



**Government of India  
Ministry of Water Resources  
Ganga Flood Control Commission**

# ANNUAL REPORT 2012-13



**Patna**

# Table of Contents

From Chairman's Desk (ii)

Highlights of the year 2012-13 (iii)

---

1.	Introduction	1
2.	Comprehensive Plans for Flood Management	10
3.	Assessment of Adequacy of Waterways Under Road and Rail Bridges	12
4.	Flood Management Programme	13
5.	Appraisal of Flood Management Schemes	15
6.	Monitoring of Ongoing Flood Management Schemes	22
7.	River Management Activities and Works related to Border Areas	26
8.	Cooperation with Neighbouring Countries	33
9.	Promotion of use of Hindi	37
10.	Participation in Trainings, Workshops and Seminars	39
11.	Representation of Ganga Flood Control Commission in Various Committees	40

---

# From Chairman's Desk



The Ganga basin which covers the States of Bihar, Jharkhand, Uttar Pradesh, Uttarakhand, West Bengal, Haryana, Rajasthan, Madhya Pradesh, Chhattisgarh, Himachal Pradesh, and Delhi occurrence of floods in one part or the other is an annual feature during the monsoon period. Since the Ganga is an inter-state river, it is necessary to prepare integrated plans to tackle the flood and related problems of the basin and to ensure their implementation in a co-ordinated manner. Ganga Flood Control Commission was created in 1972 as a subordinate office of Ministry of Water Resources. Since its inception, GFCC has played a vital role in assisting the States to manage the floods in the Ganga basin. As a part of its mandate it has prepared comprehensive plans of all the 23 river systems of the Ganga basin and sent the same to the State Governments for taking follow up action on the suggestions made in these plans.

GFCC has carried out its assigned functions in an efficient and effective manner during the year 2012-13 which is described in detail in this report. Particular mention is to be made about the proactive role undertaken by the GFCC in the implementation of the scheme of Flood Management Programme in the Ganga basin, a scheme of national importance initiated by the Government of India during the 11<sup>th</sup> five year Plan. The scheme made good progress and a financial assistance to the tune of Rs.104.53 crore was provided to the Ganga basin States during the year 2012-13.

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 implementation of schemes on extension of the embankment on the international rivers of Lalbakeya, Bagmati and Kamla in Nepal has achieved good progress.

It gives me great pleasure to present the Annual Report of GFCC for the year 2012-13 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 during the year.

A handwritten signature in black ink, which appears to read "Bibhas Kumar". The signature is written in a cursive, slightly slanted style.

(Bibhas Kumar)  
Chairman

Ganga Flood Control Commission

# Highlights of the Year 2012-13

1. Techno-economic appraisal of 38 Flood Management schemes of various Ganga Basin States was carried, out of which 20 schemes were techno-economically cleared by GFCC/TAC-MoWR, whereas 18 schemes were examined and comments/observation were conveyed to State Governments.
2. Monitoring of 31 FMP Schemes pertaining to Bihar, Jharkhand, Uttarakhand, Himachal Pradesh, Uttar Pradesh and West Bengal was done and Central Assistance recommended during 2012-13.
3. GFCC monitors the construction of embankments on Kamla, Bagmati and Lalbakeya rivers in Nepal being funded by Government of India. For the purpose, one meeting of India-Nepal Joint Committee on Inundation and Flood Management (JCIFM) was held in March 2013.
4. Schemes for bank protection on common/borders rivers with Bangladesh in West Bengal implemented with funding under the Plan Scheme – “River Management Activities and Works related to Border Areas” were monitored by GFCC.
5. Recommendations for taking up flood management works on river Kosi and right bank of river Gandak before the flood of 2013 were made by Kosi High Level Committee (KHLC) and Gandak High Level Standing Committee (GHLSC) both chaired by Chairman, GFCC.
6. Updating of two Comprehensive Plans viz. Kosi and Rupnarain-Haldi-Rasulpur river system were under progress.
7. The 16<sup>th</sup> meeting of the Ganga Flood Control Board headed by Union Minister of Water Resources was held on 16<sup>th</sup> January, 2013 at New Delhi in which various issues related to floods and its management in Ganga basin states were discussed and various decisions were taken for follow up action.

# 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 Uttarakhand and Uttar Pradesh, 110 Km along Uttar Pradesh-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. 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 whereas the rest of the major right bank rivers originate either 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), Uttar Pradesh (particularly its eastern part) and West Bengal are the worst flood affected. The flood problems in the other Ganga basin states are not so severe. The reasons of 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 structures 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

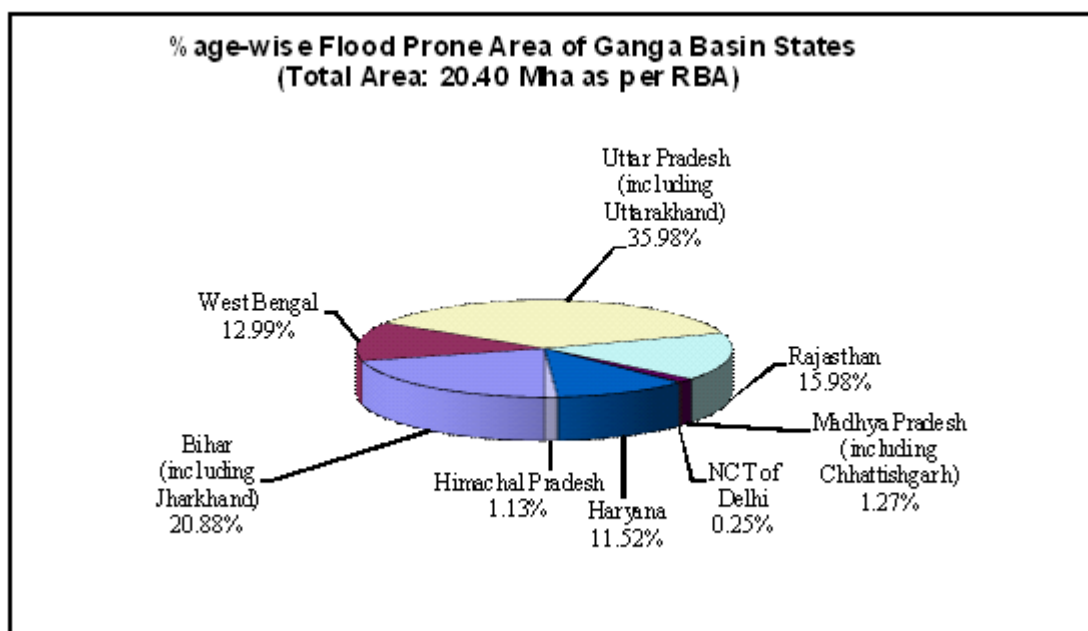
aggradation. The lower reaches where the bed slope is flatter and velocities are low, accumulation process i.e., sedimentation and accretion of the river bed is predominant. At the same time due to meandering, erosion and sedimentation take place simultaneously.

Ganga basin is spread over 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) Gomati, (2) Adhwara Group, (3) Ghaghra, (4) Mahananda, (5) Kamla Balan, (6) Burhi Gandak, (7) Bagmati, (8) Punpun, (9) Kosi, (10) Gandak, (11) Ajoy, (12) Kiul-Harohar, (13) Damodar, (14) Mayurakshi, (15) Yamuna, (16) Ramganga, (17) Tons, (18) Badhua-Chandan, (19) Rupnarain-Haldi-Rasulpur, (20) Jalangi, (21) Sone, (22) Tidal rivers and (23) Main Ganga Stem. Most of these rivers are interstate though few are within one state.

