



Summary report on TRB measures data collection Deliverable 4.3.5

This deliverable is based on Tisza countries
data information provided by end of June
2018

Version Final, Date July-21, 2018



Project co-funded by the European Union (ERDF, IPA funds)

Acknowledgements

Lead author **Branislava Matić**, Jaroslav Černi Water Institute, Serbia

Contributing authors **Milica Milović**, Jaroslav Černi Water Institute, Serbia

 Zoran Major, ICPDR

The full list of contributors to data and information collection from all five Tisza Countries is included in the Deliverable 4.3.3 Catalogue of existing measures evaluation

The information and views set out in this publication are those of the author(s) (DTP project Lead Partners and partners) and do not necessarily reflect the official opinion of the European Union/Danube Transnational Programme. Neither the European Union/Danube Transnational Programme institutions and bodies nor any person acting on their behalf may be held responsible for the use which may be made of the information contained therein.

Contents

ACKNOWLEDGEMENTS	1
CHAPTER 1 – BACKGROUND	3
CHAPTER 2 – SCOPE OF THE WORK	4
DATA AND INFORMATION COLLECTION AND REPORTING.....	4
CHAPTER 3 – GWBS MEASURES SUMMARY	5
CHAPTER 4 – CATEGORIES OF INTEGRATED MEASURES REPORTED BY TISZA COUNTRIES IN D 4.3.3 CATALOGUE OF EXISTING MEASURES EVALUATION	7
TRB HORIZONTAL MEASURES REPORTED (BY 2021)	7
TRB INTEGRATION MEASURES: SOLID PLASTIC WASTE	7
TRB INTEGRATION MEASURES: DRAUGHT AND WATER SCARCITY	8
TRB INTEGRATION MEASURES: CLIMATE CHANGE	0
REFERENCES.....	0

Chapter 1 – background

The largest tributaries of the Danube River by catchment area are the Tisza River (157,186 km²) and Sava River (97,713 km²). The Tisza River ranks as the longest tributary (966 km) and the second largest tributary of the Danube River by flow volume, with an average discharge of about 830 m³/sec, and Tisza River Basin (TRB) is the main water source for Hungary, a significant source for Serbia and an important source for western Romania and southeastern part of the Slovak Republic. Additionally, the population is higher in the Tisza River Basin (14 Million) than in the Sava River Basin (8.5 Million). As a result, demand in water is higher in the Tisza River Basin, which raises concerns about the need to ensure a harmonised and sustainable water resource management in the Tisza River Basin. Furthermore, increase in extreme events (severe floods and draughts) in the recent years has adverse affects on water resources, ecosystems, human health, and economy within the region.

Water quantity is identified as relevant water management issue in Tisza River Basin (TRB) due to the over abstraction of groundwater (GW), increase in irrigation and surface water (SW) abstraction, and key integrated water management issues (excess water, droughts, and climate change). In addition, achievement of good status for both GW and SW is obstructed by different sources of pollution. As a result, interlinkages between water quantity and water quality management issues are identified as relevant for the TRB.

