

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:	<p>There is an urgent need to integrate the use and 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.</p> <p>The project DREAM will provide an umbrella and the infrastructure for a set of 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.</p>		
Objective(s) of project:	<p>a) An important aim is to enable research of hydrodynamic, sediment transport, morphodynamic and ecological processes in the various reaches of the Danube River by means of adequate hydraulic laboratories, that provide a significant discharge (up to 5 m³/s without pumping) and space (large scale models).</p> <p>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.</p> <p>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.</p>		
Planned project activities:	<p>Act. 1: Construction of two large Responsible River Modelling Centers/hydraulic and environmental engineering laboratories (up to 5000 l/s flow capacity): 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.)</p> <p>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.</p> <p>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.</p> <p>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</p>		

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	<p>advanced river engineering solutions, being suited for carrying out benchmarking studies related to basic abiotic and biotic processes and interrelations with river engineering measures.</p> <p>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.</p> <p>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.</p>		
Transboundary impact:	<p>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.</p>		
Project beneficiaries / target groups:	<ul style="list-style-type: none"> • 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)	<input type="checkbox"/> Definition (e.g. project idea, abstract) <input checked="" type="checkbox"/> Preparation (e.g. project proposal, feasibility study) <input type="checkbox"/> Implementation <input type="checkbox"/> Completion		
Start date:	01.01.2015	End date:	t.b.d.
Notes:	-		
PROJECT TEAM			
Project leader:	University of Natural Resources and Life Sciences, Vienna / Austria		
Project partner(s):	<ul style="list-style-type: none"> • Slovak Academy of Sciences / Slovakia • Water Research Institute Bratislava / Slovakia • University of Technology and Economics, Budapest / Hungary • University of Osijek / Croatia • University of Novi Sad / Serbia • Jaroslav Cerni Institute / Serbia • University of Ruse / Bulgaria • Technical University of Bucharest / Romania • GeoEcoMar / Romania 		

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	<ul style="list-style-type: none"> University of Technology Brno / Czech Republic University of Life Sciences Prague / Czech Republic 	
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FINANCING		
Available: (please tick a box)	<input type="checkbox"/> Yes <input type="checkbox"/> Partly <input checked="" type="checkbox"/> No	
Total budget:	69,600,000 EUR	
Source(s) and amount (potential sources for project ideas): (please tick a box and provide further info)	<input checked="" type="checkbox"/> National/regional funds:	10,000,000 EUR (Line ministries, City of Vienna, Lower Austria)
	<input checked="" type="checkbox"/> EU funds:	60,000,000 EUR (Structural Funds)
	<input type="checkbox"/> IFI loans:	
	<input type="checkbox"/> Private funds:	
	<input type="checkbox"/> Other:	
PROJECT ENVIRONMENT		
Project cross-reference:	SEDiment research and management at the Danube – SEDDON	
Cross-reference ID(s):	–	
Strategic reference:	<ul style="list-style-type: none"> 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:	<ul style="list-style-type: none"> EU - Water Framework Directive 2000 EU - Floods Directive 2007 EU - Renewable Energy Directive 2009 (Climate Change) EU NAIADES / Navigation, Corridor VII, 2008 	

	<ul style="list-style-type: none"> National law (water, nature conservation, navigation, building)
Other:	–
EUSDR EMBEDDING	
Relation to other Priority Areas of the Danube Region Strategy: (please tick a box)	<input type="checkbox"/> PA1b: To improve mobility and multimodality – Road, rail and air links <input checked="" type="checkbox"/> PA02: To encourage more sustainable energy <input type="checkbox"/> PA03: To promote culture and tourism, people and people contacts <input checked="" type="checkbox"/> PA04: To restore and maintain the quality of waters <input checked="" type="checkbox"/> PA05: To manage environmental risks <input checked="" type="checkbox"/> PA06: To preserve biodiversity, landscapes and the quality of air and soils <input checked="" type="checkbox"/> PA07: To develop the knowledge society through research, education and information technologies <input type="checkbox"/> PA08: To support the competitiveness of enterprises, including cluster development <input type="checkbox"/> PA09: To invest in people and skills <input type="checkbox"/> PA10: To step up institutional capacity and cooperation <input type="checkbox"/> 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)	<input type="checkbox"/> Increase the cargo transport on the river by 20% by 2020 compared to 2010. <input checked="" type="checkbox"/> 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. <input type="checkbox"/> 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. <input type="checkbox"/> Implement harmonised River Information Services (RIS) on the Danube and its navigable tributaries and ensure the international exchange of RIS data preferably by 2015. <input type="checkbox"/> 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)	<input checked="" type="checkbox"/> To complete the implementation of TEN-T Priority Project 18 on time and in an environmentally sustainable way. <input checked="" type="checkbox"/> To invest in waterway infrastructure of Danube and its tributaries and develop the interconnections. <input type="checkbox"/> To modernise the Danube fleet in order to improve environmental and economic performance. <input type="checkbox"/> To coordinate national transport policies in the field of navigation in the

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	<p>Danube basin.</p> <ul style="list-style-type: none"><input type="checkbox"/> To support Danube Commission in finalising the process of reviewing the Belgrade Convention.<input type="checkbox"/> To develop ports in the Danube river basin into multimodal logistics centres.<input type="checkbox"/> To improve comprehensive waterway management of the Danube and its tributaries.<input type="checkbox"/> To promote sustainable freight transport in the Danube Region.<input type="checkbox"/> To implement harmonised River Information Services (RIS).<input type="checkbox"/> To invest in education and jobs in the Danube navigation sector.
<p>Affiliation to thematic working group of Priority Area 1a of the EUSDR: (please tick a box)</p>	<ul style="list-style-type: none"><input checked="" type="checkbox"/> Waterway infrastructure and management<input type="checkbox"/> Ports and sustainable freight transport<input type="checkbox"/> Danube fleet<input type="checkbox"/> River Information Services<input type="checkbox"/> Education and jobs