

A SURVEY REPORT
ON
FLOOD HAZARD IN BAHBARI DEKACHUBURI VILLAGE
(WARD NO-6), TEZPUR, SONITPUR



Submitted by

IQAC Darrang College

Prepared by

Dr. Satyendra Hazarika

Golap Sonowal

P.G. Department of Geography

Darrang College, Tezpur, Assam, India

A SURVEY REPORT

ON

FLOOD HAZARD IN BAHBARI DEKACHUBURI: AN ADOPTED VILLAGE OF DARRANG COLLEGE-TEZPUR

PREPARED BY: P.G. DEPARTMENT OF GEOGRAPHY

DARRANG COLLEGE, TEZPUR

(on behalf of IQAC, Darrang College-Tezpur)

INTRODUCTION:

River Morphology is unpredictable and it is dynamic in varying environmental landscape over both spatio-temporal scales. Flood mainly take place because of precipitation, soil properties, geology, geomorphic setup, slope, land use pattern, natural bank geometry, discharges of various frequencies, distribution of riparian vegetation, and vertical and horizontal heterogeneity of floodplain soils etc. Flood mainly occurs within the floodplain region, having low gradient and cultural landscapes. Usually it is a natural process but with ages of times it is termed as semi natural because of human intervention. Flood creates great havoc to the socio-economic life of the people living near the bank of the river. Sometimes, many people lost their homes, agriculture field, and infrastructure due to flood. Flood changes are variable in nature; some changes are gradual while others depending upon the phenomena like extreme precipitation, melting of snow, and cloud burst etc.

The Brahmaputra is a large river which flows for 2880 km through China, India and Bangladesh, out of which it has a course of 640 km through Assam, India

The Brahmaputra River is highly a braided channel. Most of the sandbars and river islands created by the action of river are just temporary in nature. The Brahmaputra River flows over different district boundary of Assam namely Tinsukia, Dhemaji, Dibrugarh, Lakhimpur, Majuli, Jorhat, Sibsagar, Golaghat, Biswanath, Sonitpur, Nagaon, Marigaon, Darrang, Kamrup, Barpeta, Goalpara, Bongaigaon, Dhubri and Mankachar. Out of these districts, some districts have being severely affected by flood problem. Sonitpur is such a district located to the North bank of river Brahmaputra. In Sonitpur district, Jiabharali, Ghabharu, Dipota River create flood problem every year. Dipota is a sub-tributary of Ghabharu River, right bank tributary of Brahmaputra River. The study area is at the lower course of it near the outlet of Brahmaputra. There are many villages under Tezpur sub division, severely affected by flood and many socio-economic parameters are lost due to flood. Nowadays Remote sensing and GIS plays an important role in identification of spatio-temporal changes due to flood and its impact. Remote Sensing, GPS and GIS are most sophisticated tools used for environmental research studies. This flood report is prepared by the department of geography, Darrang College in the adopted village of Darrang College.

The name of the adopted village is Bahhbari, Dekachuburigaon under Tezpur sub-division is a flood prone village for years. Nearby it, the others village like Niz Bahbari, Dekargaon and Bindukurigaon are also flood prone villages. The main sources of flood in these villages are Dipota River and Ghagora river flowing through these villages. According to the primary survey within these villages, it came into conclusion that, every year people suffer badly by flood water which is caused due to incessant rain. The rising water levels of various rivers and tributaries including Ghagora, Dipota and Ghabharu river submerge many areas during the rainy season affecting, hectares of agricultural lands, public dwellings and different public institutions, other resources like: animal etc. under Bahbari, Dekargaon and Bindukurigaon. It not only affects the people of the villages, but also spread along with the national highway 31 that causes tremendous problems for traffic and the people of the entire locality.

