

# Flood Hazard: Its Impact and Management in Some Blocks of the Northern Part of Nadia District, West Bengal

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## ABSTRACT :-

The Nadia district is one of the flood prone districts of West Bengal. Every year during the rainy season large areas have been inundated by flood water. The main rivers of the district are becoming very much shallower due to rapid siltation of its bed. Sometimes river water over flows its banks and inundated to its surrounding regions and water from one river bed enters at the other river. As a result many blocks and villages flooded by water. The Nakashipara, Kaliganj, Tehatta I, Tehatta II – these four blocks are most flood prone areas of the district. Flood hazard and vulnerability causes house collapse, damage to agricultural crops, buildings, roads and livelihood support system of the villagers. The present research paper has been prepared do make a critical analysis about the flood hazard, its impact and management options of some selected block of Nadia district.

## KEY WORDS :-

*Flood prone, Embankment breaching, Vulnerability, Flood risk, Flood impact, Integrated management approach.*

## I. INTRODUCTION :-

The Nadia district is located in the state of West Bengal at the border of Bangladesh at its eastern direction. The Bhagarathi, the Jalangi these two are the main rivers of the Tehatta-I, Tehatta-II, Nakashipara and Kaliganj block. The Bhagirathi if flowing along the western portion and the Jalangi is flowing along the eastern portion of the study area. The flood hazard is most vulnerable for the community who are living in this area. The poor peoples are suffering a lot during the rainy season because of vagaries of monsoon rain. Most of the villages are inundated in those four blocks during flood.

## II. OBJECTIVES :-

The following are the major objectives of the research work;

- i. To identify the major villages or areas which are flooded frequently in the blocks.
- ii. To assess the causes of flood in the study area.
- iii. To analyze the impact of flood among the local community.
- iv. To suggest proper management options to mitigate flood hazard in the study area.

### III. METHODOLOGY :-

To complete the present research work pre-field, field and post-field methodologies have been applied. In the pre-field stage literature from various sources like- books, journals, articles from the internet were reviewed. The general information about flood hazard and its impacts can be assessed by reviewing the proper literatures. In the field stage ground truth verification has been done by field survey. In this stage household survey, interview, visit to the flood affected villages, most vulnerable areas were visited by us and various information and data have been collected. In the post-field stage various data have been analyzed and these have been represented by different statistical diagrams and thematic mappings. Finally, the impacts of flood hazard can be assessed in the study area.