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 are given below:

Sl. No.	State	Flood Prone Area (in Lakh Ha.)	
		As assessed by RBA	As reported by States to 11 <sup>th</sup> Plan Working Group
1	Himachal Pradesh	2.30	2.31
2	Haryana	23.50	23.50
3	NCT of Delhi	0.50	0.70
4	Uttar Pradesh (including Uttarakhand)	73.36	73.40
5	Rajasthan	32.60	32.60
6	Madhya Pradesh (including Chhattisgarh)	2.60	3.37
7	Bihar (including Jharkhand)	42.60	68.80
8	West Bengal	26.50	37.66
	<b>Total :</b>	<b>203.96</b>	<b>242.34</b>



## 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 #
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

# (Chairman in absence of Union Minister of Water Resources)

Up to March 2013, 16 meetings of the Ganga Flood Control Board have been held. The 16<sup>th</sup> meeting of GFCB was held on 16.01.2013 at New Delhi in which various issues relating to floods and management in Ganga basin States were discussed and decisions taken for follow up action.

#### **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
<b>Full Time Members</b>		
2.	Member (Planning), GFCC	Member
3.	Member (Co-ordination), GFCC	Member



### **Part Time Members**

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 of 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**

- i) Chief Engineer, Incharge of Flood Control, Government of Haryana.
- ii) Chief Engineer, Incharge of Flood Control, Government of Himachal Pradesh.
- iii) Chief Engineer, Incharge of Flood Control, Government of Rajasthan.
- iv) Chief Engineer, Incharge of Flood Control, Government of NCT of Delhi.
- v) 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 basinwise 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 waterlogging 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 Government of India and the Ganga basin States pertaining to the subject of flood management.

GFCC apart from being engaged in the preparation and periodic updation 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 44 meetings of the GFCC have been held so far. The 44<sup>th</sup> meeting of GFCC was held on 12.03.2013 at New Delhi. 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.

### 1.7 Staff Strength in GFCC

Out of the total sanction strength of 101, 69 post were allowed to be continued during the year 2012-13. The filled staff strength of GFCC as on 31.3.2013 is 55. The category-wise details of the posts are given below.

S. No.	Group	Sanctioned	Continued allowed during 2012-13		
			Total	Filled	Vacant
1	A	23	18	14	4
2	B (Gazetted)	13	9	6	3
3	B (Non-Gazetted)	7	7	6	1
4	C	42	24	19	5
5	D	16	11	10	1
	<b>Total</b>	<b>101</b>	<b>69</b>	<b>55</b>	<b>14</b>

In addition, 18 work-charged staff comprising of 3 drivers, 3 Work Assistants and 12 Khalasis are also involved in various activities of GFCC.

All the Group 'A' posts and the posts in the grade of Assistant Director-II in Group 'B(Gazetted)' are from the Central Water Engineering Services Group A & B Services respectively.

### 1.8 Vigilance and Disciplinary Cases

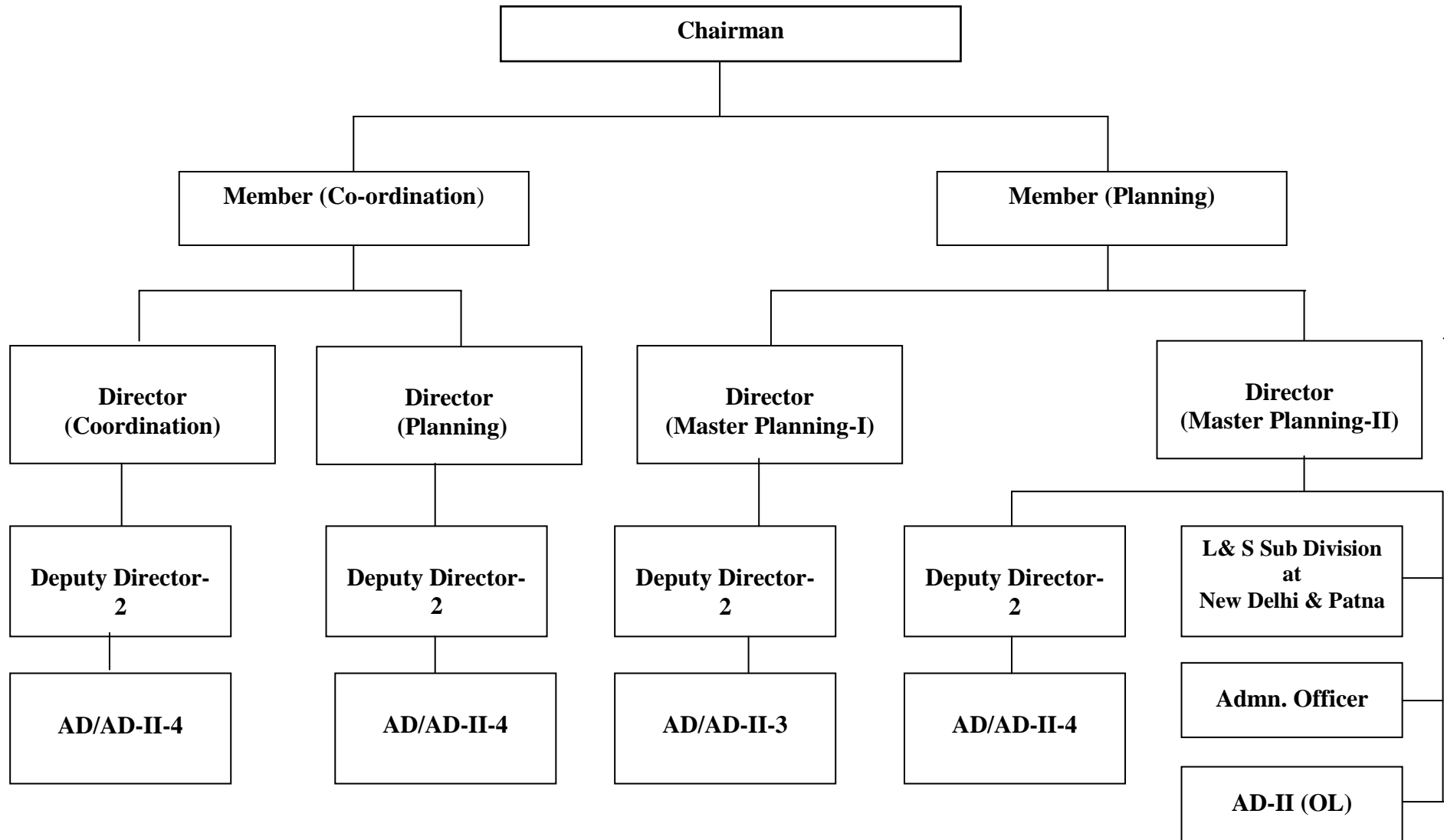
No vigilance or disciplinary case concerning any officer or staff was pending in the Commission during the year 2012-2013.

### 1.9 Parliament Questions and VIP References

1.9.1 Material for reply to 52 parliament questions was prepared 2012-13 and sent to the Ministry of Water Resources.

1.9.2 Material for reply to 17 VIP references was prepared and sent to the Ministry of Water Resources during 2012-13.

# GANGA FLOOD CONTROL COMMISSION ORGANISATION CHART



### 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 Central Public Information Officer (CPIO) and one Assistant Public Information Officer (APIO) to look into the requests made by the applicants and supply the information within stipulated time as provided in the Act. The names of the officers as on 31.03.2013 are as follows.

1	Sh.S. Masood Husain, Member (Coord.)	Appellate Authority
2	Sh. Ravi Bhusan Kumar, Director(MP-II)	Central Public Information Officer
3	Sh. Harsh Vardhan, AD (Liason & Survey subdivision, Additional charge)	Asstt. Public Information Officer

During the year 2012-13 eight requests were received in GFCC which were promptly replied directly to the applicant.

### 1.11 Financial Aspect

An expenditure of Rs. 480.40 lakh was incurred by GFCC during the year 2012-13. A statement showing sub-headwise final estimate and actual expenditure during 2012-13 is given below:

(Amount in Rs.)

