



National Conference on

LANDSCAPE MANAGEMENT FOR PREVENTING FLOOD AND RESERVOIR SEDIMENTATION (LMPFRS-2022)

22 - 24 September, 2022

Venue : Birsa Agricultural University, Ranchi (Jharkhand)

TECHNICAL PROGRAMME



भूमि संसाधन विभाग
Department of
Land Resources



जल शक्ति मंत्रालय
MINISTRY OF
JAL SHAKTI



मृदा संरक्षण

National Conference on
LANDSCAPE MANAGEMENT FOR PREVENTING FLOOD AND RESERVOIR
SEDIMENTATION (LMPFRS-2022)

22 - 24 September, 2022

Organized by

Indian Association of Soil and Water Conservationists (IASWC), Dehradun

at

Birsa Agricultural University, Ranchi (Jharkhand)

TECHNICAL PROGRAMME

DAY 1 : 22nd September, 2022

8:00 – 9:00 **Breakfast**

9:00 – 10:00 **Registration of Delegates**

10:00 – 12:00 **TECHNICAL SESSION 1 : DR K.G. TEJWANI MEMORIAL SPECIAL SESSION**

Theme 1 : Land Degradation: Land Degradation Neutrality (LDN):- Research and Policies

Chairman : Dr A.K. Sikka, Country Representative, IWMI, India

Co-Chairman : Dr D.K. Shahi, Chief Scientist & Chairman, BAU, Ranchi

Convener : Dr Pramod Jha, Principal Scientist, ICAR-IISS, Bhopal

LEAD PAPERS

1. **Land Degradation Neutrality: Old Problem with New Urgency (15 min)**
D. Mandal, ICAR-National Fellow & Principal Scientist, ICAR-IISWC, Dehradun
2. **Managing Soil Health: Concept and Practices (15 min)**
D.K. Shahi, Chief Scientist & Chairman, BAU, Ranchi
3. **Improving Soil Health and Soil Resilience for Reversing Land Degradation (15 min)**
N.K. Lenka, Principal Scientist, ICAR-IISS, Bhopal

ORAL PRESENTATION (5 min each)

1. **In-situ rainwater harvesting in bamboo for the rehabilitation of degraded lands in the himalayas foothills**
R. Kaushal, Ambrish Kumar, D. Mandal, J.M.S. Tomar and D.V. Singh
2. **Potential of watershed management technology for land degradation neutrality in NEH region of India**
B.K. Sethy, S.K. Routray, P. Panigrahi, P.K. Panda, H.K. Dash, S.K. Jena, R.K. Jena and R.K. Panda
3. **Evaluation of pedotransfer function and infiltration models for different locations of Kalyanpur block, Bihar**
Rima Das, Ambrish Kumar & Manish Kumar
4. **Quantification of leaching loss of nutrients under different nutrient management practices in eastern plateau and hill region of India**
S.K. Naik, S.S. Mali & A.K. Singh
5. **Soil long-term nutrient supply options: strategies to improve soil carbon quantities, qualities, and stock in the rice-wheat cropping system**
Sunita Kumari Meena, B.S. Dwivedi, M.C. Meena, S.P. Datta, V.K. Singh, Debashish Chakraborty, Abir Dey, Vijay Singh Meena

6. **Evaluation of agri-horticulture land use systems for sustainable natural resources management under degraded eco-system of south-eastern Rajasthan**
H.R. Meena, S. Kala, G.L. Meena, Shakir Ali, Ashok Kumar, Kuldeep Kumar & I. Rashmi
7. **Potential of different agro-industrial wastes for sustainable soil management and reclamation of soil acidity in the north-west Himalayan region**
Trisha Roy, Uday Mandal, Devideen Yadav & Debashis Mandal

12.00 – 12.30 **Tea**

12:30 – 14:30 **INAUGURAL SESSION AND IASWC AWARD CEREMONY**

14.30-15.30 **Lunch**

15:30 – 17.30 **CONCURRENT SESSION: Theme 2 & Theme 3**

Theme 2 : Catchment Treatment: Flood Prevention, Sedimentation, Community Participation

Chairman : Shri Sanjay Kumar, Director (Soil Conservation), DVC, Hazaribag
Co-Chairman : Dr Ajay Kumar, Director Soil Conservation, Jharkhand
Convener : Dr Anuranjan, PD, ATMA, Hazaribag