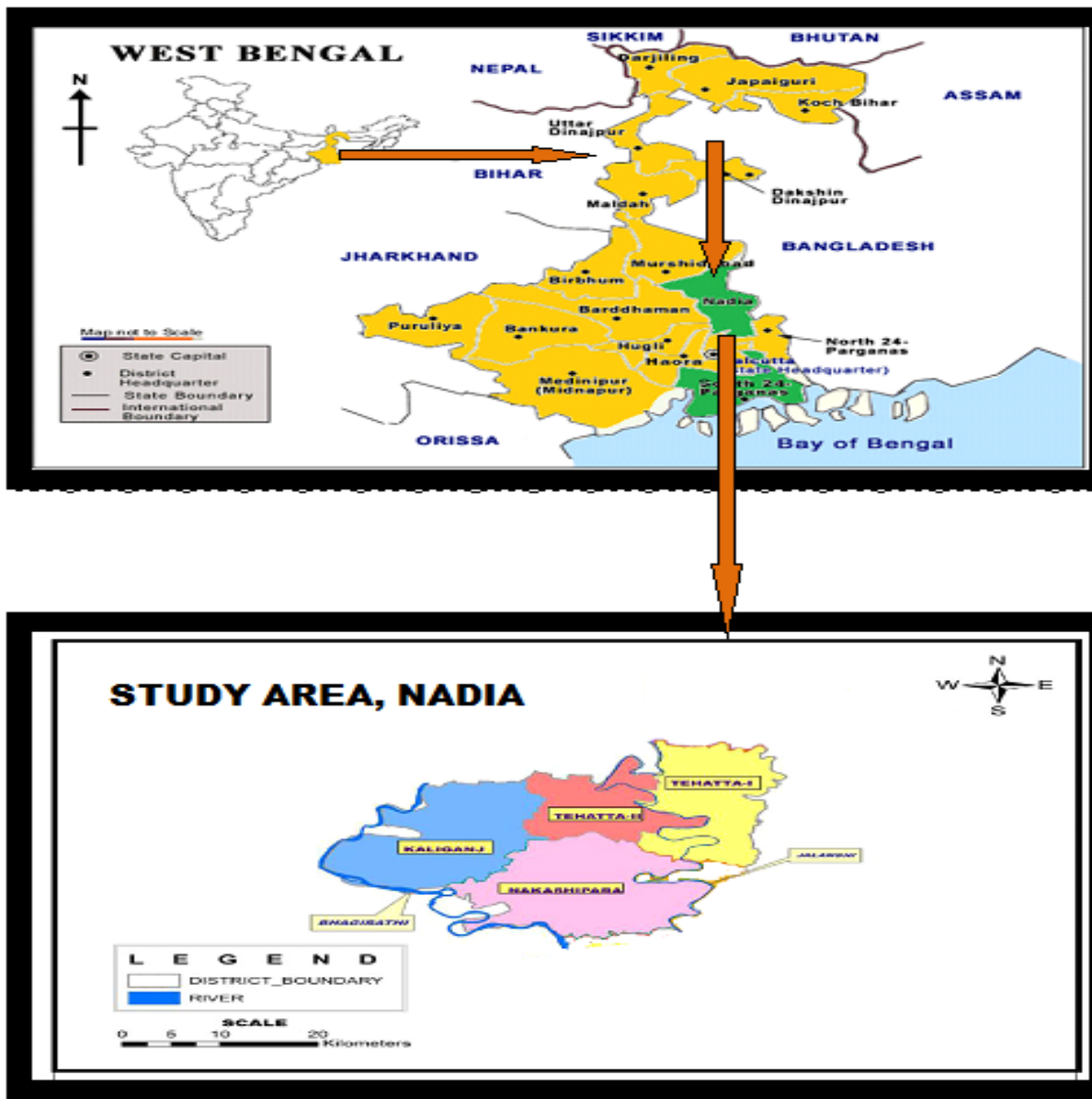


Figure-1 : Location map of the study area

**RESULTS AND DISCUSSION :-**

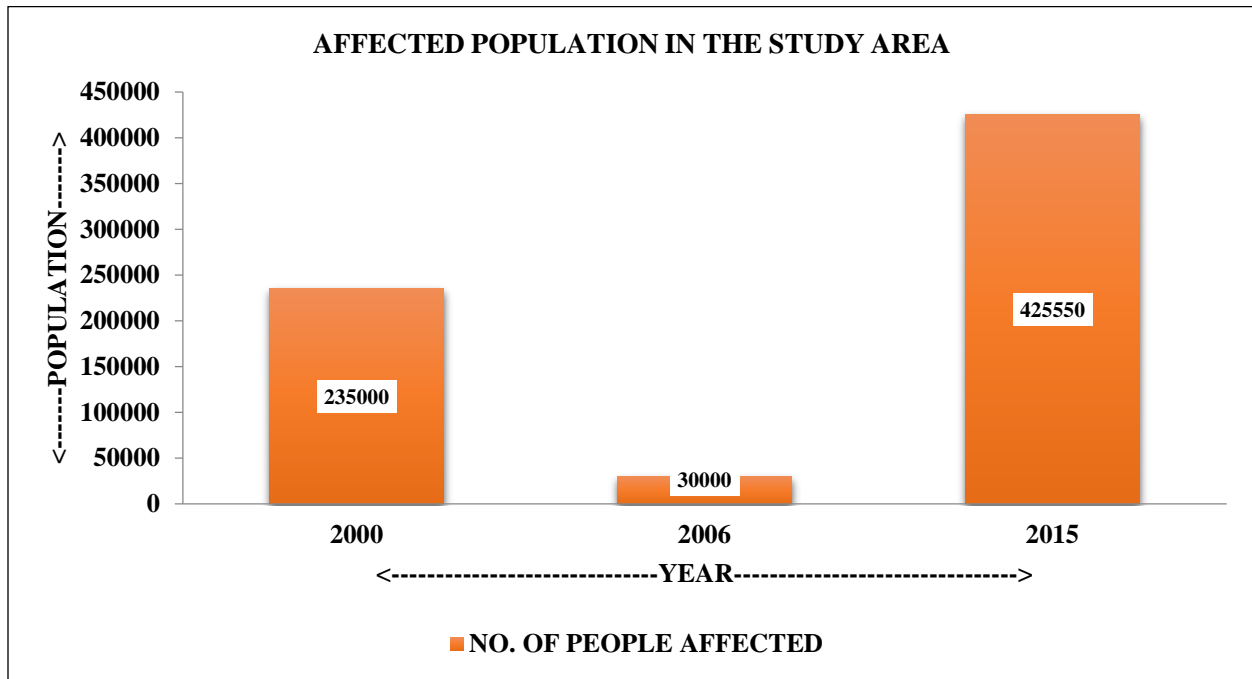
**IV. HISTORY OF FLOOD IN THE STUDY AREA :-**

The Nadia district is one of the flood prone districts of West Bengal. Many blocks of the district are affected by flood frequently. Among the studied four blocks, Kaliganj block is highly flood prone. The frequency of flood is highest among the four blocks. Of late in Tehatta and Nakashipara flood occurred in the year 2015. Due to sudden huge rainfall as a result of depression and embankment breaching flood occurs in these blocks.

