



**Government of India
Ministry of Water Resources, River
Development & Ganga Rejuvenation
Ganga Flood Control Commission**

ANNUAL REPORT 2014-15



Patna

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From Chairman's Desk



The Ganga River basin covers the eleven States of India comprising Bihar, Jharkhand, Uttar Pradesh, Uttarakhand, West Bengal, Haryana, Rajasthan, Madhya Pradesh, Chhattisgarh, Himachal Pradesh, and Delhi. The occurrence of floods in one part or the other in Ganga River basin is an annual feature during the monsoon period. Since the Ganga is an inter-state river, it is necessary to prepare integrated flood management plans to tackle the flood and related problems of the basin and to ensure their implementation in a co-ordinated and phased manner.

Ganga Flood Control Board (GFCB) was set up in 1972 inter-alia to lay down broad policies, decide priorities in the implementation of such schemes and issue directions to Ganga Flood Control Commission (GFCC). GFCC was created in 1972 as a subordinate office of Ministry of Water Resources to provide secretarial assistance to GFCB. Since its inception, GFCC has played a vital role in assisting the Ganga basin States to manage the floods. As a part of its mandate, GFCC has prepared comprehensive plans for flood management of all the 23 river systems of the Ganga basin, updated 22 comprehensive plans once, five comprehensive plans twice and has sent the reports to the State Governments for taking follow up actions on the recommendations made therein. GFCC has also prepared the reports for adequacy of waterways under road & rail bridges for all the 23 river systems except for main Ganga for the Buxor to Haridwar and Haridwar to Gangotri reaches and Tidal rivers, which are under preparation.

GFCC has carried out its assigned functions as described in detail in this report in an efficient and effective manner during the year 2014-15 in spite of many constraints, especially shortage of technical officers and secretarial staff. Particular mention is to be made about the proactive role played by GFCC in implementation of the schemes of Flood Management Programme (FMP) in the Ganga basin, a Programme of national importance initiated by the Government of India during the 11th Five Year Plan and continuing in 12th Plan. The FMP has made good progress and a financial assistance to the tune of Rs. 50.87 crore has been provided to the Ganga basin States during the year 2014-15.

Actions on modernization of GFCC which includes procurement of computers and software for technical support for efficient management of the works handled in GFCC have been initiated. Special efforts have been made to keep the GFCC premises clean by way of weeding out of old records and auction of unserviceable T&P materials.

GFCC officers have also 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 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 2014-15 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 blue ink, appearing to read 'G.S. Jha'.

(G.S. Jha)
Chairman

Ganga Flood Control Commission

Highlights of the Year 2014-15

1. Techno-economic appraisal of 87 Flood Management schemes of various Ganga Basin States was carried, out of which 45 schemes were techno-economically cleared by GFCC/TAC-MoWR, whereas 35 schemes were examined and comments/observations were conveyed to the concerned State Governments.
2. Monitoring of 15 Flood Management/Anti Erosion Schemes under FMP pertaining to Bihar, Uttar Pradesh and West Bengal was carried out and Central Assistance recommended.
3. GFCC monitors the progress of construction of embankments on Kamla, Bagmati and Lalbakeya rivers in Nepal being funded by Government of India. For this purpose, meetings of Indian-Nepal Joint Committee on Kosi & Gandak Projects (JCKGP) and India-Nepal Joint Committee on Inundation and Flood Management (JCIFM) were held at Kathmandu, Nepal in November, 2014 and February 2015 respectively.
4. Recommendations for taking up flood management works on river Kosi and right bank of river Gandak before the flood of 2015 were made by Kosi High Level Committee (KHLC) and Gandak High Level Standing Committee (GHLSC) respectively after inspection of sites. Both these Committee are chaired by Chairman, GFCC.
5. Updating of two Comprehensive Plans for Flood Management viz. Kosi and Rupnarain-Haldi-Rasulpur river system was taken up.
6. The 46th meeting of the Ganga Flood Control Commission was held on 19th November, 2014 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.
7. Chairman, GFCC took two negotiation meetings at New Delhi among the co-basin States, in accordance with Section-4 of the Inter-State River Water Dispute Act, 1956, on the request of Govt. of Bihar to the Ministry of Water Resources, River Development and Ganga Rejuvenation for constitution of a Tribunal for adjudication of Sone River Water dispute.
8. One regional office of GFCC opened at Lucknow in March 2015.
9. Chairman, GFCC took two meetings of the Expert Committee for formulation of guidelines for use of geo-textiles, geo-bags and geo-tubes in construction of flood management works and guidelines are in advance stage of finalization.

10. Chairman, GFCC took meetings with the officers of central government organizations and Water resources Department, Govt of Bihar for the revival of Phalgu river in Bihar and recommendations containing action points forwarded to Ministry.
11. A preliminary report for diverting the flow of the river Ganga towards right bank along Patna city was submitted to the Ministry. Chairman, GFCC took two meetings of the multi-disciplinary Techno-Administrative committee with members drawn from various Central and State departments constituted by the Chief Secretary, Govt. of Bihar for diverting the river Ganga water near Patna City on the directions received from Hon'ble High Court, Patna. The Committee has finalized the layout of the Channel to be constructed as an immediate measure for bringing Ganga waters near the Patna city. The Committee shall also suggest long term measures.
12. Officers of GFCC visited eight sites on different rivers in Ganga basin for the spot assessment of bank erosion and other flood management measures, river pollution and river front development. Visit reports have been submitted to the Ministry.
13. Actions on modernization of GFCC which includes procurement of computers, software for technical support for efficient management of the works handled in GFCC and refurbishing of the Committee room have been initiated.
14. Special efforts have been made to keep the GFCC premises clean by way of weeding out of old records and auction of unserviceable T&P materials as a part of 'Swachh Bharat Mission'.

1 Introduction

1.1 Ganga River 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 and form river Ganga which 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) before its outfall into 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. A line diagram of river Ganga is placed in Plate-1.1 at the end of this chapter. The Ganga river drains a total catchment area of 10.68 lakh Sq. Km, out of which 8.61 lakh Sq. Km lies in India. 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 Vindhyas or the plateau between the Ganga and the Vindhyas.

Ganga basin is spread over 11 States namely, (i) Uttarakhand, (ii) Himachal Pradesh, (iii) Haryana, (iv) Delhi, (v) Uttar Pradesh, (vi) Rajasthan, (vii) Madhya Pradesh, (viii) Chhattisgarh, (ix) Bihar, (x) Jharkhand and (xi) West Bengal.

The Ganga basin has been divided into 23 river systems. The river systems of the basin are (i) Gomati, (ii) Adhwara Group, (iii) Ghaghra, (iv) Mahananda, (v) Kamla Balan, (vi) Burhi Gandak, (vii) Bagmati, (viii) Punpun, (ix) Kosi, (x) Gandak, (xi) Ajoy, (xii) Kiul-Harohar, (xiii) Damodar, (xiv) Mayurakshi, (xv) Yamuna, (xvi) Ramganga, (xvii) Tons, (xviii) Badhua-Chandan, (xix) Rupnarain-Haldi-Rasulpur, (xx) Jalangi, (xxi) Sone, (xxii) Tidal rivers and (xxiii) Main Ganga Stem. Most of these rivers are inter-state though a few are within one state.

1.2 Flood Problem in Ganga Basin

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 main reasons of flood in the Ganga basin are as under:

- (i) Heavy precipitation for long duration in the catchment.
- (ii) Impediment of flow in tributaries and catchment drains by the river Ganga due to its high stage 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 reaches, 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.

As per XII Plan Working Group Report, total flood affected area in the country as a whole is about 50 million Ha, out of which 24 million Ha lies in Ganga Basin States i.e. nearly 50% of flood affected area in the country lies in Ganga Basin States.