LEAD PAPER

1. **Role of DVC in Soil and Water Conservation in Eastern States (15 min)**
Shri Sanjay Kumar, Director (Soil Conservation), DVC, Hazaribag
2. **Digital Soil Mapping for Effective Catchment Treatment (15 min)**
Dr Priyabrata Santra, Principal Scientist, ICAR-CAZRI, Jodhpur
3. **Problems and Prospects of Catchment Treatment of Water Bodies in Aravali Hills of India (15 min)**
Dr (Mrs) Susama Sudhishri, Principal Scientist, WTC, IARI, New Delhi

ORAL PRESENTATION (5 min each)

1. **Runoff and soil loss responses of prominent vegetable planting systems of eastern plateau and hill region of India**
S.S. Mali, S.K. Naik, P.K. Sarkar & A.K. Singh
2. **Flood characterisation and inundation pattern mapping using multi-temporal SAR data and global surface water explorer layers for Bihar**
Vikas Kumar Rai & Ravish Chandra
3. **Impact assessment of catchment treatments on agriculture production and livelihood of farmers in semi-arid region of Tamil Nadu**
S.M. Vanitha, Suresh Kumar, H.C. Hombe Gowda, K. Kannan, O.P.S. Khola, D.V. Singh, V. Selvi & Murugesan
4. **Flood in north Bihar and its impact on cropland**
Akram Ahmed, Rohan Kumar Raman, A.K. Singh, P.S. Brahmanand & Ashutosh Upadhyaya
5. **Rainfall probability analysis for crop planning in Balangir block of Balangir district of Mahanadi command area of Odisha, India**
C.R. Subudhi, Nibedita Jena, Sukanya Suryavanshi & R. Subudhi
6. **Identification of suitable sites for check dam using remote sensing and GIS tool of a hilly river basin**
Uday Mandal, Sagorika Chakraborty, A.K. Nema & Gopal Kumar
7. **Hydrologic and sedimentologic behaviour of conservation tillage based agro-geo-textiles in sloping croplands of Indian himalayan region**
Raman Jeet Singh, Gopal Kumar, N.K. Sharma, J.S. Deshwal & M. Madhu
8. **Catchment area treatment for resource conservation, increased crop productivity and economic upliftment of stakeholders in the humid and semi-arid zones in Karnataka**
A. Raizada, Suresh Kumar, H. Biswas, M. Prabhavathi & K.K. Reddy
9. **Streamflow trend analysis of river basins flowing in the east coast region of India**
Sujeet Desai, Bappa Das & Sreekanth G.B.

CONCURRENT SESSION: Theme 2 & Theme 3

Theme 3: Enhancing Ecosystems Services: Sustainable Land Management; Agroforestry; C-Sequestration & Water Productivity

Chairman : Dr R.K. Panda, Director, ICAR-IWMM, Bhubaneswar, Odisha

Co-Chairman : Dr B.N. Singh, CEO, Bihar Watershed Development Agency, Jharkhand

Convener : Dr. Biswajit Mondal, Principal Scientist, ICAR-NRRI, Cuttack

LEAD PAPER

1. **Integrated Water Management for Sustainable Agriculture Production (15 min)**
R.K. Panda, Director, ICAR-IWMM, Bhubaneswar, Odisha
2. **Organic Farming : An Instrument for Change in Agro-Ecology of Watershed (15 min)**
B.N. Singh, CEO, Bihar Watershed Development Agency, Jharkhand
3. **Carbon Sequestration and Stabilization in Agricultural Soils Challenges and Opportunities (15 min)**
Pramod Jha, Principal Scientist, ICAR-IISS, Bhopal

ORAL PRESENTATION (5 min each)

