

ACTION 1: HAZARDOUS & EMERGING SUBSTANCES						
EUSDR Action		1. Promote monitoring, prevention and reduction of water pollution deriving from hazardous and emerging substances (EU priority substances and watch list candidates as well as Danube basin specific pollutants candidates and others e.g. microplastics-plastics, pharmaceuticals, PFOS)				
Description of the Action and related Targets		<ul style="list-style-type: none"> o Close knowledge gaps on monitoring of hazardous and emerging substances in surface waters, biota and sediment o Determine sources and pathways of hazardous and emerging substances emissions o Quantify water emissions and loads o Implement prevention and mitigation measures including a more comprehensive evaluation of the measures efficiency o Contribute to capacity building in monitoring, modelling and management of hazardous substances pollution o Contribute to improved quality of sediments 				
Defined milestones		Key steps and projects				
PA4 M-1.1	Hazardous	1.1.1	DanubeHazard m3c			
		1.1.2	JDS5-			
		1.1.3	JTS1			
		1.1.4	Trimonitor			
PA4 M-1.2	Plastic	1.2.1	Tid(y)-Up, PlasticFreeDanube, MapRiverPlastic			
		1.2.2	Microplastic monitoring and impacts on ecosystems (e.g. migratory fish)			
		1.2.3	Awareness raising plastic (PET Cup, CleanDanube + events in UA, RO; plastic brochure)			
		1.2.4	Small project on microplastic measurements at some Danube WWTPs			
		1.2.5	EU plastic strategy + link to Marine			
PA4 M-1.3	Pharmaceuticals	1.3.1	International conference as platform for knowledge and best practice sharing related to pharmaceuticals in the Danube Region			
		1.3.2	Contribution to the implementation of the EU Strategic approach on pharmaceuticals			
		1.3.3	EUSBSR cooperation			
		1.3.4	bo-DEREC-CE			
PA4 M-1.4	Sediment	1.4.1	Sediment quantity: DanubeSediment follow-up project			
		1.4.2	Sediment quantity in transboundary context: SEDDON-II project			
		1.4.3	Sediment quality: SIMONA			

ACTION 2: WASTE WATER						
EUSDR Action		2. Continue boosting major investments in building, upgrading, maintaining and rehabilitating urban wastewater treatment facilities and promote alternative collection and treatment of wastewater in small rural settlements, including measures to build capacity at the regional and local level across the Danube basin				
Description of the Action and related Targets		<ul style="list-style-type: none"> o Identify means to finance infrastructure projects especially in EU Member States joined after 2007 and non-EU countries o Focus on investments in maintenance and rehabilitation of the existing infrastructure o Enhance and disseminate knowledge on wastewater treatment technologies also considering emerging substances o Assist in strengthening capacity at national and local administration level as well as at utility level to improve financing, operation and technology of the wastewater infrastructure and services o Promote alternative collection and treatment of wastewater in small rural settlements, including measures to build capacity at the regional and local level 				
Defined milestones		Key steps and projects				
PA4 M-2.1	WW Finance	2.1.1	Funding workshop and funding brochure			
		2.1.2	Investment needs assessment			
		2.1.3	Cooperation with key institutions and countries			
PA4 M-2.2	WW Tech knowledge	2.2.1	Alternative solutions for small settlements			
		2.2.2	Monitoring waste water in relation to emerging substances and viruses			
		2.2.3	Study and workshop on sewage sludge			
PA4 M-2.3	WW Capacity	2.3.1	Workshop on capacity building for national and local administration working on wastewater management			
		2.3.2	Document on capacity building on waste water management			
		2.3.3	Prepare background study for an e-learning tool			

ACTION 3: WATER & AGRICULTURE						
EUSDR Action		3. Promote prevention and reduction of diffuse pollution, promote nutrient retention, smart irrigation and water reuse, foster and develop an active process of dialogue and cooperation between authorities responsible for agriculture and environment to ensure that measures are taken to address diffuse pollution and ensure smart water use				
Description of the Action and related Targets		<ul style="list-style-type: none"> o Decouple pollution and water scarcity from agricultural development o Improve water demand management in agriculture by smart irrigation and water reuse in order to reduce water abstraction needs o Make agro-environmental measures more attractive o Provide appropriate information on modern technologies and tools to improve agricultural practices o Promote good agricultural practices in nutrient management according to the Nitrates Directive (Council Directive 91/676/EEC) and Water Framework Directive o Close knowledge gaps on measures efficiency o Raise awareness related to the link between agricultural practices, water and soil quality and biodiversity o Promote links with Air Quality Plans and National Air Pollution Control Programme (NAPCPs, mandatory under NECD) to make authorities and stakeholders understand how the described measures for water and agriculture can also help to improve air quality o Contribute to EU Common Agriculture Policy (CAP) national strategic plans 				
Defined milestones		Key steps and projects				
PA4 M-3.1	Pollution	3.1.1	Nutrient loss reduction, integrated nutrient management			
		3.1.2	Study on sewage sludge			
		3.1.3	Pesticides reduction			
		3.1.4	Air quality			
PA4 M-3.2	Water use	3.2.1	Smart irrigation			
		3.2.2	Water reuse (minimum requirements)			
		3.2.3	Collection of good practice examples dealing with limiting water abstraction			
		3.2.4	Measures to reduce GW overexploitation, DEEPWATER-CE project			
PA4 M-3.3	Strategic link between water in agriculture	3.3.1	Brochure on case studies of sustainable agriculture measures implementation in the Danube Region			
		3.3.2	CAP national strategic plans preparation and implementation / Farm to Fork / ICPDR guidance			
		3.3.3	OPTAIN - water and nutrient retention in small agricultural catchments			
		3.3.4	Soil moisture			