Sl. No.	Type of Hazard	Year of Occurrence	Name of The GPs / Wards Affected	No. of People Affected	No. of Houses Damaged
<b>NAKASHIPARA BLOCK</b>					
1	Rain with Hail	2015	Nakashipara Majhergram Dharmada Billwagram Muragachha Dhananjoypur	11000 10000 230000 4000 1550 2000	800 950 1680 102 88 120
<b>KALIGANJ BLOCK</b>					
1	Flood	2000	All GPs of the Block	200000	NA
2	Flood Like Situation	2006	Matiary, Gobra, Faridpur, Kaliganj, Rajarampur, Ghorai khetra	30000	NA
3	Flood and water logging	2015	Barachandghar, Debagram, Faridpur, Gobra, Hatgachha, Juranpur, Kaliganj	99000	Partly 20000. Fully 5000
4	Flood and water logging	2015	Matiary, Palitbeghia, Panighata, Plassey-I, Plassey-II, Rajarampur, Ghorai khetra, Mira-I, Mira-II	68000	
<b>TEHATTA - I DEV BLOCK</b>					
1	Flood like Situation & Water logging	2000	Chanderghat GP, Tehatta GP, Raghunathpur GP, Patharghata-I GP, Patharghata-II GP, Kanainagar GP	35000	455
<b>TEHATTA -II BLOCK</b>					
1	Flood	2014	Palsunda-II	NIL	NIL
2	Flood	2015	Hanspukuria, Palashipara	NIL	NIL

**Table-1 : History of Flood Hazard**

**Source :- District Disaster Management Plan, Government of West Bengal**



**Figure-2 :** Graphical Representation of the Affected People by Flood Hazard

**V. EMBANKMENT STATUS :-**

Embankment is the lifeline of the river side and coastal villagers. It protects the villagers from flooding and water intrusion into agricultural land. Embankment breaching causes flooding in the surrounding river side areas. Along the Bhagirathi and Jalangi river villages are flooded during rainy season due to heavy rain and embankment breaching. The weak and earthen embankment may breach at any time. As a result river water enters the villages.

Sl. No.	Name of the Embankment	Name of the G.Ps /Wards Covered	Length (K.M)	Type of Embankment	Population Likely to be Affected
<b>NAKASHIPARA BLOCK</b>					
1	Karkoria	Dharmada	2	Soil	6000
2	Gotpara	Nakashipara	1.5	Soil	4000
3	Sukpukur	Majhergram	1.5	Soil	3000
4	Bhebodanga	Dharmada	2	Soil	3000
<b>KALIGANJ BLOCK</b>					
1	Jagatkhal	Kaliganj, Plassy I, Plassy II, Juranpur, Gobra, Matiary, Faridpur, Rajarampur, Ghoraikhatra	45	Earthen	>300000
<b>TEHATTA -1 BLOCK</b>					
1	Kanainagar River Embankment	Kanainagar GP	3	Earthen	15,000
2	Embankment of River Jalangi from Taranagar to Nischintapur	Raghunathpur GP	2.5	Earthen	10,000
3	Sluice Gate from Raghunathpur G.P. to Nischintapur	Raghunathpur GP	5	Earthen	10,000

4	Ferighat from Boyerbandha to Kulgachhi	Tehatta GP	4	Earthen	15,000
5	Chanderghat Sardarpara to Chanderghat Puratan Ferighat via Santipota	Chanderghat GP	4	Earthen	8,000
6	Baliura Primary School to Shibpur Ferry Ghat	Patharghata-II GP	3	Earthen	6,000

**Table-2 : Embankment status of study area**

**Source :- District Disaster Management Plan, Government of West Bengal**

**VI. IMPACT OF FLOOD :-**

Flood hazard assessment starts with the identification of the sources of flood hazard followed by measuring the physical, social and economic vulnerabilities. The destruction of the mud built houses, inundation of roads and railway, inundation of agricultural land, huge economic loss and different types of diseases like cholera, typhoid and many other diseases break out suddenly in the affected areas. The people of the studied four blocks of Nadia district severely affected by flood hazard. Along the river bank side villages the vulnerable condition can be seen. The villages like Udamdanga, Gachha Basepara of Nakashipara block; Rowtara, Basorkhola of Kaliganj block; Tehatta, Khaspur of Tehatta-I and Tehatta-II block are badly affected by flood hazard.