1. **Payment to ecosystem services for sustainable crop plan: are farmers eligible & willing-to-accept?**
Biswajit Mondal, Smitashree Das, Ankit Anand, B.S. Satapathy, Asit Kumar Pradhan, Smurtikanta Rout & Sandhyarani Dalal
2. **Sivlo-aromatic system for enhancing ecosystem services in Mahi ravines of Central Gujarat**
Dinesh Jinger, Rajesh Kaushal, D. Dinesh, Gaurav Singh & A.K. Singh
3. **Cover crops for ecosystem services and climate resilient farming**
K. Kannan, V. Kasthuri Thilagam, P. Raja, D. Dinesh & O.P.S. Khola
4. **Development and evaluation of goat-based integrated farming system for small and marginal farmers of north Bihar**
P.K. Bharti, S.K. Purbey, A.K. Singh, Ravi Kumar & S.K. Samal
5. **Efficacy of roots and shoots of Lemon grass for reducing soil erosion and runoff in Himalayas**
Sushma Tamta & Akhilesh Kumar
6. **Traditional agroforestry systems of hot semi-arid zone of Rajasthan: tree species variability and biomass carbon stock**
Dipak Kumar Gupta, A.K. Shukla, Keerthika A., Praveen Kumar, Pankaj Kumar Sinha and Krishna Prakash
7. **Integrated nutrient management in BNH + (Cowpea-Berseem) cropping system for sustainable fodder production and soil nutrients distribution in semi-arid region**
Manoj Choudhary, Mukesh Choudhary, M.M. Das, R. Srinivasan & S.K. Rai
8. **Impact and effectiveness of "watershed development project" on socio-economic status of watershed area**
Chanchala Priya, Bankatesh Narayan Singh and Satyendra Kumar
9. **Water resource development and diversification of land use system for livelihood enhancement of tribal farmers in mid-Himalayan region**
J.M.S. Tomar

17:30 - 18:00

Tea

18:30 - 20:00

Cultural Programme

20.00 - 21.00

Dinner

DAY 2 : 23rd September, 2022

08:00 – 09:00 **Breakfast**

09.10 – 9.30 **BRIEF INAUGURAL OF THE SPECIAL SESSION ON SOIL CONSERVATION, WATERSHED AND SPRINGSHEDED MANAGEMENT**

09:30 – 11:00 **SPECIAL SESSION PART : 1**

Chairman : Dr M. Madhu, Director, ICAR-IISWC, Dehradun

Co-Chairman : Dr N.K. Sharma, Former Head, ICAR-IISWC, Dehradun

Convener : Sh Rajesh Kumar, Director, Watershed Management, DoLR, Gol

LEAD PAPER

1. **Land Degradation in India and Restorative Technologies Watershed Approach (45 min)**

M. Madhu, Director, ICAR-IISWC, Dehradun

2. **Springshed Management Through Scientific Approach (45 min)**

Sumit Sen, Assistant Professor, IIT, Roorkee

11:00 – 11:30 **Tea**

11:30 – 13.00 **CONCURRENT SESSION: Special Session Part 1 Continue & Theme 4
Special Session: LEAD PAPERS**

1. **Bamboo Based Intervention for Restoration of Degraded Land for Soil and Water Conservation (30 min)**

R. Kaushal, Principal Scientist, ICAR-IISWC, Dehradun

2. **Experience and Learning from Ayalur Watershed Tamil Nadu (30 min)**

O.P.S. Kholia, Head, ICAR-IISWC, RC, Chandigarh and K. Kannan, i/c Head, ICAR-IISWC, RC, Ooty

3. **Sustaining Resource Productivity and Enhancing Farmers Income at Catchment Command Scale in Eastern India (30 min)**

Anil K. Srivastva, Ex-Director, ICAR-VPKAS, Almora

Concurrent Session: Theme 4: Climate Smart Land Management: Community Approaches

Chairman : Dr Ashutosh Upadhyaya, Director (A), ICAR-RC for ER, Patna

Co-Chairman : Dr Pradip Dey, Principal Scientist, ICAR-IISS, Bhopal

Convener : Brij Lal Lakaria, Principal Scientist, ICAR-IISS, Bhopal

LEAD PAPERS

1. **Irrigation Water Pricing : How it may Lead to Effective Water Management in Agriculture (15 min)**

Ashutosh Upadhyaya, Director (A), ICAR-Research Complex for ER, Patna

2. **Mainstreaming Traditional Knowledge of Soil and Water Conservation vis-a-vis Combating Climate Change in Plateau Regions of India: Perspective and Policy Dimension (15 min)**

Pradip Dey, Principal Scientist, ICAR-IISS, Bhopal

3. **Scope of Biochar in Enhancing Soil Health and Mitigating Climate Change (15 min)**

Brij Lal Lakaria, Principal Scientist, ICAR-IISS, Bhopal

ORAL PRESENTATION (5 min each)

1. **Cost benefit analysis study of projects of underground pipeline system in Punjab state based on random control trials**

O.P.S. Kholia, Pankaj Panwar, Pradeep Dogra, Sharmistha Pal, O.P. Premi, Manoj Kumar, Nyonand Yadav and Basudeo

