

# Significant interest in sustainable infrastructure planning

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Topics: Wastewater | Drinking Water | Society

**Over a hundred guests took up the invitation to attend the closing event of the NFP 61 SWIP (Long-term Planning of Sustainable Water Infrastructure) on 23 January 2014. The two people in charge of the project, Judit Lienert from the Environmental Social Sciences department, and Max Maurer from the department of Urban Water Management, were delighted at this very positive response.**

## Gaps between research and practice

In her welcoming speech, Eawag Director Janet Hering stressed the importance of events such as this: "There is often a gap between research and practical application – and this gap can only be closed through intensive collaboration with practitioners". The aim of the event was, then, to present the most significant methods and results emerging from the SWIP project to an audience of professionals from the water sector, and to gather feedback as to how to approach the translation of these into practical applications.

## No additional uncertainties in spite of climate change

In planning and maintaining network infrastructure systems, the decision-makers have to deal with a large number of uncertainties. It is all the more welcome, therefore, when one of those uncertainty factors is no longer an issue. "Climate change is happening – there is no doubt about that – but our investigations were unable to establish that there would be an impact over the next forty years on urban water management in the areas studied", explained Max Maurer in his opening remarks.

## Hit parade of alternative options

Planners have to compare different variables with each other (such as the costs of construction, maintenance and security of supply) in order to come up with optimal solutions. Judit Lienert is convinced that MCDA (multiple-criteria decision analysis) is a useful tool in the search for an optimal solution. On the basis of interviews with key players, the goals, along with their respective weightings and the value functions associated with them, are established. The integration of objective data with the preferences of the stakeholders in this way enables a hit parade of alternative options to be developed.

## "Too time-consuming, too expensive!"

Some of the participants at the event were evidently sceptical of this method. A number of them had taken part in these time-consuming interviews and the bottom line verdict was that it was too time-consuming and too expensive. The representatives from the private sector were in some doubt as to whether they could make this tool appealing to their clients. However, it was also apparent that MCDA could provide protection from unwelcome surprises where extensive and controversial projects were concerned. There are, of course, many hurdles to be overcome if MCDA is ever to be employed in urban water management – and at the moment there are simply not enough people with the relevant training to do so.

## Complex model for use in practice

The feedback on Christoph Egger's presentation was less sceptical. He presented two statistical models for analysing the condition of drinking and waste water pipes. Since the existing records on the mains and sewer networks are often only very patchy, with gaps in the historical data, the models can help with estimating depreciation, future procurement costs and the uncertainties associated with these. Max Maurer demonstrated his conviction that the model can be suited to practical application in spite of a complex substructure, as long as there is close cooperation with private engineering firms.

As expected, the gap spoken about by Janet Hering between research and practice was evident in all the discussions. Whilst the tools proposed by the researchers do fulfil their objectives, if they are to find practical application, they must be made simpler to use, and their benefits to users and clients must be clearly visible. Alongside taking further steps in the direction of practicable methods, future publications in German relating to the completed project will also play their part.

Further information

[on National Fund Project 61: Long-term Planning of Sustainable Water Infrastructure SWIP](#)

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