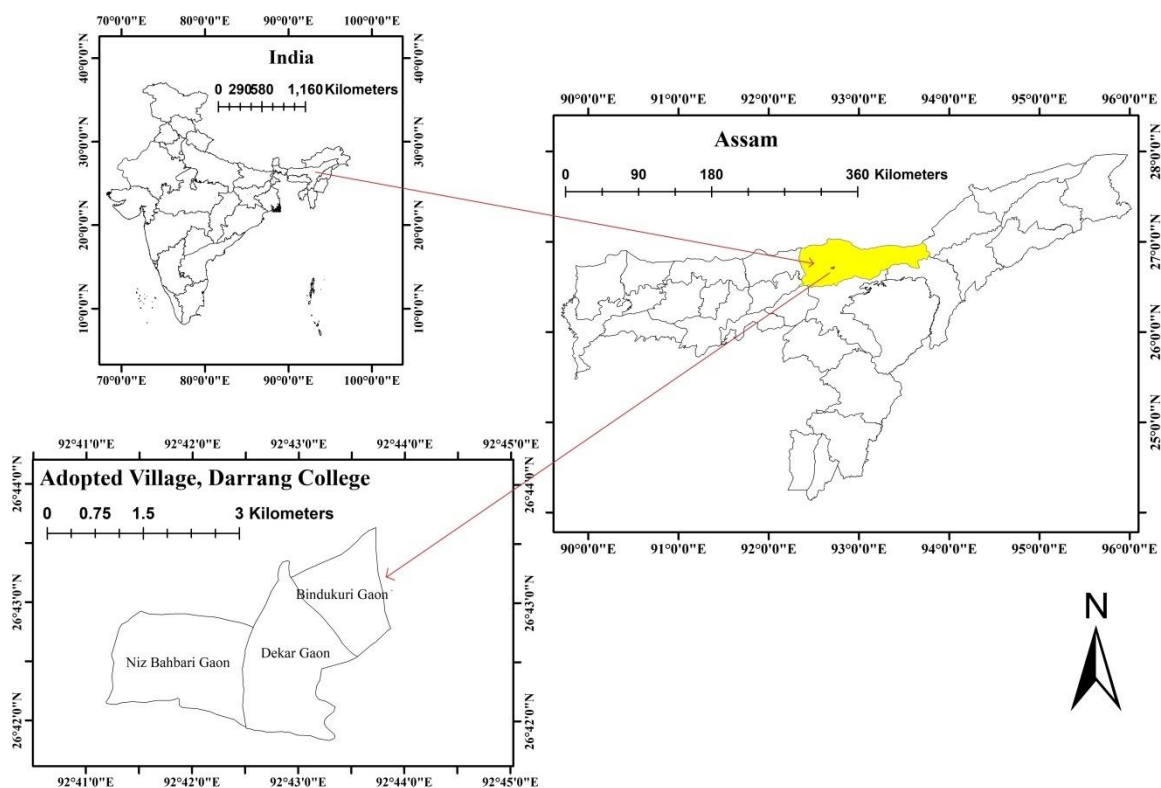


Fig 1: Location map of the adopted villages of Darrang College, Tezpur

OBECTIVES:

1. To identify the Flood belt in the adopted village.
2. To study about the consequences of flood faced by the local people during and after flood.
3. To analyse the status of mitigation measures related to flood in the study area.

METHODOLOGY:

