INTERGROUP
Seas, Rivers, Islands & Coastal Areas

# FISHERIES AND AQUACULTURE IN THE DANUBE AND THE BLACK SEA

THU 22 APRIL 2021
11.00 - 13.30 (CEST)

VIEWS FOR BUILDING FORWARD BETTER

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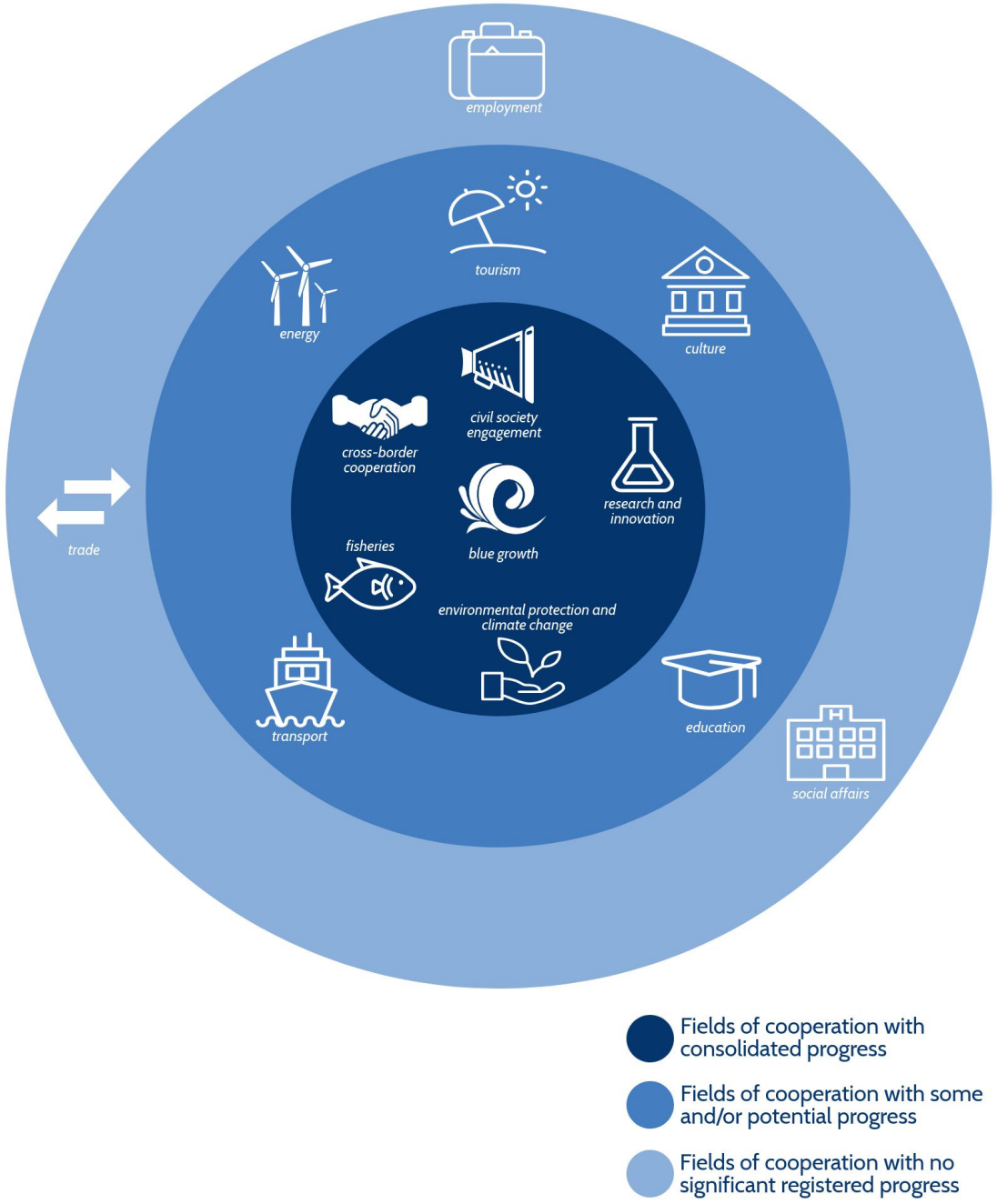
CO-ORGANISED BY:

CPMR CRPM

CPMR BALKAN & BLACK SEA COMMISSION

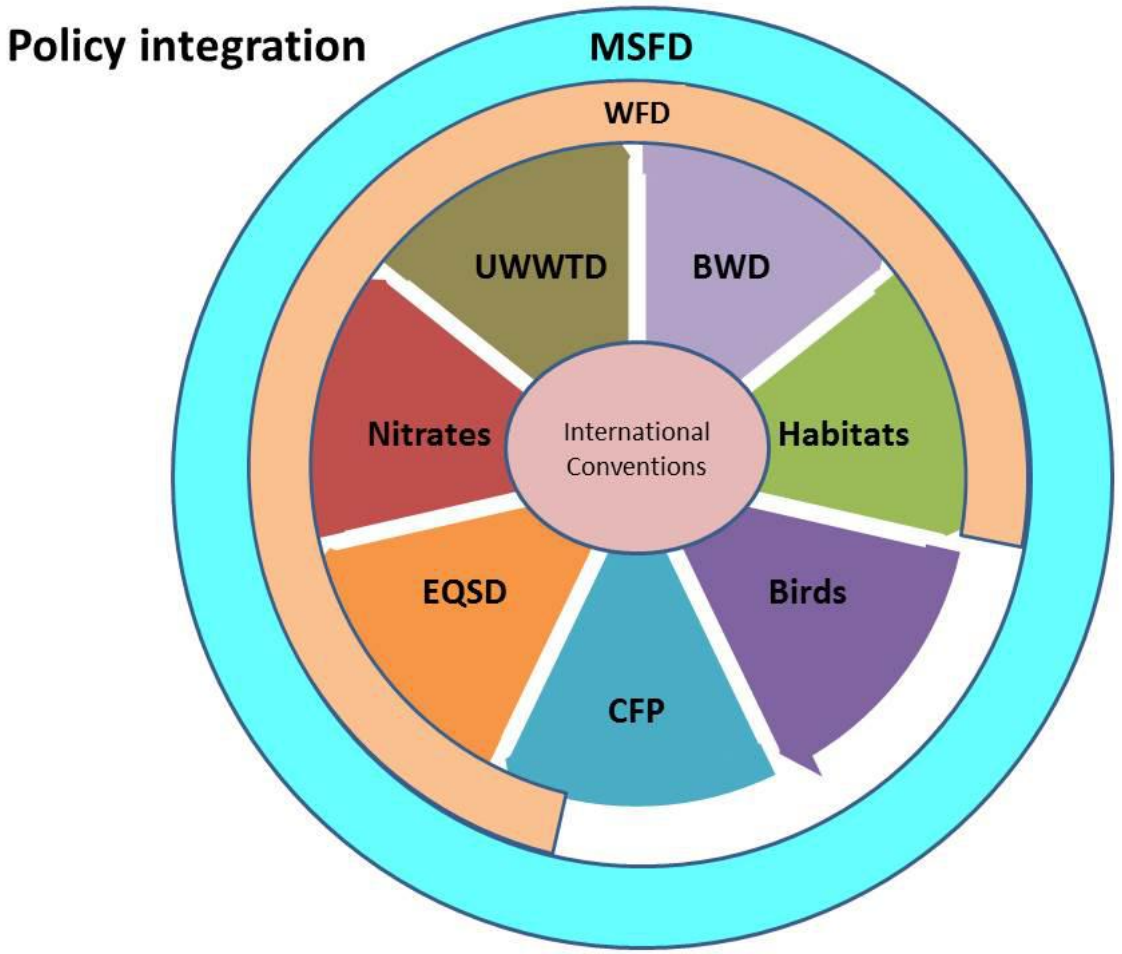
INTERNATIONAL CENTER FOR BLACK SEA STUDIES ICBSS BLACK SEA ECONOMIC COOPERATION




https://eeas.europa.eu/diplomatic-network/black-sea-synergy/346/black-sea-synergy_en

