

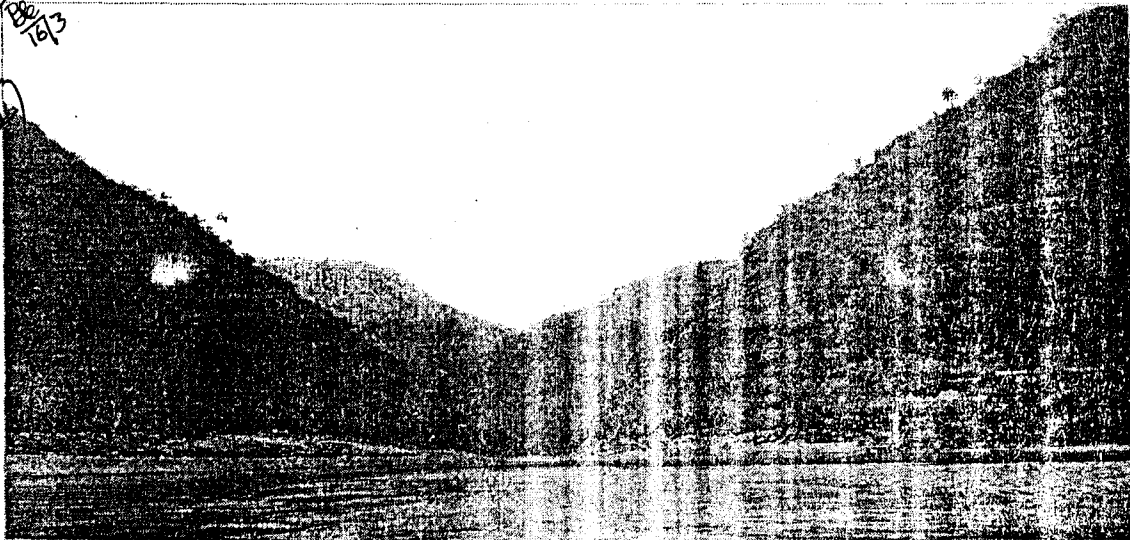
**Government of India  
Ministry of Water Resources**

**Memorandum for  
Expenditure Finance Committee (EFC)**

**On**

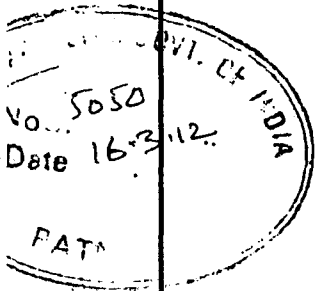
**"River Management Activities and  
Works Related to Border Areas"  
for XII Plan (2012-17)**

**(Estimated Cost : Rs. 1250.00 crore)**



**(Pancheshwar Dam site on Mahakali River at Indo-Nepal Border)**

**New Delhi  
March-2012**



*16/03/2012*  
*16/3*  
*11/8/12*  
*Dir MP*

**Memorandum for Expenditure Finance Committee On  
"River Management Activities and Works Related to Border  
Areas" for XII Plan (2012-17) – a Central Sector Scheme.**

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Name of Scheme : River Management Activities and Works Related to  
Border Areas

- 1) **SPONSORING MINISTRY/ DEPARTMENT:**  
Ministry of Water Resources, Govt. of India.
- 2) **STATEMENT OF PROPOSAL**
- a) **Whether Central Scheme or Centrally Sponsored? In the case of new CSS or CSS with changed parameters, funding pattern etc. whether approval of full Planning Commission has been obtained.**

This is an on-going Central Sector Scheme of Ministry of Water Resources during XII Plan which was restructured in XI Plan on the advice of Planning Commission by integrating smaller schemes operated by the Ministry of Water Resources during X Plan and some new works related to border areas with the neighbouring countries, namely, Nepal, Bhutan, Bangladesh, China and Pakistan. During XII Plan, the component of grant-in-aid to UTs which was funded under Flood management Programme during XI Plan, has also been brought into to the present scheme in view of requirement of 100% funding of flood management / anti-sea erosion works in the Union Territories.