S.No.	Head of account	Final Estimate 2012-13	Expenditure 2012-13
1	Salary	5,24,85,000	3,70,86,377
2.	Medical	4,00,000	78,068
3	Domestic Travel Expenses	37,40,000	30,57,983
4	Foreign Travel Expenses	5,00,000	73,193
5	Office Expenses	6,50,000	5,02,799
6	Minor Works	90,00,000	64,57,411
7	Machinery & Equipment	12,00,000	8,14,619
8	Over Time Allowances	10,000	9,917
	<b>TOTAL</b>	<b>6,79,85,000</b>	<b>4,80,40,367</b>

\*\*\*\*\*

# 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 occur. It was therefore felt necessary to prepare an integrated plan to tackle 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 Ganga basin. The Ganga basin is broadly divided into 23 river systems and comprehensive plans for flood management of these 23 river systems were prepared 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 associated 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 2013, 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 2012-13, the updating of Comprehensive plans of the Kosi and Rupnarain-Haldi-Rasulpur river system were under progress.

## 2.3 Monitoring of Floods and Preparation of Flood Reports

The flood situation in the year 2012 in Ganga Basin States was monitored and 18 weekly reports were sent to the Ministry of Water Resources.

The state-wise summary of flood situation during 2012 in Ganga Basin States is as under:

### **Rainfall**

The rainfall during the monsoon period during the year has been normal in the Ganga basin states except Bihar and western Uttar Pradesh

## **Flood situation in rivers in Ganga Basin**

According to data received from Central Water Commission, the State-wise flood situation in rivers was as under:

**Uttar Pradesh:** The River Ganga at Ballia, Narora (D/S) and Gangpur Siswan; River Ghaghra at Elign Bridge, Ayodhya, Darauli and Turtipar; River Sharda at Palia Kalan; river Burhi Rapti at Kakarahi; River Rapti at Balrampur; River Rohin at Trimohini ghat and River Kuwano at Chandradeep ghat were reported to flow beyond danger level during the monsoon months.

**Bihar:** The River Ganga at Gandhighat, Hathidah, Kahalgaon and Bhagalpur; River Kosi at Basua, Baltara and Kursela; River Bagmati at Benibad; River Mahananda at Dhengraghat and Jhawa; river Kamla Balan at Jhanjharpur; Adhwara Group rivers at Kamtaul and River Burhi Gandak at Khagaria were reported to flow above the danger level during the monsoon months

**West Bengal:** River Ganga at Farakka, River Mayuarakhshi at Maharo and River Kangsbati at Phulberia were reported to flow above the danger level during the monsoon months.

**Jharkhand:** River Ganga at Sahebganj and River Damodar at Ramgarh and Hindgir were reported to flow above the danger level during the monsoon months

There was no report of rivers flowing above danger level from other Ganga basin states.

## **Flood Damage**

No report regarding damage due to flood has been received from the states, however, according to data received from the website of Disaster Management Division, Ministry of Home Affairs, about 3.77 lakh people were affected by the flood during 2012 in the Ganga Basin States. A total loss of 433 human lives and 5130 cattles was reported in the region. A total no. of 83728 houses were reported to be partially / fully damaged. The crops in an area of about 21495 Hactare was also reported to be damaged. The total loss due to flood is reported to be Rs. 26103 Lakhs.

\*\*\*\*\*

# 3

## Assessment of Adequacy of Waterways under Road and Rail Bridges

---

**3.1** 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.

\*\*\*\*\*



# 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 neighbouring 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 was drawn up for implementation during the XIth Plan period. This plan scheme covers the 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, Government of India after 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 Govts. Besides Ministry of Finance the Committee has representatives from the Ministry of Water Resources, Ministry of Development for North Eastern Region (DONER), Ministry of Environment & Forests and Planning Commission.

The detailed schemes for flood management are 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 cover 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. are 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 / NRSC 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 (State-wise) and their progress during the XIth Plan are given below:

<b>Sl. No</b>	<b>State</b>	<b>No. of schemes approved</b>	<b>No. of schemes completed</b>	<b>No. of schemes under progress during 2012-13 (spillover schemes)</b>
1	Bihar	46	34	9 <sup>#</sup>
2	Jharkhand	3	1	2
3	West Bengal	11	6	4 <sup>*</sup>
4	Uttar Pradesh	24	6	18
5	Uttarakhand	12	4	8
6	Himachal Pradesh	1	-	1
	<b>Total</b>	<b>97</b>	<b>51</b>	<b>42</b>

# Two schemes of Bihar dropped by EC- FMP and one scheme foreclosed

\* One scheme of West Bengal withdrawn by the State Government

\*\*\*\*\*

# 5 | Appraisal of Flood Management Schemes

**5.1** Techno-economic appraisal of flood management schemes received from the Ganga basin States is an important activity of GFCC. As per revised guidelines issued by the Planning Commission on 29<sup>th</sup> June 2012, schemes estimated to cost between Rs. 12.5 crore (earlier Rs. 7.5 crore) and Rs.25 crore (earlier 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. 12.5 crore are cleared at the State level by the State Flood Control Boards. Schemes costing above Rs. 25 crore if found acceptable, after appraising 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. 12.5 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.

**5.2** The details of schemes examined during 2012-13 and their status are given below:-

S. No	Name of Scheme	Estimated Cost in Rs. Lakh	Status
	<b>Bihar</b>		
1	Estimate for A.E. work before flood 2012 in between 0.00 km to 28.00 km in Pipra Piprasi embankment	2430.00	Scheme cleared techno-economically
2	Estimate for anti erosion work before flood 2012 in between 28.0 km to 35.0 km of Pipra Piprasi embankment and 0.00 km to 6.68 km of G.H. portion of PPE	411.00	Suggested to get it cleared at their own level as the scheme is less than Rs. 12.5 crore

<b>S. No</b>	<b>Name of Scheme</b>	<b>Estimated Cost in Rs. Lakh</b>	<b>Status</b>
3	Anti erosion work near villages Khairpur, Raghapur, and Akidatpur at the left bank of river Ganga U/s of Vikramshila Setu in Bhagalpur district	6995.00	Under examination
4.	Anti Erosion work for restoration of spur no. 2,3,4 and 7 and revetment in between spur no. 4 to 7 near villages Ismailpur and Bindtoli at the left bank of river Ganga D/s Vikramshila Stu in Bhagalpur district	9964.00	Under examination
5	Bagaha town protection scheme (Phase- II)	14715.00	Under examination
6.	Anti Erosion work on the right bank of river Ghaghra near Sitab Diara	1854.00	Under examination
7.	Scheme for extension of embankment from Manouber to Phuhia with protection work at vulnerable points and brick soling road on top of embankment in between km 96.50 to 110.48 of right Kamla Balan embankment	6038.00	Under examination
8.	Raising and strengthening of flood protection embankment on Bangari river in East Champaran district	1868.00	Under examination
9.	Raising and strengthening of Lalbakeya left and right embankments, Bargania ring bundh and Doab embankment in East Champaran	3395.00	Under examination
10.	Construction of Head regulator, tagging bundh and edge protection work at Belwa on Bagmati river in Sheohar district (Bagmati flood management scheme, phase- IV (a) )	6700.00	Under examination
11.	Anti erosion work at Ramayanpur from Hardeo to Khatti	8120.00	Under examination
12.	Mahananda Flood Management Scheme Phase- II	41584.00	Under examination
13.	Bagmati Flood Management Scheme Phase- III	50810.00	Under examination
14.	Bagmati Flood Management Scheme Phase- III (b)	41765.00	Under examination
	<b>West Bengal</b>		
1.	Master Plan and DPR for Ghatal and adjoining area	174000.00	Scheme examined & observations sent to State Government

