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GOVERNMENT OF WEST BENGAL IRRIGATION & WATERWAYS DIRECTORATE



ANNUAL FLOOD REPORT 2000

*Executive Engineer
Chief Engineer's Drawing Office
Jalasampad Bhawan, Bidhannagar
Calcutta - 700 091*

December 2000

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IRRIGATION & WATERWAYS DIRECTORATE



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ANNUAL FLOOD REPORT 2000

1. INTRODUCTION

The State of West Bengal consists of a combination of land varying from the high hills on the north to the seas on the south. With the Tropic of Cancer running across it, the State is located between $21^{\circ} 31'$ and $27^{\circ} 13' 14''$ North latitudes and $85^{\circ} 45' 20''$ and $98^{\circ} 53'$ East longitudes. The geographical area of the State is about 87,853 sq.km. Flood season in State starts from 15th June and extends upto 15th October.

Classification of Areas

1.	Geographical Area	-	87,853 sq.km.	88752
2.	Area under Forest	--	11,880 sq. k.m.	
3.	Total Flood Prone Area	-	37,660 sq. km.	
4.	Area already Protected	--	26,500 sq. km.	

1.1 RIVER BASINS

The State can be demarcated into three district drainage basins, coming under the Ganga, Brahmaputra and Subarnarekha system respectively. The afore stated main basin in turns can be divided into sub-basins having individual catchment of their own. The areawise distribution of the above main basins in the State is under:

1.	Brahmaputra Basin	-	14,208 km ²
2.	Ganga Basin including Sundarban Area	--	71,485 km ²
3.	Subarnarekha Basin	--	2,160 km ²

1.2 RIVER SYSTEM

- 1.2.1 Brahmaputra Basin Drainage – the northern regions of the State, the rivers within the Brahmaputra system consists of a total area of 14,208 km² and the main rivers being Sankosh, Raidak, Torsa, Kaljani, Jaldhaka and Teesta. The different tributaries of these rivers are listed below :

	RIVERS	TRIBUTARIES
(A)	Sankosh	Chiklajhore
(B)	Raidak	Raidak-I, Raidak – II, Turturi-
(C)	Torsa	Kaljani, Sil-Torsa, Char-Torsa. Dolong, Sanjai, Ghargharia, Goram, Dina, Pana, Jainti, Gabur-Basra.
(D)	Jaldhaka	Mujnai, Murti, Diana, Sutanga, Dolong, Dharala, Ghatia, Kumla Gilandi, Buduya.
(E)	Teesta	Great Rangeet, Raman, Rangpo, Melli , Dish, Ghish, Chel , Mal, Neoro, Karali.

BRIEF DESCRIPTION OF THE ABOVE RIVERS

(A) SANKOSH

It is the eastern main river under Brahmaputra system in this State and serves as the natural boundary between West Bengal and Assam. After being joined by Raidak-II, it outfalls into Brahmaputra in Bangladesh by the name Gangadhar. The river has its origin in Bhutan.

(B) RAIDAK

Originates in Mt. Akungphu at an altitude of 6400 m in Bhutan. The river bifurcates into two channels at Bhutanghat, close to Indo-Bhutan border. One of the branches, namely Raidak-I joins the united stream of Torsa and Kaljani, while the Raidak – II is joined by Sankosh and outfalls into Brahmaputra to Bangladesh by the name Gangadhar.

(C) TOSA

The river Torsa in Chumbi valley of southern Tibet at an altitude of 7065 m. It flows through Tibet, Bhutan, West Bengal and Bangladesh. Below Hasimara Bridge (on NH-34) it bifurcates into two channels, viz. Sil Torsa and Char Torsa. They reunite at Datlakhowa forest. The river passes by the Coochbehar town and is joined by rivers Kaljani and Raidak-I. The combined flow outfalls into Brahmaputra near Nageswari at Rangpur in Bangladesh.

(D) JALDHAKA

The river has its origin Pitang Lake in Sikkim at an altitude of 4400 m. It flows through Sikkim, Bhutan, West Bengal and Bangladesh. After the river is joined by a number of streams and tributaries both in the mountainous and sub-mountainous regions, it finally flows into Dharala river and the combined stream, getting the name Dharala ultimately outfalls into Brahmaputra in Bangladesh.

(E) TEESTA

Teesta originated in the Glaciers of North Sikkim at an altitude of 6400 m and is formed by the union of two streams, viz. Lachen and Lachung at Chungthung in Sikkim. It enters West Bengal at Rangpo and upto Melli, it forms the boundary between West Bengal and Sikkim. Two of its tributaries, viz Great Rangit and Ramman, also serve as the natural boundary between the two States. It outfalls into Brahmaputra in Rangpur district of Bangladesh.

1.2.2. GANGA BASINS

The central, Southern and the South-Western parts of the State of West Bengal constitute the Ganga Basin. The Ganga, only a stretch of which is now flowing through the narrow Central west line of the present shape of this State had been an active Delta builder.

The Ganga system comprises a total area of 71,485 km² within the State of West Bengal. The catchment areas of different rivers within this system in the State of West Bengal are as under :

S.I. No.	Name of River Sub-Basin	Catchment Area (in Km ²)
1.	2	3
(a)	Mahananda	9,460
(b)	Punarbhava	730
(c)	Atrai	910
(d)	Pagla Barslo	730
(e)	Dwarka-Brahmani	2,500
(f)	Bhagirathi-Hooghly	1,170
(g)	Jalangi	5,344
(h)	Mayurakshi	2,720
(i)	Ajay	2,490
(j)	Khari-Gangur-Ghea	1,302
(k)	Churni	800
(l)	Damodar	5,250
(m)	Dwarkeswar	4,430
(n)	24- Parganas (South & North) and Calcutta Port Drainage Basin	4,330
(o)	Kangsabati	8,369
S.I. No.	Name of River Sub-Basin	Catchment Area (in Km ²)
1.	2	3
(p)	Silabati	3,952
(q)	Rupnarayan	2,548
(r)	Bichban	820
(s)	Rasulpur	1,130
(t)	Haldi	980
(u)	Tidal Zone (Sundarbans Areas)	11,320

The different tributaries of these rivers are listed below :

1.	Punarbhava	-	Punarbhava		
2.	Mahananda	-	Mechi, Balasan, Dauk, Nagar, Kulik, Gumar, Chiramati, Tangon.		
3.	Atrai	-	Atrai	-	
4.	Pagla	-	Barsloi	-	Pagla, Barsloi, Bagmari
5.	Brahmani	-	Dwarka	-	Brahmani, Dwarka
6.	Bhagirathi	-	Hooghly	-	Bhagirathi, Hooghly.
7.	Jalangi			-	Jalangi, Silamari, Bhairab, Suti.
8.	Mayurakshi			-	Mayurakshi, Babla, Noon Beel Siddheswari, Kuiya, Kopai, Bakreswar, Sal, Monikarnia, Daoki, Kana Mor, Gambhira
9.	Ajay			-	Ajay, Hinglow, Kunoor
10.	Khari-Gangur-Ghea			-	Khari, Brahmani, Banka, Bangour, Ghea, Behula, Kana.
11.	Churni			-	Churni
12.	Damodar			-	Damodar, Barakar, Sali
13	Dwarkeswar			-	Gandheswari, Dwarkeswar Arkasha, Berai
14	Rupnarayan			-	Mundeswari, Dwarkeswar, Berai, Tarjuli, Sankari, Silabati, Joypanda, Kubai, parang, Kanki, Gandheswari, Damodar.
15	Haldi			-	Haldi, Banki, Kangabati, Kumari, Bhairab, Tarafeni, Kaliaghai, Bagchai, Chandra Kapaleswari
16.	Rasulpur			-	Rasulpur, Dichaban
17.	Tidal Rivers			-	Tolly's Nullah, Keorapulkur, Ichamati, Raimongal, Kultigong, Jamuna, Kalindi, Haria, Bhanga, Gosaba, Metia, Piali, Thakuran, Raidighi, Saptamukhi, Muri Ganga, Matla, Dansa, Kalagachi, Bidyadhari etc.

BRIEF NOTE ON THE ABOVE SUB-BASINS

1. MAHANANDA

The river Mahananda originates from Paglajhora near Kurseang town. It bifurcates into two channels, viz. Fulahar Branch that flows through Bihar and Bansloi branch that flows through West Bengal. At places, it forms the Indo-Bangladesh border. Mahananada carrying the flow of four tributaries, namely, Nagar, Kalindri, Tangon and Punarbhaba, drains into Ganga from the North-Western side at Godogarighat just downstream of the point where Gnaga leaves the boundary of West Bengal.

2. ATRAI

Punarbhava – some rivers like Sahu, Nim, Talma, Chani, Panga originate from the high lands in the district of Jalpaiguri. They gradually meet together afterwards, the combined stream assumes the name Karatowa. It then enters Bangladesh where it assumes the name Atrai and bifurcates into two channels, viz. Deepa and Atrai.

The Eastern channel, i.e. Atrai re-enters West Bengal in Kumarganj P.S. of West Dinajpur district covering 40 kms length in the State. It re-enters into Bangladesh and ultimately outfalls into Brahmaputra.

The Deepa on the other hand taking a south-westernly course enters Gangarampur P.S. in South Dinajpur district, assuming the name Punarbhaba. Covering some 40 kms in length in West Dinajpur district, it touches the eastern boundary of Malda district and enters Bangladesh. Further down, it meets Mahananda in Bangladesh.

3. NAGAR-KULIK, GAMARI CHIRAMATI, TANGON, KALINDRI

These rivers flow through Malda and North Dinajpur districts. Somewhere they form the boundary either between West Bengal and Bihar or between West Bengal and Bangladesh, ultimately outfall into Mahananda.

Nagar originating in Bangladesh flows along the boundary with West Bengal. Taking a southerly course, it receives a spill channel of Mahananda and is joined by Kulik, which has also its origin in Bangladesh. Garnari and Chiramati are two small rivers that flow through West Dinajpur district before meeting the combined stream which ultimately outfall into Mahananda.

Tangon is a tributary to Mahananda. It rises in Bangladesh. After flowing through the districts of West Dinajpur and Malda, it meets Mahananda on the boundary of Malda and Bangladesh.

River Kalindri has its origin in the North Bihar, flowing across the plains of Purnea district. It enters Malda and outfalls into Mahananda.

4. PAGLA-BARSLOI-BRAHMANI

These rivers originate from Rajmahal hills of Bihar. Flowing easterly across Birbhum district, they enter Murshidabad district as the tributaries of Bhagirathi.

5. JALANGI – BHAIKAB

Jalangi takes off from the right bank of river Padma in Murshidabad district, 165 km downstream of Farakka. It is dead for all purposes, except during the rains, when it receives water from Padma. The river ends its journey by finally outfalling into Hooghly near Nabadwip town. In its lower stage of journey, it is also known as Kharia.

Bhairab takes off from Ganga in P.S. Lalbag of Murshidabad district. It is now almost a dead channel but during rainy season for a few days it receives water from Padma.

6. ICHAMATI – CHURNI

River Mathabhanga originates from the mouth of the Jalangi of Padma. It is not an important river in this stage as it flows mainly in Bangladesh. It flows only a few kilometers within Nadia district. At this stage, the river bifurcates into two channels, the eastern branch, i.e. Churni runs a few kilometers in the district in a south-west direction to meet Bhagirathi. The other branch is known as Ichamati which gets little supply from Mahananda and thrives on wash outs by tidal flows.

7. BHAGIRATHI-HOOGHLY

Bhagirathi or Hooghly is the main river in the State. It is in fact that the main artery of flow before the 12th century, the Ganga had its main course down Bhagirathi-Hooghly. Subsequently, the main flow was pushed to the east through the present course of Padma. The flow of Bhagirathi increases downstream due to the run off and outflows from a number of eastern and western tributaries.

After its confluence with Jalangi, Bhagirathi is known as Hooghly and forms the boundary between 24-Parganas (North) and Hooghly district.

8. MAYURAKSHI –BABLA

Mayurakshi originates from the high lands of Santhal Parganas. It is the main river in Birbhum district. Carrying flows of different tributaries, it outfalls into Hijol Beel of Murshidabad district. Babla takes off from the Beel and drains into Bhagirathi.

9. AJAY

It originates from the hills near Deoghar in Bihar. The principal tributaries of this river are Patro, Janiti, Darua, Kunoor and Hinglow.

10. DAMODAR

It originates from the Palamoun hills in Bihar. The river bifurcates into two channels at Beguahana. The main flow passes through Mundeswari Channel and discharges into Rupnarayan. The other one Amta Channel carries discharge during high floods and outfalls into Hooghly.

11. DWARAKESWAR – SILABATI-RUPNARAYAN

The lower tidal reach below the confluence of Dwarakeshwar and Silabati is known as Rupnarayan. After receiving the main flow of Damodar through Mundeshwari and branch of Kangabati, i.e old Cossye of Palaspai Khal, it ultimately outfalls into Hooghly. The river is tidal throughout its entire course.

Dwarakeswar originates from the high lands of Purulia district. River Gandeswari rising from Bankura district meets Dwarakeswar near Bankura town receiving waters of other streams like Arkasha, Berai, it enters Hooghly district and meets Silabati to form Rupnarayan.

Silabati originating in Purulia district, receiving water of Joypanda and after traversing through Midnapore district, it meets Dwarakeswar.

12. KANGSABATI-KALIAGHAI – HALDI

River Kangsabati originating from Purulia district is joined by Kumari in Bankura district. Further down it is jointed by the combined steam of Bhairab, Banki and Tarafeni rivers and thereafter flows through the Midnapore district. After a tortuous course, it bifurcates, the upper branch known as Old Cossye or Palaspai Khal outfalls into Rupnarayan.

River Kaliaghai trickles out from Jhargram P.S. in Midnapore district. Along its journey, it is fed by the flow of tributaries Kapaleswari, Baghai and Chandia. The combined flow meets the another arm fo Kangsabati i.e. New Cossye to form Haldi, which falls into Hooghly.

13. RASULPUR

It is a river of Contai Sub-Division of Midnapore district formed by the three streams Bagda, Sarpai and Madhakhati and ultimately meets Hooghly.

14. TIDAL RIVERS OF SOUTHERN WEST BENGAL

Apart from the rives described earlier within Ganga and Brahmaputra system, there is a group of rivers in southern part of the State which fall in the tidal zone. These rivers mostly lie in the deltaic zone to the east of Hooghly river popularly known as Sundarbans and form an intricate network with a number of crisscross into connecting channels, thus dividing the land spill channels of Ganga, then upland supply running dry, during winter months. But gradually their offtakes from Ganga have deteriorated and in some cases being cut-off from the river. Now these rivers drain off whatsoever fresh discharge comes country side, thus ultimately draining into Bay of Bengal through one or other of the principal estuaries in the area which are, starting from Hooghly river successively the Bartala of Muriganga or Channel creek, Saptamukhi, Thakuran, Matla, Gosaba, Hariabhang, Raimongal etc.

The Tolly's Nullah or the Adi Ganga, as it is sometime called as a small but important tidal creek draining into the Hooghly from the left in the vicinity of the city of Calcutta.

1.2.3. SUBARNAREKHA BASIN

The river Subarnarekha though it has every small catchment within this State has got separate entity as it directly falls into the Bay of Bengal . It has its origin in the hills of Chotonagpur Range at an elevation of 609 m. It contains a total areas of 18,951 km² in which 13,950 km² in Bihar, 2160 km² in West Bengal and 3201 km² in Orissa. The main tributaries of the river are Kanchi and Kharkai above Chandil in Bihar, Kakhai in Bihar and Orissa and Dolong in West Bengal.

2. RAINFALL

The main rainfall season in this State is the southwest monsoon season during which the entire land (excepting the extreme north, the extreme northeast and extreme south) gets 75% of the annual rainfall. The Gangetic Plains of West Bengal gets 78% of its annual rainfall during the four months period, June to September. During the last seventy-five years the dates of onset of monsoon cover West Bengal was spread between last week of May to last week of June and these of its withdrawal last week of September to second week of October.

2.1 RAINFALL PATTERN

The main channel of Ganga divides West Bengal in two parts, which are by and large homogeneous from the meteorological point of view. The northern half is designated as ‘Sub-Himalayan West Bengal’ and the southern half ‘Gangetic West Bengal’. Sub-Himalayan West Bengal is more susceptible heavy rains both in respect of amount as well as in frequency of occurrence. Very heavy rain is more frequent in first two monsoon months (June and July) than in subsequent in Sub-Himalayan West Bengal. In Gangetic West Bengal the frequency is maximum in August followed by June, July and September in that order.

On the basis of rainfall distribution, the State can be sub-divided into two broad zones.

- (i) The Himalayan & Sub-Himalayan Region.
- (ii) The Gangetic Plains.

Himalayan & Sub-Himalayan Regions

The Himalayan and Sub-Himalayan regions comprising districts of Darjeeling, Jalpaiguri, Coochbehar and Northern part of Islampur Sub-division of West Dinajpur district of high intensity of rainfall from 200 cm to over 400 cm about 80% which is found to occur during the monsoon season from June to September. On the average, Darjeeling, Coochbehar and Jalpaiguri get 114, 112 and 110 rainy days respectively in a year. The monsoon generally follows a northernly tract to ultimately break up against Eastern Himalayan causing very heavy rainfall and thereafter through of low pressure under break monsoon conditions, it shifts northwards to the Himalayan foot hills. It has been found that a precipitation to the tune of 200 to 300 mm in 2 hours is not unusual while in more than forty occasions of rainfall of 250 mm and above have been registered during 1891-1965.

Gangetic Plain

The Gangetic Plain, which constitutes the major portion of the State, can be further sub-divided into the following sectors on the basis of average rainfalls.

Sector – I Comprising the district of Bankura, Birbhum, Murshidabad and Burdwan which receive an average rainfall between 1140 mm and 1400 mm.

Sector – II Consisting of the districts of Nadia, Hooghly, Western portion of West Dinajpur, Midnapore and North 24-Parganas having an average annual rainfall between 1400 mm and 1650 mm.

Sector – III Comprising Howrah, Eastern portion of West Dinajpur, South 24-Parganas and Midnapore districts which register an average annual rainfall between 1650 mm and 1900 mm.

Such regional variations in the precipitation pattern causes flood conditions from time to time.

The rainfall data as collected from Indian Meteorological Department for the district is shown in Annexures – I (Sheet No. 1/12 to 12/12)

REPORT OF FLOOD 2000 OF WEST BENGAL

Till 15th September, 2000 the state experienced a draught like situation except three districts of North Bengal. There were deficit in rainfall in many districts.

In the 1st spell three districts namely Jalpaiguri, Darjeeling & Coochbehar experienced flood due to excessive rainfall between 2nd week of June to 2nd week of August, 2000 in the upper catchment of major rivers like Torsa, Raidak-I, Raidak-II, Kaljani, Daina & Sankosh etc. During this time, there was heavy rain in Bhutan hills and adjacent foot hills.

Tremendous velocity was observed in rivers like Jaldhaka, Mansai, Dharala, Siltorsa, Mujnai, Gadadhar, Teesta, Karala, Pangh, Mal, Chel, Gheesh, Kumla, Murti, Mohananda, Sahu, Rohini, Balason, Mechi, Bataria, Manjha, Boon, Buribalason, Taipur, Mahiswari Chenga etc. due to discharge of upper catchment areas along with incessant rains in these basin areas during this period.

As a result, severe land slides occurred in the upper catchment & big trees, logs along with whirling water compounded the devastating force of the river water. Havoc discharge and high velocity of flow caused numbers of breaches and damaged severely flood protective embankments, spurs and other structures, river training works etc. This flood had not only caused damages to irrigation structures, but also inflicted causing heavy damages to Railway embankment, Guide bundh, roads, culverts, Bridges and collapse of 132 KV-tension Tower line of West Bengal State Electricity Board.

Synopsis of damages occurred due to flood during June to August'2000 in the North Bengal districts viz. Darjeeling, Coochbehar and Jalpaiguri are enclosed herewith in separate annexures.

But in the second spell, the state of West Bengal faced a severe devastating flood in 9 (nine) districts viz. Birbhum, Murshidabad, Nadia, Burdwan, Howrah, Hooghly, Malda, Midnapore and 24-parganas (N) in the basin of Bhagirathi – Hooghly system this year since 17th September to 2nd week of October, 2000. Some areas of Bagdah, Bongaon of Ichamati Basin of North 24-parganas were under water till November, 2000.

Due to unprecedeted heavy rains since 17.09.2000 to 22.09.2000 coupled with depression in Chotonagpur plateau in Bihar, 9 (nine) districts of West Bengal experienced

severe devastations affecting all aspects of the human lives as well as damaging different kinds of properties of other Departments of State Government and Central Government. This flood had surpassed all previous records in wideness and virulence.

There had been very heavy rainfall in the river Basins of the Pagla-Bansloo, Dwarka Brahmani, Bhairab Jalangi, Mayurakshi, Ajoy, Damodar barakar all out falling in river Bhagirathi since 17.09.2000 to 22.09.2000. The high discharge through these rivers due to continuous heavy rainfall in the basins affected very adversely the carrying capacity of the Bhagirathi river.

