

## Workshop

### Sustainable water treatment technologies: achievements, perspectives, constraints

10 - 11 December 2012, Girona, Spain

Workshop is organized by GREEN-TECH project. **GREEN-TECH- From grey to green. How to improve the sustainability of wastewater and drinking water treatment** is a networking project funded by New INDIGO Initiative for the Development and Integration of Indian and European research. The consortium is composed of partners: Catalan Institute for Water Research (ICRA) from Girona, Spain (coordinator), CIEMAT- Plataforma Solar de Almería, Spain, University of Antwerp, Belgium and two partners from India: Jadavpur University and The Energy and Resources Institute (TERI).

#### Objectives and topics

The objective of the workshop is to provide a networking platform to share knowledge and experiences in sustainable water treatment technologies.

Workshop will focus on the following topics:

- i. Application of sustainable wastewater treatment systems including natural treatment systems such as lagoons/constructed wetlands, anaerobic digesters such as USAB, hybrid reactor and soil aquifer treatment technologies (artificial aquifer recharge).
- ii. Improvements in existing conventional or advanced treatments (not considered sustainable at the moment) in order to reduce the energy usage, pollutant discharge and chemical feed. Examples are membrane technologies (MBR, RO, NF), advanced oxidation processes (AOP) where the options to improve the sustainability are based on energy saving (through the application of renewable energy sources such as solar or wind power and optimizing such devices by means of knowledge-based control system or on process intensification through increased plant compactness (reduced volumes) and modular solutions available for point and non-point sources.
- iii. Application of technologies that permit harvesting of resources, such as nutrients (nitrogen and phosphorus recovery), organic chemicals and energy (biogas) from wastewater.

#### Call for abstracts and participation

Participation is **open** and **free of charge** for all interested. Participants should cover their travel and accommodation expenses in Girona.

The meeting will include invited talks and contributed key note lectures. Scientist and professionals working in the field of water treatment and management are invited to present their work and experiences. Abstracts (in English) for oral (max 4 pages) and poster presentations (1 page) should be submitted to the Secretariat before November 10th, 2012.

#### Program – confirmed talks

- Chiranjib Bhattacharjee, Jadavpur University, Kolkata, India: *Implementation of zero-effluent concept using membrane technology: A step towards environmental sustainability*
- Ignasi Rodriguez-Roda, ICRA-Catalan Institute for Water Research, Girona, Spain: *MBR energy optimization*
- Maria Kennedy, UNESCO-IHE Institute for Water Education, Delft, The Netherlands: *Perspectives and challenges for desalination in developing countries*
- Sixto Malato, Plataforma Solar de Almería, Spain: *Advanced Technologies Based on Solar Energy for Wastewater Treatment*
- Pilar Fernández Ibáñez, Plataforma Solar de Almería, Spain: *Solar reactors for water disinfection*
- Sudip Chakraborty, Jadavpur University, Kolkata, India: *Photocatalytic oxidation of pharmaceutical waste present in waste water: a kinetic study of reaction mechanism*
- Ludo Diels, University of Antwerp, Belgium: *The Sewage<sup>+</sup>-concept*
- Ivet Ferrer, UPC-Universitat Politècnica de Catalunya, Barcelona, Spain: *Biogas production in wastewater treatment systems*
- Diederik Rousseau - University College West Flanders, Kortrijk, Belgium: *Coping with space restrictions in constructed wetland application*
- Joan García, UPC-Universitat Politècnica de Catalunya, Barcelona, Spain: *Constructed wetlands and algal cultures as a tool for sustainability in the water sector*
- Maria Teresa Alarcón Herrera - Advanced Materials Research Center (CIMAV), Chihuahua, México: *Artificial Treatment Wetlands: An Alternative to Remove Arsenic from Water*
- Esther Llorens, ICRA-Catalan Institute for Water Research, Girona: *Modelling of constructed wetlands treating polluted waters*

#### Workshop secretariat

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**Venue**

Workshop will be held at:

**ICRA – Catalan Institute for Water Research**

Parc Científic i Tecnològic de la UdG, c/Emili Grahit, 101, 17003 Girona, Spain



There will be daily bus-shuttle from the center of Girona (Hotel Carlemany) to ICRA at the starting and ending hours of the workshop.

Refreshment and lunch will be organized for all the participants.



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**REGISTRATION FORM**

**To be returned to Dr M. Petrovic before November 10th, 2012**

(Fax: + 34 972 18 32 48, E-mail: mpetrovic@icra.cat)

Name/First Name: \_\_\_\_\_

Title: \_\_\_\_\_

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Signature: \_\_\_\_\_