Ministry of Population and Environment (MoPE)

Department of Hydrology and Meteorology (DHM)

Community Based Flood and Glacial Lake Outburst Risk Reduction Project (CFGORRP)

Field Visit Report

Team Members:

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Overall objective of the field visit/ mission:

The overall objective of this visit was to have a brief understandings of the project under component II to gain the familiarities with project working districts, sites, and communities. This is expected to further strengthen the monitoring system of the project. The specific objectives were:

1. To explore the potential success stories from the communities
2. To add on the missing information in the database
3. To familiarize with the project activities, communities, project implementation team and stakeholders in brief.

The visit was made from 21st- 26th February 2016.

1. Key Activities Carried Out During the Field Visit/ Mission:

The details of the key activities carried out during the field visit is described in the table below.

Date/ Day	Districts/VDCs visited	Persons/ Groups interacted with	Description of Field visit Program/Activities
Day 1: 21 Feb. 2016	Jaleshwor Municipality, Mahottari	Mr. Manohar Kumar Shah, Senior Divisional Engineer (SDE) , People's Embankment Program, Field Office, Mahottari	TA briefed about the CFGORRP to the SDE. Mr. Shah is found positive for coordination and consultation with Mr. Dinesh Shah, District Project Officer (DPO) to avoid duplicaiton of activities in the project VDCs.
	Sarpallo VDC, Mahottari	Met with CDMC members and beneficiaries at the embankment site	• Observed the embankment site along the Akushi river- a tributary of Ratu. • Observed the Elevated Tube Well (ETW) and LSAR equipment handed over to the Taskforces in the area **Findings** • CDMC members and communities found positive and active in the VDC. The embankment looks sound except some damages in the site due to soil erosions and gully formation, as people go to river bank crossing the embankment. This needs to be taken care (maintained) by the committees in order to ensure long term sustainability of the structure. New constructions at the nearby area of embankment can be seen. Locals reported that the transactions of land increased than before and the land price has also been increased in the area after the construction of embankment. • The survival rate of plantation is low however, the grass over the embankment are spread well. • The ETWs installed in the area found operational and the locals reported that the people till midnight fetch the water from the ETW as it is located in the small market area joining the Sarpollo with Baluwa VDC. They also reported that the water fetched from the ETW is best to drink than the tube wells with normal depth. • The LSAR & FA equipment are kept safely in the private home. They informed that in case the house owner has to travel, he will be handing the keys to the other responsible member from committees.

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Day 2: 22 Feb. 2016	Kalapani, Mahottari	Gauge reader Mr. Hira B. Pariyar.	**Inspection** of Rain gauge and stream in Ratu Bridge located Banepa Bardibas highway **Findings** • The fencing at rain gauge station is found to be weak as the pillars are not installed well and the barbed wire are not tightened well. • The calibration on the stream gauge in the Ratu Bridge is found to be perfectly okay, bright and clear. • The gauge reader reported that he has not packed up the CBFEWS as per instruction received during the ICIMOD's training. It was communicated that the CBFEWS needs to be packed up after the monsoon ends and then again to be fixed before the next monsoon. Hence, TA directed to follow the instructions in handling the system.
	Bahunmara, Tulsi VDC in Dhanusha district	Interaction with community people and VDC Secretary Mr. Navraj Paudel	Observed the gully control site/slope stabilization and interacted with community **Findings** • Mr. Rup Narayan Yadav, District Project Coordinator briefed the concept of developing the model site in Ratu river system in terms of upstream downstream linkages. The work will be concentrated in about 207 meter stretch and will be the combination of check dams and bioengineering. • The community people are enthusiastic to support the project as they have been most vulnerable from the flood and river cutting project. • VDC secretary has been observed to be positive and development oriented. He briefed some key projects being implemented in the area.
	Lalgadh, Mithila Municipality, Dhanusha	Mahindra Karki, a gauge reader	CBFEWS site in Dhanusha **Findings** • Mahindra Karki, a gauge reader to look after the CBFEWS in Lalgadh briefed that he has packed up the CBFEWS and stored in the house as per the instruction received duirng the ICIMOD's training. The CBFEWS pole along side the Ratu River is observed to be okay. • He informed that he has not received the sediment sampler yet. He also shared that he had managed