Sl. No.	Type of Vulnerability (Flood/Water Logging/ Fire/ Cyclone/ Boat)	Name of Vulnerable Gram Panchayat (GP)	Name of the Hamlets	Population	Total No. of Household	Total No. of Cattle, Population
<b>NAKASHIPARA BLOCK</b>						
1	Flood	Nakashipara	Charkurmipara	2500	625	256
2			Sardanga	2600	635	265
3			Gotpara	2400	601	255
4			Dangamat coloney	2600	502	245
5		Majhergram	Madhupur	2600	252	256
6			Mathurnagar	2400	635	320
7			Kulepota	2300	552	400
8			Basudebpur	2400	462	321
9		Dharmada	Kinupota	3500	810	412
10			Karkoria	2500	621	330
11			Bepodanga	2500	652	345
12			Udamdanga	3500	823	412
13			Adampota	1500	302	120
14		Billwagram	Jagonnathpur	1000	201	62
15			Chandanpur	2000	389	84
16			Gopalpur	1500	402	101
17			Kasiadanga	1500	405	105
18		Muragachha	Lohagachha	2500	603	302
19			Gachha Baganpara	1000	304	152
20			Gachha Basepara	3500	704	366
21		Bikrampur	Arpara	1000	254	152
22			Sottopirpur	1300	302	132
23			Bhabanipur	1200	305	136

24			Arijnagar	1500	402	201
<b>KALIGANJ BLOCK</b>						
1	Flood/ Cyclone/ Water logging	Gobra	Fulbagan	1600	700	NA
2			Noachar	2500	400	NA
3			Bhagyabantapur	2100	700	NA
4			Cherakhal	1500	300	NA
5			Ballavpara	3500	500	NA
6			Basatpur	3200	600	NA
7			Gobra	4000	875	NA
8			Molapara	250	60	NA
9			Akandaberia	4000	850	NA
10			Kanua	2500	550	NA
11	Flood/ Water logging	Hatgacha	Anantapur	3500	700	NA
12			Sheoratala	5500	1100	NA
13			Rowtara	7500	1500	NA
14			Basorkhola	6500	1300	NA
15	Flood/ Water logging	Faridpur	Harindanga	1400	300	NA
16			Hazrapota	1500	330	NA
17			Sadhuganj	1600	550	NA
18			Panchpota	1200	250	NA
19	Flood/ Cyclone/ Water logging	Matiary	Medhe Dhoura	2000	420	NA
20			Kumdebpur	2300	480	NA
21			Nichupara	1500	320	NA
22			Bat tala	250	70	NA
23			Taranagar	1800	400	NA
24			Kumledanga	2200	500	NA
25	Flood/ Water logging	Plassey II	Ashapara	5000	1000	NA
26			Teznagar	2500	500	NA
27			Natun Dhawra	1000	200	NA
28			Aramdanga	4000	1200	NA
29	Flood/ Water logging	Plassey I	Ariadanga	3000	600	NA
30			Janakinagar	5000	1000	NA
31			Choto Kulberia	4500	900	NA
32			Bhurulia	4000	800	NA
33			Bathangachi	3000	600	NA
34					Baninathpur	1200
35	Flood/ Cyclone/ Water logging	Kaliganj	Kaliganj	2500	500	NA
36			Manikdihi	2000	400	NA
37			Ghasuridanga	1100	220	NA
38			Chapra	1500	300	NA
39			Basantapur	700	140	NA
40			Sherpur	1500	300	NA
41			Narayanpur	1200	400	NA
42			Khidirpur	800	150	NA
43			Flood/ Water logging	Juranpur	Charkuthuria	750
44	Juranpur	2500			500	NA
45	Joyrampur	1500			300	NA
46	Hijuli	2000			400	NA
47	Flood/ Cyclone/ Water logging	Rajarampur Ghoraikhatra	Sita Chandrapur	1300	450	NA
48			UdayChandrapur	300	80	NA

49			Dayarampur	1800	400	NA
50			Char Chakundi	1200	480	NA
51			Ghoraikhatra	3000	630	NA
52			Sapjola	1500	340	NA
53			Charchuadanga	800	160	NA
54	Flood/ Water logging	Mira I	Bibakananda Pally	1500	680	NA
55	Flood/ Fire/ Water logging		Hazrapota	1280	703	NA
56	Flood/ Fire/ Water logging	Mira I	Sealkhela	450	120	NA
57	Flood/ Water logging		Panchkhela	890	230	NA
58	Flood/ Fire/ Water logging		Senjuya	980	605	NA
59	Flood/ Water logging	Mira II	Mira	1200	320	NA
60			HatGobindapur	800	240	NA
61			Chak Gobindapur	1500	380	NA
62			HatGobindapur	1300	450	NA
63			Bharatpur	1850	480	NA
64			Bharatpur	1500	500	NA
65			Gobindapur	1700	600	NA
66	Flood/ Water logging	Debagram	Jompukur	1700	230	NA
67			Dingel	2000	295	NA
68			Gohorapota	1500	200	NA
69	Flood/ Water logging	Panighata	Panighata Daspara	210	50	NA
70			Panighata Masjidpara	170	40	NA
71			Sajapur Hazrapara	150	35	NA
72			Mirjapur Madhyapara, Baliyari	130	30	NA
73			Raipur Masjider Dhar	150	40	NA
74			Raipur Haripat	40	10	NA
75			Pagla	750	250	NA
76	Flood/ Water logging	Bara Chandghar	Sitalpur	900	200	NA
77			Halderpara	600	150	NA
78			Uttarpara (Cgg)	900	210	NA
79			Natunpara (Cgg)	1100	250	NA
80			Purbapara (Cgg)	800	430	NA
81			Hindupara	800	450	NA
<b>TEHATTA - I BLOCK</b>						
1	Water logging/ Fire/ Cyclone/ Boat Capsize	Kanainagar	Rajapur Uttar	1451	290	348
2			Rajapur Dakshin	1547	309	371
3			Kanainagar Purba	1516	303	364
4			Kanainagar Paschim	1354	271	325
5			Uttar Char Chandpur	1296	259	311
6			Pratapnagar Daspara	1644	329	395
7			Pratapnagar Muslimpara	1451	290	348
8			Swardanga	1719	344	413
9			Binodnagar	1458	292	350
10		Raghunathpur	Nischintapur	1700	340	408
11		Krishnachandrapur	1717	343	412	

