## MINUTES OF THE FOURTH MEETING OF NEPAL-INDIA JOINT COMMITTEE ON INUNDATION AND FLOOD MANAGEMENT [JCIFM]

(January 10-14, 2011)
The fourth meeting of Nepal-India Joint Committee on Inundation and Flood Management (JCIFM) was held from January 10-14, 2011. The Indian delegation was led by Mr. S. Masood Husain, Member (Coordination), Gang Flood Control Commission (GFCC), Government of India and the Nepalese delegation was led by Mr. K. R. Dahal, Director General of the Department of Water Induced Disaster Prevention (DWIDP), Government of Nepal. The Nepalese delegation welcomed the Indian delegation at Janakpur, Dhanusha on January 9, 2011.

The meeting of the Committee was preceded by joint field visits to the completed ongoing and proposed embankments and flood protection works along the Kamala, Bagmati and Lalbakeya rivers. The list of participants of the meeting is at Annex-I.

## EXTENSION OF EMBANKMENTS

## A) FIELD VISIT OF ONGOING WORKS

## A-I Kamala River

The Committee carried out the field visit of the Kamala river on January 10 2011. The Committee visited the right bank starting from Ch. 0.00 km cn the Nepal-India border and proceeded upstream up to Ch .19 .95 km

It was observed that the embankment work along the right bank from Ch 2.10 km to Ch .5 .50 km has been completed. The work from Ch 0.00 to 2.10 km is also completed, except for 200 m length from the Nepal-indin border. The Committee instructed that this portion along with Anti Flood Sluice (AFS) be completed as per the contract schedule. The Committer reiterated its earlier decision that the construction of embankment should be taken up on the Indian side to close the gap along both bank appropriately by Government of India.

In the work package from Ch. 15.700 to $16.000 \mathrm{~km}, \mathrm{AFS}$ and some revetment work remain to be completed. The Committee instructed that the works be completed as per the contract schedule. It also instructed that remaining works of dressing and turfing on the embankment as per design may be completed.

Thereafter, the Committee visited the left bank from Ch. 0.000 km to Ch 10.550 km . Approximately 300 m part of the embankment near the Nepat India border remains incomplete. The Committee instructed that the works be completed as per contract schedule. It also instructed that remaining
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works of dressing and turfing on the embankment as per design may be completed. The Committee observed that the slope of the embankment at many locations was not as per the design specifications. It was decided that the slope of the embankment may be rectified as per the design specification.

## A-II Bagmati River

The field visit to Bagmati took place on January 11, 2011. During the second meeting of JCIFM, GON had tendered River Bed Material (RBM) work for nine work packages out of which the Committee approved five work packages totaling 30.48 km , the work of which is presently in progress and near completion. During the third meeting, the Committee decided to approve the remaining four work packages on the right bank totaling 20.32 km of which GOI contribution is Rs 4.52 crores including contingencies and excluding VAT. These work packages were to be initiated on completion of the ongoing RBM work of 30.48 km approved previously. However, the Committee found that RBM works of the four work packages approved in the third meeting had already been initiated.

The Committee observed that the slope of the embankment at many locations was not as per design specification. It was decided that the slope of the embankment may be rectified as per the design specification. The Committee instructed that the different work packages be completed as per contract schedule.

## A-III Lalbakeya River

The field visit to Lalbakeya embankment works took place on January 11. 2011. Some structures such as AFS at Ch. 0.40km from Nepal-India border, at Nepal Eastern Canal (NEC) breach point and at Ch. 5.075 km from NEC and also ongoing work of left bank Ch. 4.50km (Package 8) remain incomplete. It was observed that the slope of the embankment at many locations was not as per the design specification. The Committee directed that the slope of the embankment may be rectified as per the design specification. The Committee instructed that the different work packages be completed as per contract schedule.