S. No	Name of Scheme	Estimated Cost in Rs. Lakh	Status
	<b>Uttar Pradesh</b>		
1	Flood protection works of historical village Karnvas situated on right bank of river Ganga in Bulandshahar district.	1374.00	Scheme cleared techno-economically
2	Flood protection works between dampener DS-2 to Sewerage treatment plant situated in downstream of Anupshahar town on right bank of river Ganga in Bulandshahar district.	1214.00	Scheme cleared techno-economically
3	Flood protection works between km 19.50 to km 21.00 of Alinagar – Ranimau bund along right bank of river Ghaghra in district Barabanki.	1467.00	Scheme cleared techno-economically
4	Revised project estimate for construction of Mahadewa-Uska bund along right bank of river Kunra in the district of Siddharthnagar.	2776.00	Cleared by TAC of MoWR
5	Scheme: Project estimate for flood protection works of Ushet Tatbund from km 12.700 to km 14.00 on left bank of river Ganga in Badaun district.	931.49	Scheme cleared techno-economically
6	Scheme for construction of balance work of embankment (under construction) from Aiera Bridge to Ambarpur along left bank of river Sharda in Lakhempur Kheri district.	2374.00	Scheme cleared techno-economically
7	Scheme for construction of marginal embankment upstream of Elgin Bridge along right bank of river Ghaghra in districts Barabanki.	17008.00	Cleared by TAC of MoWR
8	Project estimate for anti erosion works between km 0.650 of Main bund to km 13.600 of Sakraur Bhikharipur Ring bund along left bank of river Saryu/Ghaghra in Gonda district.	4151.00	Cleared by TAC of MoWR
9	Project estimate for anti erosion works to protect cluster of villages and Kadakka bund on right bank of river Rsmganga near villages Kadakka, Bir Singhpur, Naharaiya etc in Farrukhabad district	961.72	Scheme cleared techno-economically
10	Combined scheme for 9 flood protection schemes of Ghaghra river basin in the district of Basti.	8024.00	Cleared by TAC of MoWR
11	Project for protection of Abadi and residential area from flood on right bank of river Ganga from d/s of right guide bund to Ranighat in Kanpur district.	1392.00	Scheme cleared techno-economically

<b>S. No</b>	<b>Name of Scheme</b>	<b>Estimated Cost in Rs. Lakh</b>	<b>Status</b>
12	Revised project for construction of Balrampur- Bhadaria bund along right bank of river Rapti in Balrampur district	2561.00	Cleared by TAC of MoWR
13	Project for construction of Datnala-Baroda bund between Km. 0.00 to 15.400 on the R/B of river Ganga in the district of Kansiram Nagar (U.P.),	1418.00	Scheme cleared techno-economically
14	Project estimate for construction of Isampur Tat bund from km 0.00 to km 11.70 on left bank of river Ganga in Budaun (Bhim Nagar)	1381.00	Scheme cleared techno-economically
15	Revised project for R/S of Samaspur-Nardauli bund from km 0 to km 21.06 on R/B of Ganga in Kanshiramnagar	1498.00	Scheme cleared techno-economically
16	Project for construction of Marginal bund in Ramraj Khadar along right bank of river Ganga in Muzaffarnagar district.	2939.00	TAC Note under finalisation
17	Project for construction of pump house for pumping out flood water of Banda city by river Ken in Banda district.	1857.00	Scheme examined & observations sent to State Government
18	Project estimate for construction of Bairia-Sarya bund along right bank of river Rapti in the district of Gorakhpur.	3306.28	Scheme examined & observations sent to State Government
19	Scheme for raising & strengthening of Majhauuli Chandauli bund, Khairat Raibari bund & its 2 km extension, Kukurghati Bhingari bund & its 1.5 km extension in district Deoria and raising & strengthening of (-) 1.27 km extension of Rajpur Barhara bund in district Kushinagar	1493.01	Scheme examined & observations sent to State Government
20	Scheme for flood protection works along left bank of river Ghaghra in Dewaria district.	1701.72	Scheme examined & observations sent to State Government
21	Scheme for construction of Ramganga embankment from Kothiwal Dental college to Bypass Road Bridge along right bank of river Ramganga in district Moradabad.	<u>10079.00</u> 13416.00	Scheme examined & observations sent to State Government

<b>S. No</b>	<b>Name of Scheme</b>	<b>Estimated Cost in Rs. Lakh</b>	<b>Status</b>
22	Revised project estimate of Marginal Embankment along right bank of river Sarada & Ghaghra from Aiera bridge to Chahlari Ghat from km 0.00 to km 52.62 in Lakhimpur Kheri district.	8864.75	Scheme examined & observations sent to State Government
23	Project for flood protection works between km 0.500 to km 0.900, km 1.600 to km 1.970, & km 7.500 to km 7.800 of Bokta-Barwar bund in the district of Gorakhpur along right bank of river Rapti including brick on edge soling work between km 0.000 to km 11.250.	1343.58	Scheme examined & observations sent to State Government
24	Project estimate for restoration of A.P. bund from km 1.60 to 1.90 on right bank of river Gandak	1190.84	Scheme examined & observations sent to State Government
25	Project for flood protection works to protect village Shahpur, Belaon and Gigania on left bank of river Ghaghra in Gorakhpur district.	1236.92	Dropped due to cost less than 12.5 crore
26	Revised project for construction of Alipur-Barwara-LGC bund km 0.00 to km 15.00 on R/B of Ganga in Kanshiramnagar	994.96	Dropped due to cost less than 12.5 crore
27	Detailed project estimate for construction of pucca bathing ghat at Quila Ghat on left bank of river Yamuna in Allahabad City.	999.00	Dropped due to cost less than 12.5 crore
28	Project estimate of anti erosion works for protection of Sadiabad, Baghara, Bakshi Khurd, Daraganj Mohhalla and Nagbasuki temple situated on right bank of river Ganga in Allahabad city,	904.00	Dropped due to cost less than 12.5 crore
29	Project estimate for flood protection scheme of village Meerapur, Rafiaband and Bholapur on left bank of river Ramganga in Bareilly district.	788.70	Dropped due to cost less than 12.5 crore
30	Revised project estimate for construction of RCC Regulator at Nimni Nala and protection of Marginal embankment in the district of Banda. Phase-I	1206.78	Dropped due to cost less than 12.5 crore

<b>S. No</b>	<b>Name of Scheme</b>	<b>Estimated Cost in Rs. Lakh</b>	<b>Status</b>
31	Project estimate for protection of village group of Ballia-Bairia bund from km 27.100 to km 28.500 and B.S.T.bund from km 6.00 to km 7.00 by constructing pitching with launching apron on left bank of river Ganga in district Ballia	3489.98	Scheme examined & observations sent to State Government
	<b>Uttarakhand</b>		
1	Project for flood protection and anti erosion work along both banks of Dhela, Phika and Levra rivers (tributaries of Ramganga river) in Ramnagar, Kashipur, Jaspur, and Bazpur blocks, District- Nainital and Udham Singh Nagar	7582.00	Scheme under examination
2	Anti erosion scheme for village Jogipura, Gobra and Bainthkeri along left bank of river Kosi and its tributaries Dabka in Distt. Udham Singh Nagar of Uttarakhand	1496.00	Scheme under examination
3	Flood protection scheme to protect villages, canals and roads from river Kosi in Betalghat block, District Nainital	3121.00	Scheme under examination
4	Project for anti erosion scheme of nearby village at right bank of Sukhi river in block Haldwani, District Nainital	1627.00	Scheme under examination
5	Flood protection scheme in district Nainital for protection of villages, crop land and roads at right bank of Gola river (Gola barrage to Shrilanka Tapu) and protect Gujora and Puranpur kumtiya at left bank of Bhakhra river	3171.00	Scheme under examination
6	Flood protection scheme for protection of Ramnagar city alongwith Puchhari village in distt. Nainital	1489.00	Scheme under examination
7	Project estimate for construction of flood protection works on left bank of river Solani in Laksar block, distt. Haridwar	2051.00	Scheme cleared techno-economically
8	River training works (Marginal bunds and studs) for protection of population and agricultural land situated along both banks of river Solani of villages Rampur, Ibrahimpur, Solanipuram, Jamalpur etc. in Dist. Haridwar	3319.00	Scheme cleared techno-economically
9	Project for strengthening of old existing marginal bund on river Ganga and Baan Ganga in Dist. Haridwar	1753.00	Scheme cleared techno-economically