The present proposal envisages the following broad activities to be performed during XII Plan :

SN	Activity	Estimated Cost ( Rs. crore)
1	<b>Hydrological observations and flood forecasting on common border rivers with neighbouring countries.</b>	<b>103.70</b>
2	<b>Investigation of WR projects in Neighbouring Countries</b>	
(i)	Pancheshwar Multipurpose Project	50.13
(ii)	Sapta Kosi High Dam and other schemes in Kosi basin in Nepal	57.17
(iii)	New Projects - Naumure HEP	0.75
	<b>Sub-total (2)</b>	<b>108.05</b>
3	Pre-construction activities for WR projects on common border rivers - Pancheshwar Development Authority (PDA)	<b>100.00</b>
4	<b>Grant in Aid ( 100%)</b>	
(i)	States – For flood management works in border areas	606.42
(ii)	Union Territories – For flood management / anti-sea erosion works	263.03
	<b>Sub-total (4)</b>	<b>869.45</b>
5	Continuation of Ganga Flood Control Commission, Patna	<b>68.80</b>
	<b>Total</b>	<b>1250.00</b>

- b) **Whether there are schemes with overlapping objectives and coverage in other Ministries and States? If so, the details of such schemes and the scope for integration.**

There is no scheme with overlapping objectives in other Ministries.

- c) **New Proposal/ Modified/ Revised Cost Estimate.**

This is a continuing scheme.

- d) **Reasons and justification for proposal, indicating historical background, circumstances in which the need have arisen, whether other alternatives have been considered and what detailed studies have been made in regard to the proposal for establishing its need, its economics and other relevant aspects.**

#### **JUSTIFICATION, CIRCUMSTANCES AND NEED OF ADDITIONAL FUNDS**

##### **Background:**

- (i) During XI Plan, the central sector scheme namely 'River Management Activities and Works related to Border Areas' was formulated by the Ministry of Water Resources after amalgating smaller schemes having similar objectives of funding the activities related to Pancheshwar Multipurpose Project, survey / investigations & preparation of DPRs for, Sapta Kosi High Dam and Sun Kosi Storage cum Diversion Scheme, maintenance of flood protection works of Kosi, & Gandak rivers, extension of embankments on Lalbakeya , Kamla, Bagmati & Khando rivers, flood forecasting on rivers common to India and Nepal, hydrological observations on rivers originating from Bhutan, Joint observations on rivers common to Bangladesh and neighbouring countries, expenditure on activities of GFCC, grant-in-aid to Brahmaputra Board, schemes of Majuli Island in Assam, Debang project etc, flood protection/ anti-erosion and developmental works on common/ border rivers with Bangladesh (to be carried out by the State Governments of West Bengal & Tripura) , river protection works on border rivers flowing to Pakistan , provision for field Investigations of Naumure HE Project (Nepal) on river Rapti and pre-construction activities of Pancheshwar Multipurpose Project involving construction of approach road, project bridges, residential quarters and pre-construction surveys, on Indian side.
- (ii) The above scheme was approved by the Cabinet Committee on Economic Affairs (CCEA) in its meeting held on 4<sup>th</sup> December' 2008 at a total cost of Rs. 601 Crore only which was further revised to Rs. 820.00 crore and approval of competent authority was conveyed vide MOWR Office Order No. 5/25/2009-Ganga/4413-4442 dated 14-11-2011 (**Appendix-I**) , in order to provide funds for reconstruction of breached

Kosi embankment in Bihar during 2008 and emergent works of restoration of rivers Dibang and Lohit to be executed by Brahmaputra Board.

- (iii) During XI Plan, the expenditure as on 28<sup>th</sup> Feb, 2012 has been reported as Rs. 663.42 crore which includes Grant in Aid of Rs. 288.55 crore provided to Brahmaputra Board for its establishment charges and execution of flood management / anti erosion works on Majuli Island, Debang Project and Drainage Development Schemes etc. The activity-wise provision sanctioned and expenditure incurred is shown in **Annex-1**.

