

Workshop Proceedings

The Agony of Rivers: Floods in Bihar

3 September 2015, Patna, Bihar, India

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The International Centre for Integrated Mountain Development, ICIMOD, is a regional knowledge development and learning centre serving the eight regional member countries of the Hindu Kush Himalayas – Afghanistan, Bangladesh, Bhutan, China, India, Myanmar, Nepal, and Pakistan – and based in Kathmandu, Nepal. Globalisation and climate change have an increasing influence on the stability of fragile mountain ecosystems and the livelihoods of mountain people. ICIMOD aims to assist mountain people to understand these changes, adapt to them, and make the most of new opportunities, while addressing upstream-downstream issues. We support regional transboundary programmes through partnership with regional partner institutions, facilitate the exchange of experience, and serve as a regional knowledge hub. We strengthen networking among regional and global centres of excellence. Overall, we are working to develop an economically and environmentally sound mountain ecosystem to improve the living standards of mountain populations and to sustain vital ecosystem services for the billions of people living downstream – now, and for the future.



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the United Kingdom.

Internal Report

Workshop Proceedings

The Agony of Rivers: Floods in Bihar

Himalayan Adaptation, Water and Resilience Research (HI-AWARE)

3 September 2015, Patna, Bihar, India

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Organized by
Himalayan Adaptation, Water and Resilience Research (HI-AWARE)
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Executive Summary

The roundtable 'The Agony of Rivers: Floods in Bihar' was commissioned to catalyse the interaction between the flood affected community and the concerned policymakers and stakeholders. Participants from five different flood affected districts of Bihar, facing issues such as water logging, flash and riverine floods and embankments, were present in the meeting. The meeting, one of its kind, was fairly unique as all the community representatives were seated on the dais and their concerns were raised. The sharing of their experiences on floods related complications during the first session of the roundtable was the key moment as their voices were heard. The audiences were stakeholders including scholars, activists, government officials, scientists and students. Misconceptions of the community representatives relating to floods were cleared by the experts present in the audiences. Similarly queries raised by the experts, some yet to visit the affected sites, were given first hand experiences of the floods by the community representatives. The community representatives' exclusive comments on perception of floods and the problems faced were highly appreciated by the present audience in the form of intensive discussion during the second session of the roundtable. Agendas were set for further discussion along three areas of research, policy and practice. Agreement of experts on understanding the various typologies of floods, river morphology, adaptation strategies and grafting policies accordingly to answer the issues the communities were facing summarised the event. Deep studying the ancient knowledge on adaptation to floods and reviving them for the beneficial of the community was one of the action proposed by the experts. Encouraging outcome of the meeting was the presence of government officials from Government of Bihar (GoB) and their willingness to further support on the livelihood and adaptation strategies for the communities.

A total of 114 participants were present in the round table including experts, activists, students and community representatives. The gender distribution was balanced given the situation of Bihar: a least developed state in India. Majority of the participants were present through the entire meeting agreeing the meeting met their expectations and majority were satisfied on the knowledge of the resource person. The event was published by the local media details of which are on Annex 5.

Introduction

The Himalayan Adaptation, Water and Resilience (HI-AWARE) Research on Glacier and Snowpack Dependent River Basins for Improving Livelihoods programme is implementing its three work packages – knowledge generation, research into use and strengthening expertise – in 12 study areas in the Indus, Upper Ganga, Gandaki and Teesta river basins. All four river basins have been divided into three geographical areas: representing upstream, midstream and downstream parts of the river basins. In addition to conducting research on water, energy, food security, human health, water-induced hazards and extreme events, HI-AWARE is also in the process of testing adaptation measures in Citizen Science Climate and Adaptation Ateliers (CISCAs) in these sites and designing adaptation pathways for out-scaling and up-scaling. Situational analysis is the first field activity by HI-AWARE to examine upstream, midstream and downstream areas to rapidly appraise the livelihoods of people, climate change impacts, vulnerabilities of the local people and systems, and adaptation measures.

A round table was organised in Patna, Bihar on 3 September by the HI-AWARE Research initiative of the International Centre for Integrated Mountain Development (ICIMOD), with the support of Megh Pyne Abhiyan (MPA) and the Centre for Environmental Sciences of the Central University of South Bihar (CUSB). The roundtable, envisaged as a multi-stakeholder platform was conducted in two sessions: listening to local voices and experts' comments and further actions. A total of 114 participants were present in the meeting (See Annex 2 for details). People from five different flood-affected districts of North Bihar (Supaul, Saharsa, Khagaria, Madhubani and Pashchim Champaran) who shared their experiences of living with floods, the impact of floods on their lives and livelihoods, and the possible flood risk mitigation and adaptation options. The water-related issues the communities in these areas are facing are as follows (listed by location):

1. Supaul (Koshi): waterlogging
2. Saharsa: inside embankment (Koshi)
3. Khagaria: inside the embankment (Buddhi Gandak and Ganges)
4. Madhubani: flash floods (Bhutahi Balan)
5. Pashchim (West) Champaran: flash floods, riverine floods (Pandai and Gandak)

The locations of the communities are shown in the map below.



