The 1st UNESCO IHP-VI workshop on; “Integrated Urban Water Management in Cold Climate” was arranged by the Department of hydraulic and environmental engineering, NTNU, 3-4 November 2005 at NTNU i Trondheim, Norway. Co-arrangers were City of Trondheim and Tallinn technical university, Estonia. 43 participants from 11 countries participated and exchanged experiences during two days.

The workshop was a part of UNESCO IHP-VI Programme: “Focal Area 3.5; Urban areas and rural settlements Project 5 - Integrated urban water modeling and management under specific climates: Humid Tropics (HT), Arid and Semi-Arid (ASA) and Cold Climates (CC).” http://www.unesco.org/water/ihp/ihp_six.shtml

The workshop was opened by the Mayor of Trondheim, Rita Ottervik, who underlined that the goal of the United Nations was to achieve satisfactory water supply and sanitary condition for everybody, also for those people that lived in the cold part of the Earth. Floods are common and also a problem in Trondheim. Wilf V. Gilbrich from UNESCO was glad for that the workshop was arranged in Norway and in Trondheim and expressed his happiness for all the young participants. It was promising for the future.

Håkon Thaulow at NIVA, Norway had an introduction lecture on the challenges within the water sector in Europe and extended it to the whole world with focus on cold climate. Cedo Maksimovic gave an overview on how UNESCO works on these challenges, John Sansalone gave an overview on the situation in USA with special focus on pollution in snow and the environmental challenges. Sveinn T. Thorolfsson gave an overview on the special technical challenges in cold climate regions.

Five groups worked with different themes: “Sewer networks and transport, Drinking water supply and treatment, Model development and data collection, Stormwater transport and melt processes, and Low Impact Development and natural treatment systems”.

City of Trondheim arranged an excursion to VIVA to the water treatment plant and the Ladehammeren wastewater treatment plant and to the reopening of the Ila stream in Trondheim and to Risvollan urban hydrological measuring station.

The conclusion from the workshop states that there are needs for research on and development in several issues within urban water management in cold climate. There is also a large need for technology transfer from less developed countries and also on the capacity building in
many of the underdeveloped countries. So education and training becomes an important issue. In
cold climate it is very important is to collect data on the water supply and wastewater – stormwater
network. Collection of urban hydrological data in cold climate, as done at Risvollan in Trondheim,
Norway is also important. The LID (Low Impact Development) concept for stormwater management
for water quality and quantity control is now to be introduced in cold climate regions. Research and
development has started in the cold climate regions in US and some practical projects conducted.
The ongoing research at Risvollan on bioretention in cold climate is therefore very useful and in the
front in the world.

The workshop recommended that UNESCO promoted a preparation of a book on the theme in the
workshop. Content for the book was prepared and Sveinn T. Thorolfsson, NTNU, Norway and Cedo
Maksimovic, Imperial College i London, UK was pointed out as the main editors. Everybody at the
workshop was invited to contribute to the book.

They who wish to participate in the book project may contact Sveinn T. Thorolfsson, e-mail;
Sveinn.thorolfsson@ntnu.no and Cedo Maksimovic, e-mail: c.maksimovic@imperial.ac.uk

Before the workshop it was prepared a book named, book of abstracts, with the title:”Integrated
urban water management in cold climate”. Editors, Tone Muthanna and Sveinn T. Thorolfsson.

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Sveinn T. Thorolfsson