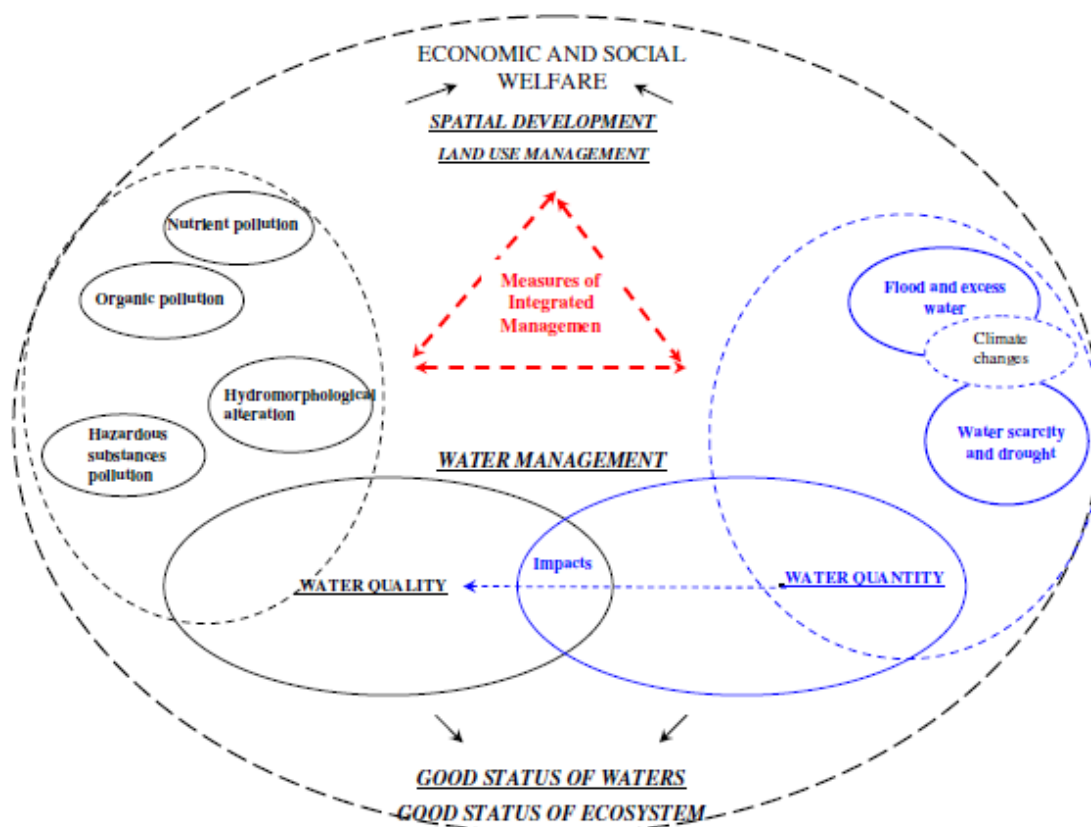


Figure I-1 Interlinkages between water quantity and quality related management issues identified by ICPDR Tisza Group (Source: The First Integrated Tisza River Basin Management Plan)

Chapter 2 – scope of the work

Data and information presented in this report summarize measures data collection relevant for Tisza River Basin (TRB) for groundwater bodies and integrated measures. Tisza countries reported measures based on templates that follow approach applied for development of the First Integrated Tisza River Basin Management Plan (1st ITRBMP) and other studies and background documents relevant for Tisza River Basin within the scope of International Commission for the Protection of the Danube River (ICPDR) Tisza Group and other ICPDR expert groups.

In the 1st ITRBMP measures are addressed with respect to Significant Water Management Issues within the TRB and in line with EU Water Framework Directive (Directive 2000/60/EC of the European Parliament and of the Council establishing a framework for the Community action in the field of water policy). The Article 4 of the EU WFD addresses environmental objectives and underline significance of measures implementation, and Article 8 elaborate water bodies monitoring. According to article 11, paragraph 3 each Member State shall ensure the establishment for each river basin district, or for the part of an international river basin district within its territory, of a programme of measures, taking account of the results of the analyses required under Article 5, in order to achieve the objectives established under Article 4. Such programmes of measures may make reference to measures following from legislation adopted at national level and covering the whole of the territory of a Member State. Where appropriate, a Member State may adopt measures applicable to all river basin districts and/or the portions of international river basin districts falling within its territory.

Data and Information collection and reporting

- Given the JOINTISZA project and data and information collection on measures collection as the activities of different work packages, technical work packages leaders (Bogdan Ion - WP5, János Fehér - WP6, Jarmila Makovinska - WP3 and Branislava Matić - WP4) had meeting and agreed which integration measures will be addressed in which work package;
- As a result of JOINTISZA Technical work package Leaders agreement the measures to be collected and elaborated in Work package 4 – Water Quantity Issues are included in chapters (3- 6) of Deliverable 4.3.3 Catalogue of existing measures evaluation;
- Measures relevant for GWBs are comprehensively presented in the chapter 2 of Deliverable 4.3.3 Catalogue of existing measures evaluation;
- In addition to this 2 maps are developed based on cooperation of the ICPDR and JCI on measures relevant for GWs within the TRB: Groundwater Bodies - Water Quality Measures Applied and Groundwater Bodies - Water Quantity Measures Applied;
- Some of the TRB integration measures are collected under the activity 5.2;
- If some of integration measures are omitted in activities 4.3. & 5.2 they will be included in measures collected under the WP3.

