

LAND4FLOOD – Regional Workshop

Workshop and study trip: Multi-purpose land use agreements in floodplains and flood water storage reservoirs

Middle Tisza region, Hungary, 30 September – 2 October 2019

COST Action – CA 16209 Natural Flood Retention on Private Land
(LAND4FLOOD)



IMPRINT

Authors:

András Kis, Corvinus University of Budapest, Hungary

Gábor Ungvári, REKK Regional Center for Energy Policy Research, Hungary

Acknowledgements: This LAND4FLOOD workshop was initiated jointly in collaboration with the Corvinus University of Budapest, REKK Regional Center for Energy Policy Research and the Middle Tisza Regional Water Directorate (KÖTIVIZIG). The workshop was funded by the COST Action “Natural Flood Retention on Private Land” (CA16209). COST is supported by the EU Framework Programme Horizon 2020.

Table of contents

Rationale for the event.....	4
Workshop themes	4
Programme.....	4
Field trip	5
Workshop agenda	6
Key messages from the workshop	7
List of participants.....	9



Photo: The Tiszaroff peak flood polder in operation during the 2010 Tisza flood. Credit: KÖTIVIZIG

Rationale for the event

The workshop brought together two main groups of participants: 1) experts and stakeholders from European countries with experience in land use agreements in flood risk mitigation and 2) representatives of Hungarian water authorities who wished to learn about the respective practices of other countries. The mutual exchange of knowledge and experience was supplemented with a field visit to learn about the flood defense solutions applied in the Middle Tisza region: flood peak polders, dyke systems and floodplain measures were explored. The workshop was co-organised by the Middle Tisza Regional Water Directorate (KÖTIVIZIG), REKK and Corvinus University of Budapest.

Workshop themes

When privately owned land is suitable for flood water storage, land owners usually receive a compensation from the state or the beneficiaries based on either agreements or regulations. The workshop inspected how this cooperation can be raised to a higher level, when land owners agree to e.g. land use change (from intensive cropping to grazing or forestry), and/or land use with a lower damage profile in case of being flooded. Cooperation mechanisms between the state, citizens and land owners were widely discussed during the workshop. Special attention was paid to compensation mechanisms, additional services that the land owners may offer to the public under the agreements, and the wider decision sphere of flood management and how multi-purpose flood peak polders compare to other solutions, such as higher level dikes or the reduced roughness of the river section.

Programme

- 30 September: Field trip along the river Tisza
- 1 October: Workshop in the city of Szolnok
- 2 October: Meeting of LAND4FLOOD members



Field trip

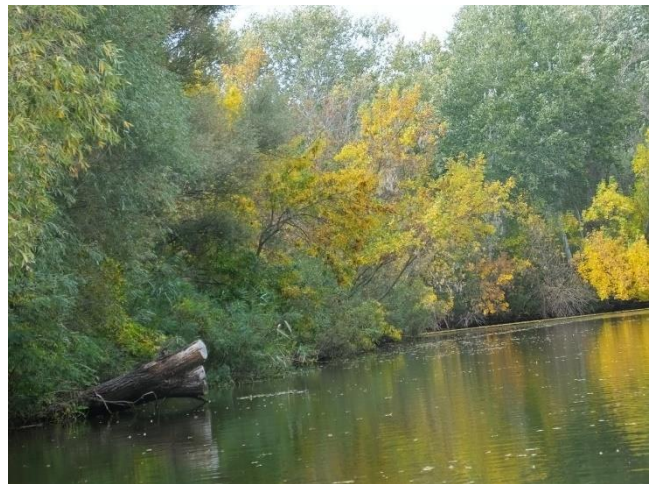
30 September 2019

On 30 September a field trip was organised for the foreign participants of the event to inspect how conflicting water functions are managed along the middle section of the river Tisza.

During the trip participants learned about the history of the Lake Tisza, its role in flood defense, and how an artificially created lake developed into a valuable ecosystem within a few decades.

Colleagues of KÖTIVIZIG described the role and operation of peak flood polders, the multiple functions satisfied by the Kisköre dam – including collection of solid waste floating on the surface of the river, water level regulation, supply of water for irrigation, energy generation -, and the fish ladder connecting the upstream and downstream stretches of the river. Participants also visited the flood gate of the largest peak flood polder in the Middle Tisza, the Hanyi-Tizsasülyi polder.

During the trip participants and the experts of KÖTIVIZIG had a chance to discuss the challenges arising from the complex management of multiple water functions and services.



Workshop agenda

1 October 2019

Location: KÖTIVIZIG Szolnoki Szakasz mérnöksége, Szolnok, Versegly út 1., 2nd floor.

9:30	9:40	András Kis, Corvinus University of Budapest, REKK	Goal of the meeting, agenda
9:40	10:00	Attila Lovas, KÖTIVIZIG	Welcome and introduction - the flood defense operations and challenges of KÖTIVIZIG
10:00	10:20	Thomas Hartmann, Wageningen University, Netherlands	The LAND4FLOOD vision on flood risk management

Session 1: Cooperation between the state and land owners

10:20	10:40	Christian Damm, Karlsruhe Institut für Technologie, Germany	The stakeholder and land owner involvement in the Lenzen dike relocation project
10:40	11:00	Haluk Gedikoglu, Konya Food and Agriculture University, Turkey	How to sustain conservation practices under the Environmental Quality Incentives Program (EQIP) of the U.S. Department of Agriculture

Coffee break

11:30	11:50	Jan Kruijshoop, International Commission for the Protection of the Rhine	Transboundary flood risk management in the Rhine basin
11:50	12:10	Thomas Hartmann, Wageningen University, Netherlands	Just compensation for spatial flood risk management measures – Comparing the Austrian and Dutch approach
12:10	12:30	Q&A	

Lunch break

Session 2: Citizen initiatives

13:30	13:50	Lukas Löschner, University of Natural Resources and Life Sciences, Austria	Compensation mechanisms for flood storage in Mittersill and Altenmarkt
13:50	14:10	Paul Cobbing, National Flood Forum, UK	How and why some communities in the UK are taking increasing control of their flood risk
14:10	14:30	Q&A	

Coffee break

Session 3 - How to trigger improved cooperation between land owners and the state / communities?

