has been the major source of livelihood in the region. There has been a skewed distribution of agricultural land among the *Diara* populations of Bihar. We find huge inequality in terms of land ownership. In this background, migration becomes the most preferred activity for people to earn living since *Diara* region does not provide an adequate amount of livelihood options for the people, migration for livelihood becomes a major coping strategy to handle the difficulties imposed by flood and drought (Kumar and Baraik, 2019).

The population who are working outside *Diara* will be obviously in favourable and secure conditions compared to those who are working within *Diara*. When it was asked why people are living in *Diara* with so many difficulties, one woman replied that “The only shameless people are living in *Diara*” which indicates that people are helpless to remain in *Diara* despite the opposite condition, the notion of shame is always get attached with woman as *Diara* is not safe place for them. Another woman narrated a popular saying (proverb) in Bhojpuri that “*Charu Or Ganga Bich Me Nanga*” means the people of *Diara* are surrounded by rivers from all directions which make their life worse. These statements of villagers indicated their state of helplessness and unwillingness to survive in the *Diara* region (Kumar and Baraik, 2019).

As Fig. 4 reveals, 43 per cent of the population was found to be not applicable in the scheme as far as the working population is concerned. This not working population is children, students, old aged, and disabled

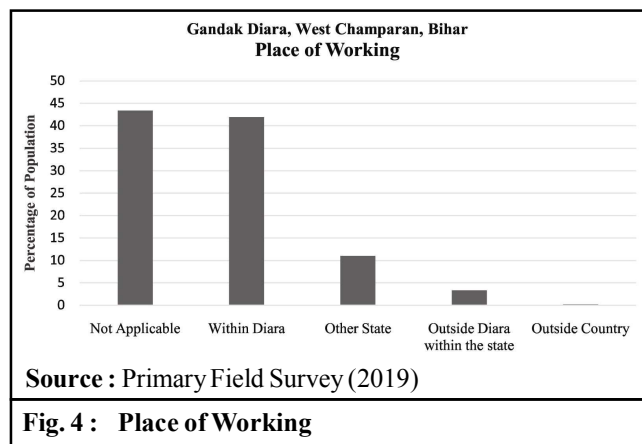


Fig. 4 : Place of Working



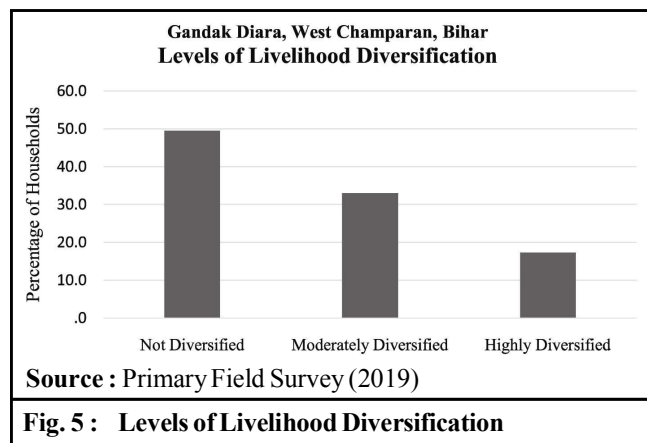
people. 42 per cent of the total population of *Diara* works within the *Diara* region. 11 per cent of the population works in other states. 3 per cent of the population works outside *Diara* but within the state. No individual was found working outside the country. However, one individual reported that he has worked in Middle East countries in the past. The people who are working in other states are mainly employed as a construction worker, mason, daily wage labour, cloth designing, etc. These people are working in distant places such as Surat, Bangalore, Punjab, Delhi, Haldwani, Pune, Himachal Pradesh, Panipat, Bhimtal, Rajasthan, Raipur, etc. People employed outside the *Diara* region are less vulnerable when it is compared with those working within the *Diara* region (Kumar and Baraik, 2019).

#### Levels of Livelihood Diversification in *Diara*:

As Table 3 and Fig. 5 suggest, 50 per cent of the *Diara* households are not diversified in terms of livelihood activities. 33 per cent of the household's livelihood is moderately diversified and only 17 per cent of the household's livelihood is highly diversified (Kumar and Baraik, 2019).

Table 3 : Levels of Livelihood Diversification in Gandak Diara of West Champaran, Bihar	
Levels of Livelihood Diversification	Percentage of Households
Not Diversified	49.6
Moderately Diversified	33.0
Highly Diversified	17.4
Total	100.0

Source: Primary Survey (2019)



**Fig. 5 : Levels of Livelihood Diversification**

13 per cent of the households in *Diara* are fully dependent on agriculture. The remaining 87 per cent of the households are found to be practicing non-agricultural

economic activities with agricultural activities. This shows most of the households are engaged in non-agricultural activities, which indicates the agriculture sector alone is not enough to provide better livelihood opportunities. People's dependence on the agricultural sector is remarkably less when it is compared with non-agricultural activities. People are conditioned to diversify their livelihood practices to cope with challenges caused by flood and drought. Livelihood diversification becomes a necessity for the households as agriculture alone is an inadequate source of livelihood for the *Diara* people (Kumar and Baraik, 2019).

#### Levels of Livelihood Diversification by Social Groups:

Table 4 shows the levels of livelihood diversification by different social groups. The highest level of livelihood diversification was reported among Other social group (35 %) followed by EBC (15 %), OBC (14 %), SC (10 %), and ST (0 %). The percentage of total households classified as not diversified was found to be highest among SC (60 %) followed by OBC (54 %), EBC (48 %), and others (35 %). The levels of livelihood diversification of vulnerable social groups such as EBC, SC, and ST are relatively poor compared to others and OBC social groups (Kumar and Baraik, 2019).

Table 4 : Livelihood Diversification by Social Groups of West Champaran, Bihar					
		Diversification in Percentage			Total
		Not Diversified	Moderately Diversified	Highly Diversified	
Social Group	Others	35	30	35	100
	OBC	54	32	14	100
	EBC	48	37	15	100
	SC	60	30	10	100
	ST	0	100	0	100

Source: Primary Field Survey (2019)

The Agriculture Department, Government of Bihar has formed a separate division named "*Tal, Chaur, Diara Chetra Vikas Vibhag*" to address the developmental issues of *Tal, Chaur, and Diara* land. With the same department, another program has been initiated, which is known as "*Diara Vikas Pariyojana*" or "*Diara Development Project*". This particular program has been launched to promote agricultural activities in the *Diara* region. It provides subsidies for seed and fertilizer purchase and borewells digging to the farmers of *Diara*. The program prioritizes giving

subsidies to the weaker section of society. However, during the field survey, it was observed that none of the *Diara* farmers are familiar with such a program being run by the government (Kumar and Baraik, 2019).

### Conclusion:

The *Diara* region does not provide an adequate number of livelihood options for the people. Migration for livelihood becomes a major coping strategy to handle the difficulties imposed by flood and drought. Half of the households of *Diara* are not at all diversified in terms of their livelihood. The agriculture sector alone is not enough to provide better livelihood opportunities. People's dependence on the agricultural sector is remarkably less when it is compared with non-agricultural economic activities. Promotion of awareness about government programs must be ensured at the local level. The region lacks basic infrastructure such as roads, electricity, school, health, etc. Development of basic infrastructure is required. The establishment of an agro-based industry in *Diara* can provide and widen livelihood opportunities. There is also a possibility to develop this region as a tourist place because of its richness of nature, which can open a new window for livelihood opportunities for local people in general and youth in particular. Promotion and development of aquaculture, water recreation, sports and adventure in the region can become other alternative sectors which the local government body can think of (Kumar and Baraik, 2019).

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