Incessant Rainfall occurred from 17.09.2000 to 21.09.2000 the instance of which are stated below :-

Time period	Basin	Total Rainfall in mm
17.09.2000 to 21.09.2000	Pagla-Bansloo, Brahmani, Dwaraka	1165
-do-	Mayurakshi basin system catchment above Massanjore Dam	1004
-do-	Catchment between Massanjore Dam and Tilpara Barrage	1153
-do-	Catchment between Tilpara Barrage and outfall at river, Babla	596
-do-	Ajoy Basin System	396
-do-	Jalangi System	793

Together with this Damodar Barakar Basin also received heavy rainfall during the same period the instance of which is stated as below:

Time period	Rainfall received at stations	Total Rainfall in mm
17.09.2000 to 21.09.2000	Maithan	572.40
-do-	Panchet	375.80
-do-	Durgapur	129.30

The rainfall at Suri, Rampurhat, Tantloi, Tilpara and other places were recorded high during this period. Pickup barrages of the Mayurakshi Reservoir system on the rivers Bramhani and Dwaraka got flanked because of this very high rainfall in their catchment areas and consequent heavy discharges in the rivers.

Due to the above situations of very heavy rainfall during this short period, the Massanjore dam had exceeded its storage capacity to a great extent which necessitated release of water for the safety of the structure as well as to avoid more devastation due to collapse of structure.

In support of the above, a statement is given below :-

- i) Water released from Massanjore Dam from 17.09.2000 to 22.9.2000 is stated below :

Period	Max outflow	Max inflow
On 18.9.2000 (upto 12.00 hrs)	Nil	89,000 cusec.
On 18.9.2000	99,000	2,17,000 cusec
On 19.9.2000	1,28,000	2,06,000 cusec
On 20.9.2000	1,29,000	1,93,000 cusec
On 21.9.2000	2,00,000	2,86,000 cusec
On 22.9.2000	1,44,000	1,97,000 cusec

- ii) Flow through Tilpara Barrage from 17.9.2000 to 22.9.2000 is stated below :-

On 18.9.2000	1,08,000 cusec
On 19.9.2000	1,43,000 cusec
On 20.9.2000	1,63,000 cusec
On 21.9.2000	2,56,000 cusec
On 22.9.2000	1,66,000 cusec

This widespread & continuous heavy rainfall in the Chotonagpur plateau and also in the catchment of river Mayurakshi & its tributaries caused abnormal run off flowing down to join Bhagirathi, the main drainage artery of the region. All river levels had been rising sharply breaching different flood embankments as the flood discharge rose beyond the carrying

capacity of these rivers. When the Bhagirathi flood entered the Jalangi outfall point, the Jalangi basin itself had already been experiencing high rainfall in its basin area. The Jalangi basin situation had become worse with addition of this Bhagirathi flood spill.

The entire Kandi Sub-Division of Murshidabad district located at the lower part of the Mayurakshi basin system was inundated. Murshidabad district recorded heavy rainfall during this period and also received heavy discharge of flood water from Mayrakshi and Pagla-Bansloi Basin causing inundation of Berhampore town the district Head Quarter of Murshidabad. The river Bhagirathi being unable to carry this extraordinary high discharge of Pagla-Bansloi, Mayurakshi and Ajoy river systems breached its flood embankments at several places and the high flood spill of water rushed to the Jalangi basin areas and submerged the National Highway-34, State Highways and the Railways embankments and breached at several places. Also, the Sealdah-Lalgola Railway Embankment was braced at innumerable places including damage of the Railway bridges at some places.

The river Ajoy carried very high discharge & breached at several places on both left and right embankments causing inundation of large areas of Burdwan & Birbhum districts. The water level of Ajoy had risen by about 4 metres in a single day over-topping the embankments.

The combined flood discharge of Bhagirathi & Jalangi with the added spill of the Ajoy rose to a great high to allow the flood water cross the basin boundary of the River Churni. By the time, the Churni was rising at Haskhali as the river Mathabhanga was pouring its flood discharge from Bangladesh. The Churni and Mathabhanga with the additional flood spill of the Bhagirathi-Jalangi then crossed over to the Ichhamati and flowed towards low areas of North 24 Parganas creating floods in the districts of Murshidabad, Nadia and a large part of 24 -Parganas (N). As the river levels were falling at upper reaches of the basins of the Ajoy, Mayurakshi consequently the Jalangi, Churni & Ichhamati kept rising because of adverse outfall condition.

As a result the Nadia district was very adversely affected. The gauge level of river Jalangi at Swarupganj rose by 2.76 M above E.D.L. The towns of Nabadwip and Krishnanagar were completely inundated including all blocks. Receding flood of Bhagirathi system was passing through this district. The Mathabhanga and Jalangi which carried spill of Padma also added to heavy inundation of the district causing severe damages to irrigation structures including all aspects of human lives & properties. Drainage congestion in Nadia & 24-Paraganas continued for about 1½ months.

The river Ichhamati at the upper region had been silted up abnormally due to cut-off of head discharge at Majdia in Naiha district. River bed was encroached by constructing bheri-bundhs, brick-fields etc. As a result, the flood spill from Bhagirathi-Jalangi came down to Ichhamati-Jamuna drainage basin and inundated part of North 24-Parganas district with about 5' to 10' average depth of water at Bongaon, Bagdah area for about 60 sq. km. Inundation in many places in Basirhat and Baduria areas also happened along river Ichhamati, due to unprecedented flow of upland discharge synchronised with considerable inflow from the rivers of Bangladesh like Kodalia, Kopotakuha, Sonai etc. including the tidal affect of Bay of Bengal and jeopardized the entire network of embankment of river Ichhamati on and from 29.9.2000. As a result, water was flowing with a height of 1 mtr. approximately above the embankments of river Ichhamati on a stretch of 35 k.m. causing inundation of mouzas Tipi, Gopalpur, Nalbari, Banglani, Gokulpur, Kabilpur, Khaddarsing etc. of Swarupnagar block and Ramchandrapur, Kulia, Nayabastia, Kankrasuti, Polta, Bajitpur etc. in Baduria block to a depth of 0.6 M to 1.50 M. Most of those two blocks had been disrupted.

On the other side, the Ajoy basin adjacent to the Mayurakshi basin received heavy precipitation and thus brought huge flood water to the Bhagirathi at Katwa. The gauge reading of river Bhagirathi at Katwa was recorded at 15.60 M from 3.00 hours to 5.00 hours on 23.9.2000 which superceded the record of flood 1978. Embankment along the rivers overtopped in many places and breached with deep scour, river side of the embankments were also damaged severely & flooded the area abnormally.

The Damodar-Barakar basin also received heavy rainfall during 20.9.2000 & 21.9.2000 of this month. The inflow rate of Maithon Dam from the Barakar river rose as high as 2,69,000 cusecs on 22.9.2000. Similarly, the Damodar also experienced very heavy and concentrated rainfall in the catchment of Panchet Dam, (the inflow of the Dam was 2,26,000 cusecs on 21.9.2000). Because of these adverse factors the combined release from the Dams were in the order of 2,05,000 cusecs at 11.00 hours on 22.9.2000 against combined maximum inflow of 4,30,000 cusecs

The districts of Burdwan, Hooghly & Howrah were affected due to this. Pursura, Khanakul, Arambagh and Haripal blocks of Hooghly district were mostly inundated. Similarly, vast area of Burdwan district inundated in P.S. Ausgram, Manjolkote, Kanksa, Keturgram, Katwa, Purbasthali, Kalna etc.

As a result, Irrigation structures including flood embankments have been severely damaged in both the districts. Also affected the embankment at Mustafapur near 24 Pur bazar of Hurhurakhal, Uday-narayanpur along Rampurkhal etc. of Howrah distret and in other places of this districts the embankment was in threatened condition. The river Hooghly spilled for about 1.50 k.m. over both banks from 1'-0" to 3'-0" depth from Tribeni /Kalyani to Uluberia/Budge Budge & Garulia etc. in the districts of Hooghly. Howrah, North 24-Parganas. Kalyani Town and other surrounding areas were water-logged during long period.

There was some isolated rainfall in the silabati basin which synchronized in high flood of Hooghly and its tide created a flood in the Ghatal, Daspur, Sabong, Pataspur, Pingla, Tamluk, Mahisadal, Panskura etc. areas of Midnapore district, Chetua circuit embankment at different places of Harisinghpur at Pratappur over flooded by the river water of Silabati.

In Maldah district the newly constructed 7th retired bundh was threatened due to erosion on the left bank of River Ganga on its highflood condition.

So, this year the severe flood was caused due to unprecedeted wide spread rainfall resulting in high discharge in the rivers and unprecedeted rise of the water level. This caused breaches, & water over topped in many places of the embankments of Ajoy, Mayurakshi, Damodar and Bhagirathi-Hooghly system in the districts of Birbhum, Murshidabad, Nadia, Burdwan, Howrah, Hooghly, Midnapore and North 24 parganas.

Moreover, the flood distress in the state of West Bengal worsened because of high tide condition of river Hooghly between 26th Septermber to 1st week of October, 2000. When the total flood was reaching the Bay of Bengal through river Hooghly.

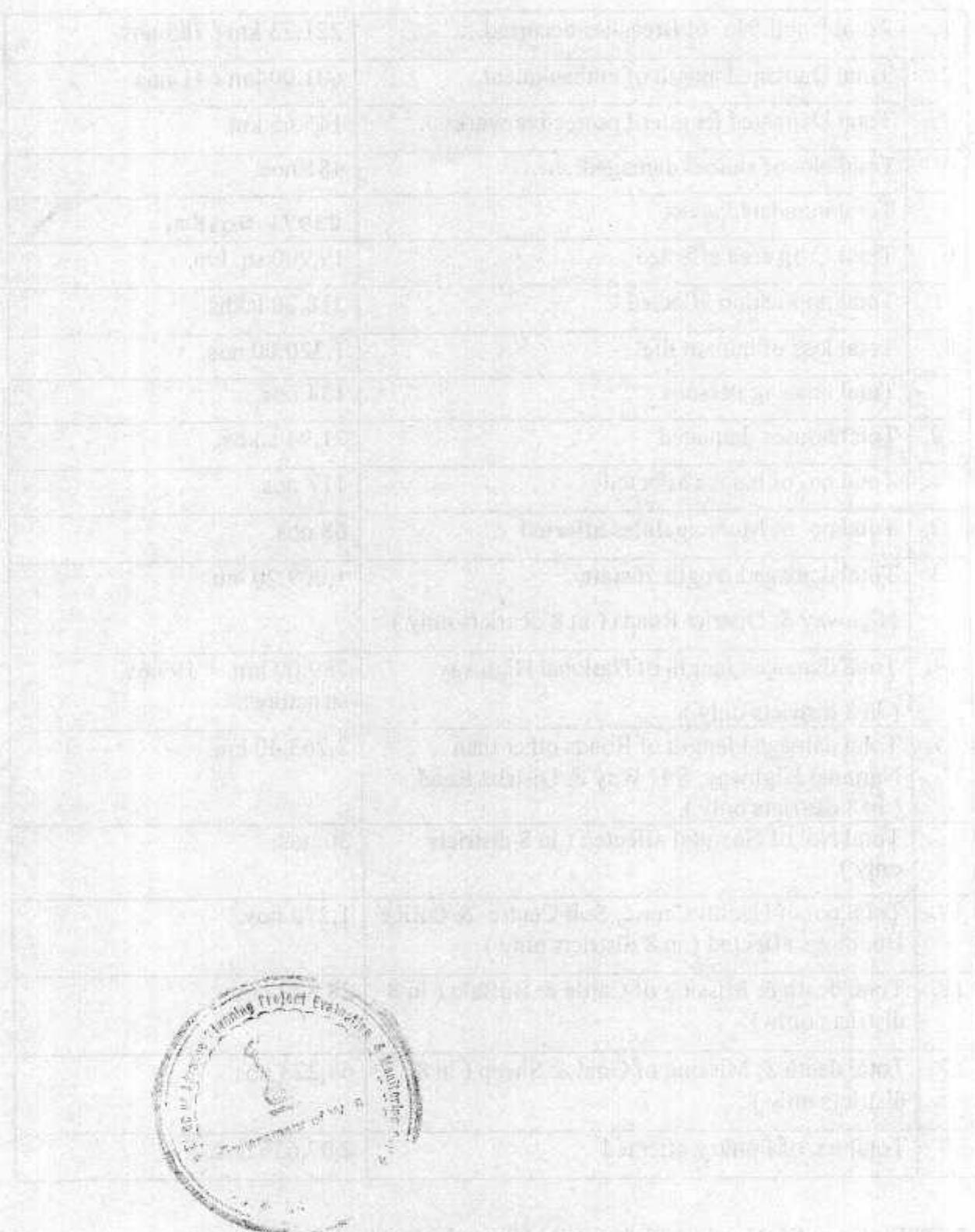
Affect of 'Flood 2000' – At a glance
(Excluding the districts of North Bengal)

1.	Total length/No. of Breaches occurred....	221.73 km / 786 nos.
2.	Total Damaged length of embankment...	601.00 km / 41 nos.
3.	Total Damaged length of protective works....	145.65 km.
4.	Total No. of sluices damaged.....	481 nos.
5.	Total inundated areas	23971 Sq.Km.
6.	Total Crop area affected	19,200 sq. km.
7.	Total population affected	218.00 lakhs.
8.	Total loss of human life	1,320.00 nos.
9.	Total missing persons	154 nos.
10.	Total houses damaged	21.94 lakhs.
11.	Total no. of blocks affected	117 nos.
12.	Total no. of Municipalities affected	68 nos.
13.	Total damaged length of state Highway & District Roads (in 8 districts only)	1,009.20 km.
14.	Total damaged length of National Highway (in 8 districts only)	789.00 km. + 19 nos. structures.
15.	Total damaged length of Roads other than National Highway, S.H.Way & District Road (in 8 districts only)	2,763.40 km.
16.	Total No. of Hospital affected (in 8 districts only)	30 nos.
17.	Total no. of Health Centre, Sub-Centre & Office Buildings affected (in 8 districts only)	1,270 nos.
18.	Total death & Missing of Cattle & Buffalo (in 8 districts only)	28,829 nos.
19.	Total death & Missing of Goat & Sheep (in 8 districts only)	68,223 nos.
20.	Total no. of Poultry affected	2,07,636 nos.

NOTE : From Sl. No. 6 to 20 data taken from the Book –let of “.....and Flood
of rare severity in 2000 in West Bengal”

Synopses of damages occurred in Nine districts of South Bengal due to flood 2000 in respect of Irrigation & Waterways Department is enclosed herewith in separate annexure.

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MONTHLY DISTRICTWISE ACTUAL & NORMAL RAINFALL
RECEIVED FROM I. M. D. ALIPORE, CALCUTTA ALONG WITH PER
CENT DEPARTURE FROM NORMAL FOR THE MONTH OF January 2000

Period from 01.01.2000 to 31.01.2000

Sl. No.	Name of District	Actual (in mm)	Normal (in mm)	Departure (in %)
1.	2.	3.	4.	5.

Sub-Division : Gangetic West Bengal

1.	Bankura	3.8	14.6	-74
2.	Birbhum	1.0	11.2	-91
3.	Burdwan	0.5	13.5	-96
4.	Hooghly	13.3	14.8	-10
5.	Howrah	1.0	15.7	-94
6.	Midnapore	2.2	12.8	-83
7.	Murshidabad	0.0	14.1	-100
8.	Nadia	13.0	12.1	7
9.	North 24-Parganas	22.6	13.9	63
10.	Purulia	12.0	15.2	-21
11.	South 24 Parganas	6.7	13.4	-50
Total :		76.1	151.2	-
Average :		6.9	13.7	-50

Sub-Division : Sub- Himalayan West Bengal

12.	Coochbehar	4.3	8.0	-46
13.	Darjeeling	3.7	16.4	-77
14.	Jalpaiguri	0.7	5.8	-87
15.	Maldah	3.6	11.5	-69
16.	North & South Dinajpur	0.0	8.9	-100
Total :		12.30	50.6	
Average :		2.5	10.1	-75

MONTHLY DISTRICTWISE ACTUAL & NORMAL RAINFALL
RECEIVED FROM I. M. D, ALIPORE, CALCUTTA ALONG WITH PER
CENT DEPARTURE FROM NORMAL FOR THE MONTH OF February 2000

Period from 01.02.2000 to 29.02.2000

Sl. No.	Name of District	Actual (in mm)	Normal (in mm)	Departure (in %)
1.	2.	3.	4.	5.

Sub-Division : Gangetic West Bengal

1.	Bankura	31.9	23.1	38
2.	Birbhum	55.9	16.7	236
3.	Burdwan	23.0	20.8	11
4.	Hooghly	31.5	17.8	77
5.	Howrah	52.2	34.3	52
6.	Midnapore	57.9	29.4	97
7.	Murshidabad	47.0	16.3	188
8.	Nadia	47.3	24.9	90
9.	North 24-Parganas	32.6	18.8	73
10.	Purulia	No Data	23.5	—
11.	South 24 Parganas	58.3	24.4	139
Total :		437.6	250.0	
Average :		39.8	22.7	75

Sub-Division : Sub- Himalayan West Bengal

12.	Coochbehar	25.7	18.0	43
13.	Darjeeling	28.3	15.5	83
14.	Jalpaiguri	21.4	15.1	42
15.	Maldah	34.0	18.0	89
16.	North & South Dinajpur	43.0	12.3	251
Total :		152.4	78.9	
Average :		30.5	15.8	93

MONTHLY DISTRICTWISE ACTUAL & NORMAL RAINFALL
RECEIVED FROM I. M. D. ALIPORE, CALCUTTA ALONG WITH PER
CENT DEPARTURE FROM NORMAL FOR THE MONTH OF March 2000

Period from 01.03.2000 to 31.03.2000

Sl. No.	Name of District	Actual (in mm)	Normal (in mm)	Departure (in %)
1.	2.	3.	4.	5.

Sub-Division : Gangetic West Bengal

1.	Bankura	2.5	24.7	-90
2.	Birbhum	11.5	16.5	-30
3.	Burdwan	4.8	22.7	-79
4.	Hooghly	0.0	27.1	-100
5.	Howrah	0.1	34.8	-100
6.	Midnapore	0.2	32.1	-99
7.	Murshidabad	0.1	21.6	-100
8.	Nadia	1.4	32.3	-96
9.	North 24-Parganas	9.0	32.3	-72
10.	Purulia	-	20.6	-
11.	South 24 Parganas	0.1	32.3	-100
Total :		29.4	296.8	
Average :		2.9	27.0	-90

Sub-Division : Sub- Himalayan West Bengal

12.	Coochbehar	11.6	35.3	-67
13.	Darjeeling	4.3	39.7	-89
14.	Jalpaiguri	5.1	38.4	-87
15.	Maldah	52.2	17.6	197
16.	North & South Dinajpur	0.0	18.4	-100
Total :		73.2	149.4	
Average :		14.6	29.9	-51

MONTHLY DISTRICTWISE ACTUAL & NORMAL RAINFALL
RECEIVED FROM I. M. D. ALIPORE, CALCUTTA ALONG WITH PER
CENT DEPARTURE FROM NORMAL FOR THE MONTH OF April 2000

Period from 01.04.2000 to 30.04.2000

Sl. No.	Name of District	Actual (in mm)	Normal (in mm)	Departure (in %)
1.	2.	3.	4.	5.

Sub-Division : Gangetic West Bengal

1.	Bankura	31.4	35.4	-11
2.	Birbhum	61.6	29.5	109
3.	Burdwan	66.3	39.0	70
4.	Hooghly	75.0	51.6	45
5.	Howrah	110.4	53.6	106
6.	Midnapore	51.2	37.6	38
7.	Murshidabad	70.0	42.4	65
8.	Nadia	20.3	62.2	-67
9.	North 24-Parganas	56.9	60.6	-6
10.	Purulia	NO DATA	25.9	-
11.	South 24 Parganas	63.0	46.2	36
Total :		606.1	483.9	
Average :		55.1	44.0	25

Sub-Division : Sub- Himalayan West Bengal

12.	Coochbehar	107.4	118.2	-9
13.	Darjeeling	168.1	79.4	112
14.	Jalpaiguri	203.4	130.0	56
15.	Maldah	169.5	36.3	366
16.	North & South Dinajpur	122.9	43.1	185
Total :		771.3	407.0	
Average :		154.3	81.4	89.6

MONTHLY DISTRICTWISE ACTUAL & NORMAL RAINFALL
RECEIVED FROM I. M. D. ALIPORE, CALCUTTA ALONG WITH PER
CENT DEPARTURE FROM NORMAL FOR THE MONTH OF May 2000

Period from 01.05.2000 to 31.05.2000

Sl. No.	Name of District	Actual (in mm)	Normal (in mm)	Departure (in %)
1.	2.	3.	4.	5.

Sub-Division : Gangetic West Bengal

1.	Bankura	100.4	76.0	32
2.	Birbhum	163.6	86.7	89
3.	Burdwan	101.9	89.2	14
4.	Hooghly	345.4	102.2	238
5.	Howrah	241.2	144.3	67
6.	Midnapore	156.9	109.2	44
7.	Murshidabad	251.5	107.9	133
8.	Nadia	273.2	133.0	105
9.	North 24-Parganas	245.4	126.1	95
10.	Purulia	NO DATA	42.3	-
11.	South 24 Parganas	290.7	117.2	148
Total :		2170.2	1134.2	
Average :		197.3	103.1	91

Sub-Division : Sub- Himalayan West Bengal

12.	Coochbehar	252.9	357.8	-29
13.	Darjeeling	349.1	185.6	88
14.	Jalpaiguri	380.4	312.2	22
15.	Maldah	152.2	121.9	26
16.	North & South Dinajpur	107.5	130.8	-18
Total :		1244.1	1108.3	
Average :		248.8	221.7	12.2

**MONTHLY DISTRICTWISE ACTUAL & NORMAL RAINFALL
RECEIVED FROM I. M. D. ALIPORE, CALCUTTA ALONG WITH PER
CENT DEPARTURE FROM NORMAL FOR THE MONTH OF June 2000**

Period from 01.06.2000 to 30.06.2000

Sl. No.	Name of District	Actual (in mm)	Normal (in mm)	Departure (in %)
1.	2.	3.	4.	5.

