

Wetskills-Romania 2015: overview of study cases

Team 1: Valorisation Programme Delta – Technical University of Delft

Temporary Embankments in Danube Delta

Almost yearly Romania suffers from floods at various impacts levels. The national governments are responsible for the river systems, on a more regional level responsibility for flood risk prevention is with the municipality. At the Dutch Flood Proof Holland test- and demonstration facility various measures against floods on a local level are tested. The challenge for the team is to address the opportunities for each measure in the Romanian context; what will work and for which types of municipality (geographically), is there any relevance of the available techniques in the Romanian context and what types of measures are really necessary? All in all; can the Dutch temporary embankments make the difference during Romanian floods and what's the strategy the Dutch companies should follow to make business while protecting against floods?

Team 2: H₂O-job / National Water Traineeship

Capacity development for young water professionals in an European perspective

Knowledge and skills exchange in Europe is one of the major policies. For the water sector this is in extremes, because water does not have (country) borders. So exchange of information, communication and cultural understanding is crucial. Specific programs for young water professionals could contribute to a better training of skills. In the Netherlands the National Water Traineeship (NWT) started five years ago. The aim of the NWT is to give fresh graduates a kick-start in the Dutch water sector. The program consists of two main components, namely a personal leadership program and a broad outlook on the Dutch water sector. The NWT cooperates with the broad water sector. Due this combination trainees are able to bring their professional knowledge in relation to their working activities in the broader sector, which should lead to a more effectiveness in their work. The challenge is if there is a need for a European water traineeship and how could this be implemented on a self-supportive way?

Team 3: Energy- and resource factory Dutch Water Authorities & Waterboard De Dommel

Resource recovery from ash after incineration of wastewater sludge

The dried sludge from the sewage treatment plants (STP) is mostly burned in the Netherlands. Nowadays this STP sludge is considered as a potential source for energy, minerals, like phosphorus, and metals. An economical sustainable way to recover phosphorus from the sewage sludge is burning the sludge and recover phosphorus from the ashes. Beside phosphorus, STP sludge contains other materials, which end up in the ash after incineration of the sewage sludge, metals such as Zn, Cu, K. The challenge for the team is to come up with possible method for recovering elements like Zn, Cu, K (etc.) from the ash of burned sewage sludge on a technical and economical way.

Team 4: Valorisation Programme Delta – Technical University of Delft

Multipurpose dams in flash flood prone areas for agricultural benefit

Romania is prone to flash floods occurring from the higher grounds in the country. The flash floods occur during the whole year. Meanwhile droughts in the summer periods can occur in the delta areas. Romania constructed many small and large dams to manage the water, and the flash floods. Are there applicable solutions thinkable where flashflood measures (i.e. dams), which also yield agriculture in, dry periods? The team is challenged to create an design for flash flood measures with existing water retaining functions and some possible structures that can be developed either mobile/temporary and of permanent character in the case of floods, benefiting agriculture in the dryer periods.