12			Jitpur	1460	292	350
13			Chak Jaliapara	1470	294	353
14		Tehatta	Kulgachhi	1638	328	393
15			Khaspur	1831	366	440
16			Tehatta	1922	384	461
17		Patharghata-I	Putimari (part)	1294	259	311
18			Malipota	1760	352	422
19			Patharghata (part)	1379	276	331
20		Patharghata-II	Taranipur	1143	229	274
21			Putimari (part)	1222	244	293
22			Solua	1085	217	260
23		Chanderghat	Chanderghat	1466	293	352
24			Dhopahat	1625	325	390
25			Kustia	1178	336	283
<b>TEHATTA -II BLOCK</b>						
1	Flood	Gopinathpur	Dafadarpara,Sardarpara,Kari karpara, Natunpara hatpara	18915	4730	15000
2			Raninagar Dhawapara			
3			Daspara, Mondalpara			
4			Radhanagar Daspara,Madhyapara			
5			Krishnagar Daspara Ramchandrapur, Paschimpara, Purbapara			
6	Flood	Palashipara	musalmanpara,Bakshipara, Kadamtalapara, Ghoshpara	23334	8144	16000
7			Palashipara,Daspara			
8			Labongola Ramnagar, Uttar Dakshinpara			
9			Purbapara, Paschimpara			
10			Baur			
11			Hazrapara, Biswaspara, Sastitalapara			
12			Uttar Palashipara			
13			Dakshinpara, Mandalpara			
14			Chak Ramnagar Chak Rudranagar			
15	Flood	Sahebnagar	Sahebnagar Uttar Daspara	28241	9423	18000
16			Uttarpara, Dakshinpara, Purbapara			
17			Chhotonaldaha Uttarpara,Moralpara			
18			Baranaldaha Coloney, Uttarpara, Madhyapara			
19			Sahebnagar Daspara			
20			1. Dakshin Sahebnagar Mondalpara			
21			2. Uttar Sahebnagar Dakshinpara			
22	Abhaynagar Daspara					
23	Flood	Palsunda-I	Baruipara	19868	4900	9000



24			Potarpara			
25			Mollapara			
26			Uttar Baruipara			
27			Dakshin Baruipara			
28	Flood	Palsunda-II	Bareya Kharer math	15295	4283	5000
29			Dhawapara			
30	Flood	Barnia	Daspara	27073	8019	18000
31			Bagagoria Coloney			
32	Flood	Hanspukuria	Kapalipara	18505	8142	14000
33			1. Natipota Dakshinpara 2. Natipota Harijanpara 3. Natipota Uttarpara			
34			Mondalpara, Panditpara, Biswaspara, Karmakarpara, Jalderpara			

**Table-3 : Impact of Flood**

**Source :- District Disaster Management Plan, Government of West Bengal**

**VII. MANAGEMENT OPTIONS :-**

The flood hazard management can be done by reducing the flood risk in the locality. The local people’s perception and awareness are also helpful to reduce the damage of the flood hazard. At present different methodologies have to be applied to decrease the flood frequency and intensity.

**Options for Reducing Flood Risk and Vulnerability :-** Regular dredging of the canals and river beds must be done. Embankment construction, its repair and maintenance must be done regularly. The land use pattern maintenance by the local people is scientifically essential. Flood emergency measures like flood warning and evacuation of the affected people are required. It is also necessary to build up flood awareness among the people. Flood hazard mapping and rescue shelter must be developed for taking the shelter during flood hazard. Lastly the integrated flood management approach must be adopted in the flood affected region. The aims of such approach are as follows:

- Maximizing the net benefits from flood plain
- Reducing loss of life due to flood hazard
- Reducing flood vulnerability and risks
- Preserving ecosystem and their associated bio-diversity
- Enabling community participation.