ORAL PRESENTATION (5 min each)

1. **Study the effect of sediment transport in channel network of multigrade bed load sediment**
Sanny Kumar, Prasanth Reddy Haimahgari & H.P. Singh
2. **Ravine vulnerability index for identifying potential zones of reclamation in mahi ravine of Gujarat**
Gaurav Singh, D. Dinesh, Dinesh Jinger & A.K. Singh
3. **Development of indigenous rainfall energy-intensity relationship using velocity and drop size frequency of one minute resolution spectrum data, western himalayas, India**
Sadikul Islam, Uday Mandal, Gopal Kumar, Akshay Dheeraj, M. Madhu & M Muruganandam
4. **Viable greening technique for management of stone mine spoil areas in Rajasthan**
S. Kala, B.L. Mina, Ashok Kumar, H.R. Meena, Shakir Ali, I. Rashmi & G.K. Sharma
5. **Impact of land use systems on soil loss, runoff, soil aggregation and aggregate associated carbon in degraded Chambal ravine ecosystem of Western India**
G.L. Meena, B.K. Sethy, R.K. Singh, H.R. Meena, Shakir Ali & Ashok Kumar
6. **Recovery of soil organic carbon during forest fallow following shifting cultivation in eastern ghats and north east hill region of India**
H.C. Hombe Gowda, M. Madhu, Praveen Jakhar & S.M. Vanitha
7. **Land shaping for development of horti-based integrated farming system for low-lying areas of eastern India**
S.K. Purbey, K.G. Mandal, Ravi Kumar, S.K. Samal, Shreya Nivesh & Vikas Paradkar

15.30 - 16.00

Tea

16.00 - 17.30

SPECIAL SESSION: Part 2 Continue

LEAD PAPERS

1. **Model Watershed Planning and Implementation Experiences from Odisha (45 min)**
H.C. Hombe Gowda, i/c Head, ICAR-IISWC, RC, Koraput
2. **Open forum discussion and Q&A session (45 min)**
All Speakers / Invitees

CONCURRENT SESSION: Theme 7: Water Resource Management: Water Harvesting, Water Use Efficiency and Aquatic Production System

Chairman : Dr K. Kumar, Former Director, NRC, Litchi
Co-Chairman : Dr Vishal Nath, Officer on Special Duty, ICAR-IARI, Jharkhand
Convener : Dr Ashok Kumar, i/c Head, ICAR-IISWC, RC, Kota

LEAD PAPERS

1. **Sustainable Land Management Perspective in Flood-Prone and Waterlogged Ecosystems (15 min)**
K.G. Mandal, Director, ICAR-MGIFRI, Bihar
2. **Actualization Production Potential of Flood Prone Area through Different Aquaculture System (15 min)**
Shivendra Kumar, Associate Professor-cum-Senior Scientist, College of Fisheries, Muzaffarpur

ORAL PRESENTATION (5 min each)

1. **Comparative study of mini-sprinkler and other irrigation methods on water economy, yield and water use efficiency of wheat in Bihar**
S.P. Gupta, Arti Kumari, I.B. Bhagat & Ravish Chandra
2. **Effect of fertigation and plastic mulch on tomato yield in middle indo-gangetic plain**
S.K. Nirala, R. Suresh, I.B. Bhagat & Ambrish Kumar

2. **Sustainable ground water management through innovative strategies in north Bihar**
Ravish Chandra, Ambrish Kumar, S.K. Jain & S.P. Gupta
3. **Experiences and promotion of micro-irrigation system in India**
Indu Bhushan Bhagat, Ambrish Kumar, R. Suresh, S.P. Gupta & S.K. Nirala
4. **Scope of location specific rice-fish farming system in waterlogged ecosystems for ensuring food and nutrition security to farmers in north Bihar**
A.K. Singh, Ravi Kumar, S.K. Samal, Shreya Nivesh & K.G. Mandal
5. **Performance of wheat (*Triticum aestivum* L.) as influenced by crop residue retention and nutrient levels under conservation**
Bharti Parmar, Varsha Gupta, A.K. Vishwakarma, Pramod Jha, A.K. Biswas, K.M. Hati & Ganesh Malgaya
6. **Performance of wood biochar on rice wheat productivity in a vertisol of central India**
Brij Lal Lakaria, Pramod Jha, A.K. Biswas, A.K. Vishwakarma, Vassanda Coumar, Jitender Kumar, Avinash Dass, Aqeel Rizvi, S.K. Dhyani & A.K. Patra
7. **Quantification of field water balance components under pearl millet based agro-ecosystem in western Rajasthan using eddy covariance system**
Priyabrata Santra, Hari Mohan Meena, Dharm Veer Singh, Rajesh Kumar Kakani, Ramesh Solanki, Abhishek Chakraborty, Rakesh & Apurba Bera
8. **Potentiality of terraced low land (*Jhola* land) rice production system in mitigating climatic aberration in Koraput district, Odisha**
Ch. Jyotiprava Dash, P.P. Adhikary, M. Madhu, U.K. Maurya, H.C.H. Gowda & J. Lenka