# EU strategies and initiatives

- Common Maritime Agenda for the Black Sea
- Black Sea Strategic Research and Innovation Agenda (SRIA)
- Black Sea Assistance Mechanism (BSAM)
- EU Black Sea Synergy initiative
- EU Strategy for the Danube Region (EUSDR)
- EU Green Deal
- EU Farm to Fork Strategy
- Eastern Partnership policy beyond 2020




- Directive 2008/56/EC of the European Parliament and of the Council of 17 June 2008, establishing a framework for community action in the field of marine environmental policy
- Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000, establishing a framework for Community action in the field of water policy
- Directive 2008/105/EC of the European Parliament and of the Council of 16 December 2008, on environmental quality standards in the field of water policy, amending Directive 2000/60/EC of the European Parliament and of the Council
- Council Directive 91/271/EEC of 21 May 1991 concerning urban waste-water treatment
- Directive 206/7/EC of the European Parliament and of the Council, of 15 February 2006, concerning the management of bathing water quality and repealing Directive 76/160/EEC
- Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora
- Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009, on the conservation of wild birds
- Council Directive 91/676/EEC of 12 December 1991 concerning the protection of waters against pollution caused by nitrates from agricultural sources

# EMBLAS Project

EU Marine Strategy Framework Directive

8 out of 11 descriptors

Initial Assessment

International cooperation (BSC, JRC, EEA, DG ENV…)