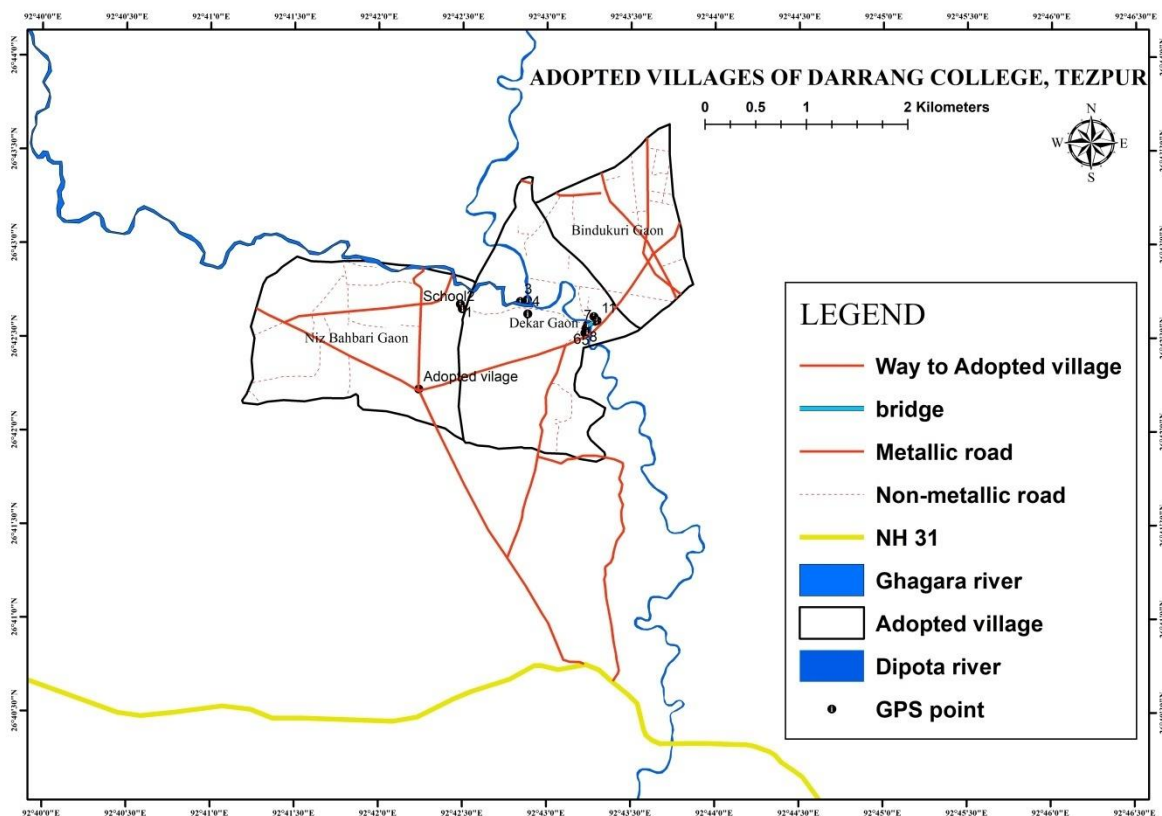
- 1) Questionnaire have been designed to conduct a household level sample survey, to assess the responses of people towards nature of flood, its impact and adaption of various mitigation measures at household level.
- 2) Floodstudy in the adopted village under Sonitpur district is completed using and geospatial tools to identify and map the high risk zone of flood.
- 3) The database is plotted on Excel sheet to prepare the necessary diagrams for further analysis.

RESULTS AND DISCUSSION:

Table 1: Details of Population (Census, 2011)

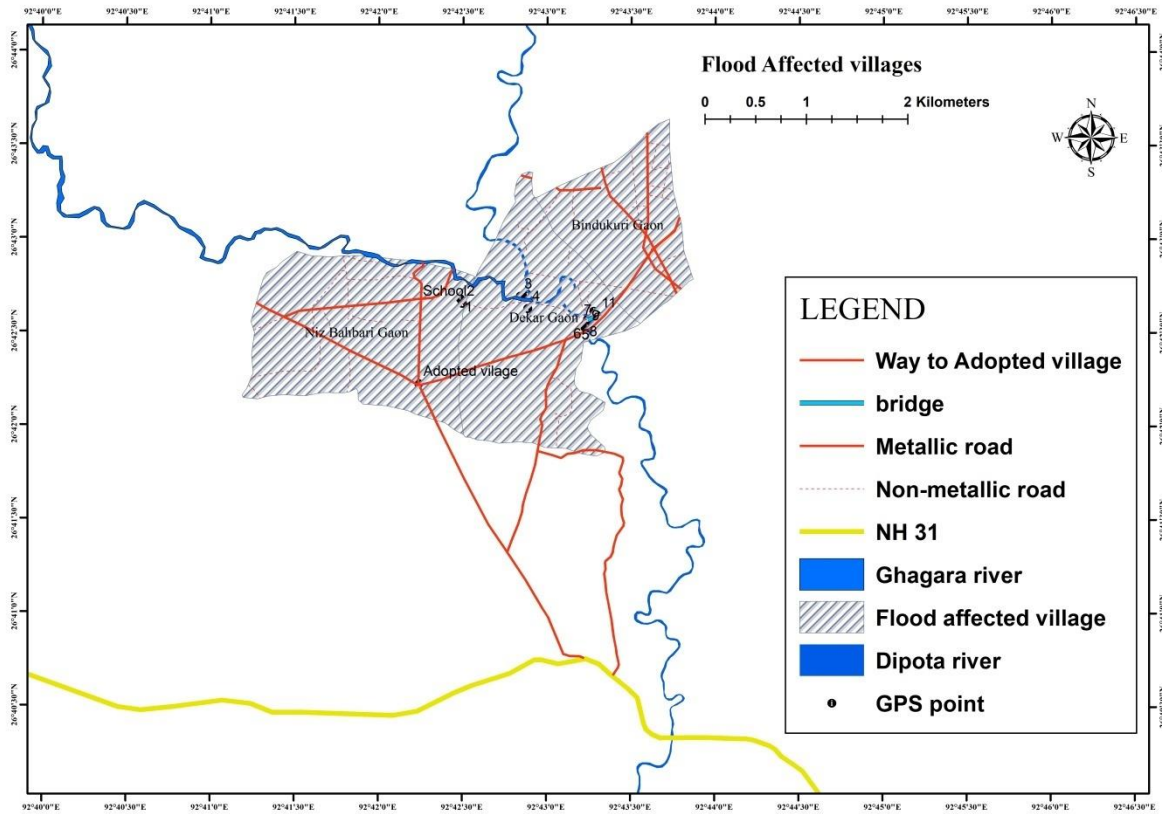
Sl.No	Village name	Household	Total Population	Male Population	Female Population
1	Dekargaon	153	784	418	366
2	NizBahbarigaon	299	1524	777	747
3	Bindukurigaon	317	1519	782	737