Sub-Division : Gangetic West Bengal

1.	Bankura	129.8	209.2	-38
2.	Birbhum	240.7	203.1	19
3.	Burdwan	163.5	229.1	-29
4.	Hooghly	187.7	259.4	-28
5.	Howrah	256.8	303.0	-15
6.	Midnapore	264.8	248.3	7
7.	Murshidabad	158.4	237.0	-33
8.	Nadia	207.6	249.3	-17
9.	North 24-Parganas	235.8	286.5	-18
10.	Purulia	230.6	200.2	15
11.	South 24 Parganas	222.7	289.2	-23
Total :		2298.5	2714.4	
Average :		209.0	246.8	-15

Sub-Division : Sub- Himalayan West Bengal

12.	Coochbehar	829.8	736.9	13
13.	Darjeeling	569.6	527.1	8
14.	Jalpaiguri	1050.5	613.5	71
15.	Maldah	275.3	269.4	2
16.	North & South Dinajpur	477.4	286.1	67
Total :		3202.6	2433.0	
Average :		640.5	486.6	31.6

**MONTHLY DISTRICTWISE ACTUAL & NORMAL RAINFALL
RECEIVED FROM I. M. D. ALIPORE, CALCUTTA ALONG WITH PER
CENT DEPARTURE FROM NORMAL FOR THE MONTH OF July 2000**

Period from 01.07.2000 to 31.07.2000

Sl. No.	Name of District	Actual (in mm)	Normal (in mm)	Departure (in %)
1.	2.	3.	4.	5.

Sub-Division : Gangetic West Bengal

1.	Bankura	319.4	307.5	4
2.	Birbhum	468.1	257.7	82
3.	Burdwan	385.6	299.9	29
4.	Hooghly	313.2	310.0	1
5.	Howrah	337.5	360.9	-6
6.	Midnapore	307.8	305.0	1
7.	Murshidabad	290.2	302.0	-4
8.	Nadia	512.9	267.4	92
9.	North 24-Parganas	331.3	332.3	0
10.	Purulia	255.6	338.0	-24
11.	South 24 Parganas	332.8	355.4	-6
Total :		3854.4	3436.1	
Average :		350.4	312.4	12

Sub-Division : Sub- Himalayan West Bengal

12.	Coochbehar	732.8	667.5	10
13.	Darjeeling	629.6	738.6	-15
14.	Jalpaiguri	762.7	819.2	-7
15.	Maldah	127.3	329.0	-61
16.	North & South Dinajpur	420.0	333.3	26
Total :		2672.4	2887.6	
Average :		534.5	577.5	-7.4

**MONTHLY DISTRICTWISE ACTUAL & NORMAL RAINFALL
RECEIVED FROM I. M. D. ALIPORE, CALCUTTA ALONG WITH PER
CENT DEPARTURE FROM NORMAL FOR THE MONTH OF August 2000**

Period from 01.08.2000 to 31.08.2000

Sl. No.	Name of District	Actual (in mm)	Normal (in mm)	Departure (in %)
1.	2.	3.	4.	5.

Sub-Division : Gangetic West Bengal

1.	Bankura	182.7	305.0	-40
2.	Birbhum	185.6	288.8	-36
3.	Burdwan	140.4	293.5	-39
4.	Hooghly	240.2	299.5	-20
5.	Howrah	136.7	356.4	-62
6.	Midnapore	198.9	307.7	-35
7.	Murshidabad	226.8	280.4	-20 -19
8.	Nadia	239.8	207.7	-8
9.	North 24-Parganas	203.9	309.2	-34
10.	Purulia	143.5	323.2	-56
11.	South 24 Parganas	219.0	359.9	-39
Total :		2157.5	3384.2	
Average :		196.1	307.7	-36

Sub-Division : Sub- Himalayan West Bengal

12.	Coochbehar	422.2	534.3	-21
13.	Darjeeling	531.9	606.5	-12
14.	Jalpaiguri	720.2	570.5	26
15.	Maldah	191.0	331.3	-42
16.	North & South Dinajpur	246.4	292.3	-16
Total :		2111.7	2334.9	
Average :		422.3	467.0	-9.6

MONTHLY DISTRICTWISE ACTUAL & NORMAL RAINFALL
RECEIVED FROM I. M. D. ALIPORE, CALCUTTA ALONG WITH PER
CENT DEPARTURE FROM NORMAL FOR THE MONTH OF September 2000

Period from 01.09.2000 to 30.09.2000

Sl. No.	Name of District	Actual (in mm)	Normal (in mm)	Departure (in %)
1.	2.	3.	4.	5.

Sub-Division : Gangetic West Bengal

1.	Bankura	224.8	192.9	17
2.	Birbhum	957.2	200.0	397
3.	Burdwan	541.7	214.3	153
4.	Hooghly	499.4	254.0	97
5.	Howrah	295.9	208.0	42
6.	Midnapore	220.9	257.3	-14
7.	Murshidabad	604.7	208.6	190
8.	Nadia	531.5	210.7	152
9.	North 24-Parganas	301.0	260.0	16
10.	Purulia	339.2	248.0	-1
11.	South 24 Parganas	270.8	272.6	-1
Total :		4787.1	2526.3	
Average :		435.2	229.7	89

Sub-Division : Sub- Himalayan West Bengal

12.	Coochbehar	414.7	496.0	-16
13.	Darjeeling	390.6	405.2	-4
14.	Jalpaiguri	388.2	466.8	-17
15.	Maldah	583.2	279.3	109
16.	North & South Dinajpur	395.6	245.6	61
Total :		2172.3	1892.9	
Average :		434.5	378.6	15

**MONTHLY DISTRICTWISE ACTUAL & NORMAL RAINFALL
RECEIVED FROM I. M. D. ALIPORE, CALCUTTA ALONG WITH PER
CENT DEPARTURE FROM NORMAL FOR THE MONTH OF October 2000**

Period from 01.10.2000 to 31.10.2000

SL. No.	Name of District	Actual (in mm)	Normal (in mm)	Departure (in %)
1.	2.	3.	4.	5.

Sub-Division : Gangetic West Bengal

1.	Bankura	46.5	85.0	-45
2.	Birbhum	30.5	100.8	-70
3.	Burdwan	33.4	104.3	-68
4.	Hooghly	66.2	118.3	-44
5.	Howrah	62.2	127.8	-51
6.	Midnapore	57.5	142.8	-60
7.	Murshidabad	49.1	130.4	-62
8.	Nadia	58.5	107.6	-46
9.	North 24-Parganas	125.8	120.7	4
10.	Purulia	86.2	85.1	1
11.	South 24 Parganas	143.2	163.3	-12
Total :		759.10	1286.1	
Average :		69.0	116.9	-41

Sub-Division : Sub- Himalayan West Bengal

12.	Coochbehar	66.3	165.9	-60
13.	Darjeeling	63.5	129.3	-51
14.	Jalpaiguri	101.2	170.7	-41
15.	Maldah	25.9	111.2	-77
16.	North & South Dinajpur	22.9	116.9	-80
Total :		279.8	694.0	
Average :		56.0	138.8	-60

**MONTHLY DISTRICTWISE ACTUAL & NORMAL RAINFALL
RECEIVED FROM I. M. D. ALIPORE, CALCUTTA ALONG WITH PER
CENT DEPARTURE FROM NORMAL FOR THE MONTH OF November 2000**

Period from 01.11.2000 to 30.11.2000

Sl. No.	Name of District	Actual (in mm)	Normal (in mm)	Departure (in %)
1.	2.	3.	4.	5.

Sub-Division : Gangetic West Bengal

1.	Bankura	0.00	13.20	-100
2.	Birbhum	0.00	12.20	-100
3.	Burdwan	2.90	15.00	-81
4.	Hooghly	20.20	21.70	-07
5.	Howrah	1.40	24.60	-94
6.	Midnapore	4.80	34.30	-86
7.	Murshidabad	0.00	12.60	-100
8.	Nadia	0.00	16.90	-100
9.	North 24-Parganas	1.90	19.80	-90
10.	Purulia	0.00	13.90	-100
11.	South 24 Parganas	5.30	29.20	-82
Total :		36.50	213.30	
Average :		3.30	19.40	-83

Sub-Division : Sub- Himalayan West Bengal

12.	Coochbehar	12.80	9.80	32
13.	Darjeeling	44.50	13.10	240
14.	Jalpaiguri	50.00	16.50	203
15.	Maldah	0.00	12.50	-100
16.	North & South Dinajpur	5.70	13.00	-56
Total :		113.00	64.80	
Average :		22.60	12.96	74.38

**MONTHLY DISTRICTWISE ACTUAL & NORMAL RAINFALL
RECEIVED FROM I. M. D. ALIPORE, CALCUTTA ALONG WITH PER
CENT DEPARTURE FROM NORMAL FOR THE MONTH OF December 2000**

Period from 01.12.2000 to 31.12.2000

Sl. No.	Name of District	Actual (in mm)	Normal (in mm)	Departure (in %)
1.	2.	3.	4.	5.

Sub-Division : Gangetic West Bengal

1.	Bankura	0.00	3.20	-100
2.	Birbhum	0.00	2.30	-100
3.	Burdwan	0.00	2.80	-100
4.	Hooghly	0.00	3.40	-100
5.	Howrah	0.00	4.10	-100
6.	Midnapore	0.00	2.20	-100
7.	Murshidabad	0.00	2.20	-100
8.	Nadia	0.00	3.60	-100
9.	North 24-Parganas	0.00	2.70	-100
10.	Purulia	0.00	2.20	-100
11.	South 24 Parganas	0.00	3.90	-100
Total :		0.00	32.50	
Average :		0.00	3.00	-100

Sub-Division : Sub- Himalayan West Bengal

12.	Coochbehar	0.00	2.20	-100
13.	Darjeeling	0.00	3.50	-100
14.	Jalpaiguri	0.00	3.10	-100
15.	Maldah	0.00	1.70	-100
16.	North & South Dinajpur	0.00	1.90	-100
Total :		0.00	16.40	
Average :		0.00	3.28	-100

**IMPORTANT RESERVOIR LEVELS & OUTFLOW
DATA DURING THE FLOOD SEASON OF 2000**

Name of Reservoir : Maithon

Conservation Level : 146.31 m (480.00 ft)
Dead Storage Level : 132.59 m (435.00 ft)

Date	Time	Reservoir Level (in m)	Outflow (in Cumecs)	Remarks
1	2	3	4	5
15.6.2000	06	137.27	76.56	
26.6.2000	06	136.13	30.86	
30.6.2000	06	135.96	27.96	
12.7.2000	06	136.71	25.75	
19.7.2000	06	137.94	16.00	
26.7.2000	06	140.58	61.48	
2.8.2000	06	142.21	78.18	
4.8.2000	06	142.61	79.46	
15.8.2000	06	142.46	39.21	
23.8.2000	06	142.94	33.52	
24.8.2000	06	142.91	39.32	
6.9.2000	06	144.25	14.15	
13.9.2000	06	145.42	58.58	
15.9.2000	06	145.55	44.20	
16.9.2000	06	145.53	48.02	
17.9.2000	06	145.64	41.64	
18.9.2000	06	146.21	39.44	
19.9.2000	06	146.91	142.33	Above conservatin level
20.9.2000	06	147.04	152.19	Above conservatin level
21.9.2000	06	149.83	326.89	Above conservatin level
22.9.2000	06	149.66	2170.70	Above conservatin level
24.9.2000	06	149.06	1500.11	Above conservatin level
25.9.2000	06	148.95	568.98	Above conservatin level
26.9.2000	06	148.73	529.77	Above conservatin level
27.9.2000	06	148.49	330.60	Above conservatin level
28.9.2000	06	148.44	172.61	Above conservatin level

Date	Time	Reservoir Level (in m)	Outflow (in Cumecs)	Remarks
1	2	3	4	5
29.9.2000	06	148.38	157.76	Above conservatin level
30.9.2000	06	148.31	154.16	Above conservatin level
1.10.2000	06	148.22	154.05	Above conservatin level
2.10.2000	06	148.12	152.77	Above conservatin level
3.10.2000	06	148.00	160.78	Above conservatin level
4.10.2000	06	148.21	57.07	Above conservatin level
5.10.2000	06	148.23	42.22	Above conservatin level
6.10.2000	06	148.24	58.12	Above conservatin level
7.10.2000	06	148.24	44.66	Above conservatin level
8.10.2000	06	148.24	41.53	Above conservatin level
9.10.2000	06	148.17	49.76	Above conservatin level
10.10.2000	06	148.17	68.21	Above conservatin level
12.10.2000	06	148.16	86.77	Above conservatin level
13.10.2000	06	148.00	105.68	Above conservatin level

**IMPORTANT RESERVOIR LEVELS & OUTFLOW
DATA DURING THE FLOOD SEASON OF 2000**

Name of Reservoir : Panchet

Conservation Level : 124.97 m (410.00 ft)
Dead Storage Level : 119.48 m (392.00 ft)

Date	Time	Reservoir Level (in m)	Outflow (in Cumecs)	Remarks
1	2	3	4	5
21.6.2000	06	119.87	38.63	
22.6.2000	06	119.82	89.67	
28.6.2000	06	119.70	-	
1.7.2000	06	119.71	80.62	
12.7.2000	06	121.03	17.28	
19.7.2000	06	122.86	116.70	
26.7.2000	06	124.77	209.38	
27.7.2000	06	126.14	332.57	Above conservatin level
28.7.2000	06	127.32	438.25	Above conservatin level
29.7.2000	06	127.25	991.45	Above conservatin level
30.7.2000	06	126.90	833.81	Above conservatin level
4.8.2000	06	126.30	326.89	Above conservatin level
6.8.2000	06	126.00	327.58	Above conservatin level
11.8.2000	06	124.95	338.49	Above conservatin level
20.8.2000	06	124.42	329.09	—
24.8.2000	06	123.65	229.22	—
6.9.2000	06	125.25	185.37	Above conservatin level
10.9.2000	06	125.92	334.20	Above conservatin level
15.9.2000	06	125.57	196.62	Above conservatin level
16.9.2000	06	125.37	247.43	Above conservatin level
17.9.2000	06	125.63	180.03	Above conservatin level
18.9.2000	06	125.94	125.98	Above conservatin level
19.9.2000	06	126.09	206.36	Above conservatin level
20.9.2000	06	126.26	326.31	Above conservatin level
21.9.2000	06	128.86	404.84	Above conservatin level
22.9.2000	06	130.15	1085.99	Above conservatin level

Date	Time	Reservoir Level (in m)	Outflow (in Cumecs)	Remarks
1	2	3	4	5
24.9.2000	06	129.02	2635.75	Above conservatin level
25.9.2000	06	128.24	1871.54	Above conservatin level
26.9.2000	06	127.79	1407.20	Above conservatin level
27.9.2000	06	127.14	958.16	Above conservatin level
28.9.2000	06	126.89	430.94	Above conservatin level
29.9.2000	06	126.80	331.76	Above conservatin level
30.9.2000	06	126.58	331.41	Above conservatin level
1.10.2000	06	126.35	299.51	Above conservatin level
2.10.2000	06	126.12	302.53	Above conservatin level
3.10.2000	06	125.77	333.15	Above conservatin level
4.10.2000	06	125.73	118.67	Above conservatin level
5.10.2000	06	125.71	84.91	Above conservatin level
6.10.2000	06	125.66	89.55	Above conservatin level
7.10.2000	06	125.60	89.67	Above conservatin level
8.10.2000	06	125.54	85.84	Above conservatin level
9.10.2000	06	125.48	81.90	Above conservatin level
10.10.2000	06	125.45	58.70	Above conservatin level
11.10.2000	06	125.35	118.78	Above conservatin level
12.10.2000	06	125.23	133.28	Above conservatin level
13.10.2000	06	125.15	104.63	Above conservatin level
14.10.2000	06	125.03	119.83	Above conservatin level
15.10.2000	06	124.90	116.23	—

**IMPORTANT RESERVOIR LEVELS & OUTFLOW
DATA DURING THE FLOOD SEASON OF 2000**

Name of Reservoir : Tenughat

Conservation Level : 263.66 m (865.00 ft)
Dead Storage Level : 249.02 m (817.00 ft)

Date	Time	Reservoir Level (in m)	Outflow (in Cumecs)	Remarks
1	2	3	4	5
21.6.2000	06	256.75	4.93	
28.6.2000	06	257.40	53.98	
1.7.2000	06	257.40	48.47	
12.7.2000	06	257.81	183.76	
18.7.2000	06	258.03	244.02	
20.7.2000	06	258.17	261.05	
28.7.2000	06	258.96	1491.64	
3.8.2000	06	258.15	387.23	
9.8.2000	06	258.23	79.39	
11.8.2000	06	258.41	218.09	
19.8.2000	06	258.03	270.67	
24.8.2000	06	257.62	148.77	
3.9.2000	06	258.94	848.28	
9.9.2000	06	258.26	347.92	
16.9.2000	06	258.59	349.99	
17.9.2000	06	258.38	465.34	
18.9.2000	06	258.29	288.16	
19.9.2000	06	258.68	328.12	
20.9.2000	06	258.71	384.06	
21.9.2000	06	258.42	476.77	
22.9.2000	06	258.23	398.25	
24.9.2000	06	258.94	645.14	
4.10.2000	06	258.42	5.84	
15.10.2000	06	259.14	5.94	

**IMPORTANT RESERVOIR LEVELS & OUTFLOW
DATA DURING THE FLOOD SEASON OF 2000**

Name of Reservoir : Kangsabati

Conservation Level : 134.11 m (440.00 ft)
Dead Storage Level : 120.40 m (395.00 ft)

Date	Time	Reservoir Level (in m)	Outflow (in Cumecs)	Remarks
1	2	3	4	5
19.6.2000	06	122.56	-	
28.6.2000	06	122.86	-	
5.7.2000	06	122.96	-	
12.7.2000	06	123.06	-	
19.7.2000	06	123.46	-	
26.7.2000	06	125.03	-	
2.8.2000	06	126.19	-	
4.8.2000	06	126.45	-	
10.8.2000	06	125.15	200.30	
22.8.2000	06	124.45	-	
30.8.2000	06	124.85	-	
31.8.2000	06	124.88	-	
13.9.2000	06	124.34	-	
20.9.2000	06	125.55	-	
27.9.2000	06	129.05	-	
29.9.2000	06	129.817	-	
4.10.2000	06	129.46	-	
5.10.2000	06	129.34	159.76	

**IMPORTANT RESERVOIR LEVELS & OUTFLOW
DATA DURING THE FLOOD SEASON OF 2000**

Name of Reservoir : Messanjore

Conservation Level : 121.34 m (398.00 ft)
Dead Storage Level : 106.37 m (349.00 ft)

Date	Time	Reservoir Level (in m)	Outflow (in Cumecs)	Remarks
1	2	3	4	5
20.6.2000	06	109.469		
23.6.2000	06	109.515		
29.6.2000	06	109.149		
12.7.2000	06	107.96		
19.7.2000	06	109.835		
26.7.2000	06	114.513		
2.8.2000	06	115.55		
7.8.2000	06	115.976		
11.8.2000	06	115.94		
17.8.2000	06	115.504		
24.8.2000	06	114.605		
6.9.2000	06	114.132		
13.9.2000	06	115.001		
16.9.2000	06	115.184		
17.9.2000	12 hrs night	115.635		42.169 cumecs discharge for irrigation purpose at 9 p.m.
18.9.2000	12 hrs night	120.847	2817.08	Total 6431.76 cumecs discharge during the day.
19.9.2000	12 hrs night	120.762	3622.71	Total 25817.64 cumecs discharge during the day.
20.9.2000	3 A.M.	121.00	3640.61	Total 26713.169 cumecs discharges during the day.
21.9.2000	3 P.M.	122.706	6493.968	Above conservation level.
22.9.2000	3 A.M.	121.158	3867.884	Total 18430.16 cumecs discharge during the day.
27.9.2000	06	119.634		
4.10.2000	06	120.167		<u>N.B.</u>
5.10.2000	06	120.228		Maximum discharge 2,29,302 cusec(6493.968 cumecs) on 21.9.2000 at 15 hrs.
7.10.2000	06	120.189		
9.10.2000	06	120.366		
11.10.2000	06	120.426		
13.10.2000	06	120.472		
17.10.2000	06	120.106		

**IMPORTANT BARRAGE LEVELS & DISCHARGE
DATA DURING THE FLOOD SEASON OF 2000**

Name of Barrage : Tilpara

Date	Time	Barrage Level (in m)	Discharge (in Cumecs)	Remarks
1	2	3	4	5
18.6.2000	06	61.782	-	
25.6.2000	06	62.057	114.02	
4.7.2000	06	62.210	-	
12.7.2000	06	62.179	-	
16.7.2000	06	62.545	8.50	
20.7.2000	06	62.332	20.45	
30.7.2000	06	61.874	27.87	
9.8.2000	06	62.667	96.29	
16.8.2000	06	62.636	93.46	
21.8.2000	06	62.453	-	
26.8.2000	06	62.575	141.60	
3.9.2000	06	62.484	79.30	
10.9.2000	06	62.210	17.00	
15.9.2000	06	62.484	-	
16.9.2000	06	62.484	-	
17.9.2000	06	62.271	45.31	
18.9.2000	06	62.636	1233.34	
19.9.2000	06	62.271	3692.00	
20.9.2000	06	62.636	4237.45	<u>N.B.</u>
21.9.2000	06	63.603	5964.56	Maximum discharge 2,62,223 cusec on 21.9.2000 at 13.30 hrs.
22.9.2000	06	62.600	4191.08	
24.9.2000	06	61.570	564.41	
25.9.2000	06	61.57	-	
26.9.2000	06	61.57	52.56	
27.9.2000	06	61.57	52.56	
29.9.2000	06	62.027	28.32	
4.10.2000	06	61.996	28.24	
11.10.2000	06	62.392	16.99	
15.10.2000	06	62.362	-	