## DECISIONS OF THE JOINT COMMITTEE ON INUNDATION \& FLOOD MANAGEMENT (JCIFM)

## B) PROPOSED WORKS AND RELEASE OF FUNDS

## B-I For Bagmati river

## Ongoing Works

The Committee noted that the initial $50 \%$ of expenditure amount for three retendered and one gap closing contracted work packages in Bagmati river of NRs. 2.43 crore has already been released. Since the utilization certificates related to these works have been submitted, the balance $50 \%$ ie. NRs. 2.43 crore is recommended for release.

The River Bed Material (RBM) work of 30.48 km approved previously is ongoing. The works were inspected by the Committee. The utilization certificate of $75 \%$ of funds may be submitted after which the balance payment of Rs. 4.45 crore will be released.

Since the four work packages for RBM works on the right bank totaling 20.32 km have already been initiated, the Committee recommends the release of $50 \%$ of Gol contribution for these works i.e. NRs. 2.26 crore. The balance payment would be made on receipt of utilization certificate of $75 \%$ of funds released and inspection of the works by the Committee.

The emergent works carried out during the monsoon floods of 2010 were inspected. The utilization certificates of the emergent works amounting to NRA. 0.45 crore were submitted to the Committee. The summary of works is at Annex-II. The Committee approves the reimbursement of NRs. 0.45 crore spent on the emergent works of 2010 monsoon floods.

Further, the Committee recommended taking up emergent anti-erosion works along both banks of the river as per details given at Annex- $/ 1 /$ before the monsoon of 2011. The GON will submit a report in respect of these emergent works to GFCC for examination. After the approval of report by GFCC, competent authority of GON will invite tenders as per Financial Regulations of GON. The summary of tender evaluation along with recommendation of award of contracts shall be submitted to EOF. Kathmandu for the endorsement of the Indian side. Thereafter $50 \%$ of Col contribution will be released.

## New Works

During the third meeting, the Committee had directed the concerned field officers to carry out the necessary field investigation including inundation area and to collect information of damages to see the necessity of
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proposed embankment on the left bank from Ch. 31.250 to 42.500 km . The investigation report submitted to GFCC was examined by it and approved Accordingly 5 work packages (Package nos. LE1 to LE 5) were tendered the summary of which is at Annex-IV. The Committee endorsed the tenders as approved by GON. The total Gol contribution for these packages including contingencies is NRs. 3.114 crore. The Committee recommends the release of $50 \%$ of this amount ie. NR. 1.557 crore. The balance payment would be made on receipt of utilization certificate of $75 \%$ of funds released and inspection of the works by the Committee.

Tenders were also invited by the Govt. of Nepal for the construction of embankment works along the Jhanj river, a tributary of Bagmati river. The, Committee decided to keep the endorsement of the tender on hold and consider the issue at the next meeting of JCIFM.

## B-II Work along the Lalbakeya river

## Ongoing Works

As decided in the second meeting of JCIFM the embankment works of 12.2 km along both banks and Anti Flood Sluice (AFS) along the right bank of Lalbakeya are being undertaken. $50 \%$ of the total GOI contribution ie. NRA. 9.615 crore has already been released to GON. The utilization certificates for these works have been submitted, hence the balance amount of NRA. 9.615 crore is recommended for release.

The emergent works carried out during the monsoon floods of 2010 were inspected. The utilization certificates of the emergent works amounting to NR. 0.42 crore were submitted to the Committee. The summary of works is at Annex-V. The Committee approves the reimbursement of NRs. 0.42 crore spent on the emergent works of 2010 monsoon floods.

Further, the Committee recommended taking up emergent anti-erosion works on both banks as summarized in Annex-VI before the monsoon of 2011. The GON will submit a report in respect of these emergent works to GFCC for examination. After the approval of report by GFCC, competent authority of GON will invite tenders as per Financial Regulations of GON. The summary of tender evaluation along with recommendation of award of contracts shall be submitted to EOI, Kathmandu for the endorsement of the Indian side. Thereafter $50 \%$ of Col contribution will be released.