Sources: Census, 2011



Prepared by: GulapSonowal

Fig 2: Adopted village of Darrang College, Tezpur



Prepared by: GulapSonowal

Fig 3: Flood affected villages

A primary survey was conducted in the adopted village with the help of students of department of geography and education of Darrang College, faculties and the local people also joined with helping hands. A total of 114 households were surveyed from the adopted villages and after the survey, we came to know that, the main sources of flood in these regions are due to actions of the river Dipota and Ghagora. They received rainfall during monsoon period, which causes flood in these villages. During flood many problems arise within the locality. Some important issues were put in the form of Questionnaire and results were analysed in the form of Pie and Bar graph.

1. Duration of Flood within the region:

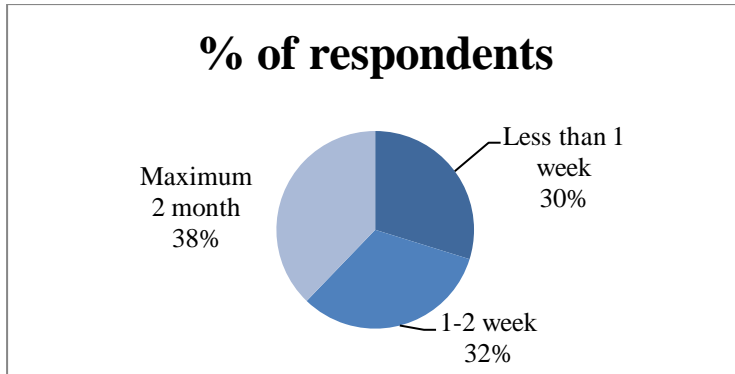


Fig 4: Duration of flood (Source: Field study)

2. Frequency of occurrence of flood within the region:

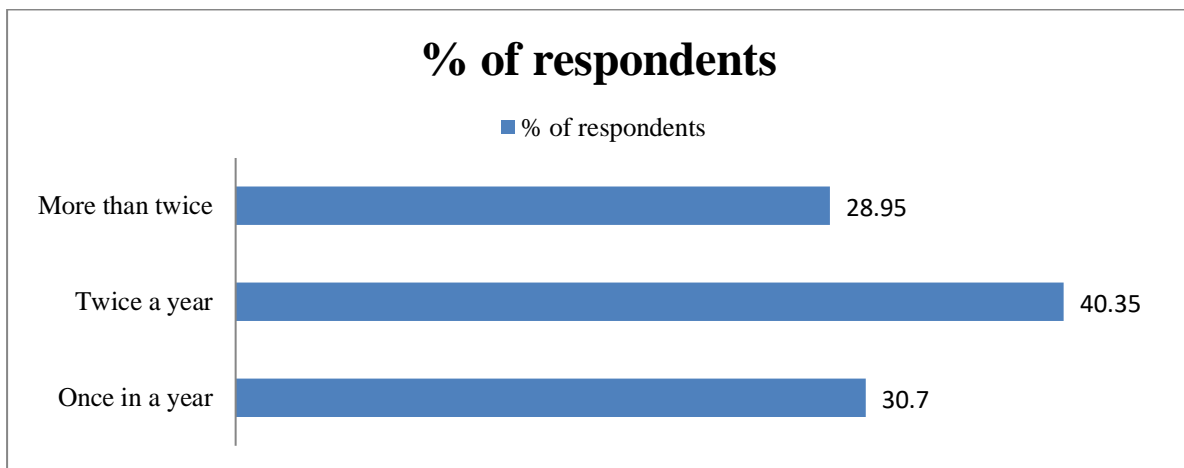


Fig 5: Occurrence of flood (Source: Field study)

