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Water in urban areas: Building sustainable cities in light of climate change

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Abstract

Climate change will impact urban areas and challenge business-as-usual practices for management of the technical water cycle. Denmark was the first country to develop and implement technical guidelines for management of increased precipitation extremes in urban drainage design and analysis. The guidelines have been widely applied, but it is also recognized, that the optimum implementation calls for collaboration between a wide range of professionals, including urban planners, urban ecologists, economists, social behavior scientists, urban drainage specialists and many others.

This was a starting point of the formulation of a strategic initiative in the form of a partnership, that will strengthen ties between all stakeholders in the urban water sector; from knowledge institutions to building owners, public and private partners, constructors as well as NGOs. The strategic partnership has received a 25 MDKK grant from the Danish Agency for Science, Technology and Innovation to cover expenses in a five year starting phase.

The objective of the Partnership is to strengthen the necessary transformation of the water infrastructure of Danish cities from climate-sensitive and CO₂ heavy-duty units to climatically robust units with a small CO₂ emission. The Partnership will ensure that this transformation process is organised in such a way that the required public investments at the same time generates increased value in the form of new products and services to promote the parallel global transformation process. The efforts will be concentrated on general activities in the nature of soft network, as well as specific innovation efforts spun from this, eventually developing into a hard network.

A number of activities are initiated to support enhanced collaboration between the participants and increase both public and private innovation, including:

- NetGroup marketplace for matchmaking, development, test and documentation of ideas developed within the frames of the Partnership as well as communication of external experiences and results.
- Workshops, summer schools, etc. to promote idea generation, concept development and soft networks.
- Branding of Danish competences and lighthouse projects within water technology and climate adaptation towards Danish and international interested parties.
- International research trips and fact-finding missions.

In principle all 60+ partners can take part in all of the above activities. However, the largest part of the partnership is to develop, test, and implement new knowledge, both in terms of technologies, methods and means in smaller groups. Currently four initiatives have been selected for knowledge generation: testing of semi-permeable surfaces, testing of infiltration capacity of constructed soils, knowledge transfer of local infiltration measures, and introduction of risk management in water supply. During 2010 an additional 6-8 projects are expected to be started.

The presentation will focus on the challenges and possible outcomes of such partnerships as well as introducing the first results of the partnership.