Project Data Sheet

BASIC PROJECT DATA			
Full project title:	**Danube River Research and Management**		
Short project title: (acronym)	DREAM	**Project logo:**	–
Project website:	–	**Project ID:**	PA1A099
Need and added value for Danube Region Strategy:	There is an urgent need to integrate the use and the protection of the Danube River in a sustainable way. Research is of fundamental importance to derive monitoring strategies, modelling and engineering solutions to improve measures suited to reach a win-win situation between economic use and environmental protection of the Danube River. This will be strongly related to the Danube River Basin Management Plan. The project DREAM provides the umbrella and coordination for setting up research topics. These topics are interconnected and cover several disciplines, from basic research, to be represented by advanced hydraulic labs and sophisticated 3D models on high computational technology, to applied research, providing field data to mitigate hydrological extremes and to improve existing situations in water regimes, sediment regime, flood risk, drought problems, revision of bio-engineering measures, restoration of streams and flood plains, etc.		
Objective(s) of project:	a) An important aim is to enable research of hydrodynamics, sediment transport, morphodynamics and ecological processes in the various reaches of the Danube River by means of adequate hydraulic laboratories, that provide a significant discharge (up to 10 m^3/s without pumping) and space (large scale models). b) On the basis of an improved process understanding, derived by the large scale physical models in the labs, computer-based simulations should be improved, leading to hybrid models. A further aim is to establish commonly agreed field study sites and stations along the Danube River to calibrate and validate physical and computer-based models as well as to develop and test advanced river engineering measures under 1:1 conditions. c) The cooperation of research institutions and laboratories along the Danube River is intended to improve scientific progress and to stimulate the transfer from basic research to the knowledge society.		
Planned project activities:	**Act. 1:** Construction of two large Responsible River Modelling Centers/hydraulic and environmental engineering laboratories (up to $10m^3$): one in the upstream section, one in the downstream section of the Danube being able to undertake basic and applied, interdisciplinary Danube River Research, including the development and test of innovative river engineering measures to improve the situation (in the context of hydropower, navigation, ecology, flood risk management, drinking water supply, recreation, remobilisation of sediments etc.). In Austria, Activity 1 is currently being implemented in **four component projects**. The four projects are co-financed by the European Regional Development Fund through different programmes. 1. SEDDON II (Sediment Resarch and Management at the Danube River II): *INTERREG V-A Austria-Hungary 2014-2020* ○ Lead Partner: University of Natural Resources and Life Sciences, Vienna ○ Partner 2: Budapest University of Technology and Economics (BME) ○ Partner 3: North-Transdanubian Water Directorate (EDUVIZIG) ○ Partner 4: BOKU-Wasserbaulabor Errichtungs- und Betriebsgesellschaft GmbH ○ Strategic Partner Federal Agency for Water Management Vienna (BAW)		

	2. DREAM SK-AT (Danube River Research and Management in Slovakia and Austria): *INTERREG V-A Slovakia-Austria 2014-2020* ○ Lead Partner: University of Natural Resources and Life Sciences, Vienna ○ Partner 1: Water Research Institute Department of Hydrology and Hydraulics ○ Partner 2: Slovak Academy of Sciences, Institute of Landscape Ecology ○ Partner 3: BOKU-Wasserbaulabor Errichtungs- und Betriebsgesellschaft GmbH ○ Strategic Partner: Federal Agency for Water Management Vienna (BAW) 3. DREAM RRMC VIENNA (Wasserbaulabor): *Investments in Growth and Employment Austria 2014-2020 – Operational Programme* ○ Lead Partner: University of Natural Resources and Life Sciences, Vienna ○ Partner: BOKU-Wasserbaulabor Errichtungs- und Betriebsgesellschaft GmbH 4. SEDECO (Sediments, ecosystem services and interrelation with floods and droughts in the AT-CZ border region): *INTERREG V-A Austria-Czech Republic 2014-2020* ○ Lead Partner: University of Natural Resources and Life Sciences, Vienna ○ Partner 1: Brno University of Technology ○ Partner 2: Povodí Moravy, s.p. ○ Partner 3: BOKU-Wasserbaulabor Errichtungs- und Betriebsgesellschaft GmbH ○ Strategic Partner: Federal Agency for Water Management Vienna (BAW) **Act. 2:** Cooperation of existing hydraulic engineering laboratories for improvement of expertise in all partner countries and to provide knowledge transfer. An upgrade of laboratory instrumentation improves the ability of modern scale models to solve river engineering models. Cooperation with the large scale laboratories is intended. **Act. 3:** Formation of a cluster/network of river engineering simulation tools to be used by Danube countries (common software development and implementation), allowing to perform long-term and large scale analyses of the development of the Danube River (e.g. riverbed aggradation or degradation) and to predict effects of river engineering works. **Act. 4:** Establishment of a network of field study sites along the Danube River and tributaries or process analysis, model calibration and validation and test of advanced river engineering solutions, being suited for carrying out benchmarking studies related to basic abiotic and biotic processes and interrelations with river engineering measures. **Act. 5:** Construction and operation of a research vessel with diving shaft for the whole Danube area (e.g. operated from Serbian base) to enable river bed research at various parts of the Danube river and to perform in situ investigations of river bed dynamics/morphodynamics, sediment transport, effects of river engineering measures and biological processes, thus forming a strong link to management. **Act. 6:** Establishment of a network of existing and extended Danube River Research Institutions throughout all riparian countries, including a strong link to management and society for strengthening and improving the scientific knowledge on the Danube River.
Transboundary impact:	All Danube riparian states and tributary states are (potential) partners, affected regions are suitable field study sites at the Danube and its tributaries as well as surrounding wetlands. Laboratory research will take place in qualified institutions and universities. All partners are participants, performing research, providing and

	gaining information and results, developing a sustainable and common procedure and management strategies for Danube river issues.
Project beneficiaries / target groups:	• Universities and research organisations along the Danube and its tributaries • Public and private sectors (ministries, regions, hydroelectric companies, waterway administrations, NGOs)