http://emblasproject.org/

PUBLICATIONS

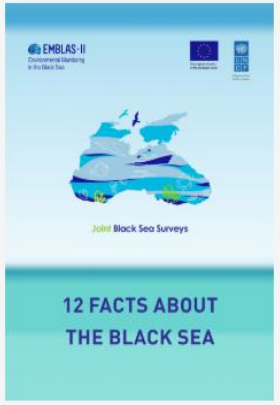

Public summary

English version

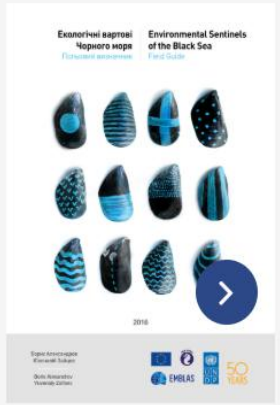

Scientific Report


Scientific Report

Annex

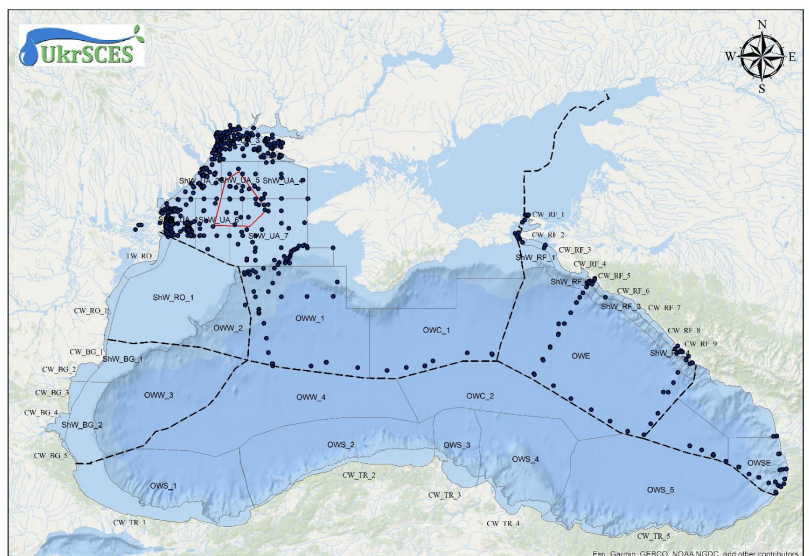



12 new facts you wish to know about the Black Sea