## New works

During the third meeting of JCIFM, it was decided that embankment works may be extended by 10.50 km on each bank and RBM works may be carried out for a length of $6.40 \mathrm{~km}(0+000$ to $6+400$ from NEC, Fatuwa Bridge) on both banks. Following the re-examination of the above proposal
in consultation of GFCC, it was decided to extend embankment works by 9.5 km on left bank and 11.5 km on right bank. Accordingly, 9 works packages (Package nos. 18 to 25 and GRV1) were tendered as per GON financial regulations and approved by the competent authority of the Government of Nepal. Furthermore, 6 work packages were proposed to be awarded to user groups. The summary of works is at Annex-VII.

The Committee endorsed the 9 tendered work packages. The total GOI contribution including contingencies for these works is NRs. 14.795 Crore The Committee recommends the release of $50 \%$ of this amount i.e. NRs. 7.397 crore to GON. The balance payment would be made on receipt of utilization certificate of $75 \%$ of funds released and inspection of the works by the Committee.

The Committee further decided that the 6 work packages earlier proposed to be awarded to user's group may also be tendered. The summary of tender evaluation along with recommendation of award of contracts for these works will be submitted to Eol, Kathmandu for endorsement by the Indian side. Thereafter $50 \%$ of Gol contribution will be released.

## B-III Works to be carried out in Kamala river embankment

## Ongoing Works

The embankment works to be carried out before the monsoon of 2010 were divided into two phases, of which the first phase had been completed and fund amounting to NRs. 17.698 crore was released. The second phase has been initiated for which the initial $50 \%$ of funds amounting to MRs. 6.165 crore has been released in the third meeting of JCIFM. Since the utilization certificates for the second phase have been submitted, the balance $50 \%$ ie. NRs. 6.165 crore is recommended for release.

Similarly, works of 150 m revetment and 3 studs at Sakhuwa Madhan and extension of 500 m length embankment at Hathmunda were approved and the initial $50 \%$ of GOI contribution ie. NRs. 0.96 crore has already been released. The works were inspected by the Committee. The utilization certificate of $75 \%$ of funds may be submitted after which the balance payment of NRA. 0.96 crore will be released.

The emergent works carried out during the monsoon floods of 2010 were inspected. The utilization certificates of the emergent works amounting to NR. 0.901 crore were submitted to the Committee. The summary of works is at Annex-VIII. The Committee approves the reimbursement of NR 0.901 crore spent on the emergent works of 2010 monsoon floods

Further, the Committee recommended taking up emergent anti-erosion works along left bank as summarized at Annex-IX before the monsoon of
2011. The GON will submit a report in respect of these emergent works to GFCC for examination. After the approval of report by GFCC, competent authority of GON will invite tenders as per Financial Regulations of GON. The summary of tender evaluation along with recommendation of award of contracts shall be submitted to EOI, Kathmandu for the endorsement of the Indian side. Thereafter $50 \%$ of Gol contribution will be released.

## New works

During the third meeting of JCIFM, it was decided that the embankment works totaling 13.00 km on the left bank and 10.74 km on the right bank may be extended on both banks so as to close all the gaps and tag with East-West highway. However, as explained by the concerned Division Office, to tag the embankment works to the high land, there was need to extend the embankment by additional 0.47 km on the left bank and additional 3.11 km on the right bank.

Accordingly, 9 work packages (Package nos. 29 to 37 ) on the left bank and 13 work packages (Package nos. 38 to 50) on the right bank were tendered as per CoN financial regulations and approved by the competent. authority of the Government of Nepal. Furthermore, 3 work packages to be given to user groups were also approved by the competent authority of Government of Nepal. The summary of works is at Annex- $X$. The Committee endorsed the 22 tendered work packages and the 3 work packages to be given to user groups.