3. Nature of flood-borne effects:

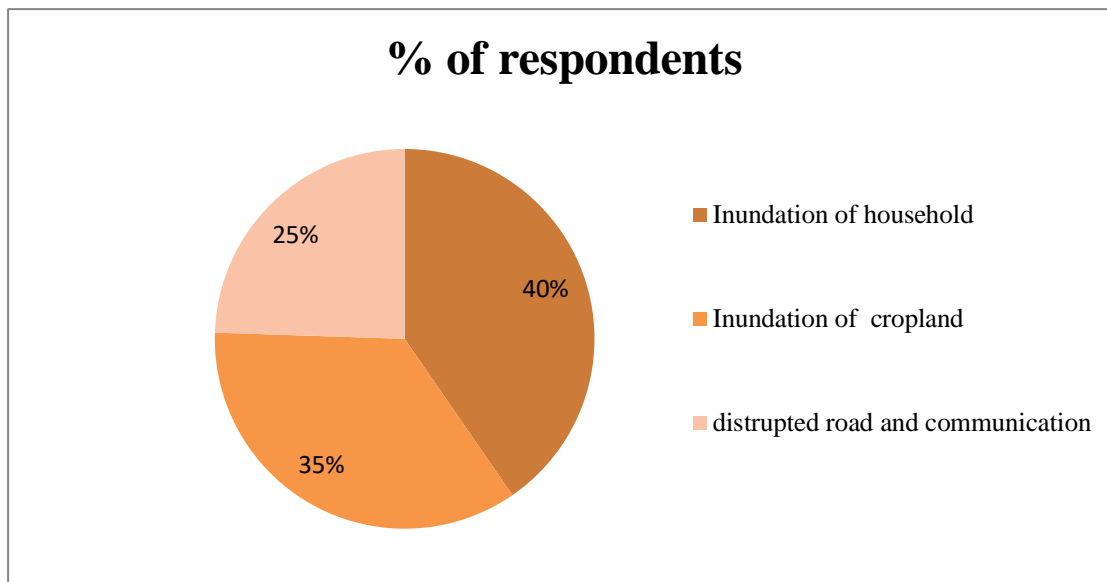


Fig 6: Nature of flood-borne effects (Source: Field study)

4. Consequences of occurrence of flood within the regions:

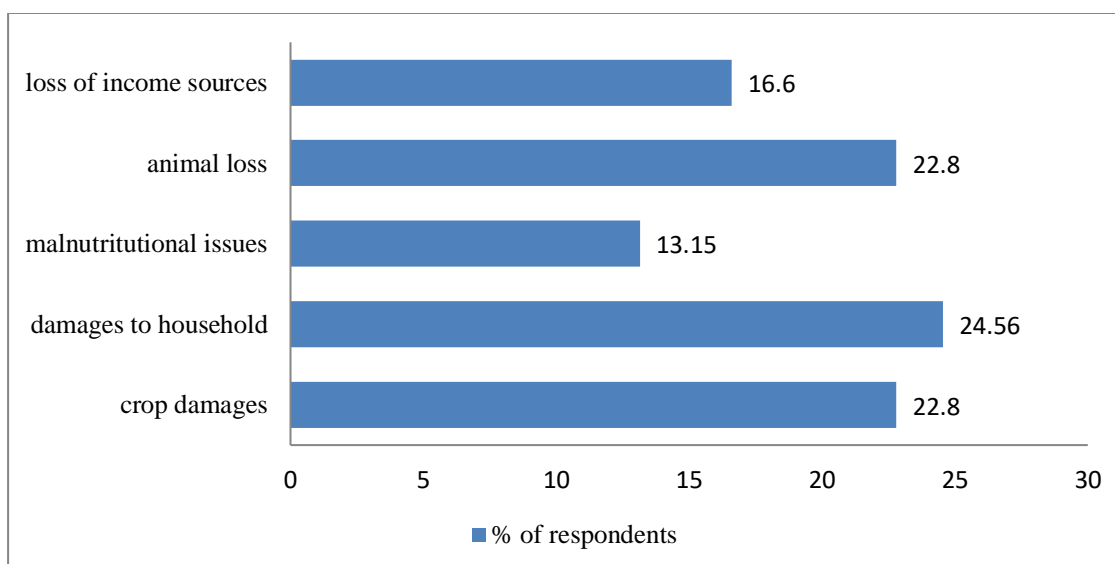


Fig 7: Consequences of occurrence of flood (Source: Field study)

