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ACTION PLAN

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**COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN
PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL
COMMITTEE AND THE COMMITTEE OF THE REGIONS
European Union Strategy for Danube Region**

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EU Strategy for the Danube Region

ACTION PLAN



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Executive Summary

The Danube River is the longest stream in the EU and the main artery for millions of people and unique natural habitats; a 2,857 km long route of transport, trade, energy, migration and cultural exchange across borders. Touching ten different countries, it is the world's most international river and a natural field of transnational cooperation.

The EU Strategy for the Danube Region (EUSDR) provides an integrated framework for strengthening this cooperation between nations. Bringing together 115 million people from nine EU member states, three EU candidate countries and two EU neighbour countries, it has an important integrative and cohesive function. Reports of the European Commission acknowledge that, since its creation in 2010, the strategy has successfully generated structures, projects, and networks to tackle common challenges. However, large dissimilarities between countries and within countries persist, highlighting the need for a continued and even re-enforced joint endeavour. In addition, some challenges, as climate change or demographic change and migration, are becoming more urgent and need to be addressed in a coordinated way beyond borders. Digitalisation brings both challenges and new opportunities; again, cooperation and exchange among the Danube countries will be crucial to avoid increasing disparities.

This revised EUSDR Action Plan is the integrated response to this common set of challenges and opportunities. It updates and concentrates the 2010 actions, puts them into a strategic background, and provides links to "embed" the EUSDR into other programmes (cf. part I).

As the EUSDR is initiated and owned by its participating countries, the largest part of this Action Plan (part II) is based on the contribution of the participant countries via the National Coordinators (NCs) and of the twelve Priority Areas (PAs). Ranging from mobility to security, they have identified 85 actions, i.e. on average seven actions per PA, to bring the Danube region forward. The European Commission, serving as a strategic adviser throughout the revision process and amending its expertise to the PAs' input, was consolidating this Action Plan in permanent coordination with the PAs and NCs. The Danube Strategy Point provided important support, to reach out to citizens by realising an online consultation and a public hearing that opened the revision process to the participation of the civil society.

The EUSDR Action Plan has the goal to help unlock the full potential of the Danube Region. This could for instance happen in terms of mobilising funding possibilities that have not yet been realised, but it goes far beyond. Joint Actions comprise also building networks, offering mutual learning, striving for harmonisation, aligning policies, building capacities, strengthening civil society and voluntary service, and more. Such actions can be realised with little resources, but they might have a large impact. The common aim of every action is to mutually benefit and generate concrete improvements in the Danube Region. Cooperation is the key. Everybody is invited to join.

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I. Background of the revision of the EUSDR Action Plan

1. Key elements

a) Framework: The EU Strategy for the Danube Region (EUSDR) is one of four EU macro-regional strategies (MRS)¹. The two existing framing documents of the EUSDR, the Communication (COM 2010a) and its accompanying Action Plan of 2010 (COM 2010b), have been designed by the European Commission according to the strategic inputs from, and in partnership with the Danube countries, respecting their initiative ownership. The Action Plan has the form of a Commission Staff Working Document. It only includes actions which (COM 2010b, p. 4-5):

- address a commonly identified need for joint action;
- have an impact on the macro-region or a significant part of it, i.e. are transnational;
- are feasible for the actors in the Danube Region (practically, legally and financially);
- are mutually coherent and supportive.

b) The aim of the revision of the EUSDR Action Plan is threefold. *First*, after one decade since the first Action Plan was developed, there is **a need for an update**, to take account of new developments. The actions have also been **streamlined**: concentrated by 40% from 137 actions in the 2010 document to 85 in this new Action Plan, still including new topics (for instance Artificial Intelligence, Priority Area 8). *Second*, there is consensus to make the new Action Plan a document that provides **more strategic guidance** for the implementation of the EUSDR. Being more than a mere work plan, it seeks to give overall guidance for defining and developing cooperative initiatives and actions at all levels, while providing a solid basis for concrete activities for the next years. The *third* aim is to achieve **a better compatibility of the EUSDR Action Plan with other programmes** and funding instruments, mainly:

- the Cohesion policy programmes – i.e. national/regional/territorial programmes under the European Regional Development Fund (ERDF), European Social Fund (ESF), Cohesion Fund (CF), and the European Maritime and Fisheries Fund (EMFF);
- Other EU funding instruments and programmes, like Instrument for Pre-accession Assistance (IPA), European Neighbourhood Instrument (ENI)/ Neighbourhood, Development and International Cooperation Instrument (NDICI), Connecting Europe Facility (CEF), LIFE, Horizon Europe, etc.;
- National/regional/local funding of the Danube countries.

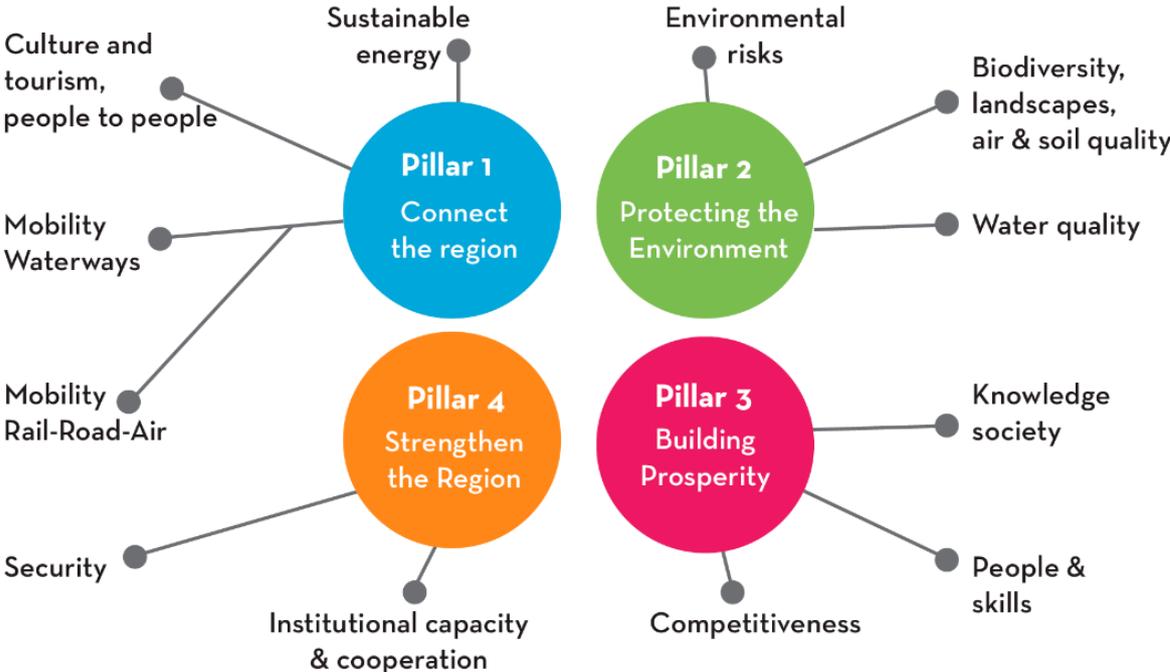
This refers to the **embedding** of MRS priorities into the funding programmes and instruments. The more concretely the EUSDR actions and targets are defined, the easier it will be for the different funding programmes and instruments to embed them into their own objectives, or to define potential for synergies and complementarities.

¹ MRS are defined as "an integrated framework endorsed by the European Council, which may be supported by the ESI Funds among others, to address common challenges faced by a defined geographical area relating to member states and third countries located in the same geographical area which thereby benefit from strengthened cooperation contributing to achievement of economic, social and territorial cohesion". Art. 2 (31) of Regulation (EU) 1303/2013 of 17.12.2013 on Common Provisions Regulations for ESI Funds.

c) **The revision process** started in May 2018. The main steps and the timeline are set out in [Annex 1](#). The EUSDR Communication (COM 2010a) remains untouched. This means that **the principles laid down in the Communication remain entirely valid**, including the EUSDR governance and the structure with four Pillars and twelve Priority Areas (see pictures 1 and 2). Still, the Action Plan is considered as a "rolling document", which means that the Danube countries should remain attentive if there is a need for adaptation.



Picture 1: The governance of the EUSDR (source: <https://danube-region.eu/about/governance>)



Picture 2: The structure of the EUSDR: pillars and priority areas (source: DSP 2019a, p. 39)

The **Danube Transnational Programme (DTP)** is strongly linked to the EUSDR both thematically and in terms of support to its governance² (e.g. support to the PACs, to the DSP, and to the Annual Fora).

d) Basic references for this revised Action Plan are:

- legal provisions for the ESI Funds, ERDF, EMFF, ETC, IPA and NDICI – initially based on the post-2020 draft regulations as proposed by the Commission, reference will have to be made to the final regulations;
- empirical data: studies (e.g. DSRN 2013, COWI 2017, CESCO 2019), COM reports (2013, 2014, 2016, 2019), Eurostat, EU Regional Innovation Scoreboard etc. – the challenges and chances, successes and shortcomings, and the specifics of the Danube Region described therein have been taken duly into account;
- inputs that have been elaborated during the revision process itself: an operational evaluation (see DSP 2019a, p. 10), the Consolidated Input of the Priority Areas and the National Coordinators (DSP 2019a), the results of the online consultation (DSP 2019b), and the public hearing back-to-back with the Annual Forum at Bucharest (2019c).

2. The strategic context

a) European policy context

The Agenda 2020, to which the 2010 EUSDR Communication refers, has been followed by the EU Strategic Agenda 2019-2024³, which was endorsed by the European Council of 20th June 2019. It focuses on four priorities:

- Protecting citizens and freedoms
- Developing a strong and vibrant economic base
- Building a climate-neutral, green, fair and social Europe
- Promoting European interests and values on a global stage.

The Action Plan aligns to them, whenever the EUSDR can make a contribution.

Based on the elements mentioned in chapter I.1, and taking into account especially the policy objectives of the proposed Regulations for ERDF, ESF, CF, JTM⁴, IPA and NDICI post-2020, the Danube countries elaborated and endorsed five strategic objectives of the EUSDR (cf. DSP 2019a, p. 20):

- 1. Counteracting Climate Change**
- 2. Stimulating Sustainable Development**
- 3. Establishing and enforcing Knowledge Society, stimulating the Economy and fight Poverty**
- 4. Improving Mobility and Connectivity**
- 5. Enhancing Democracy, sound Administration and strong Involvement of Civil Society and Youth**

² For the 2021-2027 period, Art. 15(2) of the proposed ETC regulation indicates: "where a [transnational] Interreg programme supports a macro-regional strategy, the total ERDF [...] shall be programmed on the objectives of that strategy" (COM (2018) 374 final, of 29/05/2018).

³ see <https://www.consilium.europa.eu/en/eu-strategic-agenda-2019-2024/>

⁴ Just Transition Mechanism, incl. the Just Transition Fund

The Consolidated Input (DSP 2019a, p. 22) further defines "**horizontal frames**, relevant for all five strategic objectives and to be implemented in the 12 Priority Areas": (1) digitalisation and (2) migration and demographic change. With regard to the **European Green Deal**⁵, and the ambitions to make the EU climate-neutral until 2050⁶, it is highly important to further include (3) climate change and sustainable development as horizontal topics, too. As the EUSDR structure with 12 Priority Areas remains unchanged, the successful implementation of this horizontal issues calls for a strong collaboration between the relevant PAs.

b) Geopolitical context

The Danube Region is a key to consolidate the latest enlargement and to integrate countries with considerable dissimilarities. This Action Plan should contribute to this greater picture. Moreover, the Danube Region is located in a prominent geopolitical area: the Black Sea is a gateway to Central Asia, Russia and China as well as to Turkey and the Middle East. The "bridging role of the Black Sea basin" in terms of interconnectivity was acknowledged by the 2018 EU-Asia Connectivity Strategy.

In the Danube Region, there are a number of initiatives of different scope with regard to sectors (like navigability or ecology) and to geography (e.g. focus on the Danube River, Carpathians, or Black Sea). There are institutions and frameworks that are much older than the EUSDR, like the **Danube Commission** (Belgrade Convention of 1948), or the **ICPDR** (International Commission for the Protection of the Danube River) established in 1998. The **Central Europe Initiative** dates back to 1989. The **Carpathian Convention**, which entered into force in January 2006, covers the wide mountain area in the north of the Danube Region, and involves six Danube countries plus Poland. Similarly, the **Alpine Convention**, established in 1991, relates to the sustainable development of the Alpine Region, overlapping with German, Austrian and Slovenian regions. The EU's **Black Sea Synergy** initiative was launched in 2007, including the Black Sea coastal countries, plus Armenia, Azerbaijan, Greece and the Republic of Moldova. Another important context is the EU's unequivocal support for the European perspective of the **Western Balkans** and the initiatives endorsed by the EU and Western Balkans Leaders, such as the Transport Community Treaty⁷ and the Multi-annual Action Plan on Regional Economic Area⁸ in the Western Balkans (2017), or the Sofia Declaration and Priority Agenda⁹ (2018). The European Commission complemented these efforts with a Strategy for the Western Balkans¹⁰ adopted in 2018 and a revised enlargement methodology¹¹ from February 2020. In the recent years, the **Three Seas Initiative** emerged, covering also large parts of the Danube Region. With regard to the numerous regional or sectoral initiatives beyond the existing EU strategies and programmes, coordination is needed to identify synergies and complementarities and to avoid duplications.

⁵ https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal_en

⁶ Cf. Proposal for a regulation establishing the framework for achieving climate neutrality and amending Regulation (EU) 2018/1999 (European Climate Law) - Brussels, 4.3.2020 - COM(2020) 80 final

⁷ OJ L 278, 27.10.2017, p. 3–53

⁸ <https://www.rcc.int/docs/383/multi-annual-action-plan-for-a-regional-economic-area-in-the-western-balkans-six>

⁹ https://www.consilium.europa.eu/media/34776/sofia-declaration_en.pdf

¹⁰ COM/2018/065 final "A credible enlargement perspective for and enhanced EU engagement with the Western Balkans": <https://eur-lex.europa.eu/legal-content/en/ALL/?uri=CELEX:52018DC0065>

¹¹ https://ec.europa.eu/neighbourhood-enlargement/sites/near/files/enlargement-methodology_en.pdf

Moreover, the EUSDR also has to take into account its overlaps with the EU Strategy for the Adriatic and Ionian Region (EUSAIR) and the EU Strategy for the Alpine Region (EUSALP), where appropriate.

Overall, the EU Strategy for the Danube Region has a crucial role in the deepening of EU integration, collaborating with candidate countries, and enhancing cooperation with non-EU neighbours, which has become even more important for Ukraine since 2014. Actions in the EUSDR shall consider the whole Danube Region including rural and mountain areas (see topographic map in [Annex 2](#)).

II. The Actions

The actions described below are largely based on the "Consolidated Input" provided by PACs and NCs (DSP 2019a), which was endorsed by the NCs and handed over to the Commission on 11th July 2019, as well as on the additional input provided during a consultation of the NCs and PACs on a first draft of the revised Action Plan from 17th September to 31st October 2019.

They are also reflecting the inputs provided by the Commission's sectoral Directorates-General (DGs).

Overview

In total, the 12 Priority Areas (PA) have defined 85 actions. Before going into a more detailed description, the following table provides an overview of the actions per Pillar and PA.

PILLAR 1: CONNECTING THE REGION	
PA 1a Waterway mobility	ACTION 1: Contribute to improve waterway and port infrastructure & management
	ACTION 2: Foster business development
	ACTION 3: Facilitate fleet modernisation
	ACTION 4: Support the further roll-out and enhancement of River Information Services
	ACTION 5: Contribute to the enhanced quality of education and jobs
	ACTION 6: Contribute to the simplification, harmonisation and digitalisation of administrative processes
PA 1b Rail-Road-Air Mobility	ACTION 1: To bring to completion the TEN-T (rail and road) core network crossing the Danube Region, overcoming the difficulties and the bottlenecks, and taking into account environmental, economic and political challenges, particularly in the cross-border sections
	ACTION 2: To support the implementation of the Rail Freight Corridors (RFC) forming part of the European rail network for competitive freight (Reg. 913/2010) with extension to candidate and neighbouring countries
	ACTION 3: To enhance cooperation between air traffic stakeholders in order to improve regional connectivity and prepare a plan to implement shorter plane routes
	ACTION 4: To ensure sustainable metropolitan transport systems and mobility
	ACTION 5: To improve the regional/ local cross-border infrastructure and the access to rural areas by facilitating secondary and tertiary transport infrastructure
	ACTION 6: To develop further nodal planning for multimodality
	ACTION 7: To develop further Intelligent Traffic Systems by using environmental-friendly technologies, especially in urban regions
	ACTION 8: To raise awareness for road safety and encourage exchange of best practices
PA 2 Sustainable Energy	ACTION 1: To further explore the sustainable use of clean biomass, solar energy, geothermal, hydropower and wind power to increase the energy independency and to promote and support multipurpose cross border RES utilisation projects
	ACTION 2: To promote energy efficiency and use of renewable energy in buildings and heating systems including district heating and cooling and combined heat and power facilities
	ACTION 3: To promote decarbonisation and reduction of air pollutants in the transport sector, regarding both public and freight transportation by developing the

	infrastructure for alternative fuels
	ACTION 4: To improve energy efficient, cost efficient and innovative low-carbon technologies, including smart solutions while respecting the principle of technological neutrality
	ACTION 5: To enforce regional cooperation with the aim of supporting the implementation of projects connecting energy markets with a focus on the projects of the Central and South Eastern European Energy Connectivity (CESEC) initiative
	ACTION 6: To exchange best practices and to develop activities to decrease energy poverty, to increase the protection of vulnerable consumers and to empower consumers to engage in the energy market
	ACTION 7: To explore new and innovative solutions of (subsurface) energy storage
	ACTION 8: To encourage exchange of information and best practices to improve cooperation, create synergies and to initiate joint projects with other macro-regional initiatives and relevant stakeholders at European and global level
	ACTION 9: To encourage project generation related to the energy field
PA 3 Culture and Tourism, People to People	ACTION 1: Promote sustainable tourism in the Danube Region and capitalise on EUSDR projects in the areas of culture, nature and tourism
	ACTION 2: Support and promote cultural tourism in the Danube Region
	ACTION 3: Invest in sustainable quality products, services, innovative forms and infrastructure in the fields of tourism and culture, promote skills, education and creating jobs in the related areas
	ACTION 4: Develop a "Smart Destination Danube"
	ACTION 5: Promote and encourage the development of the cultural activities and creative sectors
	ACTION 6: Promote cultural heritage in the Danube Region
PILLAR 2: PROTECTING THE ENVIRONMENT	
PA 4 Water quality	ACTION 1: HAZARDOUS & EMERGING SUBSTANCES: 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. micro plastics-plastics, pharmaceuticals, PFOS)
	ACTION 2: WASTE WATER: 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
	ACTION 3: WATER & AGRICULTURE: 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
	ACTION 4: DRINKING WATER: Promote measures aimed at reducing knowledge deficits related to protecting water resources and safeguarding drinking water supply
	ACTION 5: MIGRATORY FISH: Promote measures to enable fish migration in the Danube River basin
	ACTION 6: CLIMATE CHANGE: Promote measures to adapt to climate change impacts in relation to water quality and quantity
	ACTION 7: TOOLS: Enhance cooperation, increase and exchange knowledge and

	secure financing to water quality measures in the Danube Region
PA 5 Environmental risks	ACTION 1: Provide sufficient support for development and execution of risk management plans for different hazards
	ACTION 2: enhance the capacities, extend the coverage of basin-wide or regional forecasting and warning systems, and develop rapid response procedures
	ACTION 3: Strengthen disaster prevention and preparedness among governmental and non-governmental organizations
	ACTION 4: Decrease human impacts that evolves natural risk factors resulting in environmental damages
	ACTION 5: Anticipate regional and local impacts of climate change
PA 6 Biodiversity and landscapes, quality of air and soils	ACTION 1: Establish transnational cooperation and harmonisation of the strategic management documents between protected areas on river systems in the Danube basin
	ACTION 2: Build capacities of national and local authorities, non-governmental organisations, expert and scientific community in the environment related matters
	ACTION 3: Develop and/or implement conservation action plans and/or management plans for endangered umbrella species of the Danube Region
	ACTION 4: Promote research to develop and apply the most appropriate methods for prevention and control of IAS and for management of the priority pathways in line with the DIAS Strategy and IAS Regulation (EU) 1143/2014
	ACTION 5: Anchoring the concept of EU green infrastructure in the Danube Region
	ACTION 6: Promote ecological connectivity through cooperation between macro-regional strategies
	ACTION 7: Enhance and/or maintain soil-related ecosystem services
	ACTION 8: Identify locations with obsolete pesticide and similar chemical remains and prepare a remediation plan and a risk management plan in the case of environmental accidents
	ACTION 9: Take measures to gradually reduce air pollution, with as a minimum step to respect the limit values for pollutants according to the Air Quality Directive
	ACTION 10: Stimulate the management and the ecological restoration of wetlands, particularly in the Danube delta
PILLAR 3: BUILDING PROSPERITY	
PA 7 Knowledge Society	ACTION 1: To promote coordination of national, regional and EU funds to stimulate excellence in R&I, in research areas specific for Danube Region
	ACTION 2: To promote participation of Danube countries in EU R&I Programmes, in particular in Horizon Europe
	ACTION 3: To strengthen cooperation among universities, research organisations and SMEs in the Danube Region
	ACTION 4: To increase awareness and visibility of science and innovation in the Danube Region
	ACTION 5: To support exchange of information and experience sharing for the purpose of preparation of future strategic R&I documents applicable in the new programming period
	ACTION 6: To promote horizontal cooperation in science and technology across all PAs and other MRS
PA 8 Competitiveness of enterprises	ACTION 1: To foster cooperation and exchange of knowledge between SMEs, academia, the public sector and civil society in areas of competence in the Danube Region
	ACTION 2: Establishment of an Innovative Digital Ecosystem in the Danube Region