A total area of 24.00 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 in the table 1.1 below and Figure 1.1:

Table 1.1

Sl. No.	State	Flood Prone Area (in Lakh Ha.)	
		As assessed by RBA	As reported by States to 12 th 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
	Total	203.96	242.34

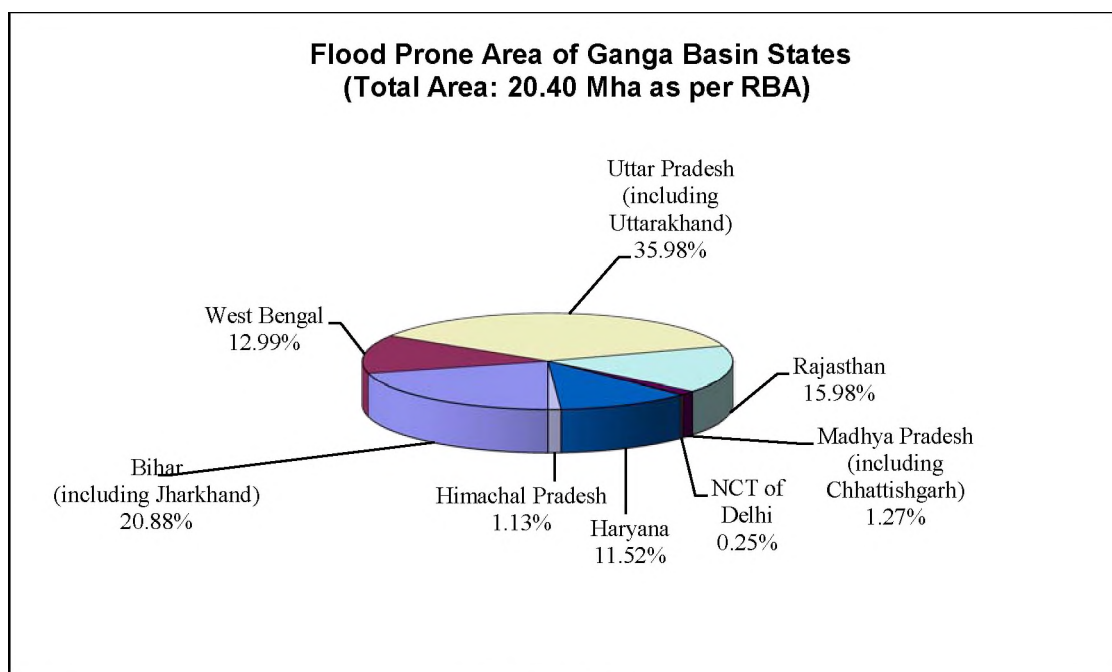


Figure-1.1

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 have 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.

1.2.1 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, 2014, 16 meetings of the Ganga Flood Control Board have been held. The 16th meeting of GFCB was held on 16.01.2013 at New Delhi in which various issues relating to floods and its management in Ganga basin States were discussed and necessary decisions were taken for implementation.

1.3 Ganga Flood Control Commission (GFCC)

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.

1.3.1 Composition of Ganga Flood Control Commission

The composition of Ganga Flood Control Commission (GFCC) is given below:

Chairman, GFCC

Chairman

Full Time Members

1. Member (Planning), GFCC Member
2. Member (Co-ordination), GFCC Member

Part Time Members

1. Member (River Management), Central Water Commission, Government of India, New Delhi Member
2. Chief Engineer, Incharge of Flood Control, Water Resources Department, Government of Bihar. Member
3. Chief Engineer, Incharge of Flood Control, Water Resources Department, Government of Jharkhand. Member
4. Chief Engineer, Incharge of Flood Control, Irrigation Department, Government of Uttar Pradesh. Member
5. Chief Engineer, Incharge of Flood Control, Irrigation Department, Government of Uttarakhand Member
6. Chief Engineer, Incharge of Flood Control, Irrigation and Waterways Department, Government of West Bengal. Member
7. Engineer-in-Chief, Water Resources Department, Government of Madhya Pradesh. Member
8. Engineer-in-Chief, Water Resources Department, Government of Chhattisgarh. Member
9. Director, Central Water and Power Research Station, Government of India, Pune. Member
10. Chief Engineer (Lower Ganga Basin), Central Water Commission, Government of India, Patna Member
11. Chief Engineer (Planning), Roads Wing, Ministry of Road Transport and Highways, Government of India. Member
12. 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.

1.3.2 Functions of GFCC

The main 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 flood control plans by the States concerned.
- (c) Formulate and ensure proper standards for works and their regular maintenance.

In due course of time, some additional works were entrusted to GFCC by Ministry of Water Resources and today its broad functions are as under:

- (a) To prepare and update a Comprehensive Plan of flood management in the Ganga basin comprising 23 river sub-basins. The field investigation and collection of data for the purpose are carried out by the concerned State Governments as directed by the Ganga Flood Control Board.
- (b) To draw out a phased and co-ordinated programme of implementation of works included in the sub-basin wise comprehensive flood management plans.
- (c) 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.
- (d) To prepare the annual programme of works and recommend allocation of funds, wherever required for consideration of the Board.
- (e) 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 and their periodic updation.
- (f) To monitor the execution of the important flood control schemes particularly those receiving central assistance or being executed under the central sector.
- (g) 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.
- (h) Processing the proposals received from Ganga Basin States for central funding under Flood Management Programme and monitoring of such schemes.

- (i) Documentation and dissemination of findings emerging out of special studies or investigations conducted in participation with scientific organisations for appropriate use by basin States.
- (j) To evaluate the performance of major flood control measures executed by the States including all the inter-State flood control schemes.
- (k) 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 responsible for carrying out techno-economic appraisal of flood management and anti-erosion schemes in the Ganga basin. It has also been given the task of coordinating several activities concerning flood management with Nepal and Bangladesh.

1.3.3 Annual Meetings of Ganga Flood Control Commission

A total of 46 meetings of the GFCC have been held so far and its 46th meeting was held on 19.11.2014 at New Delhi under the Chairmanship of Chairman, GFCC. In the meetings, various issues pertaining to the Ganga Basin such as floods management and anti-erosion works, 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 for flood control, monitoring and evaluation of flood management schemes, use of remote sensing techniques/satellite imageries for delineation of flood plain areas, use of model studies before formulation and execution of flood management and anti-erosion schemes, preparation of annual catalogue of flood management schemes etc. were discussed and decisions taken thereon for follow up action by the Ganga basin States / Central organisations concerned.

1.3.4 Organisational Structure of GFCC

Ganga Flood Control Commission has sanctioned strength of 101 officers and supporting staff. Out of the total sanctioned strength of 101, sixty three posts were allowed to be continued during the year 2014-15 as other posts had gone into deemed abolished category and their revival is required. The filled staff strength of GFCC as on 31.3.2015 is 59. The category-wise details of the posts are given below.

Table 1.2

S. No.	Group	Sanctioned	Continuation of Posts conveyed by MoWR for 2014-15		
			Total	Filled	Vacant
1	A	23	17	15	2
2	B (Gazetted)	13	6	4	2

S. No.	Group	Sanctioned	Continuation of Posts conveyed by MoWR for 2014-15		
			Total	Filled	Vacant
3	B (Non-Gazetted)	7	6	6	0
4	C	42	20	19	1
5	D	16	10	9	1
	Total	101	59	53	6

Organisation Chart of GFCC is in Figure-1.2.

In addition, 20 work-charged staff comprising of 4 Motor Vehicle drivers (2 vacant), 4 Work Assistants and 12 Khalasis (2 vacant) are also on the strength of GFCC for carrying out various field activities.

All the Engineering cadre posts from Chairman and up to the level of Assistance Director-II in GFCC are from the Central Water Engineering Services Group 'A' & 'B' Services.

1.4 Vigilance and Disciplinary Cases

No vigilance or disciplinary case concerning any officer or staff was pending or contemplated in the Commission during the year 2014-15.

1.5 Parliament Questions and VIP References

- (i) 32 Parliament questions were received by GFCC during 2014-15. The material for reply to these questions was prepared and sent to the Ministry of Water Resources.
- (ii) 16 VIP references on various matters were received by GFCC during 2014-15. The material for reply to these references was prepared and sent to the Ministry of Water Resources.

