

# Danube Sediment Management -Danube Sediment Management -Restoration of the Sediment Balance in the Danube River Péter Bakonyi Project Director

Side event on 'Flood Protection and Water Management related issues in the Danube Region - EUSDR PA4–Towards reaching good status of waters in the DRB 5 July 2017, Mosonmagyaróvár, Hungary



# **Project justification**

- Increasing discrepancy between surplus and deficit of sediment
  - $\rightarrow$  increases flood risk
  - $\rightarrow$  reduces navigation possibilities
  - $\rightarrow$  reduces hydropower production
  - $\rightarrow$  deteriorates the ecological conditions
  - $\rightarrow$  decreases the ground water level
- According to the Danube River Basin Management Plans (2009 and 2015) it is not clear if the sediment transport was a significant issue or not
  - ,... the availability of sufficient and reliable data on sediment transport is a prerequisite for any future decisions on sediment management in DRB. Hence, to propose appropriate measures for improving the situation, a sediment balance for the DRB has to be developed and additional investigations are needed to identify the significance of sediment transport on the Danube basin-wide scale."



# **Project justification – Existing Situation**

• Driving forces and impacts – Danube River Basin

➡ Hydropower plants
Flood protection
→ Navigation
➡→ Climate change
$\implies$ Changes in land use





#### **Consortium set-up and main target groups**

Country	Project Partner	Acronym	Туре
AT	University of Natural Resources and Life Sciences, Vienna	BOKU	ERDF
BG	National institute of Meteorology and Hydrology – Bulgarian Academy of Sciences	NIMH-BAS	ERDF
BG	Executive Agency "Exploration and Maintenance of the Danube River"	EAEMDR	ERDF
CR	CROATIAN WATERS	HRVODE	ERDF
DE	Bavarian Environment Agency	LfU	ERDF
DE	Technische Universität München (Technical University Munich) - Institute of Hydraulic and Water Resources Engineering	TUM	ERDF
HU	Budapest University of Technology and Economics (LP)	BME	ERDF
HU	General Directorate of Water Management	OVF	ERDF
RO	National Administration "Romanian Waters"	NARW	ERDF
RO	NATIONAL INSTITUTE OF HYDROLOGY AND WATER MANAGEMENT	NIHWM	ERDF
RS	Jaroslav Černi Institute for the Development of Water Resources	JCI	IPA
RS	The Republic of Serbia Ministry of Construction, Transport and Infrastructure Directorate for Inland Waterways	PLOVPUT	IPA
SK	Water Research Institute Bratislava	VUVH	ERDF
SI	Institute for Water of the Republic of Slovenia	IzVRS	ERDF
	Total Project Partners:	14	



#### **Consortium set-up and main target groups**

Country	Associated Strategic Partner	Acronym
AT	Federal Ministry of Agriculture, Forestry, Environment and Water Management	BMLFUW
AT	VERBUND Hydro Power GmbH	VERBUND
DE	Bundesanstalt für Wasserbau	BAW
HU	Ministry of Foreign Affairs and Trade	MFAT
INT	International Commission for the Protection of the Danube River	ICPDR
INT	International Sava River Basin Commission	ISRBC
INT	Danube Commission	DC
INT	WWF Hungary	WWF
INT	Global Water Partnership Central and Eastern Europe	GWP CEE
RO	Romanian Ministry of Environment, Waters and Forests	MEWF
RO	HIDROELECTRICA SA	Hidroelectrica
SI	SLOVENIAN WATER AGENCY	DRSV
SK	Slovak Water Management Enterprise, s.e.	SVP
SK	Water Management Construction, s.e.	VVB
	Total ASP:	14



# **Project summary**

• Project title:

Danube Sediment Management - Restoration of the Sediment Balance in the Danube River (DanubeSediment)