	<p>in order to support SMEs when tackling the challenges of a digitalised world</p> <p>ACTION 3: Improvement of framework conditions, support programs and capacity building of stakeholders, to enhance the collaboration between cluster initiatives and regional innovation strategies, with an accent on rural areas</p> <p>ACTION 4: To improve business support to strengthen the innovative and digital capacities of female-led-SMEs</p> <p>ACTION 5: Enhance the application of Artificial Intelligence (AI) technologies in the Danube Region SMEs</p>
PA 9 People and skills	<p>ACTION 1: Intensify Cooperation in Labour Market Policies</p> <p>ACTION 2: Digitalisation and Innovation in the World of Work</p> <p>ACTION 3: Integration of Vulnerable Groups into the Labour Market</p> <p>ACTION 4: Fighting Poverty and Promoting Social Inclusion for All</p> <p>ACTION 5: Quality and Efficiency of Education and Training Systems</p> <p>ACTION 6: Relevant and High-Quality Knowledge, Skills and Competences</p> <p>ACTION 7: Lifelong Learning and Learning Mobility</p> <p>ACTION 8: Inclusive Education, Equity, Common Values and Sustainable Development</p>
PILLAR 4: STRENGTHENING THE REGION	
PA 10 Institutional Capacity and Cooperation	<p>ACTION 1: To improve institutional capacities in order to provide high-quality public services</p> <p>ACTION 2: To facilitate the administrative cooperation of communities living in border regions</p> <p>ACTION 3: To review bottlenecks relating to the low absorption rate of EU funds and Invest EU</p> <p>ACTION 4: To support better coordination of funding</p> <p>ACTION 5: To test and support innovative funding solutions (for local actors and civil society)</p> <p>ACTION 6: To foster cooperation built on mutual trust between state and non-state actors to enhance well-being for the inhabitants of the Danube Region</p> <p>ACTION 7: To strengthen the involvement of civil society and local actors in the Danube Region</p> <p>ACTION 8: To enhance capacities of cities and municipalities to facilitate local and regional development</p>
PA 11 Security	<p>ACTION 1: Security offensive - Enhancing police cooperation with the aim of improving security and tackling serious and organised crime in the EUSDR countries and strengthening the efforts against terrorism threats</p> <p>ACTION 2: Promoting strategic long-term cooperation between law enforcement actors along the Danube river by enhanced networking</p> <p>ACTION 3: Improving the systems of border control, document inspection management and cooperation on consular related issues in the Danube Region</p> <p>ACTION 4: Promoting the rule of law and the fight corruption</p> <p>ACTION 5: Setting up a structure of Danube River Forum</p> <p>ACTION 6: Joint work with Priority Area 1a "Mobility: Waterways"</p> <p>ACTION 7: Implementation of a Ministerial Conference every 3 years</p>

PRIORITY AREA 1A: WATERWAYS MOBILITY

A) Strategic frame

- 1) Mission of PA 1a in the 2010 Action Plan: "to improve mobility and multimodality - inland waterways"¹²

PA objectives (as of 2019):

- To optimally manage and improve navigability conditions as well as shore side infrastructure in a harmonised and environmentally sustainable way
- Support transnational initiatives to promote inland waterway transport and business development in order to raise the modal share of inland waterway transport in the Danube Region
- Develop the Danube fleet in order to reduce emissions of greenhouse gas and air and water pollutants and to become more fuel-efficient
- Implement harmonised River Information Services on the Danube and its navigable tributaries according to European legal provisions and ensure international data exchange
- Solve the shortage of qualified personnel and harmonise standards of competence for professions in Danube navigation
- Establish time-efficient, service-oriented and transparent administrative procedures, especially border controls, in the framework of navigation on the Danube and its navigable tributaries

- 2) EU Cohesion Policy Provisions

- *Relevant policy objective(s):*
 - PO 1, "a smarter Europe";
 - PO 2, "a greener Europe"; and
 - PO 3, "a more connected Europe"
- *Specific objective(s):* "developing a sustainable, climate-resilient, intelligent secure and intermodal TEN-T"

- 3) EU Enlargement Policy Provisions (IPA)

- To strengthen economic and social development through increased connectivity and regional development
- To support territorial and cross-border cooperation

- 4) EU Neighbourhood Policy Provisions

- To support and foster dialogue and cooperation with third countries and regions in the Neighbourhood

- 5) Sector-relevant background

¹² In the Communication (COM 2010a, p.6), PA 1a and 1b are listed separately. In the 2010 Action Plan however, PA 1 is treated as one PA "to improve mobility and multimodality" (COM 2010b, p.9-17). In practice, two separate PAs (1a and 1b) emerged; still, especially topics such as "multimodality" point at a need for strong collaboration.

- White Paper on Transport (2011)
- NAIADES II European Action Plan for the promotion of inland waterway transport (2018)
- Digital Inland Navigation (DINA) Staff Working Document (2018) and the related DINA Study (October 2017)
- TEN-T network, especially Regulation (EU) 1315/2013
- Connecting Europe Facility (CEF), Regulation (EU) 1316/2013
- Treaty establishing the Transport Community (EU-Western Balkans), relevant to road, rail, maritime, inland waterway, intermodal/combined transport
- Declaration on effective waterway infrastructure maintenance on the Danube and its navigable tributaries (Luxembourg 2012) and Fairway Rehabilitation & Maintenance Master Plan for the Danube and its Navigable Tributaries
- Ministerial Conclusions on effective waterway infrastructure rehabilitation and maintenance on the Danube and its navigable tributaries, of the Danube Ministers Meeting in 2014, 2016 and 2018
- EU water legislation, especially Water Framework Directive (2000/60/EC)
- Habitats Directive (92/43/EEC) in connection with the Birds Directive (2009/147/EC)
- Directive (EU) 2397/2017 on the recognition of professional qualifications in inland navigation
- Directive (EU) 1629/2016 laying down technical requirements for inland waterway vessels
- Directive 2005/44/EC on harmonised river information services (RIS) on inland waterways
- Convention Regarding the Regime of Navigation on the Danube ("Belgrade Convention")
- Framework Agreement on the Sava River Basin
- Common Maritime Agenda for the Black Sea
- National Emission Ceilings Directive (NECD), Ambient Air Quality Directives (AAQD)

B) Actions and targets

BACKGROUND & INTRODUCTION

Within PA 1a a gap analysis document was drafted aiming to identify thematic areas and geographic locations for which additional project initiatives would be needed, in order to achieve the defined targets. This is primarily done by analysing the project activities that have been taken up in the years between 2010 and 2018, based on the project database that has been maintained by PA 1a since 2011. PA 1a took this gap analysis as an opportunity to critically review and update the set of targets, thematic areas and priorities against the background of actual developments in the area of inland navigation, policy developments, and feedback from stakeholders, among others. Based on experiences gathered since 2010 and the input of the PA 1a Steering Group, the following categorisation of targets and actions was proposed by the Technical Secretariat and approved by Steering Group Members.

ACTION 1: Contribute to improve waterway and port infrastructure & management

Description: The objective of this action is to optimally manage and improve navigability conditions as well as shore side infrastructure in a harmonised and environmentally sustainable way. In order to achieve this, PA 1a will facilitate the management of inland waterways maintenance activities to provide and preserve "Good Navigation Status" and adequate fairway conditions on the Danube and its navigable tributaries (in line with the TEN-T Regulation¹³ and the Fairway Rehabilitation and Maintenance Master Plan), ensuring that operations are carried out in a way that is compatible with environmental objectives and law and taking into account climate proofing. This Action also has the purpose of fostering the application of an integrated approach during the set-up of navigation projects in order to contribute to the achievement "Good Ecological Status" and "Favourable Conservation Status", respectively complying with the Water Framework¹⁴ and the Habitats directives. It is further envisaged to contribute to service-oriented optimisation of lock operations and shore side infrastructure, by improving the availability and quality of mooring places and bridge clearances where necessary; and to contribute to better multimodal accessibility of inland ports and transshipment sites to other transport modes and their hinterland (in close collaboration with Priority Area 1b, there: Action 2 and 6).

TARGET: Achieve a notable improvement of the fairway conditions and shore side infrastructure along the Danube and its navigable tributaries, confirmed by the waterway users by means of an annual user survey.

ACTION 2: Foster business development

Description: The objective of this action is to support transnational initiatives to promote inland waterway transport and business development in order to raise the modal share of inland waterway transport in the Danube Region. In order to achieve this, regular stakeholder meetings will be set up to identify waterway user needs on a continuous basis and market analyses will be conducted to identify promising market segments for Danube navigation. Ultimately, the purpose of the Action is to contribute to international business-to-business meetings aimed at raising modal share of inland waterway transport.

TARGET: Contribute to transnational business-to-business (B2B) meetings on an annual basis¹⁵.

ACTION 3: Facilitate fleet modernisation

Description: The objective of this action is to develop the Danube fleet in order to reduce emissions of greenhouse gas and air and water pollutants with due regard to the objective of climate neutrality, and to introduce innovation in this sector. In order to achieve this, PA 1a will monitor ongoing innovations in greening and fleet modernisation technologies and contribute to the development of a roll out strategy to support the uptake and practical implementation of innovation and modernisation measures in the Danube fleet. PA 1a assesses experiences of related projects, as for instance the LIFE-funded Clean Inland Shipping project (<https://www.clinsh.eu/>).

TARGET: Promote the use of EU funds for fleet modernisation and support the set-up of national funding schemes.

¹³ TEN-T Regulation 1315/2013

¹⁴ The WFD objective includes also good chemical status – relevant in the context of reducing pollution from ships, e.g. by PAHs and certain antifoulants.

¹⁵ After a successful pilot in 2019, B2B meetings are planned to be held back-to-back with the Annual Fora.

ACTION 4: Support the further roll-out and enhancement of River Information Services

Description: The objective of this action is to continuously implement and improve harmonised River Information Services (RIS) on the Danube and its navigable tributaries according to legal provisions on European level and to ensure international data exchange. In order to achieve this, PA 1a will promote the creation and use of service-oriented, timely and user-friendly information on site and online on current and future fairway conditions. Effectiveness and efficiency of traffic management can be further improved with the help of better traffic information. Furthermore, the establishment of RIS-based solutions for logistics and transport management purposes is supported, facilitating the integration of other modes of transport.

TARGET: Ensure the online provision, availability and interoperability of up-to-date Fairway Information Services in the Danube Region.

ACTION 5: Contribute to the enhanced quality of education and jobs

Description: The objective of this action is to solve the shortage of qualified personnel and harmonise standards for competences for crew professions in Danube navigation. In order to achieve this, PA 1a will support the Danube-wide application of EU Directive 2017/2397 on the recognition of professional qualifications not only in EU Member States, but also in non-EU riparian states. Furthermore, this action will identify measures to increase the availability of nautical personnel, the attractiveness of jobs in the sector, and the spreading of knowledge on Danube navigation to future decision makers and dispatchers of logistic supply chains.

TARGET: Facilitate the implementation of the provisions of Directive 2017/2397 in all Danube riparian states, putting specific emphasis on non-EU riparian states.

ACTION 6: Contribute to the simplification, harmonisation and digitalisation of administrative processes

Description: The objective of this action is to establish time-efficient, service-orientated and transparent administrative procedures, especially within the context of border controls. In order to achieve this, PA1a will together with PA11 harmonize and simplify border controls by means of guidance documents and an extended set of standardized control forms. Moreover, PA1a will support the preparation of new digital tools to further improve the efficiency of border controls.

TARGET: Achieve a notable improvement of administrative procedures, especially border controls, in inland navigation on the Danube and its navigable tributaries by 2023, as confirmed by the waterway users by means of user surveys.

C) Examples of projects / activities (past, present or future)

Ad ACTION 1: FAIRway Danube project; Trimodal Linz port – rail connection and port enhancement (both Connecting Europe Facility); DAPHNE project (INTERREG DTP)

Ad ACTION 2: ENERGY BARGE project (INTERREG DTP)

Ad ACTION 3: GRENDDEL project (INTERREG DTP)

PROMINENT project (Horizon2020)

Clean INland SHipping project – CLINSH (LIFE)

Ad ACTION 4: RIS COMEX project (Connecting Europe Facility)

Ad ACTION 5: Danube SKILLS project (INTERREG DTP)

Ad ACTION 6: DANTE project (INTERREG DTP)

Detailed information on these example projects can be found through the PA1a project database:
www.danube-navigation.eu/projects / <https://navigation.danube-region.eu/projects/>

PRIORITY AREA 1B: RAIL-ROAD-AIR MOBILITY

A) Strategic frame

- 1) Mission of PA 1b in the 2010 Action Plan: "to improve mobility and multimodality – rail, road and air transport"

PA objectives ("targets", as of 2016):

- Support efficient freight railway services and improve travel times for competitive passenger railway connections between major cities in the Danube Region by 2030
- Support fully functional multi-modal TEN-T Core Network Corridors by 2030
- Support the development of efficient multimodal terminals at sea, river and dry ports in the Danube Region and ensure their connectivity and access through integration of all modes of transport and efficient logistics services by 2030
- Support improvement of the regional air connectivity and implementation of the Single European Sky initiative
- Facilitate improvement of secondary and tertiary roads in the Danube Region
- Support safe and sustainable transport and mobility in the Danube Region.

- 2) EU Cohesion Policy Provisions

- *Relevant policy objective(s):*
 - PO 1, "a smarter Europe";
 - PO 2, "a greener Europe"; and
 - PO 3, "a more connected Europe"
- *Specific policy objective(s):*
 - developing a sustainable, climate-resilient, intelligent secure and intermodal TEN-T

- 3) Enlargement Policy Provisions

- To strengthen economic and social development through increased connectivity and regional development
- To support territorial and cross-border cooperation

- 4) EU Neighbourhood Policy Provisions

- To support and foster dialogue and cooperation with third countries and regions in the Neighbourhood

- 5) Sector-relevant background

- White Paper on Transport (2011) and subsequent document on EU transport policy
- TEN-T network as laid down in Regulation (EU) No. 1315/2013
- Connecting Europe Facility (CEF), Regulation (EU) 1316/2013
- Treaty establishing the Transport Community (EU-Western Balkans), relevant to road, rail, maritime, inland waterway, intermodal/combined transport
- EU legislation, e.g. COM (913)2010

- National Emission Ceilings Directive (NECD), Ambient Air Quality Directives (AAQD)
- The Connection with the sea – Black Sea - should be further considered.
The bridging role of the Black Sea basin is highlighted by the Europe-Asia Connectivity Strategy and the Council Conclusions on EU's engagement to the Black Sea regional cooperation.

B) Actions and targets

BACKGROUND & DANUBE REGION SPECIFICS

The EU Member States are part of the Single European Market that gives many advantages to performing trade within the EU-28. The EU efforts to ease and harmonise activities in the transport sector are marked by e.g. a White Paper 2011 "Roadmap to a Single European Transport Area - Towards a competitive and resource efficient transport system". Furthermore, the Communication by the European Commission on the development of a Single Railway Area (2010) aims to facilitate the sustainable development of the European economy by providing high-quality, reliable, safe and efficient railway services. The "Single European Sky" (2004) main objective is to reform Air Transport Management in Europe in order to cope with a sustained air traffic growth and air traffic operations under the safest, more cost- and flight-efficient and environmentally friendly conditions. This is related to logistics, where the European Commission adopted "Freight Transport Logistics Action Plan" (2007). The aim of the above-mentioned EU initiatives is to use a common approach leading to greater efficiency and optimal capacity use, as well as increased safety and security for all modes of transport. On the other hand, non-EU Member States within the macro-region have no common guidelines, recommendations or policies. The question how EUSDR coordination activities could contribute to synergy of all ongoing policies and works on projects and at the same time not to add to redundancy of already carried out or ongoing actions is an enormous challenge by itself. As one of the most important challenges for PA 1b, which at the same time give a lot of satisfaction, remains coordinating activities between the European Commission, EU countries and non-EU countries, as well as all relevant international institutions and stakeholders acting in the Danube Region.

ACTION 1: To bring to completion the TEN-T (rail and road) core network crossing the Danube Region, overcoming the difficulties and the bottlenecks, and taking into account environmental, economic and political challenges, particularly in the cross-border sections

Description: Following work of EU coordinators on a regular basis and contributing to core network meetings. Supporting TEN-T extension to neighbouring countries (non-EU member states) and contributing to cross-border challenges by organising high level events. Identifying key stakeholders and organising workshops and conferences, in order to exchange best practices within and outside the Danube Region. Identifying and ranking the most critical problems and continuously supporting all work on missing links and bottlenecks along the TEN-T network. Where and when possible preparing and adopting strategic guidelines to support efficient freight and passenger railway services on core network, and identifying and supporting the development and maintenance of comprehensive links to the TEN-T core network.

TARGET: to support completion of the TEN-T (rail and road) core network crossing the Danube Region by the end of 2030.

ACTION 2: To support the implementation of the Rail Freight Corridors (RFC) forming part of the European rail network for competitive freight (Reg. 913/2010) with extension to candidate and neighbouring countries

Description: Support and monitor the implementation of the Alpine-Western Balkan Rail Freight Corridor (RFC) and the Rhine-Danube RFC. Identifying key stakeholders (multimodal terminals, port authorities, logistic operators), and drafting a study in order to identify beneficiary needs of intermodal transport in the Danube Region. Establishing a permanent and regular cooperation with PA 1a incl. meetings of the multimodal transport stakeholders. Identifying possible new projects (i.e. new possible terminals, upgrading of the existing terminals) and drafting a list of priority projects (study), as well as implementing new projects and sharing best practices within and outside the Danube Region. Supporting the coordinated implementation of relevant Rail Freight Corridors in the Danube Region. The implementation of RFC should focus on ensuring interoperability, sufficient capacity for rail freight services of high quality and reliability and to improve and harmonise rail infrastructure standards relevant for freight traffic, especially axle-loads, train-lengths and loading gauges, along the entire corridors. In addition, promotion of interoperability, supporting removal of cross-border administrative, as well as operational and technical barriers, and supporting deployment of traffic management systems (ERTMS) are important activities of this action.