Sl. No	Name of the Vulnerable Areas	Name of GP	Reason of Vulnerability	No. of people	No. of Cattle	Name of the Rescue Center	Capacity
<b>NAKASHIPARA BLOCK</b>							
1	Charkurmipara	Nakashipara	Flood	2500	256	Charkurmipara School cum Flood Shelter	200
2	Sardanga	Nakashipara		2600	265	Sardanga School cum Flood Shelter	150
3	Gotpara	Nakashipara		2400	255	Dadupur High School Cum Flood Shelter	500
4	Madhupur	Majhergram		2600	256	Kulepota School cum Flood Shelter	150
5	Mathurnagar	Majhergram		2400	320	Akandadanga School	200

						cum Flood Shelter	
6	Dhanajoypur	Dhanajoypur		2500	351	Dhaparua Board Pry. School cum Flood Shelter	250
7	Birpur-I	Birpur-I		3100	401	Birpur Haralal High School cum Flood Shelter (BENFED)	250
8	Jagonnathpur	Billwagram		1000	102	Chandanpur Part Basic Pry. School cum Flood Shelter	200
<b>KALIGANJ BLOCK</b>							
1	Charchuadanga	Rajarampur Ghoraikhatra	Flood & Water logging	15000	NA	Charchuadanga Amar Vidyapith	150
2	Ghoraikhatra				NA	Sapjola Desbondhu Hish School	120
3	Sapjola				NA	Khosalpur Chakundi Pry School	100
4	Noachar	Gobra	Flood & Water logging	23000	NA	Noachar G.S.F Pry. School	150
5	Fulbagan				NA	Fulbagan Pry.School	120
6	Bhagyabantapur				NA	Bhagyabantapur Pry. School	150
7	Cherakhal				NA	Charakhal pry. School	120
8	Ballavpara				NA	Ballavpara J.A. High School	200
9	Sadhuganj	Faridpur	Flood & Water logging	18000	NA	Charsadhuganj G.S.F Pry. School	120
10	Faridpur				NA	Baliadanga-Faridpur Pry. School	100
11	Hazrapota				NA	Hazrapota Pry. School	150
12	Medhe Dhoura	Matiary	Flood & Water logging	20000	NA	Mededhawra Pry. School	120
13	Harin Danga				NA	Matiary R.P. Sen High	180
14	Charkuthuria	Juranpur	Flood & Water logging	8000	NA	Char Kuthuria Pry. School	150
15	Joyrampur				NA	Joyrampur Pry. School	130
16	Juranpur				NA	Juranpur Kalitala Adibashi Pry. School	100
17	Sital pur	Barachandgar	Flood & Water logging	2500	NA	Sitalpur Pry. School	150
18	Anantapur	Hatgachha	Flood & Water logging	3500	NA	Anantapur Pry. School	150
19	Manikdihi	Kaliganj	Flood & Water logging	7000	NA	Manikdihi Pry. School	120
20	Basantapur				NA	Basantapur Dhawrapara Pry. School	130
21	Ghasuriadanga				NA	Ghasuriadanga Pry. School	150
22	Bairampur	Palitbegia	Flood &	8000	NA	Bairampur Pry.	120

			Water logging			School	
23	Lohasa				NA	Lohasa Pry. School	80
24	Shantipur				NA	Shantipur PSS Pry. School	100
25	Bibakananda Pally	Mira I	Flood & Water logging	1500	NA	Mira High School	120
26	Pandabpara	Plassy I	Flood & Water logging	20000	NA	Janakinagar Uttarpara Pry School	150
27	Ashapara	Plassy II	Flood & Water logging	6000	NA	Ashapara Pry School	100
28	Teznagar		NA		Teznagar Pry School	150	
29	Molandi	Mira II	Flood & Water logging	2000	NA	Molandi M.S.K	120
30	Paglachandi	Panighata	Flood & Water logging	3000	NA	Panighata U.D.M. High School	200
31	Jompukur	Debagram	Flood & Water logging	2000	NA	Jompukur Pry. School	120
<b>TEHATTA - I BLOCK</b>							
1	Kanainagar	Kanainagar	Flood/Water logging/ Cyclon e/Fire	4000	270	Dr. Jakir Hossain High Madrasah	500
2	Binodnagar			4000	250	Binodnagar High School	500
3	Nischintapur	Raghunathpur	Flood/Water logging/ Cyclon e/Fire	4600	1100	Nimtala Vidyaniketan	800
4	Krishnachandrapur			3500	750		
5	Jitpur			300	988	Jitpur High School	900
6	Chak Jaliapara			1500	560		
7	Kulgachhi	Tehatta	Flood/Water logging/ Cyclon e/Fire	7895	984	Tehatta Shridamchandra Girls' High School	900
8	Khaspur			8945	789	Tehatta High School	1000
9	Tehatta			11234	1123	Tehatta High School	1000
10	Putimari (part)	Patharghata-I	Flood/Water logging/ Cyclon e/Fire	4897	841	Patharghata-I GP Office	200
11	Patharghata (part)			6987	743	Purba Gobindapur Pry School & Flood Shelter	900
12	Taranipur	Patharghata-II	Flood/Water logging/ Cyclon e/Fire	1123	374	Taranipur High School	900
13	Putimari (part)			1209	195	Taranipur High School	900
14	Solua			987	150	Taranipur High School	900
15	Chanderghat	Chanderghat	Flood/Water logging/ Cyclon e/Fire	2500	741	Chanderghat High School	500
16	Dhopahat			2400	745	Haladhar Smriti Vidyaniketan	400
17	Kustia			1987	566	Chanderghat High School	500
<b>TEHATTA - II BLOCK</b>							
1	1.Paschim Gopinathpur, Dafadarpara, Sardarpara,	Gopinathpur	Flood	18915	-	1.Raninagar Dhowapara Pry School 2.Raninagar Pry.	300-1000

