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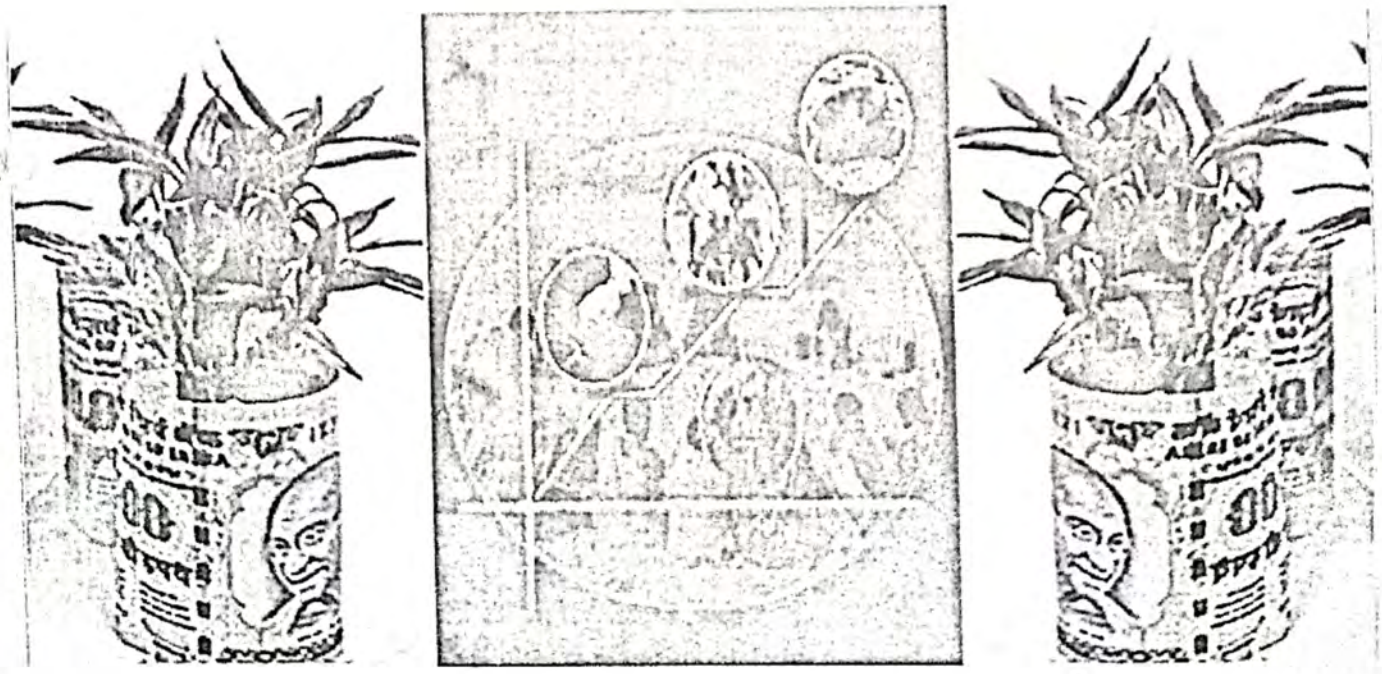

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STUDY OF THE GEOGRAPHICAL PERSPECTIVE OF FLOOD AFFECTED SETTLEMENT IN NANDURBAR TEHSIL

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ABSTRACT- The regular impact of flood has been observed in Nandurbar district. It is found that most of villages in this district come under drought affected areas. Tough span of rainfall is June to September in Maharashtra yet this part is affected by drought. According to the report of Irrigation department this part faces the break of 25 to 30 days in rainfall. It means there is 35 to 40 days fall of rain out of 120 days of monsoon season and only 100 to 120 hours of rainfall. This is drought affected area but occasionally after every 05 to 10 years rivers of this area are affected by flood due to heavy rain. The government and people of this area are conscious about the flood and that is why it is not more affected by flood. The cloud burst of 2016 made tremendous loss in the pacorabari village of Nandurbar district. People have occupied the area of rivers and nallahas for settlement and that have made more loss of people.

Key words- Flood, Nallaha, Bushes, settlement, drought

INTRODUCTION-

Nandurbar district is situated to the north of and west boundary of this district connected to the Gujarat state at the same time Madhya Pradesh state is towards the north. Naturally north part of Nandurbar is surrounded by Satpura Mountain and its hills. It makes north part of Nandurbar higher attitude and south part is Basin of Tapi River which is plain but Tapi river flow form rift valley. Physiographical structure of Nandurbar makes impact of climate. There is maximum average rainfall is 800 cm in Akkalkuwa and Dhadgaon north tehsil of Nandurbar district on the contrary in shahada tehsil of Nandurbar district south tehsil of district average rainfall is 750 cm. the average rainfall is 800 cm in Navapur tehsil due to Sahyadri ranges.

