

**39<sup>th</sup> Congress of the International Association of Hydrogeologists (IAH)  
“Confronting Global Change”, Niagara Falls, Canada, September 16-21, 2012.**

The IAH Commission on Groundwater and Climate Change and UNESCO-IHP GRAPHIC organized a special session titled: *Groundwater and climate change: linkages and adaptation*.

The session featured the following 25 oral and 6 poster presentations:

**Groundwater and climate: challenges and opportunities (invited)**

Richard Taylor

**Vulnerability of global groundwater resources to climate variability and change**

Jason Gurdak

**Distribution and temporal variations in palaeo-groundwater on the Australian continent**

Dioni Cendón

**Paleowater in Cambrian-Vendian (Ediacaran) aquifer of Baltic Basin – isotopic and Geochemical evolution since Late Pleistocene**

Rein Vaikmäe

**Groundwater resources management under climate change conditions-Integration of geological and groundwater flow models**

Samrit Luoma

**Linking climate change and groundwater: impact of climate model uncertainty on predicted recharge**

Marie-Audray Ouellet

**Hydrogeological modeling of climate change impact for a small-scale groundwater reservoir**

Christian Möck

**Simulated Impacts of Downscaled Climate Scenarios on Groundwater Temperature and Discharge in Small Unconfined Aquifers**

Barret Kurylyk

**The relationship between groundwater recharge and climate variability – an example from the Australian northern tropical savannah**

Ross Brodie

**Drought, Climate Change and Groundwater Levels in Southwestern Ontario**

Scott MacRitchie

**Buffering Capacity of Groundwater for Droughts: Examples from US High Plains and Central Valley** (invited)  
Bridget Scanlon

**Characterising groundwater resilience to climate change in Africa**  
Alan MacDonald

**Adaptation and mitigation to climate change: demonstration of methodology evolved in UNESCO-IHP GWES project for sustaining groundwater resources during droughts**  
Balbir Sukhija

**Groundwater and irrigation from quantitative and qualitative perspectives with case study in the North China Plain** (invited)  
Jianyao Chen

**Assessment of Agricultural Return Flows Under Changing Climate and Crop Water Management**  
Timothy Green

**From global depletion to sustainable use of mega-scale groundwater systems** (invited)  
Tom Gleeson

**Climate change impacts on surface water – groundwater interactions in south-western Australia**  
Don McFarlane

**Dynamic Bayesian networks for the assessment of Climate Change impacts on overexploited aquifers systems**  
Jose-Luis Molina

**Past and future contribution of global groundwater depletion to sea-level rise** (invited)  
Rens van Beek

**Coastal groundwater vulnerability due to global environmental change** (invited)  
Makoto Taniguchi

**Consequences and uncertainties of climate change for three Mediterranean aquifers and dependent ecosystems**  
Tibor Stigter

**Anthropogenic and climate change effect on seawater intrusion in Dar Es Salaam coastal aquifer**  
Matteo Rossi

**Coastal Aquifer Management: Climate Change or Too Many Faucets? (invited)**

Grant Ferguson

**Impacts of sea level rise and increasing fresh water demand on sustainable groundwater management**

Hasan Yazicigil

**Development of a GIS Based Approach for the Assessment of Relative Seawater Intrusion Vulnerability in the Province of Nova Scotia, Canada**

Gavin Kennedy

**Impact of projected climate change on groundwater recharge in Tailan basin, China (poster)**

Emmanuel Appiah-Adjei

**Effect of Climate Change on Shallow Groundwater in the Hebei Plain (poster)**

Jincui Wang

**U-series dating of travertine deposits: implications for paleoclimate and paleohydrogeology of the western margin of the Great Artesian Basin (poster)**

Stacey Priestley

**Impacts of climate changes on karst dissolution processes (poster)**

Joana Oliveira

**Evaluation of Water Resources using the Model Mike BASIN® (poster)**

Joana Oliveira

**Assessing the Impact of Climate Change on Groundwater in a Highly-Urbanized Catchment (poster)**

Rene Therrien