Chapter 3 – GWBs measures summary

All GWBs measures included in the deliverable 4.3.3 Catalogue of existing measures evaluation are based on data and information reported by Tisza countries during the JOINTISZA project implementation. In addition to data and information reported in deliverable 4.3.3 two maps are developed D 4.3.4 that provide comparison in measures for GWBs in the first Integrated Tisza River Basin Management Plan and those recently updated during the JOINTISZA project implementation.

Groundwater Bodies - Water Quality Measures Applied

GW Status assessment - ITRBMP 2019: MAP 2

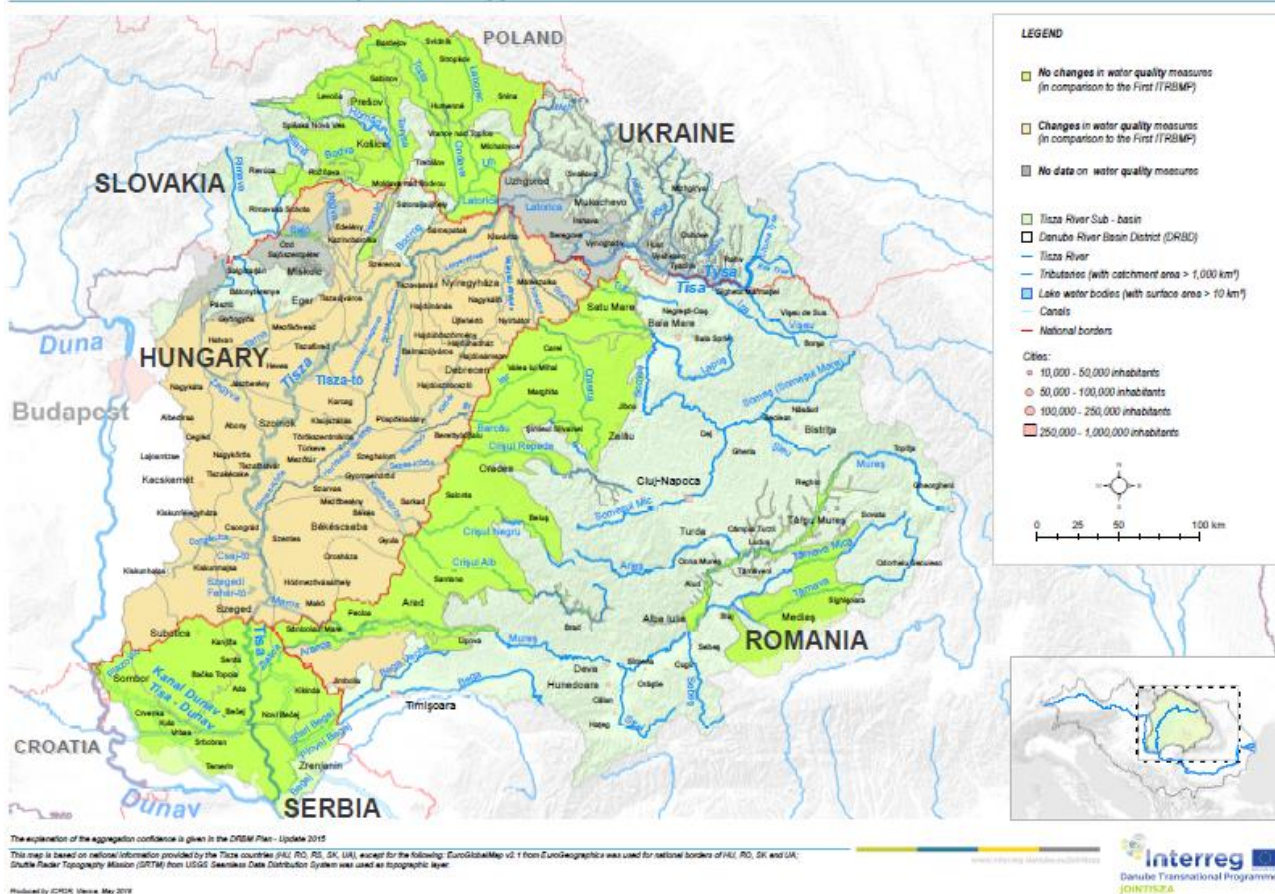


Figure III.1 GWBs Water Quality measures – Draft MAP