Figure 1: Location of communities represented in the roundtable

Proceedings of the Meeting

Opening Session

The roundtable was one of a kind, as the participants from the flood-affected regions were steering the session by sharing their experiences with the experts and scientists who were in the audience. Dr Anjal Prakash of ICIMOD kicked off the meeting by introducing ICIMOD and the HI-AWARE initiative and describing problems of floods in general. Dr Arun Bhakta Shrestha of ICIMOD then highlighted the environmental stresses that the Hindu Kush Himalayas (HKH) region is facing and the problems related to floods in Bihar. The key thing to note in the flooding in Bihar, he said, is that about 76 percent of North Bihar's population live under the threat of recurring floods, which affect around 73 percent of Bihar's area. The main goal of the roundtable was to draft strategies on flood-mitigation measures in the affected regions. The non-traditional approach used in the roundtable – whereby all stakeholders, including the community representatives, were brought under one roof to discuss the strategies – is an innovative one.

Next, Mr Eklavya Prasad of MPA highlighted the work done by his organisation in North Bihar, especially West Champaran. A major task of the project is to identify and bring to light the problems, reasons and solutions or the adaptations to the problems that the communities are facing in the region.

Next, Dr Pradhan Parth Sarathi informed the audience on the scientific experiments and studies his team is conducting in the flood-affected region of Bihar. He also lamented the fact that there was only limited research and journal papers available for research purposes in Bihar. He said that there would be more interactions with community representatives for the purpose of identifying topics for research that could be conducted with the help of ICIMOD and MPA.



Photo 1: Participants from the flood affected communities

Listening to Local Voices

In this session, the community representatives of the flood-affected regions were invited to preside on the dais. The audience representatives were very excited to see that and applauded the move. The community representatives introduced themselves and the places they hailed from. The representatives were nervous at the beginning of the meeting, but gradually they felt comfortable voicing their concerns. Subsequently, the other participants – comprising flood-affected communities, government officials, I/NGOs, and activists – were introduced. The flood-affected communities were represented by six women and six men of various ages. The session was led by Mr Prasad of MPA. The local people talked about how floods affect their communities. A misconception voiced by one of the participants was that the Koshi Barrage in the upstream region in Nepal was the main cause of floods in Bihar. He was of the opinion that when the Government of Nepal (GoN) opens all the gates of the barrage during the floods, that leads to floods occurring in the Koshi River. This point was eloquently refuted by an expert, who then explained in detail how the Koshi Barrage was managed – that it is actually being operated by the Government of India (GoI).

A participant from Kothia Village in Saharsa district, located inside the Koshi embankment, talked about the many problems associated with floods, such as drinking water issues, sanitation and access to food. He said that the area was vulnerable to floods 2-3 times a year and that the railway track in the vicinity acted as a barrier of sorts because it lies on higher ground. Another participant also from the Koshi floodplain mentioned the flooding that occurs every year, but went on to say that they prepare themselves for floods by making machans (slightly raised elevated house structures) and packing valuables. The machans can be considered an adaptation option to floods. Local people anticipate floods whenever intense rainfall during the rainy period causes river water levels to rise. For the communities that live inside the embankments, intense sedimentation of the river has led to a decrease in agricultural output. A participant from the Pandai of Paschim Champaran talked about flash floods. His community had experienced the occurrence of this event as recent as on 20 August 2015. They predict that floods will occur based on the rainfall in the upper catchment region in Nepal. He said that when it rains for more than two hours in the upstream region in Nepal, an occurrence they normally can see from their village, they understand that the



Photo 2: Locals from the community voicing their concerns

chances of a flash flood is high and they seek safety by moving farther away from the river. The water logging that takes place after the floods depends on the topography of the region: mostly, water goes away a few hours after flooding occurs, but there are also areas where due to the slopes, the water remains logged for a couple of days after the flash flood event. Because most participants, barring a few, came from rural communities (most were visiting Patna for the first time in their lives) their perception and understanding of the floods were mostly based on the problems they faced during the floods.

The experts then asked questions related to the community representatives' perceptions and the problems they faced.

The first question that the experts asked related to the importance of the embankments. A participant from the Koshi floodplain stated that the embankments were important; he said, however, that due to intense sediment deposition, confined to certain channels, is creating abnormalities in agriculture. An activist among the participants made a comment about the ICIMOD flyer of the round table. He said that the increase of embankment, from 160km in 1954 to 3,465km in 2004, has increased the size of the flood-prone area from 2.5 million hectares to 6.89 million hectares. This comment was further supported by a community representative who strongly indicated that the infrastructure (i.e. embankment) had confined the river into a narrow channel, and he argued that the rivers should be allowed to flow along their natural paths. These comments brought to light the dilemma that persists regarding embankments and their effects on both flood control and local livelihoods. The community representative said that people were concerned about the



Photo 3: An elderly woman speaking about the floods

construction of structures such as embankments and dams, which could further endanger lives if they were to fail. The experts were also asked to imagine living in the situation has to put up with so that they could understand more of the problems that persist. On this, an expert commented that planning for and regulating the space between the embankments might decrease the number of communities affected. The majority of the participants agreed on the fact that embankments were saving them from the floods, but that the intense sedimentation was causing problems.