S. No	Name of Scheme	Estimated Cost in Rs. Lakh	Status
10	Project estimate for construction of studs and marginal bund for protection of population and agricultural land of villages situated at banks of river Solani in distt. Haridwar	1609.00	Scheme cleared techno-economically
11	Project estimate for construction of studs and marginal bund for protection of population and agricultural land of villages situated at banks of river Ganga in distt. Haridwar	3485.00	Scheme under examination
12	Project for strengthening of right marginal bund on river Ganga from Bhogpur to Balawali (km 0.000 to 20.500) stage- IInd	1319.00	Scheme under examination
13	Construction of flood protection work of Thature and Bhawan from Aglad river in Dist. Tehri	1444.00	Scheme under examination
14	Flood protection scheme for villages Langha to Jamankhata near NH-72 from Gayana Khaad and Sheetla river in Vikashnagar block, district Dehradun of Uttarakhand	1360.00	Scheme under examination
15	Flood protection works along Tons river and its tributaries in Mori block of district Uttarkashi	1335.00	Scheme under examination

#### Summary status of appraisal of schemes

State	Schemes cleared	Schemes examined & observations sent to State Government	Schemes under examination
Bihar	1	1	12
Jharkhand	-	-	-
West Bengal	-	1	-
Uttar Pradesh	15	16	-
Uttarakhand	4	-	11
Himachal Pradesh	-	-	-
Total	20	18	33

\*\*\*\*\*

# 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 2012-13, 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:

Sl. No.	Scheme Code	Name of Scheme	Approved Cost (Rs. in Lakh)
<b>Bihar</b>			
1	BR-1	Raising and Strengthening of Kamla embankment	5209.26
2	BR-2	Bagmati Flood Management embankment construction (Left bank 17.55 to 56.97 km, r/b 15.2 to 56.97 km)	13516.00
3	BR-9	Raising and strengthening of balance reaches of Tirhut embankment from 29.61-83.40 km	2627.65
4	BR-21	Raising and Strengthening of Piprasi-Pipraghat embankment and GH portion in Bihar	1471.60
5	BR-31	Raising and Strengthening of Kosi embankment in Bihar	33939.00
6	BR-32	Raising, Strengthening and extension of Bhutahi Balan embankment	3714.00
7	BR-41	Extension of embankment on left and right bank of river Kamala Balan in length of 11.42 km and 5 km. with brick soling road on top in left over reaches and protection work at two points on extended portion of right Kamala Balan embankment	5611.54
8	BR-42	Raising and strengthening of Lower Noon embankments including brick soling road and other auxiliary works.	2671.00

Sl. No.	Scheme Code	Name of Scheme	Approved Cost (Rs. in Lakh)
9	BR-44	Anti erosion works on river Gandak at Salahpur Tandaspur Chharki and Magarpal Chhalki (Rs. 6.65 crore) and at Paharpur Manorath (PhaseII) (Rs. 7.59 crore)	1423.79
10	BR-46	Breach closure of Saran embankment of anti erosion work and strengthening of Patahara Chharki embankment on river Gandak Gopalganj district in Bihar	5714.00
11	BR-47	Flood protection works of Pipra- Piprasi embankment on right bank of river Gandak, Champaran district	2173.00
12	BR-48	Bagmati Flood Management Scheme Phase- II Sitamarhi, Darbhanga, Samastipur districts	12094.00
<b>Jharkhand</b>			
1	JHK-1	Restoration , breach closure and protection work of right embankment of Siwaria Goregama scheme from Ch.0.00 to 855.00 along river Gerua	2012.00
2	JHK-2	Anti erosion work on the right bank of river Ganga at Narayanpur, Sahibganj district	927.00
3.	JHK-3	Anti-erosion work on the right bank of river Ganga from Budhwaria to Kanhaiyasthan, Sahibganj district	991.00
<b>Uttar Pradesh</b>			
1.	UP-12	Scheme for flood protection works along left & right bank of river Ghaghra in the districts of Bahraich, Barabanki, Gonda, Basti, Faizabad and Mau	841.53
2.	UP-13	Flood protection works along right bank of river Gandak in the district of Kushinagar, Uttar Pradesh	604.89
3.	UP-14	Scheme for flood protection work on left & right bank of river Ganga in the distt of J P Nagar, Shahjahanpur, Meerut and Bulandshahar	1191.67
4.	UP-15	Scheme for flood protection work on left & right bank of river Rapti in districts of Sidharthnagar & Gorakhpur	1638.46

Sl. No.	Scheme Code	Name of Scheme	Approved Cost (Rs. in Lakh)
5.	UP-18	Scheme for flood protection work on left & right bank of river Yamuna in districts of Muzaffar Nagar, Baghpat, Ghaziabad, Gautam Budha Nagar, Aligarha and Mathura.	Not recommended due to non-receipt of UC
6.	UP-19	Scheme for flood protection work on right bank of river Kho and Kosi and left and right bank of river Ramganga in Bijnor and Moradabad districts	300.81
7.	UP-20	Scheme for flood protection work on left & right bank of river Hindon in districts of Baghpat & Gautam Budha Nagar.	322.01
<b>Uttarakhand</b>			
1.	UK-01	Revised project estimate for construction of right marginal bund on river Ganga from Bhogpur to Balawali	2069.49
2	UK-05	Flood protection scheme in district-Nainital & district-Udhamsingh Nagar to protect chorgalia & Sitarganj area by Naundhour river & its tributaries	1423.87
3	UK-06	Flood protection of ITITI Jhajhra along Tons river and villages along five tributaries of Yamuna basin rivers in district-Dehradun	1065.00
4	UK-07	Flood protection of village Shyampur along Bangala Nala and village Shyampur-Garhi along Goila Nala, tributaries of river Ganga, Rishikesh Dehradun	1058.00
5	UK-08	Flood protection of village Ruhada (Haripur) from Yamuna river in tribal block Kalsi, district Dehradun	1043.00
6	UK-09	Flood protection scheme for Indra colony in village Kalsi from Amlawa river in tribal block Chakrata, district Dehradun	793.00
<b>West Bengal</b>			
1.	WB-14	Project for bank protection work along both banks of river Bharigathi at Sunderpur and Basantpuram Kaziparato Nabagram and Saharbatito Uttarasan Outfall in the district of Murshidabad and at Sanyalchar in the district Nadia	2366.00

Sl. No.	Scheme Code	Name of Scheme	Approved Cost (Rs. in Lakh)
2.	WB-15	Scheme for bank protection works along the right of river Ganga-padma at Ichalipara, Moya, Galadarya, Pachim Beechpara (Bamnabad in district Murshidabad and Basumari in district Nadia	2813.00
3.	WB-17	Master Plan and DPR for Kaliaghai-Kapleshwari- Baghai drainage basin scheme	32520

Based on the monitoring reports and recommendation of GFCC, the Ministry of Water Resources released a total amount of Rs. 104.53 crore to the State Governments of Bihar, Jharkhand, Uttar Pradesh and West Bengal during 2012-13. The total fund released upto 2012-13 under the Flood Management Programme is Rs. 1787.54 crore. The break up is given below:

(Amount in Rs Crore)

Sl. No	State	Approved Central Share	Amount Released in 2012-13	Total amount released upto March 2013
1.	Bihar	1089.92	45.35	726.14
2.	Jharkhand	29.48	4.27	21.34
3.	Uttarakhand	104.62	-	49.62
4.	Himachal Pradesh	31.21	-	16.20
5.	Uttar Pradesh	458.15	45.42	299.84
6.	West Bengal	1349.81	9.49	638.96
7.	Xth Plan Spill over	-	-	35.43
	<b>TOTAL</b>	<b>3063.19</b>	<b>104.53</b>	<b>1787.54</b>

\*\*\*\*\*

# 7

## River Management Activities & 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 executed 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 (River Management), 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., Government of Nepal, Biratnagar.	Member
9.	Dy. Director General, Water Resources Deptt. ,Government of Nepal, Kathmandu.	Member
10.	Chief Engineer, Water Resources Deptt., Government of Bihar, Birpur.	Member-Secretary

Like previous years, the KHLC inspected the protection works in November 2012 and recommended works to be carried out before the floods of 2013.