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			to collect the sediment sample at once during the last monsoon.
	Rain gauge station alongside of East West Highway, near Gagan River		**Findings** It is found that the nut bolts are not fixed properly in the gauge stand. Pillars in fence are not fixed well and found that the pillars have been retrofitted with cement.
	Tulsipur-2, Banimiya, Siraha	Gauge reader / chairperson of committee Mr. Rajendra Prasad Shah and the vulnerable communities	Observation of three stretches embankment site, Stream Gauge and Elevated Tube well **Findings** • Communities started farming on the reclaimed area on the other side of embankment as they are confident that flood will not enter into the lands to damage the crops • Low survival rate of the plantation made for bioengineering, has been observed. Community informed that due to the long drought and the poor soil texture, the plantation remained unsuccessful. However, the *khar* planted on the embankment site is found to have a high survival rate. Mr. Rajendra P. Shah informed that the community people will harvest the *khar* during the harvesting season and will take half of the product and the half of the thatch will be spread over the site for the mulching purpose. This is expected to add nutrition supply in the soil, thus help to improve vegetation in embankment site. • The small patches of gully formation and soil erosion noticed in the site and recommended for the maintenance at the community level. • The initiations have been noticed to stop livestock and people using the embankment site as a village trail by keeping the thorny stems. However, they reported that it was less effective. • The small portion of the gabion revetment has been moved down by the flood this year. This demands some prompt maintenance as flood next season could damage it more. The committees need to coordinate with line agencies for the resource mobilization. However, community expects project to allocate budget for the maintenance. The chairperson shared the long term plan of making

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			money by selling *Khar* and using the money in maintenance. • Community people informed that the water level increased in the village due to high rainfall could not drain through the outlet in the embankment. This has placed high risk of damage to the embankment structure. Then the community people gathered at mid night and built dyke in the area to support the embankment. The siren supported by the project to the early warning taskforce has been used to gather community people in the mid night. The efforts had helped to save the structure. • The locals, **Jogindar Yadav** and his wife **Shila devi Yadav** also explained how they were able to save the embankment that night. This shows the community people have been highly benefited by the embankment construction so that they are enthusiastic to work hard for its long term sustainability. • The plastic calibrations fixed in the pillars on the two sides of river banks have found to be damaged by the children. • The locals informed that the ETW is not in operation since 15 days. It just needs a simple maintenance and committee member informed that they will maintain it soon.
Day 3: 23 Feb. 2016	Jogidaha VDC, Udayapur	VDC Secretary and gauge reader Mr. Dilip Kumar Chaudhary	Visit to the embankment sites and rain gauge station **Findings** • A brief meeting was held with newly transferred VDC secretary in VDC office in which TA briefed about the CFGORRP and project activities in Jogidaha VDC. • The ETW installed in the premises of VDC office is found to be in operation. • A joint observation visit was made to the embankment site by the project team along with VDC secretary, along the Kong river basin in Hadiya VDC. The low survival rate of plantation has been observed however the Khar is the major vegetation found in the stretch. Except some patches of the gully formation and soil erosion, the embankment site is observed in well condition. The VDC secretary is found to be positive and hardworking and committed towards campaigning the grazing free area. This will also help to improve vegetation status in the embankment site. • The proposed site of embankment has been observed which will start from the endpoint of the

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			embankment stretch constructed by DSCWM. There seems a good coordination among line agencies to avoid duplication and reducing flood vulnerability of the coomunities. • A rain gauge station has been visited which was not in a good condition. The door has been damaged and pillars are not installed well.
	Millsera, Musahar and Dungaha toles in Hadiya VDC, Udayapur	Interaction with local communities, women and gauge reader Mr. Chandra Lal Giri	Observation of embankment site, rain and stream gauge, ETWs and LSAR equipment **Findings** • The Mulkhola and Dungana embankment stretch have been visited and found that Khar is the major vegetation on the site with low survival rate of bamboo in the area. The embankment was found okay with some small patches of gully formation and soil erosion. This needs to be maintained in order to ensure long term sustainability of the embankment. • The installation of the rain gauge station in the Dungaha tole is on progress. Locals informed that the gauge is being installed in the private land despite the instruction of PMU level to install it in public land. When queried, the locals informed that there is no safe space in public area and they confirmed that it is the safest site near the house of gauge reader. • The ETW in Dungaha is well operational. • The LSAR and FA equipment have been reported to be utilized properly during the monsoon in 2015. The flood entered into community through the segment of old embankment stretch which was kept open as the village road. The committee and taskforces members have been reported to be mobilized during the rescue and first aid of the victims. Since it was during the daytime and the committees reacted promptly, no such causalities has been occurred. • The equipment are kept safely in the home of committee member.
	Gaighat- Udaypur	Indra Prasad Adhikari, Chief DSCO, Udayapur	Mr. Indra Prasad Adhikari is found to be positive and supportive towards project. He appreciated DPO, Mr. Sanjay Shah for his hard work. He is ready for any coordination and other support needed for the project. He requested the project to allocate some budget for institutional capacity of the DSCO if it is feasible. He also recommended for organizing the information sharing meeting to boost up the