Another question asked by an expert to the affected community was whether it was true that they sang songs to invite Koshi to their village. One participant said they prayed to the Koshi in the form of a song, to give them strength to battle its raging waters. Another participant, however, countered this point and said that their community used to sing songs for the Koshi, asking her to come to their village so that the deposition of sedimentation would further increase the fertility of their soil and enhance agricultural productivity. This anecdote illustrates the importance of sedimentation for the floodplains of various rivers. One expert highlighted that sedimentation in the Koshi floodplains was very high compared to other Himalayan riverine areas owing to the young and fragile geology of the upstream mountains. She further asked whether the recent April 2015 earthquakes would affect the sedimentation process or not. A participant from the Koshi floodplain said that the deposition of sedimentation had not been a problem for her village. This may be due to the embankments, which deposit the sediments further downstream. One participant pointed out the decreasing fertility of her land due to the reduction in the

sedimentation and siltation. The intense sedimentation in these areas is also facilitating in the rising of riverbeds, which can prove to be very dangerous in the event of an embankment breach. In some parts of the embanked area, the riverbed is already higher than the village ground. Erosion has also created havoc in some areas, according to one participant, who said her family were forced to migrate many times due to erosion and later had no option but to migrate to various other states. When asked about the changing weather pattern observed by the community representatives, the majority answered that they were aware of the changes. In the Pandai River catchment area, which is a perennial river due to the recent extreme rainfall in the Nepali Siwaliks, the rainfall has caused flash floods in the region. The changed pattern of rainfall events has also led to flash floods in the dry season of April as well.

The villagers said that none of the flood-affected communities had a proper Early Warning System (EWS), which could be beneficial during floods. For example, the upstream communities can play a major role in passing on information about rainfall and possible floods to downstream one, which can lead to lives saved downstream. The participants from Pandai said that they were on a constant look out for thunderstorms occurring in the upper regions of the hills. The village overlooks the upstream hills, and the community representatives observe the weather in the upstream areas and warn the others in the event of big thunderstorms. Sometimes, they can also hear the gush of water flowing upstream, allowing them time to prepare for evacuations.



Photo 4: A community representative expressing dissatisfaction with the EWS

One community representative's argument, however, was that the EWS creates panic amongst people, rather than helping them. He cited as an example how some villagers in Bihar had evacuated their villages during Sunkoshi Dam landslide in August 2014. But an expert pointed out that EWS are case based and can be 80-90 percent accurate. There are also informal communication channels between Nepal to India that can be used to warn the downstream communities in the event of extreme rainfall and sudden floods. But this is only limited to those communities who have relatives or friends in the upstream communities. There is also the lack of a community mechanism to provide alerts during extreme events. For example, the damming of the Sunkoshi River by a landslide

in 3 August 2014 in Nepal created fears of sudden floods in the communities in Bihar, who then had to spend sleepless days and nights keep a lookout out for floods. Furthermore, knowledge of the traditional flood-forecasting mechanisms, such as by observing the colour of the river water, patterns of wind, etc – are being forgotten by the representatives of the community nowadays. The representatives also talked about a case in which when the community representatives started passing information over a mic, information they had probably gotten from upstream communities, they were arrested by the government forces. During the 2008 Koshi breach, the then Chief Minister of Bihar had announced over the radio evacuation procedures on the radio, and this could be seen as a form of EWS. All the representatives of the community were of the view that there needed to be EWS installed in the region.

The economic impacts of floods on the community were also discussed during the meeting. Due to the irregular timing of the floods, the crops here are affected and migration is enhanced. The flooding, erosion and sedimentation has led to a decrease in fertile land and agricultural productivity has thus decreased. The GoB provides subsidies to landless farmers, but those who have lost land to the raging waters are not registered as landless and are barred from availing of these subsidies, and this practice can create social disharmony. There is also now the new problem of human trafficking, especially of girls who are sold to be sex slaves; and this practice is a product of the rapidly deteriorating economic status of the population. Many misconceptions were cleared during the meeting, wherein the experts provided explanations about the various mechanisms for flood-mitigation and other adaptation measures that the locals were unaware of. The experts also got an idea of the firsthand experience of the people living in the flood-affected regions. Overall, this meeting clearly filled in the communication gaps that the communities and the expert/scientists and policy makers had.

The session concluded with Dr Prakash asking the participants to identify the one key issue related to floods that he/she felt needed to be addressed.

Afternoon Session

Mr Eklavya Prasad from MPA began the proceedings by asking the participants whether issues pertaining to floods, climate change and adaptability had been identified. He then requested Mr K S Murali to categorise the key issues identified by the participants and to make a presentation. The major issues identified were categorised in the following manner:

- The main issue in north Bihar has to do with living with floods and resilience. How to live with floods? Two aspects that seemed to be of importance: i) uncertainty in livelihoods and ii) transportation provisions for the flood-affected;
- The second issue is related to co-ordination of relief and rehabilitation and flood-management systems, formal as well informal. He pointed out that the pre-lunch discussion highlighted the need to manage flood situations rather than floods. Similarly co-ordination for relief and rehabilitation should also include management strategies post floods;
- The third issue identified related to capacity building. The importance of documenting floods. The participants suggested that primary and secondary education could include aspects related to floods, in order to build



Photo 5: Mr. Prasad from MPA beginning the afternoon session

awareness among the people at an early age. Also, the documentation and passing down of traditional knowledge is important. It's also important to find synergies between traditional and scientific knowledge to build resilience;

- Other issues identified were as follows: people need to be involved in the process of planning and construction of embankments; the issue of sedimentation needs to be given serious consideration; and disaster-induced migration and trafficking in Bihar and Nepal's flood-affected areas are of major concern.