The expenditure incurred by Government of Bihar on protection works in Nepal, is reimbursed in full by Government of India under a central scheme. The reimbursement is made based on the expenditure statement received from the Government of Bihar for the amount involved in protection of the river Kosi in the Nepal portion.

## 7.2 Protection Works on Gandak

A similar Committee for the river Gandak namely Gandak High Level Committee (GHLC) was initially constituted by the then Ministry of Irrigation, Government of India vide office memorandum No.10/12/80-FC dated 12<sup>th</sup> 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 (GHLSC) 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 GHLSC 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, 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, 45 meetings of the GHLSC have been held upto 2012-13 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.

During the year 2012-13, the meeting / site inspection by the Committee was held in the month of November, 2012 and recommendations were made for the works to be carried out before the floods of 2013. 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.

### **7.3 Schemes on Common/Border rivers in West Bengal**

India shares 54 rivers with Bangladesh. At many places, these rivers have a 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, Punarbhaba, 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.

A total of 13 schemes for bank protection works at the above 24 sites on common/border rivers have been taken up by the State Government with funding under the Central Plan scheme "River Management Activities and work related to Border rivers". All aforementioned 13 schemes have been completed in 2012-13



In addition, a scheme for de-silting of river Ichamati along the Indo-Bangladesh Border has also been taken up and completed.

However, in the technical level meeting of Joint River Commission between India and Bangladesh which was held at Kolkata on 10<sup>th</sup> February 2012, some bank protection works (Indian side) were identified to be executed during XII plan. The Government of West Bengal has submitted twenty five nos. of schemes to GFCC for their techno-economic appraisal. Out of 25 nos. of schemes, GFCC has cleared 19 and rest 6 are under examination, as per list shown below:

**Status of Appraisal of schemes for common border rivers in West Bengal during XII plan**

S. No.	Name of scheme	Estimated cost (Rs in lakh)	Remarks
1	Protection to the left bank of river Atrai at downstream of Samjhia B.O.P. camp in P.S. Kumarganj, District- Dakshin Dinajpur (Phase- II) (Length- 240 m)	143.54	Cleared
2	Protection to the left bank of river Atrai near Rasulpur B.O.P. camp in P.S. Kumarganj, District- Dakshin Dinajpur (Length- 1295 m)	873.19	Cleared
3	Protection to the left bank of river Tulai near Purbasil B.O.P. camp in P.S. Kushmandi, District Dakshin Dinajpur (Length- 550 m)	218.63	Cleared
4	Protection to the right bank of river Punarbhava near Mallickpur, B.O.P. camp in P.S. Gangarampur, District Dakshin Dinajpur (Length- 525m)	265.67	Cleared
5	Protection to the left bank of river Tangon upstream and downstream of Iron bridge No. 1 near Kholtor B.O.P. camp in P.S. Kushmandi, district Dakshin Dinajpur (Length- 320 m)	153.81	Cleared
6	Bank protection work along the right bank of river Mahananda from 445/10-S to 448/3-S under Phansidewa B.O.P. camp (Indian side) in P.S. Phansidewa, District Darjeeling (Length-450 m)	194.52	Cleared
7	Bank protection work along the right bank of river Mahananda from 443/1-S to 445/10-S under Murikhewa B.O.P. camp (Indian side) in P.S. Phansidewa, District- Darjeeling (Length- 1250 m)	749.24	Cleared

<b>S. No.</b>	<b>Name of scheme</b>	<b>Estimated cost (Rs in lakh)</b>	<b>Remarks</b>
8	Bank protection work along the right bank of river Mahananda from 448/12-S to 730/M under Phansidewa B.O.P. camp (Indian side) in P.S. Phansidewa, District- Darjeeling (Length- 750 m)	321.62	Cleared
9	Bank protection work along the right bank of river Mahananda from 731/M to 731/24-R Laldasjote B.O.P. camp in P.S. Phansidewa, District- Darjeeling (Length- 2200 m)	1061.03	Cleared
10	Bank protection work along the left bank of river Mahananda at village Asrafpur in Mouza-Asrafpur in block and P.S. Habibpur, District- Malda (Length- 1100 m)	1095.61	Cleared
11	Bank protection work along the left bank of river Mahananda at village Asrafpur in Mouza-Asrafpur (from Plot No. 609 to 777, near Border Gate No. 43) in block and P.S. Habibpur, District- Malda (Length- 950 m)	957.46	Cleared
12	Bank protection work along the right bank of river Punarbhaba at Mouza-mahadebpur in B.O.P. Battali in block and P.S. Bamangola, District- Malda (Length- 300 m)	323.29	Cleared
13	Bank protection work along the left bank of river Mahananda at village Jadavnagar and Chandra Para in B.O.P. Sukhnagar in block and P.S. Habibpur, District- Malda (Length- 250 m)	263.22	Cleared
14	Bank protection work along the right bank of river Punarbhaba at Mouza-Nasratpur Pathar Mahadevbati within block and P.S. Habibpur, District- Malda under Anuradhapur B.O.P. (Length- 100 m)	710.75	Cleared
15	Bank protection work along the left bank of river Mahananda in B.O.P. Asrafpur in Mouza-Asrafpur (from plot no. 785 to 1015) in block and P.S. Habibpur, district Malda (Length- 950 m)	968.60	Cleared
16	Bank protection work along the right bank of river Punarbhaba at Mouza-Pathar Nasratpur and Dhaka Pathar within block and P.S. Habibpur, district Malda under Kaliabari B.O.P. (Length 1000 m)	709.27	Cleared

<b>S. No.</b>	<b>Name of scheme</b>	<b>Estimated cost (Rs in lakh)</b>	<b>Remarks</b>
17	Bank protection work along the left bank of river Punarbhaba at village- Kalibari within Mouza- Anuradhapur (Ananda Pathar) in block and P.S. Habibpur, district Malda under Kalibari B.O.P. (Length- 400 m)	283.11	Cleared
18	Protection to the right bank of river Nagar from erosion near Khunti B.O.P. camp and border fencing along the Indo-Bangladesh border in P.S. Jamalpur, district- Uttar Dinajpur (Length- 575 m)	220.84	Under examination
19	Protection to the left bank of river Kulik from erosion near Makorhat B.O.P. camp in P.S. Hemtabad, district- Uttar Dinajpur (Length- 350 m)	149.39	Cleared
20	Protection to the right bank of river Nagar from erosion near Morageti B.O.P. camp and border fencing along the Indo- Bangladesh border in P.S. Islampur, district- Uttar Dinajpur (Length- 520 m)	200.81	Under examination
21	Protection to the right bank of river Nagar from erosion near Hatkhola B.O.P. camp and border fencing along the Indo- Bangladesh border in P.S. Islampur, district- Uttar Dinajpur (Length- 480 m)	212.34	Under examination
22	Protection to the right bank of river Nagar from erosion near Fatepur B.O.P. camp and border fencing along the Indo- Bangladesh border in P.S. Islampur, district- Uttar Dinajpur (Length- 450 m)	200.567	Under examination
23	Protection to the right bank of river Nagar from erosion near Sonamati B.O.P. camp and border fencing along the Indo- Bangladesh border in P.S. Islampur, district- Uttar Dinajpur (Length- 500 m)	202.87	Under examination
24	Protection to the left bank of river Tangon from erosion near Padmakumari and Chandgaon B.O.P. in P.S. Kalianganj, district- Uttar Dinajpur (Length- 900 m)	415.07	Under Examination
25	Protection to the right bank of river Korotoya from erosion near Barmanbasti B.O.P. camp and border fencing along the Indo-Bangladesh border in P.S. Chopra, district Uttar Dinajpur (Length- 460 m)	224.02	Cleared

