

REPORT ON
“Flood Effected Dicial”
A Case Study On Disaster Management

**THIS REPORT IS SUBMITTED FOR THE PRACTICAL FULFILMENT OF B.A 6th
SEMESTER GEOGRAPHY HONORS EXAMINATION (CBCS), DIBRUGARH UNIVERSITY**



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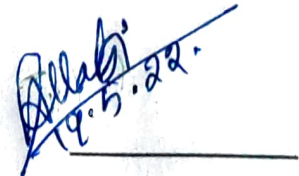
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CERTIFICATE

This is to certify that the project report entitled "Flood Effected Dicial: A case study on disaster management" by Debasish Saikia, submitted to Dibrugarh University for the partial fulfillment of B.A. 6" Semester Geography Honors, has been completed under my supervision and guidance.



Signature

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PREFACE

This report is prepared as a part of B.A. 6 Semester Geography Honors curriculum and in order to gain knowledge about how to conduct a survey. We were required to prepare a report on disaster and a project report entitled "Dicial: A case study on disaster management" is been made. The basic objective behind doing this project report is to get knowledge about disaster and understand its management strategies.

Doing this project report helped us in understanding flood and how it impacts the life of human and flora and fauna of the studied area. Through this report, we understand about different aspect of a research or surveys and how they are undertaken and also understand the importance of research and field work in the subject geography. We also understand the importance of team work while undertaking this project report.

CONTENTS

	Page no
<ul style="list-style-type: none">• Certificate• Acknowledgement• Preface• Chapter 1:	a
1.1 Introduction	b
1.2 Statement of the problem	c
1.3 Objectives	1 - 4
1.4 Methodology	
1.5 Significance of the study	
1.6 Review of the literature	
<ul style="list-style-type: none">• Chapter 2:GEOGRAPHICAL BACKGROUND	5 - 6
2.1 Location	
2.2 Relief and soil	
2.3 Climate	
2.4 Flora and fauna	
<ul style="list-style-type: none">• Chapter 3:HISTORICAL BACKGROUND	7
3.1 History of Dicial village	



• Chapter 4:POPULATION CHARACTERISTICS	8 - 10
4.1 Population and it's determinants	
4.2 Age-sex composition	
4.3 Literacy	
4.4 Occupation	
4.5 Culture	
4.6 Transport and communication	
• Chapter 5:FOOD: NATURE, FREQUENCY AND INTENSITY	11
5.1Nature and frequency	
5.2 Intensity	
• Chapter 6:IMPACT OF FLOOD	12 - 13
6.1 Impact on human population	
6.2 Impact on flora and fauna	
• Chapter 7:DISASTER MANAGEMENT STRATEGIES	14
7.1 Government approach	
7.2Community approach	

• Chapter 8	15 - 16
Summary	
• Conclusion	17
• Photographs	18 - 19
• Questionnaire	20

CHAPTER 1

1.1 Introduction

Disaster is a serious problem occurring over a short or long period of time that causes widespread human, material, economic or environmental loss which exceeds the ability of the affected community or society to cope using its resources. Disaster is broadly divided into 'natural disaster' and 'human induced disaster'. Natural disasters are those disasters caused due to natural reasons. This includes flood, earthquakes, cyclones etc. Whereas, human induced disasters are those disasters caused due to the activities of human which is beyond the limit of the nature. This includes industrial accidents, oil spills, etc. In this report a natural disaster "flood" is studied in Dical village (Sivasagar).

Disaster management can be as the organization and management of resources and responsibilities for dealing with all humanitarian aspects of emergency, in particular, preparedness, response and recovery. It refers to taking all the necessary measures to reduce the negative impact caused due to disasters. Disasters are something which cannot be prevented, but proper management will help in minimizing the loss to life or property.

This project report has been made to understand about flood and also to know and learn how to conduct research and surveys. This survey is conducted by asking questions to the people of the studied area relating to flood, their management, impacts on human life and flora and fauna of the region.