Dr Prakash set the agenda for the post-lunch session by asking the participants to focus the discussion along the three areas of research, policy and practice.

Mr Siddharth Patil from ACWADAM suggested that it was important to understand the different typologies of floods as a first step in research.

Mr Gopal Krishna stated that all the above three areas consider floods as a fait accompli and he requested the participants to also consider the phenomenon of drainage congestion along with floods.

Mr I Ahmed of Green Peace highlighted the issue of flood-induced water logging and the unpredictability of rainfall leading to flash floods in areas that experienced traditional annual floods. He named a few locations where this is happening in, such as the Kusaha-Kursela-south Koshi area.

Mr Vinay Kumar of Water Action spoke about the smaller rivers in north Bihar. He stated that most of the research, policy and practice was focused on the large rivers and that the smaller rivers were not given due consideration. He stated that the smaller rivers make up the larger rivers and therefore these smaller rivers along with the communities dependent on and affected by these smaller rivers need to be understood for developing sound policy and practice strategies.

Prof. Raju from DMI stated that the sedimentation in the rivers in north Bihar completely alters the biophysical regimes thus changing the basis of livelihoods, which required a change in approach from traditional farming to knowledge-based system of farming. He also spoke about how migration had become a way of life, and about livelihoods in the flood areas, and how it was important to understand migration and he also raised the question about whether migrants can be helped by developing information and skill-development systems that will enable them to identify better opportunities in the destinations and build their resilience.



Photo 6: Experts deliberating on the issues raised

Ajay Samaiyar stated that floods are a natural phenomenon and occur periodically. He pointed out that north Bihar and south Bihar are completely different from each other. He also stated that the embankments are structural engineering solutions and when these were conceptualised, they were designed giving due consideration to the spacing between the embankments and very few people resided within the embankments. He went on to state that there are embankments within embankments, as a second line of defense, and that the outer embankments are sometimes deliberately breached to release pressure. He also mentioned that the purpose of the sluice gates was to reduce the high water-levels outside the embankments by allowing its flow into the river. He suggested that controlled flooding through sluice gates could be used as a solution to provide relief for the people residing within the embankments. He provided the example of the Kamla Balan embankment, which was deliberately cut so as to allow the fertile silt from the river to be deposited outside the embankment.

Ramesh Kumar from GPSVS stated the need to understand the situation of the rivers, encroachments and water quality. He questioned whether infrastructure development in north Bihar, which is mostly undertaken by the State government, gave any importance to floods. On the issue of livelihoods, waterlogging and floods, he suggested introducing water-resistant and sand-resistant crops.

Prem Kumar Verma from Samta spoke about the disconnection between local and global knowledge. He asked the participants to ponder upon ways to take the indigenous knowledge systems to a larger audience. He stressed upon understanding communities' terminologies related to floods. He also asked for reviewing the operability of critical infrastructure during floods.

Mr Eklavya Prasad from MPA gave an example of the MPA's initiative along with local partner organisation Gramyasheel in Ward no. 11 of Phulkaha Village, where it was identified that there exists a huge gap between the eldest and youngest generations of the village with respect to knowledge on floods. MPA has facilitated dialogue between both these generations and has created a thesaurus terminologies related to floods and groundwater.



Photo 7: Dr. Nupur Bose from Department of Environment, A.N. College, Patna

Dr Nupur Bose from AN College highlighted the importance of hydrogeology of river systems. She stated that the Kusaha embankment that had been breached was located on the elbow of the river, where the pressure exerted by the river is the maximum. North Bihar is an area with a lot of geological features such as faults and lineaments and thus importance must be given to the geology. She questioned as to why the flows in the rivers were not being regularly monitored. She also pointed towards the gap in sectoral communication and co-ordination. She added that most large rivers in north Bihar have paleo channels, which should be allowed to be flooded and thus reduce the load on the main river channel, and thereby reducing flooding within embankments.

Rajendra Jha stated that migration and livelihoods issues have arisen in Saharsa owing to the construction of the embankments. The embankments were constructed for protecting the countryside, which also formed the most fertile areas. The blocking of floods by the embankments has led to a drop in fertility in the countryside, along with increasing waterlogging. He stressed on the need to develop a solution for such areas.

Prof. Pradhan pointed out the changing rainfall pattern. He said that earlier, north Bihar would experience long rainy spells that often stretched to 8 to 10 days. This pattern has not been observed anymore. He asked for the installation of early warning systems such as radars. He also called for creating awareness among the villagers to not create any disturbances in the embankment system as well as the rivers.

Dr Anjal Prakash dispelled a myth regarding the discharge of water from the Koshi and Gandak barrages. He stated that the discharges are not controlled by the Nepal authorities and are actually governed by the Indian engineers posted at these barrages. He used this as an example of the problem of disseminating information.

Dr Gahendra Gurung from Practical Action shared information regarding the early warning system that is operational in Nepal. He said that rainfall stations and flood gates provide real time information to the community. He said that floods are related directly to livelihood activities in the hills in Nepal and that certain traditional practices are not suitable to the current scenario and need to be improved along with good micro-watershed activities for reducing the chances of flooding and silt loads. Dr Gurung also spoke about climate change, stating



Photo 8: Dr Shrestha from ICIMOD summarising the discussion raised by the flood affected communities

that the intensity of rainfall is increasing, which is leading to an increase in flood events. The changing climate has also led to the occurrence of floods beyond the monsoon season.