GANGA FLOOD CONTROL COMMISSION ORGANISATION CHART

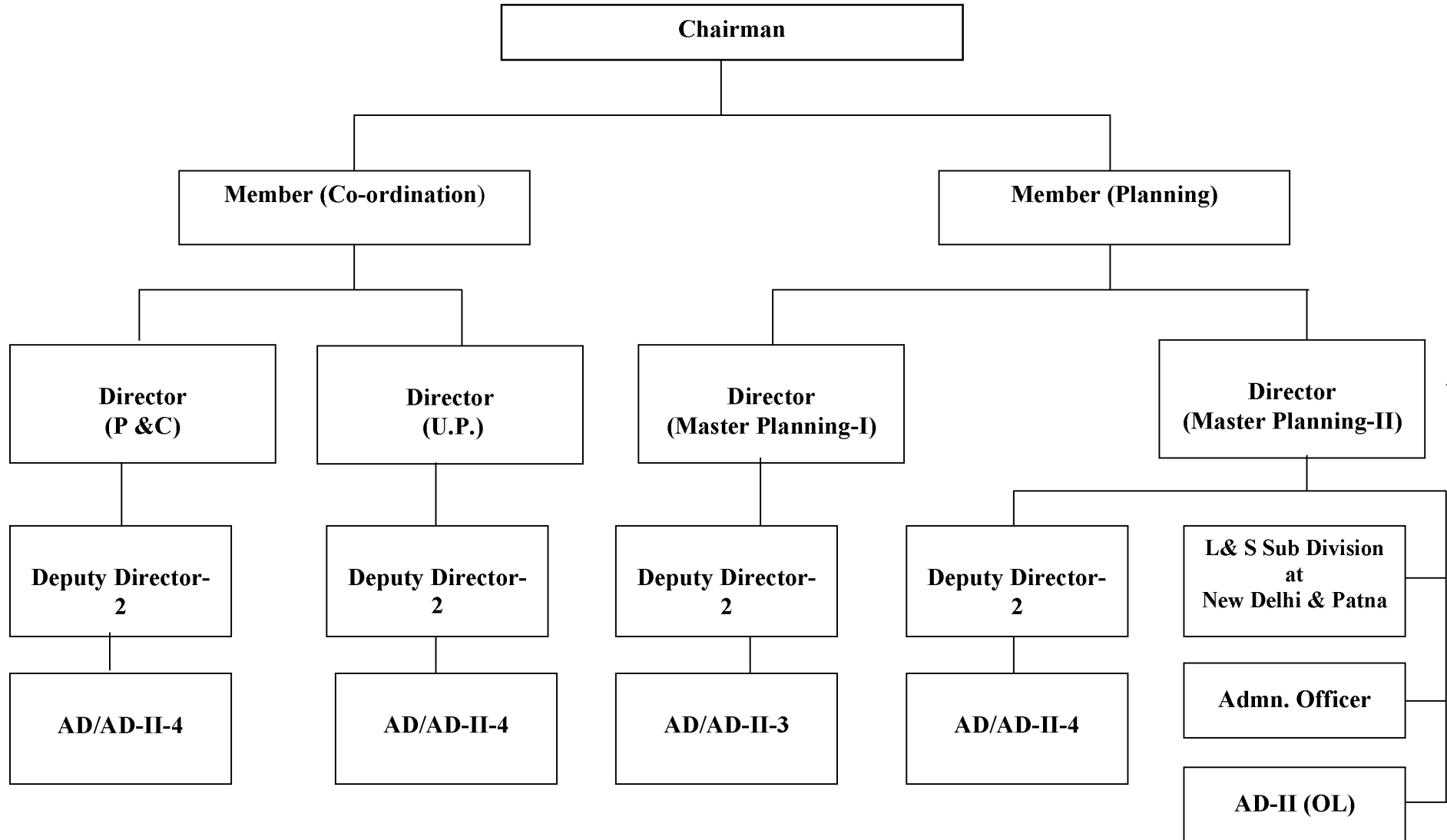


Figure -1.2
9

1.6 Implementation of RTI Act, 2005

The Ganga Flood Control Commission has designated the following officers as Appellate Authority, Central Public Information Officer (CPIO) and Assistant Public Information Officer (APIO) to provide information to the applicants in compliance of RTI Act, 2005.

1	Sh. A.K. Sinha, Member (Planning)	Appellate Authority
2	Sh. Sharad Chandra, Director(MP-I)	Central Public Information Officer
3	Sh. Harsh Vardhan, Assistant Director	Asstt. Public Information Officer

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 its Website (<http://gfcc.bih.nic.in>).

During the year 2014-15, forty three requests for supply of information under RTI Act, 2005 were received in GFCC. The necessary information was provided to applicants in compliance of said Act.

1.7 Financial Aspect

An expenditure of Rs. 550.98 lakh was incurred by GFCC during the year 2014-15. A statement showing sub-head-wise final estimate and actual expenditure during 2014-15 is given below:

Table 1.3

(Amount in Rs.)

S.No.	Head of account	Final Estimate 2014-15	Expenditure 2014-15
1	Salary	4,38,90,000	4,19,55,000
2.	Medical	3,00,000	1,33,000
3	Domestic Travel Expenses	30,00,000	29,97,000
4	Foreign Travel Expenses	7,00,000	1,29,000
5	Office Expenses	10,00,000	9,85,000
6	Minor Works	80,00,000	68,69,000
7	Machinery & Equipment	25,00,000	20,25,000
8	Over Time Allowances	10,000	5,000
	TOTAL	5,94,00,000	5,50,98,000

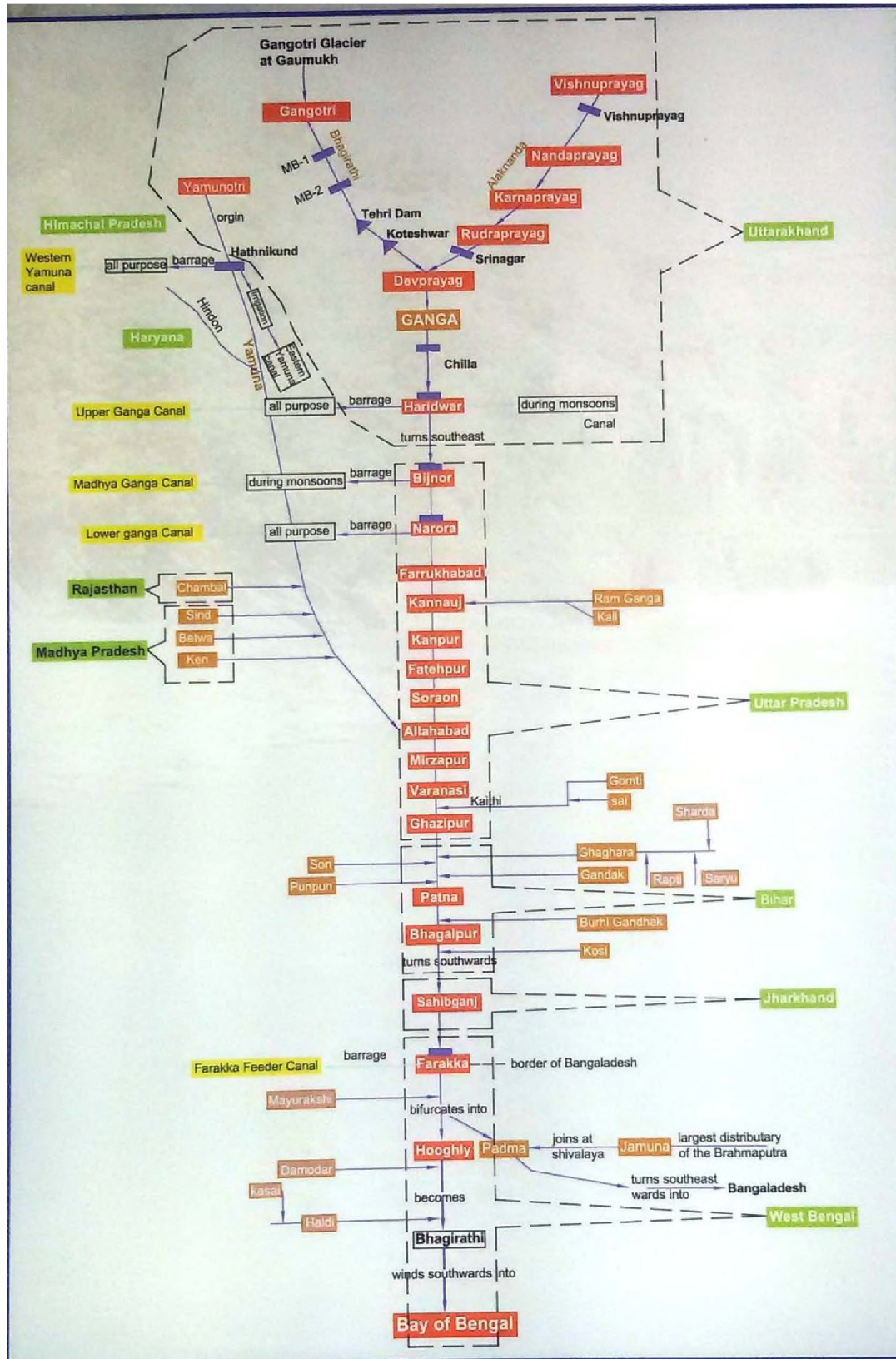


Plate-1.1: Line Diagram of River Ganga

GLIMPSES



46th meeting of Ganga Flood Control Commission chaired by Shri G.S Jha, Chairman, GFCC held on 19.11.2014 at Delhi



2

Comprehensive Plans for Flood Management

2.1 Preparation of Comprehensive Plans for Flood Management

In the Ganga basin, 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, the large scale damage due to floods often occur every year. 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 by GFCC between 1975 and 1990. These comprehensive plans were then circulated to the State Governments concerned for preparing specific schemes for implementation as per recommendations given therein.

