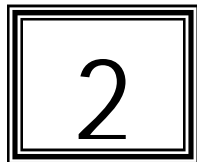


STANDING COMMITTEE ON WATER RESOURCES
(2014-2015)



SIXTEENTH LOK SABHA

MINISTRY OF WATER RESOURCES, RIVER DEVELOPMENT AND GANGA REJUVENATION

REVIEW OF GANGA FLOOD CONTROL COMMISSION

{Action Taken by the Government on the Observations / Recommendations
contained in the Twenty-First Report (Fifteenth Lok Sabha) of the
Standing Committee on Water Resources}

SECOND REPORT



LOK SABHA SECRETARIAT

NEW DELHI

December, 2014/Pausha, 1936 (Saka)

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Standing Committee on Water Resources]

Presented to Lok Sabha on 23.12.2014
Laid in Rajya Sabha on 23.12.2014



LOK SABHA SECRETARIAT
NEW DELHI

December, 2014/Pausha, 1936 (Saka)

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COMPOSITION OF THE STANDING COMMITTEE ON
WATER RESOURCES (2014-15)

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LOK SABHA

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3. Shri Devusinh Chauhan
4. Shri Sukhbir Singh Jaunapuria
5. Shri Tariq Hameed Karra
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RAJYA SABHA

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26. Prof. Mrinal Miri
27. Shri V. Hanumantha Rao
28. Shri A.V. Swamy
29. Shri Lal Sinh Vadodia
30. Vacant
31. Vacant

SECRETARIAT

- | | | | |
|----|---------------------|---|----------------------------|
| 1. | Shri A.K. Singh | - | Joint Secretary |
| 2. | Shri S. Chatterjee | - | Director |
| 3. | Smt. Rita Jaiikhani | - | Additional Director |
| 4. | Shri Kamal Khurana | - | Senior Committee Assistant |

INTRODUCTION

I, the Chairperson, Standing Committee on Water Resources (2014-15) having been authorised by the Committee to submit the Report on their behalf, present the Second Report on Action Taken by Government on the observations / recommendations contained in the Twenty-First Report (15th Lok Sabha) of the Standing Committee on Water Resources (2013-14) on 'Review of Ganga Flood Control Commission'.

2. The Twenty-First Report of the Committee was presented to Lok Sabha on 20 February, 2014. The replies of the Government to all the recommendations contained in the Report were received on 30 July, 2014.

3. The replies of the Government were examined and the Report was considered and adopted by the Committee at their sitting held on 19 December, 2014.

4. An analysis of the Action Taken by the Government on the observations/recommendations contained in the Twenty-First Report (Fifteenth Lok Sabha) of the Committee is given in Appendix-II.

NEW DELHI
19 December, 2014
28 Agrahayana, 1936 (Saka)

HUKUM SINGH,
Chairperson,
Standing Committee on Water Resources

CHAPTER I

REPORT

This Report of the Standing Committee on Water Resources deals with the action taken by the Government on the observations/recommendations/contained in the Twenty First Report (Fifteenth Lok Sabha) on "Review of Ganga Flood Control Commission" which was presented to Lok Sabha on 20 February, 2014.

2. Action taken notes were received from the Government in respect of all the thirty-six observations/recommendations of the Committee which have been categorised as follows:-

(i) Recommendations/Observations which have been accepted by the Government:

Para nos. 1,2,4,12,13,14,15,16,17,18,19,20,21,23,25,26, 32,33, and 35 (Total-19)

(ii) Recommendations / Observations which the Committee do not desire to pursue in view of the Government's replies:

Para Nos. 5, 8, 9, 22, 29, 31, 34 and 36 (Total-8)

(iii) Recommendations/Observations in respect of which replies of the Government have not been accepted by the Committee:

Para Nos. 3 and 24 (Total-2)

(iv) Recommendations/Observations in respect of which final replies of the Government are still awaited:

Para Nos. 6,7,10,11,27,28 and 30 (Total-7)

3. The Committee will now deal with the action taken by the Government on some of the observations/ recommendations in the succeeding paragraphs.

A. Long-term Comprehensive Policy

Recommendation (Para No. 1)

4. In their original recommendation, the Committee inter-alia had highlighted the fact that the river Ganga plays vital role in providing water for irrigation, drinking, industrial usage, etc., for overall development of the people of its basin region. It also provides a perennial source of fresh water for agriculture, fisheries and rich bio-diversity. The Committee further referred to a broad analysis by Reserve Bank of India (RBI)'s data for food grain production during 2000-01 to

2010-11 stating that the food grain output in the Ganga basin during the period was in the range of 48 to 54 percent of the national food grain production. Taking note of the important role played by the river Ganga in the economic, social, cultural, religious and ecological life of India, the Committee had impressed upon the Ministry the need for evolving a long-term comprehensive policy and planning to ensure judicious and efficient utilisation of water resources of the river Ganga and its tributaries commensurate with the importance the Ganga occupies in the national life. It was recommended that such a policy be evolved after due consultation with the Planning Commission and Ministries of Agriculture, Environment and Forests, Energy, Rural Development etc. and the riparian States which would serve as mandatory policy guideline for all Ganga basin States. The Committee desired to be apprised of the action taken by the Ministry in this regard at the earliest.

5. The Ministry of Water Resources, River Development and Ganga Rejuvenation, in their action taken reply vide their OM No. Z – 17012/4/2013 – Ganga/2166-68 dated 30.07.2014 have stated that they have been constantly endeavouring to persuade the State Governments (including Ganga basin States) and other stakeholders for implementation of the National Water Policies and to bring about improvements therein for optimal results. As part of these efforts, the Ministry have reviewed and formulated National Water Policy 2012.

It has been further stated that after a wide consultation with all stakeholders including Members of Parliament, Academia, Non-Governmental Organizations, Corporate Leaders and Representatives of Panchayati Raj Institutions, the National Water Resources Council (NWRC) headed by Hon'ble Prime Minister of India, wherein Planning Commission, various Central Ministries and States are also represented, in its sixth meeting held on 28th December, 2012, based on the broader consensus that emerged among the States, has adopted the National Water Policy-2012 (NWP-2012). The Policy, being comprehensive one, is expected to have long-term positive impact on overall development of the country as it also advocates and promotes judicious and efficient utilisation of water, meeting ecological needs, and adapting to climate change.

The NWP-2012 vide Para 16.2 provides for revision/ drafting the State Water Policies in accordance with the National Water Policy 2012 keeping in mind the basic concerns and principles as also a unified national perspective. Accordingly, the NWP-2012 has been forwarded to all the States/UTs and the concerned Ministries/Departments of Central Government for appropriate action. All State Water Policies should conform to the National Water Policy -2012.

As per information available, Himachal Pradesh has revised the State Water Policy and the "Himachal Pradesh State Water Policy-2013" has been notified in November, 2013.

6. The Committee appreciate that the Ministry has revised and formulated a comprehensive National Water Policy 2012 after wide consultations. However, it is disheartening to note that though the Ministry has been constantly endeavouring to

persuade the State Governments to revise or draft their State Water policies in accordance with the NWP-2012 to bring about improvement for optimal result, there is only one State i.e. Himachal Pradesh, which has revised and notified its State Water Policy-2013. The Committee, therefore, reiterate their recommendation and desire the Ministry to continue persuasive efforts with the States/UTs in this regard.

Further, the Committee are also surprised that the Ministry has failed to observe the thrust on River Ganga in its recommendation as in the reply furnished by the Ministry there is no specific mention with regard to any policy guideline for judicious and efficient utilization of Ganga water for all Ganga basin States. The Committee are aware of the recently announced 'Namami Gange' programme and feel that the Ministry should have at least provided broad details of the same. The Committee, therefore, reiterate their earlier recommendation and desire to be apprised of the measures taken in this regard within a period of three months. The Committee further feel that there is an urgent need to frame a comprehensive National Water Law under the existing distribution of legislative powers between the Union and the States and to develop a minimum national consensus on basic perceptions, concepts and principles on water, which is the most basic requirement of life. The Committee desire to be apprised of the latest status thereon.

B. National Water Informatics Centre

Recommendation (Para No. 2)

7. While noting that the Ganga is the master drain of the Ganga basin States, the Committee, in their original recommendation, had observed that it drains a total catchment area of 10.68 lakh sq. km., out of which 8.61 lakh sq. km. lies in India which is 26 percent area of our

country. They had noted that as per the National Commission on Integrated Water Resources Development and Planning (NCIWRDP), the annual average flow of Ganga basin is 525.02 Billion Cubic Metre (BCM). Out of this, the utilizable water resource has been assessed to be around 250 BCM. The Committee had further noted that the data pertaining to annual flow of river Ganga as observed at Farakka site do not establish any statistically significant trends regarding changes (increase or decrease) in total annual discharge of river Ganga since 1947. The Committee, therefore, had desired to be apprised of the State-wise percentage usages of water resource for irrigation and hydroelectric power in Ganga basin area. However, they were dismayed that the relevant information in this regard was not available with the Ministry. Recognising that an updated, authentic and comprehensive data base is a sine qua non for initiating any meaningful developmental work in the country, the Committee had recommended that the Ministry should take urgent action for compilation of updated, authentic and comprehensive information, State-wise, pertaining to usages of water for irrigation, drinking and hydroelectric power, etc., in the Ganga basin. The Ministry was also urged to establish a dedicated website on which the above information is available so that the same can be accessed by the public at large and stake-holders, viz. farmers, planners, economists, meteorologists, etc., in the country.

8. The Ministry in their action taken reply, have stated that the National Water Policy 2012 vide para 14 stipulates establishing of a National Water Informatics Centre and making all hydrological data, other than those classified on national security considerations, available in public domain. In this regard, a project namely 'Generation of Database and Implementation of Web enabled Water Resources Information System (India – WRIS)' had been initiated by the Ministry jointly with ISRO in 11th Plan.

Main groups of the database are:

- | | |
|-------------------------------|--------------------------|
| i. Watershed Atlas | ii. Administrative layer |
| iii. Water Resources projects | iv. Thematic layer |
| v. Environment data | vi. Basin wise Report |

Status of Project as on date:

- Three versions of website of INDIA WRIS have been launched so far. The URL of the website is www.india-wris.nrsc.gov.in
- River Basin Atlas of India was released on 1st November, 2012 at CWC (HQ).
- All unclassified data of CWC's G&D stations has been uploaded at WRIS website recently in July 2013 as per Hydro-meteorological Data Dissemination Policy-2013.
- The version 4.0 was launched in March, 2014 and is available in public domain at 1:250000 scale.

However, since discharge data of Ganga basin is classified one, it has not been put in public domain but is released to specific users for specific uses on a case to case basis, according to data dissemination policy. Further, despite pursuance, the States including Ganga basin States are seen reluctant in providing data on actual water usage.

To maintain and update such a large volume of water resources data at national level, it has been proposed to establish a NATIONAL WATER RESOURCES INFORMATION CENTRE (NWIC) during the 12th Plan.

9. The Committee appreciate the efforts of the Ministry which have been initiated jointly with the Indian Space Research Organization (ISRO) for establishing National Water Informatics Centre in the 11th plan and making all hydrological data, other than those classified on national security considerations, available in public domain. However, the Ministry has not furnished any information on the steps taken by them in pursuing the Ganaga basin States found reluctant in providing data on actual water usage. The Committee, therefore, reiterate and recommend that a dedicated website with updated relevant information should be made public within a definite time frame so that people in general and all major stakeholders could access it. Further, the Committee are surprised to find that though the Ministry has proposed to establish a National Water Information Centre (NWIC) during the 12th plan, yet no time frame has apparently been set for its establishment and operations. The Committee, therefore, recommend that speedy and efficacious measures should be undertaken in right earnest by the Ministry for making the NWIC operational during the 12th FY Plan period. The Committee also desire to be apprised of the specific action taken towards setting up NWIC in the last two years, since the inception of the 12th Plan.

C. Utilization of Surface Water

Recommendation (Para No. 3)

10. The Committee, in their original recommendation, had noted that only 63.28 BCM of the 250.00 BCM of utilisable surface water is presently utilised, indicating that an estimated 186.72 BCM of the basin's utilisable surface water is going waste into the sea/neighbouring country which could be arrested for utilisation in the country. Further, an additional storage of 7.65 BCM would be

created through projects which are under construction in the Ganga basin. The Committee had also noted the Ministry's reply that water discharge from Ganga basin rivers into the sea/neighbouring country in 'non lean season' can be arrested with the creation of sufficient storages in upper catchment and transferring water from the water-surplus river basins to the water-deficit river basins. In this connection, the Ministry had informed the Committee that a continuous dialogue was being maintained by the Government of India with Nepal for building storage projects in Nepal, given the fact that due to topographical constraints (i.e. flat terrain), building storages in the Gangetic plain areas is not feasible. To concretise storage creation in Nepal, 5 projects viz. Pancheshwar Multipurpose Project, Sapta Kosi High Dam Multipurpose Project, Sun Kosi Storage-cum-Diversion Project, Kamala Dam Project and Bagmati Project have been identified by the Ministry. However, the Committee were dismayed to note that these storage projects were at conceptualization stage only. Further, whereas annual flood fury is ravaging Uttar Pradesh and Bihar year after year causing untold misery to the people, the progress report of the Ministry in this regard has been nothing but dismal. Whereas the field investigations for Pancheshwar Multipurpose Project have been reported to be completed, the field investigations for Sapta Kosi High Dam Multipurpose Project and Sun Kosi Storage-cum-Diversion Project and Feasibility Level study of Kamala Dam Project and Preliminary study of Bagmati Project in Nepal are still stated to be in progress. Taking due note of the gravity of the annual flood situation in Uttar Pradesh and Bihar, the Committee had urged the Ministry to make sustained all-out efforts for accelerating the pace of implementation of the storage creation in Nepal. The Committee had also recommended that the Ministry/GFCC should draw up, in consultation with the State Governments of Uttar Pradesh and Bihar, a detailed road-map for completion of each of the above 5 projects within given timelines under intimation to them.

11. The Ministry, in their action reply have stated that as mentioned earlier, the survey & investigation works and preparation of Detailed Project Reports (DPRs) of Sapta Kosi High Dam Multipurpose Project, Sun Kosi Storage-cum- Diversion Project, Kamla Dam Project and Bagmati Projects are in progress. Some delay in works had been there mainly due to local disturbances and political instability in Nepal. The matter had been under discussion in bilateral meetings from time to time for early completion of works and finalisation of their DPRs. A Joint Team of Experts (JTE) reviews the progress, addresses the issues/ bottlenecks, if any, affecting the progress of the field works by way of taking corrective measures required for completion of ongoing field works and preparation of DPR and setting targets from time to time. The next meeting of JTE was to be held at New Delhi and efforts were on to hold meeting at the earliest.