TARGET: To establish a permanent and regular cooperation with PA 1a on multimodal transport issues, e.g. a joint Working Group or joint SG meetings, beginning in 2020. – To establish a Working Group to examine and propose solutions to remove cross-border administrative, as well as operational and technical barriers for rail and road transport, and support the deployment of traffic management systems (ERTMS) by end of 2025, to support – not to duplicate - , where needed, the work of existing structures such as the Core Network Corridors and the RFC.

ACTION 3: To enhance cooperation between air traffic stakeholders in order to improve regional connectivity and prepare a plan to implement shorter plane routes

Description: Identifying key air traffic stakeholders (small airports, local communities, business associations, airplane manufacturers, etc.), involving the main macro-regional actors and raising the macro-regional awareness by promoting enhanced regional connectivity, with due regard to the EU's climate provisions. Drafting a study on small airports and preparing a basic policy document, bearing in mind that investment in airport infrastructure will not be supported by ERDF and the Cohesion Fund. Furthermore, jointly designing and implementing the Single European Sky Initiative, in accordance with the selection of routes identified and agreed upon by countries of the macro-region. Monitoring and facilitating Functional Airspace Bloc (FAB)'s consensus for these project objectives and activities. Facilitate the creation of missing FAB and the cooperation between the existing FABs in the Danube Region. To implement SESAR, the technological part of the Single European Sky, in the Danube Region. Intelligent traffic systems in the air transport sector contribute to reduce airports' environmental footprint and to minimise nuisances like noise and air pollution. Supporting the European ATM Master Plan Level 3 Implementation Plan of the European ATM Master Plan that brings together and provides the framework for the commonly agreed actions to be taken by ECAC

(the European Civil Aviation Conference) stakeholders, in the context of the implementation of SESAR.

TARGET: to support the full implementation of SESAR in the Danube Region by end of 2023.

ACTION 4: To ensure sustainable metropolitan transport systems and mobility

Description: Identifying and listing best practices in the macro-region and the EU, while taking into account differences between the states. Each country permanently works on the project design to ensure sustainable transport systems and mobility in the urban and suburban areas. Monitoring and promoting achievements of flagship projects. Identifying and exchanging best practices within and outside the Danube Region with focus on the metropolitan areas which are of crucial importance to the mobility in the Danube Region. Contributing to the competitiveness and attractiveness of metropolitan regions in the Danube area while at the same time, making a strong contribution to climate protection and to improve health in urban areas by establishing clear links with Air Quality Plans, NAPCPs, and LIFE Integrated Projects on air and water whenever applicable. Including the further development of e-mobility by developing markets and infrastructure in densely populated areas in cooperation with enterprises. Promoting the cooperation of public and private transport companies in public procurement for environmentally friendly vehicles and the development of standardised high-quality transport and mobility internet information platforms for citizens. Enabling capitalization of a wide range EU-projects already dealing with urban mobility and help to implement the EU Action Plan for Urban Mobility (2009).

TARGET: To identify relevant and innovative approaches for urban mobility in the EUSDR, facilitate knowledge transfer and exchange of best practices

ACTION 5: To improve the regional / local cross-border infrastructure and the access to rural areas by facilitating secondary and tertiary transport infrastructure

Description: Supporting development and maintenance of secondary road network in the Danube Region and in particular links to the TEN-T core and comprehensive network. Identifying key border-crossings that hamper smooth mobility of peoples and goods, including main border-crossings between the EU and non-EU countries. Supporting and encouraging responsible ministries to start joint activities regarding the action. Monitoring and promoting main border crossings. Regularly exchanging information on activities for improvements on the cross-border sections.

TARGET: To establish a working group to examine and propose solutions to remove cross-border administrative, as well as operational and technical barriers for rail and road transport, and support projects related to better transport connectivity.

ACTION 6: To develop further nodal planning for multimodality

Description: Use of same infrastructure (roads and railways) for freight and passengers transport leads in many nodes to congestion and loss of productivity. This action will design and implement projects, in accordance with pre-identified and agreed nodes in all EU Member states, and tentatively in the five non-EU countries of the Danube Region.

TARGET: To support the development of efficient multimodal terminals at sea, river and dry ports in the Danube Region and ensure their connectivity and access through the integration of all modes of transport and efficient logistics services by 2030; and to increase the number of inland ports and transshipment sites ("hubs") with sufficient accessibility by water, rail and road by ten "hubs" in the whole Danube Region until 2030.

ACTION 7: To develop further Intelligent Traffic Systems by using environmental-friendly technologies, especially in urban regions

Description: Design, implement and monitor projects, in accordance with identified and agreed upon priority topics of ITS deployment in the macro-region. Supporting relevant research and innovations (closing the knowledge gap) and organizing annual conferences in the Danube Region with focus on key research. Support ITS deployment by 2030. Supporting sustainable mobility practices, programmes and projects such as cycling and walking.

ACTION 8: To raise awareness for road safety and encourage exchange of best practices

Description: Road safety varies among the countries of the Danube Region due to too often poor infrastructure, age of vehicle fleet and driver's behaviour. Support road safety projects and contribute to "vision zero" (no fatalities and serious injuries on the roads) by organising various events and exchanges (e.g. conference, workshop or seminar). Road safety priority topics to be deployed or implemented in the macro-region are to be consulted with stakeholders. Improving driver's behaviour could be linked with eco-driving to create synergies with reducing air pollution, e.g. building on experiences made during a LIFE project in Slovakia¹⁶.

TARGET: To halve the number of fatal and serious road traffic injuries from 2020 to 2030.

C) Examples of projects / activities (past, present or future)

- Transgreen project (Action 1) – for further details see the examples to PA6
- ACTION 1: one might draw on experiences from the cross-border-cooperation project TwinCity Rail Vienna - Marchegg - Bratislava line.
- ACTION 5: one might draw on experiences from the cross-border cooperation project Better connection of Alexandria (RO) and Cherven Bryag (BG) to TEN-T

Other projects could be linked to the improvement of rail connections between Romania and Bulgaria (within the CORE TEN-T corridor), for instance:

(1) The suggested rehabilitation of the Romanian railway-line 902 Bucharest-Giurgiu and possible renovation of the bridge connecting Giurgiu on the Romanian side and Ruse on the Bulgarian side of the Danube river, or

(2) Electrification of the existing railway line Craiova – Calafat, thus improving the connection with Bulgaria through the Bridge Calafat-Vidi.

¹⁶ LIFE Clean Air, <http://www.cleanair-europe.org/en/projects/cepta/eco-driving/>

PRIORITY AREA 2: SUSTAINABLE ENERGY

A) Strategic frame

- 1) Mission of PA 2 in the 2010 Action Plan: "to encourage more sustainable energy"
PA objectives:
 - To help achieve national targets based on the Europe 2030 climate and energy targets
 - To remove existing bottlenecks in energy to fulfil the goals of the Energy Union within the Danube Region
 - To better interconnect regions by joint activities with relevant initiatives and institutions

- 2) EU Cohesion Policy Provisions
 - *Relevant policy objective(s):*
 - Mainly PO 2, "a greener, low-carbon Europe";
 - *Specific policy objective(s):*
 - promoting energy efficiency measures; promoting renewable energy; developing smart energy systems, grids and storage at local level

- 3) Enlargement Policy Provisions
 - To strengthen economic and social development through reinforced environmental protection, increased resilience to climate change, accelerating the shift towards a low-carbon economy
 - To support territorial and cross-border cooperation

- 4) EU Neighbourhood Policy Provisions
 - To support and foster dialogue and cooperation with third countries and regions in the Neighbourhood;

- 5) Sector-relevant background
 - EU energy and climate policy framework (Energy Union, Clean Energy for all Europeans package, 2050 Long-term Strategy, Paris Agreement, Energy Security Strategy, EU Strategy for Heating and Cooling)
 - Renewable Energy Directive 2018/2001/EU
 - Energy Efficiency Directive 2012/27/EU and its amending directive 2018/2002
 - Directive 2018/844 amending Directive 2010/31/EU on Energy Efficiency in Buildings;
 - Regulation 2018/1999 on Governance of Energy Union;
 - Regulation 2019/943 on electricity internal market;
 - Directive 2019/944 on common rules on electricity internal market
 - Carbon Capture and Storage Directive 2009/31/EC
 - Directive on the deployment of alternative fuels infrastructure 2014/94/EU
 - National Emission Ceilings Directive (NECD)
 - Ambient Air Quality Directives (AAQD)

B) Actions and targets

BACKGROUND & INTRODUCTION

The EU Energy and Climate policy framework for 2030 establishes ambitious EU commitments to make further greenhouse gas reductions (of 40%) in line with the cost-effective pathway described in the 2050 roadmap, for the share of renewable energy consumed (at least 32%) and saving at least 32,5% energy by 2030 at EU level compared to 2007 baseline projections. In line with the Governance of the Energy Union regulation, the Member States prepared their National Energy and Climate Plans (NECP) to be regularly assessed.

The increasing use of renewable energy sources in EU contributes to more sustainable energy production and lower dependency on imported fossil fuels, and drives technological innovation and employment across Europe.

The cheapest energy is the one that is not used or saved; therefore, energy efficiency should be at first place and energy efficiency has to be increased at all stages of the energy chain from generation to final consumption. Accordingly, EU measures focus on sectors where the potential for savings is the highest, such as buildings. Heating and cooling is the largest single source of energy demand in Europe. 84% of heating and cooling is still generated from fossil fuels. In order to fulfil the EU's climate and energy goals, this sector must sharply reduce its energy consumption and cut its use of fossil fuels. Energy efficiency and clean renewable energy will also contribute to help reduce air pollution, which is a major environmental problem throughout the Danube Region.

In addition to the heating and cooling sector, the other key area is transportation, as this is the only sector among the major greenhouse gas emission sources which still increases its emissions.

DANUBE REGION SPECIFICS

Following the Europe 2030 climate and energy framework and Energy Union Strategy, one can observe increasing attempt to spread the use of renewable energy sources (RES) in the Danube Region. The available biomass, solar, wind, hydro, geothermal resource base varies significantly across the countries, therefore there is a need to further map the energy landscape to fully understand the potential of the regions and issues we are facing.

The decarbonisation of the heating sector in the Danube Region needs regional cooperation and harmonised actions in order to reduce the energy consumption of the heating sector and cut its use of fossil fuels. A significant segment of the heating sector is district heating, which - by traditions established in the Communist era – is widespread in many countries of the Danube Region. These systems are often obsolete, fed by gas and coal, therefore have significantly negative impacts on greenhouse gas emissions, air quality, but also raise serious issues on energy efficiency and security of supply (due to the imported nature of many of these resources, especially gas). In addition to heating, recent trends in climate change require the adaption of cooling systems as well, for which renewables provide excellent opportunities. This is a new challenge. The trends of emissions of greenhouse gases and air pollutants in the transport sector are unfavourable in the Danube Region, due to the transit role of the region and the increasing dominance of the diesel-fuelled road transportation. Thus, it is of utmost importance to promote the use of alternative fuels in the region and contribute to the implementation of the 2014/94/EU Directive at regional level.

In order to better interconnect regions, the key actions of PA 2 focus on improved cooperation with the relevant EU initiatives like the Central and South Eastern European Energy Connectivity (CESEC) High Level Group, the Energy Community, the Carpathian Convention and with the energy-related areas and thematic groups of the other macro-regional strategies (EUSBR, EUSALP, EUSAIR), as well as other international organisations working in the field of energy policy developments (e.g. IEA, IRENA, UNECE, etc.).

The Central and South Eastern Europe Energy Connectivity (CESEC) High Level Group¹⁷, established in 2015, works to accelerate the integration of central eastern and south eastern European gas and electricity markets. The initial aim was to coordinate efforts to facilitate the swift completion of cross-border and trans-European projects that diversify gas supplies to the region and to develop regional gas markets and implement harmonised EU rules. In 2017, CESEC's scope was extended to a joint approach on electricity markets (including priority interconnections projects), energy efficiency and renewable development.

The Energy Community which has been established in 2005 with the aim to implement the relevant EU energy acquis, to develop an adequate regulatory framework and to liberalise their energy markets is the most important part of PA 2 in terms of cooperation with the non-EU member state countries.

Mountain areas are of special importance in the Danube Region. With the exception of Polish part, the whole Carpathians mountain range extending over 450,000 km² is located within the Danube Region. International cooperation on sustainable development and protection of the Carpathians is already ongoing within the framework of the *Carpathian Convention* (covering SK, CZ, HU, PL, RO, RS and UA). With such geographical, but also thematic overlap, further exploration of synergies and avoiding duplication is needed in the energy field. Activities are especially foreseen cooperating with the Working Group of Sustainable Industry, Energy, Transport and Infrastructure, like harmonising/updating its Renewable Energy Action Plan, or the Protocol on Sustainable Transport. Some EUSDR countries have coastal areas as well, therefore activities in line with the EU Integrated Coastal Zone Management Program are also foreseen.

ACTION 1: To further explore the sustainable use of clean biomass, solar energy, geothermal, hydropower and wind power to increase the energy independency and to promote and support multipurpose cross border RES utilisation projects.

Description: Large territories of the Danube Region are rich in renewable energy resources, especially biomass¹⁸, geothermal and hydropower, however their current use is far below the potentials. The

¹⁷ CESEC consists of EU Member States: Austria, Bulgaria, Croatia, Greece, Hungary, Italy, Romania, Slovakia and Slovenia and contracting parties of the Energy Community Treaty: Ukraine, the Republic of Moldova, Serbia, the Republic of North Macedonia, Albania, Bosnia and Herzegovina, Kosovo, and Montenegro. [The designation of Kosovo is without prejudice to positions on status, and is in line with UNSCR 1244/1999 and the ICJ Opinion on the Kosovo declaration of independence.]

¹⁸ Regarding biomass, attention must be paid to the sustainability of local supply and to the serious impact on air quality, especially on levels of Particulate Matter and Benzo(a)pyrene which in many areas of the Danube region are exceeding EU standards. The risk of trade-offs of scaling up biomass production, harvesting, processing and combustion e.g. on biodiversity, protected habitats, water quantity and quality, and soils, shall also be considered.

available biomass, solar, wind, hydro, geothermal resource base varies significantly across the countries, therefore there is a need to map the energy landscape further to fully understand issues we are facing and the potential of the regions. The current legislation in the field of energy and climate of the EU and the non-EU countries in the Danube Region promotes the use of biomass for energy purposes, including domestic heating. However, considering the potential risks for the human health and the environment of biomass burning, mainly because of emissions of air pollutants and overexploitation of natural resources, control is necessary to use biomass fuel both safely and sustainably. A number of EU directives are currently available in the areas of eco-design, energy labelling of appliances and energy efficiency in buildings, to streamline the use of biomass for energy purposes. In addition, the green procurement, bio-economy and circular economy concepts can also be used to orient policies for the appropriate use of biomass resources¹⁹.

Coordinated actions, cross-border projects and common activities will ensure the further deployment of renewables.

TARGET: supporting each ESUDR country to reach its national target by 2030 in order to contribute to the collaborative EU 30% renewable energy in the overall use by 2030 while complying with the National Emission Ceilings.

ACTION 2: To promote energy efficiency and use of renewable energy in buildings and heating systems including district heating and cooling and combined heat and power facilities

Description: In the Danube Region households, heating and hot water supply account for more than 2/3 of the total final energy use. The overwhelming part of heating is produced by the combustion of fossil fuels with a damaging environmental impact associated with greenhouse gas emissions and emissions of air pollutants, notably Particulate Matter. The decarbonisation of the heating sector in the Danube Region needs regional cooperation and harmonised actions in order to reduce the energy consumption of the heating sector and cut its use of fossil fuels.

TARGET: to support that at least five obsolete fossil-fuel based district heating systems planned to be modernised / transformed to be RES based by 2025.

ACTION 3: To promote decarbonisation and reduction of air pollutants in the transport sector, regarding both public and freight transportation by developing the infrastructure for alternative fuels

Description: PA 2 will focus on knowledge sharing in the field of use of alternative fuels and exchange of best practices in green transportation, thus contributing to the implementation of the 2014/94/EU Directive at regional level.

TARGET: supporting alternative fuel based local transport systems in at least 3 pilot areas by 2025.

¹⁹ JRC, Sustainable use of biomass in residential sector - A report prepared in support of the European Union Strategy for the Danube Region (EUSDR), EUR 29542 EN, Publications Office of the European Union, Luxembourg. 2018, ISBN 978-92-79-98348-1, doi:10.2760/908058, JRC113417.

ACTION 4: To improve energy efficient, cost efficient and innovative low-carbon technologies, including smart solutions while respecting the principle of technological neutrality

Description: New technologies and innovative solutions supporting the integration of energy efficient and smart systems are required all over the Danube Region. PA 2 will focus on engaging stakeholders and providing a networking platform for brainstorming and introducing new ideas generating novel projects beyond the state-of-art in the field of sustainable use of various energy sources, applying various ground-breaking technologies.

TARGET: promoting and supporting the implementation of at least three new technology focused projects launched by 2025.

ACTION 5: To enforce regional cooperation with the aim of supporting the implementation of projects connecting energy markets with a focus on the projects of the Central and South Eastern European Energy Connectivity (CESEC) initiative

Description: The signatory countries of the CESEC initiative are committed to jointly resolve challenges related to the security of gas and electricity supply and promote source diversification by implementing coordinated actions in the region with the ultimate goal of boosting the energy market integration. In order to contribute to the above, PA 2 shall serve as a platform for discussion for the Danube countries to oversee the full and timely implementation of the CESEC Action Plan, especially moving to soft measures.

TARGET: provide a platform to follow the implementation of the CESEC action plan.

ACTION 6: To exchange best practices and to develop activities to decrease energy poverty, to increase the protection of vulnerable consumers and to empower consumers to engage in the energy market

Description: High energy-prices, low household incomes, inefficient buildings and appliances, and specific household energy needs all contribute to energy poverty, which is a serious issue in many parts of the Danube Region. This can lead to serious consequences such as air pollution due to inefficient domestic heating or the use of polluting “fuels” such as waste. PA 2 therefore aims to continue raising the awareness on the need for a more comprehensive treatment of the issue in scientific and policy practice and lay the ground for an Energy Poverty Reduction Action Plan.

TARGET: elaboration of Energy Poverty Reduction Action Plan for the Danube Region.

ACTION 7: To explore new and innovative solutions of (subsurface) energy storage

Description: The transition to a low-carbon energy system in Europe will likely require increased storage capabilities for different energy vectors or effluents. This transition calls for a strategic planning of the various emerging technological solutions. PA 2 intends to conduct a region wide state-of-art survey on these developing technologies, especially focussing on those building on the gas storage infrastructure, and enforce regional cooperation to map the energy storage potentials in the region.

TARGET: elaboration of a policy paper on subsurface energy storage potentials in the Danube Region and support the implementation of such projects.

ACTION 8: To encourage exchange of information and best practices to improve cooperation, create synergies and to initiate joint projects with other macro-regional initiatives and relevant stakeholders at European and global level

Description: In order not to duplicate efforts and to better use available resources, in the following years PA 2 will pay greater attention to create possible joint initiatives and coordinated actions with the energy-related areas and thematic groups of other (macro-) regional strategies (EUSBR, EUSALP, EUSAIR, Carpathian Convention), as well as other international organisations working in the field of energy policy developments (e.g. IEA, IRENA, UNECE, etc.), building on the results achieved by past and ongoing ESIF, Horizon, EP pilot and LIFE projects.

TARGET: at least five joint workshops, studies or position papers by 2025.

ACTION 9: To encourage project generation related to the energy field

Description: PA 2 is aiming to introduce the actual financing opportunities to its stakeholders, supporting them in the application process and in case the project is selected and funded, PA 2 aims to support them during the implementation phase as well. The goal is to encourage macro-regional project generation related to the spread of sustainable energy usage.

