IRISH NATIONAL HYDROLOGY CONFERENCE 2014
Tuesday, 11th November 2014

INTRODUCTION

The joint National Committees of the International Hydrological Programme and the International Commission on Irrigation and Drainage have the pleasure of inviting you to participate in the 15th annual Irish National Hydrology Conference to be held on Tuesday 11th November 2014 in the Tullamore Court Hotel. The conference provides a unique forum for attendees to share policy developments, research results, and practical solutions to engineering hydrology issues. This year's conference encompasses a wide range of developments in the fields of surface water and groundwater hydrology.

MAIN TOPICS

This year's conference will examine the challenges facing how we manage our water resources in the coming years. There are a number of European Union Directives that set out the approach for managing individual water resources, but there are still varying opinions as to how these resources can be all managed in an integrated and cohesive manner.

The conference will address, through papers / posters, issues relating to integrated water management under the following headings:

- Integrated Water Resources Management
- Flood Risk Management
- Water Quality Management
- Water Resources and Catchment Management

Full details are given in the conference programme on the following page.

ORGANISERS

International Hydrological Programme (IHP)
The UNESCO international scientific co-operative programme in hydrology and water resources, the IHP, was established to act as a catalyst to promote co-operation and research in the management of water resources, an issue which had been identified as a significant limiting factor for harmonious development in many regions and countries of the world.

International Commission on Irrigation and Drainage (ICID)
The mission of the ICID is to stimulate and promote the development of the management of water and land resources for irrigation, drainage, flood control and river training applications, including research and development and capacity building.

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SESSION 1: INTEGRATED WATER RESOURCE MANAGEMENT

01 – Water Framework Directive implementation and Integrated Catchment Management
Donal Daly, Marie Archbold and Jenny Deakin (EPA)……..*3*

02 – Where has groundwater gone from Northern Ireland
Paul Wilson (BGS)……*18*

SESSION 2: FLOOD RISK MANAGEMENT

03 – Modelling Extreme Flood Events due to Rivers, Tides and Storm Surges
Joanne Comer, Stephen Nash and Michael Hartnett (NUI Galway)…….....*26*

04 – Practical Appraisal Techniques for Valuing Adaptive Capacity in Flood Risk Management
Jonathan Cooper, Rachel Brisley (JBA)……*28*

05 – The Flood Studies Update for Ireland – The new FSU methodologies and Web Portal and future directions
Oliver Nicholson and Dr. Fasil Gebre (OPW)……*41*

SESSION 3: WATER QUALITY

06 – Assessment of urban pressures and SUDS design: the estimation of stormwater suspended solids and particle size distributions from a residential catchment
David Morgan, Paul Johnston, Laurence Gill (TCD), P.Collins (HRD Technologies), K. Osei (Hydro International)……*52*

07 - ANSWER (Agricultural Need for Sustainable Willow Effluent Recycling): An EU funded project to encourage the use of SRC willow for bioremediation.
Christopher Johnston, Alistair R. McCracken, Linda Walsh (Sustainable Agri-Food Sciences Division, Agri-Food & Biosciences Institute)……*66*

SESSION 4: WATER RESOURCES AND CATCHMENT MANAGEMENT

08 – Statistical analysis of river low flows in support of water resources management planning in the Shannon International River Basin District
Ahmed Nasr (DIT) and Michael Bruen (UCD)……*78*

09 – The River Tolka Flood Study 10 years on - A case study on how catchment based flood risk management works
Rosemarie Lawlor (OPW), Jean Hobbs (RPS), John Murphy (OPW), Gerard O'Connell (DCC) …… *90*