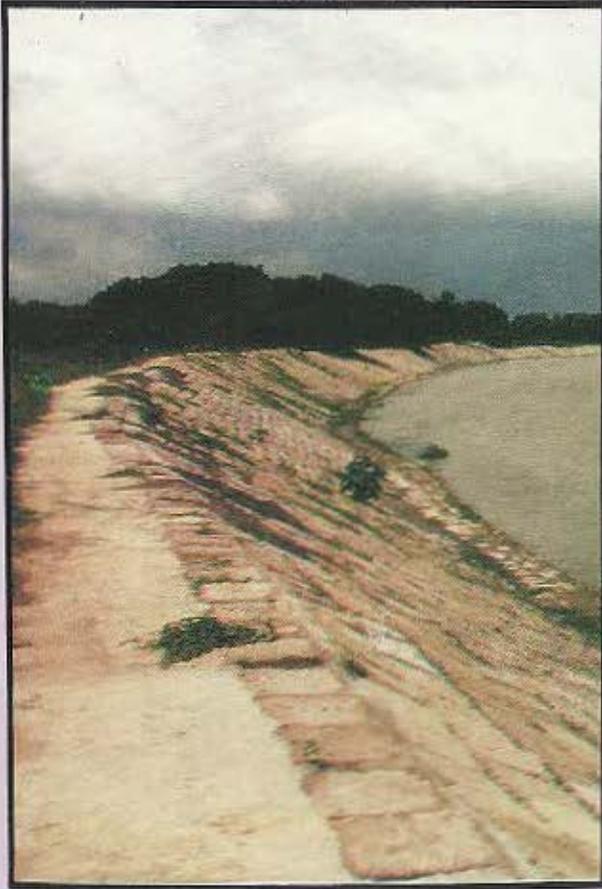




सत्यमेव जयते

भारत सरकार
जल संसाधन मंत्रालय

GOVERNMENT OF INDIA
MINISTRY OF WATER RESOURCES



वार्षिक प्रतिवेदन
2009-10

ANNUAL REPORT
2009-10

गंगा बाढ़ नियंत्रण आयोग
पटना

GANGA FLOOD CONTROL COMMISSION
PATNA



सत्यमेव जयते

**GOVT OF INDIA
MINISTRY OF WATER RESOURCES**

GANGA FLOOD CONTROL COMMISSION

**ANNUAL REPORT
2009-2010**

PATNA

CONTENTS

Chapter	Title	Page no.
	From Chairman's Desk	
	Highlights of the year 2009-10	
1.	Introduction	1
2.	Comprehensive Plans for Flood Management	11
3.	Assessment of Adequacy of Waterways Under Road and Rail Bridges	13
4.	Flood Management Programme (State Sector)	14
5.	Appraisal of Flood Management Schemes	16
6.	Monitoring of Ongoing Flood Management Schemes	23
7.	River Management Activities and Works related to Border Areas	27
8.	Cooperation with Neighboring Countries	31
9.	Promotion of use of Hindi	36
10.	Participation in Trainings, Workshops and Seminars	38
11.	Representation of Ganga Flood Control Commission in Various Committees	39

FROM CHAIRMAN'S DESK



The occurrence of floods of varying intensities in one part or the other of the Ganga basin is an annual feature leaving in its wake considerable damage to human lives and properties. Since the Ganga is an inter-state river, it was necessary to prepare integrated plans to tackle the flood and related problems of the basin and to ensure their implementation in a coordinated manner. Ganga Flood Control Commission created in 1972, is a subordinate office of Ministry of Water Resources. Since its inception, GFCC has played unique role in the preparation and subsequent updating of comprehensive plans of all the 23 river systems in the Ganga basin. These plans were sent to the State Governments for needful action on the suggestion made therein. Comprehensive plans provide background information to the Ganga basin states in formulation of flood management schemes.

A number of additions have been made in the functions originally assigned to GFCC. GFCC has carried out its assigned function in an efficient manner during the current year which is described in detail in this report. Particular mention is to be made about the proactive role under taken by GFCC in the scheme of Flood Management Programme a scheme of national importance initiated by the Govt. of India during the 11th five year Plan. The scheme made good progress during the year 2009-10. Financial assistance to the tune of Rs.652 crore was provided to the Ganga basin states during the year 2009-10.

GFCC officers have played important role in tackling international issues with the Government of Nepal and Bangladesh in matters relating to flood and drainage management. The schemes on extension of the embankment on international rivers of the Lalbakeya, Bagmati, Kamla and Khando and removal of drainage congestion in the common border Ichamati river have made good progress.

It is my great pleasure to present the annual report of GFCC for the year 2009-10 and I am sure that this report will give a comprehensive overview of the role of GFCC and its contribution in the field of flood management and other associated works in the Ganga basin.

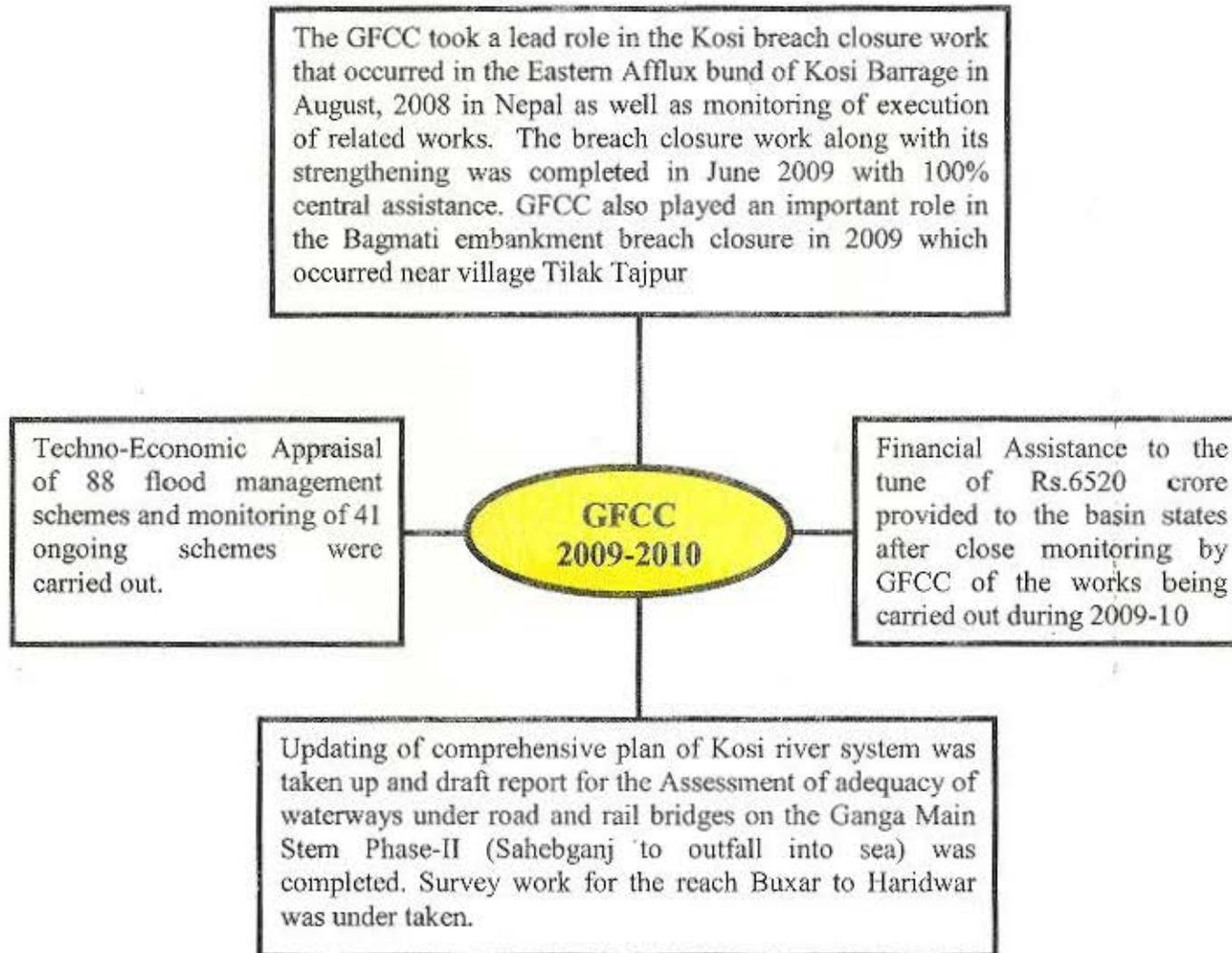
A handwritten signature in black ink, appearing to read 'A. K. Ganju'. The signature is stylized and written over a horizontal line.

(A. K. GANJU)

Chairman

Ganga Flood Control Commission

HIGHLIGHTS 2009-2010



CHAPTER-1

INTRODUCTION

1.1 Flood Problems in the Ganga basin

Two holy rivers originating from the glacial peaks of the Himalayas at an altitude of about 7000 meter, the Alaknanda and the Bhagirathi unite near Devprayag. The combined river called the Ganga traverses its course of 2525 km (1450 km in Uttar Pradesh including Uttarakhand, 110 km along U.P, Bihar border, 445 km in Bihar and Jharkhand and 520 km in West Bengal) to its outfall in to the Bay of Bengal. The important tributaries which join the Ganga in its course are the Ramganga, Gomati, Ghaghra, Gandak, Burhi Gandak, Kosi, Kamla, Bagmati and Mahananda on the left and Yamuna, Tons, Sone, Kiul, Ajoy, Damodar, Punpun and Rupnarayan on the right . The river Ganga is the master drain of the Ganga basin states. It drains a total catchment area of 10.68 lakh sq. km., out of which 8.61 lakh sq. km lies in India thus draining 26 percent area of India. The soil in the Gangetic plain is generally alluvial. All the major left bank rivers draining into the Ganga are of the Himalayan origin. On the other hand, out of the major right bank rivers only the Yamuna is of Himalayan origin and the rest of the major right bank rivers originate from the Vindhya or the plateau between the Ganga and the Vindhya. Among the various Ganga basin states, the state of Bihar, particularly its northern part, U.P, particularly its eastern part and West Bengal are the worst flood affected states. The flood problems in the other Ganga basin states are also there but not so severe.

The flood problems in the Ganga basin are summarized as under:

- (i) Heavy precipitation for long duration in the catchment.
- (ii) Blockage of drainage by the Ganga in monsoon season.
- (iii) Bank erosion by the river during the monsoon season.
- (iv) Meandering of river causing loss of land, property and life.
- (v) Inadequate bank full capacity.
- (vi) Poor maintenance of flood control measures already taken resulting in their damage during the monsoon period.
- (vii) Inundation of villages situated within the flood plains of the rivers.

