" Clean out the rivers, repair the river banks and keep the water to where it belongs … IN THE RIVER."

Empowered lives. Resilient nations.

Knowledge Network Center

on
Floods and Waterlogging for Disaster Risk Reduction and Climate Change Adaptation

Dear Friends,

Welcome to the first newsletter of the Knowledge Network Center on Floods and Waterlogging. This issue is focused on the launching workshop held at IIT Kanpur and the recommendations thereafter. We would be happy to receive suggestions and comments on this newsletter as well as contributions for the next edition. I also take this opportunity to wish all the readers a very happy new year 2014!

--- Rajiv Sinha

Launching Workshop

The Knowledge Network Centre was formally launched at IIT Kanpur on 22nd November, 2013. The participants of the launching workshop included all project partners and stakeholders from Bihar and Odisha States. The chief guest of the launching ceremony was **Mr. Anil Sinha**, Vice-Chairman of the Bihar State Disaster Management Authority (BSDMA), Patna and **Prof. S.C. Srivastava**, Deputy Director, IIT Kanpur presided over the function. Mr. Anil Sinha applauded the proposed activities of the centre and expressed hope that this will go a long way to provide a common platform for interaction among the academia, government and local communities to find sustainable solution to floods and waterlogging.

Professor Indranil Manna, Director, IIT Kanpur joined the workshop through Skype and assured the participants that IIT Kanpur will provide all possible help in running this centre. He commented that earth science is an important discipline for understanding the processes related to disasters and IIT Kanpur is committed to promote this discipline looking at its importance and societal relevance. Professor S.C. Srivastava, Deputy Director, IIT Kanpur launched a web-based knowledge portal (www.iitk.ac.in/waterwoes) which will host all important information on floods and waterlogging including case studies, literature and best management practices.

Workshop Sessions

The technical sessions of the workshop focused on consultations with all stakeholders from Bihar and Odisha to collect their needs and expectations from the knowledge Centre. They expressed hope that the knowledge centre will provide a platform to bring together policy managers and local communities together to find sustainable solutions. It was pointed out during the workshop that waterlogging is not even recognized as a disaster in the official list even though large areas of several states such as north Bihar and Odisha suffer from this problem. Most of these waterlogged areas are the result of unplanned development activities in the region particularly rail-road constructions, embankments and other structural interventions. It is also planned to set up small-scale pilot projects with the help of local commnities and local government. An important issue in this context is the climate change issue and understanding its impact on floods and waterlogging in different river basins. Most of the states are still not geared to tackle the climate change issue and there is very little preparedness to handle the modified hydrological regime due to climate change and the problems related to this. There is a strong need to put together all concerned departments to evolve a sustainable strategy for climate change adaptation.

Specific recommendations

- Embankment strategy for flood mitigation needs to be reassessed; process-based understanding of floods has to improve; physical, ecological and social context of floods need to be understood fully by policy managers.
- All information available on flood maps, hydrographs need to be passed on to the local governments and community; local communities have to be educated about flood awareness and strengthened to become resilient.
- One of the urgent needs is to develop strategy for continuous monitoring of the embankments against breaches for the safety of people living in the region; In addition, encroachment of floodplains by people has also increased the risk; community based groups may be encouraged for continuous observations along the embankment and use of modern technology such as mobile phones can prove to be very useful for such monitoring.
- Low cost housing in flood prone area depending upon the terrain, flood resistant housing using local available material, different economic groups, design parameters; OSDMA is in the process of construction of cyclone shelters; requires highest flood level data required.
- Waterlogging is not event considered as a disaster and there is an urgent need to campaign for declaring this as a disaster looking at the large areas in Bihar and Odisha which have been converted into waterlogged areas primarily due to anthropogenic interventions.
- Pissiculture development is one of the attractive options for converting the waterlogged areas from wasteland to livelihood source.
- Several paddy varieties are susceptible to waterlogging; this variety is getting extinct and needs to be promoted amongst the community.
- Unplanned road construction is one of the major reasons for aggravating the waterlogging problems. While road construction is considered to be one of the development indices but these structures have become the problem themselves; needs system planning; Techno-economic considerations need to be built in to demonstrate that the long-term damages to environment is much greater than short term gains.
- DoWR in Government of Odisha has framed a climate change action plan but they need a training program on capacity building in climate change activity. The Knowledge Center may coordinate the resource persons and training materials.
- Three important points emerged during the discussion: (a) policy planning needs to be done at the intellectual level; (b) linkages of different departments is important for disaster management, and (c) the scope of the environmental monitoring committee of every state needs to be enlarged to cover possible disasters due to developmental projects.

Proposed pilot projects

- Study of doab number-13, Baitaran-Salandi system in Mahanadi river basin for flooding, water logging and their remedial measures and adaptation strategies, and educating the community in the doab.
- Review of cropping pattern for diferent climatic zones of the Odisha as a part of climate change action plan study and adaptation measures.
- Study of Standard Project Storm (SPS) or Probable Maximum Precipitation (PMP) and their distribution for different projects in Odishain association with the Dam Safety Organisation for field implementation.
- LULC study in Puri district including a micro study due to climate change, floods and waterlogging with an emphasis to increaseawareness of people for floods and waterlogging through community learning
- Study of the BurhiGandakriverin north Bihar between Muzaffarpur and Samastipur which is continuously waterloggedto restore the natural condition with minimum intervention.
- Study of the area around Nirmali, north of Bhaptiahi along the eastern embankment to suggest measures to promote pissiculture in waterlogged areas.
- Revival of drainage through a check dam aroundItwaShivnagar village (Baheri, block Biraul), located in a low-lying, bowl shaped area to improve waterlogging and for developing fisheries.
- Study of a small tributary of Baghmati – Mansmarariver to revive a sluice gate at Chandalito regulate flow in the river.

Proposed Training Workshops

- Climate change impact on hydrological systems including hydrological modeling – for WRD departments of Bihar and Odisha (coordinator: Dr. Vimal Mishra, IIT Gandhinagar).
- Consultative workshop on flood embankments (non-structural flood management strategy) involving academia, government officials and local communities (Lead: BSDMA, Patna)

News

- SANDRP and VAMTAM have produced a 12 minutes film titled "*Flood Ravage and the Dams of Uttarakhand (Uttarakhand Flood Disaster - June 2013)* both in Hindi and English. DVD copies of the film are available from: MarthandBindanamarthand.bindana@gmail.com and SANDRP ht.sandrp@gmail.com.
- Flood activist ShashiShekhar is sitting on indefinite fast in Sitamarhi (Bihar) since December 10, 2013 to protest against unwanted & unjustified embankmentalong the Jheem river (part of Adhwara group of rivers in North Bihar) and for bringing Lakhandehiriver back to its path where it was flowing less than a decade back.
- OSDMA Awarded ICHL Award 2013 for outstanding action during Phailin management.

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