5. Types of problem faced by the flood affected household:

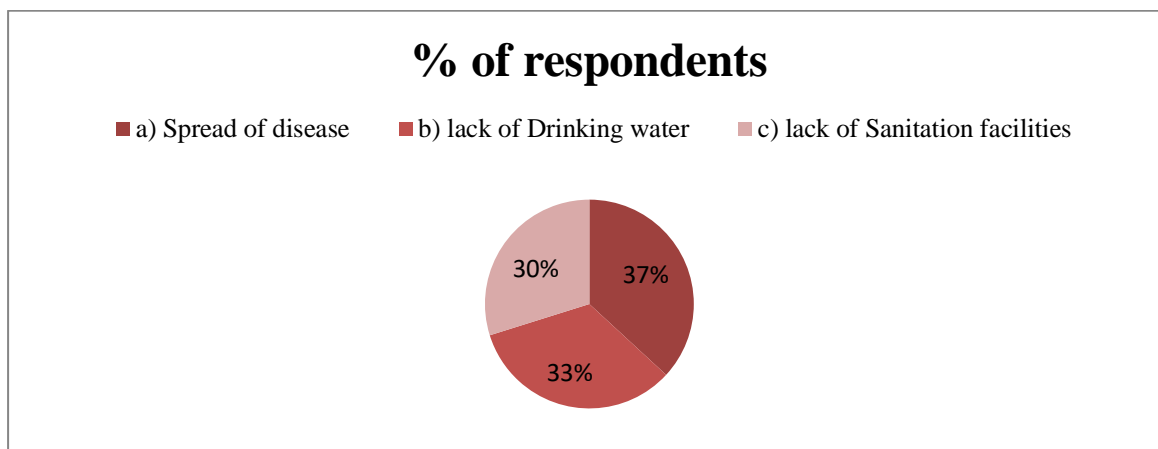


Fig 8: Types of problems faced by the flood affected household (Source: Field study)

6. Government and NGO support mechanism to tackle flood within the region:

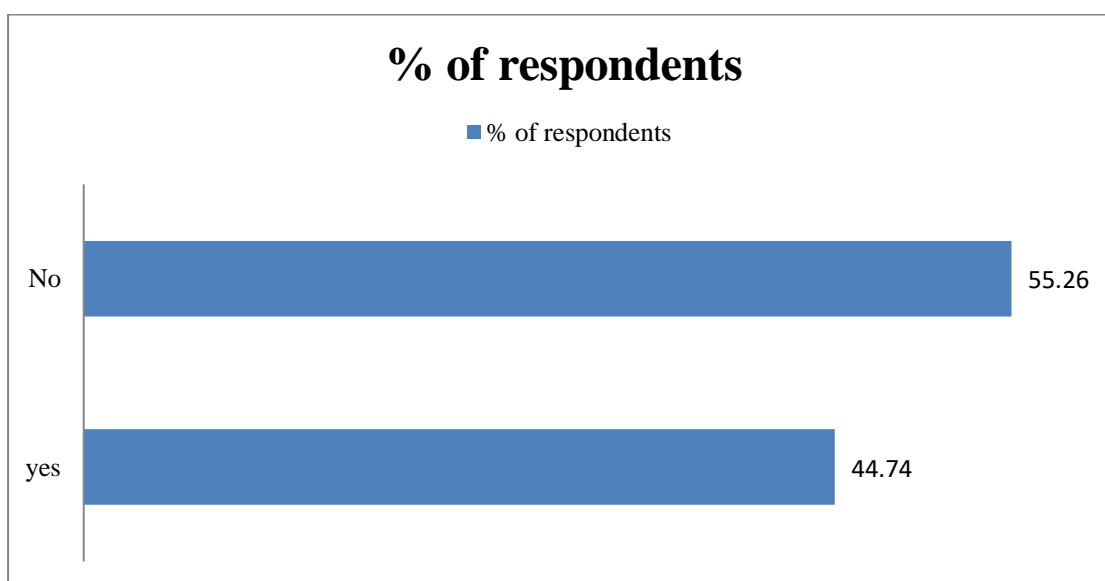


Fig 9: Government and NGOs support to tackle flood (Source: Field study)