Floods are among those disasters which frequently take place. Some of the major reasons for flood include heavy rainfall, snowmelts, tsunamis or cyclones. This disaster causes loss of life, property, flora and fauna and also mental disturbance. Most of the documented disasters of past 10 years include flood as one of the leading disasters. Floods are among those disasters whose intensity and frequency are increasing day by day. Above all mentioned factors that cause flood, climate change is influencing and contributing in the factors which accelerate the disaster.

1.2 Statement of the Problem

Since the inception of human settlement, various disasters have been affecting the civilization. Among various disasters, flood has a history creating havoc and has been destroying civilizations. Among various theories explained for the end of the Indus Valley Civilization, many historians believe that the civilization collapsed because of the movements in the Earth's crust might have caused the Indus river to flood and change its direction. This is a prove that flood has been a disaster that is affecting the life of people from quite long.

Flood was always a natural disaster but it is quite visible that from the past some decades, human activities have been contributing in accelerating its intensity. Whether be it because of natural reason or because of human induced reason, floods bring a set of negative impacts with it on the life of the people of that area, flora and fauna, national properties, etc. This is destructing some of the rare flora and fauna of the region.

Dicalgaon has been chosen as our study area as it is affected by flood every year. It is a suitable area for the study because human habitation also exists and also a varied of flora and fauna which get affect by the annual flood.

1.3 Objectives

The main objectives of the work are:

- i) To analyze and study about the geographical and historical background of the region. to understand the present days flood pattern.
- ii) To study about the flood; its causes, nature, frequency, intensity and impact.
- iii) To understand flood management strategies undertaken by different organizations.

1.4 Methodology

The required data collected for the study is mostly based upon primary data collection. Although some secondary data are used for the information of the past and how people settled there. Mostly qualitative data have been collected for the study. Visiting the village and communicating with the local resident for data collection, is the prime method undertaken for the study.

Secondary data and information in general are obtained from reviewing various articles and news published in different websites and also by reviewing a book.

In this survey, an empirical observation is also done to get an overview about the demography, occupation, etc. The information regarding the geographical background is collected in order to understand the physical characteristics of the region. This historical background helps to understand the pattern and process that has led to present days landscape of the region. Interaction with the people of the area has been taken up to understand the flood, its nature and intensity, impacts and flood management strategies. Required photos are also given for better understanding of the topic. Coming back from survey, a group discussion regarding every aspect of the study area has also been done among us

1.5 Significance of the study

The study is important to understand flood as a natural disaster, causes for the flood and its impact. It is important to know how a natural disaster affects the area. It also becomes important because flood is among the most frequent natural disasters that causes great economic losses for Dicial village. The place will continue to be an important place for the existing flora and fauna, so to understand the importance of harmony with the nature is studied. This study helps to understand the importance of disaster management strategies undertaken by the people and the government to face the disaster of flood every year. Moreover, climate change is also contributing in the increase of the frequency of flood, therefore the study of flood became very important.

1.6 Review of relevant literature

Literature review is important because it shape and guide our research in the direction which we may not have thought of by offering insights and different perspectives on the concerned research work. For carrying out the work, the following relevant work have been reviewed.

BhubanGogoi (1997), in his work "Impact of flood on human occupancy in the Dikhowmukh region' gave details about flood and their characteristics and how it affects the human population residing in flood prone region. For knowing details about how a flood prone area is studied, I went through his work. The work was well written with suitable maps and data. Reviewing his work, helped in understanding the problem more efficiently.

CHAPTER-2

GEOGRAPHICAL BACKGROUND

2.1 Location

Location of the study area can be explained in two ways absolute location and relative location. Absolute location refers to the place's exact location on Earth which is often given terms of latitude and longitude. Where as, relative location describes the position of the place by using another, familiar features as a reference point.

Dicial is a village situated in the Dikhowmukh under the Sivasagar district. Dikhowmukh is a part of Sivasagar district. Dicial village falls under the jurisdiction of the Sivasagar district. The absolute location of one point of Dicial is 26°97' N latitude and 94°50' E longitude.

2.2 Relief and Soil

Dicial is mostly a plain area. Being a river dams, the soil type is alluvial. The total area is 135 ha approximately.