2.2 Updating of Comprehensive Plans for Flood Management

Due to changes in the behaviour of the rivers in the Ganga basin over a period of time and for other associated changes, it was considered necessary to update the Comprehensive Plans for flood management of all the river systems periodically. This work was started in 1986 and till March 2015, GFCC has updated comprehensive plans for twenty two river systems once and five comprehensive plan twice.

The updated comprehensive plans were also circulated to the State Governments concerned for further follow-up action.

During the year 2014-15, the work of updating of Comprehensive plans of the Kosi and Rupnarain-Haldi-Rasulpur river system were taken up.

2.3 Monitoring of Floods and Preparation of Flood Reports

The flood situation in the year 2014 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 2014 in Ganga Basin States is as under:

2.3.1 Rainfall

The monsoon arrived late and withdrew late this year leaving 30% area of the country with deficient rainfall. The country received near-normal rainfall (94%) during the period July-September, but due to large deficiency in June, the

country as a whole received deficient rainfall (88%). The four-month long monsoon season ended with 12 percent below average rainfall, making it the worst in five years. The dry run in the first half forced Haryana and Uttar Pradesh to declare droughts. Uttar Pradesh and Bihar experienced a flood-like situation too due to heavy rainfall in catchment areas of Nepal and release of water in barrages.

2.3.2 Flood situation in rivers in Ganga Basin

According to data received from Central Water Commission, the State-wise flood situation in rivers during 2014-15 was as under:

- (i) **Uttar Pradesh:** The River Ganga at Ballia, Haridwar and Norara (DS); River Ghaghra at Elign Bridge, Ayodhya, and Turtipar; River Sharda at Palia Kalan and Sarda Nagar; River Buhi Rapti at Kakarahi; River Rapti at Balrampur, Birdghat, Bhinga, Kakardhari and Bansi; River Gandak at Khadda and River Ramganga at Muradabad and Dabri were reported to flow beyond Danger Level during the monsoon season.
- (ii) **Bihar:** The River Ganga at Gandhighat and Kahalgaon; River Kosi at Basua, Baltara and Kursela; River Bagmati at Benibad and Hayaghat; River Ghaghra at Darauli and Gangpur Siswan; River Burhi Gandak at Khagaria and Lalbeghiaghat; River Gandak at Rewaghat; River Mahananda at Dhengraghat and Jhawa; River Kamla Balan at Jhanjharpur and Adhwara Group rivers at Kamtaul and Ekmikghat were reported to flow above the Danger Level during the monsoon months.
- (iii) **Jharkhand:** River Ganga at was reported to flow above the Danger Level during the monsoon months
- (iv) **West Bengal:** River Ganga at Farakka was 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.

2.3.3 Flood Damage

As per the report of Disaster Management Division, Ministry of Home Affairs about 43.18 lakh people were affected by the flood during 2014 in the Ganga Basin States. A total loss of 418 human lives and 583 cattles was reported in the region. A total no. of 34543/8524 houses were also reported to be partially/fully damaged. The crops in an area of about 1287.52 lakh ha. were also reported damaged. The total loss due to flood is reported to be Rs. 34476.66 Lakhs (excluding Uttarakhand and Uttar Pradesh)

3

Assessment of Adequacy of Waterways under Road and Rail Bridges

3.1 This exercise is aimed at determining additional waterways required for reducing drainage congestion to a reasonable limit. This activity which commenced during the latter half of the eighties has been completed except for some stretches of the Ganga main stem.

3.2 These reports have been circulated to the Ganga basin States and departments of Central and State Governments concerned for follow up action. The list of river basins along with the year of completion of reports on adequacy of water ways is given in Table 3.1.

Table 3.1

List of Adequacy of Waterways under Road & Rail Bridges

Sl. No.	Name of Basin	Year of Completion
1	Punpun	1986
2	Ajoy	1987
3	Burhi Gandak	1987
4	Mayurakshi	1988
5	Bagmati	1988
6	Mahananda	1989
7	Damodar	1990
8	Yamuna	1990
9	Jalangi	1991
10	Gandak	1991
11	Gomati	1991
12	Ghaghra	1992
13	Ramganga	1992
14	Rupnarayan Haldi Rasulpur	1993
15	Tons	1994
16	Kamla Balan	1994
17	Adhwara Group	1996
18	Kiul-Harohar	1996
19	Badua Chandan	1997
20	Sone	1999
21	Kosi	2002
22	Damodar (updating)	2003
23	(a) Ganga (Buxar to Sahabaganj)	2005

	(b) Ganga (Sahabganj to outfall)	2011
	(c) Ganga (Haridwar to Gangotari)	<ul style="list-style-type: none"> • Survey from Haridwar to Harsil (via Devprayag, Tehri, Chamba and Uttarkasi) completed. • Survey from Harsil to Gangotri to be done. • Survey from Devprayag to Joshimath (via Rudraprayag-Karanprayag-Gopeshwar) to be done. • Drawing works from Haridwar to Harsil under progress.
	(d) Ganga (Buxar to Haridwar)	Survey completed.

The balance works at (b) and (c) are proposed to be taken up next year i.e. 2015-16.

3.3 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.

4

Flood Management Programme

4.1 Background

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.

4.2 Flood Management Programme

Keeping in view the recommendations of Task Force and other similar committees, a Plan Scheme titled 'Flood Management Programme' with a budget of Rs.8000 crore under the State sector was drawn up by MoWR for implementation during the XI Plan period. This scheme continued in XII plan with a budget of Rs.10000 crore. 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 erstwhile 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 erstwhile Planning Commission.

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

- (i) For special category States – 70%.

(The special category States cover the North Eastern States, Sikkim, Himachal Pradesh, Jammu & Kashmir and Uttarakhand)

- (ii) For non-special category States – 50%.
- (iii) For restoration of damaged flood management works and funding pattern for such works will be applicable to respective category of State. Central Assistance will not be provided for regular maintenance of flood management works but only for restoration of flood management works damaged under force majeure like conditions. It would be ensured that such works are not covered under CRF (SDRF)/NCCF (NDRF).

The schemes which got Investment clearance from erstwhile Planning Commission before 30.7.2013 continued to get central assistance as per the pattern of XI Plan. The central assistance was provided to the State Governments on the following funding pattern in XI Plan:

- (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%.

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

4.3 Monitoring of schemes under Flood Management Programme

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 jurisdictions. 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.

4.4 Schemes taken up during XI Plan for execution with their status (State-wise):

The details of the FMP schemes taken up (State-wise) and their progress during the XI Plan are given below in Table 4.1:

Table 4.1

Sl. No	State	No. of schemes approved	No. of schemes completed	No. of schemes under progress during 2014-15 (spillover schemes)
1	Bihar	46	40	3 [#]
2	Jharkhand	3	2	1
3	West Bengal	11	6	4 [*]
4	Uttar Pradesh	24	6	18
5	Uttarakhand	12	8	4
6	Himachal Pradesh	1	-	1
	Total	97	62	31

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

* One scheme of West Bengal withdrawn by the State Government

4.5 Schemes taken up during XII Plan and their status (State-wise)

The details of the FMP schemes taken up (State-wise) and their progress during the XII Plan are given below:

Table 4.2

Sl. No	State	No. of schemes approved	No. of schemes completed	No. of schemes under progress during 2014-15
1	Bihar	4	1	3
2	Jharkhand	-	-	-
3	West Bengal	1	-	1
4	Uttar Pradesh	2	-	2
5	Uttarakhand	9	-	9
6	Himachal Pradesh	1	-	1
	Total	17	1	16



Bed bars constructed with gabions



Physical Model by IRI, Roorkee of Chitauni Bund on river Sarda (U.P)

5

Appraisal of Flood Management and Anti-Erosion Schemes

5.1 Appraisal of schemes by GFCC- Scope

Techno-economic appraisal of flood management and anti-erosion schemes received from the Ganga basin States is an important activity of GFCC. As per revised guidelines issued by the Planning Commission on 29th 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 in Ganga Basin irrespective of cost are, however, examined from techno-economic aspect in GFCC.