13.00 – 14.00

Lunch

14.00 – 15.30

Special Session: Part 2

- Chairman** : Dr Ambrish Kumar, Dean, RPCAU, Pusa
Co-Chairman : Dr K. Kannan, i/c Head, ICAR-IISWC, RC, Ooty
Convener : Dr Gopal Kumar, Principal Scientist, ICAR-IISWC, Dehradun

Special Session: LEAD PAPERS

1. **Management of Natural Resources of Eastern Regions of India using Innovative Technologies with Water Positive Concepts (45 min)**
Ambrish Kumar, Dean, RPCAU, Pusa
2. **Springshed and Watershed Management Issues and Challenges under Climate Change Condition (45 min)**
Gopal Kumar, Principal Scientist, ICAR-IISWC, Dehradun

CONCURRENT SESSION: Theme 6: Land Rehabilitation: Mine Spoil; Ravines; Mass Erosion

- Chairman** : Dr P.R. Ojasvi, Head (H&E), ICAR-IISWC, Dehradun
Co-Chairman : Dr S. Manivanan, Principal Scientist, ICAR-IISWC, RC, Ooty
Convener : Dr S. Kala, Scientist, ICAR-IISWC, Kota

LEAD PAPER

1. **Mass Soil Erosion Fluxes and Need for Landscape – Scale Planning (15 min)**
P.R. Ojasvi, Head (H&E), ICAR-IISWC, Dehradun
2. **Efficient Use of Geo-Textiles for Mass Erosion Control and Slope Stabilization (15 min)**
S. Manivanan, Principal Scientist, ICAR-IISWC, RC, Ooty
3. **Ravine Land Management : Experiences and Economics (15 min)**
Ashok Kumar, i/c Head, ICAR-IISWC, RC, Kota

3. **Constructed wetland: a water treatment technology with opportunities for diverse ecosystem services and circular economy**
Rama Pal, I. Rashmi, M. Muruganandam & M. Madhu
4. **Comparative study of recirculating aquaculture system and cage aquaculture system on growth and survival of labeo rohita fingerlings**
Shivendra Kumar & P.P. Srivastava
5. **Drought analysis with different indices for the Sakri river basin of Bihar and Jharkhand**
Pawan Jeet, Anil Kumar Singh, Ajay Kumar, Arti Kumari & Ashutosh Upadhyaya
6. **Increase the profitability and productivity under zero energy drip irrigation system**
Deepak Singh & P.R. Ojasvi
7. **Rejuvenation of low yielding bore wells with runoff using recharge filter technology in semi-arid region of Karnataka**
B.S. Naik, Ravi Dupdal & S.L. Patil
8. **Data extraction from satellite image using a developed tool and validation over Samastipur district of Bihar**
Sudarshan Prasad, Ambrish Kumar, S.K. Jain, S.P. Gupta, R. Chandra & V.K. Rai
9. **Assessment of varying water demand under different scenarios using water evaluation and planning system (WEAP) model in Bundelkhand region of Madhya Pradesh**
Shreya Nivesh, Pradeep Singh Kashyap & Ajay Kumar Singh
10. **Waterspread mapping using water ratio index (WRI) and flood map for Samstipur, Bihar**
Alok Kumar, Manish Kumar, Mukesh Yadav, S.P. Gupta & Ambrish Kumar

