

All India Seminar on “Achieving Water Security in Jharkhand”

03-04 September 2016

Report

Inaugural Session - 03 September 2016

The seminar opened with the address by Er. Shivanand Roy, Chairman, Jharkhand State Centre. He welcomed the Chief Guest Padmashree Sri Simon Oraon and hoped that his pioneering role in water harvesting and social forestry would inspire others active in water resources conservation. He welcomed distinguished guest speakers arriving from various parts of the country. Underlining WRD Jharkhand's commitment he informed the gathering of Govt. of Jharkhand's initiative in renovating all old irrigation schemes to reclaim lost irrigation potential under able leadership of Sri Chandra Prakash Chaudhary. Welcoming all delegates & Media persons he wished for an action plan to achieve water security in Jharkhand as the outcome of deliberations.

The seminar was inaugurated by lighting of lamp by Chief Guest Sri Simon Oraon. Speaking his heart out, the Chief Guest stressed on reviving traditional practices of water conservation that has been inherited from purkhas (ancestors). He emphasised on social forestry and organic farming which helps conserve soil moisture. His call to bring farmer to the centre stage of water security movement was very well appreciated by the audience. Calling farmer a God who works hard in this fields to feed increasing population, he asked for a Padmashree like honour for all farmers. Speaking on Govt. of Jharkhand's initiative of Dobha construction, he wanted the impenenters to ensure that each Dobha has enough catchment area.

In his theme address Er. Shardendu Narayan focused on providing water in sufficient quantity for entire state besides making available water for irrigation . Achieving water security through reduce, reuse and recycle were underlined to make

available enough water for mining and industrial sector. Security through scientific management was stressed by him in his address

In his keynote address Sri Rajesh K. Chaudhary wished for freedom for women from carrying pitchers on their heads over long distances. Making development, ecology, equity and governance co equal goals was preferred path to sustainability by participative management under able community leaders like Simon baba was underlined.

Souvenir of Seminar was released by Sri Simon Oraon.

After Vote of thanks by Sri Subrata Mukherjee, Immediate Past Hony. Secretary, IE(I), JSC the session concluded.

Technical Session-1- 03 September 2016

The seminar's theme on Water Security in Jharkhand was set by four distinguished speakers in this session, chaired by Sri Shivanand Roy, Chairman, IE(I), JSC.

Dr. I.S. Raju, Ex-Chief Engineer, WRD, Hyderabad set the agenda by speaking at length on conservation by conjunctive use. He emphasized on increasing Irrigation efficiency and bridging the gap between Irrigation Potential Created (IPC) and Irrigation Potential Utilized (IPU).

Sri Rajesh Kumar, Director, CWC proposed a strategy on achieving water security in Jharkhand. He proposed a comprehensive sociological and scientific intervention in achieving this goal.

Dr. Arunabha Majumdar spoke on challenges in public water supply. Dependence on groundwater for Rural Water Supply Schemes, maintaining water Quality of Surface water and ground water, Water treatment and community

involvement in implementation and making it sustainable were major points of his address.

Sri K.R. Gopinath of KRG Rain Water Foundation was the last speaker in the session. He showcased successfully implemented water harvesting projects.

In his concluding address Er. Shivanand Roy thanked the distinguished speakers and requested them to support the issue by guiding in future.

Cultural Programme on theme Water – 03 September 2016-09-09

After Technical Session-1 a cultural troupe – Goonje – Jharkhand Kala Kendra a recognised troupe by Song and Drama Division of Ministry of Information and Broadcasting performed local folk showing importance of water.

Technical Session-2 – 04 September 2016

Theme-Learning from successful Socio-Technical Practices in India

Chairperson-Sri Shardendu Narayan, Former Engineer in Chief, Drinking Water and Sanitation Department, Government of Jharkhand

Facilitator- Dr. Vishnu Rajgadia, Director, Jharkhand Foundation

Rapporteur-Sri Brajesh Mishra, Independence Journalist

In the First Session of Second Day, Advisor of Jharkhand Foundation and Convenor of the program Mr. Kallol Saha welcome the participants to a set of emerging Socio-Technical Practices with potential to contribute towards Water Security. He mentioned that these are isolated ‘islands of hope’ and that they shall be taken forward with appropriate policy framework. The session was facilitated by Dr. Vishnu Rajgadia, Director of Jharkhand Foundation and noted Right to Information Activist. Dr. Rajagadia welcomed the speakers assuring all possible support to take these initiatives ahead on behalf of Jharkhand Foundation. Speaker wise Highlight of the Session is provided below:

Water Security Planning under Neer Nirmalo Pariyojna in Khunti District: As Case Study

-By Dr. Nikita Sinha, CEO, Mimitta, Ranchi

In her presentation Dr. Sinha shared experience of planning Water Security in close coordination with a Gram Panchayet under Neer Nimal Pariyojna by Nimitta in Khunti District. She advocated greater involvement of community through Village Water and Sanitation committee to ease implementation and enhance sustainability of these projectgs. Her presentation emphasized about enhanced and continued communication with community with respect to issues such as Project Planning, water supply system, safe water supply and Benefits of tap water supply. There is usually trust deficit among the community for an implementation agency coming from outside. In order to minimize this gap and enhancing knowledgeNimitta took up a series of well planned IEC activities including Special Gram Sabha Meeting, Mobilizing SHGs around issues of local concern, hosting shows involving traditional and new generation Mass Media. She raised concern over periodical discontinuity in engagement for practical reasons,and considered involvement of well intended, transparent and willing Civil Society organization as Support Organization as an essential component of empowering Panchayets For technical and procedural demystification of Water Security concept.

Pressurized Pipe Irrigation Ready For Micro Irrigation

- By Sri Sabarna Roy, VP & Head, Business Development, Electro Steel Castings Limited

Electro steel Casting had been the gold sponsors for the event. In his speech, Sri Sabarna Roy presented a comparative analysis between Canal Based Irrigation System and Pressurized Pipe based Irrigation System. Some states like-Gujrat, Maharashtra, Madhya Pradesh, Karnataka and Odisha have switched over to Pressurized Pipe Irrigation from Canal based Irrigation System on following ground:

	Canal	Pipes
Conveyance Efficiency	60-70%	100%
Efficiency After 10-15 years	30-35%	90-95%
Time taken to travel Tail end	Few Days	Few Minutes
Irrigation Cycle	7-15 Days	Daily or Alternate
Duty per TMC	4000 Ha	8000-10000Ha
GCA vs ICA	60-70%	90-95%
Cost	2-2.5 Lakh/Ha	1.8-2.2 Lakh/Ha
		Economical ;& Efficient

As per his opinion pressurized Pipe based irrigation has the potential to improve Water use Efficiency, ensure equitable distribution of Water and reduce land acquisition problem. Farmers' acceptance is expected to be higher since even peasant at higher elevations gets water without losing land. It is advantageous for Administrative & technical professionals since projects can be completed within shorter span of time and can be managed easily by integrating with water Meter, Computerized monitoring System and SCADA Facilities.

Achieving Water Security through Watershed Management Program in Ramgarh district of Jharkhand

- By Sri B.S. Gupta, Executive Director, SUPPORT, Hazaribagh

SUPPORT Team comprised of Mr. Gupta, Hydro geology Expert, Mr. Pawan Sinha, Rural Management expert. Mr. Abhishek Shankar shared their experience of improving outcome of a Watershed project in Rabodh Area of Ramgarh using data obtained through a collaborative research work in association with Sir Ratan Tata Trust, AQUADAM, Pune and Jharkhand State Watershed Mission. The research

program enabled them to prepare Hydrograph and assess ground water flow and quality through monitoring of 28 Wells in the watershed. While maximum permissible limit of fluoride in water is 1 mg/litre, when SUPPORT initiated work in the mentioned area, concentration around 2 mg/litre was observed in their area of intervention. SUPPORT took up a detailed geological mapping exercise and planned new water harvesting structure to influence existing ground water regime. Within two sessions Fluoride content in water started coming down. While Watershed approach is the key to Water Security, specifically for irrigation, Carefully designed Research program before and after program implementation may help in effective program delivery and cost optimization. Such components of Research and Development should be made an integral part of the Water Resource Development program, he opined.