With regard to Pancheshwar Multipurpose Project, it was to state that, TORs of the Pancheshwar Development Authority (PDA) were under finalisation in consultation with concerned Ministries. This Ministry had been pursuing the matter through DO letters to MEA and MOF (DOR) at Secretary Level. Hon'ble Minister has also taken up the matter through D.O. dated 26.06.14 with Hon'ble Prime Minister. However, some information was yet to be received from MOF (DOR). After receipt of the same, the matter would be taken to the appropriate platform for approval of TORs. The achievements of milestones on these projects depend upon the political situation and law and order in project area.

The States of Bihar, UP and Uttarakhand were represented in various committees/ bilateral mechanisms between India and Nepal appropriately according to their role in the ongoing works of these projects.

12. The Committee note with concern the oft-repeated stand of the Ministry that the matter concerning 5 storage creation projects in Nepal to improve the annual flood situation in U.P. and Bihar has been under discussion in bilateral meetings between India and Nepal from time to time. It has been further informed that a Joint Team of Experts (JTE) had been constituted not only to review the progress, but also to address the issues/bottlenecks, if any, affecting the progress of the field works and that a meeting of JTE is due in New Delhi. The Committee would like to be apprised about the further progress, project-wise, made till date in respect of Sapta Kosi High Dam Multipurpose Project, Sun Kosi Storage-cum-Diversion Project, Kamla Dam Project and Bagmati Projects.

As far as Pancheshwar Multipurpose Project is concerned, the Committee are deeply anguished to note the delay even for preliminary procedural requirements like finalisation of TORs for PDA and strongly recommend that the Ministry should continue to pursue with the concerned Ministries viz., Ministry of External Affairs and Ministry of Finance (Department of Revenue) at the highest level for early finalization of the project. The Committee would like to be apprised about the steps taken in this regard by the Ministry.

D. Farakka Barrage

Recommendation (Para No. 8)

13. The Committee, in their original recommendation, had observed that the Farakka Barrage is a barrage across the river Ganga, which is about 17 kms. from the Bangladesh border near Chapai Nawabganj district. Recently, excess release of water led to flooding in Lalgola block,

Murshidabad, West Bengal, which was compounded by the problem of non-maintenance of the embankment of the canal which is about 40 kms. long from the Barrage to the Bhagirathi-Hooghly, leading to flooding of villages and submergence of huge acres of land. A total of Rs.520.00 lakh has been reportedly allocated by the Government for repair and maintenance of the Farakka Barrage during XIIth Plan, out of which an expenditure of Rs.135.11 lakh has been incurred so far. The Committee had desired the Ministry to make an on-the-spot study expeditiously of the safety, reliability and efficiency of the canals and embankments of Farakka Barrage specially in Lalgola block to ensure that such flooding do not recur in future. They had recommended for completion of the same well before the onset of Monsoon season, so that necessary repair and maintenance works (if any) may be taken up by the concerned departments/organisations in time. The Committee thus desired to know the follow-up measures taken in this regard.

14. The Ministry, in their action taken reply have informed about constitution of a Team of Experts under the Chairmanship of Member (Planning), Ganga Flood Control Commission vide O.M. No. Z-16012/13/2013-Ganga/4179-88 dated 3rd December, 2013 to assess the extent of River erosion problem in the Jangipur area of West Bengal. The report had been submitted and is placed at an Annexure with the reply. Farakka barrage Project had already initiated action on immediate structural measures likely to be completed before Monsoon, 2014.

15. From the reply of the Ministry, the Committee note that a Team of Experts under the Chairmanship of Member (Planning), Ganga Flood Control Commission has been constituted to assess the extent of river erosion problem in the Jangipur area of West Bengal, and that their report has since been submitted. The Committee note that the Ministry has initiated action on structural measures, which was likely to be completed before Monsoon, 2014. The Committee would like to be apprised whether the same was completed as envisaged, as well as further progress on the matter.

E. Implementation Committees in States

Recommendation (Para No. 15)

16. In their original recommendation, the Committee had noted that the main function of the Ganga Flood Control Commission (GFCC) is to prepare Master Plans for flood protection and flood management in the Ganga basin States. The GFCC had prepared Master Plans for all the 23

rivers which are tributaries of the Ganga. Notably, the GFCC being an Advisory Commission, the execution of all works suggested under the Master Plans has to be carried out by the respective State Governments which are required to undertake works including embankments, drainage schemes, even town protection works, etc., through the Plan schemes. The Committee were dismayed to note that although State Governments are generally formulating flood management schemes keeping in view the Comprehensive Master Plans circulated by GFCC to all the concerned Ganga basin States for flood management, the information regarding status of implementation of Master Plans was not forthcoming from the State Governments despite several efforts including several reminders during the meetings of GFCB/GFCC. Besides, although the Ministry had requested six severely flood-affected Ganga basin States, namely Bihar, Uttar Pradesh, West Bengal, Jharkhand, Himachal Pradesh and Uttarakhand to constitute Implementation Committees to ensure time-bound implementation of the recommendations of the Comprehensive Plans, yet only the States of Bihar and West Bengal had set up such committees so far. Taking note of the tardy pace of execution of the Master Plans by the Ganga basin States, the Committee desired the Ministry/GFCC to keep tab on the concerned State Governments through frequent meetings, sending written reminders, etc., so that the Master Plans do not remain merely on paper in the preserve of the State Governments. Noting that four remaining severely flood-affected States had not taken needful action for constituting Implementation Committees, the Committee had urged the Ministry/GFCC to pursue vigorously with these States for speedy execution of the Master Plans for flood protection and management in Ganga basin States. The Ministry may also consider mentioning the names of defaulting States in this regard on the websites of both the Ministry and the GFCC so that general public and the stakeholders may also bring pressure to bear upon these States so as to expedite implementation of the Master Plans.

17. The Ministry, in their action taken reply, have stated that it had requested six severely flood-affected Ganga basin States, viz. Bihar, U.P., West Bengal, Jharkhand, H.P. and Uttarakhand to constitute Implementation Committees to ensure time-bound implementation of recommendations of Comprehensive Plans. Out of which, Bihar, Uttar Pradesh and West Bengal had constituted Implementation Committees, so far.

Chairman, Ganga Flood Control Commission had also reportedly requested the remaining three States namely, Jharkhand, Himachal Pradesh and Uttarakhand to expedite constitution of Implementation Committee to ensure time bound implementation of the recommendations of the Comprehensive Plans for Flood Management in the Ganga Basin States vide his D.O. dated 11.04.2014 to the Principal Secretary/ Secretary of Water Resources Department. The issue was also raised in the 45th meeting of GFCC held on 21st March, 2014 wherein concerned States were requested to expedite the formation of Implementation Committees under intimation to GFCC.

18. The Committee note that out of the six severely flood affected Ganga basin States viz., Bihar, Uttar Pradesh, West Bengal, Jharkhand, Himachal Pradesh and Uttarakhand only the States of Bihar, U.P. and West Bengal have so far constituted

Implementation Committee so as to ensure time bound implementation of recommendations of Comprehensive Plans for Flood Management. They further note that remaining three States are being requested to expedite the matter. In view of the devastating floods in Uttrakhand in the recent past, the Committee strongly urge the matter to be pursued vigorously at the highest level so as to impress upon the remaining three States Governments for expeditious formation of the Implementation Committees so as to achieve effective implementation of the Master Plan. The Committee must be apprised of the steps taken by the Ministry in this regard.

F. Embankments in the Ganga Basin States

Recommendation (Para No. 16)

19. The Committee, in their original recommendation, had noted that embankments of the length of 17,826 km had been constructed in the Ganga basin States so far. It was further noted that the details of the cost involved in the construction of embankments had not been compiled. Further, the Committee noted that although embankments had certain inherent disadvantages, the demand for providing flood embankment has been on the increase and since the area behind are protected from frequent flooding, they are available for cultivation during Monsoon as well as Rabi seasons. Moreover, embankments protect built-up area in the towns and cities. Noting that the total area protected from flood is only 9.40 mha out of the total area of 20.81 mha liable to floods in the Ganga basin States, the Committee urged the Ministry to extend the coverage of flood protection by encouraging the concerned States to construct more embankments in the Ganga basin States expeditiously. The Committee also desired the Ministry to furnish within 3 months of the presentation of this report, the expenditure incurred on the construction of embankments so far.

20. The Ministry, in their action taken reply, have informed the Committee that the subject of embankment falls within the purview of the State Governments. The role of the Ministry of Ministry is promotional and advisory in nature. Accordingly, the FMP schemes are formulated and implemented by the State Governments, as per their priorities, keeping techno-economic considerations in view, based on trusted and tested practices. However, care is taken at the time of appraising DPRs and, if found necessary, new technologies/ construction materials are suggested for use.

The expenditure (Central share) under Flood Management Scheme, which includes

expenditure on construction of embankments, upto 31st March 2014 has been furnished to the Committee, as below:

Consolidated status of State-wise funds released under "Flood Management Programme" during XI and XII Plans (up to 31.03.2014)

(Amount in Crore Rs.)

Sl. No.	State	Funds released during XI Plan	Funds released during XII Plan			Total Funds released upto 31.03.2014
			2012-13	2013-14	Total (XII Plan)	
1	Arunachal	78.77		16.83	16.83	95.60
2	Assam	744.90	2.51		2.51	747.41
3	Bihar	680.79	54.48	88.57	143.05	823.84
4	Chhattisgarh	15.57		3.75	3.75	19.32
5	Goa	9.98	2.00		2.00	11.98
6	Gujarat	2.00			0.00	2.00
7	Haryana	46.91			0.00	46.91
8	Himachal	165.31	19.92	9.75	29.67	194.98
9	Jammu &	243.50	39.36	28.29	67.65	311.15
10	Jharkhand	17.07	4.27		4.27	21.34
11	Karnataka	20.00			0.00	20.00
12	Kerala	63.68			0.00	63.68
13	Manipur	65.03	0.95	16.96	17.91	82.94
14	Mizoram	3.40			0.00	3.40
15	Nagaland	28.96	15.45		15.45	44.41
16	Odisha	95.64			0.00	95.64
17	Puducherry	7.50			0.00	7.50
18	Punjab	40.43			0.00	40.43
19	Sikkim	82.86		2.43	2.43	85.29
20	Tamil Nadu	59.82			0.00	59.82
21	Tripura	20.91			0.00	20.91
22	Uttar Pradesh	290.69	45.42	30.48	75.90	366.58
23	Uttarakhand	49.63		53.14	53.14	102.77
24	West Bengal	642.87	9.49	128.81	138.30	781.16

Total	3476.21	193.85	379.00	572.85	4049.06
Spilled over works of X Plan	89.79			0.00	89.79
Grand Total	3566.00	s		572.85	4138.85

21. Dismayed over the fact that the total area protected from floods is 9.40 mha out of total area of 20.81 mha liable to floods in the Ganga basin States, the Committee had recommended the Ministry to extend the coverage of flood protection by encouraging the States to expeditiously construct more embankments. Instead of furnishing any information on the steps taken to persuade the States to construct more embankments, the Ministry has, however, conveniently chosen to remain silent on the pretext that embankment falls within the purview of the State Governments and the role of the Ministry is promotional and advisory in nature. The Committee further note from the "Consolidated status of State-wise funds released under Flood Management Programme during XI and XII Plans (up to 31.03.2014)", furnished by the Ministry, that the funds released to the States of Assam and Jharkhand during the 12th Plan are minuscule. The Committee also observe that no fund has been released during the first three years of 12th five year plan to Gujarat, Haryana, Karnataka, Kerala, Odisha, Puducherry, Punjab, Tamil Nadu and Tripura. The Committee are surprised to note that despite recurrent episodes of devastating floods in Assam and Jharkhand the funds released for the construction of embankments to these States do not commensurate with the damages caused by the floods. The Committee, would like to know reasons for the same and urge upon the Government to impress upon the State Governments of these two States to take up construction of embankments

expeditiously and also to fully utilize the funds allocated for the purpose and reiterate their recommendation to advise the State Governments to construct more embankments using best technology and expertise. The Committee desire to be apprised of the progress in the matter.

G. Morphological Studies of Rivers

Recommendation (Para No. 18)

22. The Committee, in their original recommendation, had further noted that a provision had been made in the XIIth Plan for re-visiting the entire embankments. The longevity and durability of vulnerable embankments is proposed to be enhanced by the use of modern geo-textile/geo-synthetic material/geo-bags etc., which are environment friendly and also provide safety against puncture, breaches and erosion. Notably, these techniques had been used in many places viz. Malda, Nadia, 24 Pargana districts of West Bengal, works undertaken by Farakka Barrage Project on main stem of Ganga and river Swan in Una district of Himachal Pradesh, so that the embankments in the country stand strong enough to withstand the ravages of the swelling floods during the Monsoon season and the chances for embankment breaches are minimized and the inhabitants are protected from the unexpected calamity. The Committee therefore, had recommended that the Ministry/ CWC/ GFCC should immediately take up detailed morphological studies of all the rivers in the 11 Ganga basin States and complete this exercise within a definite time frame with a view to achieve better results in building, renovating and maintaining revetments, spurs and embankments in the area to control and mitigate the disaster caused by floods.

23. The Ministry, in their action taken reply, have stated that Morphological Studies of 14 rivers namely Ganga, Sharda, Rapti, Kosi, Bagmati, Yamuna, Brahmaputra, Subansiri, Pagladia, Krishna, Tungbhadra, Mahananda, Mahanadi and Tapi were proposed during the 12th Plan period at an approved cost of Rs.27.81 Crore under the "R&D Programme in Water Sector". Out of the above mentioned rivers, 7 rivers namely Ganga, Sharda, Rapti, Kosi, Bagmati, Yamuna and Hoogly are Ganga Basin Rivers. In this regard, proposals were obtained from IITs and NITs and are under consideration for award of works.

24. The Committee note that the task of obtaining proposals from IITs and NITs for morphological studies of fourteen rivers, out of which, half are Ganga basin rivers is reportedly under their consideration for award of works. The Committee are displeased to

note that no specific time frame has been mentioned by the Ministry for finalizing the action to be taken in this regard. The Committee further note that the reply also does not mention any time-frame for initiating morphological studies of the remaining seven rivers for which expenditure has been approved under the 12th Plan. Given the imperative need to achieve better results in building, renovating and maintaining revetments and embankments in the flood affected areas to control and mitigate the disaster, the Committee strongly recommend the Ministry to take proactive steps in this direction. The Committee would also like to be apprised of the expenses incurred from the allocated fund of Rs. 27.81 crore for morphological studies of the rivers as on date, since the Twelfth Plan has already reached its mid-way.