The year-wise status of funding under the above mentioned plan scheme is as under:

(Rs. in crore)

Sl. No.	State	Amount released						
		07-08	08-09	09-10	10-11	11-12	12-13	Total
1	West Bengal	NIL	NIL	17.51	71.31	39.49	NIL	128.49

\*\*\*\*\*

# 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 Government of Nepal.

Government of India is having continuous dialogue with the Government of Nepal to mitigate the devastation caused by the flood from the rivers coming from Nepal. In order to have interaction at highest level pertaining to the cooperation in the field of water resources, an India-Nepal Joint Ministerial Committee on Water Resources (JMCWR) with Indian side headed by Hon'ble Union Minister of Water Resources, has been constituted. So far only one meeting of JMCWR has taken place. The first meeting of JMCWR was held on 15.2.2012. For implementation of existing arrangements 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 seven 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. The last meeting of JCWR was held in January 2013.

In order to prevent spilling of flood water from the Bagmati, the Kamla, Lalbakeya 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 3<sup>rd</sup> meeting of India-Nepal Joint Committee on Water Resources (JCWR) held from 29.09.08 to 01.10.08 at Kathmandu (Nepal). The function of 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 are 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 Embassy of India, Kathmandu	Member
8	Engineer-in-Chief (North), WRD, Government of Bihar	Member
9	Representative of Government of U.P	Member
10	Representative from Government of West Bengal	Member
11	Representative from Government 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 three meetings of JSTC have been held. The last meeting was held in New Delhi on 13-14 September, 2011 in which various issues of bilateral concern were discussed and decisions taken.

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

This Committee was constituted in the 4<sup>th</sup> 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 are as under:

<b>Sl. No.</b>	<b>Composition-Indian side</b>	
1	Member (Coordination), GFCC, Patna	Team Leader
2	Chief Engineer, CWC	Member
3	Chief Engineer (WRD), Government of Bihar/Chief Engineer, Irrigation Department, Government of Uttar Pradesh / Chairman, North Bengal Flood Control Commission, Government 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 seven meetings of JCIFM have been held. The last inspection / meeting was held in March, 2013 in Nepal in which various issues relating to inundation and flood management were discussed and decision 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 36<sup>th</sup> 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 its catchment from drainage congestion problem has been discussed in various meetings since May 2005. As per the decisions taken in these meetings, the work for desiltation of river Ichamati from Bornoberia to BSF Bridge at Kalanchi (total length: 20.415 Km) was started in March, 2010. The scheme has been completed during 2012-13.

\*\*\*\*\*



# 9 Promotion of Use of Hindi

## 9.1 Progressive Use of Hindi

An Official Language Implementation Committee has been 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 suggest measures for removing the difficulties experienced at the working levels. During the year 2012-13, 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 a senior officer of the Commission participates in the meetings of above Committee regularly.

## 9.2 Achievements

### 9.2.1 Achievements During 2012-13

During the year 2012-13 generally all office orders were issued in both languages i.e. Hindi and English. During the year 2012-13, out of 5654 letters issued by GFCC, 4427 were in Hindi. The region-wise break up is given below:

S. No.	Region	Total letters issued	Letters issued in Hindi
1	A	5503	4297
2	B	21	19
3	C	130	111
	<b>Total</b>	<b>5654</b>	<b>4427</b>

To increase the awareness of use of Hindi language, Hindi fortnight was organized from 14.9.2012 to 28.9.2012. Competition for Hindi Essay, Noting/

Drafting and General Hindi/ 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:

<b>(a) Hindi Essay Competition</b>		
<b>S. No.</b>	<b>Name/Post</b>	<b>Prizes</b>
1	Shri Dilip Kumar Singh, Jr. Computer	First
2	Shri Rajeev Kumar Pandey, Stenographer Gr.I	Second
3	Shri Satish Kumar, LDC	Third
4	Shri Tapas Kumar Das, Stenographer Gr.I	Consolation

<b>(b) Hindi Noting &amp; Drafting Competition</b>		
<b>S. No.</b>	<b>Name/Post</b>	<b>Prizes</b>
1	Shri Sachindra Kumar Sharma, Sr. Computer	First
2	Shri Pappu Lal, LDC	Second
3	Shri Dilip Kumar Singh, Jr. Computer	Third

<b>(c) General Hindi / Knowledge Competition ( For “Grade- D” Staff only )</b>		
<b>S. No.</b>	<b>Name/Post</b>	<b>Prizes</b>
1	Shri Balmiki Prasad, Khalasi	First
2	Shri Rameshwar Yadav, Khalasi	Second
3	Shri Indradeo Paswan, Peon	Third

\*\*\*\*\*

# 10 | Participation in Trainings, Workshops and Seminars

During the year 2012-13, 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
1	Training course on “Purchase management in government (PMG-2) for gazette officers dealing with purchsase in Government offices” at ISTM, New Delhi	21.05.2012 to 23.05.2012	Sh. S. N. Singh, Deputy Director (MP-I)
2.	Workshop on “Fixation of pay for the officers dealing with pay fixation cases” at ISTM, New Delhi	22.08.2012 to 24.08.2012	Sh. Satish Kumar, LDC
3.	Training programme in “Microsoft office power point for officers and staff” at ISTM, New Delhi	27.08.2012 to 29.08.2012	Sh. Satyendra Narayan, Draftsman, grade-1
4	Training programme on “Behavioural Skills” at ISTM, New Delhi	18.03.2013 to 22.03.2013	Sh. Sachindra Kr. Sharma, Sr. Computer
5.	Indian Geotechnical Conference at IIT Delhi	13.12.2012 to 15.12.2012	Sh. Bibhas Kumar, Chairman

\*\*\*\*\*

# 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 are as under

Sl. No.	Name of Committee/ Board/ Experts/ Technical Group etc.	Representation of GFCC	
		Officer	Position
1	Ganga Flood Control Board	Chairman, GFCC	Member-Secretary
2	Ganga Flood Control Commission	Chairman, GFCC	Chairman
3	Gandak High Level Standing Committee	Chairman, GFCC	Chairman
4	Kosi High Level Committee	Chairman, GFCC	Chairman
5	India-Nepal Joint Ministerial Commission on Water Resources (JMCWR)	Chairman, GFCC	Member
6	India-Nepal Joint Committee on Water Resources (JCWR)	Chairman, GFCC	Member
7	India-Nepal Joint Standing Technical Committee	Chairman, GFCC	Indian Team Leader
8	India Nepal Joint Committee on Inundation & Flood Management (JCIFM)	Member(C), GFCC	Team Leader
9	Indian-Nepal Joint Committee on Kosi & Gandak Projects	Member(C), GFCC	Member
10	National Institute of Hydrology Society	Chairman, GFCC	Member
11	U.P. State Committee of Engineers	Director, GFCC	Member
12	Bihar State Committee of Engineers	Director, GFCC	Member
13	West Bengal State Committee of Engineers	Director, GFCC	Member
14	M.P. State Committee of Engineers	Director, GFCC	Member