5.2 Appraisal of schemes during 2014-15

The details of schemes appraised during 2014-15 and their status are given below in Table 5.1:-

Table 5.1

S. No	Name of Scheme	Estimated Cost in Rs. Lakh	Status
	Bihar		
1	Restoration of spur no.1,7,8,9 , construction of new spur between spur no. 4&5 , construction of bed bar d/s of spur no. 1,2,3,4,7,9 and u/s of spur no.1, maintenance of approach road, service road and activation of Chaurasidhar	9630	Cleared by GFCC but TAC dropped scheme pending model study on 16.10.2014.
2	Anti Erosion Work to be executed before flood 2014 near Khairpur, Raghapur, Akidatpur & Shankarpur village on the left bank of river Ganga.	6798.88	Cleared by GFCC but TAC dropped scheme pending model study on 16.10.2014.
3	Ani erosion work at Mangalpur near Rahua Nala at Ratanmala and near Poorhouse in West Champaran district (Bagaha Town Protection Scheme Phase-III)	7571	Cleared by GFCC on 9.7.2014. TAC cleared scheme on 16.10.14.
4	Revised Bagaha Town Protection Scheme (Phase-1)	9085	Tech viability of GFCC sent to GoB. Cleared by TAC on 16.10.14.
5	Revised Detailed Project Report for Construction of embankments on Left and right side of river Jhim, Banke, Jamura (Adhwara group) in Sitamarhi district	13420.193	Tech viability of GFCC sent to GoB. TAC is to approve.
6	Revised scheme for raising and strengthening of Lalbakaiya left and right embankment, Bairgania ring bund and Doab embankment in East Champaran Distt	2200	Scheme cleared by GFCC.
7	Anti Erosion Work before 2015 flood on the right bank o9f river gandak in between 0.21 km of old BRL to km 1.00 of old BRL and km 0.00 to km 0.56 of new BRL of Pipra-Piprasi Embankment.	2386.606	Scheme cleared by GFCC.
8	Bagmati Flood Management Scheme Phase- III (a)	91245.83	Tech viability of GFCC sent to GoB. TAC is to approve.

S. No	Name of Scheme	Estimated Cost in Rs. Lakh	Status
9	Mahananda Flood Management Scheme Phase- II	56955.2	Returned to State Govt. on 5.2.15 as the scheme is not found viable.
10	Tagging of left& right Kamla Balan embankment of Indian Territory to both Kamla embankments of Nepali Territory	851	Scheme cleared by GFCC.
11	Anti erosion work for protection of Valmikinagar forest on the left bank of Gandak river in West Champaran district of Bihar d/s of barrage	2456.5	Scheme cleared by GFCC.
12	Revised Bagmati Flood Management Scheme (Phase-II) BR 48	1283.5	Tech viability of GFCC sent to GoB. TAC is to approve.
13	Anti Erosion work near Khairpur, Raghapur, Akidatpur and Shankarpur village on left bank of River Ganga. Restoration of spur and maintenance of service road and approach road.	7068.24	Tech viability of GFCC sent to GoB. TAC is to approve.
14	Anti Erosion Works at Madrauni/Sahore village on right bank of river Kosi in Bhagalpur distt of Bihar	2460.19	Scheme cleared by GFCC.
15	Extension of left Kamla Balan embankment from km 102.38 to km 105.35(up to Western Kosi embankment) with provision of 3 Nos Anti-flood sluice and protection work of the new embankment	2492	Scheme examined & observations sent to State Government.
16	A E work for Protection of Left bank of Gandak river in u/s of Gandak barrage in West Champaran district	4250	Scheme examined & observations sent to State Government.
17	Costruction of Left and Right embankment on river Rato (Rato river flood management scheme)	10984	Scheme examined & observations sent to State Government.
18	Construction of Earthen Bund from Ashraulidan (UP) Bund to Guide Bund of Bettiah-Gopalganj bridge under FC Divn., Thakaraha Camp, Gopalganj District.	5070.01	Scheme examined & observations sent to State Government.

S. No	Name of Scheme	Estimated Cost in Rs. Lakh	Status
19	DPR for protection and Restoration of Km 0.00 to Km 28.20 of Eastern Kosi Embankment (EKE) under Bihar Kosi Recovery Flood Project (BKFRP Phase-I) and proposed Bihar Kosi Basin Development Project (BKBDP Phase-II)	38297	Scheme examined & observations sent to State Government.
20	Anti erosion work from Hardeo Tola to Khatti	11395.67	Scheme examined & observations sent to State Government.
21	A.E. Work in b/w km 0.00 km to 7.80 km of left bank of river Ganga near Mathar Diara (Munger Ghat to Tikarampur)	6189.35	Scheme examined & observations sent to State Government.
22	Bagmati Flood Management Scheme Phase- III (b)	72084	Under Examination
23	Protection work for village pather Tola to Kamla Kani near U/S of spur no. 12.	11225.47	Under Examination
24	Revised Project Estimate for construction of Bituminous road and Restoration of structure of Eastern Kosi Embankment (Km. 1.00 to Km. 125.00) & Western Kosi Embankment.	57842	Under Examination
25	Revised Detailed Project Report for Raising, Strengthening & Extension of Existing left/right embankment in Chandan River System in Bhagalpur & Banka district.	36667.6	Under Examination
	Jharkhand		
1	Anti-erosion Work on the right bank of river Ganga from Rafatola to Srighar 10 no.s in Sahibganj Disstt.	3168.67	Scheme examined & observations sent to State Government.
	West Bengal		
1.	Master Plan and DPR for Ghatal and adjoining area	119243.00	Scheme under examination
2	Resectioning of river Ichamati for better drainage & flood protection in the reach from BSF Bridge at 140.415 Km to Tipi at 152.315 Km in the District of North 24-Parganas	2972.00	Dropped on the request of State Government.

S. No	Name of Scheme	Estimated Cost in Rs. Lakh	Status
3	Improvement and extension of Banikantha Khal up to the existing lead channel linking to river Sunti under Barasat-II Block, District North 24-Parganas	1399.00	Dropped on the request of State Government.
4	Protection to the right bank of river Nagar from erosion near Khunti BOP Camp and border fencing along the Indo-Bangladesh Border in PS Islampur, District Uttar Dinajpur (Length - 575m)	221.00	Scheme examined & observations sent to State Government.
5	Protection to the right bank of river Nagar from erosion near Moraghati BOP Camp and border fencing along the Indo-Bangladesh Border in PS Islampur, District Uttar Dinajpur (Length - 520m)	201.00	Scheme examined & observations sent to State Government.
6	Protection to the right bank of river Nagar from erosion near Hatkhola BOP Camp and border fencing along the Indo-Bangladesh Border in PS Islampur, District Uttar Dinajpur (Length - 480m)	212.00	Scheme examined & observations sent to State Government
7	Protection to the right bank of river Nagar from erosion near Fatepur BOP Camp and border fencing along the Indo-Bangladesh Border in PS Islampur, District Uttar Dinajpur (Length - 450m)	221.00	Scheme examined & observations sent to State Government.
8	Protection to the right bank of river Nagar from erosion near Sonamati BOP Camp and border fencing along the Indo-Bangladesh Border in PS Islampur, District Uttar Dinajpur (Length - 500m)	203.00	Scheme examined & observations sent to State Government.
9	Protection to the left bank of river Tangon from erosion near Padmakumari and Chandgaon BOP Camp in PS Kaliaganj, District - Uttar Dinajpur (Length - 900m)	415.00	Scheme examined & observations sent to State Government.
	Uttar Pradesh		
1	Scheme for increasing drainage capacity of Bakulahi river in the districts of Pratap Garh and Chhatrapati Shahuji Maharaj Nagar	1726	Scheme cleared by GFCC.
2	Scheme for construction of 12.70 km long embankment from Bhagwanpur to Rukumpur on right bank of river Ramganga in Bareilly district.	2489	Scheme cleared by GFCC.

