

A CRITICAL REVIEW OF FLOOD AFFECTED AREAS OF ASSAM IN 2019

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Abstract: These paper mainly written to portray the present scenery of Assam's flood. Every year flood come and go, but these time all the district of Assam faced the problem of flood . Rising the amount of water ,overflow of dams, heavy rainfall can face floods in the people of the state. Many villages were submerged under water. People loose their house, property, impotent document, animals etc. Overall a great damage in the state of Assam. People lives their life in relief camp ,donated others by food, sanitary pads ,water, cloths etc. Not only people but also damage the National Park like Kaziranga, Manash, Nameri ,Dibru Saikhowa etc. Approximately more than 209 animals were died in flood and till 25th july ,69 people died in Assam. Flood is a natural disaster, so try to introduced some new method and techniques to solve or reduce these problem.

Keywords: Disaster, Flood, Distribution, Cause and Impact.

I.INTRODUCTION:

Disaster is a sudden changes which comes and put destruction or loose of human life, properties, environment etc. There have different types of disaster in the World which face time to time in different parts of the countries. Generally ,it depends on changing pattern of relief, climate, environment etc. Now-a-days, one of the major disaster face by the people of Assam is "Flood". Flood refers to the submerges of land due to overflow of water. It may be natural or mam-made. It is very common natural disaster among us. It can affects millions of people around the World. Basically, it can be seen in the river plain areas and the coastal areas of the countries.

II.OBJECTIVES:

- (I) To study about the flood affected areas of Assam in 2019.
- (II) To study about the causes and distributions of flood affected areas
- (III) To analyse the impact of flood in entire state of Assam

III.DATABASE AND METHODOLOGY:

These paper is based on both Primary and Secondary datas sources. Primary data are collected from observation, questioning and phone calls. Secondary data are collected from different government websides, newspaper, books etc. On the Basis of Government Registered data this paper will be written. For the paper, there have mainly use three method of research i.e., Descriptive, Analytical and Empirical.

IV. STUDY AREA:

Assam, one of the state of North-East India, is a flood prone area of the Country. It is located in between $24^{\circ}3'N$ to $27^{\circ}58' N$ latitude and $89^{\circ}5' E$ to $96^{\circ}1' E$ longitude. The state is covered by Bhutan and Arunachal Pradesh in the North ; Arunachal Pradesh , Nagaland, Manipur in the East; Mizoram and Tripura in the south and Bangladesh , Meghalaya and West Bengal in the West. Assam covers an area of $78,438 \text{ km}^2$. The total Population of the state is 31,169,272 (according to 2011 census). Assam is a plain area and it covers its all side by mountains and plateau. Due to it, flood is common in every year in these area. But, Present flood is very destructive and damages huge among of loss in people of Assam.