The total Col contribution including contingencies is NRs. 35.86 crore. The Committee recommends the release of $50 \%$ of this amount i.e. MRs. 17.93 crore. The balance payment would be made on receipt of utilization certification of $75 \%$ of funds released and inspection of the works by the Committee.

## B-IV Detailed Project Report for extension of Embankment along Khando River

During the second meeting it was decided that the Nepalese side would compare the present cross sections with previous cross sections in the report and findings would be provided to GFCC. Accordingly the Nepalese side handed over the details of differences of bed levels to the Indian side. A revised DPR for Khando river embankment works was also submitted to the Committee.


## B-V Miscellaneous

1) Bagmati embankment - recovery of advance from the contractors of Package C and D of Bagmati Embankment

As regards recovery of mobilization amount of advance given to the contractors of Package $C \& D$ of Bagmati embankment, Nepalese side informed that the process of recovery of mobilization of advance has been taken up. The Committee emphasized to expedite the recovery process.
C) FLOOD INUNDATION ISSUES

## C-I Kalkalwa Bund

The Indian side informed the Committee that as decided by JCWR, an opening in the Kalkalwa bund has been provided. The Committee noted with appreciation that the issue has been resolved and decided to drop this issue from the agenda.

## C-II Rasiyawal-Khurd-Lotan Bund

The Indian side informed the Committee that as directed by JCWR. construction of the culverts in Rasiyawal-Khurd-Lotan Bund has been completed. The Nepalese side informed that they had already completed the requisite works in Nepalese territory. The Committee noted with appreciation that the issue has been resolved and decided to drop this issue from the agenda.

## C-III Mahali Sagar

The Committee noted that the joint survey, as directed by JCIFM during its $3^{\text {rd }}$ meeting, could not be undertaken to fix the contour level of 92.76 m in order to assess the reservoir area both in Nepal and India at pond level of 92.76 m . The Committee directed the Contact Officers to complete the work by 30 April, 2011 and submit their report before the next meeting of the JCIFM.

## C-IV Bairganiya Ring Bund

The Nepalese side informed the Committee that the construction of embankment on the right bank of Bhakuwa Nala and sluice on the right bank of Lalbakeya river near Nepal-India border is being carried out and is likely to be completed before the monsoon of 2011.

## C-V Rato River

The Committee noted that the joint study of the inundation situation in the area, as directed by JCIFM during its $3^{\text {rd }}$ meeting, could not be undertaken
by the Contact Officers. The Committee directed the Contact Officers to complete the work by 30 April, 2011 and submit their report before the next meeting of the JCIFM. It was agreed to maintain status quo in this regard till further consideration of the matter by the Committee.

## C-VI Geruwa River

The Nepalese side informed that no embankment exists along Geruwa river in Nepal territory close to the India-Nepal border and therefore, no action is required from their side. The Committee decided that the Contact Officers may verify this jointly.

## C-VII Bhutahi Balan

The Nepalese side stated that JSTC during its $2^{\text {nd }}$ meeting had directed JCIFM to discuss this issue. The Committee directed that a presentation highlighting the problem may be made on the issue at the next meeting of the Committee.

## D) FLOOD FORECASTING ISSUE

## D-I Flood Forecasting Master Plan

The Indian side informed that the new Draft Flood Forecasting Master Plan (2010-2014) prepared by Government of Nepal is under examination/updation. The Indian side further informed that the Government of Bihar has requested inclusion of seven more raingauge stations at Khokana, Sundarijal, Pendera-Dhoben, Raigaun, Ramolobair. Gaurighat and Brahmapuri in Nepal in the Draft Flood Forecasting Master Plan. The Nepalese side informed that there are 16 raingauge stations in the Bagmati basin in Nepal which includes Khokana, Sundarijal, PenderaDhoben stations proposed by the Government of Bihar. The Nepalese side further informed that the remaining four stations proposed by the Government of Bihar would be necessary. The Committee decided that Indian side may examine the list of existing 16 raingauge stations in Bagmati basin in Nepal and if more stations are required, the same may he brought before the Committee.