Groundwater Bodies - Water Quantity Measures Applied

GW Status assessment - ITRBMP 2019: MAP 3

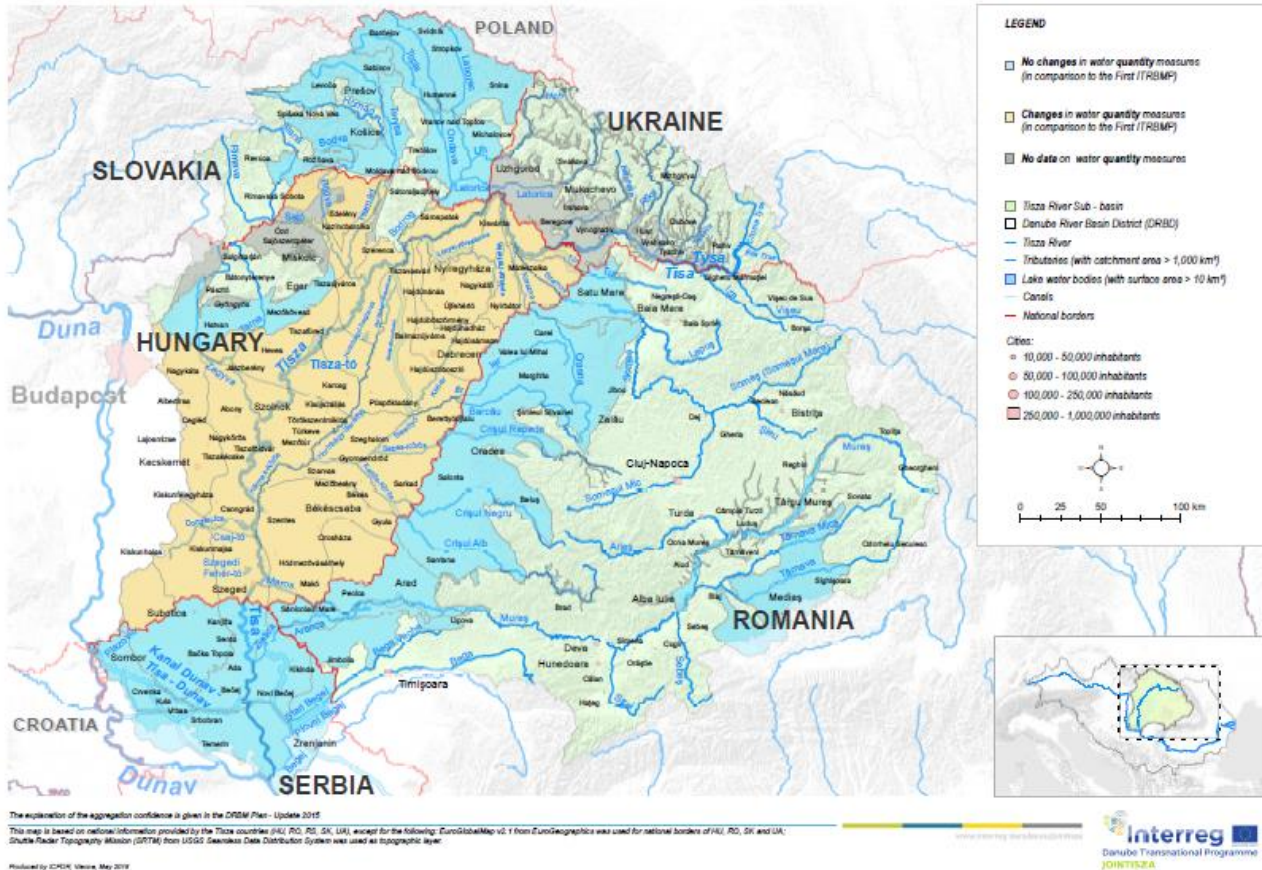


Figure III.1 GWBs Water Quantity measures – Draft MAP

Chapter 4 – Categories of integrated measures reported by Tisza countries in D 4.3.3 Catalogue of existing measures evaluation

In the Deliverable 4.3.3 all Tisza countries reported in following integration measures, For each of these categories of the measures the status of implementation by the end of 2012 reported based on following criteria for integration measures, i.e., **Not started (NS)**, **Planning on-going (PG)**, **Implementation is on-going (IG)**, and **Completed (CO)**.