Mr Manoj Raman of FMISC stated that the guided flow of rivers is a necessity. He said that the FMISC conducts regular checks in the riverbeds for the stability of the embankments. The intention is for the river to flow centrally and most of the activities are carried out in consultation with the community. He stated that the embankments protect the railway tracks, national highways and communities and that civilisation has changed by living in and around permanent structures and thus guiding of rivers is necessary.

Gopal Krishna responded by stating that a guided flow of rivers is akin to guided democracy. He stated that policy-level action is not about reinventing the wheel. He asked why the cost-to-benefit analysis of embankments had not been conducted till date. He mentioned various government-commissioned reports that have not been given credence by the government on the issue of embankments. He stressed upon the need to restore the landscape in and around the Koshi River.

Mr I Ahmed from Greenpeace gave an example of the Shershahwadi community, whose livelihood depended on selling paddy to villages by distributing it on bicycles. Floods have destroyed this livelihood. He used this example to draw attention to his statement that destruction of livelihoods leads to destruction of society. He added that Bihar is an agrarian state and will remain so. Resilience to floods should include cattle and this should include the space for raised cattle shelters during floods and the provision for cattle feed.

Dr Arun Shrestha from ICIMOD summarised the discussions from the post-lunch session. He said that the highly contrasting views from the different participants made the proceedings interesting and that it was a challenge to bring all of the views together. He elaborated on a lesson for engineers from his experience; engineering should be about creating structures that people require, and he blamed infrastructure problems on bad engineering. He said that the strengths of both traditional and modern knowledge needed to be merged given the current situation. He also spoke about examples from both community-led and government-led approaches having failed and that thus



Photo 9: Experts from ICIMOD discussing the issues raised by the flood affected communities

there is a need for integrating both approaches. Dr Shrestha stated that ICIMOD's strength lies in being present across national boundaries.

Dr Philippus Wester of ICIMOD said that he could identify with the entire day's discussions on embankments, as he hailed from the Netherlands, where such debates have been part and parcel of development. He stated that the participants should ponder on how to move from the agony of rivers to the joy of rivers, with reference to the state of floods in north Bihar by conducting similar dialogues and research, policy and action. He stressed upon the space for peoples' voices being critical in the entire process. He also said that suffering is natural but the question is how to reduce the suffering of the flood-affected population.

The proceedings were summarised under the three themes as follows:

Research

- Understanding typology of floods;
- Understanding the role of paleo-channels in floods;
- Impact of deforestation in the upper catchments on floods and sedimentation in downstream areas;
- Understanding river morphology;
- Adaptation to floods, siltation and others factors related to floods.

Policy

- Drainage and related problems such as waterlogging;
- Reviewing state and central disaster-management policies;
- Commenting on the lack of a water policy in Bihar state;
- Water quality issues such as arsenic, iron and microbial contamination.

Action

- Waterlogging issues;
- Traditional water resource (e.g. irrigation) knowledge;
- Local knowledge on coping/adaptation with and to floods;
- Water quality issues such as arsenic, iron and microbial contamination

Upon completion of the roundtable a questionnaire was given to all participants for feedbacks. Evaluating the feedback the first thing to notice was the gender participation where 20% of the participants were female. Of the community representatives six of them were female. The meeting saw a healthy amount of participants as observers who were mainly students and activists. Excluding few exceptions the majority of them were present throughout the meeting and were highly satisfied with the outcomes of the roundtable

Annex 1: Programme of the Event

Venue: Hotel Maurya Patna South Gandhi Maidan, Patna, 800 001, Bihar, India

Date: Thursday, 3 September 2015 Time: 9:30 AM to 4:00 PM

Schedule:

09:30 – 09:45 Registration and tea

09:45 – 10:30 Workshop inauguration: Setting the objectives and introduction

10:30 – 12:30 People's voices: Experience sharing from flood-affected communities