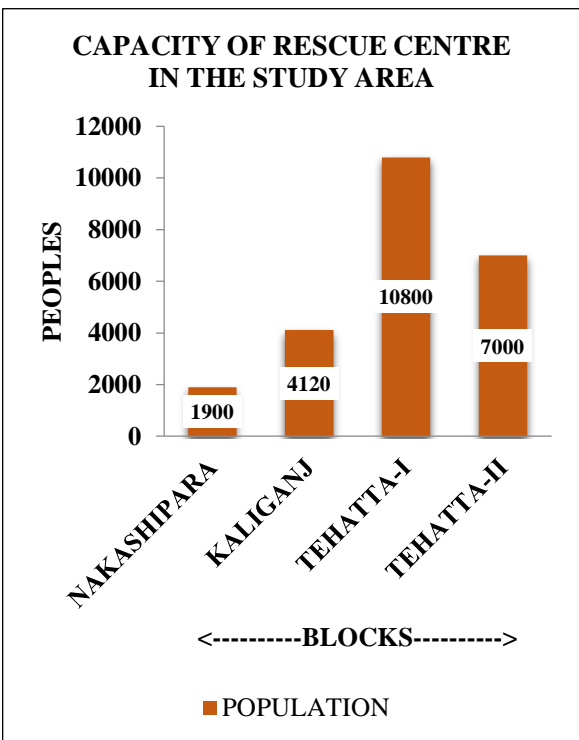
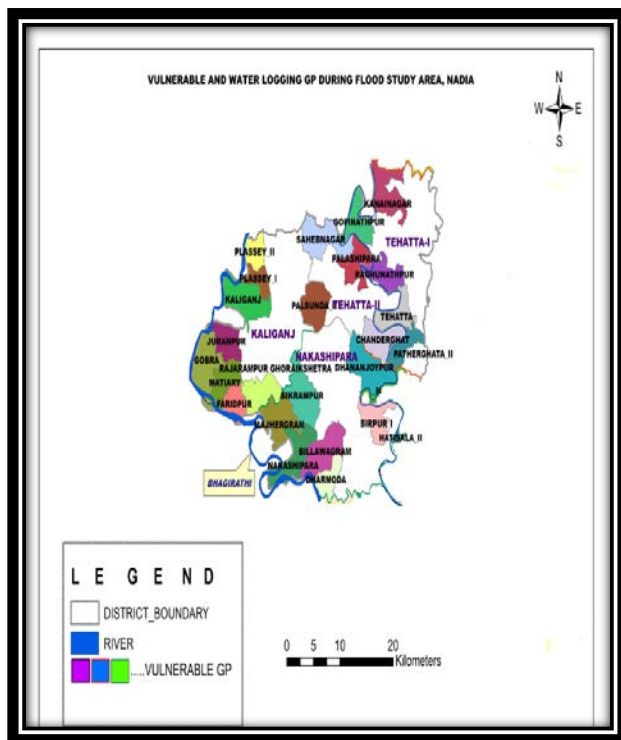
	<p>Karikarpara, 2.Raninagar Dhawapara, 3.Raninagar Daspara, 4.Radhanagar Daspara, Madhyapara, 5.Krishnagar Daspara Ramchandrapur</p>					<p>School, 3.Gopinathpur G.S. Pry. School, 4.Gopinathpur Dafadarpara Pry. School, 5.Gopinathpur Halderpara Pry. School, 6.Gopinathpur Pry. School, 7.Kulaitala Pry. School, 8.Netaji Vidyamandir High School, 9.Radhanagar Pry. School, 10.Krishnagar Pry. School, 11.Siddheswaritala Institution(H.S.), 12.Club of Deypara at Gopinathpur, 13.Krishnagar Sporting Club</p>	
2	<p>1.Rudranagar, 2.Palashipara,D a spara, 3.Satikhali, 4.Chak Satikhali, 5.Baur, 6.Ramnagar, 7.Uttar Palashipara, 8.Uttar Rudranagar, 9.Chak Ramnagar Chak Rudranagar</p>	Palashipara	Flood	23334	-	<p>1.Palashipara Mahatma Gandhi Smriti Vidyapith 2.Palashipara Mahatma Gandhi Smriti Balika Vidyalaya 3.Rudranagar Primary School cum Flood Shelter, 4.Baur Primary School</p>	400-2000
3	<p>1.Sahebnagar Uttar Daspara, 2.Kulgachhi, 3.Chhotonaldaa Uttarpara, 4.Baranaldaha Coloney, 5.Sahebnagar Daspara, 6.Sahebnagar, 7.Srinathpur, 8.Abhaynagar Daspara</p>	Sahebnagar	Flood	28241	-	<p>1.Baranaldaha Coloney Para Pry. School, 2.Baranaldaha Paschimpara Pry. School, 3.Baranaldaha Purbapara Pry. School, 4.Chhotonaldaha Belepota Pry. School, 5.Chhotonaldaha Pry. School, 6.Chhotonaldaha</p>	200-1500