Repair, Restoration & Renovation – a strategic need for revival of Water Resources in Damodar Barakar Catchment

- By Dr. P. Kanti Basu, Director & Sri Sanjay Kumar, Executive Engineer, Soil Conservation Department, DVC

Mr. Sanjay Kumar shared that Damodar Valley Corporate (DVC) has been premier and pioneer for water security since the year 1948. He shared that DVC has a huge experience in Rain water Conservation. Soil Conservation Department (SCD) of DVC has constructed a number of major and minor water harvesting structures in its target areas. Presentation by Sri Sanjay Kumar provided an account of additional water storage capacity created by them linking it with outcomes in terms of enhanced Drinking, Irrigation and livelihood support. So far approximately 4410 lakh tones i.e. equivalent to 12487 lakh cum. Of top fertile soil has been arrested by DVC initiatives creating 17000 check dams. Due to construction of these structures, 22000 ha-m storage capacity has been created with an irrigation potential of around 65000 ha in Damodar-Barakar catchment. His presentation also provided a good overview of

harvesting structures and planning exercises necessary to take up regional to local level Water Security activities. There is a need for Renovation of these structure. A success story from Ichak, where huge amount of tomato is being cultivated and supplied by the farmers to outstation markets, provided an important insight about professional excellence to meet up social responsibility.

Drinking Water Security in Jharkhand: A status review and suggestion for improving Community Participation

- By Dr. V.S. Chauhan, State Consultant, UNICEF, Jharkhand

Dr. V.S. Chauhan, talked about the need to focus on three areas for water security related interventions. These areas are: Availability, Quality & Management. He stressed that quality and quantity should be matched and we should try to recharge what we use. Contaminants like Fluoride, Iron and Arsenic, found in the water, increasingly affecting human life across Jharkhand. Mr. Chauhan shared about quality check initiatives at state and district level but emphasized upon community-led quality check practice. He talked about UNICEF initiative in Water and stressed on availability of trained and qualified human Resource as one of the key challenges being faced by the Water sector initiatives in the State.

Achieving Water Security in Jharkhand: Socio-Technical Evidences and Integrative Framework for Action

- By Sri Kallol Saha, Adviser, Jharkhand Foundation, Jharkhand

Summarizing about 'Save water, Save Future' campaign being conducted by Jharkhand Foundation, Mr. Kallol, provided a seven principle based integrative framework to work towards water security. He proposed Formation of a Jharkhand State Water Security Task Force and planning and implementation of model Water Security Programs in one Ward of Urban Local Body or Gram Panchayets of Select Districts. Since Water is a Multi sector issue, a special cell maybe created with Chief

Ministers Office (CMO) under the Direct Guidance of Chief Secretary) to steer the program. Scientific planning of Water Demand, Supply and allocation for these identified areas shall be conducted involving leading academic Institutions in this field. The academic institutions shall suggest location of Harvesting and Delivery structure with proposed off take and recharge. Based on this, the task Force shall hire reputed Consulting Firms for Preparation of Detailed Project Report. The consulting firms shall work with a designated Non Government organization with long standing local presence. Fund shall be channelized through Concerned Urban or Rural Local Body. The Projects developed by the Task Force shall take into consideration Life Cycle Cost Approach and may consider Design, Build and Operate (DBO) contract to reputed Consultants under supervision of local Bodies. The task force shall put a network of Hydro-Geo-meteorological observatory for continuous Data generation and monitoring. Funds for the program should be drawn from National Climate Change Action Plan, Disaster Management Fund, MGNREGS, NRDWP-Sustainability and dedicated Funds allocated to State and central Ground Water Development program. Additionally, the task force shall be free to raise resources under Corporate Social Responsibility and International Non Profits.

After Presentation by the speakers, Mr. Shardendu Narayan, Chairman of this Session summed up main points shared by the speakers during the session. This session came to an end with presenting memento to all the speakers by Chairman of this session. He acknowledged that speakers have shared a number of good practices and talked about a few structural and institutional issues. As member of Technical Committee to suggest way forward he would consider these valuable inputs to work out an effective outcome. Sri Shivanand Roy, Chairman of Organizing Committee presented memento to Sri Shardendu Narayan, Dr. Vishnu Rajgadia, Kumar Premchand and Prajesh Mishra. After these formalities, this session came to its end.

Technical Session-3-04 September 2014

The case of Jharkhand; Evolving water management challenges in Urban local bodies and future course of action was facilitated by Indian Chamber of Commerce.

Sri Deepak Bhattacharya, Resident Director, Indian Chamber of Commerce was the facilitator of the session and the session was chaired by Dr. D.K. Singh, Project Director, JUIDCO.

There were in total six resource persons (distinguish speakers) who gave their deliberation on challenges that ULBs faces and how to overcome or mitigate the challenges.