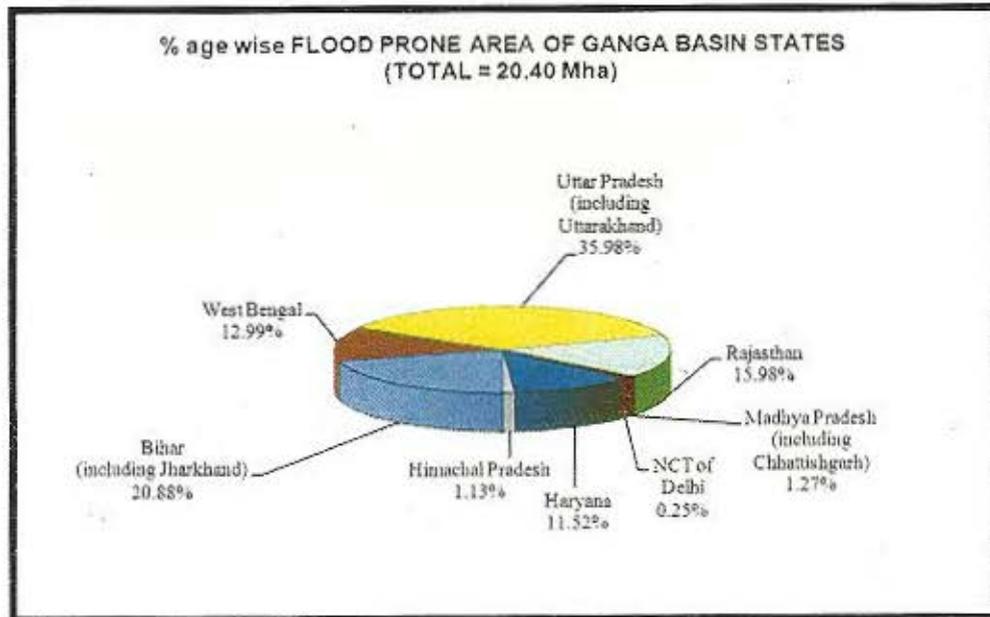
As regards erosion problems, longitudinal bed slopes of the river Ganga and its tributaries are steep in the upper reach, become flatter in middle reaches and are almost level in the lower reaches. The upper courses are noted predominantly for deep erosion i.e. bed retrogression. The scoured material is carried downstream by the flow and the middle courses have evidence of both erosion and aggradations. The lower reaches where the bed slope is flatter and velocities are low, accumulation process i.e. sedimentation and accretion of the river bed is predominant. At the same time due to meandering, erosion and sedimentation take place simultaneously.

Ganga basin is spread over the 11 states namely Uttarakhand, Himachal Pradesh, Haryana, Delhi, Uttar Pradesh, Rajasthan, Madhya Pradesh, Chhattisgarh, Bihar, Jharkhand and West Bengal. The Ganga basin has been divided into 23 river systems. The river systems of the basin are (1) The Gomati (2) The Adhwara Group (3) The Ghaghra (4) The Mahananda (5) The Kamla Balan (6) The Burhi Gandak (7) The Bagmati (8) The Punpun (9) The Kosi (10) The Gandak (11) The Ajoy (12) The Kiul-Harohar (13) The Damodar (14) The Mayurakshi (15) The Yamuna (16) The Ramganga (17) The Tons (18) The Badua Chandan (19) The Rupnarain-Haldi-Rasulpur (20) The Jalangi (21) The Sone (22) The Tidal rivers (23) The Main Ganga. Most of these rivers are interstate though few are within one state only. A total area of 20.40 million hectares (about 50% of total flood prone area in the country) is prone to floods in these states and recurring floods cause huge loss to life and property every year.

The state wise details of flood prone area in the Ganga basin so far are given below:

Sl. No.	State	Flood Prone Area (in Lakh Ha.)	
		As assessed by RBA	As reported by States to W.G. for 10 th Plan
1	2	3	4
1	Himachal Pradesh	2.30	4.76
2	Haryana	23.50	23.5
3	NCT of Delhi	0.50	0.7
4	Uttar Pradesh (including Uttaranchal)	73.36	73.40
5	Rajasthan	32.60	32.6
6	Madhya Pradesh (including Chhatisgarh)	2.60	3.37

Sl. No.	State	Flood Prone Area (in Lakh Ha.)	
		As assessed by RBA	As reported by States to W.G. for 10 th Plan
7	Bihar (including Jharkhand)	42.60	68.8
8	West Bengal	26.50	37.66
	Total	203.96	244.79



1.2 Ganga Flood Control Board

With the objective to effectively tackle the critical and chronic flood problems of the Ganga basin and to minimize the associated damages, it was considered necessary to prepare an integrated plan of flood management, erosion control etc. and facilitate quick drainage and its implementation in a comprehensive and coordinated manner. To achieve this objective, Ganga Flood Control Board (GFCB) was set up by the Government of India vide resolution no.FC-47(2)/72 dated 18.4.1972, headed by the Hon'ble Union Minister of Water Resources.

Functions:

- To lay down the broad policies and decide priorities in the implementation of various schemes.

- To issue necessary directions to Ganga Flood Control Commission in respect of formulation of a comprehensive plan of flood control in the Ganga Basin and approval of the schemes so formulated.

1.3 Composition of Ganga Flood Control Board

The composition of Ganga Flood Control Board as notified by the Ministry of Water Resources vide resolution no.22/3/99-ER/2586 dated 28.06.2001 is given below

1.	Union Minister of Water Resources	Chairman
2.	Union Minister of State for Water Resources	Member (Chairman in absence of Union Minister of Water Resources)
3.	Union Minister of Finance or his representative	Member
4.	Union Minister of Railways or his representative	Member
5.	Union Minister of Road Transport and Highways or his representative	Member
6.	Union Minister of Agriculture or his representative	Member
7.	Chief Minister of Bihar or his representative	Member
8.	Chief Minister of West Bengal or his representative	Member
9.	Chief Minister of Uttar Pradesh or his representative	Member
10.	Chief Minister of Haryana or his representative	Member
11.	Chief Minister of Rajasthan or his representative	Member
12.	Chief Minister of Madhya Pradesh or his representative	Member
13.	Chief Minister of Himachal Pradesh or his representative	Member
14.	Chief Minister of Jharkhand or his representative	Member
15.	Chief Minister of Uttarakhand or his representative	Member
16.	Chief Minister of Chhattisgarh or his representative	Member
17.	Member, Planning Commission	Member
18.	Chief Minister, NCT of Delhi or his representative	Member
19.	Chairman, Ganga Flood Control Commission	Member-Secretary

So far 14 meetings of the Ganga Flood Control Board have been held. The 14th meeting of GFCB was held in June, 2000 at New Delhi.

1.4 Ganga Flood Control Commission

To deal with floods and its management in the Ganga basin States, Ganga Flood Control Commission was created in the year 1972 vide Government of India resolution no.F.C.47(3)/72 dated 18.4.1972 as a subordinate office of Ministry of Water Resources and as the Secretariat and executive limb of Ganga Flood Control Board with its headquarters at Patna. The composition of Ganga Flood Control Commission (GFCC) is given below:

1.	Chairman, GFCC	Chairman
<i>Full Time Members</i>		
2.	Member (Planning), GFCC	Member
3.	Member (Co-ordination), GFCC	Member
<i>Part Time Members of the Commission</i>		
4.	Chief Engineer, Incharge of Flood Control, Water Resources Department, Government of Bihar.	Member
5.	Chief Engineer, Incharge of Flood Control, Water Resources department, Government of Jharkhand.	Member
6.	Chief Engineer, Incharge of Flood Control, Irrigation Department, Government of Uttar Pradesh.	Member
7.	Chief Engineer, Incharge of Flood Control, Irrigation Department, Government of Uttarakhand	Member
8.	Chief Engineer, Incharge of Flood Control, Irrigation and Waterways Department, Government of West Bengal.	Member
9.	Engineer-in-Chief, Water Resources Department, Government of Madhya Pradesh.	Member
10.	Engineer-in-Chief, Water Resources Department, Government of Chhattisgarh.	Member
11.	Member (River Management), Central Water Commission, Government India, New Delhi.	Member
12.	Director, Central Water and Power Research Station, Government of India, Pune.	Member
13.	Chief Engineer (Lower Ganga Basin), Central Water Commission, Government of India, Patna	Member

14.	Chief Engineer (Planning), Roads Wing, Ministry of Road Transport and Highways, Government of India.	Member
15.	Director (Civil Engineering Wing), Railway Board, Government of India.	Member

Permanent Invitees of the Commission

1. Chief Engineer, Incharge of Flood Control, Government of Haryana.
2. Chief Engineer, Incharge of Flood Control, Government of Himachal Pradesh.
3. Chief Engineer, Incharge of Flood Control, Government of Rajasthan.
4. Chief Engineer, Incharge of Flood Control, Government of NCT of Delhi.
5. Director (B&S) R.D.S.O., Ministry of Railways, Lucknow.

1.5 Functions of GFCC

The functions of GFCC as originally envisaged are as under

- (a) Preparation of comprehensive plan for flood control in the Ganga Basin.
- (b) To chalk out a phased and coordinated programme of implementation of the works included in the basin wise plans by the States concerned.
- (c) Ensure proper standards of works and their regular maintenance.

