

## One Day-Brainstorming Workshop on

# IT-based Real Time Monitoring of Soil, Water and Atmospheric Variables for Sustainable Surface and Groundwater Management

### Overview

Real time monitoring of hydro-meteorological and soil moisture-related variables is necessary to understand the nexus among soil-water-vegetation under climate change scenarios. Application of Information Technology for accurate real time distributed monitoring and spatio-temporal analysis at different scales is of paramount importance for developing user-friendly solutions like web-based apps and decision support systems for efficient water resources management, induced recharge, flood/drought forecasting and adaptation.

Incidentally, there is an on-going multi-institutional project funded by the ITRA, Ministry of Information Technology titled **“Improving Groundwater Levels and Quality through Enhanced Water Use Efficiency in Eastern Indian Agriculture”**. Under this project, accurate monitoring and estimation of water balance parameters at field scale is done using state-of-the-art techniques. Decision Support Systems and mobile-based App are being developed for sustainable surface and groundwater development and management for decision-making by individual beneficiaries and policy makers.

### Scope

The major objective of this brainstorming workshop is sensitization of the young researchers and future water professionals by the acclaimed national and international experts for understanding critical issues pertaining to water resources management at grass root level and developing solutions using the state-of-the-art techniques. The other objective of the workshop is to disseminate the findings of the ongoing multi-institutional project funded by the Ministry of Electronics and Information Technology, Govt. of India, among the academic organizations and water professionals for sustainable water resources management and consequent induced recharge. The future directions of the project will be decided through brainstorming with the experts and feedback from the participants.

## Broad Topics

- Coupling climate and land surface processes for improving water resources management
- Effect of global warming on the local hydro-meteorology and climate variability
- Enhancing water use efficiency through effective rainwater management and micro-irrigation techniques
- IT-based real time monitoring of hydro-meteorological variables for drought monitoring and vulnerability assessment
- Mobile App-based Decision Support Systems for sustainable groundwater Development and management

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|-------------------------|--|
| <b>Resource Persons</b> | <ul style="list-style-type: none"><li>▪ <b>Prof. R. K. Panda</b>, Professor &amp; Head, School of Infrastructure IIT Bhubaneswar</li><li>▪ <b>Prof. Dev Niyogi</b>, Professor, Department of Earth and Atmospheric Science, Purdue University, USA</li><li>▪ <b>Prof. U. C. Mohanty</b>, Emeritus Professor, School of Earth, Ocean and Climate Sciences, IIT Bhubaneswar</li><li>▪ <b>Prof. K. N. Tiwari</b>, Professor, Agricultural &amp; Food Engineering Department, IIT Kharagpur</li><li>▪ <b>Dr. P. K. Mishra</b>, Director, Indian Institute of Soil and Water Conservation, ICAR, Dehradun</li><li>▪ <b>Dr. M. Ramadas</b>, Assistant Professor, School of Infrastructure, IIT Bhubaneswar</li><li>▪ <b>Prof. B. Das</b>, Senior Professor, KIIT University, Bhubaneswar</li><li>▪ <b>Dr. B. C. Sahoo</b>, Associate Professor, College of Agricultural Engineering and Technology, Orissa University of Agriculture &amp; Technology, Bhubaneswar</li></ul> |
| <b>Who can attend?</b>  | <ul style="list-style-type: none"><li>▪ Practicing Engineers, Researchers and Professionals of civil, agricultural, hydrologic, water resources, and environmental engineering including R&amp;D laboratories</li><li>▪ Students at all levels and Faculty Members from reputed academic institutions</li></ul>  |
| <b>Date</b>             | <b>25<sup>th</sup> March 2017</b>  |
| <b>Registration</b>     | <b>Registration is Free.</b><br>Last date of registration: March 18, 2017<br>Lunch and local transport will be provided  |

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**25<sup>th</sup> March 2017**

Organized by



**School of Infrastructure  
IIT Bhubaneswar  
Odisha, India**

**REGISTRATION FORM**

Name (in BLOCK LETTERS): ..... (Female/Male)

Designation: .....

Organization: .....

Address: .....

E-mail: ..... Phone (Office): .....

Phone (Mobile):.....

Accommodation required: YES / NO (please tick)

*(If YES, please write to coordinator for details. Limited accommodation is available on payment basis in Institute guest house/hostels)*

Signature of Applicant

Date:.....

Signature of Head of the Department

Date:.....

Completed forms should be emailed to:  
[meenu@iitbbs.ac.in](mailto:meenu@iitbbs.ac.in) or [sj13@iitbbs.ac.in](mailto:sj13@iitbbs.ac.in)