TARGET: to generate 15 successful proposals, making use of all relevant funds and programmes, in the next programming period (until 2027).

C) Examples of projects / activities (past, present or future)

- Ad ACTION 1: JRC reports for the EUSDR, e.g. Sustainable use of biomass in the residential sector²⁰, 2018
- Ad ACTION 1: Darlinge - Danube Region Leading Geothermal Energy
- Ad ACTION 1: Project Geothermal district heating in Romania - Potential of the municipalities of Lovrin and Gottlob
- Ad ACTION 1 and 7: DanuP-2-Gas
- Ad ACTION 2: Project Energy Efficiency in Wastewater Treatment Plants in Hungary
- Ad ACTION 3: Deployment of fuel cells and hydrogen applications
- Ad ACTION 4: DanubeFEST - Flexible Energy Storage Technologies in the Danube Region
- LIFE Integrated Projects on air in Bulgaria, Hungary, Slovakia
- EP Pilot Project on waste burning for domestic heating

²⁰ <https://publications.jrc.ec.europa.eu/repository/bitstream/JRC113417/kjna29542enn.pdf>

PRIORITY AREA 3: CULTURE AND TOURISM

A) Strategic frame

- 1) Mission of PA 3 in the 2010 Action Plan: "to promote culture and tourism, people to people contacts"

PA objectives as of 2019:

I. Developing sustainable tourism

- Develop sustainable forms of tourism, including green tourist products and sustainable mobility solutions along the Danube Region;
- To ensure the sustainable preservation, conservation, socialization and contemporary interpretation of cultural heritage and natural values;

II. Science, research and new technologies in culture, tourism and people to people contacts

- Support the implementation of a harmonised monitoring system dedicated to sustainable tourism and cultural/natural heritage, able to provide comparable statistical data in the Danube Region;
- Promote the exchange of practices and networking in the field of a.) Arts incl. contemporary arts b.) Support the creation of linkages and synergies between the cultural and creative sectors and the tourism sector;

III. Valorising, promoting and protecting the cultural heritage

- Establish the Danube Region as important European tourist destination and further develop and strengthen the Danube Brand for the entire Danube Region;
- Establish the Danube as a transnational multicultural treasury cultural and natural travel route;
- To create a 'Blue Book' on Danube cultural identity/Build on cultural diversity and heritage as the strength of the Danube Region both for the well-being of the local inhabitants and as tourism resources; and for promoting and preserving cultural identity of local communities along the Danube;
- Promote the development of quality products, infrastructure and innovative forms of tourism and culture by SMEs and public private partnerships;
- Promote skilled labour workforce, education and skills development in the areas of tourism and culture for sustainable jobs in the region

- 2) EU Cohesion Policy Provisions

- *Relevant policy objective(s):*
 - Mainly PO 5, "a Europe closer to citizens";
 - And with a stronger focus on sustainable and environment-friendly investments also PO 2, "a greener, low-carbon Europe ";
- *Specific policy objective(s):*

- Supporting PO 5 by:
 - (i) fostering the integrated social, economic and environmental development, cultural heritage and security in urban areas;
 - (ii) fostering the integrated social, economic and environmental local development, cultural heritage and security, including for rural and coastal areas also through community-led local development.;

3) Enlargement Policy Provisions

- To strengthen economic and social development through regional development, agriculture and rural development, social and employment policies.
- To support territorial and cross-border cooperation.

4) EU Neighbourhood Policy Provisions

- “To support and foster dialogue and cooperation with third countries and regions in the Neighbourhood;

5) Sector-relevant background

- New European Agenda for Culture of the EC (May 2018)
- European Framework for Action on Cultural Heritage – Cultural Heritage for an Inclusive Europe (December 2018)
- Work Plan for Culture 2019-2022, November 2018)
- The EIT (European Institute for Innovation and Technology) will launch two new KICs (Knowledge and Innovation Communities); one of them with focus on the cultural and creative industries (CCI) planned to start in 2022.

B) Actions and targets

BACKGROUND & INTRODUCTION

The assessment of the achieved results so far shows that almost all of the old PA 3's actions with a few exceptions have been partially realised.

It is clearly demonstrated that all projects part of Danube Transnational Programme (DTP) Sub-pole 5a - Cultural values in the Danube Region contribute to almost all activities included in the EUSDR PA 3 Action Plan. In the Sub-pole the following projects financed under the 1st or 2nd DTP call for proposals are included: CultPlatForm21, ART NOUVEAU, DANUrb, INSIGHTS, Iron Age Danube, NETWORLD and REDISCOVER. Reasonably, they are supporting the actions related to enhancing the diversity, preservation and promotion of culture in the Danube Region.

On the other hand, the DTP projects of Sub-pole 5b - Natural values contributed towards the actions for sustainable tourism and the infrastructure for tourism. Among the five projects in this area, two are concentrating on ecological corridors by enhancing framework for management of Transboundary UNESCO Biosphere Reserve "Mura-Drava-Danube" and by addressing connectivity

issues along the Danube River corridor in between the national parks. The other three projects tackle issues like sustainable tourism development in geo-parks; triggering economic development in Natura2000 sites; and protection and sustainable use of natural heritage represented by karst bio-regions. Also, some DTP projects under other thematic sub-poles like Transdanube Pearls contributed towards PA 3 actions.

At the same time, a notable development of 2018 is the involvement of other actors besides the DTP in activities contributing to the implementation of the PA 3 actions not least by exploring further the potential of the DTP projects under realisation.

The Council of Europe's Routes4U project started its work to foster regional development through some specific tools. For example, the first Routes4U meeting for the Danube Region contributed to identifying the regional needs of the Danube Region with regard to the Cultural Routes Programme and featured three (CultPlatform21, ART NOUVEAU, Iron Age Danube) of the DTP pole 5a projects as contributing to already established cultural routes or with potential of being developed into new ones.

I. Developing sustainable tourism

ACTION 1: Promote sustainable tourism in the Danube Region and capitalise on EUSDR projects in the areas of culture, nature and tourism

Description: Promote investments in green and blue forms of tourism incl. all forms of ecotourism, cultural tourism, cycling, hiking and activity tourism as well as innovative SMEs active in this area; Develop effective destination management structures/systems: develop integrated approach to sustainable destinations, providing synergies among all stakeholders (from tourism, culture, sports, health etc), stimulating development of coherent destination management (through trainings, education etc.); Establish excellence centres for innovation in inter-disciplinary product design (sub forms of creative and cultural tourism, health tourism, active tourism, etc.)

ACTION 2: Support and promote cultural tourism in the Danube Region

Description: Develop relevant clusters and networks of museums and galleries including interpretation and visitor centres on both tangible and intangible heritage within the Danube Region and develop interpretation, communication and marketing strategies for its touristic valorisation. Awareness raising campaigns to be organised in order to stimulate an integrated approach to cultural heritage presentation and interpretation for wider tourism audiences and visitors. Visibility of heritage to be stimulated through innovative sustainable tourism promotion. Promote the UNESCO heritage and Danube Limes in the member countries, raise awareness about the tentative lists in the respective countries, organisation of events / festivals with impact on regional level, which promote the cultural heritage of the region.

ACTION 3: Invest in sustainable quality products, services, innovative forms and infrastructure in the fields of tourism and culture, promote skills, education and creating jobs in the related areas

Description: Stimulate cross-sectoral partnerships/projects/initiatives; invest in knowledge management and human resource development, facilitate mobility schemes for people active in or studying the areas of tourism or culture; stimulate expert-to-expert exchange (E2EE) in order to enhance transparent innovation in cultural tourism initiatives, creating, supporting and implied the SMEs, NGOs from related areas and possible PPP.

II. Science, research and new technologies in culture, tourism and people to people contacts

ACTION 4: Develop a "Smart Destination Danube"

Description: Develop a "Smart Destination Danube", based on sustainable quality products, including a consistent communication and marketing strategy and a common narrative of the Danube. Collect good territorial evidence on cultural and tourism activities, establish a comprehensive database giving an overview of cultural and tourism activities in the Danube Region. Develop an integrated transnational network of entities (observatories) that will collect, process and analyse data, and exchange and disseminate information on sustainable tourism development on a continuous basis. The networks will be a resource centre for monitoring sustainable tourism impact, based on competent research; digitalize the cultural resources for the preservation of the cultural memory of the Danube Region. Promote the development of wellness and different forms of health tourism.

ACTION 5: Promote and encourage the development of the cultural activities and creative sectors

Description: Enhance cooperation of science and research with the cultural heritage (including underwater heritage), natural heritage and tourism sector; promote strategies, concepts, networking and investments in new technologies/digitalization in the area of culture and culture/multicultural and natural heritage; digitalise the cultural resources for promoting and preserving the cultural identity of the Danube Region, develop and promote intercultural and multicultural activities and exchanges among the Danube basin.

III. Valorising, promoting and protecting the cultural heritage

ACTION 6: Promote cultural heritage in the Danube Region

Description: Build on cultural diversity as strength of the Danube Region, develop new and support existing Cultural Routes, protecting of cultural values; Investigate, revive and promote cultural heritage, traditions, folklore, handicrafts, contemporary arts and other authentic activities of ethnic communities along the Danube Region – showcasing and valorising the region's richness and cultural diversity - for preservation, safeguarding, identity building, intercultural dialogue, multicultural community development, communication and storytelling. Enhance the visibility of rural/local, less visited areas, cultural tangible and intangible heritage sites as well as underwater areas and communicate their value; strengthening cooperation and contacts between people of different origins, encouraging creativity and entrepreneurship and stimulating cultural innovation and ethnic as well as economic development, based on cultural heritage, traditions and cultural tourism. Promoting cultural heritage through knowledge transfer, digitalisation, innovation and technology with the aim of stimulating the competitiveness of the creative economy and promoting cultural

tourism. Particular interest will be given to the interpretation of cultural heritage by contemporary arts and new technologies with the aim of developing new narratives.

C) Examples of projects / activities (past, present or future)

- Fund for small projects
- Danube Platform for Intercultural Dialogue
- NEON platform– digital project
- Digital Atlas of Patrimony/Heritage
- Fostering enhanced ecotourism planning along the Eurovelo cycle route network in the Danube Region
- Promotion and development of cultural activities and creative industries

PRIORITY AREA 4: WATER QUALITY

A) Strategic frame

1) Mission of PA 4 in the 2010 Action Plan: "to restore and maintain the quality of waters"

PA objectives as of 2019:

General PA4 objective: realisation of integrated river basin management measures in the Danube Region in line with the EU Water Framework Directive and with the International Danube River Basin Management Plan (DRBMP) in order to save human health and freshwater ecosystems. Contribute to the implementation of the DRBMP and its Joint Programme of Measures based on the "Joint PA4-PA5-ICPDR Paper on Cooperation and Synergy for the EUSDR Implementation" for the development of the Danube Region.

- Contribute to preventing and reducing water pollution from point and diffuse sources in the Danube Region, especially related to organic substances, nutrients, hazardous and emerging substances inter alia by enhancing waste water treatment and by promoting best management practices
- Contribute to protecting water resources and safeguarding drinking water supply
- Enhance conservation measures of Danube migratory fish species
- Enhance climate change adaptation measures related to water quality
- Assist in elaborating / implementing sub-basin management plans, such as Sava, Tisza and Prut sub-basins as well as a Danube Delta management plan

2) EU Cohesion Policy Provisions

- *Policy objective:*
 - PO 2, "a greener Europe"
 - PO 4 "a more social Europe" (education, skills) and
 - PO5 "Europe closer to citizens", by supporting locally-led development strategies and sustainable urban development across the EU.
- *Specific policy objective(s):*
 - promoting sustainable water management;
 - Provision of water for human consumption (extraction, treatment, storage and distribution infrastructure, efficiency measures, drinking water supply)
 - Water management and water resource conservation (incl. river basin management, specific measures of climate change adaptation, reuse, and leakage reduction)
 - Waste water collection and treatment

3) Enlargement Policy Provisions

- To strengthen economic and social development through environmental protection
- To shape the rules, standards, policies and practices in alignment to those of the Union and to reinforce reconciliation and good neighbourly relations

- To support territorial and cross-border cooperation
- 4) EU Neighbourhood Policy Provisions
- To support and foster dialogue and cooperation with third countries and regions in the Neighbourhood
- 5) Sector-relevant background
- EU water legislation, especially Water Framework Directive, Environmental Quality Standards Directive, Groundwater Directive, Drinking Water Directive and its revision, Urban Waste Water Treatment Directive
 - EU Nitrates Directive
 - National Emission Ceilings Directive, Ambient Air Quality Directives
 - EU Resource efficiency roadmap
 - EU Biodiversity Strategy
 - United Nations Sustainable Development Goals (SDG), esp. SDG 6 and 17
 - EU Plastics Strategy
 - EU Circular Economy Strategy
 - Pan-European Sturgeon Action Plan in the framework of the Bern Convention - Sturgeon 2020 Strategy
 - Paris Agreement on Climate Change - EU and Danube Climate Change Adaptation Strategies
 - EU Strategic Approach to Pharmaceuticals
 - EU Common Agricultural Policy
 - EU Common Fishery Policy, in particular provisions for inland fishery, small-scale fishery (Black Sea), and sustainable aquaculture²¹, and the related EMFF national programmes and plans
 - Black Sea Protection Commission

B) Actions and targets

ACTION 1: HAZARDOUS & EMERGING SUBSTANCES: 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. micro plastics-plastics, pharmaceuticals, PFOS)

Description and targets:

- Close knowledge gaps on monitoring of hazardous and emerging substances in surface waters, biota and sediment
- Determine sources and pathways of hazardous and emerging substances emissions

²¹ cf. Communication on Strategic Guidelines for the sustainable development of EU aquaculture - Brussels, 29.4.2013 COM(2013) 229 final

- Quantify water emissions and loads
- Implement prevention and mitigation measures including a more comprehensive evaluation of measures efficiency
- Contribute to capacity building in monitoring, modelling and management of hazardous substances pollution
- Contribute to improved quality of sediments

ACTION 2: WASTE WATER: 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 and targets:

- Identify means to finance infrastructure projects especially in EU Member States that have joined after 2007 and non-EU countries
- Focus on investments in maintenance and rehabilitation of the existing infrastructure
- Enhance and disseminate knowledge on wastewater treatment technologies also considering emerging substances
- 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
- promote alternative collection and treatment of wastewater in small rural settlements, including measures to build capacity at the regional and local level

ACTION 3: WATER & AGRICULTURE: 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 and targets:

- Decouple pollution and water scarcity from agricultural development
- Improve water demand management in agriculture by smart irrigation and water reuse in order to reduce water abstraction needs
- Make agro-environmental measures more attractive
- Provide appropriate information on modern technologies and tools to improve agricultural practices
- Promote good agricultural practices in nutrient management according to the Nitrates Directive (Council Directive 91/676/EEC) and Water Framework Directive
- Close knowledge gaps on measures efficiency
- Raise awareness related to the link between agricultural practices, water and soil quality and biodiversity
- 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
- Contribute to EU Common Agriculture Policy (CAP) national strategic plans

ACTION 4: DRINKING WATER: Promote measures aimed at reducing knowledge deficits related to protecting water resources and safeguarding drinking water supply

Description and targets:

- Contribute to resource efficiency and encourage deliberate and effective water consumption and a water saving culture by the civil and industrial consumers
- Raise public awareness towards the environment 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
- Promote water protection and pollution reduction from the source to tap, according to the proposed revision of the Drinking Water Directive
- 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)

ACTION 5: MIGRATORY FISH: Promote measures to enable fish migration in the Danube River basin.

Description and targets:

- 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
- Foster sturgeon conservation activities including protection of habitats, restoration of fish migration routes and ex-situ conservation measures
- Close knowledge gaps concerning monitoring of pressures and planning of measures for fish migration in coordination with PA 6 (Action 3)

ACTION 6: CLIMATE CHANGE: Promote measures to adapt to climate change impacts in relation to water quality and quantity.

Description and targets:

- Implement water quality measures of the ICPDR Strategy on Adaptation to Climate Change.
- Promote concrete measures to control water abstraction and groundwater overexploitation
- Promote the establishment and maintenance of green infrastructure and natural water retention measures (NWRMs)
- Promote water related measures in urban planning
- Raise farmers' and public awareness about the importance of soil moisture and soil water retention capacity in soil fertility under changing climate conditions

ACTION 7: TOOLS: Enhance cooperation, increase and exchange knowledge and secure financing to water quality measures in the Danube Region.

Description and targets:

- Ensure active involvement of and dialogue with all stakeholders
 - with national and regional, urban and rural decision makers, public authorities;
 - with sectors (agriculture, industry, mining, hydropower, navigation, nature/biodiversity conservation etc.);
 - with the general public including awareness raising and education
- Strengthen territorial cooperation at different levels
 - at EU level and with non-EU countries taking into account the regional differences;
 - with other macro-regional strategies;
 - 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;
 - 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;
 - at sub-basin level considering Danube tributaries (e.g. Sava, Prut, Tisza);
 - at river section level (upstream, middle, downstream, Danube Delta);
 - at Operational Programme level;
 - at trans-boundary project level with targeted result collection, capitalisation, enhancing synergies;
 - including surface and groundwater as well as Marine coastal zones (impacts on Black Sea)
 - 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

C) Examples of projects / activities (past, present or future)

- JOINTISZA project (Action 7) – Interreg Danube project aimed at Strengthening cooperation between river basin management planning and flood risk prevention to enhance the status of waters of the Tisza River Basin²²
- GROWA-SI (Action 6, Action 3, Action 4) - In Slovenia the GROWA project is developing interesting results on calculation (products of water balance modelling through GROWA-SI will be the foundation for further work on environmental indicator "VD_15: quantitative retention of groundwater level" which in the next year will also give information on seasonal variability as well; snow-water-equivalent is calculated too),

²² www.interreg-danube.eu/approved-projects/jointisza

indexes (decadal index of drought stress) and monitoring (monitoring of cumulative water balance). Water balance calculation and irrigation forecast (5 days in advance) for several different locations with agriculture, vegetable and fruit productions is already established

- Other projects: CAMARO-D, PROLINE-CE, SIMONA, DanubeSediment, Danube Floodplain, MEASURES, DEEPWATER-CE, FramWat, REVITAL I., bo-DEREC-CE, ValueInDrops, OPTAIN, IDES, Tid(y)Up

PRIORITY AREA 5: ENVIRONMENTAL RISKS

A) Strategic frame

1) Mission of PA 5 in the 2010 Action Plan: "to manage environmental risks"

PA objectives as of 2019:

- To address the challenges of water scarcity and droughts in line with the Danube River Basin Management Plan – Update 2015, the report on the impacts of droughts in the Danube Basin in 2015 (due in 2016) and the ongoing work in the field of climate adaptation.
- Provide and enhance continuous support to the implementation of the Danube Flood Risk Management Plan – adopted in 2015 in line with the EU Floods Directive – to achieve significant reductions of flood risk events by 2021, also taking into account potential impacts of climate change and adaptation strategies.
- To continuously update the existing database of accident hazard spots (AHS Inventory), contaminated sites and tailing management facilities.
- To support the assessment of disaster risks in the Danube Region, encouraging actions to promote disaster resilience, preparedness and response activities in line with the European Union Civil Protection Mechanism.

