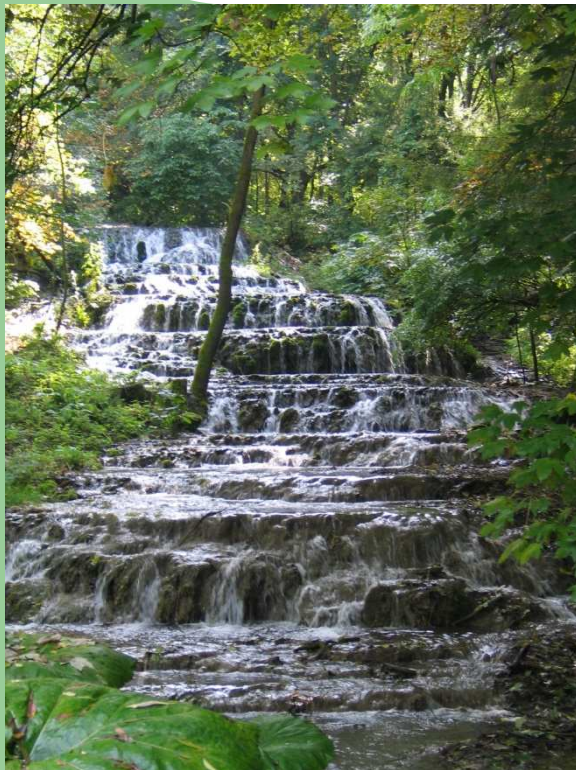


icpdr iksd

International
Commission
for the Protection
of the Danube River

Internationale
Kommission
zum Schutz
der Donau

Agriculture and Water Management Tisza case study Hungarian Background study



Judit Rakosi

ÖKO Zrt.

Bucharest, November 2012.



Table of contents

- **Agricultural measures: protected zones**
- **Irrigation**
- **Territorial water management and good practices**
- **Public involvement**

Implementation of the NRBMP's agricultural measures

- **Basic measures are carried out in accordance with the relevant legislation, sources are ensured by the NHRDP (ÚMVP).**
- **The designated areas in accordance with the Hungarian legislation are:**
 - Nitrate vulnerable zones, within this the drinking water source protection zones
 - Areas registered as protected by other laws (Natura 2000 areas, high conservation value areas)
- **Supplementary measures: Further areas to be determined by means of legislation in accordance with the NRBMP's Programme of Measures:**
 - Erosion sensitive areas
 - Excess water sensitive areas
 - Riparian water protection buffer zone
 - Drought sensitive areas
- **Since the adoption of the NRBMP significant advance has taken place in respect of the delineation and regulation of riparian water protection belts.**

Irrigation figures, Hungary

Years	Agricultural area thousand ha	Areas with water right permit ha	Irrigated area ha	Licensed area in the proportion of agricultural areas %	Irrigated area in the proportion of agricultural areas %	Irrigated area in the proportion of licensed areas %
2009	5 783	178 607	91 719	3.09%	1.59%	51.35%
2010	5 343	169 034	36 652	3.16%	0.69%	21.68%
2011	5 337	201 377	79 437	3.77%	1.49%	39.45%

Average irrigation figures

	Hungary	Tisza RB	Tisza RB in the proportion of Hungary total %
Average areas under irrigation systems, with water right permit (ha)	183006	127163	69,5%
Average areas annually irrigated in last 3 years (ha)	69269	55576	80,2%
Irrigated area in the proportion of licensed areas %	37,9%	43,7%	

Irrigation

- **3.1-3.8% of the agricultural areas are arranged for irrigation, but only half of it is irrigated even in the driest years and there are years when only a fifth of it is irrigated.**
- In Hungary there is no official irrigation demand prognosis for 2021
- Water Management, Irrigation and Drought Strategy will be prepared next year.
- Preliminary estimation:
 - **The high level of 2009 (about 90 thousand hectares) can be doubled in some years.**
 - **About 10-15 thousand hectares enlargement can be realistically planned yearly, taking into consideration the potential irrigation development subsidized by European source (CAP).**
 - On the basis of this the realization of the 180 thousand hectares irrigated area can be expected within 6-10 years. However, timing can be significantly changed as a consequence of the EU subsidization of irrigation development in 2014-2020

Flood and excess water

- 40% of the cultivated areas,
 - 32% of the railway lines,
 - 15% of the main roads,
 - 2.3 million people (23% of the Hungarian inhabitants) and
 - property of almost EUR 25 billion (20% of the GDP) value are exposed to the **risk of floods.**
 - Small watercourses in mountainous and hilly areas cross almost 1500 settlements, causing significant danger.
- **unique problem is excess water**
 - The total area being endangered by excess waters runs to ca. 2 million hectares, which covers 60% of the Great Hungarian Plain's cultivated areas.