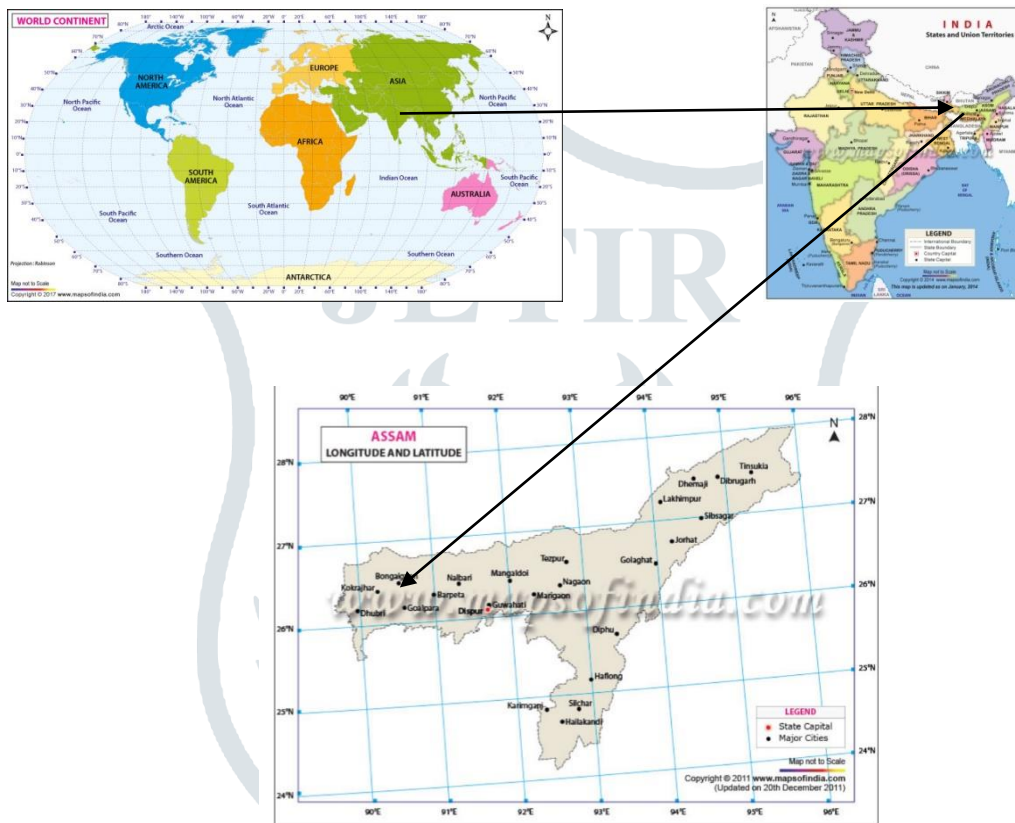


Figure1: Location map of Assam.

The Brahmaputra (come from” Sanskrit” word meaning “son of Brahma”), one of the largest river in India. It cross three International borders of Asia and flows through China, India and Bangladesh. In Assam, it flows from Sadiya in the East to Dhuburi in the West. The total length of the gigantic waterway is 2900km. The huge basin area of the river covers $651,334 \text{ sq km}$. On average, the Brahmaputra river discharges $19,300 \text{ cubic meter per second}$.

V. ANALYSIS:

1. SOURCE OF FLOOD:

Assam is geologically a very complicated region. It exists on the dynamic frontal part of the Indian Plate and the relatively stable Asian or Chinese Plate. Between these two plate, lies the bed of Tethyan Geosynclines.

“RIVER FLOW WHERE THEY WANT TO GO”

Rivers changes their channel from time to time due to some fluvio-environmental process. River Brahmaputra, larges river in Assam, plays an important role in flood. It is about 720 km long and 90 km wide in Assam. It has many tributaries. Some are called south bank tributaries i.e., Buiri Dihing, Dikhou, Janji, Disang, Kakadonga, Bhogdoi, Krishna etc. some are called North bank tributaries i.e., Jia Bharali, Jia Dhansiri, Puthimari, Pagladia, Subansiri, Ranganadi etc. The Majuli is the largest and Umananda is the smallest river island of Brahmaputra .

Barak is the second largest river on Assam. It origin in the high hill complex east of Mao and South east of Japvo Peak. It take a sharp U Turn and forms firstly the boundary between Manipur and Cachar district of Assam. The total length of the Barak within Assam is 85km. some of the left bank tributaries of Barak river are Rukni, Katakhal, Dhaleswari, Singla, Langai, Barak etc and the Right bank tributaries are Labak, Madhura, Dalu ,Jatinga ,Larang, Sonai etc.

2.DISTRIBUTIONS OF ASSAM:

Every years flood came and destroy the State of Assam. Present flood is much bigger than the earlier one. These time all 33 district of Assam can be Submerged by Water. It's a very big problem for Assam. There have 5 flood zonal division in Assam. They are—

- (a) **Upper Assam:** upper assam comprises of Tinsukia, Dibrugarh, Lakhimpure, dhemaji, Jorhat, Majuli, Charaideo, and Golaghat. In the zone, jorhat is the Divisional office. The total population in this zone is 7,840,943.