### **Justification**

The proposal during XII Plan envisages funding of the river management activities of Hydrological observations on rivers flowing from neighbouring countries of Nepal, Bhutan and China, joint observations on common rivers with Bangladesh, survey, investigation and preparation of DPRs for Pancheshwar Multipurpose Project, High Dam and other new projects like Naumure HEP, pre-construction activities for Pancheshwar Multipurpose Project, food management works on Indian side on common border rivers in Bangladesh and Pakistan Sectors, Construction of these projects is in the earnest benefit of India from flood control considerations besides Irrigation, hydropower generation and navigational benefits. The maintenance of embankments on Gandak and Kosi is essentially required for management of floods in the areas of UP and Bihar. In order to assist the UTs in flood management and control of land /sea erosion, the critical works are included in the present proposal. The total estimated cost of the proposal during XII Plan is Rs. 1250 crore as per details given in **Annex-2**.

A brief account of activities proposed under the scheme and their justification is given below:

#### **1. Hydrological observations and flood forecasting on common border rivers with neighbouring countries - This activity envisages following works :**

- (i) Continuation of HO & FF activities on existing 4 sites (on rivers Gumti, Manu, Khowai and Kushiyara in Bangladesh Sector in India.
- (ii) Establishment of 2 new sites on river Jaldhaka ( One each in India and Bangladesh).
- (iii) Continuation of reimbursement of expenditure incurred by Govt. of Nepal for providing hydro-meteorological data of 50 sites in Nepal.
- (iv) Installation of automatic data collection and transmission system on stations located in Nepalesae territory- The automatic system of data collection and transmission has already been installed at 4 sites out of 54 sites in Nepal. It is proposed to install the automatic system ate remaining 50 sites in Nepal.
- (v) Continuation of reimbursement of expenditure incurred by RGoB on collection and transmission to India the hydro-meteorological data

of existing 30 sites ( GDS sites-30, Gauge Sites-7, Meteorological sites – 19) in Butanese territories.

- (vi) Payment towards provision of hydrological information by China to India – During every monsoon season, the hydrological information of 3 stations ( Nugesha, yangqen and Nuxia) on Brahmaputra and Tsada station on Sutlej is provided by China to India. In view of importance of information in flood warning on Indian side.

The details of existing and new sites for HO and FF purpose are given in **Annex-2.1.1.4**. The above activities will continue during XII Plan for which a provision of Rs. 10370.25 lakh has been made in the present proposal. (Refer **Annex-2, 2.1, 2.1.1.1, 2.1.1.2, 2.1.1.3, 2.1.1.4 and 2.1.6**)

**2. Investigation of WR projects in Neighbouring Countries – The activity envisages the following works:**

- (i) **Pancheshwar Multipurpose Project** – The project is proposed on river Mahakali at India-Nepal border. The field investigations for the project have been completed jointly by India and Nepal but the DPR is yet to be mutually accepted. The activities of collection of hydrological data, seismological observations, R&M of wireless stations, R&M of transit camps, EIA studies, installation of MEQs/SMA, modernization of snow gauge sites, drilling operations for collection of confirmatory bore hole data at dam axis, stilling basin and meetings of JGE/JTG etc are proposed to be continued during XII Plan.

The activity will continue during XII Plan for which a provision of Rs. 5013.24 lakh has been made in the present proposal ( **Refer Annex-2, 2.1, 2.1.2, 2.1.2.1 , 2.1.2.2 and 2.1.6**).

- (ii) **Survey & Investigation of Kosi High Dam and other schemes in Kosi basin in Nepal** – As per the bilateral agreements, a Joint Project office ( JPO-SKSKI) is carrying out field investigations for Sapta Kosi High Dam as well as Sun Kosi Storage cum diversion scheme for preparation of technically sound DPR. In Feb, 2011, the revised cost of this activity was sanctioned by PIB as Rs. 8763.28 lakh and JPO was given the mandate to complete the works by Feb, 2013. The sanction order dated 18-02-2011 is placed as Appendix-II. The provisions in the present proposal cover the remaining works proposed to be carried out in XII Plan.

The activity will continue during XII Plan for which a provision of Rs. 5716.40 lakh has been made in the present proposal ( **Refer Annex-2,2.1, 2.1.2 and 2.1.6**).