**IMPORTANT BARRAGE LEVELS & DISCHARGE
DATA DURING THE FLOOD SEASON OF 2000**

Name of Barrage : Durgapur

Date	Time	Barrage Level (in m)	Discharge (in Cumecs)	Remarks
1	2	3	4	5
16.6.2000	06	64.313	182.66	
24.6.2000	06	64.313	257.71	
5.7.2000	06	64.465	66.55	
11.7.2000	06	64.465	30.44	
13.7.2000	06	64.465	121.78	
20.7.2000	06	64.465	67.97	
27.7.2000	06	64.16	1037.13	
9.8.2000	06	64.313	365.33	
13.8.2000	06	64.313	365.33	
22.8.2000	06	64.313	304.44	
30.8.2000	06	64.465	1.42	
1.9.2000	06	64.465	60.89	
12.9.2000	06	64.465	440.38	
16.9.2000	06	64.465	243.55	
17.9.2000	06	64.465	189.74	
18.9.2000	06	64.465	60.89	
19.9.2000	06	64.008	1090.77	
20.9.2000	06	64.008	940.22	
21.9.2000	06	64.008	1159.00	
22.9.2000	06	63.79	4722.36	<u>N.B.</u>
23.9.2000	09	63.55	6322.87	Maximum discharge 2,23,292 cusec(6322.87 cumecs) on 23.9.2000 at 09 hrs.
24.9.2000	06	63.70	5171.23	
25.9.2000	06	64.008	2635.18	
26.9.2000	06	64.008	2146.60	
27.9.2000	06	64.008	1417.42	
28.9.2000	06	64.008	753.31	
29.9.2000	06	64.008	669.77	
30.9.2000	06	64.16	442.05	
3.10.2000	06	64.16	485.57	
4.10.2000	06	64.465	494.18	
5.10.2000	06	64.465	1.42	
15.10.2000	06	64.465	1.42	

**IMPORTANT GAUGE LEVEL OF RIVER
DURING FLOOD SEASON OF 2000**

River	Gauge at	Date	Level (in m)	Time	Remarks
1	2	3	4	5	6
Sankosh	L.R.P Crossing	03.07.2000	46.50	10	
		11.07.2000	46.75	10	
		13.07.2000	46.50	10	
		21.07.2000	46.60	10	
Warning Level		02.08.2000	47.55	10	
E.D.L.	: 49.10 m	04.08.2000	48.40	10	
D.L.	: 48.20 m	14.08.2000	46.65	10	
		17.08.2000	46.75	10	
		30.08.2000	46.75	10	
		06.09.2000	46.90	10	
		11.09.2000	46.55	10	
		20.09.2000	46.35	10	
		29.09.2000	46.00	10	
		05.10.2000	45.85	10	

River	Gauge at	Date	Level (in m)	Time	Remarks
1	2	3	4	5	6
Teesta	Coronation Bridge	20.06.2000	146.70	10	
		22.06.2000	147.75	10	
		03.07.2000	146.90	10	
		10.07.2000	148.40	10	
Warning Level		14.07.2000	147.50	10	
E.D.L.	: 151.80 m	21.07.2000	147.96	10	
D.L.	: 149.40 m	02.08.2000	149.40	10	
		03.08.2000	148.60	10	above E.D.L.
		14.08.2000	148.40	10	
		21.08.2000	146.95	10	
		28.08.2000	148.25	10	
		01.09.2000	145.25	10	
		12.09.2000	146.90	10	
		15.09.2000	146.60	10	
		28.09.2000	146.10	10	
		05.10.2000	145.50	10	

IMPORTANT GAUGE LEVEL OF RIVER DURING FLOOD SEASON OF 2000

River	Gauge at	Date	Level (in m)	Time	Remarks
1	2	3	4	5	6
Jaldhaka	N.H.31 Crossing	21.06.2000	79.86	10	
		22.06.2000	79.78	10	
		30.06.2000	79.76	10	
Warning Level		06.07.2000	79.79	10	
E.D.L.	: 80.50 m	13.07.2000	79.40	10	
D.L.	: 80.00 m	26.07.2000	79.64	10	
		02.08.2000	79.90	10	
		04.08.2000	80.60	10	above E.D.L.
		14.08.2000	79.62	10	
		21.08.2000	79.58	10	
		24.08.2000	79.74	10	
		05.09.2000	79.55	10	
		12.09.2000	79.70	10	
		14.09.2000	79.45	10	
		28.09.2000	79.34	10	
		11.10.2000	79.30	10	

**IMPORTANT GAUGE LEVEL OF RIVER
DURING FLOOD SEASON OF 2000**

River	Gauge at	Date	Level (in m)	Time	Remarks
1	2	3	4	5	6
Mansai	Mathabhanga	21.06.2000	47.36	10	
		22.06.2000	48.88	10	
		03.07.2000	47.90	10	
		07.07.2000	48.00	10	
		13.07.2000	47.28	10	
E.D.L.	: 48.70 m	20.07.2000	47.27	10	
D.L.	: 48.20 m	02.08.2000	48.00	10	
		04.08.2000	49.10	10	above E.D.L.
		16.08.2000	47.44	10	
		22.08.2000	47.43	10	
		30.08.2000	47.47	10	
		31.08.2000	47.40	10	
		11.09.2000	47.56	10	
		14.09.2000	47.29	10	
		03.10.2000	47.20	10	
		05.10.2000	47.14	10	

River	Gauge at	Date	Level (in m)	Time	Remarks
1	2	3	4	5	6
Raidak-I	L.R.P. Crossing	05.07.2000	45.00	10	
		10.07.2000	44.85	10	
		13.07.2000	44.45	10	
		20.07.2000	44.35	10	
		01.08.2000	45.30	10	
E.D.L.	: 47.60 m	04.08.2000	48.05	10	above E.D.L.
D.L.	: 46.70 m	11.08.2000	46.30	10	
		17.08.2000	46.40	10	
		30.08.2000	45.60	10	
		31.08.2000	45.55	10	
		11.09.2000	45.20	10	
		20.09.2000	45.20	10	
		28.09.2000	45.20	10	
		05.10.2000	45.10	10	

**IMPORTANT GAUGE LEVEL OF RIVER
DURING FLOOD SEASON OF 2000**

River	Gauge	Date	Level (in m)	Time	Remarks
1	2	3	4	5	6
Kaljani	Alipurduar	05.07.2000	43.40	10	
		10.07.2000	43.65	10	
		14.07.2000	42.80	10	
		21.07.2000	42.50	10	
Warning Level		02.08.2000	44.00	10	
		04.08.2000	45.55	10	above D.L.
		14.08.2000	43.95	10	
		17.08.2000	44.10	10	
		28.08.2000	43.15	10	
		05.09.2000	43.00	10	
E.D.L : 45.70 m		07.09.2000	43.80	10	
		20.09.2000	43.05	10	
		28.09.2000	43.00	10	
		06.10.2000	42.95	10	

River	Gauge at	Date	Level (in m)	Time	Remarks
1	2	3	4	5	6
Ganga	Patna	27.06.2000	46.47	06	
		05.07.2000	46.02	06	
		12.07.2000	46.45	06	
		19.07.2000	46.78	06	
Warning Level		26.07.2000	48.65	06	above D.L.
		28.07.2000	49.02	06	Do
		07.08.2000	47.95	06	
		10.08.2000	47.62	06	
		22.08.2000	47.91	06	
		24.08.2000	47.95	06	
E.D.L : 49.20 m		04.09.2000	49.08	06	
		12.09.2000	48.70	06	above D.L.
		14.09.2000	48.63	06	Do
		23.09.2000	47.84	06	
		28.09.2000	47.12	06	
		05.10.2000	45.65	06	

**IMPORTANT GAUGE LEVEL OF RIVER
DURING FLOOD SEASON OF 2000**

River	Gauge at	Date	Level (in m)	Time	Remarks
1	2	3	4	5	6
Ganga	Hatidah	27.06.2000	38.73	06	
		29.06.2000	38.41	06	
		12.07.2000	38.66	06	
		19.07.2000	39.28	06	
	Warning Level	26.07.2000	40.98	06	
E.D.L.	: 22.36 m	28.07.2000	41.70	06	
D.L.	: 41.76 m	07.08.2000	40.84	06	
		10.08.2000	40.67	06	
		22.08.2000	40.89	06	
		24.08.2000	40.99	06	
		05.09.2000	42.00	06	above D.L
		11.09.2000	41.87	06	Do
		14.09.2000	41.77	06	Do
		23.09.2000	41.30	06	
		28.09.2000	40.49	06	
		05.10.2000	38.90	06	
		12.10.2000	37.55	06	
		14.10.2000	37.23	06	

River	Gauge at	Date	Level (in m)	Time	Remarks
1	2	3	4	5	6
Ganga	Manickchak Ghat	28.06.2000	23.38	06	
		29.06.2000	23.38	06	
		10.07.2000	23.26	06	
	Warning Level	17.07.2000	23.45	06	
E.D.L.	: 25.54 m	26.07.2000	23.85	06	
D.L.	: 24.69 m	31.07.2000	25.235	06	above D.L
		03.08.2000	24.80	06	Do
		10.08.2000	24.64	06	
		22.08.2000	24.21	06	
		29.08.2000	24.45	06	
		06.09.2000	25.17	06	above D.L
		11.09.2000	25.46	06	Do
		14.09.2000	25.40	06	Do
		23.09.2000	25.55	06	above E.D.L
		28.09.2000	24.455	06	
		05.10.2000	23.29	06	

**IMPORTANT GAUGE LEVEL OF RIVER
DURING FLOOD SEASON OF 2000**

River	Gauge at	Date	Level (in m)	Time	Remarks
1	2	3	4	5	6
Ganga	Farakka	20.06.2000	21.40	06	
		29.06.2000	21.55	06	
		12.07.2000	21.41	06	
		17.07.2000	21.75	06	
		26.07.2000	22.18	06	
E.D.L. :	23.77 m	31.07.2000	23.56	06	above D L
D.L. :	22.25 m	03.08.2000	23.10	06	Do
		10.08.2000	23.00	06	Do
		17.08.2000	22.52	06	Do
		25.08.2000	22.77	06	Do
		06.09.2000	23.52	06	Do
		11.09.2000	23.82	06	above E.D. L
		14.09.2000	23.82	06	Do
		23.09.2000	24.15	06	Do
		28.09.2000	23.43	06	above D L
		05.10.2000	21.36	06	
		13.10.2000	20.27	06	
		15.10.2000	19.84	06	

River	Gauge at	Date	Level (in m)	Time	Remarks
1	2	3	4	5	6
Ganga	Nurpur	28.06.2000	17.82	06	
		29.06.2000	18.02	06	
		12.07.2000	18.05	06	
		18.07.2000	18.34	06	
		26.07.2000	18.76	06	
E.D.L. :	31.64 m	31.07.2000	20.25	06	
D.L. :	31.03 m	03.08.2000	19.90	06	
		10.08.2000	19.79	06	
		17.08.2000	19.21	06	
		24.08.2000	19.37	06	
		06.09.2000	20.07	06	
		12.09.2000	20.54	06	
		19.09.2000	20.56	06	
		28.09.2000	20.65	06	
		06.10.2000	18.17	06	
		12.10.2000	17.27	06	
		15.10.2000	16.81	06	

**IMPORTANT GAUGE LEVEL OF RIVER
DURING FLOOD SEASON OF 2000**

River	Gauge at	Date	Level (in m)	Time	Remarks
1	2	3	4	5	6
Mahananda	Dangraghat	27.06.2000	35.56	06	
		04.07.2000	36.03	06	above D. L
		07.07.2000	36.17	06	above E.D. L
		13.07.2000	34.76	06	
		26.07.2000	35.08	06	
Warning Level		02.08.2000	35.88	06	above D.L
E.D.L. : 36.15 m		07.08.2000	35.81	06	Do
D.L. : 35.65 m		16.08.2000	35.69	06	Do
		24.08.2000	34.94	06	
		01.09.2000	34.86	06	
		11.09.2000	35.28	06	
		19.09.2000	35.39	06	
		23.09.2000	34.66	06	
		28.09.2000	34.41	06	
		07.10.2000	33.91	06	
		13.10.2000	34.06	06	
		15.10.2000	33.81	06	

River	Gauge at	Date	Level (in m)	Time	Remarks
1	2	3	4	5	6
Mahananda	Jhawa	27.06.2000	31.14	06	
		05.07.2000	31.71	06	above D L
		07.07.2000	31.62	06	Do
		13.07.2000	30.88	06	
Warning Level		26.07.2000	30.52	06	
E.D.L. : 31.90 m		02.08.2000	31.28	06	
D.L. : 31.40 m		07.08.2000	31.68	06	above D L
		11.08.2000	31.40	06	Touched D.L
		17.08.2000	31.22	06	
		24.08.2000	30.43	06	
		01.09.2000	30.22	06	
		11.09.2000	30.92	06	
		19.09.2000	31.26	06	
		23.09.2000	30.45	06	
		28.09.2000	29.91	06	
		10.10.2000	29.91	06	
		13.10.2000	29.04	06	
		15.10.2000	28.74	06	

IMPORTANT GAUGE LEVEL OF RIVER DURING FLOOD SEASON OF 2000

River	Gauge at	Date	Level (in m)	Time	Remarks
1	2	3	4	5	6
Bhagirathi	Katwa	15.06.2000	10.34	06	
		26.06.2000	10.66	06	
		30.06.2000	10.48	06	
		01.07.2000	10.48	06	
E.D.L. : 14.32 m	Warning Level	22.07.2000	10.55	06	
		26.07.2000	13.00	06	
		28.07.2000	13.16	06	
		31.07.2000	12.67	06	
D.L. : 13.71 m		01.08.2000	12.50	06	
		31.08.2000	10.57	06	
		04.09.2000	11.75	06	
		10.09.2000	11.40	06	
		17.09.2000	11.16	06	
		18.09.2000	11.22	06	
		19.09.2000	13.18	06	
		20.09.2000	14.20	06	Above D.L.
		21.09.2000	14.91	06	Above E.D.L.
		22.09.2000	15.33	06	Do
		23.09.2000	15.59	06	Do
		24.09.2000	15.09	06	Do
		25.09.2000	14.69	06	Do
		26.09.2000	14.41	06	Do
		27.09.2000	14.15	06	Above D.L.
		28.09.2000	13.58	06	
		29.09.2000	13.67	06	
		30.09.2000	13.51	06	
		01.10.2000	13.32	06	
		02.10.2000	13.08	06	
		03.10.2000	12.78	06	
		04.10.2000	12.51	06	
		05.10.2000	12.25	06	

**IMPORTANT GAUGE LEVEL OF RIVER
DURING FLOOD SEASON OF 2000**

River	Gauge at	Date	Level (in m)	Time	Remarks
1	2	3	4	5	6
Mahananda	English Bazar	28.06.2000	19.37	06	
		30.06.2000	19.47	06	
		12.07.2000	19.67	06	
Warning Level		13.07.2000	19.65	06	
E.D.L.	: 23.50 m	26.07.2000	19.08	06	
D.L.	: 22.75 m	31.07.2000	21.41	06	
		10.08.2000	21.16	06	
		18.08.2000	20.72	06	
		24.08.2000	20.48	06	
		06.09.2000	20.60	06	
		13.09.2000	21.27	06	
		19.09.2000	21.60	06	
		23.09.2000	22.23	06	
		28.09.2000	21.99	06	
		05.10.2000	20.47	06	
		10.10.2000	19.05	06	
		14.10.2000	18.14	06	

IMPORTANT GAUGE LEVEL OF RIVER DURING FLOOD SEASON OF 2000

River	Gauge at	Date	Level (in m)	Time	Remarks
1	2	3	4	5	6
Bhagirathi	Kalna	17.06.2000	4.38	06	
		28.06.2000	4.905	06	
		30.06.2000	4.940	06	
Warning Level		02.07.2000	5.040	06	
E.D.L.	: 8.24 m	14.07.2000	4.585	06	
D.L.	: 7.63 m	19.07.2000	5.100	06	
		28.07.2000	7.425	06	
		29.07.2000	7.435	06	
		01.08.2000	7.285	06	
		08.08.2000	6.395	06	
		19.08.2000	6.025	06	
		22.08.2000	5.915	06	
		31.08.2000	5.520	06	
		06.09.2000	6.395	06	
		08.09.2000	6.290	06	
		17.09.2000	6.035	06	
		18.09.2000	6.080	06	
		19.09.2000	6.725	06	
		20.09.2000	7.690	06	Above D.L.
		21.09.2000	8.625	06	
		22.09.2000	9.395	06	
		23.09.2000	9.910	06	
		24.09.2000	10.235	06	
		25.09.2000	10.175	06	
		26.09.2000	10.155	06	
		27.09.2000	9.900	06	Above E.D.L.
		28.09.2000	9.660	06	
		29.09.2000	9.380	06	
		30.09.2000	9.115	06	
		01.10.2000	8.820	06	
		02.10.2000	8.620	06	
		03.10.2000	8.385	06	
		04.10.2000	8.140	06	
		05.10.2000	7.920	06	Above D.L.
		06.10.2000	7.710	06	
		07.10.2000	7.480	06	

**IMPORTANT GAUGE LEVEL OF RIVER
DURING FLOOD SEASON OF 2000**

River	Gauge at	Date	Level(in m)	Time	Remarks	
1	2	3	4	5	6	
Bhagirathi	Jangipur	28.06.2000	18.86	06		
		29.06.2000	18.74	06		
		12.07.2000	18.70	06		
		18.07.2000	18.80	06		
		26.07.2000	19.14	06		
		27.07.2000	19.14	06		
		03.08.2000	19.00	06		
		16.08.2000	19.20	06		
		17.08.2000	19.25	06		
		24.08.2000	19.17	06		
Warning Level		05.09.2000	19.27	06		
E.D.L. : 20.88 m		07.09.2000	19.19	06		
D.L. : 20.27 m		19.09.2000	20.66	06	above D L	
		28.09.2000	20.15	06		
		06.10.2000	18.53	06		
		15.10.2000	18.43	06		

River	Gauge at	Date	Level (in m)	Time	Remarks	
1	2	3	4	5	6	
Bhagirathi	Berhampore	28.06.2000	15.41	06		
		30.06.2000	15.27	06		
		10.07.2000	15.24	06		
		17.07.2000	15.31	06		
		25.07.2000	16.02	06		
		28.07.2000	16.21	06		
		07.08.2000	15.85	06		
		16.08.2000	15.65	06		
		18.06.2000	15.68	06		
		25.08.2000	15.60	06		
Warning Level		06.09.2000	15.80	06		
E.D.L. : 17.83 m		07.09.2000	15.84	06		
D.L. : 17.22 m		20.09.2000	18.83	06	above E. D. L.	
		23.09.2000	18.87	06	Do	
		28.09.2000	17.09	06		
		05.10.2000	15.52	06		
		11.10.2000	15.01	06		
		15.10.2000	14.89	06		

**IMPORTANT GAUGE LEVEL OF RIVER
DURING FLOOD SEASON OF 2000**

River	Gauge at	Date	Level (in m)	Time	Remarks
1	2	3	4	5	6
Sui	Pajal	29.06.2000	25.80	06	
		07.07.2000	25.92	06	
		13.07.2000	25.35	06	
		20.07.2000	25.08	06	
Warning Level		02.08.2000	25.07	06	
E.D.L.	: 28.00 m	07.08.2000	25.14	06	
D.L.	: 27.43 m	10.08.2000	25.10	06	
		18.08.2000	25.06	06	
		24.08.2000	24.97	06	
		06.09.2000	24.96	06	
		12.09.2000	24.96	06	
		19.09.2000	25.13	06	
		23.09.2000	25.19	06	
		28.09.2000	25.09	06	
		07.10.2000	24.93	06	
		13.10.2000	24.93	06	

River	Gauge at	Date	Level (in m)	Time	Remarks
1	2	3	4	5	6
Sui	Katchua	29.06.2000	22.20	06	
		07.07.2000	22.20	06	
		13.07.2000	22.09	06	
		20.07.2000	21.80	06	
Warning Level		02.08.2000	22.30	06	
E.D.L.	: 26.98 m	07.08.2000	22.90	06	
D.L.	: 25.49 m	10.08.2000	22.62	06	
		18.08.2000	22.17	06	
		24.08.2000	21.69	06	
		04.09.2000	21.28	06	
		10.09.2000	21.65	06	
		19.09.2000	22.50	06	
		23.09.2000	24.10	06	
		28.09.2000	23.40	06	
		04.10.2000	21.50	06	