12:30 – 13:00 Prioritization of three issues for the roundtable

13:00 – 14:00 Lunch

14:00 – 15:30 Discussions on the three issues

15:30 – 16:00 Summing up and next steps

Annex 2: List of Participants

Male Participants

S.No.	Name	Organization	Email/contact
1.	Banku Bihari Sarkhar	UNICEF	bankubihari@rediffmail.com
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5.	Chandrashekhar	Gramyasheel Team	gramyasheelbihar@gmail.com
6.	Samir Kumar Sinha	Wildlife Trust of India	samir.wild@gmail.com
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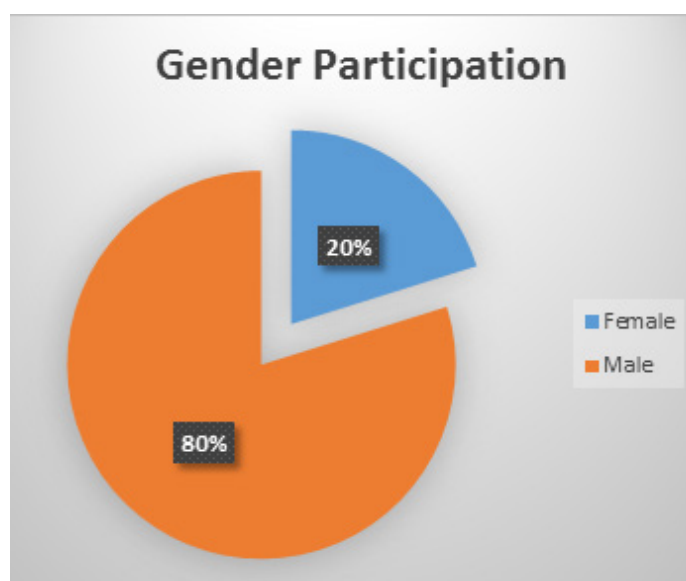
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57.	Piyush Shah	DML, Patna	
58.	Manoj Ronion	Energy FM WRP	
59.	Deep Shiuha	Jan Jagram Sansthan	
60.	Mr,. Vikash Kr. Singh	Hindustan, Reporter	
61.	Sunny Kumar	CUSB, Patna	
62.	Anwar miles Farosni Tanseen		8271692540
63.	Suresh Kr. Vision of Bihar		7877845857
64.	Jay Prakash		9334167539
65.	Ashutosh Kumar Singh	Central University of Bihar	9199704773
66.	Deepak Gupta	CUSB	9576532727
67.	Simon Peter Minz	Central for World Solidarity	7762956801
68.	Alok Kumar	Sanmarg Hindi Daily	9334645359
69.	Nikhil Kumar	Morning India	7870550890
70.	Md. Mudassiv Alam	CUSB	9871723607
71.	Manish Kumar	Sanchai Bihar	812510455
72.	Shashi Bhushan Jaiswal	Saucla Development	9431035826
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81.	Chandrashekhar Ray	Flood affected individual	Saharsa
82.	Rambilas Paswan	Flood affected individual	Khagaria
83.	Jayprakash Singh	Flood affected individual	Pashchim Champaran
84.	Yogendra Mahato	Flood affected individual	Pashchim Champaran
85.	Summy Kumar	CUSB	
86.	Amit Kumar	CUSB	
87.	Anuj Kumar	CUSB	
88.	Faiz Ahmad Siddiqui	CUSB	
89.	Kumar Rajan	CUSB	
90.	Nitish Anand	CUSB	
91.	Ramanand	CUSB	

Female Participants

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6.	Neha	CUSB	9973450955
7.	Nisha	CUSB	7301689103
8.	Ruby Kumari	CUSB	9504884898
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13.	Anju Devi	Flood affected individual	Supaul
14.	Lila Devi	Flood affected individual	Saharsa
15.	Parmila Devi	Flood affected individual	Khagaria
16.	Laxmi Thakur	Flood affected individual	Madhubani
17.	Roopkala Devi	Flood affected individual	Madhubani
18.	Shrimati Devi	Flood affected individual	Pashchim Champaran
19.	Roshan Devi	Flood affected individual	Pashchim Champaran
20.	Anuksha	CUSB	
21.	Jyotsana Kumari	CUSB	
22.	Nisha Kumari	CUSB	
23.	Priyanka Kumari	CUSB	

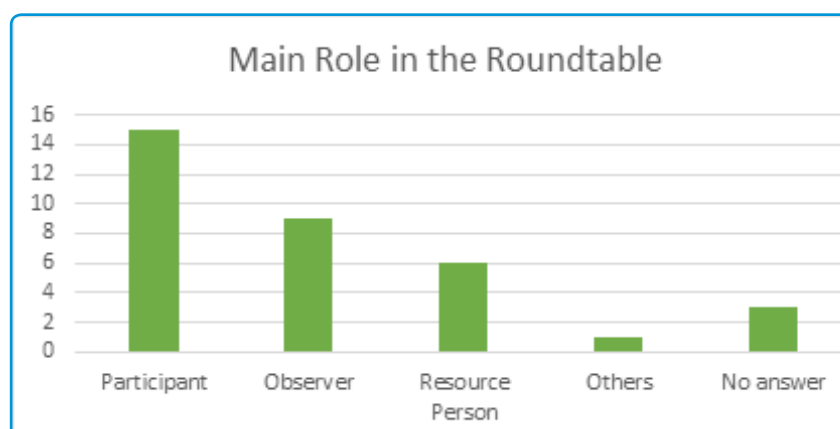
Annex 3: Evaluation of the Feedback Received

The expectation of participants were around 35-40 but we were thrilled to have around 114 participants; twice as expected. We had 12 community representatives who were directly affected from floods out of which 6 were women, a staggering 50%. Of the women participant one women was of 65 years which gave an example of how interested are these representatives to voice their problems. Of the other participants only 20% were women and 80% were men. There were prominent figures of the women participants who play a major role in development of flood related issues in Bihar. Of the many observers young women from university were present to witness the roundtable.