17.30 – 20:00

POSTER SESSION 1

1. **Soil nutrient changes in waterlogged areas of north Bihar**
S.K. Samal, A.K. Singh, Koushik Banerjee, Vikash Paradkar & K.G. Mandal
2. **Nutrient status and deterioration indices of soil in relation to land use changes under sub-humid southern plains and Aravalli hills of Rajasthan**
R.B. Meena, S.C. Meena, K.K. Sharama & G.L. Meena
3. **Climate smart land management: a way forward**
Mukesh Kumar, Bankatesh Narayan Singh & R.K. Verma
4. **Development of drainage plan for waterlogged areas of Darbhanga district using remote sensing and GIS approach**
Sudhakar Raj D., Indu Bhushan Bhagat, Ambrish Kumar, R. Suresh, S.P. Gupta & S.K. Nirala
5. **Standardization of weed management strategy for chickpea (*Cicer Arietinum* L.) under different levels of crop residue retention in conservation agriculture**
Ganesh Malgaya, A.K. Vishwakarma, R.H. Wanjari, Pramod Jha, A.K. Biswas, K.M. Hati, S.S. Kushwah & Bharti Parmar
6. **Development and validation of STCR fertilizer prescribed equations of wheat under acidic soil of Jharkhand**
Shashi Bhushan Kumar, Bhupendra Kumar & D.K. Shahi
7. **Impact of direct seeded rice on agricultural productivity in Bihar**
Sushma Tamta, Ram Pal & Abhey Ranjan
8. **Effect of long-term nutrient management practices on soil physical properties under rice-wheat cropping system**
Pragya Kurmi, H.K. Rai & A.K. Upadhyaya

20:00 – 22:00

Dinner

DAY 3 : 24th September, 2022

08:00 – 09:00

Breakfast

9:30 – 11:00

POSTER SESSION 2

1. **Enhancing properties of biochar in the field under sloping terrain and intensive rainfall conditions**
Daniel Prakash Kushwaha & Anil Kumar
2. **Quantification of surface energy balance components during reproductive stage of pearl millet crop in western Rajasthan through eddy covariance system**
H.M. Meena, P. Santra, D.V. Singh, R.K. Kakani, R.K. Solanki & Abhishek Chakraborty
3. **Innovative interventions for uplands to enhance farm profit and water productivity**
P.K. Panda, S. Pradhan, P. Sahu, S.K. Rautray & R.K. Panda
4. **Rainfall probability analysis for crop planning in Sirohi district of Rajasthan, India**
Rageswari Subudhi, Mahesh Kothari & Ch Rajendra Subudhi
5. **Hydrological simulation of Subernarekha river basin using SWAT model**
Pratibha Kumari & Ajai Singh
6. **Factors affecting watershed management projects in rainfed agro-ecosystem in north western Himalayan region**
Rajesh Bishnoi, Madan Singh, Bankey Bihari & Indu Rawat
9. **Assessment of the watershed development and management practices on natural resources and socio-economic condition**
Chanchala Priya and Bankatesh Narayan Singh
7. **Revegetating mine soils with different tree species influence molecular characteristics of soil organic matter**
Preeti Singh, A.K Ghosh & Santosh Kumar

POSTER SESSION 3

1. **Performance of bentonite based nano scale zero valent iron for remediation of arsenic contaminated water- sorption isotherm study**
Md Basit Raza, Siba P. Datta, Mandira Barman & Debasis Golui
2. **Growth and yield parameters as affected by irrigation scheduling and zinc fertilization in wheat**
Lawate Pramod Ulhas & S.K. Prasad
3. **Study of evaporation rate of pusa farm (Bihar) using recent data for irrigation scheduling and crop planning**
Sonu Kumar, R.K. Sahu & Ambrish Kumar
4. **Water requirement for different crops in north central plateau zone of Odisha**
Anita Mohanty, C.R. Subudhi & R. Subudhi
5. **An Intelligent system for fish pond water quality monitoring under water-congested ecosystems in eastern India**
Vikas Paradkar, Ravi Kumar, Shreya Nivesh & S.K. Purbey
6. **Integrated fish-duck farming system for floodplain in wetland ecosystems: a sustainable way for increasing water use efficiency and productivity**
Ravi Kumar, Monobrullah, Md. & Samal, S.K.
7. **Impact of IWMP projects on sustainable development of watershed elements**
Satyendra Kumar, Bankatesh Narayan Singh and Chanchala Priya

10:30 – 11:15

CONCURRENT SESSION: General discussion / views of delegates and recommendation generation

11:15 – 11:30

Tea

11:30 – 13:00

Valedictory Session

13:00 – 14:30

Lunch

14:00 – 17:00

Field Visit & Departure



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