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In the Flow – Issue 7

## Rising to the occasion

March 16, 2015

### EEA and Norway Grants partners with REC to provide two Hungarian municipalities with water management assistance

More than 50 people met at the *Oreg Halasz (Old Fisherman)* restaurant in Tat, Hungary, on Thursday, March 5, 2015, to obtain detailed information about the opening of a water management project that has been three years in the making. The aim of the project is to address water-related concerns in two adjacent Hungarian municipalities about 60 kilometres from Budapest. Tat and Tokod are settlements on the Danube bend that in recent years have come under increasing threat from severe flooding and high groundwater levels. While these events are not unheard of in the region, their increasing frequency and severity is widely attributed to climate change.



EEA and Norway Grants has approved a programme developed by the REC to provide financial assistance to the two municipalities and to help solve their water-related concerns. The kick-off meeting for "Elaborating a Concept for Precipitation Management and Adapting to Climate Change in the Settlements of Tat and Tokod" (EEA-C3-8) featured a number of formal, informal and technical presentations from project partners and dignitaries, and continued in the afternoon with a meeting at Tat City Hall to discuss opportunities for bilateral cooperation.

### Inspiration and background

"I'm sure that climate change is having an impact on everyday life", Tat mayor Lajos Turi said during his kick-off meeting welcome speech. "We live in a time of modern flooding, and some have been predicting that the coming years will bring biblical-scale flooding disasters. With massive changes in precipitation throughout Hungary, winters are more humid and summers are drier. While our local people have worked hard to make our towns 100 percent floodproof, our biggest problems are from drainage and groundwater. We have high hopes, however, that this EEA programme will help us to explore and manage these issues."

Following the mayor, Norwegian Ambassador to Hungary H.E. Tove Sarstein recognised the "need to adapt human and natural systems to climate change", citing the UN Panel's 2013 opinion that warming is "extremely likely". "There are two main responses," Sarstein explained, "mitigation and adaptation. Mitigation addresses root causes, while adaption seeks to limit damage and risk caused by climate change. Both are necessary, even if emissions are dramatically reduced. As part of a binding agreement with the European Union, Hungary will receive EUR 7 million towards achieving common climate and climate policy goals. And within this budget a further EUR 800,000 has been allocated for this project. And I must say that I am very happy with the local flavour of this project."

The REC's executive director Marta Szigeti Bonifert spoke next about the organisation's long history of "cooperation with experts, partners and stakeholders, both internationally and locally, to create sustainable systems". Szigeti Bonifert added that the REC, over the course of its 25-year history, has been involved in more than 1,000 projects valued at roughly EUR 200 million, and stressed the importance of "working at local level to solve problems".

The last speaker, prior to a series of technical presentations, was Karl Kerner from the Norwegian Directorate for Civil Protection, the donor programme partner. Kerner and his colleague at the directorate, Karen Tone Lie, have been contributing for three years to programme development, making several visits in the meantime to the REC for consultations. "The climate in Norway is lousy", Kerner told a chuckling audience. "We have everything except earthquakes and volcanos. And, according to climate scientists, everything is going to get worse. Now, we've all been adapting to climate and weather for 10,000 years, but the concept of climate change of human origin is new, and the big difference is in the necessity of planning, which involves a future dimension that, given human nature, is not easy." Kerner added that his agency has been working since 2007 between various ministries and local-level personnel, and that the best projects have been "those on which we work with municipalities for adaptation. Mitigation is fine at national level, but adaption is different. Planning and strategies are important, but real-life projects with tangible measurements are best. We're happy to see a project focusing on actual measures, and we wish you the best of luck."

### Experience, expertise and information

"Projects implemented in the area over the past couple of years have targeted flood protection", explained Magdolna Toth Tanai, director of the Water Directorate of Tata Area. "In 2002 we had the largest ever flash flood, but citizens worked together to protect the houses. A flood-protection dike bypassing the town from the north was built over the next few years, and flood gates protect the flooding of four streams that intersect the dike, and bridges were built." A second building phase got under way in 2012, but was put on hold when record flooding occurred the following year. When protection efforts resumed in 2014, more metres of dikes were built, while drainage ditches were dug at the same time to bear away large amounts of rainfall. "Other large building efforts were carried out in cooperation with other municipalities", the director concluded.

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Other organisations are involved in the act, as well. The REC, elaborating the programme and acting as fund operator, prescribed a number of activities, including the production and dissemination of training materials, conducting trainings for rural and urban local governments on a nationwide basis, collecting examples of good practices and distributing the outcomes, leading capacity-building efforts for local governments and stakeholders, and encouraging vulnerability assessments. Programme manager Judit Balint explained that what is missing is an information system serving as a reliable database related to adaptation, and that the development of such a system involves the integration of three interrelated components: establishing a sound base for supporting adaptation decision making; capacity building and awareness raising; and pilot projects.



The National Adaptation Geoinformatic System (NAGiS) is currently under development. According to Balint, part of the bigger picture is to extend the use of NAGiS to other sectors - agriculture, tourism, socioeconomic - in order to improve the quality and range of areas and to improve climate projections. In carrying out projects related to water saving, resilience building, and water supply and drainage the programme has a wide range of target groups including research institutes, government agencies, local authorities and stakeholders, NGOs and local citizens.

Two other institutions active in the project from the two involved municipalities of Tat and Tokod are DHI Hungary and the Technical University of Budapest. According to DHI's Zsuzsanna Nagy, the company specialises in providing "advance knowledge" of surface water, groundwater and urban water systems. "We plan to make two main contributions here in working with municipalities. The first is to understand how the system works, and the second is to help implement sustainable measures."

Marcell Knolmar from the Technical University of Budapest displayed some graphics to illustrate the radical fluctuations in precipitation that are projected for the periods 2021 to 2050 and 2050 to 2100. These anticipated patterns call for making significant changes to urban water systems (e.g. drinking water supply, sewerage systems and storm water systems). Impacts will also extend to other systems regulating roads, hygiene, hydropower and food production. "It will be important to overcome scarcity of data, lack of knowledge and simplistic models if these problems are to be addressed successfully", Knolmar argued. "Successful approaches, meanwhile, should be used to enhance bilateral cooperation between donor countries and Hungary."

### Then and now

Summing up the day's proceedings and the work that lies ahead were former mayor of Tat, Lajos Szenes, and Tivadar Toth, mayor of Tokod.

"It's been a long journey to finally open this project", said Lajos Szenes. "We've heard several times today how the municipalities of Tat and Tokod have been able to work over the past two decades with citizens and experts to control the situation. We have to keep fighting the problems caused by water, and this project is one of the opening steps in one of these fights."

"We also heard earlier a reference from the mayor of Tat to warnings of a huge flood of biblical proportions," said Mayor Toth in his concluding remarks, "but the big difference is that the old one was caused by God, while the flooding today is caused by us humans. We've been taught for a long time that man can dominate nature, one consequence of which is climate change and the damaging results we're now facing. This project, on the one hand, is addressed to finding answers, but on the other it can also teach us how to cooperate. But I also think we need to learn to cooperate with nature herself. And I do hope that the progress made during this project will teach us how to take a different attitude and to cooperate successfully with nature."