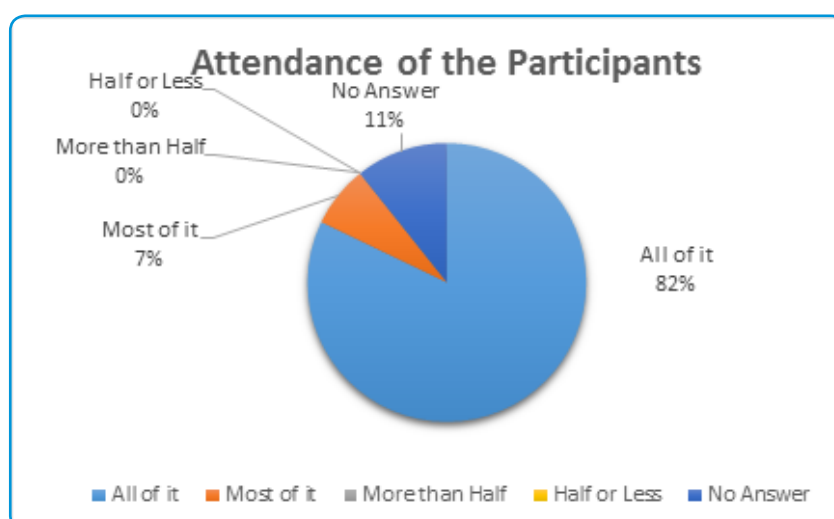
The women were asked questions regarding their perception towards floods and although hesitant at the beginning they quickly began feeling comfortable. The women are mostly affected from flood related issues because of the household work that they are engaged with. Problems such as inundation of fireplace was the most common problem they were facing along with sanitation.

The number of participants were very encouraging to observe with government bodies to young university students. Most of them were present throughout the meeting. Since we had invited around 40 participants the majority were them with a healthy amount of observers.



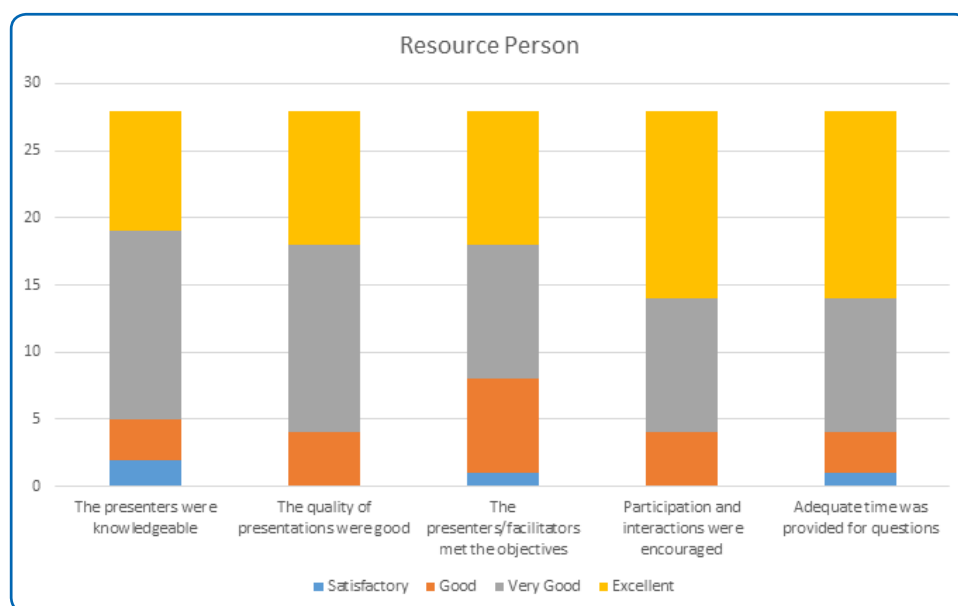
Of all the people present in the meeting 81% of them attended it from the beginning to the end. A thing to note is that none of the participant said that they attended half or less. There were 8% of the participants who attended most of it.

One of the expected outcome of the meeting was to have a shared understanding on the recurring floods in Bihar. In respect to this question the feedback question asked whether the meeting was as expected, capacity building and future engagement with HI-AWARE in related area most of the participants had a positive response.





Regarding the resource persons i.e. organizer, presenter and facilitator the attendees seemed quite satisfied with their knowledge about the topic and the quality of the presentation. The attendees also agreed that the program's objectives were met and the participation on discussion was encouraging. There were, however, very few attendees who were just satisfied with the resource person but in overall they all agreed on the successful completion of the meeting. They also agreed that adequate time was provided for questions and answers where in some cases there were long discussions between the experts and community representatives.



Annex 4: Feedback Form

Please indicate your impression on the items listed below. Your responses-no matter how positive or negative are valuable to us. Your responses are anonymous and confidential.

Please circle the number against each statement as applicable.

A General Information

1. Which of the following best describes your main role in this workshop/seminar?

- ☐ Participants
- ☐ Observer
- ☐ Resources person (organizer, presenter, facilitator)
- ☐ Other, please specify _____

2. How much of the activity were you able to attend?

- ☐ All of it (everyday, all sessions)
- ☐ Most of it (most days and sessions)
- ☐ More than half
- ☐ Half or less

3. Are you

Male

Female

B About the Event

	Satisfactory	Good	V Good	Excellent
The event met my expectations	1	2	3	4
The event objectives were met	1	2	3	4
I will benefit from the knowledge I gained	1	2	3	4
I would like to continue engaging with HI-AWARE in these areas	1	2	3	4

C Resource Persons

	Satisfactory	Good	V Good	Excellent
The presenters were knowledgeable	1	2	3	4
The quality of presentations as good	1	2	3	4
The presenters/facilitators met the objectives	1	2	3	4
Participation and interaction encouraged	1	2	3	4
Adequate time was provide for questions	1	2	3	4

Annex 5: Press Coverage of the Event



Dainik Bhaskar, 4 September 2015

Flood-affected share woes with experts

B K Mishra

Patna: It was a round-table conference with a difference. The target group was occupying the dais while the experts sat in the audience. Representatives of the flood-affected districts shared their experiences with the experts.