						<p>Jangalitala Pry. School,          7.Chhotonalda High School,          8.Kulgachhi Pry. School cum Flood Shelter,          8.Uttar Sahebnagar Pry. School,          9.Abhoynagar Daspara Pry. School,          10.AbhoynagarSishu-Kalyan Pry. School,          11.Sahabnagar High School,          12.Uttar Sahebnagar Mandaptala,          13.Srinathpur Pry. School, 14.Panchdara Paschimpara Feeding Centre,          15.Panchdara Purba Pry. School</p>	
4	<p>1.Baruipara,          2.Potarpara,          3.Mollapara          4.Uttar Baruipara,          5.Dakshin Baruipara,          6.Chhowgachhp ara,          7.Kazipara</p>	Palsunda-I	Flood	19868	-	<p>1.Palsunda High School,          2.Palsunda B.S. Pry. School,          3.Palsunda PurbaparaR.A.M. Pry. School,          4.Palsunda Paschimpara Pry. School,          5.Uttar Baruipara Pry. School,          6.Palsunda Library</p>	200-1500
5	<p>1.Bareya Kharer math,          2.Dhawapara</p>	Palsunda-II	Flood	15295	-	<p>1.Bareya Kharer math Pry,          2.Bareya Paschimpara Pry. School cum Flood Shelter,          3.Dhawapara Dakshin Pry. School,          4.Dhawapara Pry. School,          5.Bareya Nutanpara Pry. School</p>	150-1000
6	<p>1.Ujirpara,          2.Bagagoria Coloney</p>	Barnia	Flood	27073	-	<p>1.Ujirpur Pry. School,          2.Ratanpur Pry. School,          3.Barnia High</p>	300-1000

						<p>School, 4.Barnia Sarbartha Sadhika Girls Jr. High School,</p> <p>5.Surendranathpur Pry.School,</p> <p>6.Barnia Pry. School,</p> <p>7.Sabaidanga A.G.S. Pry.School,</p> <p>8.Komthana Pry. School, 1</p>	
7	<p>1.Kapalipara Hanspukuria,</p> <p>2.Notipota,</p> <p>3.Chak Behari,</p> <p>4.Jhinukghatapur a Chakbehari,</p> <p>5.Ishwarchandra Pur</p>	Hanspukuria	Flood	18505	-	<p>1.Hanspukuria Paschimpara Pry. School,</p> <p>2.Hanspukuria Vidyapith High School, 3Chak-Behari Harijan Pry. School.4.Jhinuk Ghata Pry. School, 5.Notipota Pry. School,</p> <p>6.Dharampur Pry. School,</p> <p>7.Iswarchandrapur Pry. School</p>	200-1000

**Table-4 : Distribution of Rescue centers**

Source :- District Disaster Management Plan, Government of West Bengal



**Figure-3 : Vulnerable and Water Logging GP During Flood Study Area****VIII. MAJOR FINDINGS :-**

- The Kaliganj block is very highly vulnerable due to flood hazard among the studied four blocks of Nadia district.
- More than 4.5 lakh peoples have been affected by flood since the year 2000 to 2015.
- The villages along the Bhagirothi and Jolangi rivers are frequently affected by flood hazard and the local people suffer a lot.
- Tehatta-I and Tehatta-II the flood intensity is comparatively lesser than others blocks.
- At present the school building and government offices are used rescue center during flood hazard. Flood shelters have been built by the government also.
- The local people are building resilience by increasing capacity development to cope with flood hazard.

**IX. CONCLUSION :-**

Due to increasing huge population pressure in the study area and increasing frequency of flood the local peoples who are living there are exposed to flood hazard. They are forced to take higher risks for collecting their livelihoods. To save the local people from flood hazard and vulnerability both government and non-government level immediate actions must be taken. The Bhagirathi and Jalangi these two rivers basin must be managed following the preservation of natural eco-system and bio-diversity. The flood plain zone and the low land must be kept safer by protecting flood hazard with the application of modern technology. In this way the people of the blocks can be saved.

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