S. No	Name of Scheme	Estimated Cost in Rs. Lakh	Status
3	Project for construction of Aile Persauli Lolpur bund on the left bank of river Ghaghra/Saryu in Gonda district of Uttar Pradesh	4355	Tech viability of GFCC sent to state Govt. TAC is to approve.
4	Project for protection of Bakulaha Sansar Tola bund and village group of Imbrahimabad. Naubrar between km 5.175 to km 6.500 of B S T bund on the right bank of river Ghaghra in Ballia dikstrict of Uttar Pradesh	1701	Scheme cleared by GFCC.
5	Project for construction of anti-erosion works to protect village group of Sherpur-Shemra on the left bank of river Ganga in Ghazipur district of Uttar Pradesh.	2141	Scheme cleared by GFCC.
6	Project for construction of anti-erosion workson left bank of river Yamuna from km 21.100 to km 21.700 of Hindon Yamuna Doab bund near village Kamnagar in Gautambudh Nagar of Uttar Pradesh.	1791	Scheme cleared by GFCC.
7	Revised scheme for construction of Marginal bund from Amar Shahid Path to Goamati Aquaduct on right bank of river Gomati in Lucknow district	9674	Tech viability of GFCC sent to state Govt. TAC is to approve.
8	Revised scheme for construction of Marginal bund from Lucknow-Sultanpur Road to Amar Shahid Path on right bank of river Gomati in Lucknow district.	7886	Tech viability of GFCC sent to state Govt. TAC is to approve.
9	Revised scheme for construction of Marginal bund from Amar Shahid Path to Gomati Aquaduct on left bank of river Gomati in Luck now district.	15176	Tech viability of GFCC sent to state Govt. TAC is to approve.
10	Project for construction of Afflux bund from km 0.500 to km 1.675 in downstream of Sharda Barrage at Banbasa on left bank of river Sharda in Champawat district of Uttrakhand maintained by Uttar Pradesh.	2278	Scheme cleared by GFCC.
11	Project for protection of Karmaini-Belauli Bund from km 9.000 to km 9.410 & km 9.430 to km 10.010 along right bank of river Rapti in Sant Kabir Nagar District of Uttar Pradesh	1463	Scheme cleared by GFCC.

S. No	Name of Scheme	Estimated Cost in Rs. Lakh	Status
12	Project for construction of anti-erosion works between end of M G Bund and Muktidham Gauri Shankar Ghat at Doharighat town in District Mau of Uttar Pradesh	2169	Scheme cleared by GFCC.
13	Project for construction of embankment from village Munta Nagla to Sareli (from km 0.000 to km 13.500) on left bank of river Ganga in Badaun/Kasganj District of Uttar Pradesh	2145	Scheme cleared by GFCC.
14	Revised scheme for construction of Parsa Deharia Tilakpur Marginal bund on left bank of river Rapti in Shrawasti district	1431	Scheme cleared by GFCC.
15	Project for construction of embankment from village Kaithola to Shahpura (from km 0.000 to km 7.400) on right bank of river Kosi in Rampur District of Uttar Pradesh	1413	Scheme cleared by GFCC.
16	Project for construction of embankment from village Joulpur to Patwayee (from km 0.000 to km 28.5000) on left bank of river Kosi in Rampur District of Uttar Pradesh	6663	Tech viability of GFCC sent to state Govt. TAC is to approve.
17	River training Works on Right and Left Bank of Sharda River from Indo Nepal Border to Kamboj Nagar (Left Bank) & Naujalh, Naktaha (right Bank)	2375.27	Scheme cleared by GFCC.
18	Scheme for construction of cunnette in river Sharda to maintain proper river flow at D/S of Sharda Barrage, Banbasa from Km 0.050 to Km 1.350 in Champawat district	1225	Scheme examined & observations sent to State Government
19	Project for protection of village group of Sangapour Kakarghata at T S bund between km 39.800 to km 41.600 on the right bank of river Ghaghra in Ballia district of Uttar Pradesh.	1577	Scheme examined & observations sent to State Government
20	Scheme for construction of Hastinapur embankment from km 0.000 to km 10.975 on right bank of river Ganga in Meerut district	13288	Scheme examined & observations sent to State Government
	Uttarakhand		

S. No	Name of Scheme	Estimated Cost in Rs. Lakh	Status
1	Project for construction of studs and marginal bund for protection population and agricultural land from Banjarewala to Alwalpur, villages situated at banks of river Solani in District Haridwar	3890.00	Techno-economically cleared by TAC of MoWR on 16-10-2014.
2	Flood Protection work for villages Shekhuwala and Prateetpur in channel originated from Shivalik Mountain series in Distt. Dehradun under Development Block Vikashnagar	3125.00	Techno-economically cleared by TAC of MoWR on 16-10-2014
3	Shaspur-Sabhawala Culvert to village Kunjagrnt (including villages between them) Flood Protection scheme from River Aasan	5774.00	Techno-economically cleared by TAC of MoWR on 16-10-2014
4	Flood Protection scheme from Yamuna river, Dak Pathar Barrage to National Highway-72 Kulhala-Pawata Sahibpur (Left bank Gramo) in Distt. Dehradun under Vakash Nagar Development Block	7735.00	Techno-economically cleared by TAC of MoWR on 16-10-2014
5	Flood Protection scheme of village Matak-Mazri to Pratitpur and village Kalyanpur to Signiwala from channel originating from Shivwalik Mountain in Distt. Dehradun, Block-Vikashnagar (Revised)	1794.00	Techno-economically cleared by GFCC on 26-9-2014
6	Anti-Erosion and Drainage scheme of village Khera-Pachuwa to village-Fatehpur (Aasan River) in Distt. Dehradun under Block Vikash Nagar.	3405.00	Techno-economically cleared by Advisory Committee of MoWR on 16-10-2014
7	Flood Protection scheme of Gram Chanura to gram Bhawri between Koshi Uttarakhand State Reconstruction, Distt. Almora, Block Taluka under Someshwar Area	1344.00	Techno-economically cleared by GFCC on 30-09-2014.
8	Flood Protection scheme of vollage Langha to Jamanlhata near NH72 from Gayana Khadd & Sheetla river in Vikashnagar block, Distt. Dehradun (Revised)	1665.00	Techno-economically cleared by GFCC on 25-09-2014.

S. No	Name of Scheme	Estimated Cost in Rs. Lakh	Status
9	Flood Protection work along Tons River & its Tributories in Mori Block of Dist. Uttarkashi (under centrally funded flood protection scheme) (Revised)	1455.00	Techno-economically cleared by GFCC on 26-09-2014.
10	DPR on river training works including Misc. associated works on both banks of river Bhagirathi as per requirement from Jhulapul to Tiloth bridge including proposed works on left from Tiloth bridge to switchyard Uttarkashi	7671.00	Techno-economically cleared by TAC of MoWR on 16-10-2014.
12	DPR on protection work of both banks of river Bhagirathi at Uttarkashi	4881.00	Techno-economically cleared by TAC of MoWR on 16-10-2014.
13	Project for flood protection works in Nelchami Gard for Tharti to Dhela, Bhaso to MUYAL village and Bhilangana river to Dhanshali city in bhalangana Block, Distt. Tihri Gardwal.	1493.00	Scheme cleared techno-economically.
14	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 (Revised) (Priority No. 2)	8090	Scheme examined & observations sent to State Government.
15	Changa Mazri village in Distt. Haridwar under Development Block Bhagwanpur anti-erosion scheme from Solan River	1306	Scheme examined & observations sent to State Government.
16	SSB and Kedar village Flood Protection scheme in Shrinagar from River Alaknanda in Distt. Pawri Garhwal	2493	Scheme examined & observations sent to State Government.
17	ITI and Lower Bhakhtiyana in Shrinagar Distt. Pauri Garhwal flood protection scheme from river Alaknanda.	2488	Scheme examined & observations sent to State Government.

S. No	Name of Scheme	Estimated Cost in Rs. Lakh	Status
18	Tiwari Mohalla and New Bus Stand in Shrinagar flood protection scheme fromd River Alaknanda in Distt. Pawri Garhwal (Priority No. 6)	2496	Scheme examined & observations sent to State Government.
19	Shri Kot Phase-I in Shrinagar, Distt. Pawri flood protection scheme from river Alaknanda (Priority No. 14)	2495	Scheme examined & observations sent to State Government.
20	Shri Kot Phase-2 in Shrinagar, Distt. Pawri flood protection scheme from river Alaknanda (Priority No. 16)	2124	Scheme examined & observations sent to State Government.
21	Flood Protection scheme on river Kamal (from Gundiyaad to Sundali), (Dhawra to Purola) and old P.W.D colony to Sunara Chhani) in Distt. Uttarakashi under Block Purola	2442	Scheme examined & observations sent to State Government.
22	Flood Protection works on both sides of River Yamuna from Janki Chatee to Damta in Distt. Uttarkashi under Block Naugaon (Priority No. 11)	2469	Scheme examined & observations sent to State Government.
23	Flood Protection scheme Kumola Khadd, Chhara Khadd, Malgar Khadd in Distt. Uttarakashi, Block-Purola under C,M Proclamation No. 255/2013 (Priority No. 17)	1319	Scheme examined & observations sent to State Government.
24	Flood Protection scheme Uttarakhand State Reconstruction Distt.Almora, Block-Chaukhutia and Syalde from River Ramganga and tributaries	2345	Scheme examined & observations sent to State Government.
25	Flood Protection works for Tejam, Rasiya bagad and Nachni villages on the left bank of Ramganga river in Block Munsyari District Pithoragarh under Uttarakhand State Reconstruction	2416	Scheme examined & observations sent to State Government.