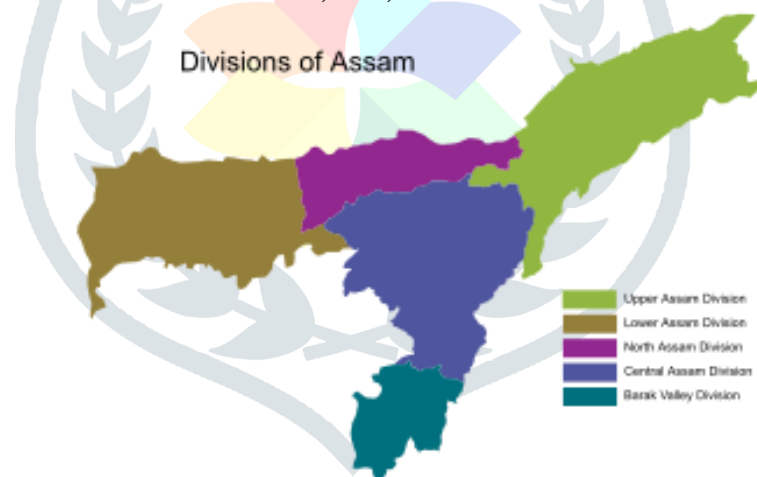


Figure 2: Distribution of Flood Zonal Divisions of Assam

- (b) **North Assam:** the North Assam comprises of Biswanath, Darrang, Sonitpurr and Udalguri. Tezpur has the divisional office and its total population is 4,246,834.
- (c) **Lower Assam:** the Lower Assam comprises of Baksa, barpeta , Bongaigaon, chirang, Dhubri, Goalpara, Nalbari, Kamrup metropolitan, Kamrup rural , Kokrajhar, south Salmara-Mankachar. Guwahati has the divisional office. Anf its total population is 13,179,980.
- (d) **Central Assam:** Central Assam comprises of Dima Hasao, Hojai, East Karbi Anglong, West Karbi Anglong , Morigaon and Nagaon. Nagaon has the divisional office and its total population is 5,894,460.
- (e) **Barak Valley:** Barak valley comprises of Cachar, Hailakandi and Karimganj. Silchar has the divisional office and its total population is 3,612,581.

3. CAUSES OF FLOOD:

- (a) **Flow large volume of water in rainy season:** Large volume of water prevail in the rainy summer season in Assam. Almost June to September, Average annual rainfall in very high. About 80% annual rainfall come mainly in these month. When snow melt in Himalaya, water fall down to the Brahmaputra valley.
- (b) **Low Gradient of the Plain:** River Brahmaputra and Barak both are extremely gentle gradient toward downstream. Excessive rain and snow melt water flows down very languidly causing flood in these plains.
- (c) **Location of the plains:** Assam is surrounded by hills and plateaus, in summer, under the tropical climate, there is heavy rainfall and when heavy rainfall in the hills, water rushes down to the plains from the extensive catchment areas causing flood.
- (d) **Choking of the River Channel:** the water borne materials reach the plains and are deposited on the river bed. The carrying capacity of the running water is highly reduced and choked the river beds. Sometimes it is naturally reduced the volume of the channels to rendering the river shallow like earthquake.

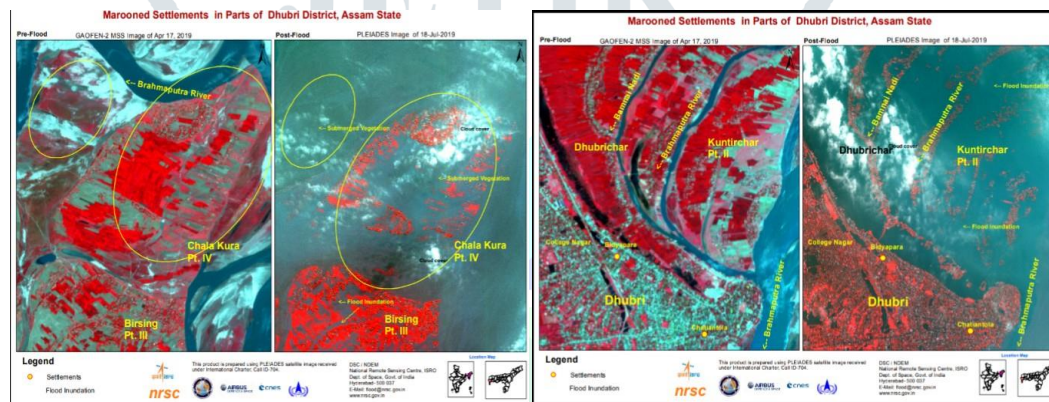


Figure 3: Flood affected area of Dhubri District by National Remote Sensing Centres. (image of same place pre-flood at 17th april 2019 and post-flood at 18th july, 2019)

- (e) **Human interference:** Rapid increase of population and technological development, man has cutting the forest cover of the catchment areas of the rivers. For these, soil loose their retain, washed down by the stream and rivers sometimes construction of dams and embankment effect the causes of flood.
- (f) **Shifting of the River courses:** River of Assam changes their courses time to time. Due to it, rivers carry huge quantities of sediments are eroded and deposited on their beds. Therefore, there channel are choked and the water in the summers dig out different channels abandoning the earlier ones.