Sri Subhasish Halder, from JUSCO, spoke about the success story of JUSCO and the measures, techniques & best practices adapted by them to provide efficient civic services to the people of Jamshedpur.

Sri Arvind Kumar, Ex-Principal Chief Conservator of Forest, at large spoke about the disappearing water bodies and its unlawful encroachment. He led emphasis on renovation, reviving of disappeared or lost water bodies. He also raised concern over the challenges of reviving of lost water bodies, beside adding that existing water bodies cannot be tampered indiscriminately.

Sri Kartik Seshan, from Arghyam, stressed on role of communities' participation in water security. He termed it as "Democratizing water security".

Through a case study of Bhuj, Hamir Shah Lake, he presented a paradigm of community based participation and its success. He emphasized that armed with proper skill, training, research & studies, a community can play a pivotal role in solving or mitigating the challenges of water crisis.

Local Govt. NGOs, academicians, right mechanism can counter the water management challenges more efficiently, provided that the participation should be robust & honest.

He also added that “the spring initiative” can be considered in state like Jharkhand as the state comprises of numerous springs & falls.

Sri Prabhu Prasad, Chief Manager, CMPDI, spoke about artificial recharge of water bodies or ground water through void coal mines. He suggested that abandoned mines, which store large volume of water can supplement rainwater to recharge groundwater, he also suggested that inflow of mines water can be directed to the aquifers. He gave number of examples of mines water bodies used in day to day life.

Dr. A.C. Pandey, Faculty, Central University spoke about the importance of mapping of water bodies, i.e. surface as well as underground through geospatial technologies. He suggested that it is one of the most authentic ways to measure groundwater level. He also suggested on proper mechanism to store rainwater, strategy and right data interpretation along with adaptation of recharge mechanism to ensure proper recharge of underground water.

Dr. D.K. Singh, Project Director, JUIDCO, Chairman of the session spoke about the activities taken by JUIDCO at large, seven sectors are being considered by JUIDCO and water is the most important of all. DPRs are being developed with the help of consultants.

He also spoke about the tapping of available resources, conservation and judicious utilization, such that the loss is minimal, to have proper monitoring mechanism and the importance of taking care of Non-revenue water by ULBs.

He added that this is right time to act, before it is too late. He also emphasised that desired result of water security can actually be achieved by participation of people from all walks of life.

Technical Session-4-04 September 2016

Developing Good practices to improve water utilization efficiency in Jharkhand through stakeholder participation was facilitated by Institution of Engineers (India). Er. N.K. Roy, Ex-Engineer-in-Chief, WRD, GoJ chaired the session and Sri Rajesh K. Chaudhary, EE, WRD, GoJ was the facilitator. Sri Onkarnath, AE, WRD, GoJ was the Rapporteur.

There were five distinguished speakers. The first speaker to take the podium was Sri R.G. Bhat, Ex-Chief Engineer and Additional Secretary of Govt. of Gujarat. He spoke about bulk transfer of water through large size pipes for water scarce regions and outlined a systematic approach for preparing a feasibility report for this task.

Sri S. Rao, Superintending Engineer, Govt. of Gujarat dwelt upon salinity ingress in coastal areas of Saurashtra and outlined the synergic efforts made by water resources, Agriculture, Forest and Revenue departments of Govt. of Gujarat with support from NGOs and farmers to control it.

Sri H.J. Patel, Superintending Engineer, CDO, Gujarat spoke about implementation of check dam projects and Gully plugging for water harvesting emphasizing their primary goal of recharging ground water reserves. He advocated similar use of check dams for Jharkhand.

Sri H. Nagwami, Environmental Engineer from MECON Ltd. emphasized on resource conservation, utilization efficiency and adoption of water saving technologies.

Sri S. Mitra Majumder of SAIL was the last to be called to podium. He suggested using 'Water Footprint' as a tool for bench marking.

Chairman of the session, Sri N.K. Roy summarized the sessions proceedings at the end. He hoped for development of an actionable plan post seminar. He spoke at length about similar projects being implemented in Jharkhand.

Valedictory Session

The Valedictory Session Chairman Sri A.K. Saxena summed up the entire proceedings and informed the house that the three member committee headed by him that includes Sri N.K. Roy, Ex-Engineer-in-Chief, WRD and Sri Shardendu Narayan will prepare a recommendation on the basis of deliberations in the seminar.

Finally Sri ManikMukhopadhyay proposed Vote of Thanks.