STATUS AND TIME FRAME

Current project phase: (please tick a box)	☐ Definition (e.g. project idea, abstract) ☒ Preparation (e.g. project proposal, feasibility study) AND ☒ Implementation ☐ Completion		
Start date:	01.07.2012	**End date:**	31.12.2020
Notes:	–		

PROJECT TEAM

Project leader:	University of Natural Resources and Life Sciences, Vienna / Austria	
Project partner(s):	• Federal Agency for Water Management / Austria • Slovak Academy of Sciences / Slovakia • Water Research Institute Bratislava / Slovakia • University of Technology and Economics, Budapest / Hungary • EDUVIZIG / Hungary • University of Osijek / Croatia • University of Zagreb / Zagreb • University of Novi Sad / Serbia • University of Nis / Serbia • University of Ruse / Bulgaria • University of Sofia / Bulgaria • Technical University of Civil Engineering Bucharest / Romania • GeoEcoMar / Romania • University of Technology Brno / Czech Republic • Povodi Moravy / Czech Republic • Ukrainian Center of Environmental and Water Projects / Ukraine • Odessa State Environmental University / Ukraine	
Contact person:	**Name:**	-
	Organisation:	University of Natural Resources and Life Sciences, Vienna Institute of Water Management, Hydrology and Hydraulic Engineering

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FINANCING		
Available: (please tick a box)	☐ Yes ☒ Partly ☐ No	
Total budget:	69,600,000 EUR for all activities	
Source(s) and amount (potential sources for project ideas): (please tick a box and provide further info)	☒ National/regional funds:	**Austrian funds for Activity 1 (all four projects):** 20,000,000 EUR (line ministries, City of Vienna, Lower Austria)
	☒ EU funds:	**ERDF funds for Activity 1 in Austria (all four projects):** 26,000,000 EUR *(Interreg V-A Programmes Austria-Czech Republic, Austria-Hungary and Slovakia-Austria; Operational Programme - Investments in Growth and Employment)*
	☐ IFI loans:	
	☐ Private funds:	
	☐ Other:	

PROJECT ENVIRONMENT	
Project cross-reference:	SEDiment research and management at the Danube – SEDDON
Cross-reference ID(s):	–
Strategic reference:	• EU Strategy for the Danube Region • Danube River Basin Management Plan (ICPDR) • NAIADES programme • Joint statement on inland navigation and environmental sustainability in the Danube river basin
Relevant legislation:	• EU - Water Framework Directive 2000 • EU - Floods Directive 2007 • EU - Renewable Energy Directive 2009 (Climate Change) • EU NAIADES / Navigation, Corridor VII, 2008 • National law (water, nature conservation, navigation, building)
Other:	–

EUSDR EMBEDDING	
Relation to other Priority Areas of the Danube Region Strategy: (please tick a box)	☐ PA1b: To improve mobility and multimodality – Road, rail and air links ☒ PA02: To encourage more sustainable energy ☐ PA03: To promote culture and tourism, people and people contacts ☒ PA04: To restore and maintain the quality of waters ☒ PA05: To manage environmental risks ☒ PA06: To preserve biodiversity, landscapes and the quality of air and soils ☒ PA07: To develop the knowledge society through research, education and information technologies ☐ PA08: To support the competitiveness of enterprises, including cluster development ☐ PA09: To invest in people and skills ☐ PA10: To step up institutional capacity and cooperation ☐ PA11: To work together to promote security and tackle organised and serious crime
EUSDR COMPLIANCE	
Compliance with targets of the Danube Region Strategy: (please tick a box)	☐ Increase the cargo transport on the river by 20% by 2020 compared to 2010. ☒ Solve obstacles to navigability, taking into account the specific characteristics of each section of the Danube and its navigable tributaries and establish effective waterway infrastructure management by 2015. ☐ Develop efficient multimodal terminals at river ports along the Danube and its navigable tributaries to connect inland waterways with rail and road transport by 2020. ☐ Implement harmonised River Information Services (RIS) on the Danube and its navigable tributaries and ensure the international exchange of RIS data preferably by 2015. ☐ Solve the shortage of qualified personnel and harmonize education standards in inland navigation in the Danube region by 2020, taking duly into account the social dimension of the respective measures.
Compliance with actions of the Danube Region Strategy: (please tick a box)	☒ To complete the implementation of TEN-T Priority Project 18 on time and in an environmentally sustainable way. ☒ To invest in waterway infrastructure of Danube and its tributaries and develop the interconnections. ☐ To modernise the Danube fleet in order to improve environmental and economic performance. ☐ To coordinate national transport policies in the field of navigation in the Danube basin. ☐ To support Danube Commission in finalising the process of reviewing the

	Belgrade Convention. ☐ To develop ports in the Danube river basin into multimodal logistics centres. ☐ To improve comprehensive waterway management of the Danube and its tributaries. ☐ To promote sustainable freight transport in the Danube Region. ☐ To implement harmonised River Information Services (RIS). ☐ To invest in education and jobs in the Danube navigation sector.
Affiliation to thematic working group of Priority Area 1a of the EUSDR: (please tick a box)	☒ Waterway infrastructure and management ☐ Ports and sustainable freight transport ☐ Danube fleet ☐ River Information Services ☐ Education and jobs
OTHER RELEVANT ISSUES	
Project requirements:	–
Follow-up projects:	–
Any other issues:	–