Environmental sentinels

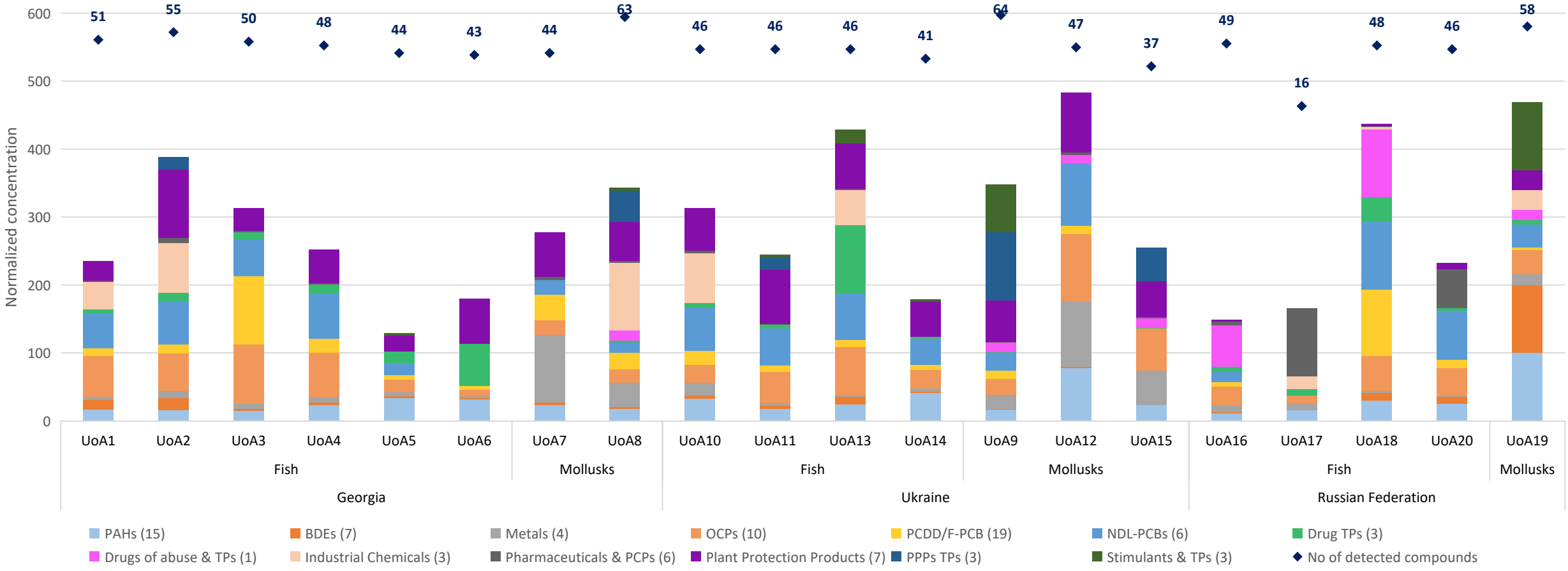
English version



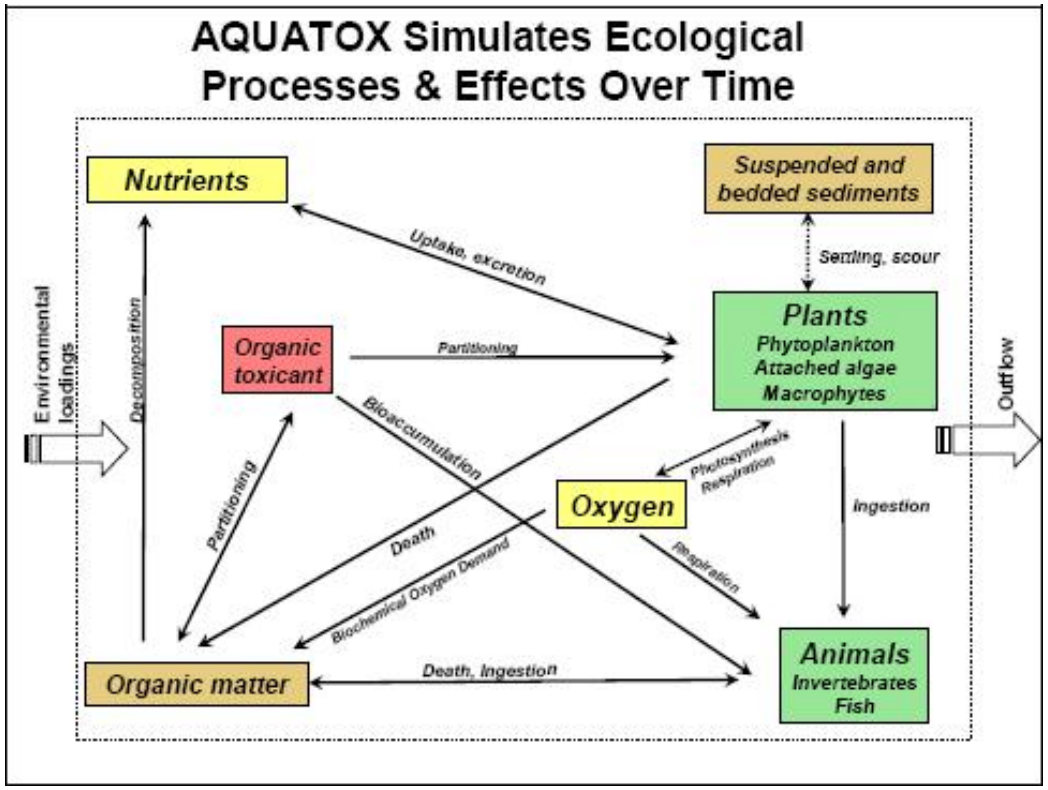

JBSS 2016, 2017, 2019

# Novel non-target screening, in each sample:
# Wide-scope target screening >2,400 substances
# Suspect screening >65,000 substances