H. Proper Maintenance of Embankments

Recommendation (Para No. 19)

25. In their original recommendation, the Committee referred to the circulation of Master Plans by GFCC to the concerned Ganga basin States wherein afforestation of the embankment zones and turfing and plantation to the extent practicable for better reinforcement of soil on embankments in all Ganga basin States was emphasised. The Committee had desired that proper maintenance of embankments through afforestation in the embankment zones would go a long way to increase the longevity and durability of embankments and, therefore, the States should be encouraged for embarking on such programmes. Additionally, periodic inspection of the quality and strength of embankment should be undertaken by the concerned departments/ agencies and updated information sent to the Ministry/GFCC for taking necessary action before the onset of Monsoon every year to facilitate timely repair and renovation, where needed. The Committee had desired to be apprised of concrete steps taken in this regard.

26. The Ministry, in their action taken reply, have merely stated that as per the extant guidelines, the State Governments shall undertake regular maintenance of flood protection works before and after each monsoon and even during execution of works. Necessity for proper maintenance of embankments is reiterated during inspections and is also emphasised from time to time. The matter was reportedly discussed in the 45th meeting of GFCC held on 21st march, 2014.

27. The Committee had desired to be apprised about any concrete steps taken to ensure better reinforcement and maintenance of embankment zones in all Ganga Basin States. However, the Ministry has adopted a casual attitude by furnishing a stereotyped reply that the responsibility of the same vests with the respective State Governments, as per extant guidelines. The Committee are not satisfied with the same. Besides, as the matter was discussed in the 45th meeting of Ganga Flood Control Commission (GFCC) held on the 21st March, 2014, they would like to be apprised of the decisions taken during the said meeting on the matters raised by them, if any, within three months of the presentation of the Report. The Committee are also desirous to know if the GFCC has any record of the inspections carried out by the Ganga Basin States to ensure quality and strength of the embankments, before these issues come up for discussion during their meetings.

I. Expert Committees

Recommendation (Para No. 24)

28. In their original recommendation, the Committee had noted that an Expert Committee under the Chairman, Central Water Commission was constituted in July, 2012 for scientific assessment of flood-prone areas in the country. Report was awaited although during its 2nd meeting held on 27 June, 2013, the Expert Committee did finalise the methodology, classification and criterion to work out the assessment of flood-prone areas in the country. The Committee had hoped that the Expert Committee would expedite its report so that necessary follow up action is taken by the Government thereon. The Committee desired to be apprised of the outcome thereof.

29. The Ministry, in their action taken reply have stated that as a first step, regional committees are to be constituted to achieve the set objectives. These Committees have been constituted in four States namely Odisha, Andhra Pradesh, Bihar and West Bengal. The other

States were being persuaded for early constitution of the regional committees. In this regard, Regional Offices of CWC were in interaction with the Officers of State Governments.

30. The Committee note that the Ministry's reply is silent on the status of the Expert Committee report. Besides, it is a matter of concern that as on date regional committees for scientific assessment of flood-prone areas have been constituted only in Odisha, Arunachal Pradesh, Bihar and West Bengal. Obviously the Regional Offices of CWC have not been very successful in persuading the State Governments to do the needful. This calls for intervention at the higher level. Besides, as the Expert Committee has already finalized the modalities of assessment of flood-prone areas in June, 2013, the Committee would urge the Ministry to undertake rigorous efforts at the highest level in pursuing the rest of the States/UTs for early constitution of their respective regional committees within a specific time period so as to undertake the assessment based on those modalities.

CHAPTER II

RECOMMENDATIONS/OBSERVATIONS WHICH HAVE BEEN ACCEPTED BY THE GOVERNMENT

Recommendation (Para No.1)

Importance of Ganga Basin

The Committee observe that two rivers - the Alaknanda and the Bhagirathi, originating from the glacial peaks of the Himalayas at an altitude of about 7000 metres, unite near Devprayag, Uttarakhand and form the Ganga. The 'Ganga' traverses its course of 2,525 kms. (1450 kms. in Uttar Pradesh including Uttarakhand, 110 kms. along Uttar Pradesh-Bihar border, 445 kms. in Bihar and Jharkhand and 520 kms. in West Bengal) to its outfall into the Bay of Bengal. The Ganga plays vital role in providing water for irrigation, drinking, industrial usage, etc., for overall development of the people of the region. It also provides a perennial source of fresh water for agriculture, fisheries and rich bio-diversity. The Committee further noted that a broad analysis by Reserve Bank of India (RBI)'s data for food grain production during 2000-01 to 2010-11 reveals that the food grain output in the Ganga basin during the period was in the range of 48 to 54 percent of the national food grain production, whereas its catchment area is only 31 percent of the total catchment area of all the basins in the country. This fact leaves no doubt in one's mind that the Ganga basin is the bread basket of India. Taking note of the important role played by the river Ganga in the economic, social, cultural, religious and ecological life of India, the Committee desire to impress upon the Ministry the need for evolving a long-term comprehensive policy and planning to ensure judicious and efficient utilisation of water resources of the river Ganga and its tributaries commensurate with the importance the Ganga occupies in the national life. Such a policy be evolved after due consultation with the Planning Commission and Ministries of Agriculture, Environment and Forests, Energy, Rural Development etc. and the riparian States which would serve as mandatory policy guideline for all Ganga basin States. The Committee would like to be apprised of action taken by the Ministry in this regard at the earliest.

Reply of the Government

The Ministry of Water Resources has been constantly endeavouring to persuade the State Governments (including Ganga basin States) and other stakeholders for implementation of the National Water Policies and to bring about improvements therein for optimal results. As part of these efforts, the Ministry has reviewed and formulated National Water Policy 2012.

After a wide consultation with all stakeholders including Members of Parliament, Academia, Non-Governmental Organizations, Corporate Leaders and Representatives of Panchayati Raj Institutions, the National Water Resources Council (NWRC) headed by Hon'ble Prime Minister of India, wherein Planning Commission, various Central Ministries and States are also represented, in its sixth meeting held on 28th December, 2012, based on the broader consensus that emerged among the States, has adopted the National Water Policy-2012 (NWP-2012). The Policy, being

comprehensive one, is expected to have long-term positive impact on overall development of the country as it also advocates and promotes judicious and efficient utilisation of water, meeting ecological needs, and adapting to climate change.

The NWP-2012 vide Para 16.2 provides for revision/ drafting the State Water Policies in accordance with the National Water Policy 2012 keeping in mind the basic concerns and principles as also a unified national perspective. Accordingly, the NWP-2012 has been forwarded to all the States/UTs and the concerned Ministries/Departments of Central Government for appropriate action. All State Water Policies should conform to the National Water Policy -2012.

As per information available, Himachal Pradesh has revised the state water policy and the "Himachal Pradesh State Water Policy-2013" has been notified in November, 2013.

Comments of the Committee

(Please see Para No. 6 of Chapter-I of the Report)

Recommendation (Para No.2)

Utilizable Water Resource, its Usages and Annual Discharge of River Ganga

The Committee note that the 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 which is 26 percent area of our country. They also note that as per the National Commission on Integrated Water Resources Development and Planning (NCIWRDP), the annual average flow of Ganga basin is 525.02 Billion Cubic Metre (BCM). Out of this, the utilizable water resource has been assessed to be around 250 BCM. The Committee further note that the data pertaining to annual flow of river Ganga as observed at Farakka site do not establish any statistically significant trends regarding changes (increase or decrease) in total annual discharge of river Ganga since 1947. The Committee desired to be apprised of the State-wise percentage usages of water resource for irrigation and hydroelectric power in Ganga basin area. However, they are dismayed that the relevant information in this regard is not available with the Ministry. Recognising that an updated, authentic and comprehensive data base is a sine qua non for initiating any meaningful developmental work in the country, the Committee recommend that the Ministry should take urgent action for compilation of updated, authentic and comprehensive information, State-wise, pertaining to usages of water for irrigation, drinking and hydroelectric power, etc., in the Ganga basin. The Ministry should also establish a dedicated website on which the above information is available so that the same can be accessed by the public at large and stake-holders, viz. farmers, planners, economists, meteorologists, etc. in the country.

Reply of the Government

The National Water Policy 2012 vide para 14 stipulates establishing of a National Water Informatics Centre and making all hydrological data, other than those classified on national security considerations, available in public domain. In this regard, the project namely 'Generation of Database and Implementation of Web enabled Water Resources Information System (India – WRIS)' had been initiated by the Ministry jointly with ISRO in 11th Plan.

Main groups of the database are:

- | | |
|-------------------------------|--------------------------|
| i. Watershed Atlas | ii. Administrative layer |
| iii. Water Resources projects | iv. Thematic layer |
| v. Environment data | vi. Basin wise Report |

Status of Project as on date:

- Three versions of website of INDIA WRIS have been launched so far. The URL of the website is www.india-wris.nrsc.gov.in
- River Basin Atlas of India was released on 1st November, 2012 at CWC (HQ).
- All unclassified data of CWC's G&D stations has been uploaded at WRIS website recently in July 2013 as per Hydro-meteorological Data Dissemination Policy-2013.
- The version 4.0 was launched in March, 2014 and is available in public domain at 1:250000 scale.

However, since discharge data of Ganga basin is classified one, it has not been put in public domain but is released to specific users for specific uses on a case to case basis, according to data dissemination policy. Further, despite pursuance, the States including Ganga basin States are seen reluctant in providing data on actual water usage.

To maintain and update such a large volume of water resources data at national level, it has been proposed to establish a NATIONAL WATER RESOURCES INFORMATION CENTRE (NWIC) during the 12th Plan.

Comments of the Committee

(Please see Para No. 9 of Chapter-I of the Report)

Recommendation (Para No.4)

Creation of Additional Storage Capacity Through Implementation of RRR Scheme

The Committee note that a storage capacity of 48.68 BCM has been created through the completed projects in the Ganga basin and an additional capacity of 7.65 BCM would be created through projects under construction in the basin which can be useful for cushioning the floods to some extent. The Committee further note that due to flat terrain of the Ganga basin, Ministry does not favour building of barrages in the river itself at intervals of about 3-5 km because such barrages would create some inundation in the densely populated Gangetic plains. Consequently, water bodies viz. lakes and ponds, etc., are considered an option for storing water available locally

mainly during flood season, and hence the Ministry formulated/implemented a pilot scheme 'National Project for Repair, Renovation & Restoration (RRR) of Water Bodies directly linked to Agriculture' during the Xth Plan. The Scheme of RRR works in 10,000 water bodies with a Central Assistance of Rs.6,235 crore has been approved for continuation during the XIIth Plan. The scheme includes comprehensive improvement of water bodies, catchment area treatment and capacity building of stake holders and increased availability of drinking water. The Committee desire to be apprised of the updated position regarding implementation of RRR Scheme, including total physical and financial achievements made Plan-wise and State-wise since Xth Plan till December, 2013 and the targets for the next two years in Ganga basin States. They also would like to know the additional storage capacities created through RRR scheme till December, 2013 for flood moderation and cushioning in the Ganga basin States.

Reply of the Government

The scheme of Water Bodies in XII Plan envisages to take up RRR works in 10,000 water bodies with a Central Assistance of Rs.6235 crore covering CCA of 6.235 lakh ha. The Scheme is a continuous one and has been approved by Cabinet Committee on Economics Affairs on 20.09.2013 and the new guidelines thereof have been circulated to all the State Governments. All the State Governments have been requested to submit the DPRs as per the new guidelines for RRR of water bodies in XII Plan-October 2013. Plan-wise progress (cumulative) is given in Annexure-4(A, B & C).

Evaluation of the Pilot scheme (X Plan) has been carried out by various agencies like Water Technology Centre for Eastern Region, Bhubaneswar and WALAMTARI, Hyderabad, CWRDM, Kerala and NRSC Hyderabad.

The study by Water Technology Centre for Eastern Region, ICAR indicates increase in the storage capacity varying from 50% to 80% in Gajapati and Ganjam districts of Odisha and South 24 Paraganas District of West Bengal. The report from CWRDM indicates that benefits of the scheme of RRR of water bodies have percolated, inter-alia, to SC/ST families. The WALAMTARI report indicates increase in storage capacity of tanks ranging from 2.6% to 37.76% in Ananthpur and 0.80% to 46.75% in Mehboobnagar district of Andhra Pradesh. NRSC evaluation data indicates increased utilisation in Annual irrigation.

Recommendation (Para No.12)

Organisation and Manpower Strength of GFCC

The Committee note that the Ganga Flood Control Commission has original sanctioned staff strength of 101 personnel comprising 23 Group 'A' Officers, 13 Group 'B' (Gazetted) Officers and 65 other supporting staff. The Committee were informed that as on 01 October, 2013 (after

deemed abolition of 32 posts), the sanctioned staff strength has been reduced to 69 comprising 18 Group 'A' Officers, 04 Group 'B' (Gazetted) Officers and 47 other supporting staff, out of which there are 16 vacancies including 4 in Group 'A' Officers, 1 in Group 'B' (Gazetted) Officers and 11 other supporting staff. The Committee have been further informed that in addition, there are 19 posts of work-charged establishment. The Ministry in their reply informed that the present manpower strength of GFCC is adequate for its smooth functioning or for achieving its objectives and mandate. The Committee also note the Ministry's reply that filling up of vacant posts and introduction of appropriate capacity building programmes for the officers/staff of GFCC would enhance the effectiveness of the GFCC. They, therefore, desire that urgent necessary steps be taken for filling up the vacant posts and introduction of appropriate capacity building programmes for the officers and staff of the GFCC. The Committee would like to be apprised of the action taken in this regard.

Reply of the Government

All technical posts are cadre posts of Central Water Engineering Services (CWES) having its own capacity building mechanism including the aspects related to flood management. Therefore, no separate capacity building programme is envisaged for the officers posted in GFCC. The postings of Chairman and Members are done by the Ministry of Water Resources, whereas, officers below the level of Director are posted/ transferred by Central Water Commission. The vacancy position as on 30.04.2014 in respect of technical officers is given below:

Sl. No.	Name of the post	Sanctioned	Filled	Vacant
1	Chairman	1	1	-
2	Member	2	2	-
3	Director	4	2	2
4	Dy. Director	8	7	1
5	Assistant Director	8	3	5
6	Assistant Director-II	7	2	5
	Total	30	17	13

The vacancies at Director and Dy. Director Level could not be filled up due to shortage of personnel at these levels and non-availability of eligible personnel for promotion to these grades during 2013-14. However, the proposal for filling up of the vacant posts is, now, being processed by the CWC. As regards the posts in the cadre of GFCC, the status is given as below:

Sl. No.	Name of the post	Sanctioned	Filled	Vacant
1	Administrative Officer	1	-	1
2	P.S.to Chairman	1	-	1
3	Private Secretary	2	-	2
4	Steno Grade-I	7	6	1
5	Steno Grade-II	3	1	2
6	Assistant Director (OL)	1	1	-
7	Hindi Translator Grade-II	1	1	-
8	Head Clerk	4	1	3
9	Upper Divisional Clerk	4	2	2
10	LDC	10	4	6
11	Head Draftsman	1	-	1
12	D/Man Grade- I	6	5	1
13	D/Man Grade-II	1	-	1
14	Jr. Engineer	5	-	5
15	Sr. Computer	1	1	-
16	Jr. Computer	3	3	-
17	Ferro Printer	2	-	2
18	Driver	2	1	1
19	Multi Tasking Staff	16	9	7
	Total	71	35	36

For filling up the vacant posts of LDC, the vacancy position has already been communicated to Staff Selection Commission through the Ministry of Water Resources. For filling of one post of Stenographer Grade-II, which is likely to be vacant after the promotion one of the existing Stenographer Grade-II to Stenographer Grade-I, the vacancy has already been communicated to Staff Selection Commission through the Ministry of Water Resources. The RRs

of the some posts are under revision as per 6th CPC and after finalization of revised RRs necessary action would be initiated for promotion. Wherever DPC for promotion can be held with existing RRs, the action has been initiated.