**IMPORTANT GAUGE LEVEL OF RIVER
DURING FLOOD SEASON OF 2000**

River	Gauge at	Date	Level (in m)	Time	Remarks
1	2	3	4	5	6
Tangon	Banshihari	26.06.2000	24.94	06	
		28.06.2000	24.64	06	
		10.07.2000	25.01	06	
		17.07.2000	23.88	06	
		20.07.2000	22.95	06	
E.D.L.	: 26.21 m	02.08.2000	22.95	06	
D.L.	: 25.60 m	07.08.2000	23.75	06	
		16.08.2000	25.04	06	
		18.08.2000	25.34	06	
		30.08.2000	22.68	06	
		04.09.2000	23.26	06	
		13.09.2000	24.17	06	
		19.09.2000	25.25	06	
		23.09.2000	25.14	06	
		28.09.2000	23.50	06	
		05.10.2000	22.25	06	
		15.10.2000	22.30	06	

River	Gauge at	Date	Level (in m)	Time	Remarks
1	2	3	4	5	6
Nagar	Makdampur	29.06.2000	29.10	06	
		07.07.2000	29.45	06	
		13.07.2000	29.10	06	
		20.07.2000	28.78	06	
		02.08.2000	29.73	06	
E.D.L.	: 31.86 m	07.08.2000	29.98	06	
D.L.	: 31.54 m	10.08.2000	29.78	06	
		18.08.2000	29.78	06	
		24.08.2000	29.60	06	
		01.09.2000	28.67	06	
		13.09.2000	29.02	06	
		19.09.2000	29.90	06	
		23.09.2000	30.17	06	
		28.09.2000	28.96	06	
		11.10.2000	27.67	06	

**IMPORTANT GAUGE LEVEL OF RIVER
DURING FLOOD SEASON OF 2000**

River	Gauge at	Date	Level (in m)	Time	Remarks
1	2	3	4	5	6
Fulahar	Teljana R/S	11.07.2000	27.25	06	
		13.07.2000	26.75	06	
		26.7..2000	26.64	06	
		02.08.2000	27.75	06	above D.L
		07.08.2000	28.05	06	Do
E.D.L.	: 28.35 m	11.08.2000	27.74	06	Do
D.L.	: 27.43 m	17.08.2000	27.54	06	Do
		24.08.2000	27.03	06	
		06.09.2000	27.12	06	
		11.09.2000	27.97	06	above D.L
		19.09.2000	27.92	06	Do
		23.09.2000	27.75	06	Do
		28.09.2000	26.90	06	
		04.10.2000	25.76	06	

River	Gauge at	Date	Level (in m)	Time	Remarks
1	2	3	4	5	6
Purnabhava	Gangarampur	26.06.2000	25.77	06	
		05.07.2000	25.15	06	
		10.07.2000	25.32	06	
		13.07.2000	24.93	06	
		20.07.2000	23.10	06	
E.D.L.	: 26.415 m	02.08.2000	24.57	06	
D.L.	: 25.815 m	04.08.2000	24.87	06	
		07.08.2000	24.08	06	
		16.08.2000	24.50	06	
		18.08.2000	25.27	06	
		30.08.2000	22.60	06	
		31.08.2000	22.70	06	
		12.09.2000	23.70	06	
		19.09.2000	24.25	06	
		23.09.2000	23.60	06	
		28.09.2000	23.90	06	
		06.10.2000	22.55	06	
		15.10.2000	21.46	06	

**IMPORTANT GAUGE LEVEL OF RIVER
DURING FLOOD SEASON OF 2000**

River	Gauge at	Date	Level (in m)	Time	Remarks
1	2	3	4	5	6
Jamuna	Hilli	27.06.2000	22.41	06	
		29.06.2000	22.12	06	
		06.07.2000	21.84	06	
		13.07.2000	21.69	06	
		20.07.2000	21.58	06	
		02.08.2000	21.52	06	
		07.08.2000	21.72	06	
		10.08.2000	21.47	06	
		17.08.2000	21.45	06	
		24.08.2000	21.31	06	
		05.09.2000	21.46	06	
		08.09.2000	21.40	06	
		19.09.2000	21.47	06	
		26.09.2000	21.73	06	
		28.09.2000	21.65	06	
		06.10.2000	21.54	06	
		15.10.2000	18.54	06	

River	Gauge at	Date	Level (in m)	Time	Remarks
1	2	3	4	5	6
Atrai	Balurghat	26.06.2000	21.89	06	
		05.07.2000	21.40	06	
		10.07.2000	20.99	06	
		13.07.2000	20.12	06	
		20.07.2000	18.94	06	
		02.08.2000	20.46	06	
		04.08.2000	20.64	06	
		16.08.2000	19.90	06	
		17.08.2000	20.64	06	
		24.08.2000	19.22	06	
		31.08.2000	18.82	06	
		12.09.2000	19.68	06	
		19.09.2000	19.42	06	
		23.09.2000	19.40	06	
		29.09.2000	18.94	06	
		07.10.2000	18.60	06	

**IMPORTANT GAUGE LEVEL OF RIVER
DURING FLOOD SEASON OF 2000**

River	Gauge at	Date	Level (in m)	Time	Remarks
1	2	3	4	5	6
Dwaraka	Sankoghat	26.06.2000	16.80	06	
		29.06.2000	16.30	06	
		12.07.2000	15.65	06	
		17.07.2000	16.98	06	
		26.07.2000	21.18	06	
		27.07.2000	20.82	06	
		04.08.2000	19.30	06	
		12.08.2000	18.52	06	
		17.08.2000	18.12	06	
		24.08.2000	16.28	06	
Warning Level		04.09.2000	20.60	06	
E.D.L. : 21.30 m		07.09.2000	18.81	06	
D.L. : 20.42 m		18.09.2000	18.50	06	
		10.10.2000	14.30	06	
		15.10.2000	13.52	06	

River	Gauge at	Date	Level (in m)	Time	Remarks
1	2	3	4	5	6
Bhairab	Akheriganj	26.06.2000	15.02	06	
		30.06.2000	15.39	06	
		12.07.2000	15.45	06	
		18.07.2000	15.77	06	
		26.07.2000	16.09	06	
		01.08.2000	17.44	06	
		03.08.2000	17.19	06	
		10.08.2000	17.09	06	
		17.08.2000	16.55	06	
		24.08.2000	16.70	06	
Warning Level		04.09.2000	16.77	06	
E.D.L. : 19.05 m		13.09.2000	17.71	06	
D.L. : 18.44 m		14.09.2000	17.71	06	
		09.10.2000	14.42	06	
		15.10.2000	13.67	06	

**IMPORTANT GAUGE LEVEL OF RIVER
DURING FLOOD SEASON OF 2000**

River	Gauge at	Date	Level (in m)	Time	Remarks
1	2	3	4	5	6
Jalangi	Swarupganj	27.06.2000	6.87	06	
		29.06.2000	6.94	06	
		06.07.2000	6.62	06	
Warning Level E.D.L. : 9.05 m D.L. : 8.44 m		19.07.2000	6.95	06	
		26.07.2000	9.15	06	above E.D.L.
		28.07.2000	9.34	06	Do
		03.08.2000	9.06	06	Do
		10.08.2000	8.21	06	
		18.08.2000	8.04	06	
		24.08.2000	7.75	06	
		06.09.2000	8.49	06	above D.L.
		07.09.2000	8.44	06	Touched D.L.
		20.09.2000	9.58	06	above E.D.L.
		23.09.2000	11.72	06	Do
		28.09.2000	11.05	06	Do
		05.10.2000	9.50	06	Do
		06.10.2000	9.34	06	Do
		07.10.2000	9.18	06	Do
		09.10.2000	8.81	06	above D.L.
		10.10.2000	8.62	06	Do
		11.10.2000	8.44	06	Touched D.L.
		15.10.2000	8.78	06	above D.L.

**IMPORTANT GAUGE LEVEL OF RIVER
DURING FLOOD SEASON OF 2000**

River	Gauge at	Date	Level (in m)	Time	Remarks
1	2	3	4	5	6
Churni	Hanskhalia	28.06.2000	4.47	06	
		03.07.2000	5.08	06	
		12.07.2000	4.75	06	
		19.07.2000	5.20	06	
		26.07.2000	7.52	06	
Warning Level		02.08.2000	7.66	06	above D.L
E.D.L.	: 8.14 m	03.08.2000	7.63	06	Do
D.L.	: 7.53 m	10.08.2000	7.04	06	
		17.08.2000	6.85	06	
		25.08.2000	6.43	06	
		06.09.2000	7.11	06	
		13.09.2000	7.47	06	
		20.09.2000	8.37	06	above E.D.L
		23.09.2000	9.71	06	Do
		29.09.2000	10.50	06	Do
		05.10.2000	9.60	06	Do
		06.10.2000	9.52	06	Do
		07.10.2000	9.45	06	Do
		09.10.2000	9.30	06	Do
		10.10.2000	9.24	06	Do
		11.10.2000	9.15	06	Do
		12.10.2000	9.06	06	Do
		13.10.2000	8.98	06	Do
		14.10.2000	8.88	06	Do
		15.10.2000	7.76	06	above D.L

IMPORTANT GAUGE LEVEL OF RIVER DURING FLOOD SEASON OF 2000

River	Gauge at	Date	Level (in m)	Time	Remarks
1	2	3	4	5	6
Mayurakshi	Narayanpur	25.06.2000	24.825	06	
		26.06.2000	24.893	06	
		30.06.2000	24.095	06	
Warning Level		02..07.2000	24.925	06	
E.D.L.	:	10.07.2000	23.805	06	
D.L.	: 27.988 m	15.07.2000	23.775	06	
		24.07.2000	25.245	06	
		27.07.2000	24.845	06	
		31.07.2000	24.405	06	
		02.08.2000	24.475	06	
		06.08..2000	23.965	06	
		11.08.2000	23.955	06	
		20.08.2000	23.915	06	
		25.08.2000	23.865	06	
		31.08.2000	23.825	06	
		01.09.2000	24.135	06	
		15.09.2000	23.835	06	
		17.09.2000	23.815	06	
		18.09.2000	23.905	06	
		19.09.2000	29.105	06	Above D.L.
		20.09.2000	29.045	06	Above D.L.
		21.09.2000	29.175	06	Above D.L.
		22.09.2000	28.995	06	Above D.L.
		23.09.2000	28.125	06	Above D.L.
		24.09.2000	26.925	06	
		25.09.2000	25.625	06	
		26.09.2000	25.325	06	
		30.09.2000	24.315	06	
		02.10.2000	24.425	06	
		08.10.2000	24.085	06	
		15.10.2000	23.955	06	

**IMPORTANT GAUGE LEVEL OF RIVER
DURING FLOOD SEASON OF 2000**

River	Gauge at	Date	Level (in m)	Time	Remarks
1	2	3	4	5	6
Ajoy	Katwa	19.09.2000	14.50	06	Above D.L.
		20.09.2000	15.00	06	Do
		21.09.2000	15.65	06	Above E.D.L.
Warning Level		24.09.2000	15.45	06	Do
E.D.L.	: 15.09 m	25.09.2000	15.07	06	Above D.L.
D.L.	: 14.48 m	26.09.2000	14.72	06	Do
		27.09.2000	14.47	06	
		28.09.2000	14.17	06	
		29.09.2000	14.00	06	

**IMPORTANT GAUGE LEVEL OF RIVER
DURING FLOOD SEASON OF 2000**

River	Gauge at	Date	Level (in m)	Time	Remarks
1	2	3	4	5	6
Ajoy	Budra	03.06.2000	35.51	06	
		12.06.2000	36.12	06	
		19.06.2000	36.00	06	
Warning Level		24.06.2000	37.31	06	
E.D.L.	: 40.10 m	30.06.2000	36.40	06	
D.L.	: 39.49 m	22.07.2000	38.96	14-30	
		23.07.2000	38.87	14-20	
		31.07.2000	36.73	07	
		03.08.2000	37.43	06	
		11.08.2000	36.82	06	
		17.08.2000	37.13	06	
		22.08.2000	36.52	06	
		31.08.2000	35.79	06	
		22.09.2000	39.35	22	
		23.09.2000	39.29	01	
		01.10.2000	37.07	06	
		15.10.2000	36.55	06	

**IMPORTANT GAUGE LEVEL OF RIVER
DURING FLOOD SEASON OF 2000**

River	Gauge at	Date	Level (in m)	Time	Remarks
1	2	3	4	5	6
Ajoy	Gheropara	22.07.2000	38.39	06	
		23.07.2000	38.460	06	
		03.08.2000	37.230	06	
Warning Level		11.08.2000	36.700	06	
E.D.L.	: 40.466 m	17.08.2000	36.910	06	
D.L.	: 39.416 m	21.08.2000	36.500	06	
		03.09.2000	37.360	06	
		12.09.2000	36.570	06	
		17.09.2000	36.560	06	
		18.09.2000	36.400	06	
		19.09.2000	39.080	06	
		20.09.2000	38.550	06	
		21.09.2000	42.870	06	Above E.D.L.
		21.09.2000	43.230	6.20 A.M.	Over topping the embk
		22.09.2000	39.930	06	Above D.L
		23.09.2000	38.98	06	
		24.09.2000	38.42	06	
		26.09.2000	37.880	06	
		27.09.2000	37.53	06	
		28.09.2000	37.17	06	
		29.09.2000	36.980	06	
		30.09.2000	36.790	06	
		01.10.2000	36.660	06	
		12.10.2000	36.440	06	

**IMPORTANT GAUGE LEVEL OF RIVER
DURING FLOOD SEASON OF 2000**

River	Gauge at	Date	Level (in m)	Time	Remarks
1	2	3	4	5	6
Damodar	Amta	19.06.2000	3.30	06	
		26.06.2000	3.39	12.00	
		29.06.2000	3.35	06	
Warning Level		18.07.2000	3.50	18.00	
E.D.L.	: 6.24 m	22.07.2000	3.50	9.00	
D.L.	: 5.64 m	28.07.2000	5.35	06	
		29.07.2000	5.29	06	
		01.08.2000	5.41	06	
		05.08.2000	4.40	12.00	
		11.08.2000	4.18	15.00	
		19.08.2000	3.85	18.00	
		21.08.2000	3.85	6.00	
		11.09.2000	3.45	15.00	
		13.09.2000	4.60	6.00	
		17.09.2000	4.10	6.00	
		18.09.2000	3.70	6.00	
		19.09.2000	4.40	18.00	
		20.09.2000	6.23	24.00	Above D.L.
		21.09.2000	6.29	12.00	Above E.D.L.
		22.09.2000	6.93	24.00	Do
		23.09.2000	6.93	2.00	Do
		24.09.2000	6.91	1.00	Do
		25.09.2000	6.93	15.00	Do
		26.09.2000	6.86	1.00	Do
		27.09.2000	6.74	6.00	Do
		28.09.2000	6.63	4.00	Do
		29.09.2000	6.44	3.00	Do
		30.09.2000	5.99	1.00	Above D.L.
		01.10.2000	5.50	3.00	
		02.10.2000	5.15	6.00	
		03.10.2000	4.90	6.00	
		04.10.2000	4.70	6.00	

**IMPORTANT GAUGE LEVEL OF RIVER
DURING FLOOD SEASON OF 2000**

River	Gauge at	Date	Level (in m)	Time	Remarks
1	2	3	4	5	6
Hurhura	Muchighat	19.06.2000	3.24	15.00	
		20.06.2000	3.20	18.00	
		29.06.2000	3.08	6.00	
Warning Level		01..07.2000	3.14	18.00	
E.D.L.	: 6.77 m	18.07.2000	4.40	15.00	
D.L.	: 6.16 m	19.07.2000	4.20	15.00	
		23.07.2000	4.00	18.00	
		25.07..2000	5.44	9.00	
		30.07.2000	5.64	18.00	
		31.07.2000	5.58	15.00	
		01.08.2000	5.36	15.00	
		02.08.2000	5.26	15.00	
		14.08.2000	4.30	12.00	
		22.08.2000	3.66	9.00	
		30.08.2000	3.50	15.00	
		05.09.2000	3.54	6.00	
		17.09.2000	3.50	9.00	
		18.09.2000	3.84	6.00	
		19.09.2000	4.60	18.00	
		20.09.2000	6.15	18.00	
		21.09.2000	6.68	24.00	Above D.L
		22.09.2000	8.02	22.00	Above E.D.L
		23.09.2000	8.30	24.00	Do
		24.09.2000	8.45	24.00	Do
		25.09.2000	8.45	1.00	Do
		26.09.2000	8.10	2.00	Do
		27.09.2000	7.64	6.00	Do
		28.09.2000	7.20	4.00	Do
		29.09.2000	6.78	1.00	Do
		30.09.2000	5.60	6.00	
		01.10.2000	5.20	15.00	
		02.10.2000	4.84	6.00	
		03.10.2000	4.60	15.00	
		14.10.2000	3.88	15.00	

**IMPORTANT GAUGE LEVEL OF RIVER
DURING FLOOD SEASON OF 2000**

River	Gauge at	Date	Level (in m)	Time	Remarks
1	2	3	4	5	6
Rupnarayan	Bandar	18.06.2000	2.95	06	
		30.06.2000	2.28	06	
		06.07.2000	3.29	06	
Warning Level		08.07.2000	2.52	06	
E.D.L. : 7.46 m		19.07.2000	3.35	06	
D.L. : 6.85 m		28.07.2000	5.09	06	
		01.08.2000	4.63	06	
		14.08.2000	3.39	06	
		20.08.2000	3.78	06	
		31.08.2000	2.47	06	
		03.09.2000	3.90	06	
		15.09.2000	4.09	06	
		17.09.2000	3.58	06	
		18.09.2000	3.98	06	
		19.09.2000	4.12	06	
		20.09.2000	5.60	06	
		21.09.2000	7.46	06	Touched D.L.
		22.09.2000	8.28	06	Above E.D.L.
		23.09.2000	8.34	06	Do
		24.09.2000	8.25	06	Do
		25.09.2000	8.40	06	Do
		26.09.2000	8.22	06	Do
		27.09.2000	7.76	06	Do
		28.09.2000	7.28	06	Above D.L.
		29.09.2000	6.73	06	
		30.09.2000	6.18	06	
		01.10.2000	5.61	06	
		10.10.2000	1.51	60	
		15.10.2000	3.12	06	

**IMPORTANT GAUGE LEVEL OF RIVER
DURING FLOOD SEASON OF 2000**

River	Gauge at	Date	Level (in m)	Time	Remarks
1	2	3	4	5	6
Rupnarayan	Ranichak	15.06.2000	2.31	06	
		22.06.2000	3.29	06	
		30.06.2000	2.65	06	
Warning Level		05..07.2000	3.23	06	
E.D.L. : 5.94 m		14.07.2000	2.10	06	
D.L. : 5.33m		21.07.2000	3.35	06	
		31.07.2000	4.84	06	
		01.08.2000	4.54	06	
		14.08.2000	3.47	06	
		21.08.2000	3.98	06	
		22.08..2000	3.29	06	
		31.08.2000	3.29	06	
		04.09.2000	4.42	06	
		12.09.2000	3.75	06	
		17.09.2000	4.08	06	
		18.09.2000	3.81	06	
		19.09.2000	3.84	06	
		20.09.2000	5.03	06	
		21.09.2000	6.24	06	Above E.D.L.
		22.09.2000	6.93	06	Do
		23.09.2000	7.52	06	Do
		24.09.2000	7.73	06	Do
		25.09.2000	7.91	06	Do
		26.09.2000	7.58	06	Do
		27.09.2000	7.12	06	Do
		28.09.2000	6.72	06	Do
		29.09.2000	6.21	06	Do
		30.09.2000	5.85	06	Above D.L.
		01.10.2000	5.27	06	
		10.10.2000	1.49	06	
		15.10.2000	3.08	06	

**IMPORTANT GAUGE LEVEL OF RIVER
DURING FLOOD SEASON OF 2000**

River	Gauge at	Date	Level (in m)	Time	Remarks
1	2	3	4	5	6
Rupnarayan	Gopiganj	20.06.2000	2.53	06	
		26.06.2000	1.03	06	
		30.06.2000	1.70	06	
Warning Level		05..07.2000	2.77	06	
E.D.L.	: 5.64 m	08.07.2000	2.13	06	
D.L.	: 5.03 m	20.07.2000	2.50	06	
		31.07.2000	3.35	06	
		02.08.2000	3.44	06	
		14.08.2000	2.53	06	
		21.08.2000	3.14	06	
		31.08.2000	2.37	06	
		03.09.2000	3.29	06	
		16.09.2000	2.62	06	
		17.09.2000	2.89	06	
		18.09.2000	2.98	06	
		19.09.2000	3.17	06	
		20.09.2000	3.96	06	
		22.09.2000	4.93	06	
		23.09.2000	5.54	06	Above D.L.
		24.09.2000	5.73	06	Above E.D.L.
		25.09.2000	5.94	06	DO
		26.09.2000	5.64	06	Touched E.D.L.
		27.09.2000	5.30	06	Above D.L.
		28.09.2000	5.03	06	Touched D.L.
		30.09.2000	4.36	06	
		01.10.2000	3.96	06	
		15.10.2000	2.04	06	

Gauge level of Ajoy River at Gheropara (From 17.09.2000 to 22.09.2000)