2) EU Cohesion Policy Provisions

- *Relevant policy objective:*
PO 2, "a greener Europe by promoting [...] climate adaptation and risk prevention and management";
- *Specific policy objective:* promoting climate change adaptation, risk prevention and disaster resilience

3) Enlargement Policy Provisions

- To strengthen economic and social development through environmental protection
- To shape the rules, standards, policies and practices in alignment to those of the Union and to reinforce reconciliation and good neighbourly relations
- To support territorial and cross-border cooperation

4) EU Neighbourhood Policy Provisions

- To support and foster dialogue and cooperation with third countries and regions in the Neighbourhood

5) Sector-relevant background

- EU water legislation, especially Water Framework Directive, EU Floods Directive, River Basin Management, Water Scarcity & Drought, Sustainable Development, EU Strategy on Adaptation to Climate Change, Seveso III Directive
- United Nations Sustainable Development Goals – particularly SDG 13: Climate Action
- Sendai Framework for Disaster Risk Reduction

- Decision (EU) 2019/420 of the European Parliament and of the Council of 13 March 2019 amending Decision No 1313/2013/EU on a EU Civil Protection Mechanism
- Paris Agreement on Climate Change - EU and Danube Climate Change Adaptation Strategies of the EU and ICPDR
- ICPDR: a Joint Synergy Paper was signed in 2014 defining the way of cooperation; the majority of PA5 actions have been prepared and are implemented in close cooperation with ICPDR.
- Carpathian Convention (MoU signed in December 2017 defining the possible fields of cooperation including environmental risks)
- Global Water Partnership Central and Eastern Europe (GWP CEE): MoU signed in 2019. Permanent observer in the PA 5 steering group (SG). Until now good cooperation in the field of integrated drought management.
- Sava Commission (permanent observer in the PA 5 SG)
- European Flood Alert System (in cooperation with the JRC)

B) Actions and targets

BACKGROUND & INTRODUCTION

Priority Area 5 has implemented eight actions set up in the Roadmap, all of them broadly formulated to follow the objectives of the Floods Directive (FD) mainly. The EUSDR PA 5 Action Plan also significantly contributes to the implementation of the EU Strategy on Adaptation to Climate Change (presented in 2013), the Seveso III Directive (2012), the Sendai Framework for Disaster Risk Reduction (2015) and supports the EU Civil Protection Mechanism in the Danube Region. Due to the fact that the first cycle of the FD implementation process runs until 2021, the first Commission report about SEVESO III is due in September 2020, and the EU climate change adaptation strategy is currently under revision, none of the actions has been fully accomplished, although remarkable steps were taken. Stressing the strategic role of the International Commission for the Protection of Danube River (ICPDR) and their Flood Risk Management and River Basin Management Plans, the majority of actions have been prepared and are implemented in cooperation with ICPDR. EU JRC has been the main partner in early warning and climate change prediction issues. ICPDR published in 2018 the updated Strategy on Adaptation to Climate Change for the Danube, PA 5 expresses the strong cooperation on the CC adaptation. Moreover, cooperation has started with the Carpathian Convention and on the field of integrated drought management with the GWP CEE (MoU signed in 2019).

DANUBE REGION SPECIFICS

Floods and drought and low flow events, as well as water scarcity situations, are likely to become more intense, longer and more frequent for the next period due to climate change as well as socio-economic pressure. In recent years, most notably in 2002, 2006, 2013 and in the summer of 2014, parts of the Danube River Basin District were being affected by very strong or extreme flooding events. These events caused significant human and economic damages in the affected countries and communities. In 2006, 4 casualties were reported in the Czech Republic and Slovakia, and the costs and damages amounted to almost 600 million Euro in the whole basin. In 2010, there were 35 casualties, and damages of around 2 billion Euro occurred, a figure which was even surpassed in 2013

(2.3 billion Euro damages, mostly in Germany and Austria; additionally, 9 casualties were also reported from Austria and Romania). And, most recent, the Sava River Basin in Croatia and Bosnia and Herzegovina as well as Serbia was hit very hard in May 2014, effecting 2.6 million people, killing 79, and causing almost 4 billion Euros damage in the three countries. Local events due to heavy precipitation are also multiplying across the region, causing hail damage, flash floods and sewage overflow.

Moreover, the risk for forest and wild fires has increased in the past years, which is strongly related to climate change and extreme weather conditions, including droughts. Therefore, adaptation strategies are needed in order to avoid an increase in the effects of fires on the environment.

The JRC Technical Report on 'Impact of a changing climate, land use, and water usage on water resources in the Danube river basin' also shows the increased need on climate change adaptation and increased resilience against environmental risks.

ACTION 1: Provide sufficient support for development and execution of risk management plans for different hazards

Description:

1.1 Collaborate with ICPDR in order to produce regular updates of the Danube Flood Risk Management Plan (DFRMP) (Danube basin-wide flood risk management including forecasting focussing on reducing the existing flood risks, avoiding new flood risks such as flash floods, strengthening resilience, awareness raising and basin-wide solidarity);

- Improvement of flood forecasting
- Information exchange on the operation of hydraulic structures
- Coordination of operative flood management plans
- Development of elements of FRMPs for trans-boundary sub-units of common interest
- Exchange of flood protection techniques, technologies and experiences
- Develop an education/training network
- Enhance coordination of operative flood protection methods and equipment

1.2 Promote sustainable floodplain management including green infrastructure

1.3 Foster basin wide management planning on specific issues (e.g. ice on rivers)

1.4 Support relevant actors in developing risk assessment related to droughts, forest fires, hail and other climate change related disaster risks

TARGET: To realize at least five projects supporting the implementation of the Danube Flood Risk Management Plan and sub-basin flood risk management plans in 2021-2027

ACTION 2: enhance the capacities, extend the coverage of basin-wide or regional forecasting and warning systems, and develop rapid response procedures

Description:

- Create stronger links and synergies between the European information systems, like European Flood Awareness System and the European Forest Fire Information System, and the national or regional early warning systems to support preparedness efforts at regional level;
- Support the development of the DanubeHIS system;
- Support regular ICPDR Danube Accidental Early Warning System (AEWS) maintenance, testing and usage;
- Support drought forecasting and drought management in the Danube basin

TARGET: Support the organization of bi-annual forecasting fora in the Danube Region

ACTION 3: Strengthen disaster prevention and preparedness among governmental and non-governmental organizations

Description:

- Support joint preparedness activities (e.g. regional exercises, joint training activities, sharing know-how, standardisation of capacities) of flood protection and disaster response actors (professionals and volunteers at operational, tactical and strategic level);
- Harmonised training and capacity building of civil protection units (based on European Union Civil Protection Mechanism) to improve coordination, interoperability, procedures and self-sufficiency;
- Support the flood and disaster risk reduction at regional and local level, raising public awareness;
- Innovation and technology on flood protection to support disaster response (IT solutions, mapping, virtual reality, drone)

TARGET: To establish common minimum standards for civil protection organisations and fire and rescue services involved in international or cross-border disaster response in the Danube Region

ACTION 4: Decrease human impacts that evolves natural risk factors resulting in environmental damages

Description:

- Support completion of the ICPDR Accidental Hazard Sites (AHS), Contaminated Sites (CS) and Tailings Management Facilities (TMF) geodatabase;
- Identify potential challenges and solutions regarding rapid response procedures in case of industrial accidents;
- Overview man-made structures or reservoirs as disaster risk hot spots (e.g. LAREDAR)

TARGET: to support the development of AHS, CS and TMF inventories

ACTION 5: Anticipate regional and local impacts of climate change

Description:

- Facilitate the harmonisation and the coordination of the climate change adaptation (CCA) strategies and action plans to boost international collaboration within the Danube Region;
- Exploring direct effects of climate change and implement mitigation and adaptation measures in environmental risk management plans;
- Facilitate cooperation with regard to the use of climate change data and projections from Copernicus Climate Change Service (C3S) and its Climate Data Store (CDS);
- Support research in the field of climate change adaptation;
- Support natural (small) water retention measures²³

Target: Support the implementation of the CCA by organizing an event focusing on CC effects in risk management planning

²³ <https://www.gwp.org/en/GWP-CEE/WE-ACT/news/news-archive/Guidelines-on-Natural-Small-Water-Retention-Measures/>

C) Examples of projects / activities (past, present or future)

- DAREFFORT²⁴
- DriDanube
- Danube Floodplain
- Danice
- DAREnet
- Municip-Aid
- ProFound
- FloodUzh
- WAPCOS
- REVITAL I
- LAREDAR
- SAFETisza
- DAMWARM
- ICPDR actions

Future projects might also draw upon experiences from the cross-border cooperation project RaabFlood4cast as well as upon EUSALP activities on the establishment and maintenance of green infrastructure and natural water retention measures (NWRMs).

²⁴ <http://www.interreg-danube.eu/approved-projects/dareffort>

PRIORITY AREA 6: BIODIVERSITY AND LANDSCAPES, QUALITY OF AIR AND SOILS

A) Strategic frame

- 1) Mission of PA 6 in the 2010 Action Plan: "to preserve biodiversity, landscapes and the quality of air and soils"

PA objectives (as of 2019):

- Improve management of Natura 2000 sites and other protected areas through transnational cooperation and capacity building.
- Strengthen the efforts to halt the deterioration in the status of species and habitats occurring in the Danube Region and covered by EU nature legislation and in particular to continue the ongoing work and efforts to securing viable populations of Danube sturgeon species.
- Reduce the introductions and spread of Invasive Alien Species (IAS) in the Danube Region
- Maintain and restore Green and Blue Infrastructure elements through integrated spatial development and conservation planning.
- To improve and/or maintain the soil quality in the Danube Region.
- To decrease air pollution in the Danube Region.

- 2) EU Cohesion Policy Provisions

Relevant policy objective:

- PO 2, "a greener Europe"

Specific policy objective:

- "enhancing biodiversity, [...], and reducing pollution"

- 3) Enlargement Policy Provisions

- To strengthen economic and social development through environmental protection
- To shape the rules, standards, policies and practices in alignment to those of the Union and to reinforce reconciliation and good neighbourly relations
- To support territorial and cross-border cooperation

- 4) EU Neighbourhood Policy Provisions

- To support and foster dialogue and cooperation with third countries and regions in the Neighbourhood

- 5) Sector-relevant background

- EU legislation, especially Habitat Directive and Natura 2000 Network, Birds Directive, Water Framework Directive, Priority Substances Directive, Groundwater Directive, Drinking Water Directive and its revision, Urban Waste Water Treatment Directive, Nitrates Directive, EU Regulation 1143/2014 on Invasive Alien Species, Air Quality Directives 2008/50/EC and 2004/107/EC,

which define limits and target values for legislated pollutants, National emission ceiling (NEC) obligations (Directive 2016/2284/EU)

- EU Action plan for nature, people and the economy
- EU 2020 Biodiversity Strategy and the forthcoming EU Biodiversity Strategy 2030
- United Nations Sustainable Development Goals (SDG)
- Paris Agreement on Climate Change - EU and Danube Climate Change Adaptation Strategies of the EU and ICPDR
- International treaties, conventions and programmes, such as: Convention on Biological Diversity; European Landscape Convention of the Council of Europe; Ramsar Convention - Convention on Wetlands of International Importance, especially as waterfowl habitat; Bonn Convention – FAO Convention on the Conservation of Migratory Species of Wild Animals; International Plant Protection Convention; FAO International Treaty on Plant Genetic Resources for Food and Agriculture FAO; UN Strategic Plan for Biodiversity 2011-2020 and its 20 Aichi Biodiversity Targets; Carpathian Convention, Alpine Convention, and Bern Convention - Convention on the Conservation of European Wildlife and Natural Habitats; the Emerald Network; the Pan-European Ecological Network (PEEN); World Health Organisation (WHO)'s Resolution on Improvement of health through sound management of obsolete pesticides and other obsolete chemicals, May 2010.

B) Actions and targets

BACKGROUND & INTRODUCTION

The Danube Region covers a wide area, not only the river Danube and its tributaries, lowlands and delta, but also the major part of the Carpathian Mountains, the Balkans and part of the Alps. As such, it is rich in diverse ecosystems that provide important habitat for numerous species. Well-preserved ecosystems of the Danube Region also provide invaluable ecosystem services, such as food, fibre and fresh water, climate regulation, soil protection, nutrient recycling, waste assimilation. These are extremely important for the socioeconomic development and human wellbeing, especially in the wake of future climate change.

On the other hand, pollution generated by human activities in this region (i.e. waste disposal, agriculture, transportation, domestic heating etc.), has major impact on quality of water, soil and air. For instance, erosion and runoff from arable lands is the main source of the agricultural diffuse pollution in the Danube River basin.

Considering the value and potential fragility of the Danube Region, environmental and nature protection and restoration of its natural assets, including development of green infrastructure, should be a high priority and a key task for society. Ecosystems and services they provide are fundamental for human societies and economies; most of them are not replaceable and are deteriorating worldwide. Global reports²⁵ clearly indicate that we continue to lose biodiversity and

²⁵ Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES): The global assessment report on BIODIVERSITY AND ECOSYSTEM SERVICES - SUMMARY FOR POLICYMAKERS, 2019; the

natural resources; at an alarming rate, but also specifically describe priorities, actions, decisions need to be taken immediately. It should be stressed that climate change, beside biodiversity loss, is one of the greatest challenges of our time. Exploring synergies between climate action and actions to protect, sustainably manage and restore biodiversity should be further strengthened and scaled-up to ensure that they achieve their full potential. As latest scientific research findings indicate, nature-based solutions (NBS) can provide over one-third of the cost-effective climate mitigation needed between now and 2030. The IPBES 2019 report²⁶ clearly indicates that despite progress to conserve nature and implement policies, global goals for conserving and sustainably using nature and achieving sustainability cannot be met by current trajectories, and goals for 2030 and beyond may only be achieved through transformative changes across economic, social, political and technological factors.

Several principles can contribute to effective nature and environmental protection especially in the production and consumption of energy and food, nature-friendly climate adaptation and mitigation, which is compatible with the Sustainable Development Goals and the 2050 Vision for Biodiversity²⁷. Environmental measures should be planned parallel to development of each sector (e.g. tourism, construction, energy, transportation, agriculture, forestry, fishery). Moreover, human migration, cultural differences, urban / rural development and regional security should also be taken into consideration. Before building new infrastructure, improvement of current infrastructure efficiency should be examined (energy, household consumption, transport). Landscape (spatial) planning should be used as basis for developing good quality strategies for rural/urban development.

Compliance with EU environmental legislation (see sector-relevant background above) is a key factor for preserving the ecosystems and improving the environment in the EU countries of the Danube. Moreover, the EU acquis should provide the environmental framework in the candidate and potential candidate countries, as well as in other third countries participating in the Strategy.

Furthermore, PA 6 targets are in line and are contributing to the global and European processes related to environmental and nature conservation – such as the EU Biodiversity Strategy, Convention on biological diversity (CBD) and UN's Sustainable Development Goals (SDGs). There will be a need in the near future to align PA 6 work to the new global post 2020 framework to be adopted at the Fifteenth meeting of the Conference of the Parties to the Convention on Biological Diversity (CBD COP 15), to be held in Kunming (China) in October 2020.

DANUBE REGION SPECIFICS

The Danube Region encompasses a wide range of diverse but interrelated and interdependent ecosystems, including Danube with its tributaries, lowlands and delta, the major part of the Carpathian Mountains, the Balkans and part of the Alps. The region contains a large share of Europe's remaining great wilderness areas but also rich cultural landscapes. These diverse habitats result in presence of a rich and unique flora and fauna. Moreover, the Danube and its tributaries are of great importance for overall state of the environment, such as water quality, land use, ecosystem

review of actions to achieve the Aichi Biodiversity Targets, 2018–2019; and The Living Planet Report of WWF, 2018.

²⁶ Cf. footnote 14.

²⁷ The Informal Meeting of the Ministers of Environment 20th -21st May 2019, Bucharest

health and function, as well as ecological connectivity, not only for the region itself, but also for the wider area. The natural heritage of the Danube Region is therefore of European importance.

But this unique region and its natural values are under growing pressure due to urban sprawl and development of agriculture, industry, transport and tourism, often resulting in: loss of biodiversity and variety of ecosystems (like wetlands and floodplain areas, primary and old-growth forests); deforestation (pointing to the need for a significantly increase of the share of forest areas covered with management plans including biodiversity-friendly practices such as closer-to-nature forestry); air and soil pollution (e.g. non-compliant municipal landfills and numerous contaminated sites are common); depopulation and land abandonment in rural areas. Moreover, the public awareness for the need of nature and environmental protection in the eastern part of the region is low, as well as the knowledge and use of best available practices.

Air quality management is a transboundary and cross-cutting issue. In addition to mandatory legislation, important initiatives at local level, such as the EU partnership on Air Quality and the Covenant of Majors²⁸, have gained importance in recent years to coordinate for instance measures concerning residential combustion. According to recent studies²⁹, it will be important to promote a coordinated multi-level and multi-sectoral approach, including in particular PA 6, PA 1B and PA 2. In this context, the PA 6 Task Force on Air Quality may play a catalysing role in the implementation of the EUSDR objectives in this field.

ACTION 1: Establish transnational cooperation and harmonisation of the strategic management documents between protected areas on river systems in the Danube basin

Description: Due to different customs and/or legislation, management of Natura 2000 and other protected areas located on Boundary Rivers of the Danube basin could present a challenge. Transnational cooperation and harmonisation of the strategic planning documents (e.g. Natura 2000 site-specific conservation objectives and management plans, management plans of other protected areas, Masterplan) will help ensure consistency and sustainability in implementation of conservation measures and, in the end, contribute to better nature protection of these areas.

Targeted activities: Develop (in a participatory manner) a Danube Masterplan for the Conservation and Restoration of Biodiversity Values for mainstreaming into inland navigation programmes and integration with the navigation Master Plan for the Danube (Fairway Rehabilitation and Maintenance Master Plan for the Danube and its navigable tributaries). The new Masterplan should focus on the identification of biodiversity hotspots, the common setting of conservation objectives, identifying priority sites for restoration, and measures for mainstreaming the biodiversity values into inland navigation programmes and integration with the navigation Master Plan (cooperation with PA 1A).
TIMELINE: end of 2030; MILESTONES: developed Danube Masterplan for the Conservation and Restoration of Biodiversity Values; identified measures for mainstreaming it into inland navigation

²⁸ JRC, 2019. Urban pollution in the Danube and Western Balkans regions: The impact of major PM2.5 sources. Environment International 133. Article 105158.

²⁹ JRC, 2016, Air Quality in the Danube macro-region. Towards a science based coordinated approach. EUR 28417 EN , doi: 10.2760/96587

programmes and integration with the navigation Master Plan; OTHER MONITORING TOOLS: no. of meetings of interested parties, concept note on the development.

ACTION 2: Build capacities of national and local authorities, non-governmental organisations, expert and scientific community in the environment related matters

Description: Successful nature protection depends on a long-term engagement of well informed authorities, strong non-governmental organisations and an involved expert and scientific community. The EUSDR provides a perfect platform to ensure multiplication and the sustainability of capacity building activities, such as those aiming to strengthen the knowledge transfer between national authorities, scientific community and different stakeholders (e.g. DANUBEPARKs), and managers of protected areas, Natura 2000 and Emerald Network sites.

Targeted activities: Strengthen horizontal knowledge transfer and access to environmental data between national authorities responsible for nature conservation (especially those of neighbouring countries). For instance, use of Strategic Environmental Assessments for decision making, integration of the blue-green infrastructure into planning documents, supporting sustainable use of protected areas in order to increase support and feeling of ownership of local people, etc. TIMELINE: end of 2030; MILESTONES: events (workshop, conference); report on best practices (case studies); OTHER MONITORING TOOLS: no. of organised workshops/study tours.

ACTION 3: Develop and/or implement conservation action plans and/or management plans for endangered umbrella species of the Danube Region

Description: The umbrella species (or flagship species) have complex demands on their habitats. Therefore, preserving (the dynamics of) their key habitats contributes to the protection of many other species. Additionally, these species are usually attractive and fascinating plants or, more often, animals, which is why they are also well-suited to demonstrating to the public the need to preserve their habitats and raise awareness about anthropogenic impact on ecosystems.