## D-II Transmission of Real Time Data

The Indian side mentioned that during the monsoon season of 2010, dat? from only 6 hydro-meteorological stations, namely, Narayanghat Bhalubhang, Kusum, Mainachuli, Chatra and Karmaiya in Nepal were received by the Central Water Commission till August 22, 2010 and thereafter, no data was received, and requested the Government of Nepal to ensure un-interrupted transmission of Real Time Data. The Nepalese side informed that there was strike by the hydro-meteorological staff who
are casual employees and, therefore, data from auto-transmission stations could only be supplied. They assured that necessary action was being taken by the Government of Nepal in this regard and informed that there should not be any problem in future.

## D-III Early Warning System in Koshi Basin

The Nepalese side informed that the Government of Nepal is developing Disaster Management Plan for Koshi Basin including Early Warning System for Kosi river, which is supported by the Asian Development Bank and requested the Government of India to provide data for this purpose. The Committee decided that the Government of Nepal may send a request with relevant details in this regard to the Government of India through diplomatic channel.

## E) COMPREHENSIVE STRATEGY FOR FLOOD MANAGEMENT

## E-I Preparation of prioritized list of flood management works

The Nepalese side submitted a priority list of rivers (Annexure-XI) for undertaking short term flood control measures and mentioned that Government of Nepal is executing river training works along several of these rivers. The Committee desired the Nepalese side to provide the details of flood control works being undertaken by them. The Committee also desired the Indian side to submit their priority list.

It was decided to hold the next meeting of JCIFM in first week of May. 2011.

The meeting was held in a cordial and friendly atmosphere.
Signed on January 14, 2011 at Kathmandu.

(K.R. Dahal)

Team Leader/ Director General
Dept. of Water Induced Disaster Prevention (DWIDP)

(S. Masood Husain )

Team Leader/Member
Ganda Flood Control Commission (GFCC), Patna

## LIST OF PARTICIPANTS

## INDIAN SIDE:

1. Mr. S. Masood Husain

Member (Coordination),
GFCC, Patna - Team Leader
2. Mr. Sanjiv Ranjan

Director (North)
MEA, New Delhi - Member
3. Mr. H. K. Jain

Counsellor (Commerce)
EOI, Kathmandu - Member
4. Mr. A. S. P. Sinh

Sr. Joint Commissioner (Ganga)
MOWR, New Delhi - Member
5. Mr. A. K. Ojha

Chief Engineer
Irrigation Department, Govt. of UP, Lucknow

Member
6. Mr. Mari Narayan

Chief Engineer (WRD)
Govt. Of Bihar, Patna - Member
7. Mr. S. K. Gangwar

Director, GFCC, Patna - Member Secretary
8. Mr. Subir Dutta

Under Secretary
MEA - Member

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## NEPALESE SIDE :

1. Mr. Khom Raj Dahal

Director General/DWIDP - Team Leader
2. Mr. Hira Nand Jha

Deputy Director General/DWIDP - Member Secretary
3. Mr. Sanjaya Dhungel

Senior Divisional Engineer, WECS - Member
4. Mr. R. D. Maskey

Senior Divisional Engineer, Dept. of Irrigation - Member
5. Mr. Sashi Bahadur Bisht

Senior Divisional Engineer, DWIDP - Member
6. Mr. Ananta Kumar Gajurel

Senior Divisional Engineer, RTP/DWIDP - Member
7. Mr. Rishi R. Ghimire

Under Secretary, Ministry of Foreign Affair - Member
8. Mr. Amrit Shrestha

Senior Divisional Engineer, Ministry of Irrigation - Member
9. Mr. Bimal Sapkota

Section Officer, Ministry of Finance - Member
10. Mrs. Bibhuti Pokharel

Hyd. Engineer, DHM
Member

## SPECIAL INVITEES

1. Mr. Rajendra Prasad Adhikari, SDE, DWIDP
2. Mr. R. L. Karna, Division Chief, WIDPO, D.No. 2, Dhanusha
3. Mr. A. C. Jha Division Chief, WIDPO, D.No.3, Bara
4. Mr. S. C. Acharya, Division Chief, WIDPD No. 5, Rupandehi
5. Mr. B. N. Yadav, Division Chief, WIDPD No. 6, Banke
Annex - II (1)