Recommendation (Para No.13)

Meetings of GFCC

The Committee note the reply of the Ministry that the meetings of GFCC are held regularly for interaction among Ganga basin States and that 44 meetings have been held so far, including the last meeting held on 12 March, 2013. Considering the gigantic nature of challenges posed by the recurrent floods in the Ganga basin, the number of meetings held by GFCC is much too less and inadequate. Further, a perusal of the summary record of the 44th meeting of the Ganga Flood Control Commission held on 12 March, 2013 reveals that certain serious loopholes have been impeding the works of GFCC, which inter alia include flood management scheme being not formulated as per the guidelines of GFCC, non-submission of Detailed Project Reports (DPRs) according to guidelines, non-submission by Ganga basin States of quarterly physical and financial progress report of various schemes being implemented with Central Assistance, etc. The Committee urge the Ministry/GFCC to vigorously pursue with the concerned States for plugging the loopholes indicated above so that the onerous task of implementation of flood protection and management by the Ganga Flood Control Commission is carried out without any let-up or hindrances. Further, the Ministry/GFCC needs to strengthen its coordination with the concerned State Governments by increasing the frequency of meetings with them, i.e. by holding regular meetings atleast twice a year, namely, one meeting before the onset of Monsoon season to chalk out detailed coordinated strategies, measures and plan of action for coping with the ensuing Monsoon rains for each State of the Ganga basin, followed by another meeting at the end of the Monsoon season to review and evaluate the effectiveness of the strategies and measures taken during the Monsoon season, and also prepare new or modified strategies/measures as may be warranted by the flood trends. The Committee are also of the considered view that apart from other meetings and consultations that may be held as per the exigencies of the situation, a separate Cell should be created in the Ministry solely for handling the works of liaisoning/ coordination with the States so that the Ministry/ GFCC and the concerned States work smoothly and in tandem to achieve their declared goals and objectives. The Committee would like to be apprised of action taken in this regard.

Reply of the Government

The issue for holding two regular meetings of GFCC, one meeting before the onset of Monsoon season to chalk out detailed coordinated strategies, measures and plan of action for coping with the ensuing Monsoon rains for each State of the Ganga basin, followed by another meeting at the end of the Monsoon season to review and evaluate effectiveness of the strategies and measures taken during the Monsoon season, and also prepare new or modified

strategies/measures as may be warranted by the flood trends was discussed during 45th meeting of GFCC held on 21st March, 2014. Member States agreed that GFCC meeting may be held twice in a year as per the observation of Parliamentary Standing Committee. The post monsoon meeting, accordingly, is likely to be held in November 2014 depending upon the convenience of States.

Implementation of flood protection and management by coordinating amongst the States are enjoined in the functions to be discharged by GFCC. The Ganga Wing of the Ministry headed by a Commissioner level Officer assisted by Senior Joint Commissioners also provides technical and administrative support required by GFCC in discharging such functions. The Wing would continue to provide the support to GFCC.

Recommendation (Para No.14)

Financial Position of GFCC

The Committee note that as an organisation of Ministry of Water Resources, the expenditure on establishment and activities of Ganga Flood Control Commission is met from the allocation made for the Plan scheme 'River Management Activities and Works Related to Border Areas'. According to the Ministry, a total expenditure of Rs.20.48 crore was incurred by GFCC from the period 2007-08 to 2011-12 whereas during XIIth Five Year Plan, a total expenditure of Rs.4.80 crore during 2012-13 and Rs.2.44 crore (as on 01.10.2013) during 2013-14 had been incurred. The Expenditure Finance Committee (EFC) has approved an amount of Rs. 45 crore for the activities of GFCC during the XIIth Five Year Plan against the demand of Rs. 68.80 crore made by the Ministry of Water Resources. The Committee were informed about the adequacy of funds to meet the expenditure on establishment and to fund the activities of GFCC. The Committee hope that the Government will ensure the availability of adequate financial resources with the GFCC so as not to hamper its activities for Flood Management in Ganga Basin States.

Reply of the Government

The provision of Rs.45.00 crore has been proposed for GFCC in the EFC Memo for the plan scheme 'River Management Activities and Works related to Border Areas' during XII plan which appears to be sufficient to meet the expenditure on establishment and current level of activities and responsibilities of GFCC. It shall also be ensured that adequate financial resources are available to the GFCC so as not to hamper its activities for flood management in Ganga Basin States.

Recommendation (Para No.15)

Master plans for Flood Protection and Flood Management

The Committee note that the main function of the Ganga Flood Control Commission (GFCC) is to prepare Master Plans for flood protection and flood management in the Ganga basin States. The GFCC has prepared Master Plans for all the 23 rivers which are tributaries of the Ganga. Notably, the GFCC being an Advisory Commission, the execution of all works suggested under the Master Plans has to be carried out by the respective State Governments which are required to undertake works including embankments, drainage schemes, even town protection works, etc. through the Plan schemes. The Committee are dismayed to note that although State Governments are generally formulating flood management schemes keeping in view the Comprehensive Master Plans circulated by GFCC to all the concerned Ganga basin States for flood management, the information regarding status of implementation of Master Plans 'is not forthcoming from the State Governments despite several efforts including several reminders during the meetings of GFCB/GFCC'. Besides, although the Ministry requested six severely flood-affected Ganga basin States, namely Bihar, Uttar Pradesh, West Bengal, Jharkhand, Himachal Pradesh and Uttarakhand to constitute Implementation Committees to ensure time-bound implementation of the recommendations of the Comprehensive Plans, yet only the States of Bihar and West Bengal have set up such committees so far. Taking note of the tardy pace of execution of the Master Plans by the Ganga basin States, the Committee desire the Ministry/GFCC to keep tab on the concerned State Governments through frequent meetings, sending written reminders, etc. so that the Master Plans do not remain mere paper works in the preserve of the State Governments. Noting that four remaining severely flood-affected States have not taken needful action for constituting Implementation Committees, the Committee urge the Ministry/GFCC to pursue vigorously with these States for speedy execution of the Master Plans for flood protection and management in Ganga basin States. The Ministry may also consider mentioning the names of defaulting States in this regard on the websites of both the Ministry and the GFCC so that general public and the stakeholders may also bring pressure to bear upon these States so as to expedite implementation of the Master Plans.

Reply of the Government

MoWR had requested six severely flood-affected Ganga basin States, viz. Bihar, U.P., West Bengal, Jharkhand, H.P. and Uttarakhand to constitute Implementation Committees to ensure time-bound implementation of recommendations of Comprehensive Plans. Out of which, Bihar, Uttar Pradesh and West Bengal have constituted Implementation Committees, so far.

Chairman, Ganga Flood Control Commission has also requested the remaining three States namely, Jharkhand, Himachal Pradesh and Uttarakhand to expedite constitution of Implementation Committee to ensure time bound implementation of the recommendations of the Comprehensive Plans for Flood Management in the Ganga Basin States vide his D.O. dated

11.04.2014 to the Principal Secretary/ Secretary of Water Resources Department. The issue was also raised in the 45th meeting of GFCC held on 21st March, 2014 wherein concerned States were requested to expedite the formation of Implementation Committees under intimation to GFCC.

Recommendation (Para No.16)

Embankments

The Committee note that embankments of the length of 17,826 km have been constructed in the Ganga basin States so far. The Committee also note that the details of the cost involved in the construction of embankments have not been compiled. Further, the Committee note that although embankments have certain inherent disadvantages, the demand for providing flood embankment has been on the increase and since the area behind are protected from frequent flooding, they are available for cultivation during Monsoon as well as Rabi seasons. Moreover, embankments protect built-up area in the towns and cities. Noting that the total area protected from flood is only 9.40 mha out of the total area of 20.81 mha liable to floods in the Ganga basin States, the Committee urge the Ministry to extend the coverage of flood protection by encouraging the concerned States to construct more embankments in the Ganga basin States expeditiously. The Committee also desire the Ministry to furnish within 3 months of the presentation of this report, the expenditure incurred on the construction of embankments so far.

Reply of the Government

The subject of embankment falls within the purview of the State Governments. The role of the Ministry of Water Resources is promotional and advisory in nature. Accordingly, the FMP schemes are formulated and implemented by the State Governments, as per their priorities, keeping techno-economic considerations in view, based on trusted and tested practices. However, care is taken at the time of appraising DPRs and, if found necessary, new technologies/ construction materials are suggested for use.

The expenditure (Central share) under Flood Management Scheme, which includes expenditure on construction of embankments, upto 31st March 2014 is given below:

Consolidated status of State-wise funds released under "Flood Management Programme" during XI and XII Plans (up to 31.03.2014)

(Amount in Crore Rs.)

S. No.	State	Funds released during XI Plan	Funds released during XII Plan			Total Funds released upto 31.03.2014
			2012-13	2013-14	Total (XII Plan)	
1	Arunachal Pradesh	78.77		16.83	16.83	95.60

2	Assam	744.90	2.51		2.51	747.41
3	Bihar	680.79	54.48	88.57	143.05	823.84
4	Chhattisgarh	15.57		3.75	3.75	19.32
5	Goa	9.98	2.00		2.00	11.98
6	Gujarat	2.00			0.00	2.00
7	Haryana	46.91			0.00	46.91
8	Himachal Pradesh	165.31	19.92	9.75	29.67	194.98
9	Jammu & Kashmir	243.50	39.36	28.29	67.65	311.15
10	Jharkhand	17.07	4.27		4.27	21.34
11	Karnataka	20.00			0.00	20.00
12	Kerala	63.68			0.00	63.68
13	Manipur	65.03	0.95	16.96	17.91	82.94
14	Mizoram	3.40			0.00	3.40
15	Nagaland	28.96	15.45		15.45	44.41
16	Odisha	95.64			0.00	95.64
17	Puducherry	7.50			0.00	7.50
18	Punjab	40.43			0.00	40.43
19	Sikkim	82.86		2.43	2.43	85.29
20	Tamil Nadu	59.82			0.00	59.82
21	Tripura	20.91			0.00	20.91
22	Uttar Pradesh	290.69	45.42	30.48	75.90	366.58
23	Uttarakhand	49.63		53.14	53.14	102.77
24	West Bengal	642.87	9.49	128.81	138.30	781.16
Total		3476.21	193.85	379.00	572.85	4049.06
Spilled over works of X Plan		89.79			0.00	89.79
Grand Total		3566.00			572.85	4138.85

Comments of the Committee

(Please see Para No. 21 of Chapter-I of the Report)

Recommendation (Para No.17)

Maintenance of Embankments of River Bagmati

The Committee note that a team led by Chairman, GFCC and Member (RM), CWC

inspected the embankment works on river Bagmati in Sitamarhi and Sheohar districts (Bihar) on 27 November, 2013. The inspection team highlighted several shortcomings in the embankments, including absence of maintenance of the embankments since 2008 and made several recommendations regarding works required to be undertaken by the concerned authorities in this regard. The Committee deplore that the concerned basin State has not taken necessary corrective measures keeping in view the disastrous floods in North Bihar caused by a breach in the Eastern Afflux Bund of Kosi barrage at Kusaha in Nepal, necessitating works to be taken up for breach closure at a staggering Rs.115.00 crore during 2008-2011. The Committee also deplore the callousness on the part of the concerned authorities viz. the Ministry/GFCC/State Government of Bihar regarding non-maintenance of the embankment on river Bagmati after its completion in 2008 leading to its deterioration at many locations in view of the fact that there is high level of risk of occurrence of similar catastrophe on river Bagmati as it happened on the Kosi river. The Committee, therefore, strongly recommend the Ministry/GFCC to take vigorous, timely action for implementation of the recommendations of the inspection team led by Chairman, GFCC and Member (RM), CWC regarding embankments on river Bagmati so that all necessary works may be completed before the onset of ensuing Monsoon. The Committee would like to be apprised about the action taken in this regard.

Reply of the Government

The recommendations of the inspection team led by Chairman, GFCC and Member (RM), CWC regarding embankments on the Bagmati have already sent to the State Government of Bihar for taking necessary action and implementing the recommendations vide MOWR letter no. 2/1/2012-Ganga/4547-50 dated 27-12-2013. The matter is being pursued by GFCC with the State Government for early implementation of the recommendations and submitting the Action Taken Report.

Recommendation (Para No.18)

Renovation and Maintenance of Embankments

The Committee also note that a provision has been made in the XIIth Plan for re-visiting the entire embankments again. The longevity and durability of vulnerable embankments is proposed to be enhanced by the use of modern geo-textile/geo-synthetic material/geo-bags etc., which are environment friendly and also provide safety against puncture, breaches and erosion. Notably, these techniques have been used in many places viz. Malda, Nadia, 24 Pargana districts of West Bengal, works undertaken by Farakka Barrage Project on main stem of Ganga and river Swan in Una district of Himachal Pradesh, so that the embankments in the country stand strong enough to withstand the ravages of the swelling floods during the Monsoon season and the chances for embankment breaches are minimized and the inhabitants are protected from the unexpected calamity. The Committee therefore, recommend that the Ministry/ CWC/ GFCC should immediately take up detailed morphological studies of all the rivers in the 11 Ganga basin

States and complete this exercise within a definite time frame with a view to achieve better results in building, renovating and maintaining revetments, spurs and embankments in the area to control and mitigate the disaster caused by floods.

Reply of the Government

Morphological Studies of 14 rivers namely Ganga, Sharda, Rapti, Kosi, Bagmati, Yamuna, Bramhaputra, Subansiri, Pagladia, Krishna, Tungbhadra, Mahananda, Mahanadi and Tapi are proposed during the 12th Plan period at an approved cost of Rs.27.81 Crores under the "R&D Programme in Water Sector". Out of the above mentioned rivers, 7 rivers namely Ganga, Sharda, Rapti, Kosi, Bagmati, Yamuna and Hooghly are Ganga Basin Rivers. In this regard, proposals were obtained from IITs and NITs and are under consideration for award of works.

