



**PREPARING THE DANUBE
LIGHTHOUSE EU MISSION**
ON RESTORING OUR OCEANS
AND WATERS BY 2030
07/12/2022 PRAGUE

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www.bio-hub.cz



BIOEAST TWG Fresh Water Based Bioeconomy Enhancement of the Danube Lighthouse

The need to tackle
freshwater related
issues on the
BIOEAST macro-
region

**TWG as a working
body of the BIOEAST
Initiative**
TWG activities
achievements &
challenges & ambitions



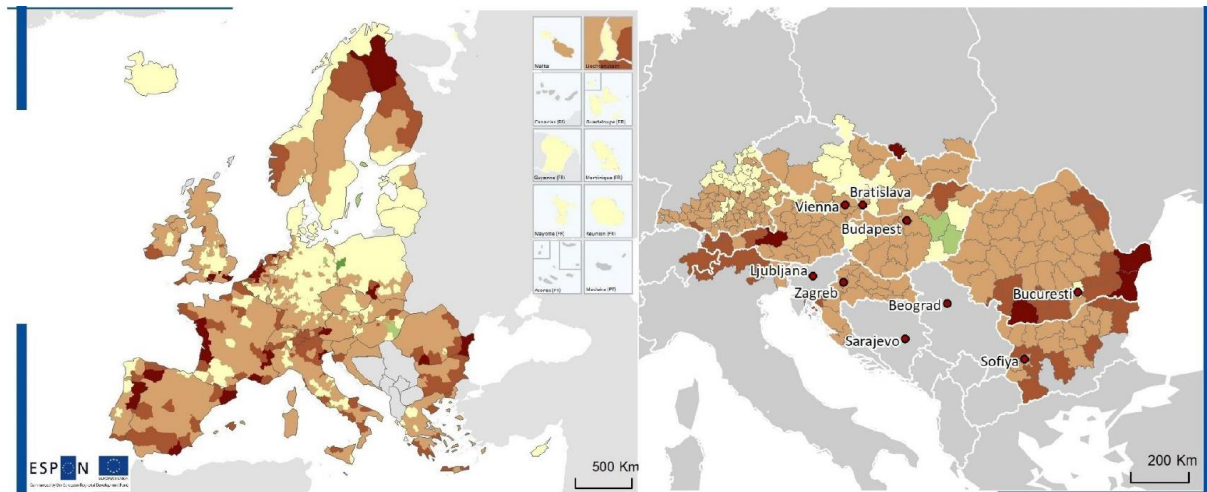
**CENTRAL-EASTERN EUROPEAN INITIATIVE FOR KNOWLEDGE-BASED AGRICULTURE,
AQUACULTURE AND FORESTRY IN THE BIOECONOMY**

BIOEAST.EU

The need to tackle freshwater related issues on the BIOEAST macro-region

- production lines have been built based on fresh water
- current crisis (safety, climate, energy, food) create a pressure to ensure sustainable management of fresh water and bioeconomy deployment

The number of regions in the Danube area that will not or will just marginally be affected by climate change is quite small. !!



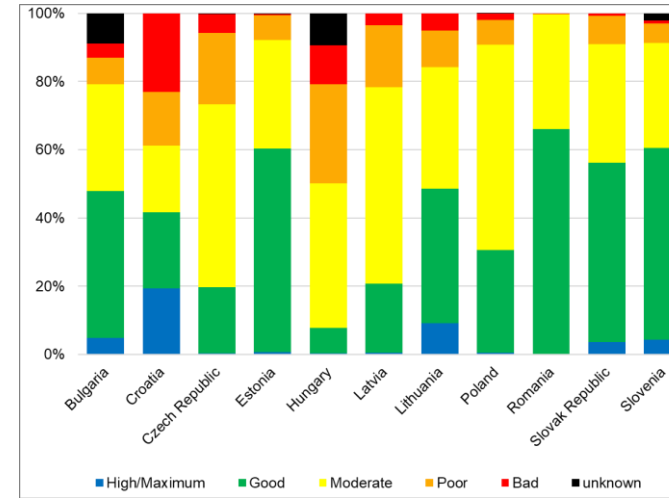
Aggregate potential impact of climate change

■ Medium positive impact (-0,5 - -0,3) ■ Low negative impact (0,1 - 0,3)
■ Low positive impact (-0,3 - -0,1) ■ Medium negative impact (0,3 - 0,5)
■ No/Marginal impact (-0,1 - 0,1) ■ High negative impact (> 0,5)