Date	Time	Gauge level in Mt.	Remarks.
17.09.2000	6 a.m.	36.560	
	6 p.m.	36.460	
18.09.2000	6 a.m.	36.400	
	9 a.m.	36.430	
	12 noon	39.020	
	3 p.m.	40.370	
	6 p.m.	40.580	
	9 p.m.	40.380	
	12 night	39.890	
19.9.2000	3 a.m.	39.430	
	6 a.m.	39.080	
	9 a.m.	38.910	
	12 noon	38.740	
	3 p.m.	38.620	
	6 p.m.	38.580	
	9 p.m.	38.590	
20.9.2000	12 night	38.570	
	3 a.m.	38.550	P.D.L. 38.416 Mt
	6 a.m.	38.550	D.L. 39.416 Mt.
	9 a.m.	38.610	E.D.L. 40.416 Mt.
	12 noon	38.740	
	3 p.m.	38.790	
	6 p.m.	40.000	
21.9.2000	9 p.m.	40.670	Above E.D.L
	12 night	41.300	Do
	3 a.m.	41.850	Do
	6 a.m.	42.870	Do
	9 a.m.	42.300	Do
	12 noon	40.640	Do
	3 p.m.	40.440	Do
22.9.2000	6 p.m.	40.340	
	9 p.m.	40.220	
	12 night	40.120	
	3 a.m.	40.050	
	6 a.m.	39.930	
	9 a.m.	39.800	
	12 noon	39.510	
	3 p.m.	39.150	
	6 p.m.	39.000	
	9 p.m.	39.180	
	12 night	39.350	

**Tide levels of River Hooghly at Garden Reach (Calcutta) for the period
25.09.2000 to 30.09.2000 in G.T.S.**

Date	Day	Time (Hours : Minute)	Height of Water (Metres)
24.09.2000	Sunday	5 : 58	2.35
		10 : 33	5.34
		19 : 01	2.14
		23.06	5.24
25.09.2000	Monday	7:19	2.06
		11:31	5.75
		20:09	1.89
		23 : 57	5.68
26.09.2000	Tuesday	8:26	1.90
		12 :14	6.08
		21.08	1.80
27.09.2000	Wednesday	003F	6.03
		9:25	1.87
		12:49	6.29
		21:59	1.83
28.09.2000	Thursday	1 :14	6.27
		10:12	1.92
		13:52	6.38
		22:41	1.92
29.9.2000	Friday	1:49	6.40
		10:50	2.05
		13.52	6.34
		23:15	2.02
30.09.2000	Saturday	2:23	6.40
		11:21	2.10
		14.23	6.20
		23:43	2.12
01.10.2000	Sunday	2:55	6.28
		11:49	2.21
		14:53	5.96
02.10.2000	Monday	0:07	2.22
		3:23	6.05
		12:13	2.33
		15:23	5.66

**Rainfall statement for the period from 18.09.2000 to 25.09.2000 in different
Basins / Catchment of the rivers flowing in West Bengal**

(Rainfall in mm)

	Rainfall during preceding 24 hrs. recorded at 8.30 a.m.	18.9.2000	19.9.2000	20.9.2000	21.9.2000	22.9.2000	23.9.2000	24.9.2000	25.9.2000	Total
A	Catchment of Massanjore Dam									
	Maharo	178.00	448.40	172.80	281.40	32.20	106.40	5.44	0.00	1224.6
	Kushiary	189.60	221.40	211.60	450.60	87.80	6.40	0.00	0.80	1168.20
	Massanjore	392.40	171.20	159.00	246.40	8.80	11.00	45.60	3.80	1038.20
B	In Mayurakshi Command									
	Tantloi	411.20	398.80	175.60	495.40	16.20	110.60	8.00	5.40	1621.20
	Tilpara	163.00	553.00	94.20	100.40	16.80	14.20	0.00	3.00	944.60
	Suri	217.00	618.00	95.80	135.40	81.30	21.20	0.00	0.00	1168.70
	Rampurhat	247.00	488.60	403.70	237.80	3.00	7.60	12.70	27.40	1427.80
	Kultore	106.00	116.00	94.00	88.00	45.00	33.00	-	-	482.00
	Kanaisala	110.00	195.00	135.00	95.00	18.50	-	-	-	553.50
	Khayrasole	145.00	107.00	53.00	187.00	05.00	153.00	-	-	650.00
	Bharatpur	32.00	210.00	220.00	-	31.00	16.50	-	-	509.50
	Salar	57.00	393.00	330.00	58.00	31.00	77.00	-	-	946.00
	Kandi	30.00	332.00	-	-	-	-	-	-	362.00
	Shyambati	46.80	95.00	141.00	158.80	32.00	39.80	-	-	513.40
	Md. Bazar	95.00	352.50	110.00	109.50	20.00	8.70	-	1.50	697.20
	Debagram	75.00	177.00	180.00	155.00	05.00	42.00	-	-	634.00
	Nalhati	170.00	330.00	225.00	163.30	92.00	16.40	4.00	-	1000.70
	Deocha	99.50	240.00	155.10	123.20	18.80	29.10	-	-	664.70
	Kinnahar	47.00	267.00	136.00	123.20	18.80	29.10	-	-	450.00
	Kushkarni	189.60	221.40	211.60	450.60	15.20	110.60	-	6.80	1173.80
C	Ajoy Basin									
	Hinglow	65.00	50.00	25.00	116.00	5.00	67.00	-	3.00	331.00
	Khayrasol	145.00	107.00	53.00	187.00	5.00	153.00	45.00	100.00	795.00
	Gheropara	37.00	85.00	109.40	104.40	-	54.00	-	0.20	390.00
	Sikatia	340.60	13.40	66.40	569.20	21.80	22.80	-	6.40	1040.60
	Jamtara	-	-	-	582.60	-	55.80	-	-	638.40
D	Damodar Basin System									
	Maithon	182.20	6.00	29.00	355.20	-	-	0.60	7.40	580.40
	Panchet	53.00	7.20	16.40	299.20	-	-	1.00	-	376.80
	Durgapur	38.90	31.40	18.80	40.20	4.90	-	5.00	-	139.20
	Tnughat	15.40	3.00	4.80	36.60	-	-	-	1.00	60.80
E	Ganga Basin System									
	Berhampore	140.00	558.80	471.20	92.50	-	-	-	-	1262.50

3 hours gauge level discharges of Canada Dam at Massanjore (From 17.09.2000 to 22.09.2000)

Date	Time	Reservair level in P.W.D. ft	Discharge	Remarks
17.09.2000	8 a.m.	378.00	Nil	
	9 a.m.	378.00	Nil	
	12 noon	378.05	Nil	
	3 p.m.	378.30	Nil	
	6 p.m.	378.55	Nil	
	9 p.m.	379.05	1,489	Irrigation purpose
	12 night	379.40	Nil	
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18.9.2000	3 a.m.	381.40	Nil	
	6 a.m.	382.50	Nil	
	9 a.m.	383.70	Nil	
	12 noon.	385.10	Nil	
	3 p.m.	388.75	5,085	
	6 p.m.	393.20	42,690	
	9 p.m.	395.50	79,860	
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19.9.2000	3 a.m.	396.70	1,12,303	
	6 a.m.	396.20	1,06,496	
	9 a.m.	395.45	97,397	
	12 noon	395.40	1,01,928	
	3 p.m.	396.00	1,16,070	
	6 p.m.	396.60	1,23,474	
	9 p.m.	396.80	1,26,015	
<hr/>				
20.9.2000	3 a.m.	397.00	1,28,550	
	6 a.m.	396.85	1,26,649	
	9 a.m.	396.60	1,23,474	
	12 noon	396.25	1,19,221.50	
	3 p.m.	395.70	1,12,350	
	6 p.m.	395.05	1,04,813	
	9 p.m.	395.40	1,08,963	
<hr/>				
21.9.2000	3 a.m.	397.25	1,32,395	
	6 a.m.	398.20	1,46,550	
	9 a.m.	400.30		
	12 noon	401.95		
	3 p.m.	402.60	2,29,302	
	6 p.m.	402.05		
	9 p.m.	400.70		
<hr/>				
22.09.2000	12 night	399.05	1,58,513	
	<hr/>			
	3 a.m.	397.50	1,36,575	
	6 a.m.	396.10	1,04,790	
	9 a.m.	395.25	76,670	
	12 noon	394.90	47,410	
	3 p.m.	395.20	70,368	
<hr/>				
	6 p.m.	394.80	76,500	
	9 p.m.	394.35	71,928	
	12 night	393.80	66,528	

3 Hours gauge level discharge at Tilpara Barrage
(From 17.09.2000 to 22.09.2000)

Date	Time	Barrage Pond Level (F.T)	Discharge down Barrage (Cusecs)	Remarks.
17.09.2000	3 a.m.	204.40	Nil	
	6 a.m.	204.30	Nil	
	9 a.m.	204.20	Nil	
	12 noon	204.00	Nil	
	3 p.m.	203.90	Nil	
	6 p.m.	203.90	Nil	
	9 p.m.	204.00	Nil	
	12 night	204.10	Nil	
18.9.2000	3 a.m.	203.80	4060	<i>44 gates made Fully open to allow free flow since 8.00 a.m. on and from 18.09.2000</i>
	6 a.m.	205.50	43550	
	9 a.m.	205.00	79304	
	12 noon.	202.00	75,970	
	3 p.m.	202.00	78834	
	6 p.m.	201.80	93299	
	9 p.m.	201.50	89135	
	12 night	202.80	1,07,638	
19.9.2000	3 a.m.	204.00	1,25,727	
	6 a.m.	204.30	1,30,385	
	9 a.m.	204.40	1,31,951	
	12 noon	204.40	1,31,951	
	3 p.m.	204.10	1,27,267	
	6 p.m.	204.40	1,31,951	
	9 p.m.	205.10	1,43,102	
	12 night	205.50	1,49,617	
20.9.2000	3 a.m.	205.70	1,52,925	
	6 a.m.	205.50	1,49,617	
	9 a.m.	205.20	1,44,641	
	12 noon	204.70	1,36,691	
	3 p.m.	204.50	1,33,531	
	6 p.m.	204.10	1,27,267	
	9 p.m.	204.50	1,33,531	
	12 night	206.30	1,62,940	
21.9.2000	3 a.m.	207.60	1,85,380	
	6 a.m.	209.00	2,10,613	<i>Maximum discharge passed at 1.30 p.m.</i>
	9 a.m.	210.70	2,42,659	
	12 noon	211.40	2,56,297	
	3 p.m.	211.10	2,51,581	
	6 p.m.	210.10	2,31,179	
	9 p.m.	208.60	2,03,298	
	12 night	207.60	1,85,380	
22.09.2000	3 a.m.	206.50	1,66,335	
	6 a.m.	205.40	1,47,990	
	9 a.m.	204.00	1,25,718	
	12 noon	202.10	93,365	
	3 p.m.	200.20	71,886	
	6 p.m.	200.00	69,350	
	9 p.m.	201.20	85,055	
	12 night	201.80	93,330	

**1. Down discharge data of Brahamani Barrage on River Brahamani
(From 17.09.2000 to 18.09.2000)**

Date	Time	Barrage Pond level (F _T)	Discharge down Barrage (Cusecs)
17.09.2000	22.00 hrs	136.00	6,714
	22-30 hrs.	136.00	10,071
	22.45 hrs	136.00	24,904
	23.30 hrs.	136.00	36,094
18.09.2000	00.00 hrs.	136.00	38,094
	00.15 hrs	139.00	46,598
	01.00 hrs.	140.00	53,590
	08.00 hrs.	139.00	46,598
	12-30 hrs.	—	46,390
	16.00 hrs.	141.00	69,000
	22.00 hrs.	144.50	80,000

**2. Down discharge data of Dwaraka Barrage on River Dwaraka
(From 17.09.2000 to 18.09.2000)**

Date	Time	Barrage Pond level (F _T)	Discharge down Barrage (Cusecs)
17.09.2000	21.45 hrs.	—	10,680
	22.00 hrs.	175.67	10,630
	22.45 hrs.	175.20	14,308
	23.30 hrs.	175.10	18,474
18.09.2000	08.00 hrs.	175.00	26,679
	12-30 hrs.	—	10,000

INFLOW & OUTFLOW DATA OF D.V.C. SYSTEM

(From 20.09.2000 to 24.09.2000)

**Table of district-wise area affected in the year 2000
due to flood against the actual territorial areas**

Annexure – XII

Sheet - 1

Sl. No.	Name of District	Territorial areas (in sq. km)	Inundated areas due to breaches, washout and over topping of embkts in sq. km (approx)	Remarks
1.	Malda	3733	43	Inundated area in North Bengal District :
2.	Murshidabad	5324	4525	1. Jalpaiguri – 673.00 sq. km. Between 30.06.2000 to 14.08.2000
3.	Nadia	3927	3731	2. Coochbehar 14.00 sq. km. On 22.04.2000 and 15.10.2000
4.	Birbhum	4545	3182	Total 687.00 sq.km. (approx)
5.	Burdwan	7024	2458	
6.	24 Parganas (North)	4094	2016	
7.	Howrah	1467	293	
8.	Hooghly	3149	912	
9.	Midnapore	14081	25	
	TOTAL	47,344 sq. km.	17,185 sq. km.	

**Government of West Bengal
Irrigation & Waterways Department
Jalasampad Bhawan, Salt Lake City,
Calcutta – 700 091**

**Statement of Damages to Embankments / Sluices in different districts of West Bengal
During the flood of June to August 2000**

i) **NORTH BENGAL DISTRICTS**

SL. No.	District	River	Police Station / Block	Nature & Extent of Damages				Inundated area in sq km.
				Breach No / (KM)	Severely / Partially Damaged (KM)	Damages to Protective Works (KM)	Sluices (No.)	
1	2	3	4	5	6	7	8	9
1.	JALPAIGURI	Pana, Torsa, Raidhak_I & II, Kaljani, Rehti Sukreti, Pagli, Diana, Howri, Bania, Titipangri, Mujnai, Tur-Turi, Gadadhar, Jayanti, Sankosh, Sil- Torsa, Dolong, Jaldhaka, Char-Torsa, Mahanadi, Sahu, Jorapani, Teesta, Karala, Panga, Mal, Cheel, Dhrala, Murti . Jorai, Balaghora, Gholani, Gharshi, Garam, Kuchi-diana, Saptana, Gaburbasra, Gilandi, Dudua	Kalchini, Jaigaon, Madarihat, Kumargram, Banarhat, Birpara, Aliporeduar, Falakata, Jaigaon, Nagrakata, Dhupguri, Bhaktinagar, Raiganj, Jalpaiguri, Mal, Neora, Gheesa, Chal, Mng.	24 Nos. / 9.634 Km (washed out) / 9.76 Km (breached)	60 Nos. / 55.53 km.	9.37 km 91.00 km (Slips) Spur = 13 Nos. damaged & Spur = 1 No. Completely washed away. 59 Nos. Studs of spurs washed away.	-	673.14 sq. km.

Annexure XIII
Sheet ²/₈

SL. No.	District	River	Police Station / Block	Nature & Extent of Damages				Inundated area in sq km.
				Breach No / (KM)	Severely / Partially Damaged (KM)	Damages to Protective Works (KM)	Sluices (No.)	
1	2	3	4	5	6	7	8	9
2.	DARJEELING	Rohini, Balasor, Mahananda, Mechie, Bataria, Mahesnari, Dumuria, Manjha, Boon, Chenga, Bur- Balason, Taipu, Champta, Panchanoi, Dudlong.	Matigora, Naxalbari, Siliguri, Kharibari, Phansidewa,	-	11.581 km (Partially damaged)	28 Nos.	-	-
3.	COOCH- BEHAR	Teesta, Kaljani, Torsa, Jaldhaka, Mansai, Dharala, Raidhak- I & II, Sil- Torsa, Mujnai, Stunga, Gadadhar, Ghargoaria, Mora- Torsa, Banti.	Mechliganj, Haldibari, Tufanganj, Dinhata, MTB, Ghokasadanga, SLK, STI.	0.288 Km (Washed out)	10.95 km/ 22.24 km	-	-	14.059 sq. km.

**Statement of Damages to Embankments / Sluices in different districts of West Bengal
During the flood of September 2000**

2nd Phase

ii) SOUTH BENGAL DISTRICTS

SL. No.	District	River	Police Station / Block	Nature & Extent of Damages				Inundated area in sq km.
				Breach No / KM	Severely / Partially Damaged (KM)	Damages to Protective Works (KM)	Sluices (No.)	
1	2	3	4	5	6	7	8	9
1	MURSHIDABAD	Mayuraskhi	Burdwan	5.00	11.50	1.50	-	4525km ²
		Kuye	Burdwan, Bharatpur	9.00	10.00	-	-	
		Bele	Burdwan, Bharatpur, Kandi	10.00	21.00	0.50	-	
		Chuatore	Kandi, Bharatpur	3.00	4.00	0.50	3	
		Kana-Mayurakshi	Kandi	6.00	13.00	-	3	
		Dwaraka	Khargram, Kandi, Berhampore	7.00	20.00	1.00	1	
		Bramhani	Khargram, Nabagram	4.00	7.00	1.00	-	
		Bhagirathi-Ganga	Lalgola, Bhagabangola, Murshidabad-Juganj, Berhampore, Beledanga	12.00	51.00	7.00	10	
		Babla	Beledanga-II	5.00	8.00	-	1	
		Bhairab	Doknal, Bhagawangola, Berhampur	1.00	7.00	3.00	-	
		Jallangi	Domkal	1.00	-	-	-	
		G.N.Cut	Bhagawangola-I, Murshidabad-Ja-laganj Block	-	5.00	-	-	
		Padma	Farakka, Samsanganj, Suit, Lalgola, Bhagawangola, Raminagar, Jalangi	-	6.00	-	-	
		Total		63.00 KM	163.50 KM	14.50 KM	18 Nos.	4525km ²
2	NADIA	Bhagirathi / Hooghly	Kaliganj, Sanitpur, Krishnagar, Nabadwip, Katwa, Nakashipara, Chakdah	40 No.	20.00	10.00	9	3731km ²
		Jalangi	Dhubulia, Krishnanagar, Tehatta, Nabadwip, Karimpur, Chipra	4 Nos.	4.00	7.00	5	
		Padma	Karimpur	-	-	2.00	-	
		Churni	Hanskhali	-	-	2.00	4	
Total				44 Nos.	24.00 KM	21.00 KM	18 Nos.	3731km ²

**Statement of Damages to Embankments / Sluices in different districts of West Bengal
During the flood of June to August 2000**

SL. No.	District	River	Police Station / Block	Nature & Extent of Damages				Inundated area in sq km.
				Breach No / KM	Severely / Partially Damaged (KM)	Damages to Protective Works (KM)	Sluices (No.)	
1	2	3	4	5	6	7	8	9
3	HOOGHLY	Hooghly	Balagarh, Mogra to Uttarpara	-	2.90	0.50	-	
		I.K.S.K.S.System	Polba, Dadpur, Pandua, Memari	-	10.50	0.40	10	
		Damodar	Pursurah, Jamalpur, (Burdwan) Jangipara	-	0.50	0.20	3	
		Mundeswari	Khanakul, Pursurah	-	-	0.30	1	
		Darakeswar	Khanakul, Arambang, Goghat, Goghat (Midnapore)	-	9.30	0.90	-	
		Gheea	Polba, Singur, Dadpur, Haripal	30 KM	6.40	-	2	
		Cut-Kunti	Singur, Srirampur	-	1.15	-	2	912km ²
		Kana	Singur, Dadpur, Haripal	0.40	5.00	-	4	
		Lower Kedarmoti	Polba	-	0.75	-	1	
		Dakatia Khal, Madari Khal, Rajapur Khal, Baidyabati Khal, Dankuni Khal	Jangipara, Haripal, Chanditala, Scrampur, Dankuni	0.30	10.20	0.70	24	
		Damodar	Tarakeswar, Singur, Champadanga	90 Nos./10.00	40.00	-	10	
			Total	90 Nos. /11.00 KM	86.70 KM	3.00 KM	57 Nos.	912km ²
4	HOWRAH	Hooghly	Uluberia, Shyampur, Bowria, Sankrail	-	2.60	0.80	8	
		Damodar	Uluberia	-	0.45	-	-	
		Rupnarayan	Bagnan, Shyampur	-	1.20	0.25	-	
		Hurhurah Khal, Rampur	Khanakul-I, Udayanarayan, Bagnan	1 No.	2.43	0.015	-	

Annexure XIII
Sheet 5/8

SL. No.	District	River	Police Station / Block	Nature & Extent of Damages				Inundated area in sq km.
				Breach No / KM	Severely / Partially Damaged (KM)	Damages to Protective Works (KM)	Sluices (No.)	
1	2	3	4	5	6	7	8	9
4	HOWRAH	Damodar & Madaria Khal	Amta	-	2.50	0.015	4	
		Kana Damodar	Jagatballavpur, Panchla	-	1.70	-	-	
		Howrah Drg. Channel & Rajpur Drg. Channel	Sankrail, Domjur, Panchla	-	0.50 0.70	-	-	293km ²
		Lower Rupnarayan	Joypur	-	1.70 0.20	-	-	
		Purana Khal	Uluberia	-	-	-	-	
		Amta Channel, Koria Bikrampur Khal	Bagnan	-	0.40	-	-	
			Total	1 No.	11.78 KM	1.018 KM	12 Nos.	293km ²

