

Brief Report on National Workshop on “Enhancement of Irrigation Water Use Efficiency and Irrigation Water Productivity” conducted by NERIWALM at Tezpur during 21-22 January, 2016 sponsored by National Water Mission, MoWR, RD & GR, Govt. of India

SALIENT FEATURES:

(A) Objectives:

The National workshop was conducted involving all stakeholders associated with irrigation management during **21-22 January, 2016** in its campus at Tezpur. The programme was sponsored by National Water Mission, MoWR, RD & GR, Govt. of India. The workshop deliberated mainly on following issues:

- Challenges of Irrigation Management due to Climate Change
- PIM and Irrigation Act
- Database management on irrigation schemes and programme
- Cropping pattern and crop productivity in irrigation command

(B) Number of participants:

Participant’s representing all levels of stakeholders from NE states like Assam, Meghalaya, Manipur, Nagaland and also from Odisha took part in the workshop. Scientists and officials of organizations like CWC, CGWB, ICAR, Agricultural University, NERIWALM and departments of Irrigation/Water Resources, Agriculture, Soil Conservation etc. participated in the workshop. Dr. Joginder Singh, Technical Adviser, NWM, New Delhi was deliberated key note address and moderated the proceedings of the workshop. Altogether 50 Nos. of participants took part in the workshop out of which **women participation was 06 (six)** only as enclosed as **Annexure-IV**.

(C) Opening Session:

The workshop was inaugurated by Er. R K Sinha, Chief Engineer, B&BBO, Shillong, CWC, MoWR, RD & GR on 21st January, 2016 at 10.30 AM. Who also actively moderated the workshop. The workshop was started with presentation of the following papers on:

1. **“Irrigation Water Use Efficiency in some Major and Medium Irrigation Projects of NE Region”** by Dr. A C Debnath, Associate Professor (WRE), NERIWALM
2. **“Innovative Approaches for Water Resources Management for Sustaining Agricultural Productivity in NE Region of India”** by Dr. DJ Rajkhowa, Principal Scientist, ICAR, NER Hill Centre, Barapani, Shillong.
3. **“National Project on Aquifer Management”** by Dr. P Kalita, Superintending Hydrogeologist, CGWB, NER, MoWR, RD & GR, Govt. of India, Guwahati.
4. **“Enhancement of Crop Water Productivity through Proper Irrigation Management of Crops”** by Dr. Ramani Thakuria , Chief Scientist, AICRP on IWM, Assam Agricultural University, Jorhat.

(D) Recommendations:

Following are the recommendations adopted in the workshop:

1. The likely increase in global temperature leading to possible climate change is expected to have impact on irrigation management. It is projected to affect the distribution pattern of rainfall and subsequent variation in water resources availability in time and space. It deserves proper attention to address the likely issues that may thereby appear to affect the crop productivity. Formulating appropriate policy at government level to combat the situation is the need of the time to avoid likely disasters. At the same time creation of awareness among all stakeholders is to be carried out through water resources department, universities and different organizations including NGOs from Panchayat level onward.
2. Climatic parameters should invariably be measured regularly in all types of water resources projects and create a strong database for appropriate analysis from time to time.

3. PIM is still at very nascent stage in North Eastern Region (NER) of India. Presently, PIM acts are available for the state of Assam, Nagaland, Manipur and Meghalaya only. For all other NER states PIM Act should be taken up supported by legislation/act.
4. Distribution of water and collection of revenue thereof should be authorized and managed by the water user associations.
5. The institution of water user associations for all major-medium and minor irrigation projects shall be strengthened through provision of state legislations (PIM or cooperative Acts). Incentivisation of best performing water user associations in the area of water conservation/water management (state-wise/project-wise) may be formulated for implementation by the States.
6. Data base management in irrigation projects of NER is very poor. Unless volumetric water release data to the canals and farm fields are made available, efficient irrigation water use cannot be expected. Data regarding water release in canals through outlets to the farm fields of command area are not at all available in the region. Thus emphasis should essentially be given on proper data base creation and management by the State Governments/project authorities.
7. Micro irrigation can enhance water use efficiency up to 90%. This is suitable for hilly states of NER also, therefore should be promoted at large scale. Standardization of farmers' subsidy for implementation of micro irrigation, giving incentive to farmers for encouraging drip irrigation or other suitable means of micro/minor irrigation in a massive way in entire NER is the need of the time.
8. Implementation of micro and drip irrigation system for producing high value marketable crops in the small protected cultivation areas with micro finance shall be encouraged with modern storage and transportation system.
9. It is also necessary to link up banks/financial institution for financing of micro irrigation and connect with the reliable marketing system for timely disposal and recovery of cost of farm products.
10. Rejuvenation of irrigation projects/ irrespective of their size and location. Implementation of proper operation and maintenance of irrigation projects shall be ensured by providing adequate funds.
11. Planned replacement of open irrigation channels gradually by modern improved water distribution pipes is likely to enhance water use efficiency as well as reuse of agricultural land lost to the irrigation channels.
12. State level workshops/capacity building programme may be organised in all the NER states by State Governments involving all stakeholders.
13. Design suitable cropping pattern in advance to replace traditional cropping pattern to cope up the changing climate to maintain sustainable agricultural productivity and avoid any impending and undesirable agricultural disaster. Involvement of ICAR institutes/agriculture universities/research institutes/WALMIs shall be ensured in the selection of region-wise cropping pattern for increasing water productivity.
14. Irrigation Scheme (Lift/Minor/Traditional) for the benefits of uprooted or Project Affected Families (PAF) in the periphery of reservoir/nearby areas of upper catchments of basin shall be prepared by encouraging micro and drip irrigation.
15. Documentation of best practices in the area of improving water use efficiency and water productivity. A field visit/capacity building may be arranged by the concerned organization of the State Government for the benefit of water user associations, farmers and concerned Government officials.