Comments of the Committee

(Please see Para No. 24 of Chapter-I of the Report)

Recommendation (Para No.19)

Aforestation of Embankment Zones and Periodic Inspection of Embankments

The GFCC had circulated Master Plans to the concerned Ganga basin States wherein afforestation of the embankment zones and turfing and plantation to the extent practicable for better reinforcement of soil on embankments in all Ganga basin States was emphasised. The Committee desire that proper maintenance of embankments through afforestation in the embankment zones would go a long way to increase the longevity and durability of embankments and, therefore, the States should be encouraged for embarking on such programmes. Additionally, periodic inspection of the quality and strength of embankment should be undertaken by the concerned departments/ agencies and updated information sent to the Ministry/GFCC for taking necessary action before the onset of Monsoon every year to facilitate timely repair and renovation, where needed. The Committee would like to be apprised of concrete steps taken in this regard.

Reply of the Government

As per the extant guidelines, the State Governments shall undertake regular maintenance of flood protection works before and after each monsoon and even during execution of works. Necessity for proper maintenance of embankments is reiterated during inspections and is also emphasised from time to time. The matter was also discussed in the 45th meeting of GFCC held on 21st March, 2014.

Comments of the Committee

(Please see Para No. 27 of Chapter-I of the Report)

Recommendation (Para No.20)

Execution of Flood Protection Schemes/Works

The Committee note that for execution of schemes/works, the Technical Committees suggest to start the work in December or latest in January, when the water level in the river is low for better sustainability of flood protection works. However, most of the times flood protection works get delayed due to non-submission of Techno-economically sound proposals, delay in compliance of technical observations of GFCC, non-completion of formalities like timely land acquisition, delay in submission of Utilisation Certificates and so on by the State Governments. The Committee were apprised that the matter was brought to the notice of concerned State Governments at various occasions like meetings of GFCB/GFCC besides monitoring visits and through holding meetings with concerned officers of State Governments. Further, the Committee note that the GFCC prepared compendium of guidelines/specifications, updated the same in January, 2004 and circulated to all concerned to follow the same during the implementation of the schemes, which is helpful in stabilization of the executed works. However, no specific response/suggestions in regard to guidelines/specifications has been received from any State Government. The Committee also note the Ministry's reply that there are some deficiencies in information flow regime between the Central and State Governments as a result of which a clear picture of Master Plans vis-à-vis their implementation is lacking thereby necessitating a need to streamline the same. For ensuring speedy execution of flood protection works in Ganga basin States, the Committee recommend that :

- (a) the Ministry/GFCC impress upon the States through regular correspondence and frequent meetings with the concerned officials of the States, the need for taking up flood protection works well before the onset of Monsoon;
- (b) the Ministry should insist on strict compliance of guidelines/specifications issued by the GFCC for implementation of Schemes by the States; and
- (c) the information flow system between the Ministry/GFCC and the States be streamlined so that there is no gap in the flow of information between them.

Reply of the Government

- a) The matter of speedy and timely execution of flood protection and anti-erosion works was discussed in the 45th meeting of GFCC held on 21st March, 2014, wherein, it was impressed upon the States to ensure completion of schemes as per schedule proposed in the DPR of the

scheme in statement FMP-1 while submitting the schemes for inclusion under FMP. The States were also requested to submit the flood control/anti-erosion scheme, which were required to be implemented before the next session, by 15th December so that sufficient time is available to GFCC for appraisal of schemes and thereafter for execution by the State Government.

- b) The matter of strict compliance of guidelines/specifications issued by GFCC for implementation of schemes by the States was discussed in detail in the 45th Meeting of GFCC held on 21st March, 2014 and it was impressed upon the states to ensure formulation of schemes strictly in accordance with the guidelines of GFCC. States were also advised to make use of CWC's handbook for "Flood Protection, Anti-erosion and River Training Works" which is available on the CWC's web site.
- c) For smooth follow up information between the Ministry/GFCC and States, the States have been requested to nominate the nodal officers who will be responsible for coordinating with GFCC/MOWR for all matters related to schemes in the States as well as for proposals for inclusion under FMP. The States were also advised to use e-mail for speedy communication for information.

Recommendation (Para No.21)

Anti Erosion Measures

The Committee note that erosion causes severe damage to soil fertility. Silt discharged due to erosion silts up farmlands; chocks lakes, reservoirs and canals; clogs up and raises river beds; blocks navigation passes; decreases the benefits of water conservancy facilities; and aggravates flood and water logging. All these adversely affect the development of economy and production in the country. The Committee, therefore, urge the Ministry to impress upon the State Governments the need to check erosion by taking necessary measures on priority basis such as : (i) planting trees, bushes, grasses, grass-shrub vegetation, etc. through plantation and also aerial sowing in inaccessible terrains; and (ii) taking appropriate engineering measures such as building intercepting ditches/check dams/silt-trap and/or construction of bench terraces, etc.

Reply of the Government

Under the Flood Management Programme (FMP) during XII Plan, funds are also provided for anti-erosion schemes in critical regions, anti-sea erosion and catchment area treatment. While appraising the schemes, provision for plantation is also looked for. In addition, the project authorities are impressed upon to take necessary action during monitoring visits.

During the 45th meeting of GFCC, the matter was discussed and States were requested to take necessary measures as recommended by the Hon'ble Committee.

Recommendation (Para No.23)

Implementation of Flood Management Programme under Central Plan

The Government launched in September 2007 'Flood Management Programme (FMP)' a State Sector Scheme under Central Plan with an outlay of Rs.8,000.00 crore for providing Central Assistance to the State Governments for works related to river management, flood control, anti-erosion, drainage development, flood-proofing works, restoration of damaged flood management works and anti-erosion works in coastal areas. A total of Rs.3,566.00 crore has been released as Central Assistance under this programme as on 31.03.2012. The Committee were apprised that the Government has approved continuation of FMP during XIIth Plan with an increased outlay of Rs.10,000.00 crore under which projects for catchment area treatment having objectives of flood management would also be provided Central Assistance besides the type of works funded during XIth Plan. While appreciating the fact that the allocations for FMP has been increased from Rs.8,000.00 crore during XIth Plan to Rs.10,000.00 crore during XIIth Plan, the Committee note that out of 420 works approved during XIth Plan, only 252 works were completed during the same period. Further, although an allocation of Rs.10,000.00 crore has been made for XIIth Plan, only Rs.263.71 crore had been released as Central Assistance till 31.10.2013 which include Rs.54.48 crore for Bihar, Rs.19.92 crore for Himachal Pradesh, Rs.4.27 crore for Jharkhand, Rs.45.66 crore for Uttar Pradesh, Rs.24.25 crore for Uttarakhand and Rs.54.86 crore for West Bengal. No funds have been released for Haryana, Rajasthan, Madhya Pradesh, Chattisgarh and NCT Delhi which are also part of the Ganga basin States. The Committee also note that no new scheme has been approved under Flood Management Programme during XIIth Five Year Plan so far. Noting that as per the projection made by States/UTs, an additional area of 6.0 mha. is likely to be provided reasonable degree of protection against floods under FMP during XIIth Plan, the Committee desire the Ministry to pull up its socks and make renewed efforts for effective implementation of Flood Management Programme during XIIth Plan. Accordingly, they recommend that the Ministry short-list flood management schemes of States/UTs capable of being implemented within the XIIth Plan period and expedite the release of funds for these schemes for achieving better results in this regard.

Reply of the Government

With a view to cover more area, 97 new schemes have been included and approved for XII Plan. Details of the same are given in Annexure-3. The inter se priority of the schemes is fixed by the States as per their priority based on the degree of the problem.

Recommendation (Para No.25)

Recommendations of 'Working Group on Flood Management and Region Specific Issues'

The representatives of the Ministry deposed before the Committee that the Union

Government has been making assessment of the adequacy of flood management measures through various working groups for specific Five Year Plans. For XIIth Plan, the Government had set up 'Working Group on Flood Management and Region Specific Issues' which recommended various measures for flood management. When asked to furnish the recommendations of this Working Group including the status of implementation thereof, the Ministry was unable to do so. The Committee, therefore, urge the Ministry to furnish the recommendations of the 'Working Group on Flood Management and Region Specific Issues' including the up to date status of the implementation of each of the recommendations.

Reply of the Government

The recommendations of the said Working Group are given Section 7 of the Report. The same are at Annexure-7. The status on three recommendations is given below:

A) Scientific Assessment of Flood Prone Area in India

The Ministry of Water Resources (MOWR) constituted an Expert Committee for Scientific Assessment of Flood Prone Area in India under the Chairmanship of Chairman, CWC; vide OM No. 5/19/2012/Ganga/2709-30 dated 20th July, 2012. The Expert Committee met two times and the last meeting was held on 27th June, 2013 at Sewa Bhavan, New Delhi.

The Expert Committee, during its second meeting finalized methodology, classification & criteria for assessment of flood prone areas in the country and decided to constitute Regional committee's for each State/UT with Principal Secretaries of the Water Resources Departments as its Chairman and Regional Chief Engineers of CWC as Member-Secretary of the committee. These regional committees were tasked to identify, demarcate and classify the Flood Prone Areas based on the methodology, classification & criteria as suggested by the Expert Committee within a stipulated period of nine months.

As of now regional committees have been constituted in the four states namely Odisha, Andhra Pradesh, Bihar and West Bengal and Chief Engineers of the regional offices of CWC are in contact with State Governments for constitution of the regional committees in the respective State/UT. Member (RM), CWC has also written DO letters to the Chief Engineers of the regional offices of CWC to take personnel interest in the matter and ensure notification of regional committees at an early date.

B) Flood Plain Zoning

As stated earlier, a model draft bill for flood plain zoning legislation was also circulated by the Union Government in 1975 to all the States for implementation of Flood Plain Zoning Approach. The status of Flood Zoning Bill is given below:

S.N.	State	Status / views of State
1	Rajasthan	Bill enacted

2	Uttarakhand	Bill enacted. Action are being taken by the State for its implementation
3	Uttar Pradesh	Enactment kept in abeyance. However, State is taking administrative measures to ensure flood plain zoning.
4	Himachal Pradesh	Bill is under consideration.
5	Delhi	State has informed that provision of Delhi Development Act is sufficient to achieve the objective.
6	Bihar	State informed that enactment of bill could not be considered in view of large flood affected area.
7	Haryana	Not enacted, The state has informed that necessary administrative measures are taken to ensure flood plain zoning.
8	Jharkhand	State informed that the requirement of bill in Jharkhand is not felt
9	Madhya Pradesh	State informed that the requirement of bill in MP is not felt
10	West Bengal	Under consideration by West Bengal Flood Control Board
11	Chhattisgarh	Views awaited

C) Preparation of Digital Elevation Model

In various meetings held in National Disaster Management Authority (NDMA) and the Annual Conference of Principal Secretaries of Irrigation/Water Resources/Flood Control Departments organised by the Ministry of Water Resources and various other forums, need has been expressed for availability of topographical maps on 1:10000 scale with contour interval of 0.5 meter. This would be useful for issuing inundation forecasts and provide information to the local authorities about the likely inundated areas during a particular flood. It would also facilitate vulnerability mapping in greater detail and help NDMA and State Disaster Management Authorities in undertaking disaster management in more effective manner.

During 12th Plan, it is proposed to take up the work of preparation of topographical maps in digital format i.e. Digital Elevation Modelling (DEM) for an area of 200000 sq. Km for the States of UP, Bihar and West Bengal. Survey of India has indicated a cost of Rs.400 crore for this work. A provision of Rs.400 crore has been made in the revised EFC for Modernisation of Flood Forecasting Network of CWC which is under process of approval by the Government of India.

Recommendation (Para No.26)

Flood Forecasting and Flood Preparedness

According to the Ministry of Water Resources, the flood situation in the country including Ganga basin States is monitored by the Central Water Commission every Monsoon. Based on the information provided by the CWC, the GFCC prepares weekly summary of flood situation in the Ganga basin States. Further, based on the flood information received from the CWC and the GFCC, the various agencies like NDMA, Ministry of Home Affairs, Ministry of Defence and the officials of State Governments are apprised of the flood situation and trend of rivers during emergency meetings of high level inter-ministerial forums like National Executive Committee headed by the Home Secretary. The Ministry claimed that there is accuracy of more than 96 percent in flood forecasting by the CWC, which is comparable with the best international practices. At present, the Central Water Commission issues flood forecasts at 87 stations in Ganga basin States of Uttarakhand (3), Uttar Pradesh (35), Bihar (32), Jharkhand (5), Madhya Pradesh (1), Haryana (1), NCT Delhi (2), West Bengal (8) during Monsoon period every year. The forecasts are disseminated to various user agencies namely State Revenue/Civil authorities, Water Resources/Irrigation/Flood Control/Disaster Management authorities of respective State Governments, and Road and Rail traffic authorities. As emphasized in the National Water Policy, 2012, flood forecasting is very important for flood preparedness and, therefore, it should be expanded extensively across the country specially in the Ganga basin States which are facing perennial flood ravages. The Committee recommend that the present flood forecasting infrastructure should be modernized using real time data acquisition system and linked to forecasting models. The Committee are pleased to note that the Ministry has, during XIIth Plan, proposed modernization and expansion of its flood forecasting network to include additional reservoirs under inflow forecasting network, preparation of Digital Elevation Maps (DEMs) in Uttar Pradesh, Bihar and West Bengal. They hope and desire completion of these proposals in the near future so that tangible improvements are visible in flood forecasting scenario specially in the flood-prone Ganga basin States.

Reply of the Government

Modernisation of flood forecasting network envisaged installation of telemetry for sensor based data acquisition and its real-time transmission for formulation of flood forecasts with the objective of improving warning time and accuracy of forecast started in 9th Plan. A total of 455 stations have been covered by the end of 11th Plan:

Plan	No. of H.O. sites where telemetry installed	basins
9 th	55	Chambal and Upper Mahanadi basins
10 th	168	i) Godavari basin 63 stations ii) Krishna basin 41 stations iii) Brahmaputra basin 21 stations iv) Damodar basin 20 stations

		v) Yamuna basin 15 stations vi) Mahanadi basin 8 stations
11 th	222	vii) Indus Basin – 04 viii) Lower Ganga Basin – 18 ix) Upper Ganga Basin – 45 x) Yamuna Basin – 25 xi) Narmada Tapi Basin – 76 xii) Mahanadi river Basin – 36 xiii) Brahmaputra Basin – 14 xiv) Godavari Basin – 4

Augmentation of Telemetry System is proposed to be continued in the 12th Plan. Efforts are also being made to have Digital Elevation Model (DEM) prepared. During 12th Plan, it is proposed to take up the work of preparation of topographical maps in digital format i.e. Digital Elevation Modelling (DEM) for an area of 200000 sq. Km for the States of UP, Bihar and West Bengal. Survey of India has indicated a cost of Rs.400 crore for this work. A provision has been kept in the revised EFC for Modernisation of Flood Forecasting Network of CWC which is under process.