## JBSS 2019 – contaminants in biota – molluscs/fish



# Scenarios for the Lower Danube region ecosystems with simulation method



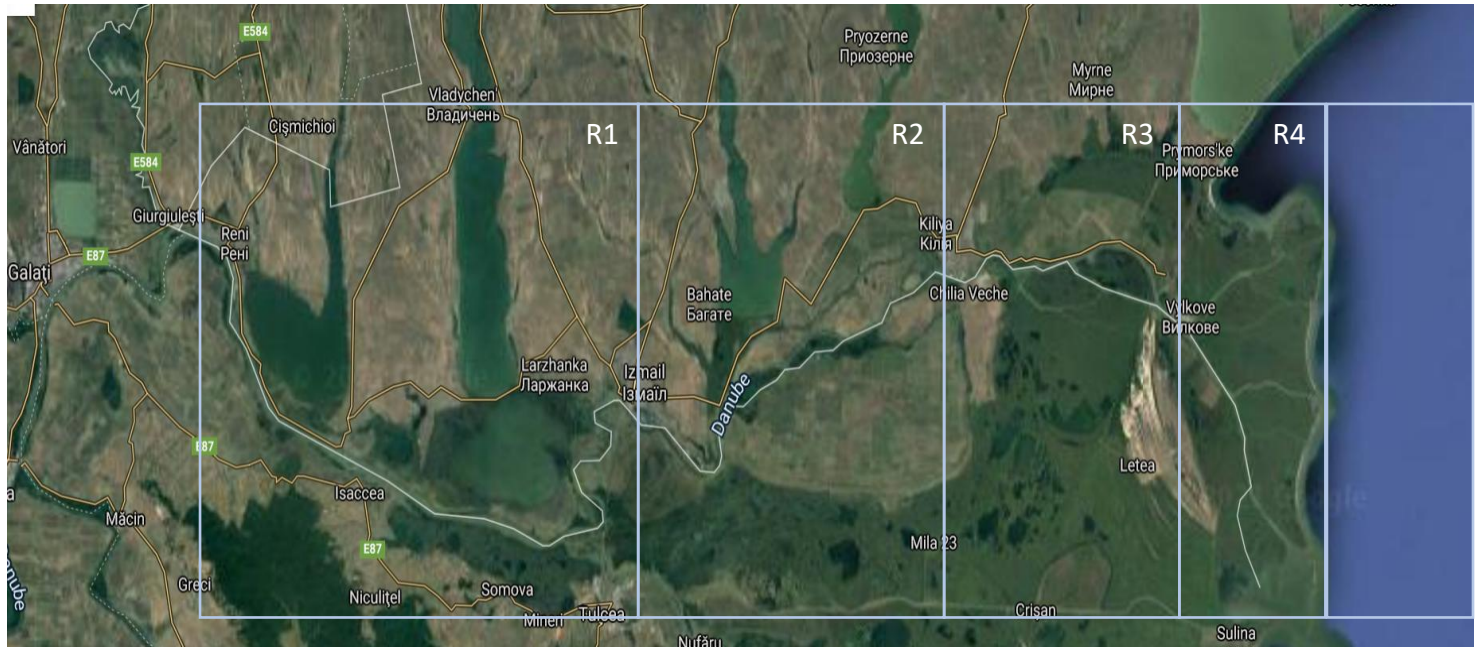

https://www.epa.gov/ceam/aquatox-basic-information

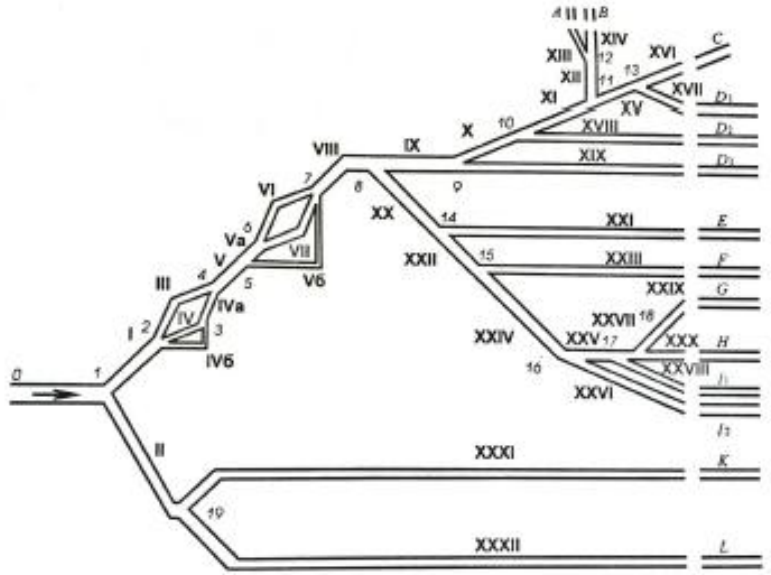
Ukrainian Lower Danube water assessment/ Technical report EU Project "Inventory, Assessment and Remediation of Anthropogenic Sources of Pollution in the Lower Danube Region of Ukraine, Romania and the Republic of Moldova"- MIS-ETC 995, UkrSCES. – Odesa, 2017.

- **Techno-world:** the main focus in techno-world scenario is economic growth. High economic growth is accompanied by increased energy needs and resources, which brings development of agriculture. However, there are measures to reduce the anthropogenic influence.
- **Compromise world:** the scenario assumes that economic growth remains the same as it is today. More effort is used to ensure the harmonious use of natural resources of food, row materials and energy. A lot of effort is applied to ensure the conservation and restoration of ecosystems.
- **Fragmented world:** this scenario is one of increasing economic development, in some cases there are also great economic crisises (recessions). The environmental issues almost are not considered.