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			coordination and consultation among the district level line agencies. In response, Mr. Govind Acharya, informed that project will conduct consultative meeting and joint monitoring visit of line agencies in year 2016. This is expected to increase coordination and cooperation among line agencies.
Day 4: 24 Feb. 2016	Rajbiraj, Saptari	Bishnu Bahadur Bhandari, Chief, DSCO, Saptari	Mr. Bishnu B Bhandari highlighted the rigidness of communities in Dighwa VDC and suggested project to concentrate on upstream VDCs along Khando river system if feasible. He also suggested to complete the work by hiring the local contractor if the project guideline allows.
	Dighwa, Saptari	Interaction with users of ETW and community people	Observed the proposed embankment site, visited elevated tube well site and rain gauge station. **Findings** • The community people have priority need of embankment. However, due to some land disputes, the community consensus could not be made on the alignment of embankment. Thus the embankment construction activity has been hindered since beginning. • The ETW is found in a proper use and community women reported that the water fetched from ETW is best to drink. A woman found taking bath in the ETW and reported that she feels comfortable to bath in the ETW structure than the open tube wells in village. • The rain gauge station is found in the good condition inside the private land.
Day 5: 25 Feb, 2016	Lahan, Siraha	DWIDP, Engineer, Mr. Dev Narayan Mandal – Incharge for Siraha and Udayapur	Mr. Ram Naresh Mandal is positive to work closely with the project in the targeted river basins to reduce flood risk at vulnerable sites. He suggested to conduct the consultative meetings at district level so that there will be good coordination among the partners will be achieved. He also wished to avoid duplication in the investment from the different agencies.
		Mr. Rup Narayan Yadav and Mr. Prem Shahi	The meeting was held in the FCO Lahan, to review the overall monitoring visit, its findings and recommendation. The TA, AFO and MEO shared the overall observation in the field and provided some recommendations for improving the project effectiveness.
Day 6: 26 Feb, 2016	Janakpur, Dhanusha		Travel to Janakpur from Lahan in office vehicle and fly back to Kathmandu from Janakpur.

2. **Major findings from the Field Visit/ Mission:**

- The embankment structures have been well built and the community people in all the project areas are happy with the structures.
- In some areas, the structures have small patches of gully formation and soil erosion. This needs to be maintained earliest the possible in order to ensure long term sustainability of the embankment. The community participation and ownership should be enhanced while doing so.

  Construction of the concrete houses, increased transaction of the land (as reported by the locals) along the riverside and reuse of reclaimed land are the impact level changes that we can see in the communities.
- The bioengineering part of the embankment construction is in the satisfactory level. However, the survival of grass and *Khar* is significant over the stretches. The survival rate of tree species is low and minimal bamboo sprouts are visible in some sites. Community informed that the plantation remained unsuccessful because of the low rainfall during monsoon last year. Furthermore, the poor soil quality also has contributed to the low survival rate of the saplings. The team also observed a high rate of open grazing in the embankment sites.

  However, the khar/grass planted on the embankment site is found to have a high survival rate. Committees in the Tulsipur, Siraha are planning to promote the income generation by selling the Khar from next year and invest the income in the maintenance of the embankement sites.
- Community ownership on LSAR, FA and EWS equipment is found much appreciative and the equipment are kept safe in the private homes. The community people reported that the equipment has been used during the monsoon last year.
- The ETWs are in well operation. Whereas in some locations, the minor maintenance is needed to re-operate the ETWs. During interaction with committee members, they reported they will maintain the ETW soon.
- The stream gauge are found okay in the sites where the calibration are painted. In case of plastic calibration, most of them are found to be damaged. So they need to be replaced with the painting calibration on the structures, for long term sustainability.
- The fencing installed at the rain gauge stations are in poor conditions and needs proper maintenance to ensure long term sustainability. The service provider needs to guarantee the quality of works.
- Local women seem actively involved in the project activities as they have been enthusiastic to talk about the embankment, ETWs and FA, LSAR and early warning equipment supported by the project.

3. **Recommendations and conclusions:**

- Project should work toward building community ownership over the structural measures so as they could initiate the maintenance of the structural measures. The networking meetings planned for this year are expected to enhance the community capacity for coordination with line agencies for resource mobilization and institutionalization of the committees formed under project.

- For bioengineering, the DPOs should consult with the respective District Forest Offices and select the best drought resilient species to be planted in the embankment sites. The plantation needs to be initiated with the beginning of monsoon so that they will have the better survival rate.
- As we are on the fourth year of project implementation, we need to focus more on exploring the outcome level results from our intervention at the communities. As DPOs are the frontline in the project execution at community level, they should explore the success stories from the fields. The support will be then provided by the M&E officer as per need.
- The field verification of the availability of the sediment sampler among gauge readers needs to be done.

4. Outputs from the Field Visit/ Mission:

- As one of the major objective of the visit, four potential case stories have been identified which need to be further worked out to have a complete story. The list of potential stories are:
    - Increase in land transaction and construction of new homes alongside of embankment site in Sarpollo, Mahottari.
    - Community people started the farming on the reclaimed lands in Tulsipur, Siraha
    - Use of early warning equipment to gather people at midnight and worked hard to protect the embankment in Tulsipur, Sirahah
    - Use of LSAR, FA and EWS equipment to save lives when the flood entered the village from the open section of embankment, in Hadiya, Udayapur

5. Likely Follow-ups that might be necessary after the visit (*What Next?*):

- The regular follow ups need to be made for the mobilizing the users committee in the maintenance and repairing of the embankment site and ETWs.

6. Major changes, if any, since the last Field Visit:

NA