2.3 Climate

Climate refers to the long-term pattern of weather in a particular area. Climate plays an important role in determining the basic needs like the type of food, clothing and shelter, occupations, etc. In general, climate is one of the major factors for determining the pattern and footprints formed by human in that particular region.

The climate of Dicial is tropical. The annual temperature ranges from a minimum of 14°C and to a maximum of 34°C. The rainfall ranges from 2300mm to 3800mm.

2.4 Flora and fauna

Dicial is a part of a Dikhowmukh. The flora of the region includes various species of tamarisk, sal trees, teak plant, beechwood, toog banyan, elephant apple, ficus, wild lemon, orchid, Indian hogplum, etc. Fauna of this region is also very rich. It includes different domestic animals such as cow, buffalo, pig, duck etc. The village also has a number of bird species. The commonly seen birds are flamingo, dove, mynah, water crow, wild duck, etc. Different types of fish species are also found. These include catla, gojar fish, olive barb, botlyafish. Beside naturally found flora, the people themselves are involved in agricultural activity. The main type of crop includes rice especially 'BaaoDhan', although the cultivation of rice stopped from 2012 due to flood. Other agricultural items grown by them include vegetables like pumpkin, papaya, corn, different types of gourds, tomato, etc.

CHAPTER-3

HISTORICAL BACKGROUND

3.1 History of Dicial village

Dicial is a Village in Gaurisagar Tehsil in Sivasagar District of Assam State, India. It is located 19 KM towards west from District head quarters Sivasagar. 335 KM from State capital Dispur

Borahibari (14 KM) , Panbecha (15 KM) , Hafaluting (15 KM) , Rudrasagar (15 KM) are the nearby Villages to Dikhowmukh. Dikhowmukh is surrounded by Kaliapani Tehsil towards South , Sivasagar Tehsil towards East , Amguri Tehsil towards South , UjaniMajuli Tehsil towards west .

Sibsagar , North Lakhimpur , Jorhat , Mariani are the near by Cities to Dikhowmukh.

CHAPTER-4

POPULATION CHARACTERISTICS

4.1 Population and its determinants

The total population of Dicial ranges from approximately 600-800 people. The population of Dicial includes all the age group people. Just like any other regions, the demography of this area is also affected by fertility, mortality and mobility. Birth is less in this area. The major reason is the lack of medical facilities. There is no Primary Health Care service which could be easily assessable. The nearest PHC is also far and due to poor transport and communication, availing medical assistance on time is a big concern. Even death in Dicial is more. The reason can be death due to various diseases like diarrhea, cholera, malaria, etc. Beside this factors, lack of medical facilities plays as a major factor for high death. Mobility is also a determinant affecting the demographic structure of Dicial. There are pull and push factors. The main pull factor is marriage. Whereas, push factors are many like no proper education, lack of employment opportunity, annual displacement due to flood and also marriage. More than the pull factor, push factor is more prevalent in this area.

4.2 Age-sex composition

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Age-sex composition refers to the proportion of population in each age group. An uneven age and sex composition was seen in Dicial. Here the males outnumber the females. One of the main reasons could be lack of medical assistance at the time of giving birth. More population of young and middle age group was seen. Whereas, the least population was from the old aged group

4.3 Literacy ?

Literacy refers to the state where the person has the ability to read and write. Literacy of Dicial is low. There are only 1 lower primary school and 1 upper primary school. There exist 0 higher secondary school. Even though there are few schools, children are unable to get proper education throughout the year due to flood. To acquire higher, education, one has to move out of the village to adjoining areas like Dikhowmukh, Sivasagar, etc. All people cannot afford expense to send their children for higher education due to low income, because of which all cannot get proper education. Overall, the education quality of the area is not up to the mark.

4.4 Occupation }.

The people of this area depend on a few types of activities for their livelihood. These includes forest dwelling, agriculture, domestication of animals, etc. They are indulged into: agricultural activities where they grow different rice, vegetables etc. Weaving is also an important occupation of the people of the area. They domesticate animals like cows, pigs, goats, ducks, hens, etc. and sell milk in nearby areas.