Targeted activities: In particular, sturgeons play an important ecological role as indicators of healthy ecosystems. The Danube River Basin preserves some of the most important wild sturgeon populations and functional habitats in the world today. Implementation of the Danube-related measures from the Pan-European action plan for sturgeon conservation will contribute to their protection and protection of other freshwater species and their habitats. TIMELINE: end of 2030; MILESTONES: enforced sturgeon catch moratoriums/ restrictions across borders, governance and funding framework for ex-situ conservation measures; mapped habitats and measures for conservation and/or restoration of their habitats taken; harmonised monitoring programmes; OTHER MONITORING TOOLS: no. of organized workshops/stakeholder meetings; coordination / joint meetings with PA 4 (Action 5).

ACTION 4: Promote research to develop and apply the most appropriate methods for prevention and control of IAS and for management of the priority pathways in line with the DIAS Strategy and IAS Regulation (EU) 1143/2014

Description: In order to develop and apply the most appropriate methods for prevention and control of IAS and management of their priority pathways in the Danube Region, further research is needed. List of IAS of particular concern in the region could help to ensure more targeted use of the EU resources. Early detection and warning system, transboundary action and/or eradication plans and collaboration of all relevant sectors could ensure both pooling the resources and sustainability of applied measures.

Targeted activities: Transboundary eradication plans could help ensure both pooling the resources and sustainability of applied measures. Apart from eradication measures, in order to be (more) successful, eradication plans should also include appropriate measures for restoration of the invaded ecosystems. TIMELINE: end of 2030; MILESTONES: developed 1) early warning and rapid response system; 2) action plan(s) for the priority pathways at regional level; 3) transboundary eradication plans (incl. measures for restoration of invaded ecosystems); OTHER MONITORING TOOLS: no. of organized meetings with relevant actors.

ACTION 5: Anchoring the concept of EU green infrastructure in the Danube Region

Description: Green Infrastructure (GI) refers both to the concept and to structures in the landscape. It is a strategically planned network of (semi-)natural areas with other environmental features, designed and managed to deliver a wide range of ecosystem services, including adaptation to climate change. Since ecological connectivity is vital to reduce the biodiversity loss and to preserve ecosystem services, individual GI elements have to be connected by natural or artificial connectivity features or by sustainable use/ecosystem service areas.

Targeted activities: Development of a common approach to define and determine ecological corridors for key target species on land and improve the communication, knowledge and data sharing between environmental, transport and spatial planning sectors on spatial integration of green and blue infrastructure. TIMELINE: end of 2030; MILESTONES: established transnational working group and communication platform; adapted toolbox for identification of corridors and WebGis tool for future use; technical handbook on ecological connectivity in the Danube Region; harmonised dataset and ecological connectivity map for the EUSDR; selected pilot regions; OTHER MONITORING TOOLS: number of meetings with relevant actors; other documents (agreements, conclusions, reports).

ACTION 6: Promote ecological connectivity through cooperation between macro-regional strategies (MRS)

Description: The ecological connectivity was recognised as an area/topic of interest of all MRS that should be more explored in terms of collaboration and strengthening. Therefore, PACs of the EUSDR PA 6 started the initiative of MRS collaboration aiming to establish more systematic sectoral exchange between PAs. Main focus is on exploring ways for enhancing synergies and avoidance of duplication in terms of actions and funding, while increasing the efficiency of limited national (governmental) capacities.

Targeted activities: Establish the cooperation between the MRS approaches in establishing ecological connectivity and Green Infrastructure. Follow-up to the meeting on biodiversity (esp. ecological connectivity) in EU macro-regional strategies, 04-05 Dec. 2019, Zagreb.

ACTION 7: Enhance and/or maintain soil-related ecosystem services (ES)

Description: Multi-functionality of soils represents the basis for many ecosystem services (ES). Since negative impacts on soil quality can result in indirect impacts on ecosystems and human welfare, it is essential to enhance and/or maintain soil-related ES. Therefore, DRC should develop harmonized soil map(s), carry out research and propose solutions for mitigating threats and pressures (agriculture, climate change, urban sprawl etc.) and promote dissemination and knowledge exchange by different networks.

Targeted activities: Develop harmonised soil maps for the Danube Region. This includes preparation of data harmonisation and definition of scales and data formats in addition to numerous other activities (e.g. scientific workshops and collaboration on soil research). Apart from representing the basis for scientific and expert research, soil maps and related soil information will be used on local and regional level for awareness raising activities (targeting both the public and school children).
TIMELINE: Soil maps will be implemented in the entire Danube Region until the end of 2030.
MILESTONES: guidelines for developing harmonised soil map; developed soil maps for Danube Region countries; OTHER MONITORING TOOLS: percentage of area covered by the map.

ACTION 8: Identify locations with obsolete pesticide and similar chemical remains and prepare a remediation plan and a risk management plan in the case of environmental accidents

Description: Sites with remains of obsolete pesticides and similar chemicals (OPC) could pose a serious threat to human health and the environment. Danube Region countries should identify these sites, prepare risk management plans (incl. intervention activities) and remediation plans in order to minimise the risk that OPC pose and to restore ecosystems. The MRS approach would help to ensure a cross-border collaboration, stakeholder involvement, knowledge exchange and targeted use of EU funding streams.

Targeted activities: To prepare a list of identified locations together with priority status and overview of location status that could be used for preparation of more detailed Remediation Plans (RPs). Risk management plans (RMPs) should address effective management systems on both national and regional level, including the best available techniques to prevent, control and mitigate environmental accidents. Prepared Remediation plans (RPs) should 1) summarise all data on the detected contaminants; 2) identify contaminants of concern and all the media affected (soil, water, air); 3) evaluate remedial options and describe methods used for selection of the preferable remedial strategy; 4) describe selected clean-up methods, their technical feasibility and implementation plan; 5) discuss control measures to minimise fugitive air emissions, surface water control, worker health and safety; 6) provide the information on the fate of residual contaminants, remedial verification and long-term environmental monitoring plans for sites of concern. TIMELINE: end of 2030: MILESTONES: locations contaminated with obsolete pesticide and similar chemical remains per Danube Region country mapped in GIS; developed intervention plan on the national and regional level and risk

management plan including an environmental risk assessment per priority location; list of prioritised locations contaminated with obsolete pesticide and similar chemical remains; risk management plans including remediation plans per priority location; no. of workshops / meetings with relevant actors; collected data on the locations contaminated with obsolete pesticide and similar chemical remains; developed intervention plan on the national and regional level and risk management plan including an environmental risk assessment per priority location; recommendations for the development of the risk management plan; recommendations for development of the remediation plan.

ACTION 9: Take measures to gradually reduce air pollution, with as a minimum step to respect the limit values for pollutants according to the Air Quality Directive

Description: Enhanced and optimised air quality monitoring network and reports on air quality (based on measured and modelled data) would help to tailor appropriate air quality enhancement measures, and to install trans-border warning mechanisms for peak exceedance episodes of air pollution. Moreover, Air Protection Programme for the Danube Region should be developed, making connections with the Air Quality Plans and NAPCPs as well as with ongoing LIFE Integrated Projects in the countries in the region, aiming to develop and disseminate appropriate tools for air quality assessment and management, while taking into account institutional knowledge and capacity gaps, need for coordinated and harmonised actions and sectoral collaboration.

Potential measures to deal with existing gaps include a) promoting sustainable use of biomass for heating in the domestic sector, b) tackling emissions from coal-fuelled power plants, c) improving the emission estimations, d) boosting the international collaboration within the macro region and with the neighbouring areas, e) better integration of sectoral policies by adopting a multilevel and multisectoral approach, e) promoting integration with EU networks on air quality such as AQUILA and FAIRMODE.

Targeted activities: Develop an Air Protection Programme for the Danube Region. Building on the JRC scientific support dedicated to this Priority Area, it should take into account institutional knowledge and capacity gaps, need for coordinated and harmonised actions, sectoral collaboration, as well as aim to develop and disseminate appropriate tools for air quality assessment and management, and propose actions to enhance air quality. TIMELINE: end of 2030. MILESTONES: identified institutional capacity gaps; identified measures and instruments to gradually reduce the pollution; developed Air Protection Programme; OTHER MONITORING TOOLS: no of workshops / meetings with relevant actors; stashed expert group for Air Quality improvement programme; developed Programme.

ACTION 10: Stimulate the management and the ecological restoration of wetlands, particularly in the Danube delta

Targeted activities: To implement management structures to monitor and counteract wetland losses, and to stop wetland losses and promote the restoration of degraded wetlands, with a particular attention to the Danube delta, both for its role in biodiversity conservation and animal migration, and for the relevance of these environments in pollution prevention and carbon dioxide sequestration.

C) Examples of projects / activities (past, present or future)

- JRC reports, e.g. on air quality (Action 9) and the sustainable use of biomass in the EUSDR
- LIFE Integrated Projects on air in Bulgaria, Hungary, Slovakia (Action 9)
- Transgreen project (Action 6, Action 7) - Interreg Danube project devoted to the integrated transport and green infrastructure planning in the Danube-Carpathian Region. Main results of the project are inter alia the "Guidelines How to Minimise the Impact of Transport Infrastructure Development on Nature in the Carpathians" and the "Policy Recommendations on integrated road and rail transportation planning in the Carpathians"
- ConnectGREEN Project (Action 6, Action 7)- Interreg Danube project aimed at restoring and managing ecological corridors in mountains as the green infrastructure in the Danube basin
- Centralparks project (Action 7) –Interreg Central Europe project, Centralparks aims at improving management capacities of Carpathian protected areas. The project will support nature protection and local sustainable development, improve integrated environmental management capacities and policies, enhance transnational cooperation, and mitigate current threats and pressures to biodiversity.
- EUSALP activities (Action 6, Action 7) - EUSALP has developed exemplary activities on the establishment and maintenance of green infrastructure and natural water retention measures (NWRMs) – see examples to PA 5 for further details
- Sturgeon2020 initiative; the EMFF could also be used to support actions on inland waters (cf. action 3)

PRIORITY AREA 7: KNOWLEDGE SOCIETY

A) Strategic frame

- 1) Mission of PA 7 in the 2010 Action Plan: "to develop the knowledge society through research, education and information technologies"

PA objectives (as of 2019):

- To support education, research and ICT in the Danube Region by improvement of framework conditions for building a knowledge society
- To contribute to an increasing level and quality of network activities, strengthening the existing links and fostering new cooperation in the Danube Region
- To strengthen the realization of the European Research Area in the Danube Region
- To revert brain drain and foster brain circulation
- To further implement Smart Specialization Strategies in all Danube countries

- 2) EU Cohesion Policy Provisions

- *Relevant policy objective:*
 - PO 1, "a smarter Europe"
- *Specific policy objectives:*
 - (i) enhancing research and innovation capacities and the uptake of advanced technologies;
 - (ii) reaping the benefits of digitisation for citizens, companies and governments; [...];
 - (iv) developing skills for smart specialisation, industrial transition and entrepreneurship

- 3) Enlargement Policy Provisions

- To strengthen economic and social development including through increased connectivity and regional development, develop the digital economy and society
- To support territorial and cross-border cooperation

- 4) EU Neighbourhood Policy Provisions

- To support and foster dialogue and cooperation with third countries and regions in the Neighbourhood

- 5) Sector-relevant background

- Research Framework Programme HORIZON, in particular: Widening Participation and Spreading Excellence (Teaming, Twinning, ERA Chairs)
- European Research Area (ERA) and its priorities
- Smart Specialisation Strategy
- European Institute of Innovation and Technology (EIT) Strategy 2021-2027
- University Business Cooperation
- EUREKA scheme

- COST (European Co-operation in Science and Technology)
- Digital Europe Programme (DEP), for capacities building (including Artificial Intelligence) and deployment (including the Digital Innovation Hubs)

B) Actions and targets

BACKGROUND & INTRODUCTION

A society's ability to create and exploit knowledge is a key factor for progress and growth. A society based on knowledge needs competitive research and education infrastructure, innovation supporting and facilitating institutions, and high performing information and communication technologies.

DANUBE REGION SPECIFICS

- Heterogeneous Research and Innovation (R&I) performance; disparities within the Danube Region
- Uneven access to European regional funding i.e. ERDF vs. IPA
- Need to revert brain drain and foster brain circulation
- Need to encourage sustainable cross-border partnerships and excellence clusters in the region

ACTION 1: To promote coordination of national, regional and EU funds to stimulate excellence in R&I, in research areas specific for Danube Region

Description: Innovation policies, instruments and funding programmes should foster excellence and smart specialisation, i.e. focus on key challenges of the Danube Region and develop key research strengths in areas important for the long-term competitive development of the region. This action will support the establishment of a Danube platform focused on exchange of information and experience in the area of R&I financing.

Targeted activities: To ensure continuation of successfully established platforms like the Danube IncoNet and the Danube Funding Coordination Network. To stimulate participation in EUREKA and EIT activities. To contribute to the fulfilment of the policy objective PO 1 "a smarter Europe" and to full compliance with European Research Area objectives and priorities. In particular, peer review standards and competitive funding practices shall be implemented consistently in Danube Region; the careers of young researchers as well as of female researchers shall be facilitated; the quality and professionalism of R&I management and administration in the institutions of the region shall be improved.

ACTION 2: To promote participation of Danube countries in EU R&I Programmes, in particular in Horizon Europe

Description: To monitor the participation of Danube countries in EU R&I Programmes, trainings supporting researchers in project development, strengthening the networks of the National Contact Points and R&I management, organisation of informative workshop(s) on Horizon Europe and its particular work programmes, networking events supporting project preparation and participation in joint partnership initiatives (such as BIOEAST). Reinforcing research and innovation infrastructures, capacities and skills is a prerequisite for this action.

Targeted activities: Promote investment in research and innovation infrastructures, capacities and skills. Support the creation of new centres of excellence by 2030 as lighthouse projects for the modernization of the R&I system. In particular, support applications in the framework of Horizon's "Spreading Excellence and Widening Participation" to research institutions in less performing countries.

ACTION 3: To strengthen cooperation among universities, research organisations and SMEs in the Danube Region

Description: This action will upgrade existing cooperation between its key target group of quadruple helix actors including among others the Danube Rector's Conference, Danube academies of sciences, Danube schools, along with the business sector and regional municipalities. It will contribute to stronger cooperation in various fields, such as developing joint programmes of common interest, mobility schemes, common research projects, and exchange of best practices.

Targeted activities: Use European networking schemes such as COST and TWINNING as platforms for creating better connectivity between Danube research institutions. Encouraging research and academia in participating in transnational clusters. Making use of the European University Business Cooperation Framework (2018 study, Country reports 2017, University Business Fora³⁰).

ACTION 4: To increase awareness and visibility of science and innovation in the Danube Region

Description: This action will focus on making science more attractive (notably to young people), increase society's appetite for innovation, and open up further research and innovation activities mainly through using web and social media. Moreover, the Danube Region will be promoted in different fora as a smart region with excellent partners for collaboration. In addition, the proliferation of open access as standard practise in the region will be supported.

Targeted activities: Support projects that aim at making the Danube Region more attractive for especially young and female researchers, supporting brain circulation and preventing brain drain.

ACTION 5: To support exchange of information and experience sharing for the purpose of preparation of future strategic R&I documents applicable in the new programming period

Description: Smart Specialisation can make a valuable contribution to the better integration of the Danube Region, to stimulate the constructive use of regional diversity by avoiding uniformity and duplication in regional investment goals as well as help develop critical mass to tackle major common challenges. Within this action we can contribute to the fulfilment of SDGs (e.g. by development of STI road maps based on RIS3 methodologies).

Targeted activities: To further promote, implement and make use of the smart specialisation strategies in the whole Danube Region. To continue close cooperation with national and EU institutions in charge (in particular with the JRC).

³⁰ See https://ec.europa.eu/education/policies/innovation-in-education/university-business-cooperation_en

ACTION 6: To promote horizontal cooperation in science and technology across all PAs and other MRS

Description: This action will be focused on participation in joint activities across PAs, support of cross-fertilisation activities among macro-regions, promotion of best practices and capitalisation activities between projects. It will help to fill knowledge-gaps by linking actors with complementary thematic specialisation, experiences, and methodological approaches from across sectors.

Targeted activities: To implement common activities like joint Steering Group meetings, joint support for project proposals, workshops etc.; providing and building on scientific evidence, publications etc. especially where these refer to the Danube Region (e.g. JRC reports).

C) Examples of projects / activities (past, present or future)

- EUSDR Flagship project: DREAM – Danube River Research and Management
- One might draw upon experiences from the SEDDON project (*Sediments and sediment management along the Danube I and II*) <http://seddon.boku.ac.at>
- Examples of Danube Transnational Programme projects:
 - RESINFRA@DR <http://www.interreg-danube.eu/approved-projects/resinfra-dr>
 - ReSTI <http://www.interreg-danube.eu/approved-projects/excellence-in-resti>
 - EDU-LAB <http://www.interreg-danube.eu/approved-projects/edu-lab>

PRIORITY AREA 8: COMPETITIVENESS OF ENTERPRISES

A) Strategic frame

- 1) Mission of PA 8 in the 2010 Action Plan: "to support the competitiveness of enterprises, including cluster development"

PA objectives (as of 2019):

- To support and improve the competitiveness of the Danube Region by generating concrete technology offers, technology requests and expressions of interest in the field of innovation and technology transfer
- To improve policy dialogue and public governance in innovation and technology transfer by promoting adequate policies and policy papers
- To improve digital skills of entrepreneurs
- To establish Trans-Danube Digital Value Chains based on transnational Open Data Lakes
- To improve know-how transfer about Digital Innovations to local small and medium-sized enterprises (SME)
- To identify a level of development and ambitions of the domain artificial intelligence in the individual Danube countries/regions, contribution to the smooth fit of the respective strengths and identification of potential flagship applications for the region
- Mapping and evaluation process/benchmarking of the state of the art in terms of the level and quality of the collaboration of the clusters with the regional development stakeholders
- Fostering the development of methods of the regional strategies by more intense involvement of the cluster representatives in the process. The main aim is to improve the current system and to overcome the current gap between regional strategies and cluster strategies, especially in terms of S3 implementation
- To improve the innovation capacity of female SMEs
- Foster cooperation and continuous discussion between national/regional policy level and SMEs regarding Artificial Intelligence (AI) / how to integrate national/regional AI platforms.

- 2) EU Cohesion Policy Provisions

- *Relevant policy objectives:*
 - PO 1, "a smarter Europe" and
 - PO 2, "a greener Europe"
- *Specific policy objectives:*
 - With regard to PO1: reaping the benefits of digitisation for citizens, companies and governments; and
 - enhancing growth and competitiveness of SMEs; [...]
 - With regard to PO 2: (vi) promoting the transition to a circular economy

3) Enlargement Policy Provisions

- To strengthen economic and social development including through development of the digital economy and society
- To support territorial and cross-border cooperation

4) EU Neighbourhood Policy Provisions

- To support and foster dialogue and cooperation with third countries and regions in the Neighbourhood

5) Sector-relevant background

- European Strategic Cluster Partnerships (COSME)
- Smart Specialisation Strategy
- Digitising European Industry, in particular the support to Digital Innovation Hubs that can support SMEs with their digital transformation
- Digital Europe Programme (DEP), for capacities building (including Artificial Intelligence) and deployment (including the Digital Innovation Hubs)
- Activities to support cultural and creative industries³¹, cf. https://ec.europa.eu/culture/policy/cultural-creative-industries_en

B) Actions and targets

BACKGROUND & INTRODUCTION

The unequal level of economic development is one of the most visible challenges within the Danube Region. The economies of the region are strongly relying on SMEs, but due to various difficulties, they are not able to exploit their existing potential completely. However, their support in overcoming the economic disparities is indispensable.