Recommendation (Para No.32)

India-Nepal Co-operation

The Committee note that in order to contain the flood havoc caused by Nepal-originating rivers of the Ganga basin viz. Gandak, Bagmati, Kamla, Kosi, etc., the Government of India has taken several measures in agreement with the Government of Nepal which include : (i) regular transmission of hydro-meteorological data of sites located in Nepal to India during monsoon for use in flood forecasting on Indian side in Uttar Pradesh and Bihar; and (ii) taking up schemes for several flood control projects viz. Pancheshwar Multipurpose Project, Sapta Kosi High Dam, Storage-cum-Diversion Project in Sun Kosi and a dam coupled with a barrage project in Kamla basin in Nepal territory. The Committee further note that a Task Force has reviewed the arrangements regarding transmission of Hydro-Meteorological Data and identified key stations in Nepal, requirement of modern equipment in order to have more effectiveness in data collection and transmission for flood forecasting on Indian side. The Committee therefore, recommend that the Ministry take necessary steps for implementing the recommendations of the Task Force and keep them apprised in due course. The Joint Standing Technical Committee (JSTC), constituted in 2008 also needs to meet more frequently to address the problems.

Reply of the Government

The report of the Task Force was discussed in the 4th meeting of JSTC held on 12-13 September 2013, wherein, it was agreed that the report prepared by the Task Force on flood forecasting activities in the rivers flowing from Nepal to India would be reviewed by the experts of both the Governments, and concrete steps would be recommended jointly taking the applicable

new technologies into consideration. Subsequently, the matter was discussed in the 8th meeting of the India Nepal Joint Committee on Inundation and Flood Management (JCIFM) held on 4-8 February 2014 and the views of experts from Indian Side were communicated to Government of Nepal. It was decided that the report may be reviewed by the experts of Government of Nepal within 3 months. The expert views of Nepal are awaited.

India-Nepal Joint Standing Technical Committee (JSTC) meets as often as required depending upon the agenda and mutual convenience of two sides.

Recommendation (Para No.33)

Construction of Embankments in Nepal

The Committee note that an umbrella Committee in the name of Joint Committee on Inundation and Flood Management (JCIFM) was constituted in 2009 to implement the decisions of JSTC and also monitor the progress of works funded by Government of India in Nepal on various rivers flowing down to India and provide guidance to task group(s) and report to JSTC. The Committee are pleased to note that the works for construction of embankment in Nepal on rivers Kamla, Bagmati and Lalbakeya are under progress and they recommend that the works be completed speedily.

Reply of the Government

The projects for extension of embankment on river Kamla, Bagmati and Lalbakeya are presently under implementation by the Department of Water Induced Disaster Prevention, Government of Nepal with funding by the Government of India. The status of implementation of important components under these projects, river-wise are given as under:

A) Kamla River Training Project

	Description of works	Total as per DPR	Completed	Ongoing	Balance
1.	Embankment Construction (Km)				
	a. Left Bank	34.65	32.55	2.10	-
	b. Right Bank	33.60	32.80	0.80	-
2.	Gravelling of top of embankment (Km)				
	a. Left Bank	34.65	9.00	25.65	-
	b. Right Bank	33.60	8.00	25.60	-
3.	Spur / Stud (Nos.)	182	105	54	23
4.	Revetment (Km)	14.73	13.56	1.17	-
5.	Anti Flood Sluice(Nos.)	28	23	4	1
6.	Bridge(Nos.)	5	-	-	5

B) Bagmati River Training Project

	Description of works	Total as per DPR	Completed	Ongoing	Balance
1.	Embankment Construction (Km)				
	a. Left Bank	31.55	31.55	-	-
	b. Right Bank	8.45	8.45	-	-
2.	Embankment Strengthening (Km)				
	a. Left Bank	5.10	-	5.10	-
	b. Right Bank	31.78	-	31.78	-
3.	Gravelling of top of embankment (Km)				
	a. Left Bank	46.20	25.85	-	20.35
	b. Right Bank	41.00	24.65	-	16.35
4.	Spur / Stud (Nos.)	16 / 100	16 / 48	0 / 6	0 / 46
5.	Revetment (m)	1500	1500	-	-
6.	Anti Flood Sluice(Nos.)	17	12	1	4
7.	Bridge(Nos.)	3	-	-	3

C) Lalbakeya River Training Project

	Description of works	Total as per DPR	Completed	Ongoing	Balance
1.	Embankment Construction (Km)				
	a. Left Bank	30.11	21.00	9.11	-
	b. Right Bank	34.80	23.00	8.20	3.60
2.	Gravelling of top of embankment (Km)				
	a. Left Bank	31.96	5.40	15.60	10.96
	b. Right Bank	37.00	5.40	17.60	14.00
3.	Spur / Stud (Nos.)	8 / 205	0 / 90	0 / 43	8 / 72
4.	Revetment (m)	4386	4086	200	100
5.	Anti Flood Sluice(Nos.)	31	16	12	3
6.	Bridge(Nos.)	1	-	-	1
7.	Irrigation Outlet	1	-	-	1

The implementation of works is being monitored by the India Nepal Joint Committee on Inundation and Flood Management. During the 8th meeting of JCIFM, India insisted for early completion of ongoing works on these rivers.

Recommendation (Para No.35)

River Management Activities and Works Related to Border Areas

The Committee noted that under the Plan scheme 'River Management Activities and Works related to Border Areas' taken up during XIth Plan period, the Ministry held dialogues with Nepal on setting up of Pancheshwar Development Authority (PDA) for finalization of Joint DPR of Pancheshwar Multipurpose Project. Terms of Reference (ToR) of the PDA are being finalised in the Ministry in consultation with various Ministries including Ministry of External Affairs (MEA) and Ministry of Finance (MoF). Further, the joint field investigations for preparation of DPR of Sapta Kosi High Dam, Storage-cum-Diversion Project in Sun Kosi and a dam coupled with a barrage project in Kamla basin in Nepal territory are being carried out by a Joint Project Office- Sapta Kosi Sun Kosi Investigation (JPO-SKSKI). The Committee recommend that the Ministry speedily complete finalization of Terms of Reference (ToR) of the Pancheshwar Development Authority (PDA) for finalization of Joint DPR of Pancheshwar Multipurpose Project. They also desire that the works related to joint field investigations for preparation of DPR of Sapta Kosi High Dam, Storage-cum-Diversion Project in Sun Kosi and a dam coupled with a barrage project in Kamla basin in Nepal territory which are being carried out by a Joint Project Office- Sapta Kosi Sun Kosi Investigation (JPO-SKSKI) may be completed within a definite time-frame at the earliest. Noting further that about 50 percent of bank protection works on rivers Attrai, Punarbhava, Tangon, Nagar, etc. in West Bengal and 50 percent of works on river Feni in Tripura along international border with Bangladesh have been completed, the Committee ardently hope that these works may be completed fully within this financial year 2013-14. Further, they also observe that out of Rs.820.00 crore outlay approved for XIth Plan, the Ministry could achieve an expenditure of only Rs.721.14 crore upto 31.03.2012. The Committee, therefore, desire that due pre-planning exercise be undertaken by the Ministry and targets for achievements fixed and bottlenecks hampering project execution such as R&R issues, land acquisition, non-submission of UCs, etc. be removed so that the works/projects taken up under the scheme 'River Management Activities and Works related to Border Areas' achieve full utilization of its allocated outlay during XIIth Plan.

Reply of the Government

A) TORs of Pancheshwar Development Authority (PDA):

TORs of the Pancheshwar Development Authority (PDA) are under finalisation in consultation with concerned Ministries. D.O. letters have been written to MEA and MOF (DOR) at Secretary Level. However, some information is yet to be received from MOF (DOR). After receipt of the same, the matter would be put to the appropriate authority for approval. The matter is being pursued.

B) Sapta Kosi High Dam Multipurpose project and Sun Kosi Storage-cum-Diversion scheme by JPO-SKSKI:

As mentioned earlier, the survey & investigation works and preparation of Detailed Project Reports (DPRs) of Sapta Kosi High Dam Multipurpose Project, Sun Kosi Storage-cum- Diversion Project, Kamla Dam Project and Bagmati Projects are in progress. However, there has been some delay in

works mainly due to local disturbances and political instability in Nepal. The matter has been under discussion in bilateral meetings from time to time and Government of Nepal has been taking necessary steps for early completion of works and finalisation of their DPRs. A Joint Team of Experts (JTE) reviews the progress and addresses the issues for completion of ongoing field works and preparation of DPR of these projects in its meeting from time to time.

C) Bank Protection Work on Common / Border Rivers

The bank protection works on Common / Border rivers between India and Bangladesh, namely Attrai, Punarbhava, Tangon, Nagar, etc. in West Bengal taken up during the XI Plan have been completed.

CHAPTER III

RECOMMENDATIONS/OBSERVATIONS WHICH THE COMMITTEE DO NOT DESIRE TO PURSUE IN VIEW OF THE GOVERNMENT'S REPLIES

Recommendation (Para No. 5)

Role of Inter-Linking of Rivers Programme in Reservoir Creation

The Committee note that as part of the Inter Linking of Rivers (ILRs) programme, a series of reservoirs have been planned to be created in Nepal or in the foothills of the Himalayas. The Committee hope that these links would be able to harness the waters of the Ganga and its tributaries before going into the sea/neighbouring country and also serve as effective mechanisms for flood moderation / cushioning in the Ganga basin States. The Committee further note that 14 links under Himalayan component of ILR scheme have been identified. While Feasibility Reports (Indian portion) of two links have been completed, the Survey and investigation works (Indian portion) of 7 links have been completed and the field works of remainder links, except 1 link which lies entirely in Nepal, are under progress. The Committee are however, unhappy to note that the work on the Kosi-Mechi link which lies entirely in Nepal, could not be initiated for the simple reason that it lies entirely in Nepal. They are also dismayed to note that no time-frame/schedule has been fixed for completion of Himalayan component of ILR scheme by the Ministry giving the plea that ILRs are at conceptualization stage only and that the same would be fixed while finalising their Detailed Project Reports (DPRs). Noting further that the Indian Government is in dialogue with Nepal and Bhutan through bilateral mechanism for expediting field works for completion of DPRs of the links involving these countries, the Committee recommend that the implementation of ILRs and storage projects in Nepal and Bhutan be taken up with topmost urgency and seriousness by the Ministry by working out implementable time-schedule for their completion in collaboration with the Governments of those countries especially in case of Kosi-Mechi link for which work has not been initiated till now.

Reply of the Government

The response of MEA regarding surveys and investigations in Nepal Territory for link projects of Himalayan Rivers Development Component of National Perspective Plan for Water Resources Development was received vide their letter dated 13.09.2005 wherein MoWR was advised to wait for an appropriate and conducive time for these works. The relevant para of the MEA's Letter reads as follows:

"In MEA's assessment of current political situation in Nepal, this is not the appropriate time to carry out survey works for linking of rivers in Nepalese territories. Our focus at the moment could be on the linking of Peninsular Rivers".

Thereafter, MoWR vide letter dated 17.01.2007 requested MEA to seek permission of Government of Nepal for taking up of Survey & Investigation works of ILRs projects. Upon being

reminded by Secretary (WR), MEA on 09.06.2008 observed that, "Due to political instability and sensitivities in Nepal, it has not been possible to survey, investigate or collect data in Nepal".

Further, the Government of India have been making sincere efforts to accomplish the ongoing works including preparation of Detailed Projects Reports (DPRs) of storage projects in Nepal through bilateral mechanisms with Nepal. Issues causing hindrance in works are taken up in the bilateral meetings and also through diplomatic channels from time to time.

Recommendation (Para No. 8)

Flooding in Farakka Barrage Areas

The Committee observe that the Farakka Barrage is a barrage across the river Ganga, which is about 17 kms. from the Bangladesh border near Chapai Nawabganj district. Recently, excess release of water led to flooding in Lalgola block, which was compounded by the problem of non-maintenance of the embankment of the canal which is about 40 kms. long from the Barrage to the Bhagirathi-Hooghly, leading to flooding of villages and submergence of huge acres of land. A total of Rs.520.00 lakh has been allocated by the Government for repair and maintenance of the Farakka Barrage during XIIth Plan, out of which an expenditure of Rs.135.11 lakh has been incurred so far. The Committee desire the Ministry to make an on-the-spot study expeditiously of the safety, reliability and efficiency of the canals and embankments of Farakka Barrage specially in Lalgola block of Murshidabad district to ensure that such flooding do not recur in future. They would like this work to be completed well before the onset of Monsoon season, so that necessary repair and maintenance works (if any) may be taken up by the concerned departments/organisations in time. The Committee would like to know the follow-up measures taken in this regard.

Reply of the Government

MoWR constituted a Team of Experts under the Chairmanship of Member (Planning), Ganga Flood Control Commission vide O.M. No. Z-16012/13/2013-Ganga/4179-88 dated 3rd December, 2013 to assess the extent of River erosion problem in the Jangipur area of West Bengal. The report has been submitted and is at Annexure-6. Farakka barrage Project has already initiated action on immediate structural measures likely to be completed before Monsoon, 2014.

Comments of the Committee

(Please see Para No. 15 of Chapter-I of the Report)

Recommendation (Para No. 9)

Flood Management in Ganga Basin States

Taking note of : (i) dire necessity of tackling the recurrent devastations caused by floods year after year in the Ganga basin and to alleviate human miseries and also to reduce and ultimately eliminate colossal damages to crops, houses and public utilities; and (ii) the provisions of the National Water Policy, 2012 for rehabilitation of natural drainage systems, the Committee recommend that the Ministry/Central Water Commission should in consultation with all the basin States chalk out a time-bound, implementable programme of action to identify those drainage systems, viz., rivers/streams, canals, etc., which need immediate rehabilitation and adopt measures to be taken by the concerned agencies/authorities for their repair and restoration. The progress of works undertaken in this regard should be reviewed after every six months.

Reply of the Government

Working Group on Flood Management and Regional Specific Issues for XII Plan recommended structural and non-structural measures including drainage improvement for working out strategies for flood management.

Drainage development aspects are effective where flood water stays for long periods due to drainage related problems. These schemes are to be formulated by the States.

In general, this method may not be sustainable in Ganga basin due to prevailing characteristics of the drainage system and huge amount of silt coming in Himalayan rivers in monsoon season. Creation of storages in the upper reaches (in Nepal) jointly with flood protection works at some reaches downstream in the Ganga basin States namely Uttar Pradesh, Bihar and West Bengal may be considered as better proposition.

Recommendation (Para No. 22)

Centrally Sponsored Anti-Erosion Schemes

The Committee observe that as part of the implementation of the recommendations of Task Force 2004, the Union Government had expanded their role in flood sector and during Xth Plan it had approved the Centrally Sponsored Scheme 'Critical Anti-Erosion Works in Ganga basin States' for Rs.305.03 crore and State Sector Scheme 'Critical Flood Control and Anti-Erosion Schemes in Brahmaputra and Barak Valley States' for Rs.225.00 crore and under which immediate Short-Term-I measures as recommended by Task Force 2004, were undertaken. Taking note of the great significance of such anti-erosion schemes, the Committee recommend that the Ministry make all out efforts for full, effective and speedy implementation of these schemes. The Committee also urge the Government to implement and further improve upon these schemes in future. They also would like to be apprised of achievements made under the two schemes.