TRB horizontal measures reported (by 2021)

Table IV.1 Summary on TRB Horizontal measures

Title of proposed measure	Status of the measures estimated towards the end of 2021				
	UA	RO	SK	HU	RS
International coordination	IG	CO	IG	IG	IG
Incentives	NS	CO	NS	PG, IG CO *	NS
Communication and consultation	PG	CO	IG	IG	PG
Any other (please specify)?	–	–	–	–	–

TRB Integration measures: solid plastic waste

Table IV.2 Summary on TRB solid plastic waste measures summary table

Title of proposed measure	Status of the measures estimated towards the end of 2021				
	UA	RO	SK	HU	RS
Education and awareness raising measures	IG	CO	IG	IG	PG
River clean-up actions to installing collection and recycling facilities	IG	CO	IG	IG	CO
Selective collecting of the solid plastic waste	–	CO	–	–	–

TRB integration measures: draught and water scarcity

Table IV.3 Summary on TRB drought and water scarcity

Title of proposed measure	Status of the measures estimated towards the end of 2021				
	UA	RO	SK	HU	RS
Establishment of common indices to define droughts and to get a better insight of water scarcity across the Tisza Basin	NS	IG	IG	IG	IG
Maps with water scarce areas identified for the Tisza Basin.	NS	CO	IG	IG	NS
Collection of more precise information on irrigation and groundwater depletion is needed on the future uses.	PG	CO	CO	IG, CO	IG
Changes in agricultural practices	PG	CO	IG	IG	PG
Reduction of leakage rates	PG	IG	NS	IG	NS
Improving irrigation efficiency	PG	IG		IG	PG
Development of an agreed upon groundwater model to assess depletion	NS	N/A	N/A	N/A	NS
Coordinated approach to water allocation and the application of economic incentives or tools such as water pricing	PG	CO	CO	IG	PG
Overview of the methodologies used to establish national minimum ecological flows to be prepared (to lead to agreement on comparable limits and approaches to managing low-flow situations)	NS	CO	IG	IG	PG
Establishment of comparable national approaches to monitor and report groundwater abstraction to ensure the better management and regulation of groundwater resources	NS	CO	CO	CO	IG
Any other					IG

TRB integration measures: climate change

These measures are comprehensively elaborated in Deliverable 4.3.3 , Chapter 6.

References

The First Integrated Tisza River Basin Management Plan

EU Water Framework Directive

The ICPDR CC adaptation strategy

ICPDR DanubeGIS

Data and information reported by Tisza countries:

Ukraine:

Datasets available on the ICPDR DanubeGIS

Ukraine_JoinTisza template for GWB data collection_Act.4.1.xls

JOINTISZA Report for GWBs data Ukraine.doc

Country report on measures_Act.4.3

Romania

Datasets available on the ICPDR DanubeGIS

Romanian_JoinTisza template for GWB data collection_Act.4.1.xls

JOINTISZA Report for GWBs data Romania.doc

Country report on measures_Act.4.3

Slovakia:

Datasets available on the ICPDR DanubeGIS

Slovak_JoinTisza template for GWB data collection_Act.4.1.xls

JOINTISZA Report for GWBs data Slovakia.doc

Country report on measures_Act.4.3

Hungary

Datasets available on the ICPDR DanubeGIS

Hungarian_JoinTisza template for GWB data collection_Act.4.1.xls

Serbia

Datasets available on the ICPDR DanubeGIS

Serbian_JoinTisza template for GWB data collection_Act.4.1.xls

JOINTISZA Report for GWBs data Serbia.doc

Country report on measures_Act.4.3

Project co-funded by the European Union (ERDF, IPA funds)

Partners: General Directorate of Water Management, Hungary | Global Water Partnership Central and Eastern Europe, Slovakia | International Commission for the Protection of the Danube River | Ministry of Water and Forests, Romania | Ministry of Foreign Affairs and Trade, Hungary | National Administration "Romanian Waters", Romania | National Institute of Hydrology and Water Management, Romania | Public Water Management Company "Vode Vojvodine", Serbia | Regional Environmental Center for Central and Eastern Europe, Hungary | The Jaroslav Černi Institute for the Development of Water Resources, Serbia | Water Research Institute, Slovakia | World Wide Fund for Nature Hungary

Associated Partners: Interior Ministry, Hungary | Republic of Serbia Ministry of Agriculture and Environmental Protection - Water Directorate | Secretariat of the Carpathian Convention (SCC), Austria | State Agency of Water Resources of Ukraine | Tisza River Basin Water Resources Directorate, Ukraine