Presently the broad functions of GFCC are as under:

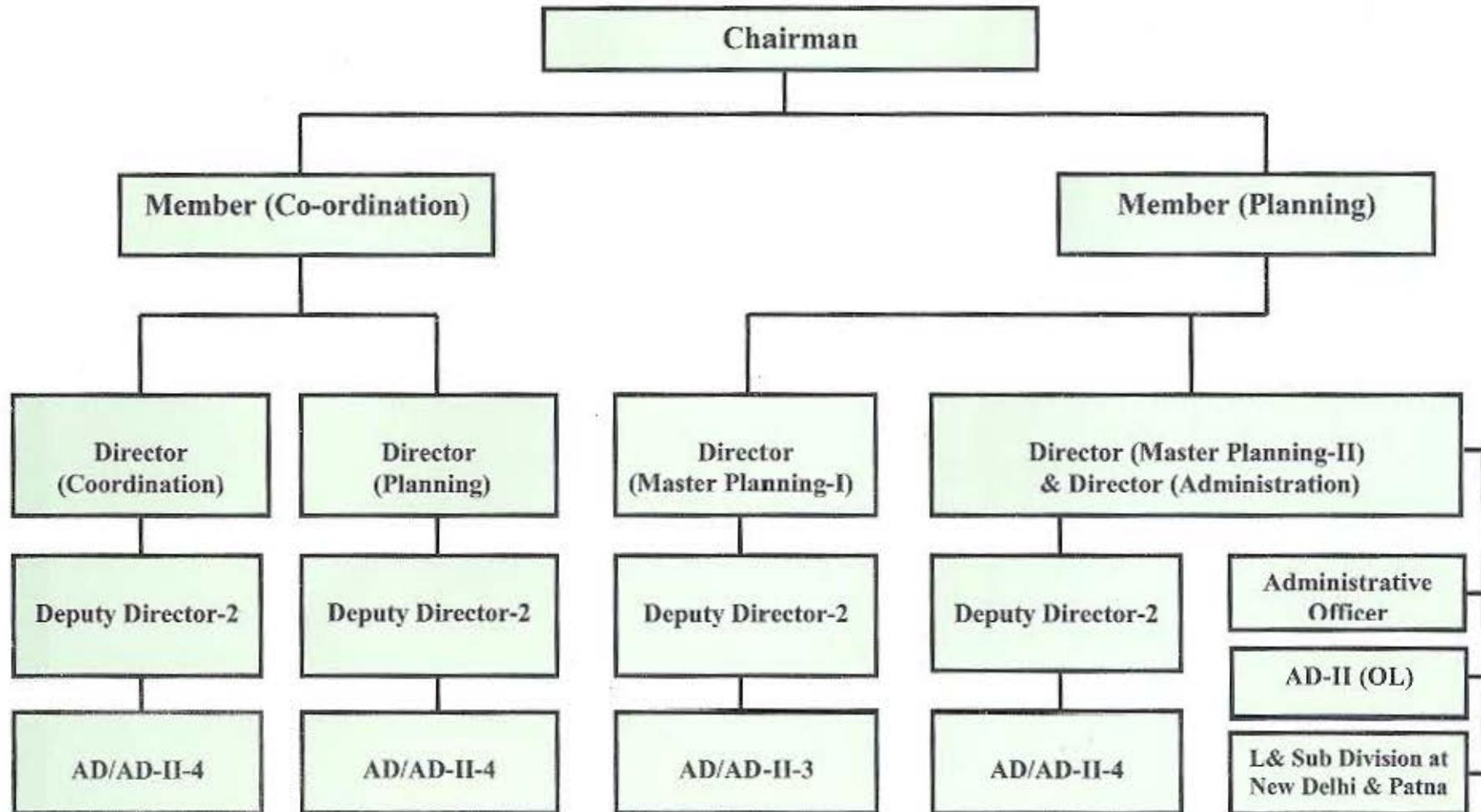
- To prepare a Comprehensive plan of flood management in the Ganga basin. The field investigation and collection of data for the purpose are carried out by the State Governments as directed by the Ganga Flood Control Board.
- To draw out a phased and co-ordinated programme of implementation of works included in the basinwise plans.
- To advise the states concerned to follow guidelines in respect of quality control, material specifications and maintenance in order to ensure the implementation of works and the maintenance thereof to proper standards.
- To prepare the annual programme of works and recommend allocation of funds, wherever required for consideration of the Board.
- To make an assessment of the existing waterways under the road and rail bridges and to determine additional waterways to be provided for reducing the drainage congestion to reasonable limits.

- To monitor the execution of the important flood control schemes particularly those receiving central assistance or being executed under the central sector.
- To examine all major and medium flood control, drainage, anti water logging and anti-erosion schemes of Ganga basin States except for schemes of the States of Haryana, Uttar Pradesh and Delhi on the river Yamuna in the reach from Tajewala to Okhla barrage.
- Documentation and dissemination of findings emerging out of special studies or investigations conducted in participation with scientific organisations for appropriate use by basin States.
- To evaluate the performance of major flood control measures executed by the States including all the inter-State flood control schemes.
- To participate in various National and International Committees set up by the Govt. of India and the Ganga basin States pertaining to the subject of flood management.

GFCC apart from being engaged in the preparation and periodic updating of comprehensive master plans for flood management in the Ganga basin is also the agency for techno-economic appraisal of flood management schemes in the Ganga basin. It has also been given the task of coordinating several activities concerning flood management with Nepal.

A total of 42 meetings of the GFCC have been held so far. The *42nd meeting of GFCC was held on 15th July 2010 at Bhopal (M.P)*. In the meetings, various issues pertaining to the Ganga Basin such as progress made in implementation of recommendations of Rashtriya Barh Ayog, preparation of flood plain zoning/flood risk maps, implementation of sub-basin wise comprehensive plans, monitoring and evaluation of flood management schemes, use of remote sensing techniques/satellite imageries for delineation of flood plain area, use of model studies before formulation and execution of flood management schemes, preparation of annual catalogue of flood management schemes etc., have been discussed and decisions taken thereon for follow up action by the Ganga basin States / Central organisations concerned.

GANGA FLOOD CONTROL COMMISSION ORGANISATIONAL CHART



1.7 Staff Strength in GFCC

The staff strength of GFCC as on 31.3.2010 is 74 against the sanctioned strength of 101. The details of the posts sanctioned and filled up are given below

S.No.	Group	Sanctioned	Vacant	Filled
1.	A	23	7	16
2.	B (Gazetted)	13	3	10
3.	B (Non-Gazetted)	02	-	02
4.	C	47	14	33
5.	D	16	3	13
	Total	101	27	74

In addition, 19 work charged staff comprising of 3 drivers, 4 Work Assistants and 12 Khalasis are involved in various activities of GFCC.

The entire Group 'A' posts and the posts in the grade of Assistant Director-II in Group 'B' are from the Central Water Engineering Group A & B Services.

1.8 Vigilance and Disciplinary Cases

No vigilance or disciplinary case concerning any officer or staff was pending in the Commission during the year 2009-2010.

1.9 Parliament Questions and VIP References

1.9.1 Material for reply to 44 parliament questions was prepared during the year and sent to the Ministry of Water Resources.

1.9.2 Material for reply to 14 VIP references was prepared and sent to the Ministry of Water Resources during the year.

1.10 Implementation of RTI ACT, 2005

Ganga Flood Control Commission has implemented the directions as indicated in the RTI Act, 2005. The Commission has compiled and published manuals under clause 4(1) (b) of the Act and displayed them on the Website <http://gfcc.bih.nic.in>. The manuals provide all relevant information as required under the Act.

The Ganga Flood Control Commission has also designated one Appellate Authority,

one Public Information Officer (PIO) and 5 Assistant Public Information Officer (APIO) to look into the requests made by the applicants and supply of the information to the requestors within stipulated time as provided in the Act. The names of the officers as on 31.03.2010 are as follows.

1.	Member (C), Sh.M.U. Ghani	Appellate Authority
2.	Director (MP-II), Sh. S. K. Gangwar	Central Public Information Officer
3.	A.D (C), Sh. A.K. Sinha	Asstt. Public Information Officer
4.	AD-II (MP-I), Sh. Harsh Vardhan	Asstt. Public Information Officer
5.	AD-II (MP-II), Rajendra Kumar	Asstt. Public Information Officer
6.	AD-II (P), Sh. K.K. Roy	Asstt. Public Information Officer
7.	AD-II (Adm), Sh. Bipin Kumar Sinha	Asstt. Public Information Officer

During the year 2009-10 twenty-five requests were received in GFCC through MOWR which were promptly replied directly to the applicant.

1.11 Financial Aspect

An expenditure of Rs. 471.43 lakhs was incurred by GFCC during the year 2009-2010. A statement showing sub-headwise final estimate and actual expenditure during 2009-2010 is given below:

(Amount in Rs. lakhs)

Sl.No.	Head of account	Final Estimate 2009-2010	Actual Expenditure 2009-2010
1.	Salary	373.73	368.50
2.	Medical	2.00	1.75
3.	Travel Expenses (Domestic)	20.60	20.47
4.	Travel Expenses (Foreign)	3.70	2.17
5.	Office Expenses	6.00	5.81
6.	Minor Works	45.60	44.58
7.	Machinery & Equipment	35.70	28.08
8.	Over Time Allowances	0.10	0.073
	TOTAL	487.43	471.43

CHAPTER-2

COMPREHENSIVE PLANS FOR FLOOD MANAGEMENT

2.1 Preparation of Comprehensive Plans for Flood Management

In the Ganga basin area covering eleven states, floods in some part or the other are an annual feature. On account of the inadequacy of the protection works carried out so far, large scale damage due to floods often occurs. It was therefore felt necessary to prepare an integrated plan to tackle the floods, erosion and drainage problems in the basin and implement it in a coordinated manner. It was with this in view that GFCC was set up to prepare Comprehensive Plans for flood management for the entire Ganga basin. The entire Ganga basin is divided into 23 river systems and comprehensive plans for flood management of all these river systems have been completed between 1975 and 1990. These comprehensive plans were then circulated to the State Governments concerned for preparing specific schemes for implementation in order of priority.

2.2 Updating Of Comprehensive Plans for Flood Management

Due to changes in the behaviour of the rivers in the Ganga basin and for other reasons, it was considered necessary to update the Comprehensive Plans for flood management of all the river systems. This work was started in 1986 and till March, 2010, GFCC has updated comprehensive plans for twenty two river systems. The updated comprehensive plans were also circulated to the State Governments concerned for further follow-up action. During the year 2009-10, the updating of Comprehensive plans of the Kosi river system was taken up.

2.3 Monitoring of Floods and Preparation of Flood Reports

The flood situation in the year 2009 in Ganga Basin States was monitored and 18 weekly reports were sent to the Ministry of Water Resources.

The flood situation in the year 2009 in Ganga basin states was moderate except in some part of U.P and Bihar. During monsoon of 2009 unprecedented flood situation was observed in river Ghaghra in U.P during October, 2009. Due to this the district of Barabanki

and Faizabad were severely affected. The river Ghaghra set the new record of HFL at Elgin bridge as 107.56 m against the existing HFL of 107.48 m. and at Ayodhya recorded new HFL as 94.01 m against the existing HFL of 93.84 m. During the the floods of 2009 the total damages to crops, houses and public utilities in U.P were Rs. 110.101 crore, the population affected was 1.835 million, the crop area affected was 0.461 million ha. and damages to houses, cattle lost and human life lost were 2893,101 and 254 respectively.

In Bihar damages worth Rs.24.059 crore occurred during the floods of 2009. The high flood situation was observed in river Kosi and Bagmati in Supaul and Muzaffarpur district respectively. The flood situation in other rivers of Bihar remained more or less normal. In other Ganga basin states no significant flood damages was reported by the States.

However in West Bengal the Sunderbans and adjoining area in the district of North and South 24 Parganas were damaged by severe cyclone AILA on 25th May, 2009 before the on set of monsoon 2009. Damages of varying degree also occurred in the district of Purba and Paschim Midnapur, Hooghly, Howrah, Jalpaiguri and KoochBihar falling within the influence zone of cyclone.