7. Community participation in various flood mitigation measures within the regions:

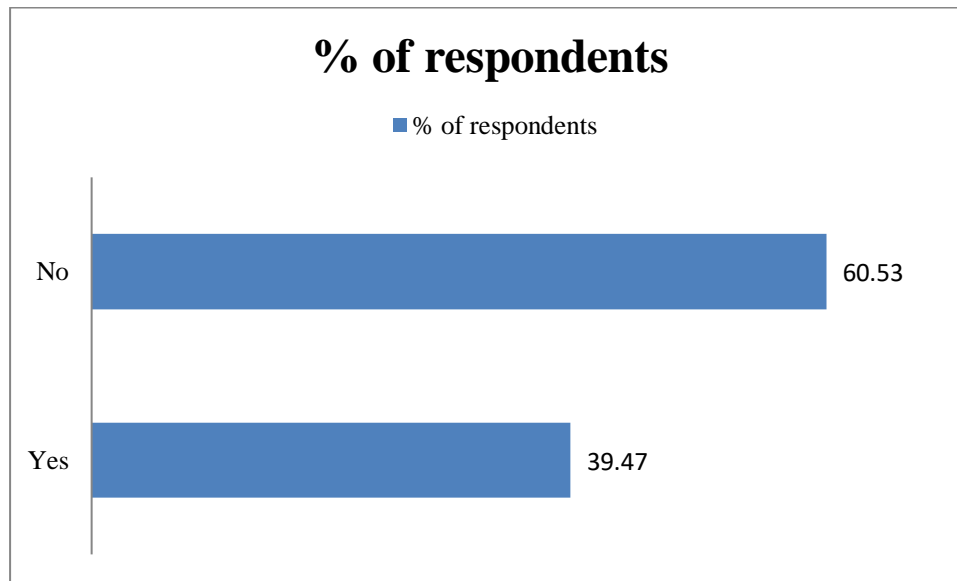


Fig 10: Community participation in various flood mitigation measures(Source: Field study)

Finding & recommendations:

Based on the household survey, the following findings have been observed from the study, according to the responses of the affected people.

1. Dekachuburi, Bahbari is located in the core zone of flood along the river banks of Dipota and Ghagora, surrounded by other villages like Nizbahbari, and Bindukurigaon which are also affected by the seasonal flood havoc.
2. Majority of the respondents claim that they are affected by the seasonal flood for about 2 months in a calendar year (38%), with maximum respondents claiming it as occurring twice a year (40.35%).
3. Apart from household and crop damage, loss of income sources, loss of resources like animals, human health etc. also have paralyzed livelihood pattern of the flood affected people.
4. During the flood season, spreading of various water borne diseases, problems related to drinking water and sanitation facilities are also badly affected the flood ravaged villages.
5. The survey has shown that, the intervention from government and NGOs support system is not adequate (55%respondents stated it to be none) whereas the strong points is the stronger community participation during flood seasons to tackle their own problems (60%).

Recommendations:

1. The affected core area of the flood havoc along the bank line of Ghagora and Dipota needs specialized flood protection measures like natural embankment. The local availability of the bamboo resource can play a crucial role in developing the natural embankment along the bank line of Ghagra and Dipota.
2. There should be sufficient number of water-outlet like culvert, bridges etc so that the incoming water during flood seasons due to over bank flow can maintain a natural and quicker out flow from the core area.
3. The Government effort towards various construction and infrastructural installations related to flood should be more pro-active and adequate in conformity to local problem specific demands.
4. There is an urgent necessity in changes of approach from relief centric to the approach of how to live with the flood with minimum damages.
5. There may be experimental applications of a changed crop calendar with emphasis on more and more winter cropping with artificial irrigation to restore the economic balance of affected people.
6. To strengthen the livelihood pattern of the affected people, other income generating activities can be introduced in the flood affected area as an alternative source of income. In these contexts, they can avail various schemes, where government and NGOs sector can play a big role as a liaisoning agent.
7. The mitigation measures to tackle flood should be designed in such a way that, problem specific intervention can be adopted during and after the flood havoc, with an aim to minimize problems like spread of diseases, drinking water crisis etc.

(The report is based on the field survey conducted on: 10/5/2023 by: Dr. Satyendra Hazarika & Mr. Gulap Sonowal, faculties of P.G. Department of Geography, with a group of students. It is prepared on behalf of IZAC, Darrang College)