Annexure XIII
Sheet 6/8

SL. No.	District	River	Police Station / Block	Nature & Extent of Damages				Inundated area in sq km.
1	2	3	4	5	6	7	8	9
5	BURDWAN	Ajoy	Kanksa, Ausgram-II, Mongalkot, Ketugram, Katwa	40 Nos./12.5	82.5	-	10	2458km ²
		Bhagirathi	Katwa, Purbasthali, Kalna	300 Nos./ 5.00	40.00	-	15	
		Damodar	Galsi, Burdwan, Memari, Jamalpur, Khandoghosh, Raina	290/7.0	47.00	90.00	260	
			Total	630 nos / 24.5 KM	169.50 KM	90.00 KM	285 Nos.	2458km ²
6	BIRBHUM	Mayurakshi	Suri, Mayreswar, Laabhpur	9 Nos./2.65	22 Nos/ 13.16	7.5	59	3182km ²
		Kushkarni	Suri	2 Nos/0.5	3 Nos./ 0.75	-	-	
		Dwaraka	Rampurhat	4 Nos./0.8	5 Nos./1.25	2.0	1	
		Ajoy	Bolpur, Nannur	7Nos/1.58	9 Nos./5.45	-	-	
		Bramhani	Nalhati, Rampurhat	1 No/2.2	2 Nos/0.8	2.1	5	
		Bansloi	Murrai	2 Nos/1.5	2.2	1.2	-	
			Total	25 Nos./9.23 KM	41 Nos./23.61 KM	12.80	65 Nos.	3182km ²

Annexure XIII
Sheet 7/8

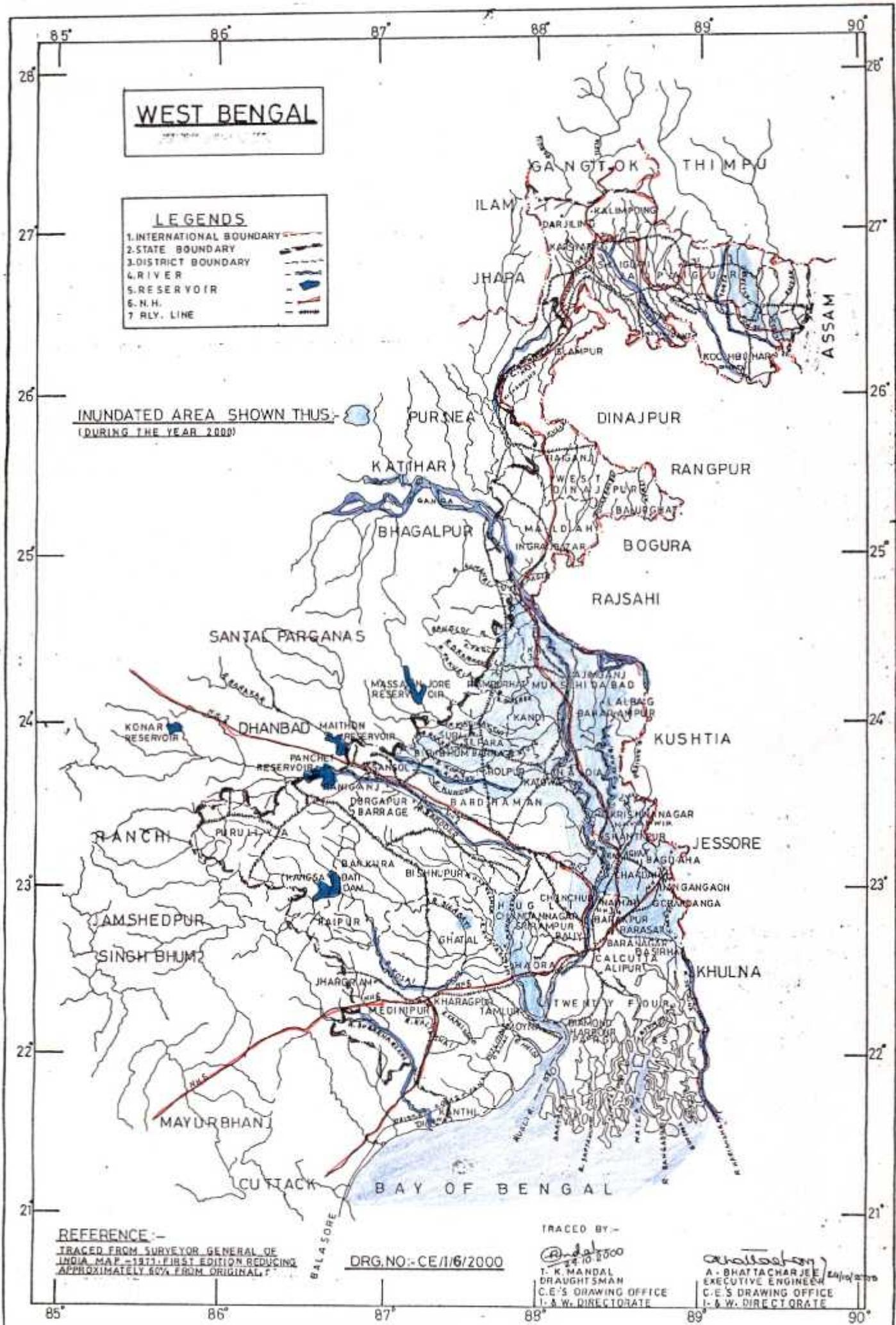
SL. No.	District	River	Police Station / Block	Nature & Extent of Damages				Inundated area in sq km.
1	2	3	4	5	6	7	8	9
7	NORTH-24 PARGANAS	Ichamati	Baduria	2.00	4.8	.05	10	
		Ichamati	Basirhat-I	-	8.35	.05	2	
		Bidyadhar	Basirhat - II	-	0.255	-	-	
		Ichamati, Kalindi, Sahebkhali, Roymangal, Sakunkhali Khal , Gomati Dansa, Goureswar,	Hingalganj	-	11.985	0.60	2	
		Ichamati, Amlani Khal, Dansa, Katakhal, Sahebkhali, Goureswar Raimangal	Hasnabad	-	4.85	0.35	7	2016km ²
		Kumirmari, Bidyadhar, Sukdev Khal, Ghatihara, Benti, Dansa, Raimongla, Chotokalagachi.	Sandeshkhali – I	-	6.55	0.60	3	
		Rampur, Cghotokalagachi, Pipra Khalikhal, Roymongal, Borakala- Gachi, Bali, Kalagachi, Dansa, Banibatia, Tushkhali, Sahebkhali	Sandeshkhali – II	-	11.57	0.50	1	
		Haroaganj, Kultigang	Haroa	-	2.225	.05	1	
		Biddyadhar, Buri, Metiakhali	Minakhan	-	1.23	.05	-	
			Total	2.00	51.82	2.25	26	2016km ²
						2.1	5	
8	MALDA	Ganga (Left Bank)	Kaliachak I & II	-	12.00	-	-	43km ²
			Total	-	12.00	-	-	43km ²

Annexure XIII
Sheet ⁸/₈

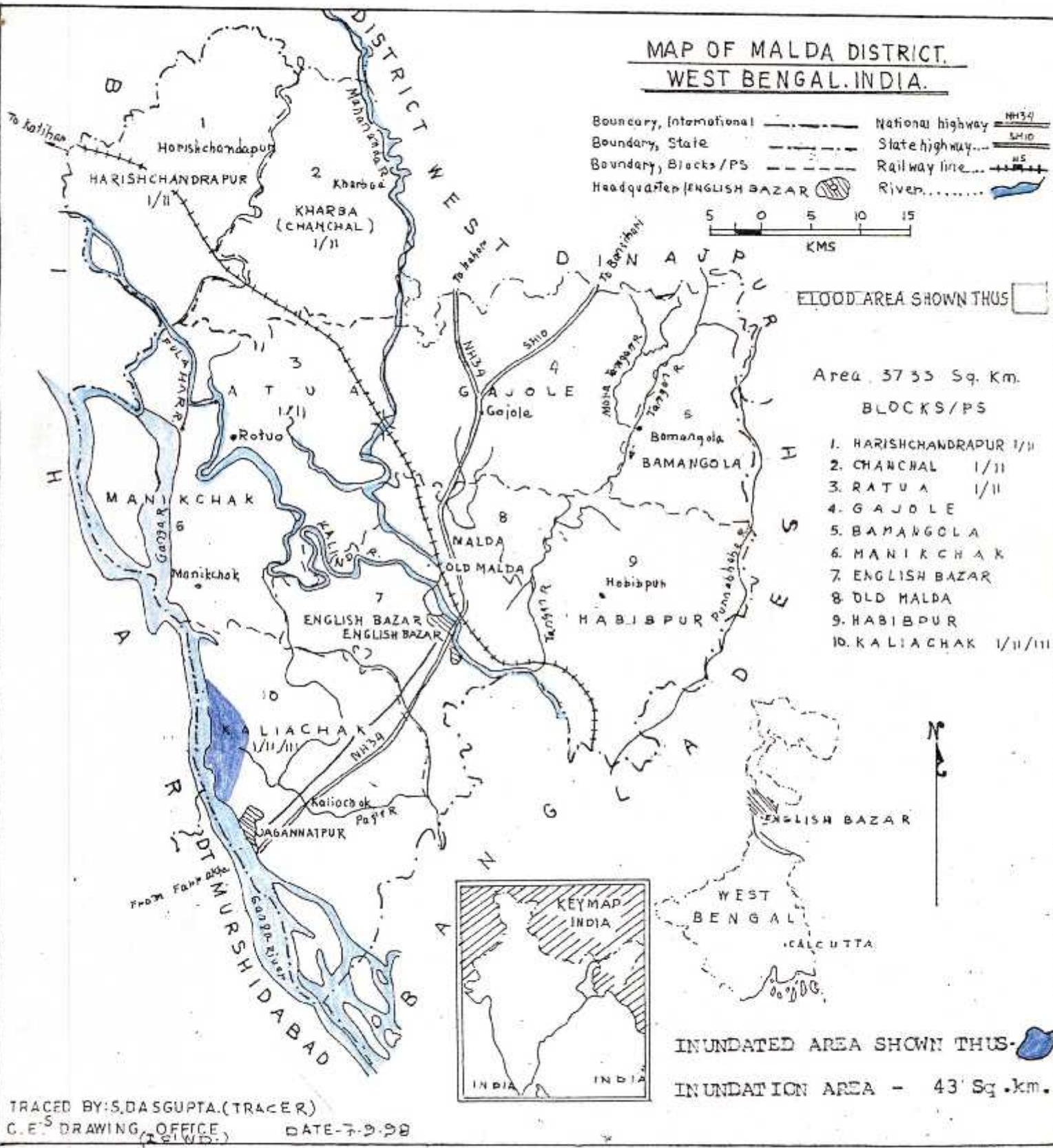
SL. No.	District	River	Police Station / Block	Nature & Extent of Damages				Inundated area in sq km.
				Breach No / KM	Severely / Partially Damaged (KM)	Damages to Protective Works (KM)	Sluices (No.)	
1	2	3	4	5	6	7	8	9
9	MIDNAPORE	Silabati	Daspur & Ghatal	-	14.50	0.5	-	
		Kaliaghaye	Sabong, Pataspur & Pingla	-	10.00	-	-	
		Rupnarayan	Daspur	-	31.00	0.6	-	
		Rupnarayan & Bhasiksora Khal	Tamluk & Mahishadal	-	12.60	0.5	-	
		New Cossye	Debra & Panskura	-	0.20	-	-	
		Haldi	Sutahata	-	-	0.10	-	
		Bhosra & Durbachatti	Panskura & Kolaghat	-	12.00	-	-	
		Hooghly	Mahisadal	-	-	0.10	-	
		Chandia	Moyna	-	0.30	-	-	
			Total	-	70.06	1.08	-	25km ²

**Statement showing probable cost of restoration of flood damage
(September 2000) and available fund in respect of I & W.Deptt.
(Rs. In Crores)**

District	Initial proposal	Final proposal	Amount available from Allocation for Restoration	Grants-in-Aid
1	2	3	4	5
Murshidabad	56.00	66.00	22.00	14.16
Nadia	36.00	37.49	13.40	9.39
Midnapur	6.00	5.03	2.20	21.51
Birbhum	26.50	33.50	9.90	8.10
Burdwan	37.75	25.63	14.00	11.10
Howrah	8.25	8.40	3.00	5.69
Hooghly	8.75	8.69	3.30	8.22
24-Parganas (N)	6.00	6.84	2.20	8.82
Maldah	5.00	5.01	5.00	8.89



**MAP OF MALDA DISTRICT,
WEST BENGAL, INDIA.**



MAP OF MURSHIDABAD DISTRICT

WEST BENGAL, INDIA

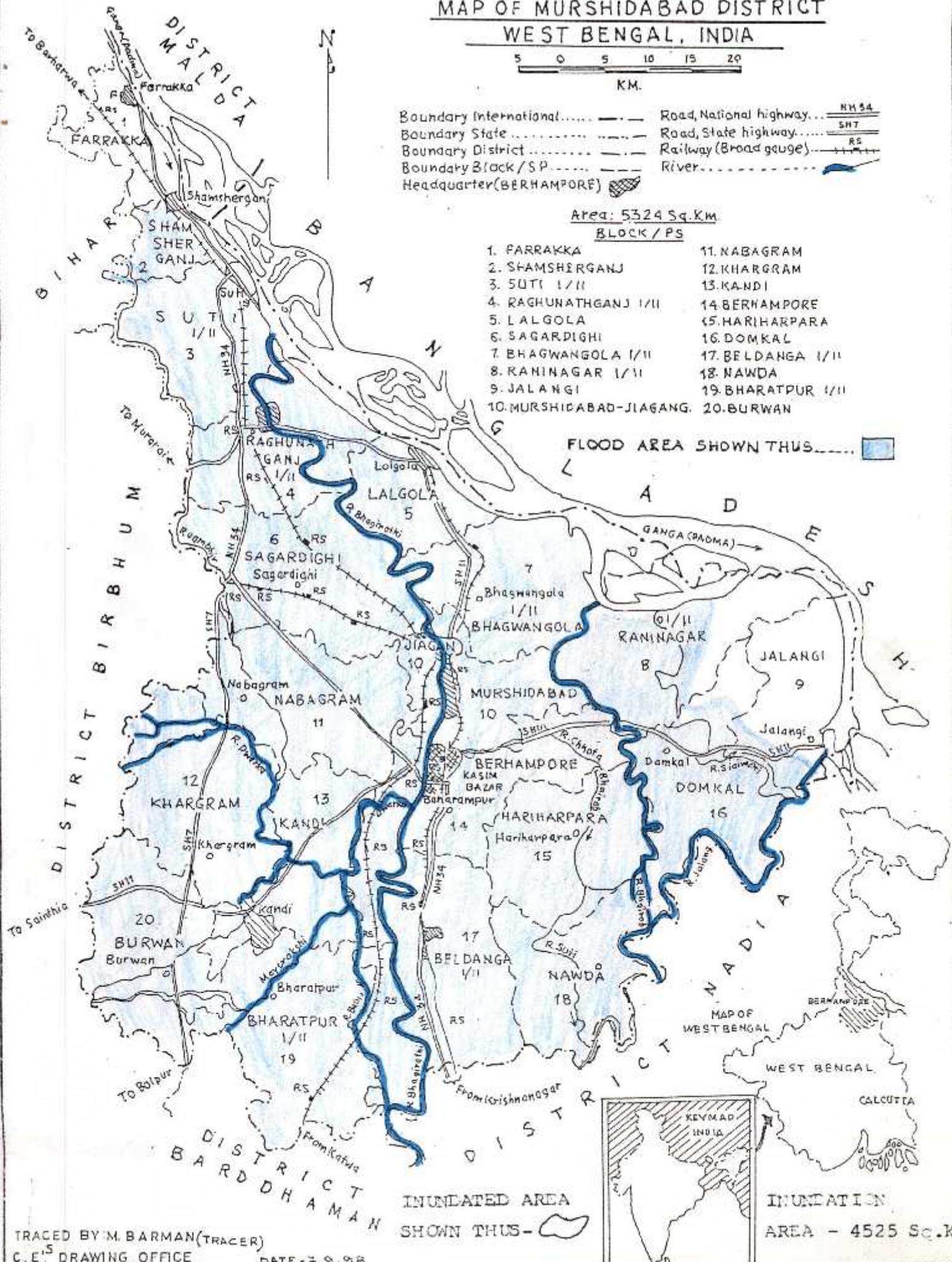
5 0 5 10 15 20 KM.

Boundary International..... — Road, National highway... NH 54
 Boundary State — Road, State highway... SH 7
 Boundary District — Railway (Broad gauge)... RS
 Boundary Block/SP — River.....
 Headquarter(BERHAMPORE)

Area: 5324 Sq.KM
BLOCK / PS

- | | |
|--------------------------|--------------------|
| 1. FARRAKKA | 11. NABAGRAM |
| 2. SHAMSHERGANJ | 12. KHARGRAM |
| 3. SUTI I/II | 13. KANDI |
| 4. RAGHUNATHGANJ I/II | 14. BERHAMPORE |
| 5. LALGOLA | 15. HARIHARPARA |
| 6. SAGARDIGHI | 16. DOMKAL |
| 7. BHAGWANGOLA I/II | 17. BELDANGA I/II |
| 8. RANINAGAR I/II | 18. NAWDA |
| 9. JALANGI | 19. BHARATPUR I/II |
| 10. MURSHIDABAD-JIAGANG. | 20. BURWAN |

FLOOD AREA SHOWN THUS.....



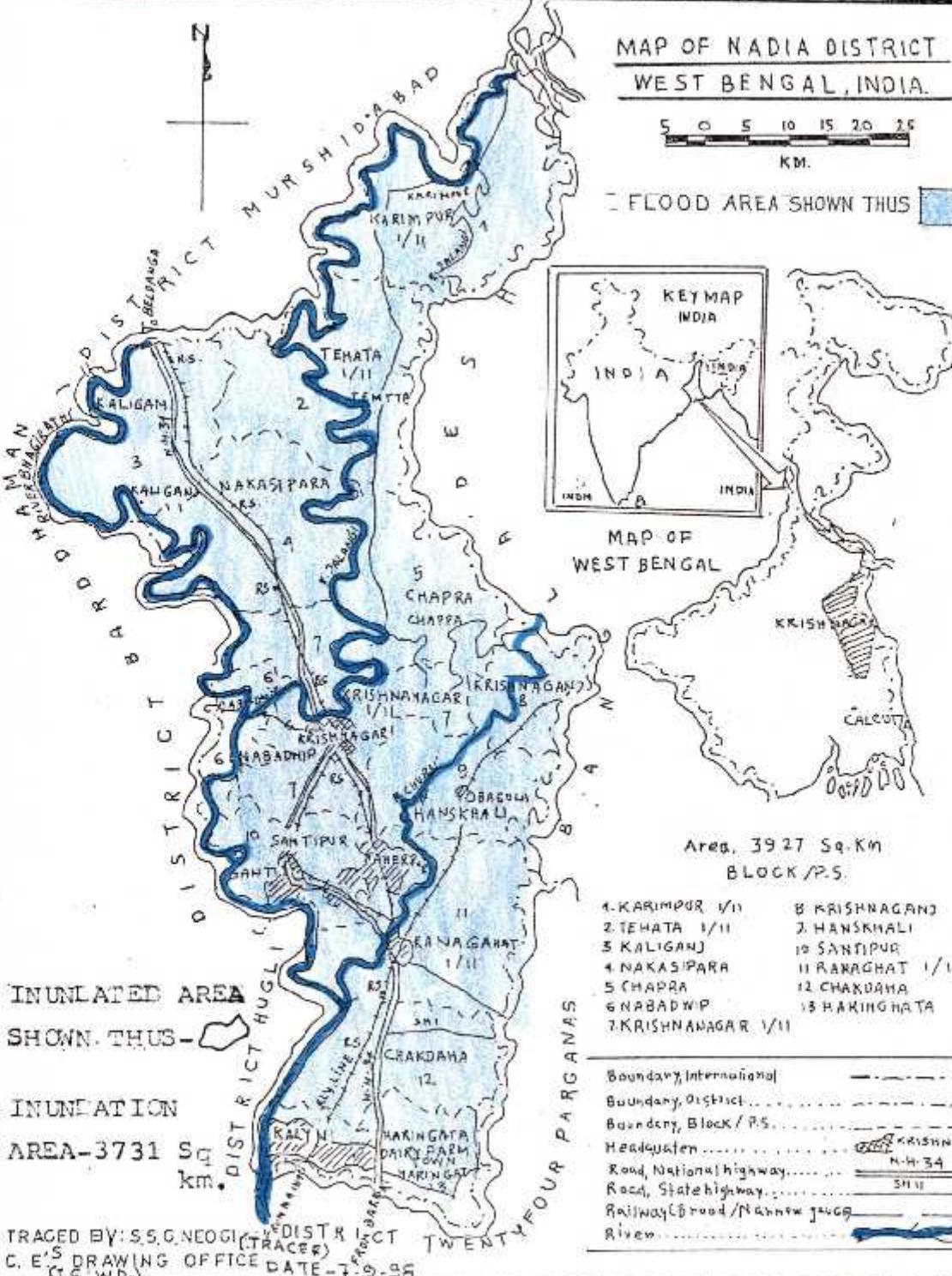
MAP OF NADIA DISTRICT
WEST BENGAL, INDIA.

5 0 5 10 15 20 25
KM.