- Project duration: 01/2017-06/2019 (30 months)
- Programme: Danube Transnational Programme
  - Programme Priority:
    PA2. Environment and culture responsible Danube region
  - Programme Specific Objective:
    SO2.1 Strengthen transnational water management and flood risk prevention
- Project Budget: 3.56M EUR
- Lead Partner: Budapest University of Technology and Economics
- http://www.interreg-danube.eu/approved-projects/danubesediment

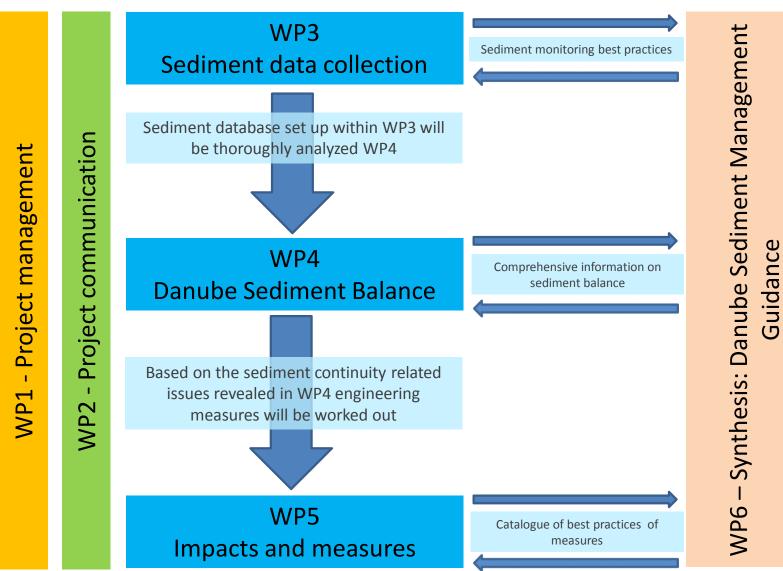


# Main objectives

- To propose a pragmatic transnational quantitative sediment monitoring network
- To establish for the first time the **sediment budget** for the Danube River considering the input of the most important tributaries as well,
- To identify reaches with **surplus and deficit**, river bed aggradation and degradation, **sediment-related problems** in flood risk management, hydropower generation, navigation, ecology
- To gain **knowledge and** better **understanding** of sediment transport and morphodynamic processes in the Danube River
- To develop a Danube Sediment Management Guidance (DSMG) and a related Sediment Manual for Stakeholders (SMS)



#### **Project methodology**





# Link with the EUSDR

- PA4 "TO RESTORE AND MAINTAIN THE QUALITY OF WATERS" – Action 1 - "To implement fully the Danube River Basin Management Plan"
- PA5 "TO MANAGE ENVIRONMENTAL RISKS"
  - Action "To develop and adopt one single overarching floods management plan at basin level or a set of flood risk management plans coordinated at the level of the international river basin"
- DanubeSediment project will contribute through
  - Danube Sediment Management Guidance
  - Sediment Manual for Stakeholders
    - Water management
    - Sediment management (hydropower, navigation, nature protection...)



### **Expected project results**

- Danube Sediment Management Guidance
- Sediment Manual for Stakeholders (inc. Good practises)
  - Water management
  - Hydropower
  - Navigation
- To propose a pragmatic transnational quantitative sediment monitoring network
- To establish for the first time the **sediment budget** for the Danube River considering the input of the most important tributaries as well,
- To identify reaches with **surplus and deficit**, river bed aggradation and degradation, **sediment-related problems** in flood risk management, hydropower generation, navigation, ecology
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# Synergies with other INTERREG projects

- Capitalisation
  - Thematic Pole 4: Water Management
    - JoinTisza
    - CAMARO-D
    - DriDanube
    - DanubeSediment
  - Thematic Pole 7: Waterways
  - Thematic Pole 8: Sustainable Energy



# Acknowledgment

- ICPDR
- Ministry of Foreign Affaires and Trade of Hungary,
- EUSDR (PA4 and PA5)
- DTP



# Thank you for your attention