CHAPTER-3

ASSESSMENT OF ADEQUACY OF WATERWAYS UNDER ROAD AND RAIL BRIDGES

One of the functions of GFCC is the preparation of reports on adequacy of waterways under the road and rail bridges. GFCC has often been called upon to examine the adequacy or otherwise of the waterways under existing rail and road bridges by the Ministry of Railways and also by the Ministry of Road Transport and Highways. This exercise is aimed at determining additional waterways required for reducing drainage congestion to a reasonable limit. This activity which commenced during the later half of the eighties has been completed except for the some stretches of the Ganga main stem.

These reports have also been circulated to the Ganga basin states and departments of Central and State Governments concerned for follow up action.

During 2009-10, the survey work of adequacy of waterways under road and rail bridges on the Ganga main stem from Buxar to Haridwar was carried out. The draft report for the Ganga main stem from Sahebganj to outfall into the Bay of Bengal was under finalization.

CHAPTER-4

FLOOD MANAGEMENT PROGRAMME

Due to unprecedented floods in Bihar, Assam and West Bengal and consequent large scale damages in these States in the year 2004, Government of India under the direction of Hon'ble Prime Minister of India, keeping in view the seriousness of the flood problem and consequently the grave situation created on the ground, constituted a Task Force for Flood Management/Erosion Control headed by the Chairman, Central Water Commission, New Delhi to look into the problem of recurring floods in Assam and neighboring states as well as Bihar, West Bengal and Eastern Uttar Pradesh in August 2004. The Task Force deliberated upon various issues relating to floods in these States and taking into account the prevailing situation on the ground, suggested various measures for controlling flood/erosion. The report of the Task Force was submitted to the Ministry of Water Resources in December, 2004.

Keeping in view the recommendations of Task Force and other similar Committees, a plan scheme titled Flood Management Programme amounting to Rs.8000 crore under the state sector has been drawn up for implementation during the XIth Plan period. This plan scheme covers works of flood management, river bank-erosion, sea erosion, drainage development and flood proofing. The financial approval of the individual schemes is given by an Empowered Committee headed by the Secretary (Expenditure), Ministry of Finance, Govt. of India taking into consideration the critical and emergent situation and availability of annual budget/plan outlay and provision of state share and central share by the respective State Govt. Besides Ministry of Finance, the Committee has representatives from the Ministry of Water Resources, Planning Commission, Ministry of Development for North Eastern Region (DONER), Ministry of Environment & Forests.

The detailed schemes for the purpose are to be formulated and submitted by the implementing States to the concerned appraising agency for techno economic appraisal as per the prevailing guidelines laid down by the Planning Commission.

The central assistance is provided to the State Govts. on the following funding pattern:

- (i) For special category States – 90%.
(The Special Category States covers the North Eastern States, Sikkim, Himachal Pradesh, Jammu & Kashmir and Uttarakhand)
- (ii) For non-special category States – 75%.
- (iii) For restoration of damaged works, the central assistance can be provided upto 90%.

Financial and physical management, quality control, timely completion of the work etc. is the responsibility of the State government/implementing agency

The schemes under flood management programme are to be monitored by the Central Water Commission (CWC), Ganga Flood Control Commission (GFCC) and Brahmaputra Board (BB) in their respective jurisdiction. The Department of Space/NRSA are also associated in monitoring of physical progress of the works through Remote Sensing techniques.

After the completion of work , performance evaluation studies are conducted by independent agencies in consultation with CWC/GFCC/Brahmaputra Board as the case may be.

Schemes taken up for execution State wise with their status :

The details of the FMP schemes taken up (statewise) and their progress during the XIth Plan are given below:

Sl.No.	Name of State	No. of Schemes taken up for execution	No. of schemes completed up to 2008-09	No. of schemes completed during 2009-10	No. of schemes under progress as on 31.03.10
1.	Bihar	34	2	20	12
2.	Jharkhand	1	-	-	1
3.	West Bengal	10	-	1	9
4.	Uttar Pradesh	12	-	3	9
5.	Uttarakhand	4	-	-	4
6.	Himachal Pradesh	1	-	-	1
	Total	62	2	24	36

CHAPTER- 5

APPRAISAL OF FLOOD MANAGEMENT SCHEMES

Techno-economic appraisal of flood management schemes received from the Ganga basin States is an important activity of GFCC. Schemes estimated to cost between Rs. 7.5 crore and Rs.15 crore are examined by GFCC for their techno-economic viability and, if found acceptable, are cleared by GFCC itself and recommended to the Planning Commission for investment clearance. Schemes costing less than Rs. 7.5 crore are cleared at the State level by the State Flood Control Boards. Schemes costing above Rs. 15 crore if found acceptable, after apprising them for their techno-economic viability are recommended by GFCC, to the Advisory Committee of the Ministry of Water Resources for Irrigation, flood control and multi purpose projects for clearance.

Normally, GFCC does not examine schemes costing less than Rs. 7.5 crore. However, in special cases, such as schemes on emergent flood protection works in the Eastern Sector on common border rivers with Bangladesh, Ministry of Water Resources, Government of India issued an instruction that GFCC would scrutinize such schemes on the common border rivers with Bangladesh and make recommendations to MoWR for release of funds. In addition, all central sector schemes irrespective of cost are however examined from techno-economic aspect in GFCC.

The details of schemes examined during 2009-10 and their status are given below:-

BIHAR

S.No	Name of Scheme	Estimated Cost in Rs. lakh	Status
1	Construction of embankment along Jhim and Jamura rivers (Adhwara group) from Sonbarsa bazaar to Sonbarsa village on left (25.71 km) and right bank (26.06 km)	6452.108	Scheme cleared
2	Raising and strengthening of left Burhi Gandak embankments in upstream of Akharaghat bridge from Minapur to Vijay Chapra (0 km to 18.4 km and in downstream of Akharaghat bridge TO Samastipur district border (0.00 to 45.5 km)	2240.88	- do -

3	Extension on Left and Right bank of River Kamla Balan in lengths of 11.42 km and 5.00 km with Brick Soling Road on Top in Left over reaches and protection work at two points on Extended portion of Right Embankment.	5611.54	- do -
4	Anti erosion work along the left bank of river Ganga (i) at Ramdiri-Sihama Erosion site near Gupta Embankment (ii) near Gupta lakhminia Embankment (iii) near Sanaha Gorgama Embankment and (iv) Raising and Strengthening of Gogari Narayanpur Embankment Naya Gaon Ring Bundh and Akha-Khajritha Ring Bundh	2932.0	- do -
5	Mahananda Flood Management Scheme	14968.0	- do -
6	Raising and Strengthening of lower None embankments including brick soling road and other auxiliary works.	2671.0	- do -
7	Anti erosion works at Paharpur-Manorath (Phase II) in between 5 to 6 mile of Tirhut embankment along the bank of river Ganga	758.0	- do -
8	Construction of proposed Spur No. 8 & 9 in the existing Ismailpur to Bindtoli embankment in d/s of Vikramshila Setu of left bank of river Ganga	849.0	- do -
9	Anti erosion work in left bank of Ganga river near village Kasimchak to Panapur (Bindtoli) in a length of 1500 meters with end anchors in Danapur Diara.	817.63	- do -
10	Anti erosion work with Breach closure work at 20.98 km (ch 688) of Lava-Chaukia Parapur near Govindpur right embankment of Mahananda river and raising and strengthening of Azam nagar ring bundh from 0.00 km to 2.58 km (84.50 ch) with 0.20 m thick brick soling on top of embankment of left embankment of Mahananda river in the State of Bihar.	1117.42	- do -
11	Anti Erosion Work at Sallahpur Tandapur Charki in between 1.51 km to 2.15 km with construction of Pilot Channel, Anti erosion work in Magarpal Charki at Km 4.20 near village Semara on right bank of river Gandak.	664.96	- do -
12	Town Protection work at right bank of river Ganga from Mahavir Ghat to Terdhi ghat (Patna City) and Ramnagar diara (Bakhtiyarpur, Patna)	1100.0	- do -
13	Anti erosion scheme at left bank of river Ganga near village Mathurapur-Ami, on the left bank of river Ganga.	654.36	- do -
14	Gap closure of Ganga left embankment from Manihari to Ramayanpur (Chaukia Paharpur) on the left bank of river Ganga	813.02	- do -
15	Raising and Strengthening and extension of embankment on Chandan river	14768.68	Schemes appraised and observations sent to State Govt.
16	Raising and Strengthening and extension of embankment on Fariyani river	2100.0	
17	Construction of bituminous road on Tirhut embankment between 0.00 km to 83.40 km on left bank of river Gandak.	9881.0	

18	Raising and Strengthening of Hayaghat karachin embankment from 0.00 km to 75.00 km	2947.07	Schemes appraised and observations sent to State Govt.
19	Raising and strengthening of Sanaha Gorgama embankment from 0.00 km to 21.30 km 24.10 to 28.50 km	2806.37	
20	Permanent Solution of Water logging and flood problem in samastipur town.	442.8	
21	Raising and Strengthening of Nagapara embankment from 2.80 km to 16.00 km	1487.53.	
22	Raising and Strengthening of the left and right embankment of the Brandi river including anti-erosion works on the right embankment from Ch. 79 to 82.	1569.7	
23	Raising and Strengthening and brick soling of karri Koshi embankment from 0.00 Ch to 788 Ch and Anti-erosion work in between Ch 58 to 62 at Garighat.	1477.91	
24	Raising and Strengthening and 8" brick soling of old KAS embankment and 8" brick soling on 2 nd , 3 rd and 5 th retired line on left bank of river Ganga	773.521	
25	Construction of Bharwalia Majharia-Malahi bazaar ring bund on old alignment of Champaran embankment	1434.78	
26	Raising and strengthening and extension of BKG embankment on right bank of river Ganga in Bhojpur and Buxar districts	5461	

JHARKHAND

1	Anti erosion work on the right bank of the river Ganga from Budhwaria to Kanhaia sthan	991.13	Scheme Cleared
2	Anti erosion work on the right bank of the river Ganga at Narayanpur	927.72	- do -

WEST BENGAL

1	Protection for bank protection work along both banks of river Bhagirathi at Sunderpur and Basantpur, Kaziparato Nabagram and Saharbatito Uttarasan Outfall in the district of Murshidabad and at Sanyalchar in the district Nadia of West Bengal	2366.00	Scheme Cleared
2	Scheme for bank protection works along the right bank of river Ganga-Padma at Ichalipara, Moya, Galadarya, Pachim Beechpara (Bamnabad) in district Murshidabad and Basumari in district Nadia of West Bengal	2813.67	- do -
3.	Master Plan and DPR for Kaliaghai-Kapaleswari-Baghai Drainage Basin Scheme	65038.00	- do -
4.	Reconstruction , Remodeling and Improvement of embankments in Sunderbans and adjoining areas in the districts of North and South 24 Parganas, damaged by sever cyclone, "AILA"	503200.00	- do -