At the discussion on 'The agony of rivers: Floods in Bihar', organized at a posh hotel here on Thursday by the Himalayan Adaptation, Water and Resilience (HI-

CONF ON FLOODS

AWARE) Research Initiative of the International Centre for Integrated Mountain Development (ICIMOD) in partnership with the Centre for Environmental Sciences of Central University of South Bihar (CUSB), 12 flood-affected people narrated their experiences of living with the floods, their impact on their lives and livelihoods, and probable flood risk mitigation and adaptation options.

Anju Mishra of Supaul said the siltation that comes from the river flood leads to land degradation causing severe agricultural problems. "We face ex-

treme sanitation and drinking water problems during the time of floods. We don't know where to defecate and most of the time, we defecate in the same water that we drink. This gives rise to various waterborne diseases like diarrhoea," said Bela Devi of Mahishi block in Saharsa district.

Srimati Devi of Nautan block in West Champaran district observed, "Most of the time, we have to live with bare minimum of food items during floods. We don't get anything to eat for two to three days until someone comes to our help and provides us with sattu and chura."

Yogender Nath of Kairi village in West Champaran said, "We do not get information about floods through official channels. Flood forecasting for us is an informal system which is dependent on our own symbols as well as messages from our relatives in Nepal."

Experts who heard the experiences of the flood-affected people included HI-AWARE coordinator Anjal Prakash, Megha Pyne Abhiyan trustee Eklavya Prasad and CUSB environmental sciences head Pradhan Partha Sarthi.

पीड़ितों ने सुझाया बाढ़ से बचने का उपाय

जासं, पटना : 'एगोनी ऑफ रिवर्स : फ्लड्स इन बिहार' विषय पर दक्षिण बिहार केंद्रीय विश्वविद्यालय (सीयूएसबी) के सहयोग से इंटरनेशनल सेंटर फॉर इंटीग्रेटेड माउटेन डेवलपमेंट (आईसीआइएमओडी) और मेघ पायने अभियान संस्थान द्वारा गोलमेज चर्चा का आयोजन किया गया। परिचर्चा में बाढ़ से प्रभावित लोगों को ही विशेषज्ञ बनाए गए और मौजूद लोगों के प्रश्नों का बखूबी जवाब दिया। आईसीआइएमओडी के संयोजक डॉ. अंजल प्रकाश ने बताया कि इस कार्यक्रम का उद्देश्य बिहार में बार-बार आने वाले भयावह बाढ़ के आयाम और उसका समाज में हाशिये पर रहने वाले लोगों पर पड़ने वाले प्रभावों के बारे में विस्तृत चर्चा करना था। सीयूएसबी के सेंटर फॉर इन्वायर्नमेंटल साइंसेज के विभागाध्यक्ष डॉ. प्रधान पार्थ सारथी ने कहा कि परिचर्चा के मुख्य बिन्दुओं पर वह शोधार्थियों के साथ मिलकर बाढ़ की समस्या के वैज्ञानिक समाधान ढूंढने का प्रयास करेंगे।

सीयूएसबी के जनसंपर्क अधिकारी मो. मुदस्सीर आलम ने बताया कि एकदिवसीय परिचर्चा में करीब 80 लोग शामिल हुए जिनमें बिहार के विभिन्न भागों से आये 12 बाढ़-पीड़ित समुदायों के प्रतिनिधि शामिल हुए। इसमें सुपौल से अंजू मिश्रा, सहरसा के हरदिया बासा गांव की बेला देवी, पश्चिम चंपारण से देवी और योगेन्द्र नाथ शामिल हुए।

The Times of India, 4 September 2015

Dainik Jagaran, 4 September 2015

बाढ़ पर परिचर्चा में पीड़ित बने विशेषज्ञ

पटना। इंटरनेशनल सेंटर फॉर इंटीग्रेटेड माउंटेन डेवलपमेंट और दक्षिण बिहार केंद्रीय विवि (सीयूएसबी) ने गुरुवार को एक होटल में परिचर्चा कराई। विषय था द एगोनी ऑफ रिवर्स: फ्लड्स इन बिहार। इस राउंड टेबल चर्चा में बाढ़ से पीड़ित लोगों को विशेषज्ञ बनाया गया। बाढ़ पीड़ितों ने मौजूद लोगों के प्रश्नों का बखूबी जवाब दिया।

मौके पर आईसीआइएमओडी के समन्वयक डॉ. अंजल प्रकाश ने कहा कि आयोजन हिमालयन अडाप्टेशन, वाटर एंड रेसिलिएंस शोध पहल के तहत किया गया। इसका उद्देश्य बिहार में बार-बार आने वाली बाढ़ और उसका समाज में हाशिये पर रहने वाले लोगों पर पड़ने वाले प्रभाव के बारे में विस्तृत चर्चा करना था।

हिन्दुस्तान - 4 सितम्बर
2015

Hindustan, 4 September 2015



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