15:00	15:20	Gábor Ungvári, Corvinus University of Budapest, REKK	Challenges of cooperation within a Central European context
15:20	15:50	Short comments from Mila Chilikova-Lubomirova (Institute of Mechanics, Bulgaria) Pavel Raska (UJEP, Czech Republic) Attila Lovas (KÖTIVIZIG, Hungary) Bojan Srdjevic (University of Novi Sad, Serbia) Silvia Kohnova (Slovak University of Technology, Slovakia) Vesna Zupanc (University of Ljubljana, Slovenia)	
15:50	16:30	Round table discussion with Paul Cobbing, Lukas Löschner, John Sheehan (UTS, Australia), Vesna Zupanc. Moderated by András Kis	

Key messages from the workshop

The workshop had a mixture of audience: international experts from universities, NGOs, government agencies and research institutes, and Hungarian experts working for the government's water authorities, specialising in flood defense.

Attila Lovas, Director of KÖTIVIZIG described the organisational and institutional history of Hungarian water management, paying special attention to the regulation of the river Tisza in the 19th century and its current consequences in terms of increased flood risk. He discussed the operation of the peak flood polders along the Tisza and its tributaries, a unique set of large-scale emergency reservoirs the coordinated operation of which is under development currently.

Thomas Hartmann introduced the LAND4FLOOD project and its 3x3 approach-matrix that structures location and perspective, as illustrated by the slide on the right. He emphasized that role of land use in flood defense is underappreciated and is destined to grow. He also compared the compensation practices of three countries, highlighting how fundamentally different methods can lead to sufficient, but different outcomes.

Christian Damm shared the experience from the Lenzen dike relocation project on the river Elbe, where flood risk reduction and other ecosystem service enhancements go hand in hand. This experience is of special interest for the host KÖTIVIZIG which in the process of implementing a similar development on the river Tisza just upstream of Szolnok.

Haluk Gedikoglu discussed the importance of economic incentives when land use practices are to be sustained for the benefit of society. The importance of other factors at play, such as strong local social capital, were emphasized.

Jan Kruijshoop discussed how the countries of the Rhine Convention rely on each other to mitigate flood risk through the application of a suite of measures, including dyke relocation, room for the river, retention basins, coordinated forecasting and mobile walls.

A presentation slide with a black background. At the top, there are three colored boxes: green for 'HINTERLAND RETENTION (nature-based solutions)', blue for 'FLOOD STORAGE (flood polders, dams)', and red for 'RESILIENT CITIES (adapted urban areas)'. On the left side, there are three vertical colored boxes: blue for 'FLOWS (hydrology & engineering)', yellow for 'LAND (property rights & land use)', and pink for 'INSTRUMENTS (law & economics)'. The main text reads: 'You cannot do it without the owner! Start with land, not hydrology.' Below this, it says: 'It is not only about negotiation by administrative bodies – private landowners should be the heroes. Communicate a positive message' and 'Do not create “perverse subsidies” (i.e. avoid to disincentive)'.

HINTERLAND RETENTION (nature-based solutions) FLOOD STORAGE (flood polders, dams) RESILIENT CITIES (adapted urban areas)

FLOWS (hydrology & engineering)

LAND (property rights & land use)

INSTRUMENTS (law & economics)

You cannot do it without the owner! Start with land, not hydrology.

It is not only about negotiation by administrative bodies – private landowners should be the heroes. Communicate a positive message

Do not create “perverse subsidies” (i.e. avoid to disincentive)



The small scale water retention agreements displayed by Lukas Löschner from the Austrian Alps demonstrated that flood risk reduction services provided by upstream land owners represent enormous economic value for downstream towns, but reaching an agreement still requires time, effort, and sometimes external (government) assistance and money.

Paul Cobbing had similar stories to share about land use agreements made between settlements and upstream farmers, some of which have already proven useful during recent flood events.

Finally the floor was opened for comments and open discussion. Evidently, countries of the former socialist block lack the tradition of bottom-up initiatives and negotiation based agreements between the government and land users. Water managers in these countries have started their journey acquiring the necessary knowledge and skills, and the LAND4FLOOD workshop has been helpful in this endeavour.



List of participants

For any of the workshop days

Asztalos, Gabor	Hungary
Chilikova-Lubomirova, Mila	Bulgaria
Cobbing, Paul	UK
Damm, Christian	Germany
Domány, András	Hungary
Gedikoglu, Haluk	Turkey
Gulyás, Krisztina	Hungary
Hartmann, Thomas	Netherlands
Juhász, Zoltán	Hungary
Kajner, Peter	Hungary
Kis, András	Hungary
Kiss, Péter	Hungary
Kohnova, Silvia	Slovakia
Kruijshoop, Jan	Netherlands
Löschner, Lukas	Austria
Lovas, Attila	Hungary
Morales, Janeth	Germany
Antal, Örs	Hungary
Palatinus, Judit	Hungary
Právetz, Tamás	Hungary
Raška, Pavel	Czechia
Sheehan, John	Australia
Srdjevic, Bojan	Serbia
Süveggyártó, Anita Mária	Hungary
Tamas, Jozsef	Hungary
Ungvári, Gábor	Hungary
Vas, László	Hungary
Vizi, David	Hungary
Zupanc, Vesna	Slovenia