5.	Master Plan and DPR for Ghatal and its adjoining areas	155000.00	Under examination
----	--	-----------	-------------------

UTTAR PRADESH

1.	Construction of Suwawan nala between km 30.00 to km 82.00 in district Balrampur	1358.66	Scheme Cleared
2.	Construction of embankment on left bank of Ganga from village Sherpur to Thet in district J.P.Nagar/Bijnor.	2458.00	do
3.	Project Estimate for protection of Turtipar-Shrinagar(T.S.) Bund by constructing anti-erosion works between Km. 68.200 to km. 70.200	1495.00	do
4.	Project estimate for river training works on R/B of river Sarda for protection of Bheera-Palia railwayline near village Matahia in the distt of Lakhimpur-Kheri.	1042.00	do
5.	Project for extension, restoration and Anti-erosion works of Lalpur-Dhanaura bund on L/B of river Kosi in the distt. of Rampur(U.P.)	1420.00	do
6.	Project for flood protection works along right bank of river Gandak in the district of Kushinagar.	4450.20	do
7.	Project for flood protection works along left & right bank of river Ghaghra in the districts of Bahraich, Barabanki, Gonda, Basti, Faizabad and Mau.	11000.00	do
8.	Scheme for flood protection work on left & right bank of river Ganga in the distt of JPNagar, Shahjahanpur, Meerut and Bulandshahar.	3241.72	do
9.	Scheme for flood protection work on left & right bank of river Yamunan indistt of Muzaffar Nagar, Baghpat, Ghaziabad, Gautam Budha Nagar, Aligarha and Mathura.	4380.00	do
10.	Scheme for flood protection work on left & right bank of river Hindon in distt of Baghpat & Gautam Budha Nagar	1492.10	do
11.	Scheme for flood protection work on bank of river Kho,Kosi and Ramganga in Bijnor and Moradabad districts	1165.00	do
12.	Protection of village group Nordara, Bhusaula and BST bund on the left bank of Ganga in the district of Ballia.	945.00	do
13.	Project for flood protection works to protect villages Makadumpur, Bastaura and Kishorpur on right bank of river Ganga in the district of Meerut	695.54	do
14.	Project for restoration and extension of existing bund to protect villages Ashokpur, Patti and Gajraula on left bank of river Pilakhar in the district of Rampur	309.00	do
15.	Project for flood protection works to protect villages: Tanda, Mukarpuri, Jyotihima, Gangadharpur, Sipahiwala, Nawadakesho, Tanda Barkhera and Umarpur Khadar on right bank of river Kho in the district of Bijnor (UP).	523.84	do

16.	Project for flood protection works by construction of anti-erosion works between Papsara Ring Bund and existing stud at km 17.00 of Hasanpur bund-II to protect Hasanpur bund-II on left bank of river Ganga in the district of J P Nagar (UP).	410.57	do
17.	Project for flood protection works to protect villages namely Ambedkar village Mandawar, Baseda, Choutra and villages Balheda mawi, Kakour Mamour & Sahpat on the left bank of river Yamuna in the district of Muzaffar Nagar (UP)	627.40	do
18.	Project for construction of Datnala-Baroda bund between Km. 0.00 to 15.400 on the R/B of river Ganga in the distt. of Kansiram Nagar(U.P.),	1044.00	Scheme examined & Comments sent to State Govt.
19.	Project for construction of Khajua Jhunghunia-Andharpurwa Marginal Bund on L/B of river Rapti in the distt. of Shravasti(U.P.)	830.25	do
20.	Anti erosion work from Km. 35.00 to 36.35 of Elgin Bridge-Chanacha bund on L/B of river Ghaghra.	593.18	do
21.	Project estimate for restoration of Chhitauni Bund from Km. 0.00 to Km. 2.400 and protection of D/s toe of the bund in Distt-Kushinagar	622.52	do
22.	Project estimate for raising, widening and painting from Km. 0.00 to Km. 10.065 and slope pitching from km. 4.900 to km. 5.600 of Amwa Khas Bund in Distt-Kushinagar	619.21	do
23.	Project estimate for raising & strengthening of chhitauni bund from km. 6.800 to km. 14.400 in Distt-Kushinagar	744.44	do
24.	Project estimate for construction of spur at km. 7.830, 8.330 and km. 8.650 of Chhitauni Bund in Distt-Kushinagar	666.30	do
25.	P/E for restoration of spur at km. 10.037, 10.132, 10.450, 10.685, 10.821, 10.901, 11.200 and apron of u/s shank of spur at km. 8.148 of Chhitauni bund distt.-Kushinagar	504.22	do
26.	Project for construction of spurs at Km. 3.700 and 4.500 of amwa Khas Bund in Distt-Kushinagar	717.69	do
27.	Project for protection of A.P. Bund from km. 5.900 to km. 7.320 on right bank of river Great Gandak in distt-Kushinagar.	543.67	do
28.	Scheme for flood protection work on left & right bank of river Rapti in distt of Sidharthnagar & Gorakhpur.	6882.38	Under Examination

UTTARAKHAND

1	Flood protection scheme at Kosi river and tributaries for protection of village Garampani Khairna, Chukam and Mahan, Ramnagar town, Ajiipur, Nastnagar, Bainthkheri, Gobra and Jogipura under Uttarakhand state	727.01	Scheme Cleared
2.	Flood protection scheme for Derha and its sub rivers in Tehsil Sitarganj (Udham Singh Nagar) Uttarakhand	718.93	do

3.	Flood Protection Scheme of village Panchonia, Sunerdhara, Amkhara, Kutilia in Nandhor river at Chorgalia area in Distt- Nainital	504.92	Scheme examined & comments sent to State Govt.
4.	Proposed flood protection scheme on Dhela river and its subsidiary in Nainital and U.S. Nagar districts of Uttarakhand	552.74	do
5.	Project for flood protection scheme on Kali river and its tributaries in Pithoragarh, distt of Uttarakhand	545.95	do
6.	Flood protection works of village Bhichlam, Asseti and Chhitar from Ramganga river at Chaukhtia block, distt- Almora	355.08	do
7.	Project for flood protection works of Gerkhhet, Golana, strengthening to protect Gerkhhet Golana, village from flood of Shraua river in block Kapkot, distt: Bageshwar	359.44	do
8.	Project estimate for strengthening of Katapathat canal flood works from Yamuna river in Vikas nagar block, distt: Dehradun	448.06	do
9.	River Training & Flood Protection Works along Yamuna & Tons river & its tributaries for protection of village Ninush, Suwa, Putad, Stangdhar, Kulha, Derio, Ghanta, Lakhmandal & Kandhar in Chakrata Tribal Block Distt. Deharadun,	390.84	do
10.	Protection of 20 villages from Mandakini river and its tributaries in distt: Rudraprayag	814.91	do
11.	Protection of 12 villages from Alaknanda river and its tributaries in distt: Rudraprayag	318.29	do
12.	Protection of 10 gram Sabha from Ramganga river its tributaries in distt: Pauri Garhwal	405.29	do
13.	Protection of 7 villages in tributaries of Ganga river (Telesoat and Malan river) in block Dugadda, distt: Pauri Garhwal	435.42	do
14.	River training and flood protection work along Yamuna's tributaries for protection of Matiyalaur, Devdhung, Gandhi Nagar and Chaptadi village in Purola block distt: Uttarkashi	232.39	do
15.	Project estimate for making stud and construction of marginal bund on right bank of river Ganga from Kankhal bund to Ajitpur bund and Balawali to Khanpur bund	1412.94	do
16.	Flood protection scheme of village (between Jatowala to Kunjagrang) in Viksnagar block, distt: Dehradun	2854.68	do
17.	Flood protection scheme of villages from Yamuna river (between Yamuna river Barrage Dakpathar to NH-72 Kulhal-Paonta Sahile bridge) in block Vikasnagar	2997.74	do
18.	River training and flood protection works along Ganga river and its tributaries for protection of village Kangri, Jorasi, Sikarpur, Ladpur, Badheri Rajputana, Bharapur (Ghorewala) and Kota Murad Nagar in distt: Haridwar	639.58	do

19.	Project for anti-erosion and spill mitigation work for Khola Bazar Chorgalia in Nandhor river in district Nainital	573.32	do
20.	Project Estimate for Strengthening & Restoration of River Training works of Ganga River along Bishanpur Kundhi Bund in Bahadradab Block Distt-Haridwar.	490.15	do
21.	River training and flood protection works along Solani river, Ratmau and Pathari Rao river for protection of Twelve villages in Distt-Haridwar.	680.46	do
22.	River training work of Solani river for flood protection work of village Chhanga Majri, Bhagwanpur block, Distt-Haridwar.	691.08	do
23.	River Traomomg & flood protection works along Solani river and its tributaries for protection of village Shivdasspur, Ure, Telewala, Chholi, Hakeempur turabh, Shahpur & Manak Majara in Distt-Haridwar.	349.00	do
24.	Project of river training work along left bank of the Ganga river for safety of village Taatwala in Distt-Haridwar.	281.79	do
25.	Protection of 9 villages from Nandakini river and its tributaries in Distt-Chamoli,	380.13	do
26.	Protection of 8 villages from Pindar river and its tributaries in distt-Chamoli,	408.29	do
27.	Protection of 16 villages from Alaknanda river and its tributaries in Distt-Chamoli,	998.50	do
28.	Flood Protection schemes in Distt. Nainital & Distt. Udham Singh Nagar to Protect Chorgalia & Sitarganj area by Naundhaur River & its tributaries	1434.43	do

HIMACHAL PRADESH

1.	Channelisation of Tributaries of Bata River Phase-I (Sunker) from RD 0 to 8300 in Tehsil-Paonta Sahib, Distt-Sirmour (H.P.)	1493.10	Scheme Cleared
----	---	---------	----------------

Summary of status of schemes

State	Schemes Cleared	Schemes examined and comments sent	Schemes under examination
Bihar	14	12	-
Jharkhand	-	-	-
West Bengal	4	NIL	1
Uttar Pradesh	18	10	-
Uttarakhand	3	25	-
Himachal Pradesh	1	-	-
Total	40	47	1

CHAPTER-6

MONITORING OF ONGOING FLOOD MANAGEMENT SCHEMES

GFCC monitors flood management schemes under Central funding for their physical and financial progress and monitoring reports are sent to the Ministry of Water Resources regularly. During the year 2009-10, FMP schemes as per the details given below were monitored by GFCC officers and monitoring reports were prepared and sent to Ministry of Water Resources:

BIHAR

Sl. No.	Name of Scheme	Estimate Cost (Rs. in Lakh)
1.	Bagmati Flood Management, Embankment construction (l/b 17.55 to 56.97 km, r/b 15.2 to 56.97 km)	13516.00
2.	Raising and Strengthening of Simaria-Gorgama embankment	1236.1
3.	Anti erosion work at 72-74 km of left Burhi Gandak embankment near Basahi village	515.00
4.	Raising, Strengthening balance reaches of Tirhut embankment from 29.61 – 83.40 km	2627.65
5.	Anti erosion work near Rampur Kanth village (3.45 km to 4.61 km) and at Sonakhan (5.55 km to 5.88 km) along Bagmati left embankment	830.72
6.	Anti erosion work on Pipra Piprasi embankment between 0.00 km to 35.0 and GH portion between 0.00 km to 6.68 km	920.97
7.	Brick soling on the top of Champaran Embankment in between 32.24 – 132.40 km.	1492.81
8.	Brick soling road on Saran Embankment from 35.20 km to 80.00 km on right bank of river Gandak	957.53
9.	Raising and Strengthening of right Burhi Gandak embankment from 8.00 km u/s of Akharaghat to 39.00 km d/s of Akharaghat	1200.00
10.	Darbhangha Town Protection Scheme Part – I	933.40
11.	Darbhangha Town Protection Scheme Part – II	1416.09
12.	Darbhangha Town Protection Scheme Part – III	1060.14
13.	Khagaria Town Protection Scheme Part – II	1339.18
14.	Raising and Strengthening of Pipra-Piprasighat embankment and GH portion in Bihar	1471.60
15.	Anti erosion work on left bank of river Ganga near Hetampur and Kasimchak in Danapur Diara with restoration work	1230.47

Sl. No.	Name of Scheme	Estimate Cost (Rs. in Lakh)
16.	Anti erosion work on the left bank of river Ganga near Mathurapur village under Dighwara block of Saran district of Bihar	101.94
17.	Anti erosion work on right bank of river Ganga at Neknamtola.	169.00
18.	Anti erosion work on left bank of right channel of river Ganga in Raghapur Diara	665.68
19.	Raising and Strengthening of Lalbakeya right marginal embankment from 9.06 RD to 13.50 RD at Goabari	175.30
20.	Anti erosion works near village Gorghat on Mani river	339.39
21.	Anti erosion works near village Maniarchak on right bank of river Ganga	352.00
22.	Anti erosion works near Taufeer diara on right bank of river Ganga	673.90
23.	Raising and Strengthening of Kosi embankment in Bihar	33900.00
24.	Anti erosion work at Paharpur Manorath, Bangara, Barar, Gayee tola in between 5.00 to 6.00 mile of Tirhut embankment along river Gandak in Muzaffarpur district (Bihar)	813.00
25.	Anti erosion scheme at left bank of river Ghaghra in districts Siwan & Chapra (Bihar) : Estimated cost	1059.00
26.	Anti erosion works "Restoration of Spurs and retired line embankment" in Jarlahi Karhagola embankment on the left bank of river Ganga in Katihar district of Bihar	970.00

JHARKHAND

1.	Restoration, Breach closure and Protection work of Right embankment of Semaria-Goregama scheme from Chainage 0.00 to 855.00 along Gerua river of Jharkhand	2012.00
----	--	---------

UTTAR PRADESH

1.	Construction of Balrampur Bhadaria Bund, along right bank of river Rapti in district Balrampur	1251.00
2.	Anti erosion works on the left bank of the river Ganga from Balawali to Simli in district Bijnor in Uttar Pradesh	1268.12
3.	Anti-erosion works on the left bank of the river Sarye/Ghaghra from 13.6 km to 15.0 km of Sakroar-Bhikaripur ring dam in district-Gonda	1268.00

Sl. No.	Name of Scheme	Estimate Cost (Rs. in Lakh)
4.	Protection of railwayline track near Bhira (Plaia Kala) and other properties in lakhimpur-Kheri of UP by constructing pilot channel (cunette) and closure of existing dhars including renovation of existing four spurs at 0, 1, 2 & 3 km	1042.00
5.	Project for extension restoration and anti-erosion works of lalpur-Dhanaura Bund on L/B of river Kosi in the distt of Rampur (U.P)	1420.00
6.	Project of Turtipar-Shrinagar (TS) bund along the right bank of river Ghaghra in the district of Balia	1495.00
7.	Project for flood protection works along left and right bank of river Ghaghra in the districts of Bahraich, Barabanki, Gonda, Basti, Faizabad and Mau	11000.00
8.	Project for flood protection works along R/B of river Gandak in the district of Kushinagar, U.P	4450.00

UTTARAKHAND

1.	Construction of Right Marginal bund from Bhogpur to Balawali	2069.49
----	--	---------

HIMACHAL PRADESH

1.	Channelisation of Bata river from RD 10230 to RD 19700 m in Tehsil-Paonta Sahib, Distt-Sirmour	3467.38
----	--	---------

WEST BENGAL

1.	Raising and strengthening of Sunderban embankment by amounting with 32.5 cm Dry Brick pitching along left bank of river Bidya at Mouza-Mathurakanda from 18.20 km to 18.825 km and Mouza-Amlamethi from 20.5 km to 21.0 km and with Brick Block pitching at Mouza-Jharkhali-IV facing river Harobhanga from 48.33 km to 48.98 km in District-South 24 Parganas (Length-1775 m)	502.87
----	--	--------

Based on the monitoring reports and recommendation of GFCC, the Ministry of Water Resources released a total amount of Rs.564.47 crore to the State Governments Uttar Pradesh, Uttarakhand, Himachal Pradesh, and West Bengal & Bihar during 2009-10. The total fund released upto 2009-10 under the Flood Management Programme including the

amount released for 'Reconstruction of embankments affected by AILA' in West Bengal is Rs. 791.95 crore. The break up is given below:

(Amount in Rs Crore)

Sl. No.	State	Total Central Share	Amount released in 2007-08	Amount released in 2008-09	Amount released in 2009-10	Total	Remarks
1	2	3	4	5	6	7	8
1.	Bihar	670.38	65.27	131.61	210.94	407.82	635.74 for FMP schemes and Rs.34.66 for balance spilled over schemes of Xth Plan
2.	Jharkhand	15.09	-	7.37	4.53	11.9	
3.	Uttarakhand	6.94	3.47	8.2218	4.70	16.3918	
4.	Himachal Pradesh	-	0.6667	-	16.20	16.8667	
5.	Uttar Pradesh	205.55	5.25	-	112.88	118.13	
6.	West Bengal (FMP)	589.06	1.39	4.2337	27.72	33.3437	
7.	Reconstruction of Embankment in Sunderbans affected AILA	3774	-	-	187.50	187.50	
	Total	5261.02	76.0467	151.4355	564.47	791.9522	

Note - The amount released includes the releases for spilled over schemes of Xth Plan also.

CHAPTER -7

RIVER MANAGEMENT ACTIVITIES AND WORKS RELATED TO BORDER AREAS

During the XI Plan period, Ministry of Water Resources has undertaken a plan scheme titled "River Management Activities and Works related to Border Areas" for water resources development and flood management activities. The scheme includes provision for taking up maintenance of flood protection works of Kosi and Gandak projects and bank protection works on common/border rivers between India and Bangladesh.

7.0 Maintenance of Flood Protection Works on Kosi and Gandak Projects

7.1 Protection Works on Kosi

The Kosi High Level Committee (KHLC) was constituted by the then Irrigation Deptt. Government of Bihar in the year 1978 under the Chairmanship of Chairman, GFCC to review/examine the protection works already taken on the river and recommend protection measures to be taken before the next flood season. Since then the committee is inspecting every year the protection works taken up on the river and is making recommendations regarding protection work to be executed on the river before the next flood season. The State Government executes the schemes on the basis of the recommendations of the committee.

The present Composition of the committee is given below:

1.	Chairman GFCC, Patna.	Chairman
2.	Member (RM) Central Water Commission, New Delhi or his representative	Member
3.	Director, CWPRS, Pune or his representative.	Member
4.	Engineer-in-Chief (North) Water Resources Deptt., Government of Bihar.	Member
5.	Chief Engineer Water Resources Deptt., Government of Bihar, Darbhanga.	Member
6.	Chief Engineer (Research) Water Resources Deptt., Government of Bihar, Khagaul.	Member
7.	Chief Engineer (Hydrology & Project Planning) Water Resources Deptt., Government of Bihar.	Member
8.	Director, Eastern Region Water Resources Deptt., Govt. of Nepal, Biratnagar.	Member

9.	Dy. Director General Water Resources Deptt., Govt. of Nepal, Kathmandu.	Member
10.	Chief Engineer Water Resources Deptt., Government of Bihar, Birpur.	Member-Secretary

Like in previous years, the KHLC inspected the protection works in October 2009 and recommended works to be carried out before the floods of 2010. The expenditure incurred by Government of Bihar on protection works in Nepal, is reimbursed in full by Government India under a central scheme. The reimbursement is made based on the expenditure statement received from Government of Bihar for the amount involved in protection of the river Kosi in the Nepal portion.

During the year 2009-10, an amount of Rs 15.39787 crore was reimbursed to the Government of Bihar for works in the Nepal portion based on the expenditure statement furnished by Water Resources Department, Govt of Bihar. The total amount provided during the XIth Plan is Rs. 15.81197 crore.

Kosi Breach Closure Works

A breach in the Eastern Afflux Bund at 12.00 km. at Kusaha in Nepal occurred on 18.08.08. The GFCC took a lead role in providing technical assistance in the Kosi breach closure work that occurred in the Eastern Afflux bund of Kosi Barrage as well as monitoring of execution of works. The breach closure work along with its strengthening has been completed in June 2009 with 100% central assistance. The total fund provided to WRD, Govt. of Bihar for this work is Rs.107.55 crore out of which Rs.37.65 crore have been provided during the year 2009-10.

7.2 Protection Works on Gandak

A similar Committee for the river Gandak with the name Gandak High Level Committee (GHLC) was initially constituted by the then Ministry of Irrigation, Govt. of India vide office memorandum no.10/12/80-FC dated 12th November, 1981 to evaluate the performance of flood protection works on the right bank of the river Gandak in the States of Uttar Pradesh and Bihar during 1981 floods, to guide and advise construction activities in the two States and to suggest programme of works for the year 81-82. The term of the committee was extended from time to time. This Committee has been renamed as Gandak

High Level Standing Committee vide Ministry of Water Resources letter no. 5/15/2002-ER/Ganga /1219-27 dated 21.03.2006.

The terms of reference of the committee are:

- ❖ To review the flood control and anti-erosion works so far executed by the State Governments of U.P and Bihar and evaluate their performance during the floods.
- ❖ To recommend a programme of works which could be executed by the two states in a coordinated manner?
- ❖ To guide the construction activities in the States and advise on the steps to be taken to get over any difficulties that may arise with a view to ensure that all the necessary works are completed by the states latest by June each year.