Reply of the Government

For effective and speedy implementation of FMP, which inter-alia includes anti-erosion works, the Ministry has issued new guidelines for providing central assistance to the States. The same have been provided to the State Governments. Under the new guidelines of "Flood Management Programme", critical flood control, river management and anti-sea erosion works in the entire country would be covered. As per the report of XI Plan Working Group on Water Resources, an area of 1.78 million hectare (mha) had been provided reasonable degree of protection during X Plan, which includes the area benefitted by the works executed under the above two schemes.

Recommendation (Para No. 29)

Monitoring, Evaluation and Appraisal of Flood Management Schemes by GFCC

The Committee note that Ganga Flood Control Commission (GFCC) monitors all Flood Management Schemes in the Ganga basin through site visits and report to the Ministry. The GFCC also advises the State Governments and that every ongoing scheme is site-inspected at least once in a year. In regard to physical progress of Flood Management Programme (FMP) in the Ganga basin, the Ministry informed that as of October, 2013, 97 Schemes had been taken up, out of which 52 were completed, 04 schemes dropped/withdrawn and 41 Schemes were still under progress since 2007-08. Further, giving reasons for poor performance of FMP in the Ganga basin, the Ministry attributed the same to availability of limited working season, disputes in land acquisition and non-submission of Utilisation Certificates (UCs) by the States in time. The Committee recommend that before giving clearance to schemes for Flood Management Programme sent by the Ganga basin States, the Ministry should ensure that necessary ground works viz. land acquisition, submission of utilization certificates, infrastructural developments, Rehabilitation and Resettlement issues, etc. are sorted out by the concerned State Governments before undertaking execution of the schemes.

Reply of the Government

As per the revised guidelines of FMP for XII plan, it is mandatory for the States to submit a certificate that, land required for taking up of the scheme is in possession of the State Government. The other suggestions of the committee will be duly complied with while according techno-economic clearance of the scheme being received from the Ganga Basin States.

Recommendation (Para No. 31)

Utilisation Certificates

The Committee are surprised to observe that UCs for a total amount of Rs.334.54 crore were outstanding, viz. Rs.4.56 crore in Uttarakhand, Rs.16.61 crore in Bihar and Rs.313.37 crore

in West Bengal. The Committee in their 17th Report on Demands for Grants (2013-14) had recommended that the UCs from the concerned organizations/departments must be obtained and also recommended to consider imposition of fines for inordinate delays in submission of the UCs. The Committee reiterate their above recommendation and urge the Ministry to keep strict vigil on the implementation/completion of various FMP schemes/projects being funded by Union Government and the timely submission of UCs by the concerned State Governments.

Reply of the Government

The Matter is being pursued with the States for expediting submission of UCs. During the 45th meeting of GFCC held on 21st March 2014, States have been impressed upon to ensure timely submission of UCs. The subsequent release of central assistance to a State is linked to submission of UCs of fund releases to the State.

Recommendation (Para No. 34)

Indo-Bangladesh Co-operation

The Committee note that the Indo-Bangladesh Joint Rivers Commission (JRC) was set up in 1972 which provides a platform for resolution of common problems related to development works on common/border rivers, causing no harm to either side. They also note that 37 meetings of JRC have been held so far whose outcome include Ganga Water Sharing Treaty, 1996 with Bangladesh. The Committee appreciate the work of JRC for solving common problems related to border rivers between India and Bangladesh. Noting that there are still a few common problems which defied resolution, viz. sharing of waters of common rivers like Teesta, Feni, etc., the Committee would like the Ministry to redouble its efforts for bringing mutually acceptable solution to persisting problems between India and Bangladesh on sharing of waters of common rivers as stated above and apprise the Committee about the outcome thereof.

Reply of the Government

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 developmental works on common/border rivers, causing no harm to either side. Under the aegis of above Commission, the 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.

Efforts are being made to resolve issues related to water sharing of Teesta, Feni Jaldhaka, Torsa, Manu, Muhuri, Khowai & Gumti rivers and to arrive at mutually acceptable solutions protecting interest of all stake holders.

Recommendation (Para No. 36)

Flood Protection Works on Kosi River

The Committee note that the Kosi High Level Committee (KHLC) was constituted by the then Irrigation Department, Government of Bihar in 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. They further note that the Committee is inspecting every year the protection works taken up on the river and make recommendations regarding protection works to be executed by the State Governments on the river before the next flood season. However, a breach in the Eastern Afflux Bund at 12 kms. at Kusaha, Nepal occurred on 18.08.2008 in Kosi Barrage for which works for breach closure were taken up by the Government of India with an expenditure of Rs.115.00 crore during the years 2008-09, 2009-10 and 2010-11. The Committee also note that the GFCC took a lead role in providing technical assistance in the Kosi breach closure works that were carried out in the Eastern Afflux bund of Kosi Barrage as well as monitoring of execution of works. No further breaches have occurred in the Kosi Barrage since 2008. As short-term measure to avoid recurrence of breaches in Kosi Barrage, the KHLC inspects the existing works on Kosi river every year and suggests necessary restoration works for implementation by the Government of Bihar. As long-term measures, five Multipurpose projects in Nepal are under various stages of finalization/studies. The Committee also note the submission of the Government that unless construction of reservoirs, i.e. high dams in the upstream of these rivers, is taken up, the flood problem cannot be solved fully. Noting that the short-term measure of flood protection works carried out by KHLC have been ineffective to solve flood problem, the Committee feel that the focus should be on long-term measures for flood control in respect of Kosi river. The Committee also note that the tenure of JPO-SKSKI has been fixed upto February, 2015 for completing field investigations and preparation of DPRs for Sapta Kosi High Dam Multipurpose project and Sun Kosi Storage-cum-Diversion scheme at a revised cost of Rs.104.78 crore. The Committee desire to see the works pertaining to field investigations and preparation of these DPRs completed within the scheduled time without involving any further revision of cost so that the process for execution of these two projects be taken up in the near future. The Committee would like to be apprised of further action taken in this regard.

Reply of the Government

A Joint Team of Experts (JTE) reviews the progress, addresses the issues/ bottlenecks, if any, affecting the progress of the field works by way of taking corrective measures required for completion of ongoing field works and preparation of DPR from time to time. The next meeting of JTE is to be held at New Delhi and efforts are on to hold meeting at the earliest.

The achievements of milestones of the projects depend upon the political situation and law and order at the project site.

CHAPTER IV

RECOMMENDATIONS/OBSERVATIONS IN RESPECT OF WHICH REPLIES OF THE GOVERNMENT HAVE NOT BEEN ACCEPTED BY THE COMMITTEE

Recommendation (Para No. 3)

Creation of Storages for Increasing Utilization of Water

The Committee note that only 63.28 BCM of the 250.00 BCM of utilisable surface water is presently utilised, indicating that an estimated 186.72 BCM of the basin's utilisable surface water is going waste into the sea/neighbouring country which could be arrested for utilisation in the country. Further, an additional storage of 7.65 BCM would be created through projects which are under construction in the Ganga basin. The Committee also note the Ministry's reply that water discharge from Ganga basin rivers into the sea/neighbouring country in 'non lean season' can be arrested with the creation of sufficient storages in upper catchment and transferring water from the water-surplus river basins to the water-deficit river basins. In this connection, the Ministry informed the Committee that a continuous dialogue is being maintained by the Government of India with Nepal for building storage projects in Nepal, given the fact that due to topographical constraints (i.e. flat terrain), building storages in the Gangetic plain areas is not feasible. To concretise storage creation in Nepal, 5 projects viz. Pancheshwar Multipurpose Project, Sapta Kosi High Dam Multipurpose Project, Sun Kosi Storage-cum-Diversion Project, Kamala Dam Project and Bagmati Project have been identified by the Ministry. However, the Committee are dismayed to note that these storage projects are at conceptualization stage only. Further, whereas annual flood fury is ravaging Uttar Pradesh and Bihar year after year causing untold misery to the people, the progress report of the Ministry in this regard has been nothing but dismal. Whereas the field investigations for Pancheshwar Multipurpose Project have been reported to be completed, the field investigations for Sapta Kosi High Dam Multipurpose Project and Sun Kosi Storage-cum-Diversion Project and Feasibility Level study of Kamala Dam Project and Preliminary study of Bagmati Project in Nepal are still stated to be in progress. Taking due note of the gravity of the annual flood situation in Uttar Pradesh and Bihar, the Committee urge the Ministry to make sustained all-out efforts for accelerating the pace of implementation of the storage creation in Nepal. The Committee also recommend that the Ministry/GFCC draw up, in consultation with the State Governments of Uttar Pradesh and Bihar, detailed road-map for completion of each of the above 5 projects within given timelines under intimation to them.

Reply of the Government

As mentioned earlier, the survey & investigation works and preparation of Detailed Project Reports (DPRs) of Sapta Kosi High Dam Multipurpose Project, Sun Kosi Storage-cum- Diversion Project, Kamla Dam Project and Bagmati Projects are in progress. Some delay in works has been

there mainly due to local disturbances and political instability in Nepal. The matter has been under discussion in bilateral meetings from time to time for early completion of works and finalisation of their DPRs. A Joint Team of Experts (JTE) reviews the progress, addresses the issues/ bottlenecks, if any, affecting the progress of the field works by way of taking corrective measures required for completion of ongoing field works and preparation of DPR and setting targets from time to time. The next meeting of JTE is to be held at New Delhi and efforts are on to hold meeting at the earliest.

With regard to Pancheshwar Multipurpose Project, it is to state that, TORs of the Pancheshwar Development Authority (PDA) are under finalisation in consultation with concerned Ministries. This Ministry has been pursuing the matter through DO letters to MEA and MOF (DOR) at Secretary Level. Hon'ble Minister has also taken up the matter through D.O. dated 26.06.14 with Hon'ble Prime Minister. However, some information is yet to be received from MOF (DOR). After receipt of the same, the matter would be taken to the appropriate platform for approval of TORs. The achievements of milestones on these projects depend upon the political situation and law and order in project area.

The States of Bihar, UP and Uttarakhand are represented in various committees/ bilateral mechanisms between India and Nepal appropriately according to their role in the ongoing works of these projects.

Comments of the Committee

(Please see Para No. 12 of Chapter-I of the Report)

Recommendation (Para No. 24)

Assessment of Flood Prone Areas by Expert Committee

According to the Ministry, an Expert Committee under the Chairman, Central Water Commission was constituted in July, 2012 for scientific assessment of flood-prone areas in the country. The Committee were apprised that the report of the Expert Committee was yet to be submitted although during its 2nd meeting held on 27 June, 2013, the Expert Committee finalised the methodology, classification and criterion to work out the assessment of flood-prone areas in the country. The Committee hope that the Expert Committee would expedite its report so that necessary follow up action is taken by the Government on the report of the Expert Committee. The Committee would like to be apprised of the outcome thereof.

Reply of the Government

As stated, as a first step, regional Committees are to be constituted to achieve the set objectives. The Committees have been constituted in the four states namely Odisha, Andhra

Pradesh, Bihar and West Bengal. The other States are being persuaded for early constitution of the regional committees in the respective State/UT. In this regard, Regional Offices of CWC are in interaction with the Officers of State Governments.

Comments of the Committee

(Please see Para No. 30 of Chapter-I of the Report)

CHAPTER V

RECOMMENDATIONS/OBSERVATIONS IN RESPECT OF WHICH FINAL REPLIES OF THE GOVERNMENT ARE STILL AWAITED

Recommendation (Para No. 6)

Flood-affected Areas and Magnitude of Damage

The Committee note that devastating flood is a recurring feature in the 11 Ganga basin States. The Committee observe that the XIIth Plan Working Group of Flood Management and Region Specific Issues compiled the maximum flood effected area in the country as 49.815 million hectare, out of which flood affected area for Ganga basin States was compiled as 23.728 million hectare *viz.* Bihar (4.986 mha), Jharkhand (0.266 mha), Madhya Pradesh (0.377 mha), Chhattisgarh (0.089 mha), Uttar Pradesh (7.34 mha), Uttarakhand (0.002 mha), Delhi (0.458 mha), Haryana (1.000 mha), Rajasthan (3.260 mha), Himachal Pradesh (2.870 mha), and West Bengal (3.080 mha). Regarding the magnitude of losses caused by recurring floods, the Committee observe that between 2000 to 2012, 200.312 million population were affected and a total damage of crops, houses and public utilities amounting to Rs.36,744.142 crore has been caused in the 11 Ganga basin States. The Committee also note that the recurring flood scene in Ganga basin States are due to high intensity rains falling in short duration, heavy rains of long duration, high flows from upper hilly regions, inadequate river capacity and inadequate river embankments, etc. The Ministry could not furnish the information regarding: (i) the average annual rain fall, total cropped area, flood prone area and flood protected area in the Ganga basin in 1972 and as on 18.10.2013, and (ii) the proportion of the total flood prone area falling under cropped area, saying that the same were being collected. Reiterating the need for compiling such a vital information for policy planning and programme execution, the Committee recommend that the desired information may be furnished to the Committee within three months of the presentation of this report along with details of relief and rehabilitation package given to the flood affected areas in Ganga basin during the last 5 years, year-wise.

Reply of the Government

The state-wise data of average annual rainfall supplied by India Meteorological Department (IMD) and flood affected area/ cropped area (tentative) in Ganga Basin States in the years 1972 and 2013 are given in Annexure-1. Figures in respect of flood protected/ benefitted area in 1972 are as per the report of Rashtriya Barh Ayog published in 1978, whereas, corresponding data for 2013 is not available. However, figures of benefitted area compiled by the Working Group on Flood Management and Region Specific Issues upto March 2011 have been given in the Annexure-1.

The Government of India has constituted State Disaster Response Fund (SDRF) in each State for providing immediate relief to the people affected by the notified natural disasters. The contribution of Centre and State Governments are in the ratio of 75:25 for general category States

and 90:10 for special category States. In case, the State does not have adequate balance in the SDRF, additional assistance is provided from National Disaster response Fund (NDRF). At present, 12 natural disasters including floods are covered under grant from SDRF/NDRF. However, this Ministry does not maintain disaster-wise or district-wise expenditure booked from SDRF. The state-wise allocation of State Disaster response Fund (SDRF) by Ministry of Home Affairs (MHA) during 2010-2015 is at Annexure-5. The information about relief and rehabilitation packages given to flood affected areas is being collected from the Ganga basin States and would be provided in due course.