SMEs are facing extremely heterogeneous challenges during their daily operation, but the effects of the digital transformation processes will concern them all. Unfortunately, due to the different economic development, digitalisation as a topic may seem relevant in one country, but does not yet exist in another. However, digitalisation is rightly referred to as the third Industrial Revolution. Single technologies like Cloud Computing, Mobile Computing, Internet of things, Block chain or Artificial Intelligence and their combined application, are changing the way we do business today. Digitalisation affects all economic sectors and areas of life. Against this background, digitalisation and its challenges should be addressed when talking about competitiveness. The same is valid for the artificial intelligence, which is a complex domain on a hype, with enormous resources put behind. It is an organic consequence of earlier decades of ICT, data storage, processing capacity and data transmission developments. The applications of artificial intelligence will determine the operation

³¹ On points related to support to cultural and creative industries, interesting initiatives can be found in the Open Method of Coordination EU Member States' expert group on the role of public policies in developing entrepreneurial and innovation potential of the cultural and creative sectors: <https://publications.europa.eu/en/publication-detail/-/publication/5d33c8a7-2e56-11e8-b5fe-01aa75ed71a1> <https://publications.europa.eu/en/publication-detail/-/publication/1c3f87fa-2e5a-11e8-b5fe-01aa75ed71a1/language-en> (overview of policies and studies)

from health-care to everyday life. In order to be competitive, SMEs have to take into consideration the opportunities offered by these thematic field.

As mentioned above, due to the economic differences of the countries it is very difficult to handle these topics on the same level. However, the exploitation of industry differences can be used as asset for transnational value chains, or to identify issues related to digitalisation or artificial intelligence that will allow even lower-income countries access to digital innovation by building on less investment-intensive regional assets (e.g. digital tourism, AI based individual medicine, smart grids).

The transnational exchange along different value chains can excellently supported by various cluster initiatives. These are well-known approaches to support competitiveness and innovation of the private sector through trust building, networking, capacities building and improving innovation capacities among SME. Due to increased complexity of innovation, cluster initiatives are promising to match SME according to needs and competences. However, although originally intended to contribute to regional development, most cluster initiatives became more and more disconnected from regional development over the last years. Post 2020 the regions should come to the fore as a booster for economic development therefore cooperation between regional developers and cluster initiatives should be enhanced. Furthermore, there is an urgent need to set up transnational frameworks and instruments to stimulate transformative activities through cluster initiative in the context of EUSDR in order to spur investments and jobs along emerging value chains through need based cross-regional cooperation.

Beyond cluster initiatives, synergies with the services of the Enterprise Europe Network (EEN) should actively be envisaged that include dedicated Business-to-business (B2B) events and targeted innovation management capacity building for SMEs. EEN members are renowned regional/national actors of their respective business and innovation support ecosystem, and have already been enhancing the implementation of various transnational and cross-border projects. Through their close daily contact with the SME community, they have the potential to deliver important contributions to the actions 1, 2 and 4 that are detailed below.

DANUBE REGION SPECIFICS

The Danube Region, which is composed of different countries and innovation milieus of different levels of maturity, would benefit from strengthening transnational cooperation. This has to happen both at the policy and business level, thus achieving higher regional coherence and sustainable economic growth.

In order to keep up with other regions the development of new products and innovative services is essential. For this, especially start-ups and SMEs require access to scientific and applied research knowledge combined with innovation expertise. For successful technology transfer the transnational collaboration between research organisations and companies or among companies is crucial. The capability to adapt to innovation needs requires developing and implementing tools and services based on specific roadmaps and strategies in innovation and technology transfer.

However, the greatest added value for the Danube Region will be achieved if priority is given to sectors where the region has existing strengths, or in priority activities identified in the corresponding regional smart specialisation strategies.

ACTION 1: To foster cooperation and exchange of knowledge between SMEs, creative industry, academia, the public sector and civil society in areas of competence in the Danube Region

Description: This action is attracting stakeholders from all Danube Region countries to foster cooperation in areas where there is particular knowledge such as in innovation, design and technology transfer. This can be achieved through generating policy dialog as well as concrete activities and projects (addressing e.g. design for acceptance of new digital tools, better conceived man-machine-interaction). The identification of the main challenges will help to improve the framework conditions in innovation and technology transfer in the Danube Region. Emphasis should be laid specifically on actions supporting the internationalisation of SMEs and facilitating interdisciplinary cooperation in order to create effective synergies for the full exploitation of applicable results in the specific thematic field on innovation and technology transfer. Policy Exploration Systems in innovation and technology transfer could steer this process to make it consistent with the development perspectives of the whole Danube Region.

TARGET 1.1: Preparation of at least five concrete technology offers and requests

TARGET 1.2: Involvement of at least 10 new Danube actors in EU innovation and technology transfer financed projects

Timeframe: by Mid 2022

ACTION 2: Establishment of an Innovative Digital Ecosystem in the Danube Region in order to support SMEs when tackling the challenges of a digitalised world

Description: The Innovative Digital Ecosystem should bring together organisations and stakeholders whose main goal is to enable and foster technology development and innovation. In other words, the Innovative Digital Ecosystem shall enable collaborative innovation among different stakeholders, through combining complementary resources, systems and support, with a clear goal to generate domain-based data lakes, new business models, products, features, processes or services. Digital Innovation Hubs (DIH) can play a significant role here.

TARGET 2: Establishment of at least two Trans-Danube Digital Value Chains by Mid 2022

ACTION 3: Improvement of framework conditions, support programs and capacity building of stakeholders, to enhance the collaboration between cluster initiatives and regional innovation strategies, with an accent on rural areas

Description: This action aims to understand the interplay between clusters and regional innovation strategies. Attention shall be given to key success factors of the interplay between them, their respective tasks and responsibilities, and ways to facilitate this kind of cooperation in the post-2020 era.

TARGET 3: Fostering the interplay between cluster initiatives and regional developers through at least one event until Dec 2021

ACTION 4: To improve business support to strengthen the innovative and digital capacities of female-led-SMEs

Description: The focus of this action is mainly to support development of innovative and digital capacities of female-led start-ups and dynamically growing SMEs. The aim is to combine complementary resources, systems and support, with a clear goal to generate new products, features, processes, services or value.

TARGET 4.1: Development of at least one innovative and practical solution (tool) for strengthening female entrepreneurial skills in the digital age through at least one tailored event.

TARGET 4.2: Organization of at least one networking event for exchange of experience between business and academia

Timeframe: December 2021

ACTION 5: Enhance the application of Artificial Intelligence (AI) technologies in the Danube Region SMEs

Description: Artificial Intelligence will be playing an important role in the next 10-15 years in the development of the Danube Region. Therefore, it is inevitable that SMEs adapt to and keep abreast of this new area and enhance and permanently update their knowledge in the field of AI to remain competitive. Most of the EUSDR countries/regions have their own AI platforms, which would benefit from enhanced collaboration and interoperability. Individually the players cannot achieve the necessary critical mass with respect to know-how and competencies. The synergies can only be identified through collaboration among the players. An additional challenge is that policy makers and stakeholders of the implementation operate in a non-harmonized way, and the gap has to be overcome. A difficulty lies in matching the top-down policy intentions with the bottom-up operational objectives.

TARGET 5: to co-invest together with Member States and regions in Digital Innovation Hubs (DIHs) that diffuse Artificial Intelligence, Cybersecurity and High Performance Computing in all regions in Europe, possibly supported by the Digital Europe Programme. Concretely, to set up 5 new DIHs in the Danube Region until the end of 2024.

C) Examples of projects / activities (past, present or future)

- “Smart Factory Hub” (Danube Transnational Programme) : www.interreg-danube.eu/Smart-Factory-Hub
- “Chainreactions” - focusing on interconnecting DIH services in the Danube Region
- Possible future activity: Trans Danube Digital Value Chains
- Possible future activity: Setup of a Danube-specific Digital Innovation Hub
- Possible future activity: Fostering the interplay between cluster initiatives and regional developers
- Possible future activity: Establishment of an EUSDR Artificial Intelligence Platform

PRIORITY AREA 9: PEOPLE AND SKILLS

A) Strategic frame

1) Mission of PA 9 in the 2010 Action Plan: "to invest in people and skills"

PA objectives (as of 2019):

- Contribute to a higher employment rate, especially through tackling youth and long-term unemployment
- Contribute to improved educational outcomes, skills and competences, focusing on learning outcomes for employability, entrepreneurship, innovation, active citizenship and well-being
- Contribute to Increased higher quality and efficiency of education, training and labour market systems
- Contribute to ensuring inclusive education and training and promoting inclusive labour markets, equal opportunities and non-discrimination as well as the promotion of civic competences and lifelong learning opportunities for all
- Contribute to closer cooperation between educational, training and labour market and research institutions

2) EU Cohesion Policy Provisions

- *Relevant policy objectives:*
 - PO 1, "a smarter Europe" and
 - PO 4, "a more social Europe implementing the European Pillar of Social Rights"
- *Specific policy objectives:*
 - With regard to PO1: developing skills for smart specialisation, industrial transition and entrepreneurship
 - With regard to PO4: (i) enhancing the effectiveness of labour markets and access to quality employment through developing social innovation and infrastructure;
 - (ii) improving access to inclusive and quality services in education, training and lifelong learning through developing infrastructure;
 - (iii) increasing the socioeconomic integration of marginalised communities, migrants and disadvantaged groups, through integrated measures including housing and social services;
 - (iv) ensuring equal access to health care through developing infrastructure, including primary care
- *Interreg-specific provisions for PO 4, see ETC regulation*

3) Enlargement Policy Provisions

- To strengthen economic and social development through social and employment policies and development the digital economy and society
- To support territorial and cross-border cooperation

4) EU Neighbourhood Policy Provisions

- To support and foster dialogue and cooperation with third countries and regions in the Neighbourhood

5) Sector-relevant background

- Agenda 2030; Sustainable Development Goals (SDG), in particular SDG 4
- European Pillar of Social Rights
- Strategic framework for European cooperation in education and training ("ET 2020" and follow-up)
- The ESF+ as foreseen in the new regulation should play a key role for the implementation of PA 9 actions. The ESF+ Regulation will support in particular the principles of the European pillar of social rights and the implementation of recommendations under the European Semester.
- Erasmus+ supports learning mobility, cooperation among organisations and institutions and gives support to policy development and cooperation. The programme finances activities highly relevant to PA 9.
- Riga Conclusions on European cooperation in vocational education and training (VET)
- New Skills Agenda for Europe for an inclusive and competitive Europe
- EU Framework for National Roma Integration Strategies
- EU Disability Strategy
- Several EC Communications, like on "Strengthening Innovation in Europe's Regions"³² (2017), on Communication on Building a stronger Europe: the role of youth, education and culture policies³³ (2018), etc.
- Various Council Conclusions and Recommendations, in particular on: EQF, EQAVET Validation, Key Competences for lifelong learning, developing media literacy and critical thinking, inclusion in diversity to achieve a high quality education for all, school development and excellent teaching, a renewed EU agenda for higher education, promoting common values, inclusive education, and the European dimension of teaching, Upskilling Pathways, a European Framework for Quality and Effective Apprenticeships, moving towards a vision of a European Education Area, a comprehensive approach to the teaching and learning of languages, high quality early childhood education and care systems.
- ET 2020 working groups, peer reviews and other peer learning activities (including Cedefop and ETF events)
- Cedefop and ETF VET policy monitoring, ET Monitor, ET 2020 benchmarks

B) Actions and targets

BACKGROUND & INTRODUCTION

³² <https://eur-lex.europa.eu/legal-content/en/ALL/?uri=CELEX:52017DC0376>

³³ <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52018DC0268>

Making the Danube Region competitive, cohesive, resilient and more prosperous in the future means investing in people, in their education and training, their skills, their creativity, and their capacity to innovate. The world of work is evolving at a brisk pace. Changing and increasing skills demands, coupled with economic, demographic and technological developments are posing considerable challenges as well as providing opportunities for innovative responses from education and training as well as labour market and social systems.

Priority Area 9 "Investing in People and Skills" is focusing on policies and actions in the fields of education and training, labour market and marginalised communities. By investing in people and promoting human capital, the Danube Region can grow in a smart and inclusive way. In this respect, the European Pillar of Social Rights, supporting quality and inclusive education, training and life-long learning, quality employment and social inclusion plays a key role, also regarding its relevance for future EU investments in 2021 - 2027. Therefore, the importance of functioning labour markets and social systems as well as high-quality education and training systems for the Danube Region cannot be overemphasised.

DANUBE REGION SPECIFICS

A closer look to the Danube Region shows that there are various challenges:

There is a demographic change to an ageing society: Increasing life expectation concurrent with decreasing fertility rates and labour force migration and brain drain results that in some countries the overall population has started to decline.

In the Danube Region in comparison to EU average are less people in employment and shares of employment in traditional sectors, such as agriculture, are still high. Still, unemployment is high in some peripheral regions, where targeted interventions are needed.

On the job market special attention needs to be paid to the mobility of workers. Work induced migration flows follow an east-west as well as rural-urban pattern, motivated by considerable income disparities in the Danube Region, thus resulting in brain drain in some parts.

Education and training systems in the Danube Region are in general of good quality, but there is also a number of shortcomings as repeatedly highlighted by EACs country reports and related OECD documents and studies. For instance, too many pupils acquire only a low level of competences. A further problem is linked to equal opportunities, as young people showing weak performance come disproportionately from disadvantaged backgrounds.

Enhancing the anticipation of skills needs and increasing the labour market relevance of skills is a huge challenge in many parts of the region - also within the context of digitalisation. The modernisation of education systems and the provision of VET including work-based learning in a larger context of lifelong learning become more and more important. The 2018 Advisory Committee for Vocational Training "Opinion on the future of VET"³⁴ also puts a focus on the promotion of VET excellence and inclusion, calling for the establishment of Platforms of Centres of Vocational Excellence. Another key aspect concerns civic and social skills to empower citizens to participate fully

³⁴ <https://ec.europa.eu/social/BlobServlet?docId=20479&langId=en>. Centres of Vocational Excellence are intended to be reference points for training in specific areas for both initial training of young people as well as for continuing up-skilling and re-skilling of adults. They operate in a given local context, closely embedded in the local innovation ecosystems, while working with centres in other countries through collaborative platforms.

in diverse and changing societies as well as to take action towards achieving the sustainable development goals in the Danube Region.

Furthermore, one third of the EU population at risk of poverty lives in the Danube Region. Roma communities, of whom 80% live in the region, not only suffer from poverty and substandard living conditions, but are also exposed to social and economic exclusion.

Regarding equal opportunities between men and women, inequalities are more pronounced in upper parts of the region than in lower parts. The general employment rate for women and men is lower than in rest of the EU.

The above-mentioned challenges call for actions in a wide range of fields like education and training, labour market, integration, research and innovation as well as the need of mutual reinforcement of the policies in these areas. To tackle the existing challenges, PA 9 is focusing on the following two main topics:

I. Labour Market and Social Policies:

The labour market systems in the Danube Region should tackle unemployment and social exclusion by supporting job seekers, marginalised and deprived groups. This should include the development of key competencies and organisations skills and the promotion of innovative projects and partnerships. Furthermore, a strong cooperation of labour market institutions regarding policies, measures and information exchange is needed.

To avoid the digital divide (by age, gender, region, high and low skilled work) on labour markets in the Danube Region the lack of knowledge and skills in IT should be reduced as well as common standards in the field of labour law should be developed.

Groups at risk of poverty should be empowered to get access to the labour market. Opportunities must be offered to them to get out of the vicious circle of unemployment and poverty.

II. Education and Training

Danube Region education and training systems should aim to deliver high quality and inclusive education and training that offer opportunities for both economic and social cohesion, support competitiveness and growth and smart, inclusive and sustainable development, and foster democratic citizenship and European values - thus helping all individuals to develop their full potential in a lifelong learning perspective.

Key issues for future regional cooperation relate to fostering equal opportunities in education and to ensuring quality learning outcomes, inter alia by strengthening the labour market relevance of skills, by reinforcing basic and key competences, fostering digital skills, and reducing the number of early school leavers. Action is also needed in the fields of quality assurance and skills monitoring, the promotion of teaching at all levels, addressing the diversity of learners, increasing participation in lifelong learning (LLL), fostering transparency of skills, addressing gender gaps as well as skills and competences to promote the ownership of democratic values and sustainable development.

Transnational school projects enhance dialogue and cooperation of young people and contribute to the process of European integration. Regional cooperation platforms such as ERI SEE (Education

Reform Initiative of South Eastern Europe) or the Danube Region Youth Platform are important instruments for the implementation of EUSDR actions. Cooperation in VET supports countries with opportunities for mutual learning and exchange of good practice. Work-based learning in VET is an important concept for enhancing competitiveness and employability in the region. In this context, centres of vocational excellence could act as drivers of quality vocational skills in a context of national, regional/local, and sectorial challenges.

Overall, possible measures/activities will focus on (1) Cooperation among institutions (Partnerships for cooperation, including small-scale partnerships; partnerships for excellence; online platforms and tools for virtual cooperation; learning mobility) and (2) Support to policy development and cooperation (PAC conferences and high-level meetings; peer-learning, peer-counselling, expert groups and networks; studies and surveys; civil society dialogue).

ACTION 1: Intensify Cooperation in Labour Market Policies

Description: By intensifying the cooperation between labour market stakeholders' reforms will be enhanced. The focus will be on active labour market policies, common peer learning/peer counselling in the Danube Region, skills mismatch, labour market information systems, vocational re-education and re-training, dual education as a measure of active labour market policies, transition from school to work.

TARGET: Continue the cross-border dialogue by maintaining at least one Network-Meeting, one Peer-Learning Meeting or one Stakeholder Conference per year.

ACTION 2: Digitalisation and Innovation in the World of Work

Description: To avoid the digital divide (by age, gender, region, high and low skilled work) on labour markets in the Danube Region there will be a focus on the following activities: reduce the lack of knowledge and skills in IT, exchange and development of common social security standards for platform and crowd work, necessary adaptations of existing labour law in the Danube Region.

TARGET: Implement and maintain a "Working Group Digitalisation" together with Social Partners (one meeting per year)

ACTION 3: Integration of Vulnerable Groups into the Labour Market

Description: We define vulnerable groups as persons belonging or perceived to belong to groups that are in a disadvantaged position or that are marginalised. The future activities will focus on: tailor made measures and projects developed with the concerned groups, e.g. case management, subsidies to keep up employment or new models of entrepreneurship for unemployed, social entrepreneurship, or targeted measures for young people to reduce the number of young people not in education, employment or training (NEET).

TARGET: Implement a "Network Empowering Roma" together with PA10 (one meeting per year).

ACTION 4: Fighting Poverty and Promoting Social Inclusion for All

Description: Concrete issues of this action are: empowering groups at risk of poverty to get access to the labour market, actions to reduce the number of people at risk of poverty will complement each other and apply on integrated approaches, therefore long term policies are needed, diversification of social services and measures developed together with people at risk of poverty.

TARGET: Continue the cross-border dialogue by maintaining at least one Network-Meeting, one Peer-Learning Meeting or one Stakeholder Conference per year.

ACTION 5: Quality and Efficiency of Education and Training Systems

Description: Concrete issues of this action are:

- enhancing the anticipation of skills needs and strengthen the labour market relevance of skills,
- strengthening vocational education and training (VET), in particular work-based learning in all its forms,
- developing quality assurance mechanisms and increasing evidence-based policy and practice to monitor and design reforms,
- promoting of teaching at all levels (recruitment, selection and induction; attractiveness of profession, initial education and professional development)

TARGET: Strengthen regional exchange, peer learning and cooperation in projects and networks (at least one activity and/or one new project/initiative per year) and make available a Danube Region monitoring tool on current developments in education and training systems.

ACTION 6: Relevant and High-Quality Knowledge, Skills and Competences

Description: Concrete issues of this action are:

- reducing low achievement in basic skills, covering language, literacy, mathematics, science and digital literacy,
- strengthening transversal and key competences, in particular entrepreneurship and language competences,
- addressing the development of digital competences, including media literacy, at all levels of learning,
- further exploring the potentials of innovative and active pedagogies as well as upgrading educational resources,
- promoting the establishment of platforms of “centres of vocational excellence” to act as catalysts for local business investment, supporting local innovation and smart specialisation strategies by ensuring supply of high quality skilled workers through flexible and timely offer of training.