ACTION 4: DRINKING WATER						
EUSDR Action		4. Promote measures aimed at reducing knowledge deficits related to protecting water resources and safeguarding drinking water supply				
Description of the Action and related Targets		<ul style="list-style-type: none"> o Contribute to resource efficiency and encourage deliberate and effective water consumption and a water saving culture by the civil and industrial consumers o Raise public awareness towards the environmental friendly, economic, efficient and safe water uses as well as strengthening the environmental consciousness of the public using social media, information materials and targeted guidance documents o Promote water protection and pollution reduction from the source to tap, according to the proposed revision of the Drinking Water Directive o Ensure safe drinking water supply via water quality early warning and safeguard zones. Increase the resilience of society and water supply systems against droughts by means of stimulating investments in alternative water sources and smart grids (i.e. linking networks of water providers), and enhancing planning of water availability (i.e. with reservoirs filling plans) 				
Defined milestones		Key steps and projects				
PA4 M-4.1	Assist the implementation of the Drinking Water Directive	4.1.1	Promote the new DWD approach: from source to tap			
		4.1.2	Microbiological water quality: assist project implementation if the field of antimicrobial resistant micro-organisms (tap water and drinking water resources)			
		4.1.3	Promote managed aquifer recharge via the DEEPWATER-CE project			
PA4 M-4.2	Resource efficient use of drinking water	4.2.1	Promote water saving, consciousness and environment-friendly water uses			
		4.2.2	Prepare a leaflet on resource efficiency, effective water consumption and drinking water quality from source to tap			
		4.2.3	Promote tap water consumption to reduce packaging waste to contribute to circular economy			
PA4 M-4.3	Safeguarding water resources	4.3.1	Promote a project on early warning real-time monitoring to safeguard DW resources			
		4.3.2	Promote assessment of bank filtration (sediment, pharma)			
		4.3.3	DW resource resilience to droughts (smart grids, water availability planning)			

ACTION 5: MIGRATORY FISH						
EUSDR Action		5. Promote measures to enable fish migration in the Danube river basin				
Description of the Action and related Targets		<ul style="list-style-type: none"> o Raise broad public awareness and political commitment for the Danube sturgeons as flagship species for the Danube River Basin and for the ecosystems and biodiversity of the Danube River Basin as a whole o Foster sturgeon conservation activities including protection of habitats, restoration of fish migration routes and ex-situ conservation measures o Close knowledge gaps concerning monitoring of pressures and planning of measures for fish migration in coordination with PA 6 (Action 3) 				
Defined milestones		Key steps and projects				
PA4 M-5.1	Contribute to migratory fish initiatives and projects	5.1.1	Assist the implementation of the Sturgeon 2020 Program			
		5.1.2	Contribute to the restoration of fish migration at the Iron Gates in the framework of the We Pass project			
		5.1.3	Restore ecological corridors for migratory fish species in the framework of the MEASURES project			
PA4 M-5.2	Preparation of fish studies and documents	5.2.1	Prepare a fish migration restoration document for the Middle and Upper Danube			
		5.2.2	Study on effects of noise and waves on fish species			
		5.2.3	Promote hydro-morphological measures to achieve good ecological status of waters needed for fish migration			
PA4 M-5.3	Facilitate and raise awareness about the importance of good water status in fish migration	5.3.1	Organize a Working meeting on migratory fish			
		5.3.2	Issue a leaflet on promoting measures to enable fish migration in the Danube River Basin			