4.5 Culture

The villages is inhabited by the people of Ahom community. They mainly speak the Assamese language. Bihu is their main festival. The clothes worn by the men and women are mostly traditional attires. They mostly consume local fishes, meats, different herbs available their like mejengapaat, tikoniborua, etc.

4.6 Transport and communication

Transport refers to the movement of people or goods from one place to another. Communication refers to the exchange of information, ideas, etc. by speaking, writing or using any other medium. Transport and communication are an integral part of any settlement. Dicial is being a village, the source of transport to mainland is by road. Almost every household there have their own boat. These boats are mainly county boats. At time of flood, all their goods and animals are transported to mainland with the help of boats.

CHAPTER-5

FLOOD

5.1 Nature and frequency

Flood has been a regular disaster in Dicial since long period. The main reason is because of high monsoon rains and the existence of the Dikhow river. The floods are mainly seen in between the months of May to October every year. The major cause of flood is due to heavy rainfall. The flood in Dicial is very frequent and strong that it causes erosion. Flood makes them so that people lose even a little space to put their death bodies.

5.2 Intensity

Intensity of flood is the damage caused by it. It can be characterized by the dept of inundation, volume of inundation, velocity of flow and rate of rise of water. When the depth of water is more, than more will be the volume, velocity and its damaging capacity.

The flood in Dicial is very catastrophic as the flash flood washes away everything. People there live in Chang Ghar made of wood and bamboos. During that time of year when flood occurs, the water level rises rapidly and reaches up to 3 to 4 feet, forcing them to leave their house. In this situation, the people need to move to nearby relief camps with their animals.

In the past, the flood intensity was less and advantageous as they silted the area with sediments and made the land fertile for cultivation, etc. But in the recent years the frequency and intensity increased rapidly making it disastrous by damaging the biodiversity. of the area. Every year the intensity has been increasing. Monsoon starts from April and it floods the village till October last. Those 6-7 months become impossible for the villagers for survival there as the settlements are collapsed.

CHAPTER-6

IMPACT OF FLOOD

6.1 impact on human population

Flood always have a negative impact on the life of people affected by it. Every year the village suffers from high intensity flood from the Dikhow river which cause huge damage to their life. This annual natural disaster destroys their house and left them flooded. In this case, they move to some rehabilitation centers where they stay until the flood water retreats and make Dicial again habitable. Once coming back, they again build their house. Building of house every year is a huge economic burden they face.

Water and sanitation are also affected due to flood. People of Dicial has no easy access for safe drinking water and at time of flood, this situation become more worse.

As people there don't consume safe drinking water, they are always exposed to various types of diseases that are caused due to the consumption of contaminated water. This situation gets worst due to flood because all possible sources of water get dirty. Moreover, there is no easy access to health care center where they can take the injured people.

Mostly people are associated with primary activities like fishing, cattle rearing, etc. these all get badly affect due to flood affecting their source of income. Storage of food is also a task for the people residing there. They usually save food for the flood season, but due to improper management, the food items get destroyed which eventually causes food shortage.

Education is also harmed during this period. Students are unable to attend their classes as flood submerges their schools also. This continuous process of getting insufficient education constantly keep them backward.

During floods, women, children and elderly people have to face immense problems, Most important is the deterioration of their mental health due to prolonged stay in the flood. People of this age group are more exposed to

diseases. Apart from this, women have to face a lot of difficulties especially the pregnant and the breastfeeding women. They usually suffer from malnutrition due to lack of food. They have to compromise with their nutritional needs while staying in relief camps.

6.2 Impact on flora and fauna

Flood can be destructive to the natural environment. The effects of flood can be catastrophic and sometimes help to drive biodiversity and are essential to the functioning of many ecosystems.

There are both positive and negative impacts of flood on flora. The positive impacts: include improvement in the condition of soil, a good supply of groundwater has a positive impact on soil health and leads to more productive trees and pasture lands or grassland. The negative impacts are one of the major impacts of flood on that environment is its limited amount of flora also gets destroyed. Flooding weakens the trees, making them more to damage from insects and diseases and mostly the small trees cannot survive due to flood.