S. No	Name of Scheme	Estimated Cost in Rs. Lakh	Status
26	Flood protection Scheme of Malan River in Block Dugadda, District Pauri Garhwal	2410	Scheme examined & observations sent to State Government.
27	Flood Protection Scheme and Channelization of Sukhro River in Block Dugadda, District Pauri Garhwal	2362	Scheme examined & observations sent to State Government.
28	Flood Protection Scheme of Khoh River from Grastanganj Bridge to Lalpani in Block Dugadda, District Pauri Garhwal	1544	Scheme examined & observations sent to State Government.
29	Flood Protection Scheme for Dabli, Ghildiyal and Jakhani villages in Block Kirtinagar, District Tehri Garhwal	1378	Scheme examined & observations sent to State Government.
30	Flood Protection Work for villages Ukauli, Nakulia, Khairana, Kaudha, Ashraf and Kaundha Ratan on river Kailash in tehsil Sitarganj, District Udhamasinghnagar	1312	Scheme examined & observations sent to State Government.
31	Flood Protection Work for villages Mehravan nagar, Ulani, Sunpahar, Mohammadpur Bhuria, Mohammadganj and Khamaria on Dehva river in Tehsil Khatima and Sitarganj in District Udhamasinghnagar	2487	Scheme examined & observations sent to State Government.
	Rajasthan		
1	Flood Protection Scheme for Baran City	5616.00	Under examination
2	Flood Protection Scheme for Bharatpur district under Flood Management Programme 2012-17	6768	Under examination
	Himachal Pradesh		

S. No	Name of Scheme	Estimated Cost in Rs. Lakh	Status
1	Detailed Project Report for channelisation of River Pabber from Tikkari to Hatkoli in Tehsil Rohroo District Shimla	19082	Scheme cleared techno-economically

5.3 Summary of status of Appraisal of Schemes (State-wise)

State-wise status of appraisal of schemes is given in table below:

Table 5.2

State	Scheme received	Schemes cleared	Schemes examined & observations communicated to State Government	Schemes under examination
Bihar	25	14	7	4
Jharkhand	1	-	1	-
West Bengal	7	-	6	1
Uttar Pradesh	20	17	3	-
Uttarakhand	31	13	18	-
Himachal Pradesh	1	1	-	-
Rajasthan	2	-	-	2
Total	87	45	35	7



Geobag Pitching & Launching Apron with Procupines filled with jhankar on right bank of river Sarada in Village Ratuli, Uttar Pradesh



Anti-Erosion Works in Mohammadganj, Uttarakhand

6

Monitoring of Ongoing Flood Management and Anti-Erosion Schemes

6.1 Monitoring of Schemes by GFCC - Scope

GFCC monitors flood management and anti-erosion schemes under Central funding for their physical and financial progress and monitoring reports are sent to the Ministry of Water Resources regularly.

6.2 Monitoring of Schemes during 2014-15

During the year 2014-15, 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:

Table 6.1

Sl. No.	Scheme Code	Name of Scheme
Bihar		
1	BR-49	Raising & Strengthening of Adhwara and Khiroi left embankment from RD 0.0 km to RD 43.60 km and from RD 44.00 km to RD 90.50 km and right embankment from RD 0.0 km to RD 81.50 km in Sitamarhi, Madhubani and Darbhanga districts of Bihar
2	BR-50	Raising & Strengthening and extension of existing left and right bank embankments in Chandan river system
3	BR-51	Bagaha Town Protection Scheme Phase-II on left bank of river Gnadak in West Champaran district of Bihar
Uttar Pradesh		
1.	UP-16	Flood protection works on right bank of river Ghaghra in District Lakhimpur Kheri.
2.	UP-17	Flood Protection works along left and right bank of river Sarada in District Lakhimpur Kheri.
3.	UP-22	Construction of embankment on left bank of Ganga from village Sherpur to Thet in district J.P.Nagar/Bijnor

Sl. No.	Scheme Code	Name of Scheme
4.	UP-23	Project for flood protection/anti erosion works along right bank of river Sharda in u/s & d/s of Sharda Barrage at Banbasa
5.	UP-24	Scheme for flood protection works on right/left bank of river Gurra in district Deoria
6.	UP-25	Scheme for flood protection works along left and right bank of river Rapti in districts Siddharthnagar, Sant Kabir Nagar, Gorakhpur and Deoria
7.	UP-26	Scheme for protection of Ballia Bairia bund between km 24.650 to km 25.900 in Ballia district
8.	UP-27	Construction of Marginal Embankment upstream of Elgin Bridge along right bank of river Ghaghra in district Barabanki, Uttar Pradesh
9.	UP-28	Scheme for flood protection works along left bank of river Ghaghra in the district of Basti, Uttar Pradesh
West Bengal		
1.	WB-1	Improvement of south Saraswati river from off take at Nasibpur, Hoogly to outfall at Sankrail, Hawra (Length 46 Km)
2.	WB-14	Project for bank protection work along both banks of river Bhagirathi at Sunderpur & Basantpur, Kazipara to Uttarasan Outfall in the district Nadia of West Bengal
3.	WB-17	Master Plan and DPR for Kaliaghai- Kapleshwari-Baghai drainage basin scheme

6.3 Release of Funds during 2014-15 under Flood Management Programme

Based on the monitoring reports and recommendation of GFCC, the Ministry of Water Resources released a total amount of Rs. 50.87 crore to the State Governments of Bihar, Himachal Pradesh, Uttar Pradesh and West Bengal during 2014-15. The total fund released up to 2014-15 under the Flood Management Programme is Rs. 2129.86 crore. The break up is given below:

Table 6.2

(Amount in Rs Crore)

Sl. No	State	Approved Central Share	Amount Released in 2014-15	Total amount released upto March 2015
1.	Bihar	1392.42	24.92	839.63
2.	Jharkhand	29.48	-	21.34
3.	Uttarakhand	288.07	-	102.75
4.	Himachal Pradesh	31.21	2.42	36.05
5.	Uttar Pradesh	645.89	15.69	337.49
6.	West Bengal	1679.02	7.84	1823.5
7.	X Plan Spill over	-	-	35.43
	TOTAL	4066.09	50.87	2129.86

GLIMPSES



Measurement of a spur during Monitoring Visit in Uttarakhand



Monitoring Visit of FMP Scheme UP-22

7

River Management Activities & Works related to Border Areas

7.1 Background

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.

7.2 Maintenance of Flood Protection Works on Kosi and Gandak Projects

7.2.1 Kosi High Level Committee & Protection Works on Kosi

The Kosi High Level Committee (KHLC) was constituted by the then Irrigation Department, 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 up and completed before the next flood season. Since then, the Committee is inspecting every year the protection works 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 | Member |

Resources Deptt., Government of Bihar.

- | | | |
|-----|--|------------------|
| 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 KHLIC inspected the protection works in November 2014 and recommended works to be carried out before the floods of 2015.

7.2.2 Protection work in Nepal Portion

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 spent on carrying out protection works on river Kosi in the Nepal portion.

7.3 Gandak High Level Standing Committee & Protection Works on Gandak

A 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 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 the floods of 1981, to guide and advise construction activities in the two States and to suggest programme of works for the year 1981-82. The term of the committee was extended from time to time. This Committee has now 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, 47 meetings of the GHLSC have been held up to 2014-15 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.

7.3.1 Inspection during 2014-15

During the year 2014-15, the meeting / site inspection by the Committee was held in the month of November, 2014 and recommendations were made for the works to be carried out before the floods of 2015.

7.3.2 Protection Works in Nepal Portion

The expenditure incurred 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.