Regional level: NUTS 3
 Origin of data: EEA, 2012, 2013, 2014; E-PTN 2012; OSM2014; GISCO 2006; Eurostat 2011, 2013, 2014; JRC 2006, 2012, 2013, 2014; USGS 2011, DIVA 2004, ATSR2014; Statistics Iceland 2011; Bundesamt für Statistik 2011, 2014; Amt für Statistik Liechtenstein 2014; HESTA 2014.
 Source: ESPON CLIMATE updated, 2015

Climate change is expected to impact most European regions by 2100. The computed potential impact is aggregated into the degree of exposure (the extent to which a region is facing natural hazards or climate change impacts), the sensitivity of the region (the economic, social and ecological damage potential, which is assessed, in this context, by using the regional GDP per capita), and their capacities to respond (the ability to react to and mitigate which, in this context, is addressed by taking into account national GDP per capita). The impact of climate change concentrates mainly along regions with natural borders (rivers, mountains, coastal regions).

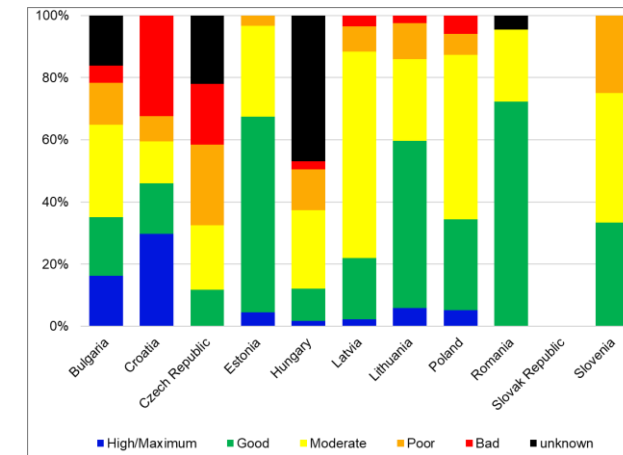
The number of regions in the Danube area that will not or will just marginally be affected by climate change is quite small. In some countries like Austria and Bulgaria, the mountain regions are seen as potentially the most affected. In Romania, the flat area in the south and the Dobrogea counties near the coast appear to be the most potentially vulnerable.



Ecological status or potential of surface water bodies: rivers & ponds

The majority of BIOEAST water bodies has worse than good status !!

Source: Thematic Study Fresh Water Based Bioeconomy, BIOEASTsUP project 2022



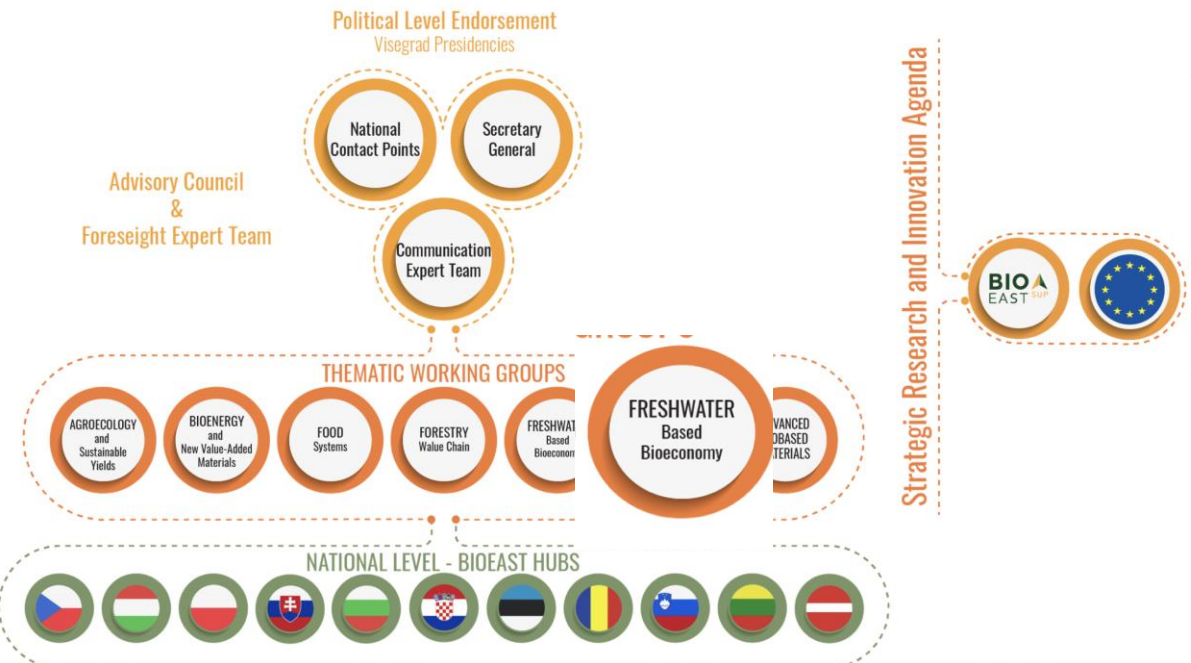
Source: ESPON EGTC August 2021 www.espon.cz