FLOOD AREA SHOWN THUS 

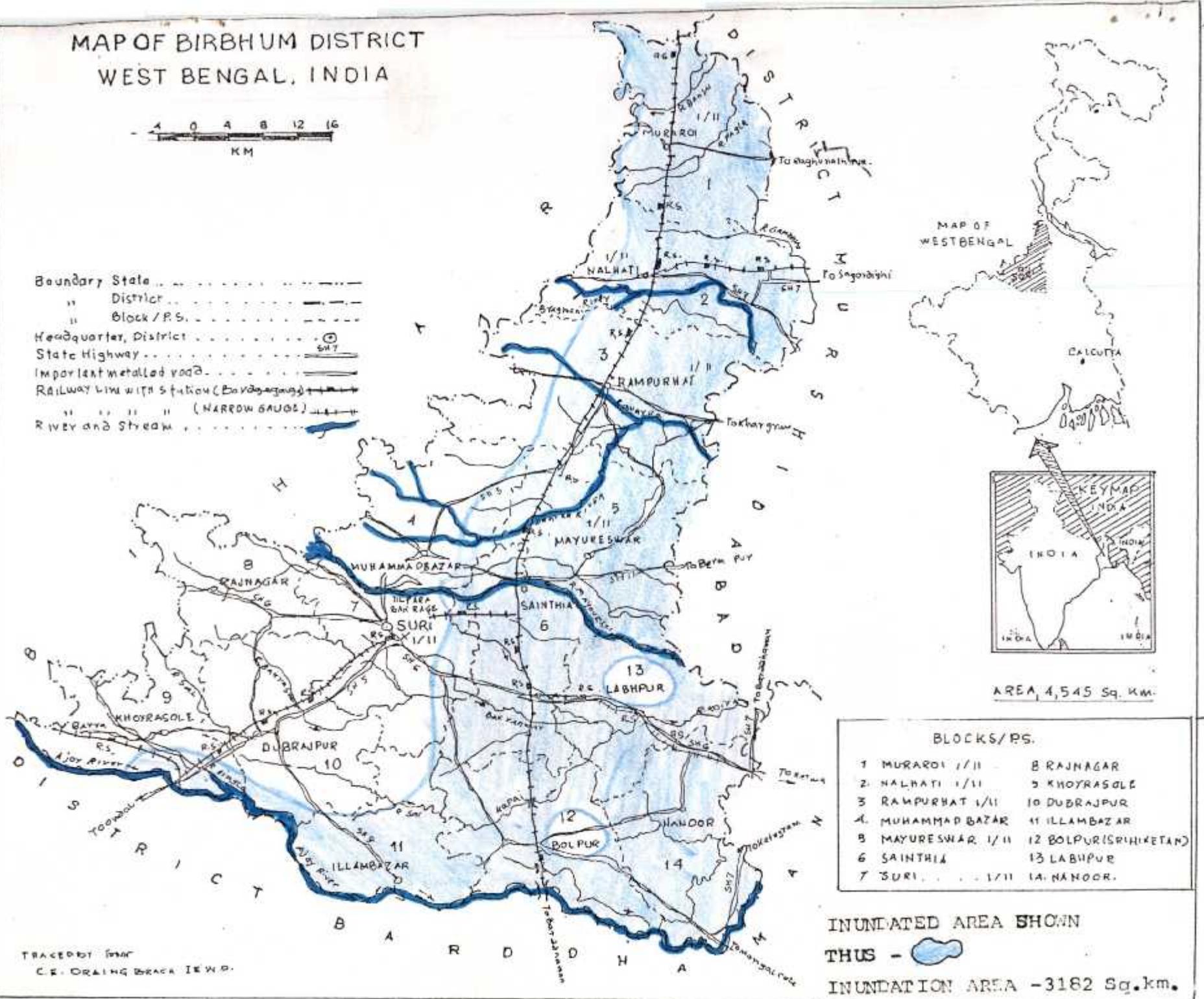


MAP OF
WEST BENGAL



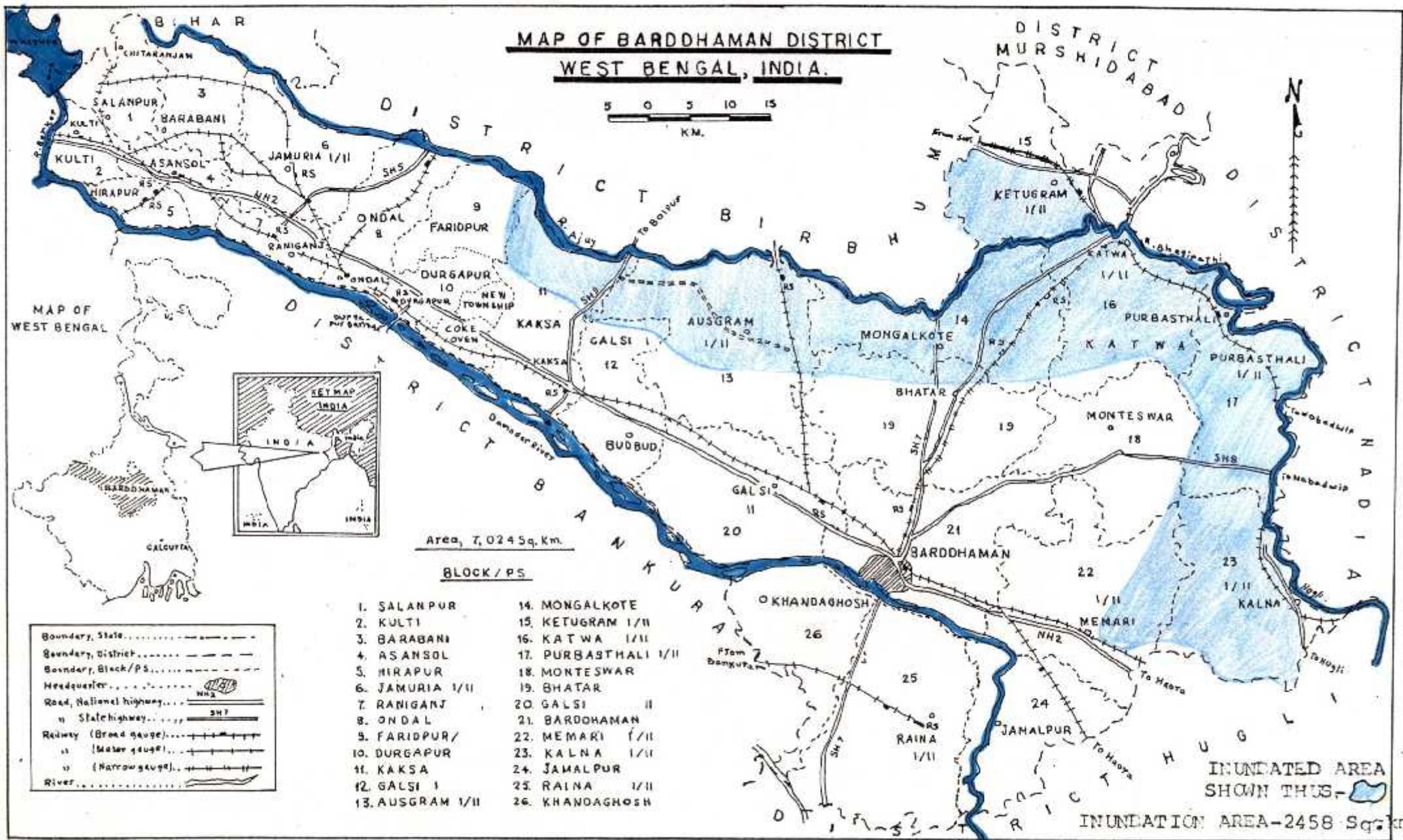
MAP OF BIRBHUM DISTRICT
WEST BENGAL, INDIA

Boundary State
 " District
 " Block / P.S.
 Headquarters, District
 State Highway
 Important metallized roads
 Railway line with station (Broad gauge)
 " " " " (NARROW GAUGE)
 River and stream



**MAP OF BARDDHAMAN DISTRICT
WEST BENGAL, INDIA.**

5 0 5 10 15
KM.



**MAP OF
TWENTYFOUR PARGANAS & CALCUTTA DISTRICT**

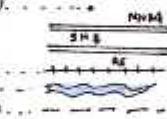
AREA, 14,156 Sq.Km.
(NORTH & SOUTH)

5 0 5 10 15 20

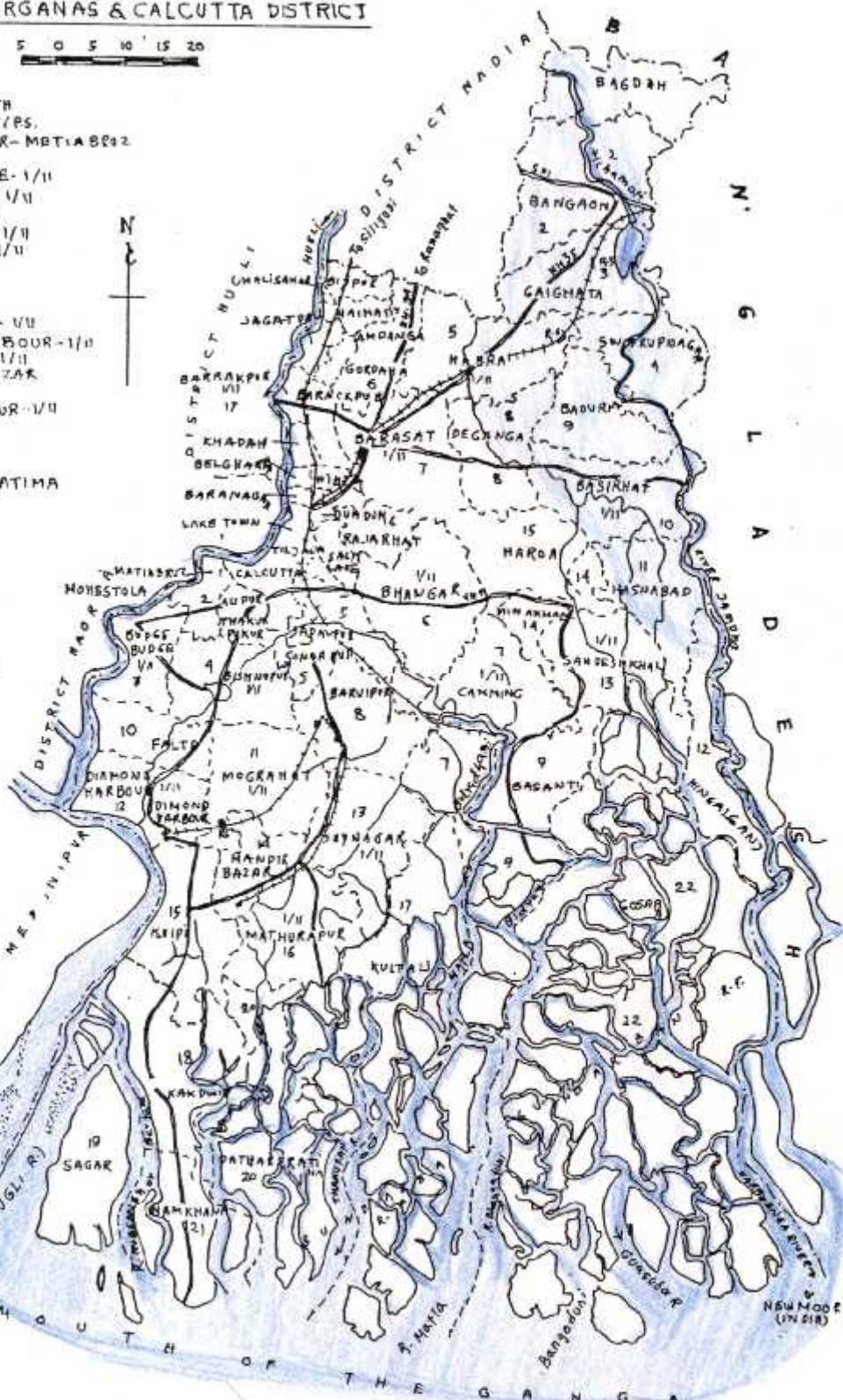
NORTH
BLOCK/P.S.
1. BAGDAD
2. BORGAON
3. CAIGHATA
4. SHAFUPURGARH
5. HABRA - I/II
6. AMDAKHA
7. BARASAT - I/II
8. DEORANGA
9. RA PURIA
10. BASIRHAT - I/II
11. HASNA BAZAR
12. HINGALGANJ
13. SANDESHKHALLI - VII
14. MIKAKHAN
15. HAROA
16. RAJARHAT
17. BARACKPUR - I/II

SOUTH
BLOCK/P.S.
1. THAKURPUKUR - METIA BAZAR
2. MOHESTOLA
3. BUDGE BUDGE - I/II
4. BISHNUPUR - VII
5. SONARPUR
6. BHANGAR - I/II
7. CANNING - I/II
8. BARUIPUR
9. BASANTI
10. FALTA
11. MAGRAHAT - VII
12. DIAMOND HARBOUR - I/II
13. JAYNAGAR - I/II
14. MANIPUR BAZAR
15. KUUPI
16. MATHURAPUR - I/II
17. KULTALI
18. KAKDIPUR
19. SAGAR
20. PATHARPRTIMA
21. NAMKHANA
22. GOSABA

Boundary, International.....
Boundary, District.....
Boundary Block / P.S.....
Headquarters, Basirhat (North).....
Headquarters, Nitiraj (South).....
Road, National highway.....
Road, State highway.....
Railway.....
River.....
Boundary, North and South.....



MAP OF
WEST BENGAL



INUNDATED AREA SHOWN
THUS -

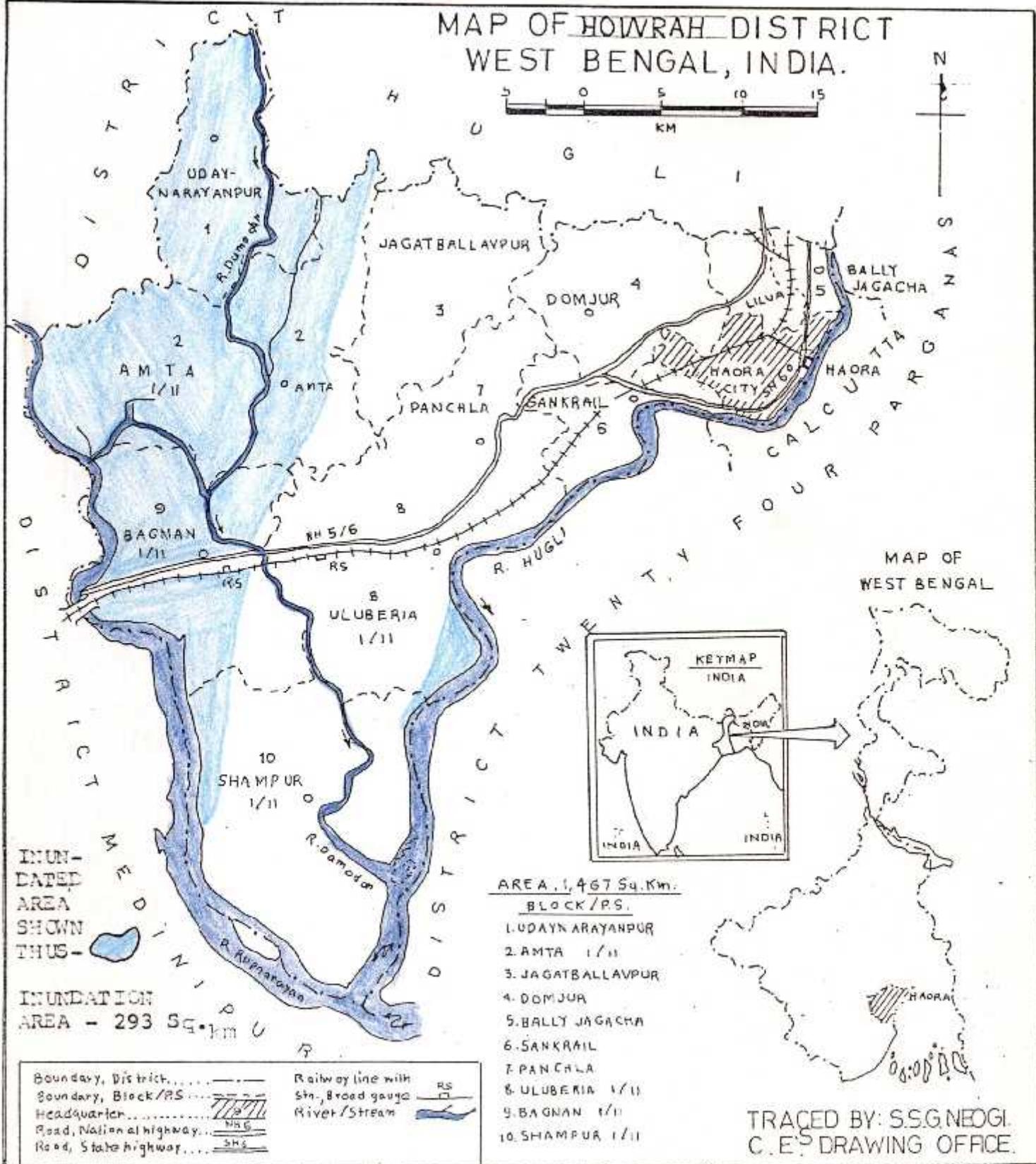
B A Y O F B E N G A L

INUNDRATION AREA - 2016 Sq.Km.

**MAP OF HOWRAH DISTRICT
WEST BENGAL, INDIA.**

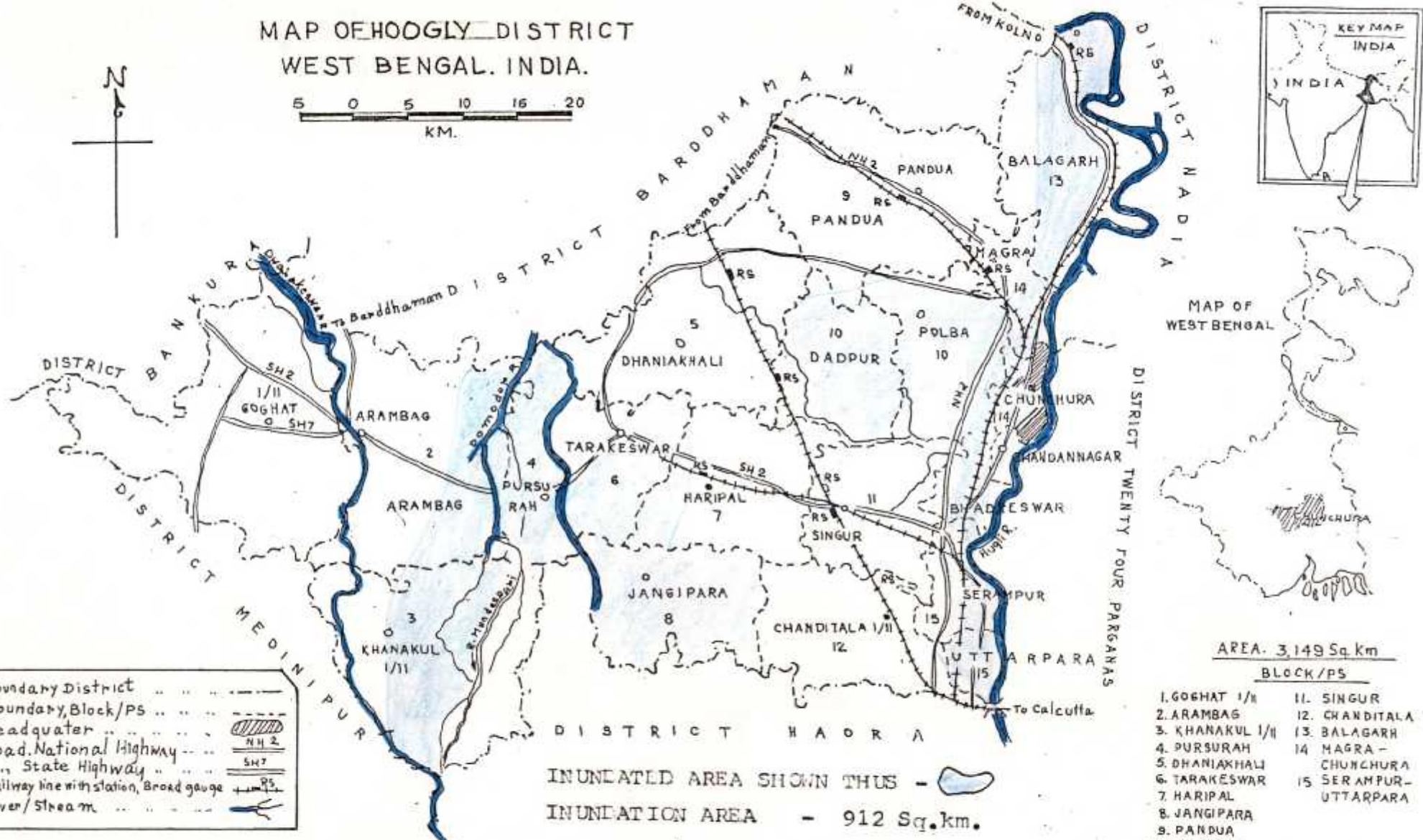
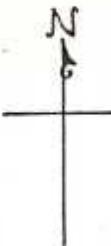


0 5 10 15 KM



MAP OF HOOGHLY DISTRICT
WEST BENGAL, INDIA.

5 0 5 10 15 20
KM.



MAP OF
WEST BENGAL

AREA: 3,149 Sq.Km

BLOCK/PS

- | | |
|-----------------------|-----------------------------|
| 1. GOGHAT 1/II | 11. SINGUR |
| 2. ARAMBAG | 12. CHANDITALA 1/II |
| 3. KHANAKUL 1/II | 13. BALAGARH |
| 4. PURURAH | 14. MAGRA -
CHUNCHURA |
| 5. DHANIAKHALI | 15. SERAMPUR -
UTTARPARA |
| 6. TARAKESWAR | |
| 7. HARIPAL | |
| 8. JANGIPARA | |
| 9. PANDUA | |
| 10. DADPUR -
POLBA | |