7.4 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 10th 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:

The Government of West Bengal has started execution work on 19 Bank protection schemes cleared by GFCC.

Table 7.1

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

S. No.	Name of scheme	Estimated cost (Rs in lakh)	Remarks
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
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

S. No.	Name of scheme	Estimated cost (Rs in lakh)	Remarks
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
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

S. No.	Name of scheme	Estimated cost (Rs in lakh)	Remarks
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:

Table 7.2

(Rs. in crore)

Sl. No.	State	Amount released						
		09-10	10-11	11-12	12-13	13-14	14-15	Total
1	West Bengal	17.51	71.31	39.49	NIL	1.60	NIL	130.09

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 problems 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 part of U.P are generally caused by the rivers coming from Nepal, long term solution to the problem of flood lies in the 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.

8.1.1 India Nepal Joint Ministerial Committee on Water Resources (JMCWR)

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 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 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.

8.1.2 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 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

- (i) To coordinate all existing Committees and Sub Committees under the JCWR

So far four meetings of JSTC have been held. The last meeting was held in New Delhi on 12-13 September, 2013 in which various issues of bilateral concern were discussed and decisions taken.

8.1.3 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, SSEC and SCFF. The Constitution (Indian side) and terms of reference of the committee are as under:

Sl. No.	Composition-Indian side	
1	Member (Coordination), GFCC, Patna	Team Leader
2	Chief Engineer, CWC	Member
3	Chief Engineer (WRD), Government of Bihar/Chief Engineer, Irrigation Department,	Member

	Government of Uttar Pradesh / Chairman, North Bengal Flood Control Commission, Government of West Bengal	
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

- (i) The JCIFM shall be an umbrella Committee to implement the decisions of JSTC on inundation and flood management issues.
- (ii) The JCIFM shall address the issues related to flood management and inundation and can form Task Group(s), if required.
- (iii) The JCIFM shall monitor the progress of works and provide guidance to task group(s) and report to JSTC.

So far nine meetings of JCIFM have been held. The last inspection / meeting was held on 8-12 February, 2015 in Kathmandu, Nepal in which various issues relating to inundation and flood management were discussed and decisions were taken on the works to be executed in 2015-16 on the rivers namely Kamala, Bagmati and Lalbakeya.

8.1.4 Extension of Embankment on River Bagmati, Kamla, Lalbakeya and Khando rivers

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.

8.2 India-Bangladesh Cooperation

8.2.1 Indo-Bangladesh Joint River Commission

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:

8.2.2 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.

In 2014-15, thirteen Bank Protection Schemes in India were completed and nineteen Bank Protection Schemes are being implemented by Government of West Bengal.

GLIMPSES



9th Meeting of JCIFM, Kathmandu, 8th to 12th Feb, 2015



9th Meeting of JCIFM, Kathmandu, 8th to 12th Feb, 2015

9

Promotion of Use of Hindi

9.1 Progressive Use of Hindi

An Official Language Implementation Committee headed by the Chairman, GFCC is functioning in Ganga Flood Control Commission. 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 said Committee holds its meetings once in 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 2014-15, 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 2014-15

During the year 2014-15 generally all office orders were issued in both languages i.e. Hindi and English. During the year 2014-15, out of 6843 letters issued by GFCC, 5768 were in Hindi. The region-wise break up is given below:

Table 9.1

S. No.	Region	Total letters issued	Letters issued in Hindi
1	A	6705	569
2	B	15	12
3	C	123	64
	Total	6843	5768

To increase the awareness of use of Hindi language, Hindi fortnight was organized from 12.9.2014 to 26.9.2014. 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:

Table 9.2

(a) Hindi Essay Competition		
S. No.	Name/Post	Prizes
1	Shri Amar Nath Jha, Draftman Gr.-I.	First
2	Shri Anil Kumar Sinha, UDC	Second
3	Shri Dilip Kumar Singh, Jr. Computer	Third
4	Shri Tapas Kumar Das, Steno. Gr.-I	Consolation

(b) Hindi Noting & Drafting Competition		
S. No.	Name/Post	Prizes
1	Shri Sachindra Sharma, Sr. Computer	First
2	Shri Amar Nath Jha, Draftsman Gr.-I.	Second
3	Shri Dilip Kumar Singh, Jr. Computer	Third

(d) General Hindi / Knowledge Competition (For “Grade- D” Staff only)		
S. No.	Name/Post	Prizes
1	Shri Balmiki Prasad, Khalasi	First
2	Shri Rameshwar Yadav, Khalasi	Second
3	Shri Kewal Mochi, Khalasi	Third

(e) Incentive for doing work in Hindi Award Scheme		
S. No.	Name/Post	Prizes
1	Shri Jitendra Kumar, Head Clerk	First
2	Shri Laddu lal Mahato, L.D.C	First
3	Shri Kewal Mochi, Khalasi	Second
4.	Shri Satish Kumar, L.D.C.	Second
5.	Shri Rameshwar Yadav, S.W.A.	Second

(e) Incentive for doing work in Hindi Award Scheme		
S. No.	Name/Post	Prizes
6	Shri Baleshwar Prasad, W/A	Third
7	Shri Rabindra Ram, Peon	Third
8	Shri Anil Kumar, Draftsman Gr.-I	Third

10 | Participation in Trainings, Workshops and Seminars

During the year 2014-15, officers and staff of GFCC participated in various training programmes, workshops and seminars as per the details given below:

Table 10.1

Sl. No.	Training Course/ Workshop/ Seminar	Dates	Name of Officers
1.	National Conference on Emerging Trends in water quantity & quality management at Poomima University, Jaipur	18.12.2014 to 20.12.2014	1. Sh. A. Paramesham, Member (C) 2. Sh. Anil Jain, Director
2.	Workshop on Geo-Synthetics in water resources at CSMRS, New Delhi	12.08.2014 to 13.08.2014	Sh. Anil Jain, Director
3.	Non-structural measures of Flood Management at NWA, Pune	26.05.2014 to 30.05.2014	Sh. U.K. Sharma, Dy. Director
3.	River morphological studies including Flood Management Works	02.06.2014 to 06.06.2014	Sh. S.N. Singh Dy. Director
4.	Pay fixation at ISTM, New Delhi	11.08.2014 to 13.08.2014	Sh. Anil Kumar, UDC

11

Representation of Ganga Flood Control Commission in Various Committees

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

Table 11.1

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	National Institute of Hydrology Society	Chairman, GFCC	Member
9	NNRMS Standing Committee on Water Resources (SC-WR)	Chairman, GFCC	Member
10	Technical Advisory Committee of Farakka Barrage Project	Chairman, GFCC Alternate: Member (P), GFCC	Member
11	Water Resources Division Council of Bureau of Indian Standards	Chairman, GFCC Alternate Member-Member (C),GFCC	Member

Sl. No.	Name of Committee/ Board/ Experts/ Technical Group etc.	Representation of GFCC	
		Officer	Position
12	Farakka Barrage Project Advisory Committee	Member (P), GFCC	Member
13	Tender Committee of Farakka Barrage Project	Member (P), GFCC	Member
14	Yamuna Standing Committee	Member(P), GFCC	Member
15	Coastal Protection And Development Advisory Committee	Member (P), GFCC	Member
16	India Nepal Joint Committee on Inundation & Flood Management (JCIFM)	Member (C), GFCC	Team Leader
17	Indian-Nepal Joint Committee on Kosi & Gandak Projects	Member, GFCC	Member
18	U.P. State Committee of Engineers	Director, GFCC	Member
19	Bihar State Committee of Engineers	Director, GFCC	Member
20	West Bengal State Committee of Engineers	Director, GFCC	Member
21	M.P. State Committee of Engineers	Director, GFCC	Member
22	T.A.C. of Bihar	Director, GFCC	Member
23	T.A.C. of Uttar Pradesh	Director, GFCC	Member
24	T.A.C. of Himachal Pradesh	Director, GFCC	Member
25	T.A.C. of Haryana	Director, GFCC	Member
26	T.A.C. of Rajasthan	Director, GFCC	Member
27	Technical Committee of West Bengal State Flood Control Board	Director, GFCC	Member
28	TAC of Jharkhand	Director, GFCC	Member
29	TAC of Uttarakhand	Director, GFCC	Member
30	TAC of Chhattisgarh	Director, GFCC	Member
31	T.A.C. of Madhya Pradesh	Director, GFCC	Member
32	NIH Regional Coordination Committee for Ganga Plain North Regional Centre	Director, 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