The Chairman, GFCC is the Chairman of the Committee. The Composition of the Committee is given below:

1.	Chairman GFCC, Patna	Chairman
2.	Engineer-in-Chief Water Resources Deptt., Government of Bihar.	Member
3.	Engineer-in-Chief Irrigation Department, Government of U.P.	Member
4.	A Representative from Central Water and Power Research Station P.O.-Khadakwasla, Pune.	Member
5.	Chief Engineer (Research) Irrigation Research Institute, Government of Bihar, Patna.	Member
6.	Director Irrigation Research Institute, Government of Uttarakhand (Roorkee).	Member
7.	Director(Co-ordination) GFCC, Patna.	Member-Secretary

Since its constitution, 41 meetings of the Committee have been held upto 2009-2010 and recommendations were made for protection works to be executed before the next floods. The respective State Govts. executed the works as per recommendations of the Committee. The reimbursement under the scheme was started since 1997-98. The protection works in Nepal portion for which Government of India is making reimbursement is a central scheme.

During the year 2009-10, the meeting/site inspection by the committee was held in the month of October, 2009 and recommendations were made for the works to be carried out before the floods of 2010. The expenditure made by Government of U.P. in Nepal portion for maintaining the flood protection works on the right bank of the river Gandak is reimbursed by the Government of India.

During the year 2009-10 an amount of Rs. 16.9265 crore was reimbursed to the Govt. of Uttar Pradesh for works in Nepal portion based on the expenditure statement furnished by Irrigation Department U.P. Thus total fund provided during the XIth plan is Rs.18.0035 crore.

7.3 Schemes on Common/Border rivers in West Bengal

India shares 54 rivers with Bangladesh. At many places, these rivers have tendency to shift their course by eroding the banks on either side. Sites of active erosion are identified by both the countries and the bank protection works for such sites are finalized by consultation among the two countries.

Twenty four (24) such sites have been identified in Ganga Basin, which lie on seven rivers, namely, Mahananda, Nagar, Punarhaba, Atrai, Kulik, Karatowa and Tangon. Irrigation and Waterways Department, Government West Bengal is taking up bank protection work for such sites under the above plan scheme.

So far, three schemes are under implementation for bank protection works at 6 locations which were monitored during 2009-10. The proposals for other locations are under formulation.

Common Border Schemes in West Bengal	
1	Bank protection work on the left bank of Mahananda at Char Rishipur in BOP's Sukhnagar and Krishnanagar in Block & PS-Babilipur, District Malda (1800m), Estimate Cost Rs.1328.40 lakh
2.	Bank Protection work on the left bank of river Mahananda at Bauripara in BOP's Sukhnagar and Krishnanagar in Block and PS-Babibpur, district Malda (1200m) Estimated cost Rs.886.06 lakh
3.	Bank protection work on the left bank of river Mahananda at Nimughat, Mahajanpur, Manoharpur and English Tola in BOP's Muchia and Adampur in Block & PS-old Malda district-Malda (300m) Estimated Cost Rs.1293.99 lakh

During the year 2009-10, an amount of Rs.17.51 crore was released to the Govt. of West Bengal for the bank protection schemes.

CHAPTER- 8

COOPERATION WITH NEIGHBOURING COUNTRIES

8.1 India-Nepal Cooperation

Several rivers like the Gandak, the Bagmati, the Kamla, the Kosi etc. originate in Nepal and flow through the hilly tracts of Nepal before entering the plains of India. Heavy rains in the upper reaches not only bring floods of large magnitude but also carry huge quantities of sediment to the plain reaches of India. Hence any measures to be taken up to alleviate the flood and silting problem are to be done in an integrated manner with proper co-ordination between the two countries. GFCC is playing a vital role in this context by providing all the technical know-how and guidance.

As floods in Bihar and U.P are generally caused by the rivers coming from Nepal, long term solution to the problem of flood lies in the watershed management and construction of multi-purpose projects with flood cushion in the upper reaches to achieve flood moderation. Since suitable sites to locate reservoir/dams to control the floods lie in Nepal, the construction of these dams/reservoirs on these rivers is subject to agreement with Govt. of Nepal.

Govt. of India is having continuous dialogue with the Govt. of Nepal to mitigate the devastation caused by the flood from the rivers coming from Nepal. In order to have interaction at higher level pertaining to the cooperation in the field of water resources including implementation of existing arrangement and better understanding, India-Nepal Joint Committee on Water Resources (JCWR) headed by the Water Resources Secretaries of both the countries is functioning with the mandate to act as umbrella committee for all other sub-committees and groups under it. So far five meetings of the JCWR have been held which covered the entire gamut of bilateral cooperation in the water resources sector including flood management aspects and issues regarding multi-purpose projects on rivers coming from Nepal like the Sapta Kosi, the Sun Kosi, the Pancheshwar multi-purpose projects and other related matters.

In order to prevent spilling of flood water from the Bagmati, the Kamla, Lalakeya and the Khando rivers from Nepal side in the protected area in Bihar, both sides have agreed

to extend the embankments along these rivers from the India-Nepal border to high grounds in Nepal with corresponding strengthening of embankments on the Indian side. The work relating to this aspect is under various stages of implementation.

GFCC is also providing technical assistance by way of its officers leading or participating as members of the following Committees .

(1) Joint Standing Technical Committee (JSTC)

This Committee was constituted during the 3rd meeting of India-Nepal Joint Committee on Water Resources (JCWR) held from 29.09.08 to 01.10.08 at Kathmandu (Nepal). The JSTC is to coordinate the work of existing committees and sub-committees under the JCWR. The Constitution (Indian side) and terms of reference of the Committee is as under:

Sl. No.	Composition-Indian side	
1.	Chairman, GFCC, Patna	Team Leader
2.	Commissioner (Ganga), MOWR	Member
3.	Joint Secretary (Hydro), Ministry of Power	Member
4.	Chief Engineer (UGBO), CWC, Lucknow	Member
5.	Chief Engineer (HP & I), CEA	Member
6.	Director (North), MEA, New Delhi	Member
7.	Representative from EOI, Kathmandu	Member
8.	Engineer-in-Chief (North), WRD, Govt. of Bihar	Member
9.	Representative of Govt. of U.P	Member
10.	Representative from Govt. of West Bengal	Member
11.	Representative from Govt. of Uttarakhand	Member
12.	Sr.Joint Commissioner, MOWR	Member-Secretary

Terms of Reference of JSTC

1. To coordinate all existing Committees and Sub Committees under the JCWR

So far two meetings of JSTC have been held. The last meeting was held in Nepal on 30 -31 March, 2010 in which various issues were discussed and decisions taken for follow

up action in the matter.

(2) Joint Committee on Inundation and Flood Management (JCIFM)

This committee was constituted in the 4th meeting of India-Nepal Joint Committee on Water Resources (JCWR) held on 12-13, March, 2009 in New Delhi. This committee replaces the earlier bilateral committees namely SCIP, HLTC, JCFM, SCEC and SCFF. The Constitution (Indian side) and terms of reference of the committee is as under:

Sl.No.	Composition-Indian side	
1.	Member (Coordination), GFCC, Patna	Team Leader
2.	Chief Engineer, CWC, New Delhi	Member
3.	Chief Engineer (WRD), Govt. of Bihar/Chief Engineer, Irrigation Department, Govt. of U.P./Chairman, North Bengal Flood Control Commission, Govt. of West Bengal	Member
4.	Director (North), MEA, New Delhi	Member
5.	Sr.Joint Commissioner, MOWR	Member
6.	Representative of EOI, Kathmandu	Member
7.	Director (MP-II), GFCC, Patna	Member-Secretary
8.	Director (Finance), MEA/MOWR, New Delhi	Invitee

Terms of Reference of JCIFM

1. The JCIFM shall be an umbrella Committee to implement the decisions of JSTC in inundation and flood management issues.
2. The JCIFM shall address the issues related to flood management and inundation and can form task group(s), if required.
3. The JCIFM shall monitor the progress of works and provide guidance to task group(s) and report to JSTC.

So far three meetings of JCIFM have been held. The last meeting was held in Nepal

during 14 to 19 May, 2010 in which various issues relating to inundation, flood forecasting and extension of embankment in Nepal territory were discussed and appropriate decisions were taken.

8.2 India-Bangladesh Cooperation

The Indo-Bangladesh Joint Rivers Commission (JRC) was set up in November 1972 to discuss and sort out the issues related to common/border rivers between India and Bangladesh. The setup provides a platform for resolution of common problems related to developments works on common/border rivers, causing no harm to either side.

Under the aegis of above Commission, meetings are held at regular interval at various levels to discuss related issues. The decisions taken in such meetings are finally ratified by the Commission.

Various issues related to management of floods in common/border rivers have been discussed. The issues in respect of Ganga Basin under deliberations are summarized as under:

Bank Protection Works

Most of common/border rivers between India and Bangladesh traverse through alluvial plains and they keep on changing their course due to meandering and erode banks on either side. Bank protection works are thus required to arrest erosion at vulnerable points. The matter was discussed in the 36th meeting of JRC held in 2005 and at various subsequent occasions. Later in the Secretary (Water Resources) level meeting between India and Bangladesh held in August 2007, it was decided that bank protection works on identified sites could be taken up simultaneously on both sides within a time frame of three successive working sessions with similar specifications of works. The specifications of works to be undertaken were finalized in a technical level meeting held in December, 2009. As per the list exchanged between the countries, the bank protection works were proposed on 41 sites in India and 28 sites in Bangladesh. It was also agreed to add more sites as per requirement.

Dredging of river Ichamati

The matter related to dredging of river Ichamati to relieve the catchment of river

Ichamati from drainage congestion problem was discussed in the 18th meeting of the Standing Committee of JRC held from 20th to 31st May 2005 wherein the Indo Bangladesh Task Force (IBTF) for flood management was directed to formulate a proposal for de-silting of River Ichamati in the reach from Angrail to Kalanchi as an immediate measure. A tentative proposal for pilot de-silting of river Ichamati was considered in the specially convened meeting of the IBTF held on 8.6.2005 for placing the same for consideration of Standing Committee of the IBJRC, but the proposal was not accepted by the Bangladesh side.

Subsequently joint survey was conducted in the common border stretch of the river in August 2005. the matter was further discussed in the 36th meeting of the JRC held in September 2005. As per the decision taken during the meeting, a joint inspection by the Ministers of Water Resources of the both country was carried out in September, 2006.

The matter was again discussed in the Secretary level meeting held in August 2007. It was decided that the proposal for de-silting of river Ichamati could be placed for consideration for JRC in its forthcoming meeting and the work could be started at the earliest under supervision of a joint monitoring team. The issue was again discussed in a technical level meeting held during 5th to 6th December 2009, but matter could not be finalized.

The details of modalities and plan for desilting work was further discussed in Technical Level meeting held between both country from 30.12.2009 to 1.1.2010 and were finalized. The same was also endorsed in the Secretary Level meeting during 4-5 January, 2010.