4. OVERALL VIEW OF FLOOD AFFECTED AREAS

Flood of Assam starts approximately 16th June 2019. First 2/3 district face the problem of it. When time increase flood came almost all district of Assam. It destroy whole Assam quickly and People loss their life, houses, agricultural land, etc. First Flood occur in Jorhat district of Assam and it affect 2 villages of west Jorhat revenue circle and 375 population face it

Table 1: Data Collected From Assam Disaster Management Authorities.
(From 16th June -25th July,2019)

DATE	TOTAL DISTRICT AFFECTED	TOTAL VILLAGE AFFECTED	TOTAL POPULATION AFFECTED	CROPS AREA AFFECTED By FLOOD (Hect)
16/6/19	1	2	375	0
17/6/19	3	8	565	0
18/6/19	1	9	4945	163
19/6/19	1	9	4945	163
20/6/19	1	3	2076	56
21/6/19	3	5	4730	56
22/6/19	2	7	6346	56
23/6/19	2	7	6373	45
24/6/19	2	7	4892	0
25/6/19	2	12	4254	0
26/6/19	2	12	4350	1031
27/6/19	4	14	10423	865
28/6/19	5	20	9902	1827
29/6/19	6	36	10659	658
30/6/19	2	26	4259	651
1/7/19	1	17	3848	76
2/7/19	1	4	767	390
3/7/19	2	43	6820	134
4/7/19	2	18	2717	281
5/7/19	1	13	1940	0
6/7/19	N/A	N/A	N/A	NA
7/7/19	1	8	3637	0
8/7/19	5	43	12631	955
9/7/19	8	145	62419	3435
10/7/19	11	530	207098	13267.74
11/7/19	17	749	423386	16730.72
12/7/19	21	1556	869024	27864.16
13/7/19	25	2168	1406711	51752
14/7/19	28	3181	26455333	87607.43
15/7/19	30	4157	4786421	150213.6
16/7/19	30	4663	5259142	163969.02
17/7/19	29	4626	5751938	173312.12
18/7/19	28	4128	5352107	212122.74
19/7/19	27	3705	4887443	178938.58
20/7/19	24	3024	4408142	151380.46
21/7/19	18	2669	3837354	135226.67
22/7/19	18	2283	3055837	114179.77
23/7/19	19	2523	2801329	126837.55
24/7/19	20	2933	3482170	143734.12
25/7/19	18	2753	3492734	13038370

From the above date, we saw that after the month of June Flood increases and it spread in every district of Assam. More than 57 lakh people and more than 1lakh crops area affected by flood. Government, NGO, other organization, common People were gave relief to the flood affected areas. From 16th June -25th July, total 17,74,526 quintal Rice, 9015934 quintal Dal, 22,72,194 quintal salt, 62,366.62 quintal mustard oil distributed by others. Other than these, people gave biscuit, chira, sanidary pad, water bottol, candel etc. At present, total 15,25,019 numbers of small and big relief camp were set up in assam.

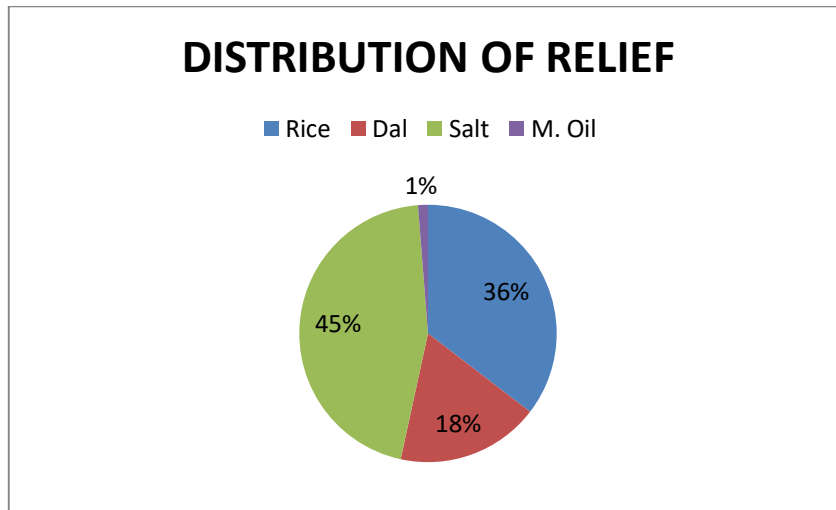


Figure4: Distribution of Relief (from 16th June-25th July)

Like people, animals were also affected by flood. There have 1,53,93,340 big, 82,98,268 small and 2,14,09,039 poultry were affected by flood within the times. More than 300 animls were died.