Study area-

Nandurbar Tehsil it lies between north latitude 21°14'55" to 21°30'22" N and east longitude 74°03'45" to 74°29'36" E. According to census of 2011 there is 367385 populations live in Nandurbar tehsil 187450 male and 179931 females and 04 others. The Population density of Nandurbar tehsil is 287. Out of total population 69.77 % People live in rural area and 30.23% People in urban area in Nandurbar Tehsil.

OBJECTIVE-

1) To find out impact of flood on Nandurbar tehsil in 2006.
2) To study the rehabilitation settlements in Nandurbar tehsil.
3) To study people's opinion in the environment.
4) To study factors affecting the flood affected village.

Hypothesis-

Environment, settlement and are responsible to flood and people do not get rehabilitated properly due to their depression

MATERIAL AND METHOD-

For this study the Primary data is generated through field work by a Questionnaire, which has been carried out in different village in the basin. The secondary data of land use is collected from the statistical review of the district census, agriculture, Irrigation, Forest collector offices for the year 2016-17. All statistical data is taken from the above information and with the help of table is use for the analysis environment impact of the study region.

RESULT AND DISCUSSION-

The main rivers like Tapi, Chandwa, Ranka and Sukai Nallaha affected 73 rural settlements. Western river flowing longest in Maharashtra is Tapi. Purna is tributary of Tapi and origin of both of them is Satpura Mountain. The amount of rainfall is more over both the rivers therefore plenty of water is found in both the rivers. Tapi river has occupied almost east and west boundaries of Maharashtra. This river flows from the rift valley which makes people to settlement high. Therefore these settlements are not affected by flood every year. Same times tributaries of tapi river are over flooded due to continue rainfall at one and the same time over all there rivers, long catchment area of tapi river result in to

flood. Being high settlement al the partsof settlements are covered by water and seems like island. The bank is eroied because most of the settlements are on the banks of river. Security wall are there its height is only 3 to 4 meter and level of water is upto that. Speed and quality of water in river creates to the people.

The flood in this part does not create any human causality but it makes problem for drinking water, reptile's production of poisonous mosquitoes and insects. There is a large amount of loss of soil and crop in this area. People were not cultivating the land on river bank before 20 to 30 years because of fear of flood. Increase in population and mechanical devices made people to cultivate the soil of river bank. The agriculture factors of this part are affected because people have occupied the area of Tapi river bank.

Flood Definition-

1) Smith (1992)- "Heavy rainfall is the most common cause of floods. Flooding is generally caused by the inadequate capacity within the banks of the river to contain the high flows brought down from the upper catchments due to heavy rainfall and weakness of its course and water in the river flows either overtopping or breaching the embankments."

Sr. No	District	River Name	Name of Flood Affected Settlements	Index Code Location	Height from M.S.L(Meter)	Area Sq.KM	Number of Houses	Population	Site
1	Nandurbar	Tapi	Savalde	525672	112	202.61	106	452	Left Bank
2			Korit	525673	100	1164	500	2385	Left Bank
3			Sujalpur	525674	120	640.80	170	839	Left Bank
4			Borale	525675	120	556.62	343	1565	Left Bank
5			Nashinde	525677	117	226.92	185	861	Left Bank
6			Hat Mohide	525691	120	1013.17	433	2072	Left Bank
7			Amalthe	525692	120	528.31	96	535	Left Bank
8			Osarli	525693	129	690	228	1120	Left Bank
9			Kaparkheda	525677	124	167.75	73	372	Left Bank
10			Orale	525694	120	830	221	1029	Left Bank
11			Koparli	525698		941.26	795	4293	Left Bank
12		Chandwa Nala	Korit	525673	100	1164	500	2385	Left Bank
13			Samsherpur	525678	120	662	474	2267	Left Bank
14			Savalde	525672	112	202.61	106	452	Left Bank
15			Borale	525675	120	556.62	343	1565	Left Bank
16			Sujalpur	525674	120	640.80	170	839	Left Bank
17			Nashinde	525677	117	226.92	185	861	Right bank
18		Ranka Nala	Dhanora	525638	124	869.25	1150	5201	Right bank
19			Kothade	525663	178	677.40	306	1384	Right bank
20		Shivan	Karankheda	525737	178	597.98	362	1728	Right bank
21			Sundarde	525738	180	448.77	595	3146	Right bank
22			Aaste	525782	126	1010.75	707	3546	Right bank