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\qquad \begin{array}{c}
\text { Government of Nepal } \\
\text { Ministry of Irrigation }
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\text { Department of Water Induced Disaster Prevention Division } \\
\text { Water Induced Disaster Prevention Division Office No } 3 \\
\text { Parwanipur, Bara }
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Summary of Emergency Works During Monsoon 2010

| SN | Name of Work | $\begin{gathered} \hline \text { Work Order } \\ \text { Date } \\ \hline \end{gathered}$ | Agency (User's Committee) | Estimated Amount, NRs | Payment Released NRs | Remarks |
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| 1 | Supply of Empty Gunny Bags | Aug, 2010 | Vikas Nepaltatha Prakop NiyantranSanstha | 198,000.00 | 132,000.00 |  |
| 2 | Emergency Flood Fighting Works near Laxmipur Village, Right Bank | Sept, 2010 | Bagmati Tatha Lalbakaiya Nadi NiyantranSanstha | 951,021.00 | 932,200.00 |  |
| 3 | Supply of Empty Gunny Bags and Nylon Crates | Sept, 2010 | Jal Utan Prakop Niyantran Sanrakchan Upbhokta Sanstha, <br> SamanpurMadanpur, Rauthat | 305,541.11 | 305,339.15 |  |
| 4 | Supply of Empty Gunny Bags | Aug, 2010 | Jal Utan Prakop Niyantran Sanrakchan Upbhokta Sanstha, SamanpurMadanpur, Rauthat | 360,000.00 | 360,000.00 |  |
| 5 | Emergency Flood Fighting Works near Laxmipur Village, Right Bank | Sept, 2010 | Bagmati Tatha Lalbakaiya Nadi NiyantranSanstha | 816,784.66 | 800,478.00 |  |
| 6 | Emergency Flood Fighting Works noar $2 \times 0$ Mo Milage Pigh: Bm | 50pt, 2010 | Bagmati Tatha Lalbakaiya Nadi NivantranSanstho | 1,745,830.00 | 1.710,394.00 |  |

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|  | 98＇19SSL61 | ISEtt6ZS91 | ヤL＇6Z996ISI | 86＇tOヤャらちレと | 8＇91E¢97¢ | LL¢ட¢ | レ゙GLZ9G992 |  | $000+\angle l-00 Z+G l$ | レレーOLOZ／ちZd／gWヨ <br> －7／II－＞${ }^{(17 / N-1}$ | $\varepsilon$ |
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## Priority list of rivers in Short Term Strategy on Flood Management and Control

## Rivers between Koshi and Mech

1. Kankai (Western Kankai in India)
2. Biring (Eastern Kankai in India)
3. Lohendra
4. Mechi
5. Ratuwa
6. Chisang
7. Sunsari
8. Budhi (Parman in India)

## Rivers between Gandaki and Koshi

1. Rato (Dhaus in India)
2. Balan
3. Lakhandehi
4. Jhim
5. Maraha (Harsingahi)
6. Bighi (Dhaus)
7. Jamuni
8. Pasaha
9. Sikta
10. Bangri
11. Uriya
12. Tilawe

## Rivers between Mahakali and Gandaki

1. Karnali (Ghaghra in India)
2. Mohana
3. Banganga
4. Babai (Sarya in India)
5. West Rapti (Rapti in India)
6. Chaudhar
7. Donda
8. Mahakali (Sharda in India)
9. Rohini
10. Tinau
11. Dano (Kunhra in India)
12. Maan
