

## Agenda

### Panel Discussion on: Low-cost bio-treatment technologies for improving sanitation and water reuse for irrigation in India

**Date: June 16, 2016**

**Time: 13:30 – 15:40**

**Place: Casuarina Hall, India Habitat Center (IHC), New Delhi**

**Concept Note:** Water pollution from untreated municipal wastewater is an enormous problem in India with grave implications for public health as well as environmental quality. Even the largest cities are struggling to put in place expensive wastewater treatment systems and associated infrastructure. It is implausible that such expensive infrastructure can contribute meaningfully to the water pollution and sanitation challenge in smaller towns and rural areas in the foreseeable future. Low-cost, decentralized, wetland-based bio-treatment systems have strong potential to dramatically improve the water quality and sanitation problems facing much of India. Scientific research has shown that well designed bio-treatment systems have good performance in terms of removing pollutants from municipal wastewater. Moreover, they are low-cost, quick to deploy, and easy to operate and maintain, making them ideal for India's sanitation context. They can be used extensively in rural areas, small towns, peri-urban areas of large cities, industrial townships or institutional campuses, as well as for certain types of industries such as agro-food/beverage. In addition to contributing towards improved public health and water quality, this approach has additional potential co-benefits such as employment generation and availability of treated wastewater for irrigation that can increase farm productivity and incomes. However, these potential benefits can only be realized if such bio-treatment systems are deployed widely. This session will be devoted to a discussion on the prospects of large scale deployment of bio-treatment systems including potential challenges, sources of finance, manpower, appropriate government interventions and civil society support. These approaches have the potential to contribute significantly to the goal of important government programs such as the Swachh Bharat Mission as well as our commitment to SDGs.

#### Questions this session will seek to answer:

- Which bio-treatment technologies are the right choice under particular circumstances?
- How effective are small scale bio-based wastewater treatments at meeting needs of decentralized sanitation and water pollution control?
- What are the costs associated with planning, deployment, operation and maintenance?
- What are the manpower and training (and expert supervision) requirements?
- What sources of financing can be harnessed to deploy these technologies?
- What government policies and programs (existing or new) would be the most appropriate vehicles?
- What other institutional support would be needed, for e.g., extension/outreach?
- How could civil society best support such an initiative?
- What other potential barriers could be faced and how can they be overcome?

#### Expected outcomes:

- Clarity on low cost bio-treatment technologies for improving sanitation and irrigation
- Recommendations on way forward for adoption of these technologies

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## Session Structure:

- 13:30- 13:40 Welcome and introduction: Deepthi Prasad (EIRC)
- 13:40-14:30 Summary of wastewater bio-treatment technologies developed by W4C Indian and European partners highlighting their applicability
- Brief report from EU consortium Antonio Lopez
- Brief report from ICRISAT Mukund D Patil
- Brief report from UAS-Dharwad Manjunath
- Brief report from NEERI Prashant Thawle
- Discussions /Q & A
- 14:30-15:30 **Panel Discussion on prospects for adoption of low-cost bio-treatment of wastewater in India**
- Moderator: Raghu Babu N. (GIZ)
- Panelists:
- Ministry of Environment, Forest and Climate Change Manoranjan Hota
  - MGNREGA, Ministry of Rural Development Dhruva Kumar Singh
  - International Water Management Institute Priyanie Amerasinghe
  - Centre for Science & Environment Chandra Bhushan
  - Rural WASH, WaterAid Siddhartha Das
  - GIZ- India Dirk Walther
- 15:00- 15:30 Moderated Discussions
- 15:30- 15:40 Conclusions and way forward: Dr. Suhas Wani
- Tea/coffee