Recommendation (Para No. 7)

Scientific Assessment of Flood Prone Areas

The Committee note that the Ministry of Water Resources has constituted an Expert Committee for scientific assessment of flood-prone areas in the country and it has also been decided to set up Regional Committees for compilation and assessment of State-wise flood-prone areas. The Committee would like to see a speedy completion of the process of setting up Regional Committees for compilation and assessment of State-wise flood-prone areas. They also desire to be apprised about the report of the Expert Committee set up for scientific assessment of flood prone areas in the country as and when it is presented.

Reply of the Government

As stated, regional Committees are to be constituted to achieve the set objectives. The Committees have been constituted in the four states namely Odisha, Andhra Pradesh, Bihar and West Bengal. The other States are being persuaded for early constitution of the regional committees in the respective State/UT for speedy completion of the study. As and when more such Committees are constituted, same would be brought to notice of the Committee.

Recommendation (Para No. 10)

Role of Global Climate Change in Ganga Basin Flood

The Committee note with alarm that a study made by the Indian Network of Climate Change Assessment (INCCA), a network-based scientific programme of Ministry of Environment and Forests (MoEF), on the impact of climate change on water resources in four regions of the country including the Himalayan region indicated that the flooding could vary from 10 percent to over 30 percent of the existing magnitudes in most of the regions by 2030. They also note that the Ministry of Water Resources is also currently taking up basin level studies in this regard, and that the Central Water Commission (CWC) has taken up two studies, *i.e.* (i) Inventory and monitoring of glacial lakes and water bodies in Himalayas affecting India and (ii) development of snowmelt-runoff models with the National Remote Sensing Centre, Hyderabad to which the National Institute of Hydrology is providing necessary inputs. The National Water Policy, 2012 underlines the need for

factoring the input of climate change into all projects. The policy also envisages that planning and management of water resources structures such as dams, flood embankments, tidal embankments, etc., should incorporate coping strategies for possible climate change. The Ministry has constituted a Committee to review the guidelines for preparation of Detailed Project Reports (DPR) incorporating the aspect of climate change. The Committee therefore recommend that the process of reviewing the guidelines for DPRs be completed expeditiously and corrective measures taken urgently to ward off or minimise the adverse impact of climate change on the river basin systems.

Reply of the Government

A study on the impact of climate change on water resources has been initiated and the parameters governing the impact are yet to be quantified and authenticated.

Till the factors responsible are suitably incorporated in the guidelines and parameters are quantified, the data series as available at or near the project location is studied in establishing the water availability and other water related parameters for planning of project, which account for variability in the water flow characteristics.

Recommendation (Para No. 11)

Objectives and Functions of GFCC

The Committee observe that the Ganga Flood Control Commission (GFCC), a subordinate office of Ministry of Water Resources was created in 1972 to act as the Secretariat and executive limb of the Ganga Flood Control Board (GFCB) and to deal with the floods and its management in the Ganga basin States. With its headquarters located at Patna, the mandate of the GFCC includes examination of all major and medium flood control, drainage, anti-water logging and anti-erosion schemes of the Ganga basin States except for the schemes of the States of Haryana, Uttar Pradesh and Delhi on the river Yamuna in the reach from Tajewala to Okhla barrage. The Committee also note that the GFCC has undertaken studies for assessment of adequacy of waterways under the road and rail bridges aimed at determining additional waterways required for reducing drainage congestion to a reasonable limit. This study has been completed for all 23 river systems in the Ganga basin except the Tidal River System and the Ganga Main Stem. For the Ganga Main Stem, the study has been completed for the stretch between Haridwar and outfall. These reports have been circulated to the Ganga basin States and the concerned departments of the Union and State Governments including the Ministry of Railways for follow up action. The Committee desire that the study be undertaken / completed at the earliest in respect of the Tidal River System and the remaining part of the Ganga Main Stem as well. They also further desire the Ministry to keep a tab on follow up action taken by the concerned Ganga basin States/Departments of Union and State Governments including the Ministry of Railways in this regard.

Reply of the Government

The study with regard to adequacy of waterways under road and rail bridges in respect of tidal river system and remaining part of Ganga Main Stem is being planned and proposed to be completed by the end of Financial Year 2015-16. The action required to be undertaken by the Ganga Basin States/Departments of Union including the Ministry of Railways on the recommendations of the studies already completed was discussed in 45th Meeting of Ganga Flood Control Commission held on 21st March, 2014. The States were requested to appraise the present status vis-à-vis the recommendations. The same is awaited. The matter is being actively pursued with the states/ other departments for early submission of information.

Recommendation (Para No. 27)

Enquiry into Disastrous Flood of Uttarakhand

The Committee note the reply of the Ministry that the disastrous flood of Uttarakhand in 2013 was due to combination of one or more factors, i.e. (i) melting rate of glacier being high during the period, (ii) unprecedented early, prolonged and heavy to very heavy rainfall in the catchment areas, and (iii) occurrence of snowfall prior to rainfall which melted rapidly due to rainfall. As per the information of the Ministry, 1,08,653 persons were affected, 580 people killed, 4,726 houses fully damaged, and 9,470 cattle were lost. Responding to the Committee's query, the Ministry further informed that the Central Water Commission had issued timely (water) level forecasts to the local administration for the stations located at Rishikesh and Haridwar, besides sharing the water-level data of 11 other stations in the State with the State Government. The Ministry also claimed that India Meteorological Department (IMD) had issued forecast for heavy rainfall in Uttarakhand during 14th to 18th June, 2013. However, the Committee are pained to note that in spite of the claims by the Ministry, a disaster of such a magnitude took place in the Ganga basin, leaving behind unprecedented destruction and misery in its trail. The Committee are of the firm view that with increased efforts and research by India Meteorological Department along with stepping up of periodic monitoring of glacial lakes and water bodies in Himalayas by the National Remote Sensing Centre (NRSC), Hyderabad, advance information regarding occurrence of such natural calamities can be gathered and passed on to concerned authorities in time to avoid or minimize the loss of life and property as a result thereof. Notably, the present form of periodical monitoring of glacial lakes and water bodies does not help in fast changing weather triggered natural catastrophe such as cloud bursts. The Committee, therefore, recommend that the Ministry should step up its coordination with associated organisations/departments like Central Water Commission, India Meteorological Department, National Institute of Hydrology, National Remote Sensing Centre (NRSC), etc., for undertaking appropriate research into such climatic phenomenon as cloud bursts, rainfall pattern, snow melt pattern, etc., in the Himalayas so that the results may be gainfully utilised for making better/more accurate weather predictions thereby helping the concerned departments/ organisations to make advance preparations for natural catastrophe as occurred in Uttarakhand. The Committee also note that the Ministry of Water Resources has set up

a Committee under Chairman, GFCC to find out the causes for severe destruction in Uttarakhand due to flood and erosion during 16-17 June, 2013 and that the report has already been submitted by the Committee. The Committee desire the Ministry to take appropriate action on the recommendations of this report and apprise them accordingly.

Reply of the Government

A proposal for monitoring of glacial lakes and water bodies in Himalayan region is under formulation in CWC/MoWR. The proposal includes establishing of well-equipped Glacial Lakes monitoring Cell in CWC with a view to have better coordination & knowledge sharing amongst the expert institutions namely CWC, NRSC, GSI, Ministry of Earth Sciences, India Meteorological Department, Survey of India, National Institute Hydrology and National Disaster Management Authority etc. CWC would undertake glacial lakes outbursts flood studies and would formulate advisory sheets for State Governments and other stakeholders using mathematical modelling software e.g. MIKE11 etc. on monthly basis which, later on, will be attempted on weekly basis.

Further, the report of the Committee to find out the causes for severe destruction in Uttarakhand due to flood and erosion during 16-17 June, 2013 has been sent to the State Government in January 2014 for taking further action on the implementation of the recommendations given in the report. The Committee would be kept apprised of status of action taken by State Government thereupon.

Recommendation (Para No. 28)

Flood Plain Zoning

The Committee note that the flood plain zoning measures aim at demarcating zones or areas likely to be affected by floods of different magnitudes or frequencies of probability levels and specify the types of permissible development in these zones so that whenever the floods actually occur, the damage can be minimized. However, although a Model Draft Bill for Flood Plain Zoning Legislation was circulated by the Union Government to all the States in 1975 for implementation of Flood Plain Zoning approach, only the States of Manipur, Rajasthan and Uttarakhand have enacted legislations about Flood Plain Zoning. Regarding the progress of implementation of Flood Plain Zoning legislation in Ganga basin States, the Committee note that only the States of Uttarakhand and Rajasthan have enacted the Bill. Uttarakhand is taking steps for implementation of the Bill while the enactment is kept in abeyance by Uttar Pradesh. Curiously enough, the States of Jharkhand, Madhya Pradesh and NCT Delhi have not felt the requirement of the Bill, whereas it is under consideration in Himachal Pradesh and West Bengal. Besides, the State of Bihar informed its inability to enact the Bill in view of large flood-affected area whereas views of Chhattisgarh are stated to be awaited. The State of Haryana has not enacted the Bill but informed about the necessary administrative measures taken for Flood Plain Zoning. The Committee also note that at the 16th meeting of Ganga Flood Control Board (GFCB) held on 16.01.2013, the Hon'ble Union

Minister of Water Resources observed that 'the present draft Bill for Flood Plain Zoning is quite old and needs revision'. The Union Minister, therefore, requested the Member States to send their suggestions expressing their views within a month or so to enable the same to be considered for revising the draft Bill. The Committee further note that at the GFCC meeting held on 12.03.2013, the Member States were reminded to send their views in this regard to GFCC at the earliest and also that the Ministry has proposed to get Digital Elevation Maps (DEMs) for flood-affected areas of Uttar Pradesh, Bihar and West Bengal in the XIIth Plan, which may be used to demarcate various flood zones. The Committee therefore, recommend that the Ministry take vigorous steps for persuading the remaining States to enact the necessary legislation in this regard without delay. Further, the Committee would like the Ministry to coordinate with these State Governments to ensure that, pending enactment of legislation in this regard, they take necessary administrative measures to prevent further encroachment of areas located in the flood plain zone. The Committee also recommend that apart from Uttar Pradesh, Bihar and West Bengal, other States of the Ganga basin may also be included in the proposed Digital Elevation Maps (DEMs) for the flood-affected areas.

Reply of the Government

The matter is being taken up with State Governments for enactment of necessary legislation by them and also to have DEM for flood affected areas of Ganga Basin.

As mentioned in reply to para 26 of Part-II, during 12th Plan, it is proposed to take up the work of preparation of topographical maps in digital format i.e Digital Elevation Modelling (DEM) for an area of 200000 sq. Km for the States of UP, Bihar and West Bengal. Survey of India has indicated a cost of Rs.400 crore for this work. A provision of Rs.400 crore has been made in the revised EFC for Modernisation of Flood Forecasting Network of CWC which is under process of approval by the Government of India. The proposal is yet to be cleared by EFC. Such work may be taken up for the other States of Ganga basin later on, depending upon the need and experience gained in the three States.

Recommendation (Para No. 30)

Evaluation Study of Flood Management Programme Implemented during XI Plan

The Committee note that the performance evaluation of the schemes operated by the Ministry of Water Resources during Xth plan for funding of flood/erosion control projects was got done through the Indian Institute of Public administration (IIPA) and that action for performance evaluation study for Flood Management Programme implemented during XIth Plan, has been initiated by the Ministry of Water Resources. The Committee would like to see early completion of the study by the Ministry in this regard.

Reply of the Government

The outcome of the said study would be made available to the Hon'ble Committee when it is completed.

NEW DELHI;

19 December, 2014
28 Agrahayana, 1936 (Saka)

HUKUM SINGH,
Chairman,
Standing Committee on Water Resources.

APPENDIX-I

MINUTES OF THE SIXTH SITTING OF THE STANDING COMMITTEE ON WATER RESOURCES (2014-2015) HELD ON FRIDAY, 19 DECEMBER, 2014

The Committee sat from 1000 hours to 1030 hours in Committee Room 'E', Parliament House Annexe, New Delhi.

PRESENT

Shri Hukum Singh – Chairman

MEMBERS

LOK SABHA

2. Shri Devusinh Chauhan
3. Shri Sidhant Mohapatra
4. Shri Sukhbir Singh Jaunapuria
5. Shri Abhijit Mukherjee
6. Shri Murali Mohan Maganti
7. Shri Lallu Singh
8. Shri Rodmal Nagar
9. Shri Vishnu Dayal Ram
10. Shri Ram Prasad Sarmah
11. Smt. Sathyabama V.
12. Shri Vinod Kumar B.
13. Shri Sanjay Kaka Patil
14. Shri Vijaysinh Shankarao Mohite Patil
15. Shri L.K.Vaghela

RAJYA SABHA

16. Shri Anil Madhav Dave
17. Prof. Mrinal Miri
18. Shri V. Hanumantha Rao
19. Shri A.V. Swamy
20. Shri Lal Singh Vadodia

SECRETARIAT

1. Shri A. K. Singh - Joint Secretary
2. Shri S. Chatterjee - Director
3. Smt. Rita Jaikhani - Additional Director

At the outset, the Chairperson welcomed the Members to the sitting of the Committee convened for consideration and adoption of (i) Draft Report on Demands for Grants (2014-15) of the Ministry of Water Resources, River Development and Ganga Rejuvenation, and (ii) Draft Report on Action Taken by the Government on the observations/recommendations of the Committee contained in the 21st Report (15th Lok Sabha) on "Review of Ganga Flood Control Commission".

2. Thereafter, the Committee took up the above two draft Reports for consideration. After some discussion, the Committee adopted the Reports with slight modifications/amendments.

3. The Committee then authorized the Chairman to finalise the Reports in the light of verbal and consequential changes arising out of factual verification by the Ministry and to present the Reports to both the Houses of Parliament.

The Committee then adjourned

APPENDIX II
[Vide Para 4 of the Introduction]

ANALYSIS OF ACTION TAKEN BY THE GOVERNMENT ON THE RECOMMENDATIONS/
OBSERVATIONS CONTAINED IN THE
TWENTY FIRST REPORT (FIFTEENTH LOK SABHA)
OF THE COMMITTEE

(i)	Total number of Recommendations/Observations	36
(ii)	Recommendations/Observations which have been accepted by the Government Para Nos. 1,2,4,12,13,14,15,16,17,18,19,20,21,23,25,26,32,33 and 35 Total Percentage	19 53%
(iii)	Recommendations/Observations which the Committee do not desire to pursue in view of the Government's replies Para Nos. 5,8,9,22,29,31,34 and 36 Total Percentage	8 22%
(iv)	Recommendations/Observations in respect of which replies of the Government have not been accepted by the Committee Para Nos. 3 and 24 Total Percentage	2 6%
(v)	Recommendations/Observations in respect of which final replies of the Government are still awaited Para Nos. 6,7,10,11,27,28 and 30 Total Percentage	7 19%