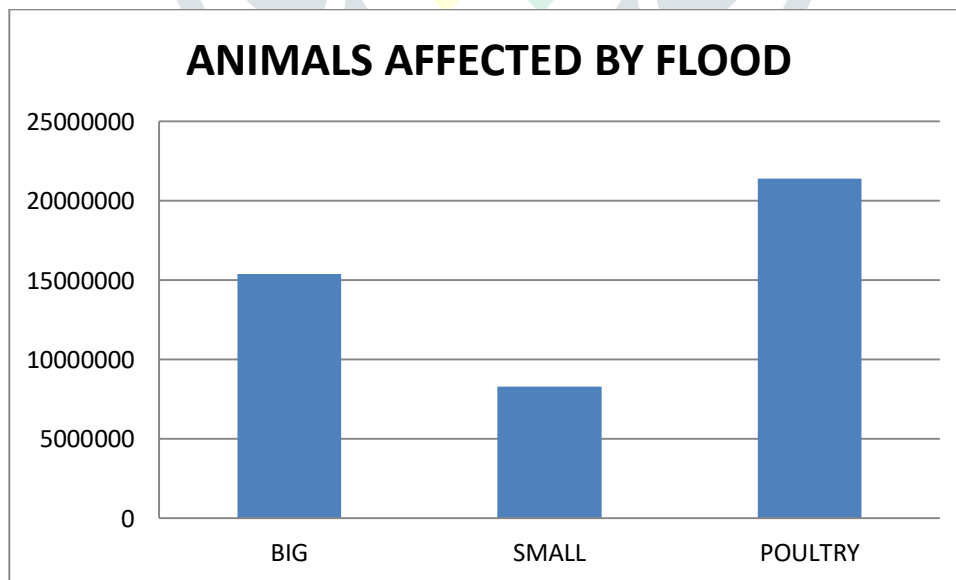


Figure 4: Showing animals affected by flood.

5.IMPACT OF FLOOD IN ASSAM

- (a) **Loss their houses and properties:** More than 52 lakh people (till 22th july,2019 ,at 5pm) of 33 district affected by flood. They have loss their houses ,imported document ,accessories of house, domestic animals and many more in their life. Some of the people saw their death in their families. It's a very paintfull exprences for us. They live together in relief camp.
- (b) **Lack of food supply:** Due to flood , they not carry much food in their houses. Some people cannot eat food in whole day. Many people, NGO. Other organization donates food ,cloths,sanitary pad etc to donate and give some sympathy and humanitarism.
- (c) **Transport Facilities:** Every transport facilities has black except water way. People use Ferry, small boat, banana boat etc. to carry people from flood affected areas to relief camp. They use these water way to donate food ,flothing from unflooded area to flooded area.
- (d) **Influence of Social Media:** Social Media plays an important role. They gave each and every movement of flood to the others. They try to give news related with flood, announced and send message to help the people flooded area. Many online appsa were use to give money as a donation to help us in outside Assam people.
- (e) **Government Fund and donation:** The Assam Government as well as Central government gave fund to every villages. Depend on their losses, evey family get money to reconstruct their houses said by the govt. many bolleywood actor-actress, Sports persons, Musician, Dancer, Literats etc also gave donation to help the people of Assam.
- (f) **Medical Facilities:** Due to flood, there have shortage of medicine in some places of Assam. After flood there also have doubt if there have any disesase come in here. So some medicine were try to store in their pharmacy or medical offices.

6.CONCLUSION:

Flood is a national problem of a country. It is problem of every losses in the counties socio-economically, physically, mentally and environmentally. It a great damages. Every year it come in Assam and every years people lose their houses and properties, animals etc. If their have happen any permanent solution, it can feel relax by the people of Assam. Some of the measures to solve the problem of flood are to construction of embankment in a planned manner in some selected areas only; checking bank erosion time to time; stopping deforestation and taking up a afforestation in the catchment areas; undertaking protection work of settlement both rural and urban; construction of drainage channels culverts and sluice gates whenever necessary; construction of raised platforms near the settlements of the flood prone areas for taking shelter in the period of high flood. Flood came every country in this world. If we try to solve international solution take research of it. I hope affect of flood has reduced among the country . For these , common people and government take initiative to solve it. Otherwise, a huge among of money government pay for it in every years.

REFERENCES

- [1] Taher and Ahmed, Assam: a Geographical Profile. Chapter II 22-26pp
- [2] J. N. Sharma, Asomar Nod Nodi. pp2
- [3]<http://sdmassam.nic.in>
- [4]<https://www.nrsc.gov.in/>