23			Ozarde	525780	280	113.29	57	217	Right bank
24			Goghalgaon	525785	330	177.07	174	795	Right bank
25			Ambapur	525781	300	3517.30	273	1380	Right bank
26			Ajepur	525784	320	415.07	216	947	Right bank
27			Khamgaon	525765	300	656.68	473	2373	Right bank
28			Vicharak	525768	242	221.45	253	1748	Right bank
29			Biladi	525766	200	361.31	145	799	Right bank
30		Sukai	Umarde khurde	525745	170	808.10	469	2426	Right bank

According to the above table in Nandurbar Tehsil, there is danger of flood from Tapi River, Shivan rivar, Chandwa nallha and Ranka nallaha. Tapi is the largest river in the tehsil his length 60 km. The length of other river and Nallaha is between 20 to 25 kms. The river and Nallahas of these tehsils make the risk of flooding in 15 to 20 years. Tapi in other river and Nallaha is seasonal flowing. For long time, there is no possibility of large floods, people become uncomfortable and ignore the security. Therefore, financial losses are very high.

According to the survey conducted by Nandurbar District Disaster Division, 11 rural settlement on the Tapi river are affected by the flood, as well as Chandwa Nallaha is affected by 6 settlement, but this settlement are also affected by the Tapi river. Similarly, 2 rural settlements on the Ranka Nallaha are affected by the flood. As well as 9 rural settlements on the river Shivan are affected by the flood. Similarly, 1 rural settlement on the Sukai Nallaha is affected by the flood. Total 24 rural settlements in Nandurbar tehsil are flood affected as well as flood's impact on 41213 people. Similarly 15654.26 hectare area is affected by flood.

Sr. no	Tahsil	Affected Village	Edited in 1968 Govt Land	Rehabilitation available Government Land area Hector			Affected People
				Availabl e Land	Survey no	Area Hecor	
1	Nandurb ar	Korit	10.77	Yes	116,122	3.09,3.52	521
2		Savalde	--	Yes	123,127	3.15,1.01	130
3		**Borale**	**6.02**	**Yes**	**187,188, 193,** 194, 196/2,197, 190, 191	**2.82, 1.01, 0.04,**0.20, 0.49,0.70, 3.46, 1.69	**282**
4		Sujalpur	4.73	Yes	73,74,75	2.35,2.38,4.52	175
5		Nashinde	Borale Shift		--		139
6		Kaperkeda	Sujalpur Shift		--		72
7		Osarli	5.90	Yes	57	3.64	166
8		Hat moide	12.00	Yes	327, 117/2	3.07,1.66	356
9		Orale	6.91	Yes	148	114.83	171
10		Amalthe	3.16	Yes	68/1	10.43	64
	Total		49.49			161.91	2076

According to the above table, floods occur every year in Nandurbar tehsil, but the intensity of some flood is very large. In 1968 too there was big flood condition. Then, 15 rural settlements had felt its impact. After that the Government Departments is studied the rehabilitation the flood affected settlements people. In the year 1968, the Government took the land to the flood affected families with the aim of rehabilitation of 49.49 hectares in 7 villages. Also 2006, all the rivers and Nallahas in this tehsil had created a terrible flood situation. At that time, there was a huge danger to entire 12 rural settlements in this tehsil. In view of the risks, the district Collector himself was surveyed in full time and decided to rehabilitate the flood affected families, 161.91 hectares of 10 rural settlements in the government and private lands were edited. The entire 2016 flood affected people had to be rehabilitated. Due to lack of land available to the two villages of Nashinde and Kaparkheda, the land was providing to the flood affected people in Boralae and Sujalpur villages. Rehabilitation settlement land 2 to 5 km from main village, it was at a distance. In this land only the flood affected peoples had to be shifted. To make the people of the whole past experience rehabilitate them, the collector himself conducted meetings in some villages and urged people to rehabilitation and promised to provide facilities. Similarly, 70 families of Haat Mohide were rehabilitated in

the new settlement place, but the people of other villages did not rehabilitate theme in the village. Because of the new occupation of roads, electricity, drinking water, school facility, social security, attack of wild animals, employment, etc. due to fear of not getting many facilities, there is no shift.

CONCLUSION - The rehabilitation of the villages affected by floods in Nandurbar tehsil was no successful because the government and the flood affected family of the disrupted family are the reason for the depression. This is a danger in the future.

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