Sl. No.	Name of Committee/ Board/ Experts/ Technical Group etc.	Representation of GFCC	
		Officer	Position
15	Technical Advisory Committee of Farakka Barrage Project	Chairman, GFCC Alternate: Member(P), GFCC	Member
16	Farakka Barrage Project Advisory Committee	Member(P), GFCC	Member
17	Tender Committee of Farakka Barrage Project	Member(P), GFCC	Member
18	T.A.C. of Bihar	Director, GFCC	Member
19	T.A.C. of Uttar Pradesh	Director, GFCC	Member
20	T.A.C. of Himachal Pradesh	Director, GFCC	Member
21	T.A.C. of Haryana	Director, GFCC	Member
22	T.A.C. of Rajasthan	Director, GFCC	Member
23	Technical Committee of West Bengal State Flood Control Board	Director, GFCC	Member
24	TAC of Jharkhand	Director, GFCC	Member
25	TAC of Uttarakhand	Director, GFCC	Member
26	TAC of Chhattisgarh	Director, GFCC	Member
27	T.A.C. of Madhya Pradesh	Director, GFCC	Member
28	Yamuna Standing Committee	Member(P), GFCC	Member
29	Coastal Protection And Development Advisory Committee	Member(P), GFCC	Member
30	NNRMS Standing Committee on Water Resources (SC-WR)	Chairman, GFCC	Member
31	NIH Regional Coordination Committee for Ganga Plain North Regional Centre	Director, GFCC	Member
31	Water Resources Division Council of Bureau of Indian Standards	Chairman, GFCC Alternate Member- Member(C),GFCC	Member
33	River Training & Diversion Works Sectional Committee (WRD-22) of Bureau of Indian Standards	Director (MP-II), GFCC Alternate Member- Director (P), GFCC	Member

\*\*\*\*\*

# GLIMPSES



**16<sup>th</sup> meeting of Ganga Flood Control Board chaired by Shri Harish Rawat, Hon'ble Union Minister (Water Resources) held on 16.1.2013 at New Delhi**



**44<sup>th</sup> meeting of Ganga Flood Control Commission chaired by Shri Bibhas Kumar, Chairman, GFCC held on 12.3.2013 at Delhi**

## GLIMPSES



Signing of minutes during the 7<sup>th</sup> meeting of JCIFM on 24<sup>th</sup> March 2013 in Kathmandu

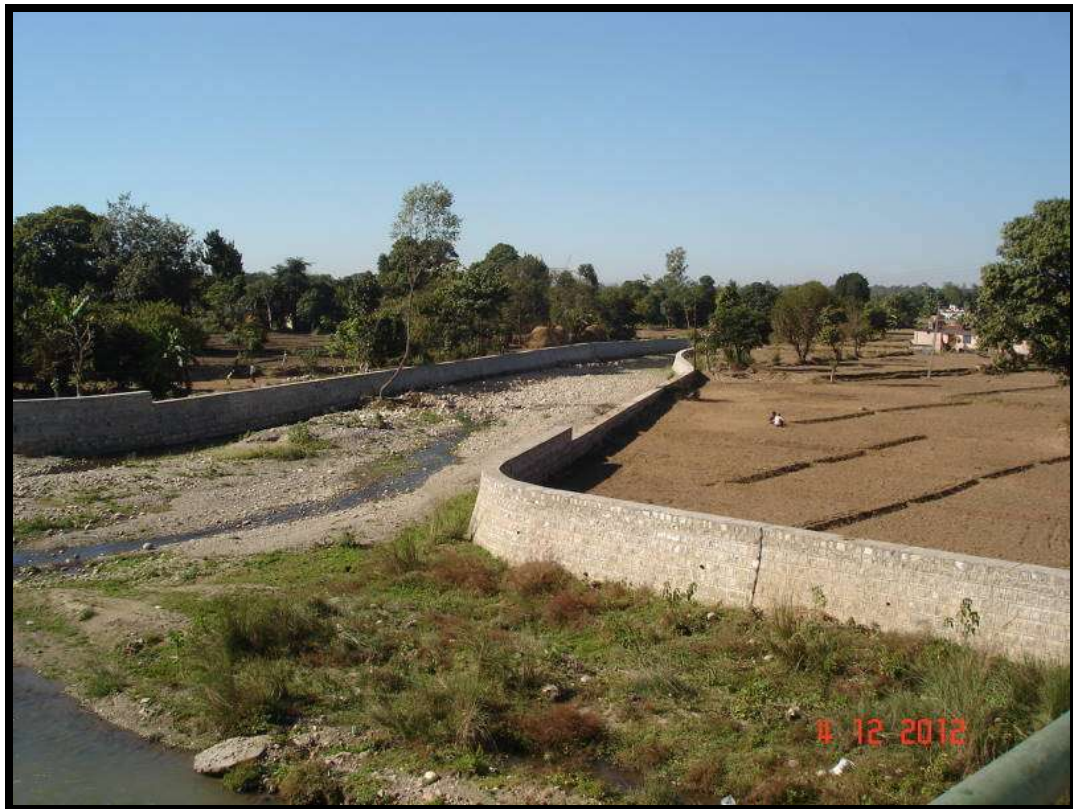


Distribution of prize to winners of competition organised during Hindi Pakwara 2012

# GLIMPSES



**Construction of embankment on river Ganga in District Haridwar**



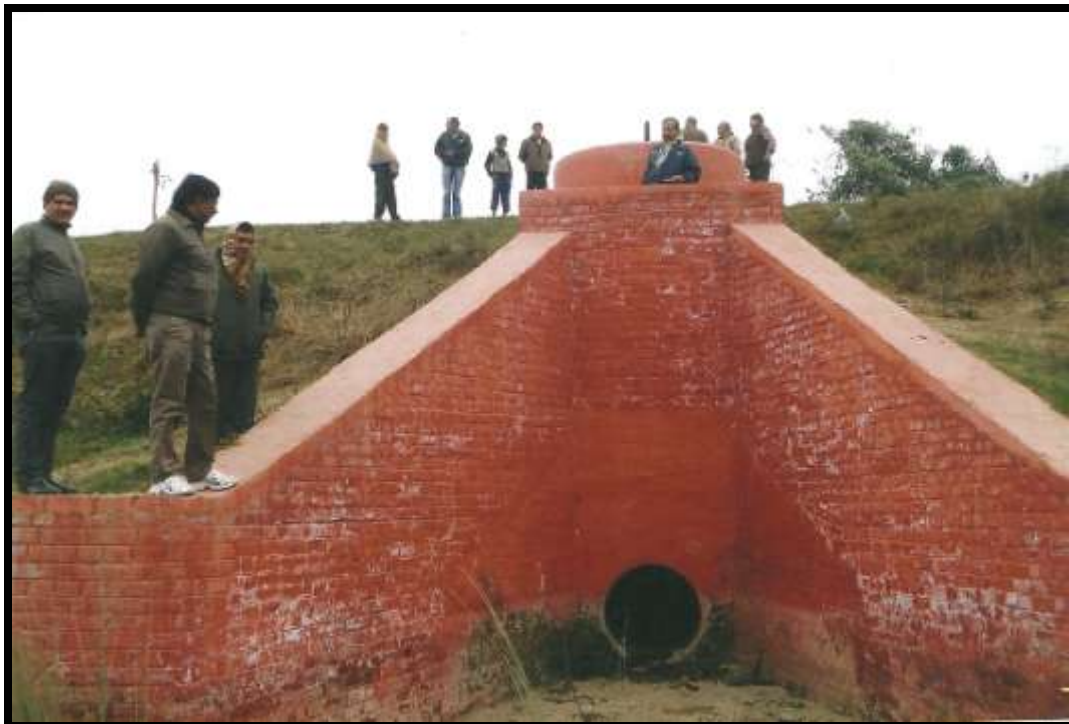
**Construction of river channelisation work on river Bangla Nala in Uttarakhand**



# GLIMPSES



**Anti-Erosion Works (boulder spurs) constructed on river Kamla in Nepal with funding from Government of India**



**Anti Flood Sluice constructed on river Bagmati in Bihar**