- (iii) **Survey & Investigations for Naumure HEP** – The Government of India and Government of Nepal have initiated discussions on construction of a storage dam on river West Rapti in Nepal which

would have benefits of irrigation, hydropower and flood control in both the countries. A token provision for survey & investigations of Naumure HEP has been made in the present proposal as the action plan will depend on mutual consent.

The activity will continue during XII Plan for which a provision of Rs. 75.00 lakh has been made for new projects including Naumaure HEP in the present proposal (**Refer Annex-2,2.1, 2.1.2 and 2.1.6**).

**3. Pre-construction activities for WR projects on common border rivers** – A Pancheshwar Development Authority (PDA) has been agreed to be set up jointly by Nepal and India. It is expected that the outstanding issues will be resolved in a most expedient manner with cooperation from both sides. Therefore, a provision of Rs. 100.00 crore has been made in the present proposal for activities of PDA (**Refer Annex-2,2.1, 2.1.2 and 2.1.6**)

**4. Grant in Aid-** During XI Plan, provisions for providing 100% grants to the States for carrying bank protection / anti-erosion works on common border rivers in Bangladesh and Pakistan Sectors were sanctioned. Accordingly, these works are being carried out by the States of West Bengal, Tripura in Bangladesh sector and J&K in Pakistan sector. The other States of HP and Punjab have also made requests for funding such works on common / border rivers with Pakistan. Therefore, it is proposed to continue this activity with enhanced and additional provisions for the works. Besides, the flood management / anti-erosion and anti-sea erosion works of Union Territories which were funded under Flood Management Programme during XI Plan are proposed to be brought under this scheme because UTs involve 100% funding from the Government of India.

The activities of reimbursement of expenditure incurred by the Governments of UP and Bihar on maintenance of Gandak and Kosi, bank protection works on common border rivers with Bangladesh and Pakistan Sectors would continue during XII Plan. Besides, the grant-in-aid to UTs been brought under this scheme for ongoing and new flood management and anti-sea erosion works of UTs. A provision Rs. 86945.11 lakh been kept for the grant-aid to be released for grant-in-aid to States and UTs during XII Plan for the above activities. (**Refer Annex-2, 2.1 and Annex-2.1.4**)

**5. Continuation of Ganga Flood Control Commission, Patna** - The Ganga Flood Control Commission (GFCC) was established in April' 1972 with its headquarters at Patna. It serves as the executive limb of the Ganga Flood Control Board, headed by the Union Minister for Water Resources. The Chief Ministers (or their representatives) of the Basin

states concerned, Union Ministers of Finance, Railways, Surface Transport, Agriculture and Member, Planning Commission are members of this Board.

The Commission has been assigned the task of preparing comprehensive plans of flood management of the 23 sub-basins in the Ganga Basin, and drawing out a phased programme of implementation of these works to proper standards. Besides examination of various flood management and erosion control schemes from techno-economic angle, it also monitors the physical progress of important flood management schemes in the Ganga Basin States. It also provides technical assistance in assessment of the adequacy of waterways existing under the rail and road bridges besides technical guidance for formulation of new flood management schemes to the basin states.

The Commission is headed by a Chairman and is assisted by two full-time Members, four Directors and other officers and staff. Out of total original sanctioned strength of 101 posts, a total of 86 posts are filled-in at present.

The activity would continue during XII Plan and provision of Rs. 6880.00 lakh has been made in the present proposal ( **Refer Annex-2, 2.1, 2.1.5.1 to 2.1.5.4** )

**e) If it is location specific, basis for selection of location.**

Investigations of water resources projects in Nepal and bank protection works along the common border rivers with Bangladesh, Nepal and Pakistan are location specific and the dam sites have been selected by experts from India and Nepal jointly.

**f) Has the proposal been included in the Five Year Plan and what are the provisions in the Five Year Plan and in the current annual plan? Is any modification proposed?**

The proposal has been included in the XII Five Year Plan of MOWR and a provision of Rs. 1250.00 crore has been recommended by the XII Plan Working Group on Flood Management and Region Specific Issues to Planning Commission.

**g) What is the estimated yield from the Project and what are the economic implications?**

This is a composite scheme required for cooperation and development of bilateral water resources projects for energy generation, irrigation and flood mitigation in association with the neighbouring countries. **It is an**