BIOEAST TWG Fresh Water Based Bioeconomy

Working body of the BIOEAST Initiative

ESTABLISHMENT



- Dec 2019 initiated by the Ministry of Agriculture Czech Republic
- Feb 2020 Kick off meeting in Brussels during the BIOEAST conference BIOEAST AS A DRIVING FORCE IN THE CONTEXT OF THE EUROPEAN GREEN DEAL
- TWG Fresh Water BBE is are working on 11 countries priorities concerning the fresh water based bioeconomy, and specifically on research and innovation agendas



The BIOEASTsUP project has received funding from the European Union's Horizon 2020 research and innovation programme under Grant Agreement No 862699





TWG Objectives and Thematic Areas

1. **Support the BIOEAST Initiative on the EU scene**
2. **Improve the involvement of TWG members and the dialog between policy makers and academia**
3. **Share the knowledge from the on-goings international projects, exchange the data & results and build the knowledge**
4. **Support the Danube Lighthouse and Mission implementation to serve the whole region to cover fresh water related need**

MEMBERS

- **Ministry of Agriculture Czech Republic**
- **Ministry of Agriculture Hungary**
- **Ministry of Environment Estonia**
- **Ministry of Rural Affairs Estonia**
- **Ministry of Agriculture and Rural Development Romania**

- **Ruder Bošković Institute Croatia**
- **Institut de Prognoza Economica, Romania**
- **S. Sakowicz Inland Fisheries Institute Poland**





DIALOG BETWEEN POLICY MAKERS RESEARCH PUBLIC AND PRIVATE SECTOR INPUT FROM TWG MEMBERS AND STAKEHOLDERS

Wide spectrum of stakeholders involved in the fresh water issues in the Danube river basin belong to the agenda of several ministries – agriculture, environment, research and innovation, transport and also internal affairs.

There is a need to map all relevant actors, set proper systems of cooperation to be able to discuss a common long-term vision, define research needs and map demands for supportive tools.

- Involvement and support the implementation of the Danube Pilar
- Closer collaboration with the CBE – JU
- peer review of good fresh water based bioeconomy examples
- capacity building on innovative technologies and transition towards sustainable development





Research Topics on the macro regional level (ongoing)

SRIA

- Development of new business models and value chains based on freshwater with a focus on the Danube River Basin
- Development and mapping of the existing solutions to enhance the eco innovation system in the Danube River Basin, more efficient technology transfer of fresh water related issues
- Setting up a new appropriate framework to enhance
 - efficient cooperation between **all relevant actors**
 - **cooperation and discussion of a common long-term vision**
 - **defining common research and innovation agenda**
- Support the implementation of the Danube Lighthouse and fresh water related needs
- Develop nature-based innovative solutions to mitigate impact of climate change on ecosystems and improvement of water management
- Support ecosystem-based approach for monitoring and improvement water quality both in rivers and water areas, new innovative solutions how process use sediment, micro plastics into valuable products for new value chains
- Develop new technologies to approach invasive species in freshwater
- Development of evidence based assessment to provide evidence based solutions for policy makers to advocate for restoration of water bodies



1. Facilitating the ongoing dialog between policy makers, researchers, public and private sector

- Validation Workshops and ongoing discussion on the BIOEAST SRIA input

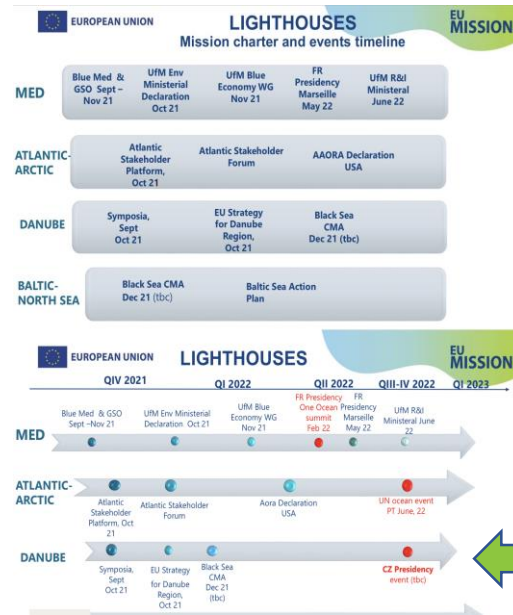
- Thematic Study

2. Co-design thematic SRIA

- Mapping the fresh water related topics in the BIOEAST Macro region initiated by TWG members