TARGET: Engage in regular stakeholder and networking meetings to continue the cross-border and transnational dialogue and initiate project development (at least one activity and/or one new project/initiative per year)

ACTION 7: Lifelong Learning and Learning Mobility

Description: Concrete issues of this action are:

- supporting mobility of learners and teachers as well as partnerships among schools and educational institutions,
- promoting balanced mobility and brain circulation as well as reducing brain drain
- addressing the transition phase within education and training and from ET to work, inter alia through high quality guidance,
- continuing LLL strategies and promoting adult learning (in view of governance, supply and take up, access, quality) and second chance opportunities,
- fostering transparency, validation and recognition of skills and/or qualifications and implementing EQF and NQFs

TARGET: Strengthen working together on similar policy challenges and make use of the potential of the Erasmus+ programme to increase the impact of macro-regional cooperation among education and training institutions (at least one activity and/or one new project/initiative per year)

ACTION 8: Inclusive Education, Equity, Common Values and Sustainable Development

Description: Concrete issues of this action are:

- reducing early school leaving,
- addressing the diversity of learners, enhancing access to quality and inclusive education for all, including disadvantaged groups,
- addressing gender gaps in educational training (ET),
- promoting civic, intercultural and social competences, ownership of democratic values and fundamental rights at all levels of ET, while tackling discrimination, racism and stereotypes
- enhancing critical thinking, along with cyber and media literacy; promoting sustainable development through ET

TARGET: Enhance the dissemination of good practices and lessons learned through thematic events, policy exchange and other forms for knowledge transfer (at least one activity and/or one new project/initiative per year)

C) Examples of projects / activities (past, present or future)

Current activity: EUSDR network of ESF managing authorities (particularly related to ACTION 1)

Remark: By decision of the PA 9 Steering Group, no examples of projects should be included in the Action Plan related to PA 9. Projects will be included on the level of rolling annual work programmes decided by Steering Group.

PRIORITY AREA 10: INSTITUTIONAL CAPACITY AND COOPERATION

A) Strategic frame

- 1) Mission of PA 10 in the 2010 Action Plan: "to step up institutional capacity and cooperation"

PA objectives (as of 2019)

- Strengthening institutional capacities to improve decision-making and administrative performance.
- Increasing involvement of civil society and local actors for effective policy-making and implementation.
- Enhancing coordination and knowledge for better use of funding and to develop needs-based funding instruments.

- 2) EU Cohesion Policy Provisions

- *Mainly relevant policy objective:*
 - PO 5, "a Europe closer to citizens";
- *Specific policy objectives:*
 - (i) fostering the integrated social, economic and environmental development, [...];
 - (ii) fostering the integrated social, economic and environmental local development, [...] including for rural and coastal areas also through community-led local development.
- *Interreg-specific objective "a better governance",*

- 3) Enlargement Policy Provisions

- To strengthen the rule of law, democracy, the respect of human rights, fundamental rights and international law, civil society
- To reinforce the effectiveness of public administration and support structural reforms and good governance at all levels
- To shape the rules, standards, policies and practices in alignment to those of the Union and to reinforce reconciliation and good neighbourly relations, as well as people to people contacts and communication
- To support territorial and cross-border cooperation

- 4) EU Neighbourhood Policy Provisions

- To support and foster dialogue and cooperation with third countries and regions in the Neighbourhood
- To consolidate and support democracy, rule of law and human rights, support civil society organisations, further stability and peace and address other global challenges including migration and mobility

- 5) Sector-relevant background

- European Semester

- Structural Reform Support Programme (to be replaced by the Technical Support Instrument 2021-2027 under the Reform Support Programme) Single Digital Gateway
- Strategic Framework of Public Administration Reform
- Urban Agenda
- Territorial Agenda
- European Youth Goals
- European Training Strategy in the field of Youth³⁵
- Capacity building tools: TAIEX – REGIO Peer2Peer, JASPERS, Quality in Public Administration Toolbox etc.
- EU Framework for National Roma integration strategies

B) Actions and targets

ACTION 1: To improve institutional capacities in order to provide high-quality public services

Description: Enhancing needs-based and high-quality public services, reducing administrative burden, strengthening cooperation capacities for all stakeholders in the multi-level governance system, and improving institutional capacities to implement e-Governance are crucial to contribute to better policy coordination, mutual learning, and development of common standards in public service provision that aligns policies between partner countries, manages spatial spill-over effects and increases knowledge.

TARGET 1.1: Building capacities for efficient, effective and transparent public administration through e-Government/digitalisation of public services.

TARGET 1.2: Developing policy guidance for co-designing policies at all levels in the Danube Region.

ACTION 2: To facilitate the administrative cooperation of communities living in border regions

Description: Capacity development for high-level public services, healthy regional development and trust building across borders is crucial to support smooth economic, social and territorial cohesion in the Danube Region. Hence, activities such as diminishing or eliminating legal and administrative obstacles or developing joint cross-border public services and governance structures contribute to improve the competitiveness of border regions.

TARGET 2: Establishing structures to contribute to the facilitation of cross-border capacity building and cooperation through facilities such as cooperation platforms, knowledge transfer, and project development for cross-border public services.

ACTION 3: To review bottlenecks relating to the low absorption rate of EU funds and Invest EU

³⁵ https://ec.europa.eu/youth/sites/youth/files/eu-training-strategy-youth_en.pdf

Description: Building capacities of project promoters for better coordination of funds is expected to increase the development and implementation of projects, to support project capitalisation and use the innovative potential of a broad group of stakeholders at all levels. Better coordination of funding addresses the ability of project promoters to improve the use of available funding that is suitable for the implementation of innovative project ideas.

TARGET 3: Building capacities on funding possibilities at international, EU, national, regional, and local level and transnational project implementation through regular consultation formats (in synergy with the EuroAccess MacroRegion initiative).

ACTION 4: To support better coordination of funding

Description: Better coordination at programme level contributes to reinforce the positive results of projects at macro-regional level. Capitalisation and coordination networks between programmes are supposed to contribute to policy coordination and the development of cooperation mechanisms at programme and/or project level. Thus, the action aims at review factors that impede joint planning and programming, particularly between EU members and non-EU members in the EUSDR implementation process. Emphasising that funding of projects should be linked to objectives and approaches of mandatory plans required under EU acquis such as NAPCPs and RBMPs.

TARGET 4: Continue and strengthen the exchange between the EUSDR and funding instruments in the Danube Region on transnational/macro-regional cooperation through network meetings at least once a year.

ACTION 5: To test and support innovative funding solutions (for local actors and civil society)

Description: Supporting the development and testing of innovative funding instruments that suits the needs of different stakeholder groups in the Danube Region is supposed to increase the capacities of project promoters, unleash the untapped innovative potential in the Danube Region, and introduce project promoters to transnational EU project management. Suitable funding should aim at supporting broad stakeholder involvement in regional development.

TARGET 5: Developing at least one innovative funding instrument with a particular focus on needs of local actors and civil society.

ACTION 6: To foster cooperation built on mutual trust between state and non-state actors to enhance well-being for the inhabitants of the Danube Region

Description: Mutual exchange of good practices of trust building initiatives, implementing dialogue platforms, trainings and mutual learning on participatory governance co-designing public policies at macro-regional level are expected to support the endeavours of building trust with a particular focus on improving the cooperation in regional development in the Danube Region at all levels. Participation Days and further dialogue formats further enhance capacities to engage in participatory processes.

TARGET 6: Encouraging all EUSDR partner countries to involve national, regional and local authorities, as well as civil society organisations and further relevant stakeholders in the communication and implementation of the EUSDR through implementing national/regional Participation Days.

ACTION 7: To strengthen the involvement of civil society and local actors in the Danube Region

Description: Both civil society organisations and local actors as well as public administrations at all levels need capacities to contribute to a meaningful participatory multi-level governance. Thus, civil society and local actors need to strengthen their political capital to engage in a transparent and responsive decision-making process and policy implementation. Mutual learning and capacity building strengthen the ability of state and non-state actors to jointly develop and foster the practice and implementation of EUSDR's placed based approach. A particular focus should be given on youth participation and civic engagement in order to ensure a long-term perspective on regional development and sustainable democracy.

TARGET 7.1: Supporting the empowerment of young people for participation in the development of the Danube Region through strategic guidance and the implementation of macro-regional networks.

TARGET 7.2: Building capacities on participatory governance and involvement of civil society and local actors in cooperation with the Danube Local Actors Platform, the Danube Civil Society Forum, and/or further experts and stakeholders.

ACTION 8: To enhance capacities of cities and municipalities to facilitate local and regional development

Description: Cities, municipalities and regions are key stakeholders in contributing to regional development that addresses territorial challenges. Drafting territorial strategies or establishing cooperation and participatory policies are pre-requisites for high quality regional development. Thus, local actors shall be supported in increasing capacities for cooperation and service provision in the area of Roma inclusion, fighting trafficking in human beings, spatial planning and cooperation in functional regions.

TARGET 8.1: Implementing a Network "Empowerment Roma" together with Priority Area 9 (through at least one stakeholder meeting per year)

TARGET 8.2: Implementing a Network on "Fighting Trafficking in Human Beings" together with Priority Area 11 (through at least one stakeholder meeting per year)

C) Examples of projects / activities (past, present or future)

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PRIORITY AREA 11: SECURITY

A) Strategic frame

- 1) Mission of PA 11 in the 2010 Action Plan: "to work together to promote security and tackle organised and serious crime"

PA objectives (as of 2019):

- Security offensive - Enhancing police cooperation with the aim of improving security and tackling serious and organised crime in the EUSDR countries
 - Developing strategic long-term cooperation between law enforcement actors along the Danube river by strengthening networks for cooperation by 2020
 - Improving the systems of border control, document inspection management and cooperation on consular related issues in the Danube Region
 - Promoting the rule of law and fight corruption
- 2) EU Cohesion Policy Provisions
 - *Mainly Interreg-specific objective "a safer and more secure Europe"*
 - 3) Enlargement Policy Provisions
 - To strengthen the fundamental rights and security, improving migration management including border management
 - To reinforce the effectiveness of public administration and support structural reforms and good governance at all levels
 - To shape the rules, standards, policies and practices in alignment to those of the Union and to reinforce reconciliation and good neighbourly relations, as well as people to people contacts and communication
 - To support territorial and cross-border cooperation
 - 4) EU Neighbourhood Policy Provisions
 - To support and foster dialogue and cooperation with third countries and regions in the Neighbourhood
 - To consolidate and support democracy, rule of law and human rights, support civil society organisations, further stability and peace and address other global challenges including migration and mobility
 - 5) Sector-relevant background
 - European e-justice strategy
 - Directive 2014/41/EU on faster, more efficient cross-border criminal investigations in the EU
 - The EU Internal Security Strategy for the period 2015-2020 (resp. the subsequent document)

- EU Strategy towards the eradication of trafficking in human beings³⁶

B) Actions and targets

BACKGROUND & INTRODUCTION

The activities within PA 11 contribute to sustainable development in the Danube Region in terms that security is inter-related to all other aspects of the strategy - it is the necessary prerequisite for safe transport and energy corridors, safety of tourism, including even food security. When the Strategy was being elaborated the topic of security was added at the very last stage of its preparation. Yet, it proved to be one important element contributing to the level of security in the region and enhancing networking and cooperation with other priority areas.

Without a certain level of safety and stable security environment in the region, the cooperation in all other fields will be significantly affected. The successful implementation of the EUSDR requires the efficient functioning of not only its priority areas but also certain horizontal elements like cooperation between the priority areas themselves. For PA 11 Security it could be said that it involves a wide range of key stakeholders, which come from different law-enforcement agencies, but also committed partners from Europol, SELEC, RCC, etc.

The growing efforts of PA 11 to develop the "horizontal cooperation" with PA 1a, PA 6 and PA 10 already led to tangible results (e.g. the elaboration of a Practical Manual with PA 1a or the participation in several overlapping workshops or forums with PA 6 and PA 10).

DANUBE REGION SPECIFICS

The Danube River represents an important waterway for passengers and goods that requires a safe and free from corruption environment. In that regard tangible efforts to prevent and fight corruption and combatting serious and organised crime were undertaken in the last few years. However, some challenges remain that call for further enforcement of the rule of law, both within and across jurisdictions. Intelligence must be better shared, more effectively used, and target joint actions should be implemented. Structures and capacity for private and public sector decision-making must be improved, including good planning and international cooperation. The optimal use of resources and the horizontal cooperation with the other PAs is essential. PA 11 and PA 1a have already undertaken concerted action.

The four above-mentioned PA 11 objectives relate to concrete actions as follows:

ACTION 1: Security offensive - Enhancing police cooperation with the aim of improving security and tackling serious and organised crime in the EUSDR countries and strengthening the efforts against terrorism threats

Targeted activities:

³⁶ cf. Communication from the Commission to the European Parliament and the Council "Reporting on the follow-up to the EU Strategy towards the Eradication of trafficking in human beings and identifying further concrete actions", COM(2017) 728 final, https://ec.europa.eu/anti-trafficking/eu-policy/commission-sets-out-priorities-step-eu-action_en

- to enhance cooperation between police units on operational and ministerial level to combat cross-border crime in particular in the Danube Region;
- To intensify the prevention of and fight against terrorism;
- To intensify the police cooperation in information security and combating cybercrime and hybrid threats;
- To exchange experience, networking and cooperation in the field of smuggling, and addressing trafficking in human beings, drugs, excise goods and firearms. Under the EU strategy towards the eradication of trafficking in human beings, prevention is the cornerstone of action, and providing better access to and realising the rights of the victims is a priority;
- To strengthen and intensify the law enforcement cooperation in the field of property crime.

ACTION 2: Promoting strategic long-term cooperation between law enforcement actors along the Danube River by enhanced networking

Targeted activities:

- To establish a network of contact and coordination centres along the Danube River,
- To further strengthen the cooperation with key stakeholders – Europol, Southeast European Law Enforcement Center (SELEC) and others,
- To establish standardised operational procedures for joint activities in case of transboundary technical-technological water traffic accidents,
- To enhance cooperation between water police units in Danube Region.

ACTION 3: Improving the systems of border control, document inspection management and cooperation on consular related issues in the Danube Region

Targeted activities:

- To further develop well-functioning border-management systems,
- To foster the cooperation and exchange of best practices on document inspection management,
- To address the topic of better managing migration in the Danube Region.

ACTION 4: Promoting the rule of law and the fight corruption

Targeted activities:

- To further enhance the joint efforts in combating corruption,
- To foster the administrative cooperation and improvement of qualifications of law enforcement.

ACTION 5: Setting up a structure of Danube River Forum

Description: An important aspect within PA 11 portfolios is the long-term cooperation on establishing a network of contact and coordination centres along the Danube that is continuously growing. As a follow-up to a strategic PA 11 project "DARIF" (2013-2015) the EUSDR-Countries participated in six annually held joint actions to strengthen the cooperation.

TARGET: In this regard we will furthermore organize joint action days in this field of cooperation once a year.

ACTION 6: Joint work with Priority Area 1a "Mobility: Waterways"

Description: The joint work with Priority Area 1a "Mobility: Waterways" has a longstanding history since 2013. The main objective of this cooperation is the standardisation, harmonisation and digitalisation of ship inspections on the Danube. In order to achieve this goal, several actions have been developed through several workshops, which need to be coordinated between the EUSDR countries. PA 11 is responsible for implementing four measures. PA11 will continue the cooperation with PA 1a in the future.

TARGET: To identify further control procedures along Danube River ports to be harmonised within the joint expert group between PA 1a and PA 11.

ACTION 7: Implementation of a Ministerial Conference every 3 years

Description: The Interior Ministers within the framework of the PA 11 of EUSDR convened at two Danube Security Conference in 2013 and 2016. The next meeting is scheduled for the end of 2019 or early 2020 (because of the EU-Elections). It is very important to have a steady exchange and support on a high political level regarding all relevant topics in the EUSDR. PA 11 will furthermore organise such meetings in the future. Moreover, a Police Chief Conference is planned to cover the operational level.

TARGET: To organise a Ministerial conference every three years

C) Examples of projects / activities (past, present or future)

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References

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COM 2010b	Commission Staff Working Document – Action Plan. Brussels, 08.12.2010 – SEC(2010)1489 final.
COM 2013	Report from the Commission concerning the European Strategy for the Danube Region. Brussels, 08.04.2013 – COM(2013)181 final.
COM 2014	Report concerning the Governance of macro-regional strategies. Brussels, 20.05.2014 – COM(2014)284 final.
COM 2016	Report on the Implementation of EU macro-regional strategies. Brussels, 16.12.2016 – COM(2016)805 final. Accompanying Staff Working Document - SWD(2016)443 final.
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COWI 2017	Macro-regional strategies and their links with cohesion policy. COWI, November 2017. Published online: http://ec.europa.eu/regional_policy/sources/cooperate/macro_region_strategy/pdf/mrs_links_cohesion_policy.pdf
DSRN 2013	Danube Strategy Research Network (DSRN) study: EUSDR Challenges and Chances 2014-2020. Updated 2015. Published online: https://danube-region.eu/download/dsrn_conference_proceedings_2015/?wpdmdl=646&refresh=5de8d8937fee81575540883
DSP 2019a	Consolidated Input Document of the Danube Countries for the Revision of the EUSDR Action Plan. Final version of 11 th July 2019. Published online: https://danube-region.eu/wp-content/uploads/2019/09/EUSDR_Consolidated-Input-Documents_AP-Revision_2019_DSP_v1.pdf
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DSP 2019c	Report on the Public hearings on the Revision of the EUSDR Action Plan. Published online: https://danube-region.eu/wp-content/uploads/2019/12/EUSDR_ReportPublicHearings_2019.pdf

ANNEX 1: Timeline of the revision process

25 th May 2018	Joint NC&PAC meeting at Sofia: Consensus on the need for a revision of the EUSDR Action Plan. Start of the revision process
26 th June 2018	Joint NC&PAC meeting at Brussels with Commissioner Crețu and several line DGs: Broad support for the revision and call for a re-boost of the EUSDR
September 2018	The new Danube Strategy Point (DSP) becomes operational to assist the revision process
22 nd / 23 rd January 2019	The PAC meeting at Bucharest discussed the "Summary of the PACs proposals to the revision of the EUSDR Action Plan – Outcomes of the consultation phase on the guidance note of the Bulgarian EUSDR Presidency"
29 th January 2019	<i>[Second] Report on the Implementation of EU macro-regional strategies</i>
14 th / 15 th February 2019	NC meeting at Bucharest endorsed a roadmap/timeline for the revision process
26 th April 2019	Deadline for NCs and PACs contributions to a Consolidated Input drafted by the DSP
14 th May 2019	DSP compiled and circulated draft Consolidated Input
23 rd / 24 th May 2019	NC/PAC meeting: NC decision to relegate input paper to DSP for consolidation i.e. redrafting
27 th / 28 th June 2019	EUSDR Annual Forum at Bucharest (Public Hearing and Session 4 especially dedicated for the Revision of the Action Plan. Results of the Public Hearing to be presented during Session 4 of the AF)
11 th July 2019	Final minutes of NC meeting of May 2019 and final Consolidated Input circulated to NCs for endorsement. Final and endorsed version of Consolidated Input handed over to DG REGIO.
17 th September 2019	First Draft of revised Action Plan (as Staff Working Document / SWD) circulated to NCs and PACs for comments
24 th September 2019	DG REGIO Information workshop for NCs and PACs, Vienna
31 st October 2019	Deadline for NCs' and PACs' feedback
21 st / 22 nd November 2019	NC meeting at Zagreb: DG REGIO presents main characteristics of the final draft of the Action Plan, taking into account the NCs' and PACs' feedback
December 2019	Final draft of revised Action Plan (SWD) circulated to NCs
January 2020	Start of the formal SWD Commission procedure, incl. an Inter-Service Consultation
Tentatively March 2020	New EUSDR Action Plan adopted as a SWD