Water scarcity

- Drought also falls on the Great Hungarian Plain and the Tisza's area.
- The territorial distribution of drought varies year by year. **It occurs circa as frequently as the excess water, but might affect many times larger areas.**



- The crop failure of orchards as a result of a drought might exceed 30%.
- The following years were seriously threatened by flood: 1998-2001, 2002, 2006 and 2010 (often along with excess water– 1998, 1999, 2010) and three years were extremely droughty.

Territorial water management, Common challenges

- **Territorial water management: the management of excess waters, irrigation, melioration of mountainous and hilly areas, regulation of the water cycle of wetlands.**
- **Extremities are characteristic of the hydrological regime: floods, drought and excess water are all key issues. The aim of the territorial water management is to reduce risks, its tasks are divided between **agriculture and water management****
- **The solution is the adaptation of land use to the natural conditions and the establishment of a modern system of territorial water management.**

Good Practice: Land management

- **Land management is based on water retention requiring close cooperation between agriculture and water management (e.g. flood plain land management).**
- **Land management based on water retention contributes to the quantitative and qualitative preservation of utilizable water resources as well as to the reduction of damages caused by drought and excess waters**

Good Practice: Land management projects

- **UNDP/GEF „Integrated land development (ILD) programme to improve land use and water management efficiency in the Tisza basin”) The implementer of the project was the Alliance for the Living Tisza (ALT) association (NGO)**
- **Interreg project (Hungary-Slovakia) Bodrogköz**
- **IPA project (Hungary-Croatia) DRABALU Project (Drava Basin Altered Land Use Project).**

Good Practice: Land management EEOP projects

- Development of water retention based flood plain land management systems
- 8 projects are being prepared, which – in case of approval – will be implemented by 2015 the latest. Projects. Funded by EEOP (Environment and Energy Operational Programme).
- The projects will expectedly be implemented in the following areas:
 - Nagykörű region
 - In the basin of the Törökér main channel
 - In Bereg including the area of the flood control reservoir of Bereg
 - In Bodroghöz including the area of the flood control reservoir of Cigánd
 - In the area of the flood control reservoir in Tiszaroff
 - In the area of the flood control reservoir in Nagykunság
 - In the area of the flood control reservoir in Hanyi-Tiszasülyi
 - In the area of the flood control reservoir of Szamos-Kraszna Interfluve
- These projects include land use plans and farming programmes, discussed with the farmers and other stakeholders on public forums during preparation.

Change in economic incentives

- **Transform the present agricultural subsidy systems.**
- **Water retention provide ecological services, The society (state with the help of EU) has to pay for this service.**
- **Use the land everywhere for that purpose and with that intensity, which it is the most suitable for and which it can take without being damaged.**

Good Practice: Public Involvement

- The public consultation of the draft RBPs, especially the programmes of measures took place in 2009. It was a successful process.
- Draft plans: 42 sub unit RBMP, 4 regional RBMP, 1 National RBMP were made available via internet and in printed forms.
- Public / stakeholders consultations were held at each planning unit.
- The 25 thematic hearings covered issues such as agriculture, nature protection, forest management, municipal government tasks, thermal waters, fishery, regulatory and comprehensive measures, institutional development, financing.
- Altogether 3800 comments/remarks were received during the consultation period and evaluated during the finalization of the plans.
- They all were documented with the response of the planners (acceptance, rejection, reasoning) in the annex of the RBMP, which is available at the www.vizeink.hu

Good Practice: Public Involvement - Stakeholders

- **professional state organisations,**
- **municipalities,**
- **civil organisations (e.g. green NGOs),**
- **Representatives of sectors of economy (industry, agriculture etc.),**
- **associations of water management, public water works**
- **scientific communities and the general public.**

Good Practice: Public Involvement - Water Management Councils

- **New institutions, participants: state administration (40%), economic actors (water users – 20%) civil organisations (20%), science (20%)**
 - **12 Territorial Water Management Councils**
 - **Four Sub-basin Water Management Councils**
 - **National Water Management Council**
- **The role of the councils and committees did not end with the finalisations of the RBMP.**
- **The active involvement of these bodies covering the wide public is needed in the course of the detailed planning taking place till 2012 .**
- **They will also have a role in the review of the river basin management plans every 6 years and in the elaboration of the further detailed plans.**
- **These can serve as an example for other countries' public participation practices.**



**Thank you for the
attention**