(E) Feed back:

The feedback of the national workshop was taken from all the stakeholders participated in the workshop. The feedbacks of the following items were given by participants:

1. Subject of the workshop:

About 60% of the participants considered the subject of the workshop as excellent as there is issue of water scarcity and water use efficiency for water productivity while 40% considered it as very good.

2. Content of the program :

The content of the programme included technical presentations on 5 different topics and four major issues. There was also sharing of experiences by states representatives and WUAs. About 44% of the participants have given feedback that the content was relevant and need of the time while 46 % marked as very good and 10 % said the content as good only.

3. Write up provided in the workshop:

The write up provided to the participant containing guidelines of Government of India schemes on improving water use efficiency, Pradhan Mantri Krishi Sinchayee Yojana (PMKSY), irrigation water use efficiency in some major and medium irrigation projects in NE region, activities of the Central Ground Water Board, NE Region and enhancement of crop productivity through better irrigation management of crops. About 81% of the participants were in the opinion that the write up provided was useful and informative while 19 % said as relevant.

4. Other material provided:

The other materials folder, Note pad etc. provided in the workshop was replied by maximum of the participants as very good.

5. The extent to which expectations of participants from the workshop were met:

It was found that 60% responded as fully met their expectations while 40% responded as satisfactorily.

6. Any other comments (suggestions/problems to be addressed etc.):

Suggestions and comments were sought at the end of the workshop for future direction. It was suggested such workshop would definitely help the different stakeholders for proper management of irrigation water for enhancing agricultural productivity and thereby improvement of livelihood. More workshops on similar including awareness programme/training etc. for the benefit of all stakeholders may be organized in all the states of NE region for mass participation. Involvement of more representations of WUAs may also be ensured along with senior level officials from all the concerned state departments. It was suggested to activate the WUAs of all the irrigation projects and request for confirmation of their participation in planning and execution of irrigation projects. Some trainings for the stakeholders in formulation of District/block irrigation plan in the case of PMKSY for all NE states and crop based irrigation programme suitable to field preparations and farmers' choice may be formulated. To combat the water scarcity coupled with climate change, some participants suggested for policy decisions for harvesting /storing rainwater and recharging ground water aquifer.

Contd...(list of participants)

Annexure- IV

List of Participants of the National Workshop on “Enhancement of Irrigation Water Use Efficiency and Water Productivity ” during 21 – 22 January, 2016 organized by NERIWALM at Tezpur sponsored by National Water Mission (NWM), MoWR, RD & GR, Govt. of India.

1. Er. R K Sinha, Chief Engineer, B&BBO, CWC, Govt. of India, Shillong & Director, NERIWALM.
2. Dr. Joginder Singh, Adviser (Technical),NWM. MoWR, RD & GR, Govt. of India, New Delhi
3. Dr. B C Nath, Associate Professor (Agri), NERIWALM, Tezpur : Co-ordinator
4. Dr. D. J. Rajkhowa, Principal Scientist, ICAR, NE Hill Centre, Barapani, Shillong
5. Dr. R. K. Thakuria, Chief Scientist, AICRP on Water Management, Assam Agricultural University, Jorhat
6. Dr. P Kalita, Hydrogeologist, CGWB, NE, MoWR, RD & GR, Govt. of India, Guwahati (Phone: 9854274336)

Sl. No.	Name	Designation	State	Addresses
7	Dr. A C Debnath	Associate Professor (WRE),		NERIWALM, Tezpur
8	Dr. U M Hazarika	Assistant Professor		NERIWALM, Tezpur
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19	Sri Ajoy Kumar Sharma,	Assistant Professor & Deputy Director, i/c,		NERIWALM, Tezpur
20	Shri R. N. Das	Divisional Soil Conservation	Assam	Sonitpur Soil Conservation

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21	Shri A. R. Tariang	Junior Engineer (WA)	Meghalaya	O/O: Executive Engineer Water Resources, Ri-Bhoi Division, Nongpoh, Meghalaya, Phone: 943676602
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23	Sri Manoranjan Nath	Research Associate (Agri)		NERIWALM, Tezpur
24	Sri Ritu Thakur	Research Associate (Agri)		NERIWALM, Tezpur
25	Sri Ramesh Prasad	Assistant Librarian		NERIWALM, Tezpur
26	Shri Marbualang L. Lawai	Executive Engineer	Meghalaya	Water Resources Department, Williamnagar, East Garo Hills , Meghalaya Phone: 9863063818
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28	Shri Razouvolie Kelio	Executive Engineer, IFCD	Nagaland	O/o: Chief Engineer(I&FCD), Kohima, Nagaland Phone: 9412988688
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42	Mrs. A. D. Blah	Superintendent Engineer (WR)	Meghalaya	Department of Water Resources, Shillong, Meghalaya, Phone: 9436111187
43	Shri I Deben Singh	Assistant Engineer, IFCD,	Manipur	IFCD, Imphal, Manipur, Phone: 9856116836
44	Shri K. Kameshola Singh	Executive Engineer, IFCD	Manipur	IFCD, Imphal, Manipur, Phone: 8132829036
45	Shri Suman Prasad	JE (Project)		NERIWALM, Tezpur
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