ACTION 6: CLIMATE CHANGE						
EUSDR Action		6. Promote measures to adapt to climate change impacts in relation to water quality and quantity				
Description of the Action and related Targets		<ul style="list-style-type: none"> o Implement water quality measures of the ICPDR Strategy on Adaptation to Climate Change o Promote concrete measures to control water abstraction and groundwater overexploitation o Promote the establishment and maintenance of green infrastructure and natural water retention measures (NWRMs) o Promote water related measures in urban planning o Raise farmers' and public awareness about the importance of soil moisture and soil water retention capacity in soil fertility under changing climate conditions 				
Defined milestones		Key steps and projects				
PA4 M-6.1	Strive for mainstreaming the role of water in climate adaptation strategies	6.1.1	Contribute to updating and implementating the EU and ICPDR climate adaptation strategies			
		6.1.2	Assess water quality elements of national climate change strategies towards transnational solutions			
		6.1.3	Climate Change Adaptation conference			
PA4 M-6.2	Act towards improving water retention knowledge and measures in the Danube Region to adapt to climate change	6.2.1	Assist in establishing water balance modelling in the Danube region			
		6.2.2	Promote natural water retention measures (NWRMs) to improve water quality, e.g. via wetland reconnection, re-meandering and restoring the ecological functionalities			
		6.2.3	Support international projects: FramWat, OPTAIN, DanubeFloodplain, IDES, LIFE LOGOS 4 WATERS			
PA4 M-6.3	Water retention in urban areas in the Danube Region	6.3.1	Study on facts, activities, measures and their financial assessment			
		6.3.2	Leaflet on water retention in urban areas			

ACTION 7: TOOLS						
EUSDR Action		7. Enhance cooperation, increase and exchange knowledge and secure financing to water quality measures in the Danube Region				
Description of the Action and related Targets		<ul style="list-style-type: none"> • Ensure active involvement of and dialogue with all stakeholders <ul style="list-style-type: none"> o with national and regional, urban and rural decision makers, public authorities; o with sectors (agriculture, industry, mining, hydropower, navigation, nature/biodiversity conservation etc.); o with the general public including awareness raising and education • Strengthen territorial cooperation at different levels <ul style="list-style-type: none"> o at EU level and with non-EU countries taking into account the regional differences; o with other macro-regional strategies; o at EUSDR level with other PAs, especially with PA 1a on inland navigation, PA 5 on environmental risks, PA 6 on biodiversity and PA7 on education; o at Danube level with ICPDR based on the "Joint PA4-PA5-ICPDR Paper on Cooperation and Synergy for the EUSDR Implementation" by contributing to the implementation of DRBMP and its JPM; o at sub-basin level considering Danube tributaries (e.g. Sava, Prut, Tisza); o at river section level (upstream, middle, downstream, Danube Delta); o at Operational Programme level; o at trans-boundary project level with targeted result collection, capitalisation, enhancing synergies; o including surface and groundwater as well as Marine coastal zones (impacts on Black Sea) o with other international commissions and organization related to water protection, e.g. Global Water Partnership and Carpathian Convention • Continue to support ICPDR in further developing water information systems in the Danube Region • Strengthen and facilitate exchange of good practice in integrated water management implementation in the Danube Basin among decision-makers at all levels and all sectors • Identify transboundary funds, which could finance and invest in measures outlined in the joint programme • Collect information on water related financing needs • Ensure consideration of climate change in planning and measures 				
Defined milestones		Key steps and projects				
PA4 M-7.1	Cooperation	7.1.1	Assist in elaborating / implementing sub-basin management plans, such as Sava, Tisza and Prut sub-basins as well as a Danube Delta management plan. Study on sub-basin activities.			
		7.1.2	Establish information exchange and common activities with water experts of other macro-regional strategies on topics of common interest (e.g. pharmaceuticals, nutrients, green corridors)			
		7.1.3	Cooperate with other EUSDR PAs, especially PA 1/a (good navigation and good ecological status), PA5 (floods, droughts, damages, climate change adaptation, water retention) and PA6 (water retention, green infrastructure, wetlands, pesticides, soil, IAS)			
		7.1.4	Ensure active involvement of and dialogue with all stakeholders			
PA4 M-7.2	Knowledge	7.2.1	Contribute to capitalization of the results of different water quality related international projects			
		7.2.2	Raise general awareness and promote IWRM approach in the population of the Region (e.g. Danube Day)			
		7.2.3	Strengthen and facilitate exchange of good practice in integrated water management implementation in the Danube Basin			
PA4 M-7.3	Financing	7.3.1	Contribute to embedding EUSDR objectives into EU funding programmes			
		7.3.2	Collect and disseminate information on funding opportunities and financing needs			
		7.3.3	Organize funding workshops			
		7.3.4	Prepare funding leaflets			
PA4 M-7.4	Assist in establishing successful international projects in the Danube Region to implement the DRBMP	7.4.1	Issue Letters of Recommendation for projects			
		7.4.2	Assist in project preparation e.g. finding the right project partners			
		7.4.3	Study / brochure on relevant water projects			