3. Co-development of international project proposal

- Cost Fresh Water project submitted



December 2021 informal meeting with the EU Board Mission
December 2022

ACTION PLAN

1. Finalize TWG input for the BIOEAST SRIA & Thematic SRIA (February 2023)

2. Launching the DALIA IA project (beginning of 2023) cooperation with the Danube Lighthouse CSA and CSA of the other Lighthouses & Water4All partnership & Global Water Partnership



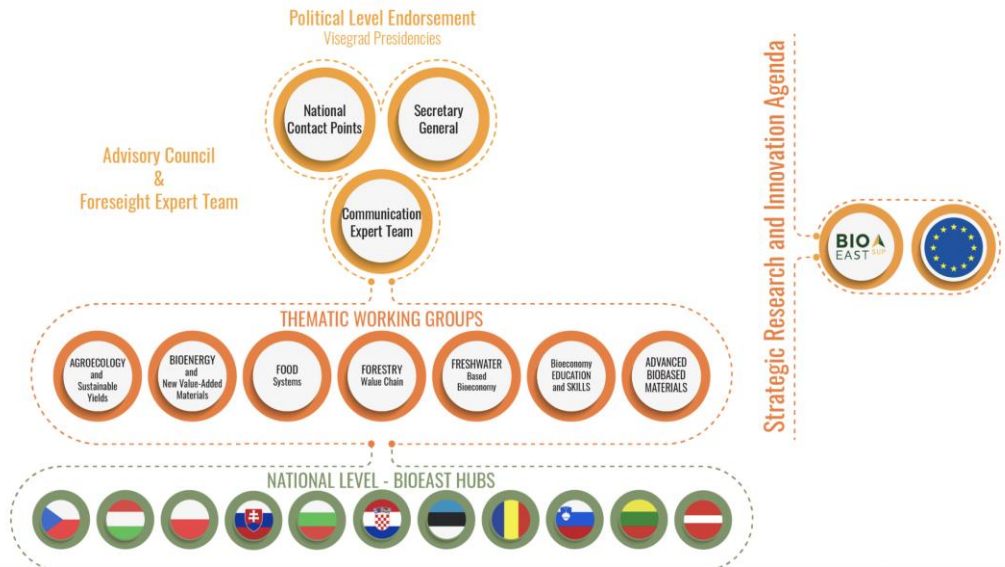
IA Danube River basin
DALIA HE project
January 2023 –
December 27





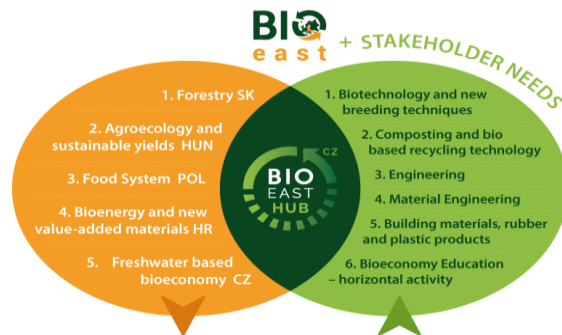
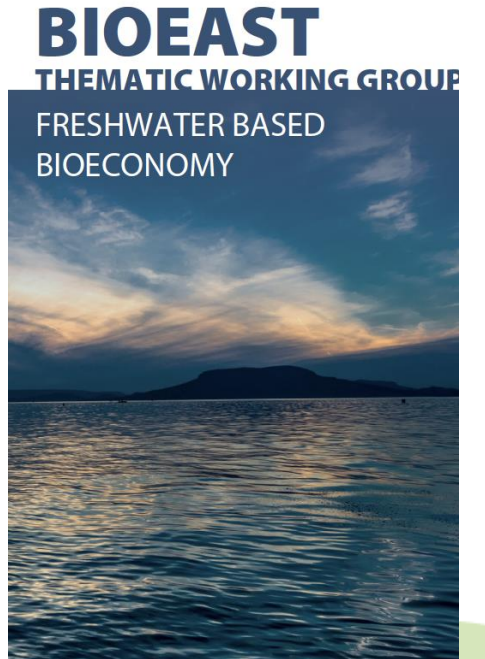
How to get involved?

We are looking forward to welcoming you on board!



1. Macro region level – BIOEAST NCP

2. National Level – national HUBs (CZ, POL)



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Discussion





Ladies and Gentlemen
Thank you for your kind attention

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