Flooding also affects the fauna of the region. It also has negative impacts on wildlife causing drowning, diseases proliferation, habitat destruction etc. This flood sometimes has positive impacts on the ecosystem. Floods are important for some animals as they see it as a sign that it is time to mate. Small floods can be good for fish and other water animals. Negative impacts include such as drowning of animals and destruction of habitations too, it compels the animals to migrate, pollutes the water and harm the marine.

CHAPTER-7

DISASTER MANAGEMENT STRATEGIES

7.1 Government approach

Disaster management is a systematic process of effectively preparing for and responding to disasters. It means a coordination and integrated process of planning, organizing coordinating and implementing measures which are necessary to reduce the impact of a disaster.

Government based disaster management approaches implies the measures taken by the government authorities to rescue and reduce the problems of the residents by financially supporting them by providing food and medical facilities in the time of need. Dicial being a part of Dikhowmukh, moat of the government provided facilities are not functional. After the people are rescued from the flood areas and shifted to the rescue camps, they have been provided with Rasons. As transport facility is poor in the region, government's facilities like medical could not reach to them on time.

7.2 Community based approach

Community based disaster management approaches focuses on creating progressive planning and measures taken into account by the particular community of the disaster: affected area to rescue them, manages the losses and reduce the scale of destruction. It is an approach to building the capacity of communities to assess their vulnerability to both human induced and natural hazards. They built 'Chang Ghar'(house on stits); arrange boats for moving people, goods and animals to a safer place; moves to rescue centers, etc. They work on the resources available to them and try to cope up the situation.

CHAPTER-8

Summary

The summary of the report is a shorter version of the report it gives an overview of the entire report in short. This project report entitled "Flood Affected Dical: A case study on disaster management" is a report that contains about the village Dical, which is a part of Sivasagar District. This report tries to explain a natural disaster flood in this area and the overall background of Dical.

Chapter one of the report contains the introduction of the report. An introduction is very important as it gives the reader a base knowledge about what is the report all about. Other than introduction, this chapter includes statement of the problem, objectives of the study, methodology used for the study, significance of the study and review of the literature.

Chapter two is about the geographical background of Dical. It includes the location, relief and soil, climate, vegetation and flora and fauna. This chapter explains the location and overall physical geography of Dical.

Chapter three explains the Peopling background of the area. It is very important to the history of any region to understand their present days pattern and future perspective. This chapter includes the peopling process of Dical.

Chapter four includes the population characteristics of the region like its demography, age-sex composition, literacy, culture and transport and communication aspect. This will give an overview about the socio-economic and socio-cultural condition of the people residing in the area.

Chapter five contains about the flood: its nature, frequency and intensity. It explains about the intensity of flood, about its frequency and how its increasing and creating havoc.

Chapter six deals with the impact of flood upon human population and the flora and fauna. It explains various difficulties faced by the people of Dical during that period of the year. It explains the positive and negative and few of the fauna of the region.

Conclusion

Through this report, an attempt to study about flood and its management strategies is made. This project report helped us in understanding how flood affects an area and about the life of the people residing in those flood prone areas. With the help of information collected through personal interaction with the people of Dicial gave the base for the report and also articles from the internet are used. Dicial, a village situated in the Dikhowmukh experience flood every whenever the water of the Dikhow river rises. The problems faced by them are immense and there is need to adopt proper measures to tackle the situation. The most important thong to be done is the prevention and precaution measures.

~PHOTOGRAPHS~



USED QUESTIONNAIRE

1. Is your area prone to floods?
2. How many times you experience flood at this address?
3. Did you suffer any personal loss?
4. What kind of damage did the flood do?
5. How do you prepare for a flood now?
6. If there is a flood tomorrow, would you feel prepared to handle it?
7. Did any officials or political leaders came to visit you?
8. Is any special forces came to help you?
9. Did you get any or all facilities given by govt.?
10. Do you have flood insurance?
11. Information about drinking water source, sanitary system, schooling, religion, food habit, source of income, animal husbandary [what kind of animal do they rear?] etc.
12. Do you have any suggestions as to how such flood can be prevented?