As per the details finalized between India and Bangladesh, the work for desiltation of river Ichamati from Bornoberia to BSF Bridge at Kalanchi (total length: 20.415 km) has started from March 9 2010 under joint monitoring team of officials from both countries. An officer from Ganga Flood Control Commission has been deputed to attend the joint monitoring team from Indian side.

CHAPTER - 9

PROMOTION OF USE OF HINDI

9.1 Progressive Use of Hindi

An Official Language Implementation Committee is constituted in Ganga Flood Control Commission headed by the Chairman, GFCC. Both Members of GFCC and various Directors, Deputy Directors, Administrative Officer, P.S. to Chairman, Assistant Director (Gr.II), Hindi Translator and Branch heads from GFCC besides Dy. Director (Implementation), Official Language, Ministry of Home Affairs and one officer from Hindi Teaching Scheme are its members. Assistant Director (Gr-II) of the Commission is Member-Secretary of this committee. The Committee is required to hold its meetings once every quarter. In these meetings, detailed discussions are held on the quarterly progress reports and emphasis is given on achieving the targets laid down in the annual programme. The committee makes an assessment of actual position of progressive use of Hindi in day to day work of the Commission and suggests measures for removing the difficulties experienced at the working levels. During the year 2009-10, four meetings of the Committee were held.

Chairman, GFCC is a Member of Hindi Salahkar Samiti, Ministry of Water Resources and "Nagar Rajbhasa Karyanvayan Samiti", Patna. Chairman or any senior officer of the Commission participates in the meetings of above committees regularly.

9.2 Achievements

9.2.1 Achievements During 2009-10

During the year 2009-10 generally all office orders were issued in both languages i.e. Hindi and English. During the year 2009-10 out of 5720 letters issued by GFCC, 3439 were in Hindi. The region-wise break up is given below:

S. No.	Region	Total letters issued	Letters issued in Hindi
1	A	5606	3388
2	B	24	16
3	C	90	35
	Total	5720	3439

To increase the awareness of use of Hindi language, Hindi fortnight was organized from 14.9.2009 to 30.9.2009. Competition for General Knowledge was also organized among officials of the commission during this period. After evaluation, prizes were distributed among the winners.

The following officials of the Commission were awarded prizes:

(a) General Hindi / Competition (For "Grade- D" Staff only)		
Sl.No.	Name/Post	Prizes
1	Shri Rabindra Ram, Peon	Ist
2	Shri Rameshwar Yadav, Khalasi	IInd
3	Shri Badri Prasad, Gestetner Operator	IIIrd
4	Shri Girja Kant Poddar, Khalasi	IIIrd

Incentive scheme for doing original Hindi noting/drafting in official work is effectively introduced in the commission. During the year, cash award was given to the following three officials based on the work rendered by them in Hindi during the year 2008-09:

- | | | |
|----|--------------------------|------------|
| 1. | Md. Tufail Ahmed, U.D.C | Ist Prize |
| 2. | Shri Pappu Lal, LDC | Ist Prize |
| 3. | Shri Jitender Kumar, UDC | IInd Prize |

CHAPTER - 10

PARTICIPATION IN TRAININGS, WORKSHOPS AND SEMINARS

10.1 Training/Workshop/Seminar attended by GFCC officials:

During the year 2009-10, officers and staff of GFCC participated in various training programmes, workshops and seminars as per the details given below:

Sl. No.	Training Course/Workshop/Seminar	Dates	Name of Officers	Remarks
1	Workshop on Assam Integrated Flood and Bank Erosion Risk Management Project (to be funded by ADB) at CWC, New Delhi	23.9.09	Sh.S. Masood Husain Member (Planning) Sh. R.K.Sinha, Director (MP-I)	
2	National Seminar on Strategy for Water Resources Development and Management organized by Bihar State Productivity Council, at Patna	27.02.10 to 28.02.10	Sh.S. Masood Husain, Member (Planning) Sh. R.K.Sinha, Director (MP-I)	(Presented the key note address in the Seminar) Participant
3	Pay Fixation at ISTM , New Delhi	16.12.09 to 19.12.09	Sh. Tufail Ahmed, UDC	Participant
4	Regarding Investigation & Disciplinary Proceeding at Postal Staff College, Ghaziabad	08.03.10 to 10.03.10	Sh. Jitendra Kumar, Head Clerk	Participant

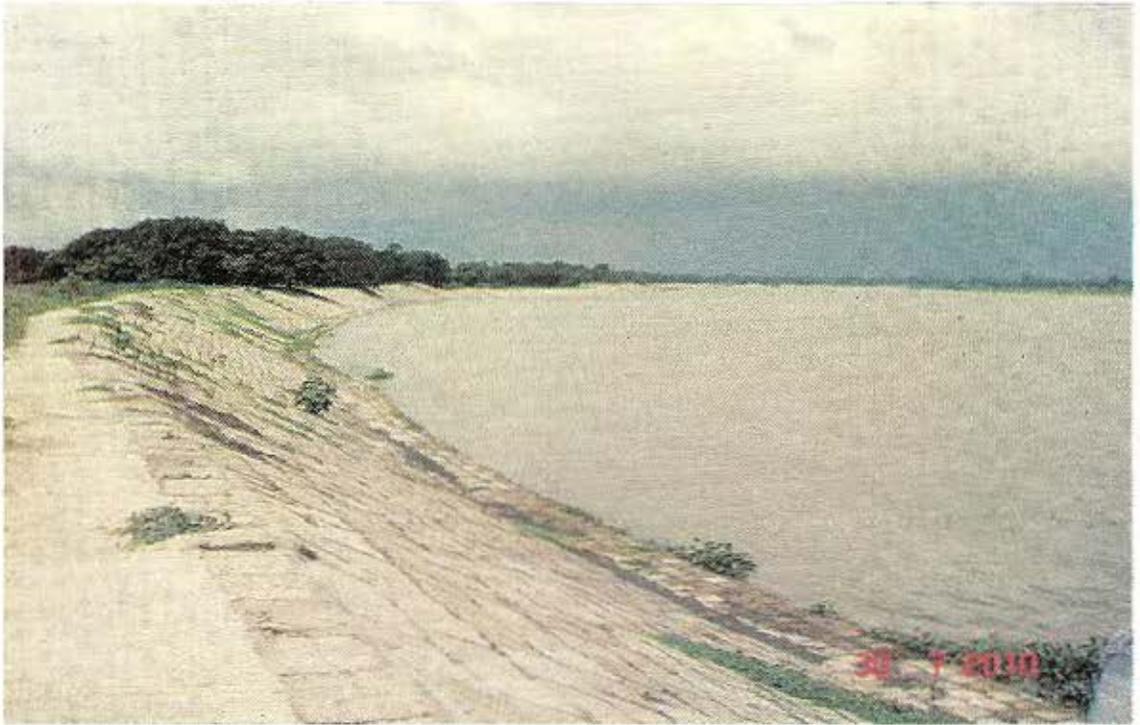
CHAPTER – 11

REPRESENTATION OF GANGA FLOOD CONTROL COMMISSION
IN VARIOUS COMMITTEES

Chairman, GFCC and other senior officers represent GFCC on various technical committees either as Chairman, Member-Secretary or as Members. The list of such Committees is given below.

Sl. No.	Name of Committee/ Board/ Experts/ Technical Group etc.	Representation of GFCC	
		Officer	Position in the Committee etc.
1.	Ganga Flood Control Board	Chairman, GFCC	Member-Secretary
2.	Ganga Flood Control Commission	Chairman, GFCC	Chairman
3.	India-Nepal Joint Ministerial Commission on Water Resources (JMCWR)	Chairman, GFCC	Member
4.	India-Nepal Joint Committee on Water Resources (JCWR)	Chairman, GFCC	Member
5.	India-Nepal Joint Standing Technical Committee	Chairman, GFCC	Indian Team Leader
6.	India Nepal Joint Committee on Inundation & Flood Management (JCIFM)	Member(C), GFCC	Team Leader
7.	Indian-Nepal Joint Committee on Kosi & Gandak projects	Member(C), GFCC	Member
8.	Indian National Committee on Hydraulic Research	Chairman, GFCC	Member
9.	Gandak High Level Standing Committee	Chairman, GFCC	Chairman
10.	Kosi High Level Committee	Chairman, GFCC	Chairman
11.	National Institute of Hydrology Society	Chairman, GFCC	Member
12.	Sahibi Standing Committee	Chairman, GFCC	Member
13.	U.P. State Committee of Engineers	Chairman, GFCC	Member
14.	Bihar State Committee of Engineers	Chairman, GFCC	Member
15.	West Bengal State Committee Of Engineers	Chairman, GFCC	Member
16.	M.P. State Committee of Engineers	Chairman, GFCC	Chairman
17.	Committee on siltation of rivers in India.	Chairman, GFCC	Member
18.	T.A.C. of Farakka Barrage Project	Chairman, GFCC	Member
19.	T.A.C. of Uttar Pradesh	Director, GFCC	Member
20.	T.A.C. of Himachal Pradesh	Director, GFCC	Member

Sl. No.	Name of Committee/ Board/ Experts/ Technical Group etc.	Representation of GFCC	
		Officer	Position in the Committee etc.
21.	T.A.C. of Haryana	Director, GFCC	Member
22.	T.A.C. of Rajasthan	Director, GFCC	Member
23.	T.A.C. of Bihar	Director, GFCC	Member
24.	T.A.C. of West Bengal	Director, GFCC	Member
25.	TAC of Jharkhand	Director, GFCC	Member
26.	TAC of Uttarakhand	Director, GFCC	Member
27.	TAC of Chhattisgarh	Director, GFCC	Member
28.	T.A.C. of Madhya Pradesh	Member(C), GFCC	Member
29.	Yamuna Standing Committee	Member(P), GFCC	Member
30.	R.V.D. 68, BIS, New Delhi	Member, GFCC	Member
31.	Coastal Protection And Development Advisory Committee	Member(P), GFCC	Member
32.	NNRMS Standing Committee on Water Resources (SC-WR)	Member, GFCC	Member
33.	NIH Regional Coordination Committee for Ganga Plain North Regional Centre	Representative of Chairman, GFCC	Member



भारत और बंगलादेश के बीच साझी/सीमा नदियों पर बाढ़-प्रबंधन विकास कार्य

Flood Management work on common border rivers between India and Bangladesh



कोसी एफलक्स बांध में आयी दरार को बांधने संबंधित कार्य

Works related to breach closer of river Kosi



कोसी एफलक्स बांध में आयी दरार को बांधने संबंधित कार्य

Works related to breach closer of river Kosi



FPW Sahab Nagar



उत्तराखंड में बाढ़ सुरक्षा योजना संबंधित कार्य

Works related Flood Protection Works in Uttarakhand