Changes in meteorological and hydrological parameters of the Lower Danube region state that are characterized scenarios of development are determined by changes in regional features of all Danube basin. The climate models RPC85, RPC45 have been used for scenarios of climate change for the periods up to 2030 and to 2060

# Scenarios for the Lower Danube region ecosystems with simulation method



| Region | Techno-world | | Compromise world | | Fragmented world | |
|---|---|---|---|---|---|---|
| | T30 | T60 | C30 | C60 | F30 | F60 |
| R1 | -17 | -24 | -1 | -2 | -15 | -21 |
| R2 | -25 | -29 | -4 | -8 | -16 | -25 |
| R3 | -8 | -12 | -2 | -5 | -6 | -11 |
| R4 | -12 | -20 | -6 | -7 | -7 | -15 |
| Danube | -15 | -21 | -3 | -6 | -9 | -14 |

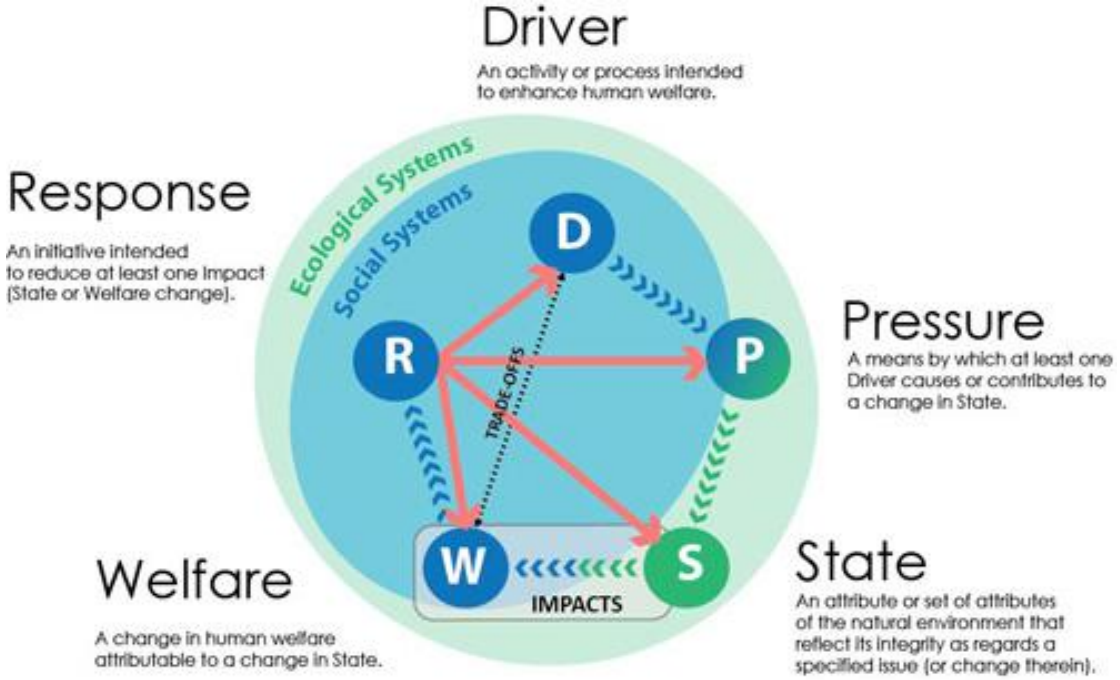
- Fish biomass in relation to the existing value (%) will changed in 2030 and 2060

# *COVID 19 Impact: E*nvironmental effects


Ana L.Patrício Silva et. al., Increased plastic pollution due to COVID-19 pandemic: Challenges and recommendations, Chemical Engineering Journal, Volume 405, 1 February 2021

1) Despite the positive environmental effects (for example, $CO_2$ build-up will be slightly slower), there is much uncertainty about the long-term benefits of the COVID-19 pandemic for the environment;
2) At the same time, negative environmental impacts of the COVID-19 pandemic clearly emerged (for example, there is growing concern about the surge in consumption and disposal of single-use plastics for individual protection);
3) Many environmental enforcement programs, observer programs and monitoring surveys had to be postponed or suspended during the lockdown. This can hamper the collection of continuous time series of observations from natural systems, which in turn are fundamental for ecosystem assessment, management and, ultimately, conservation

# *COVID 19 Impact: Aquaculture and Fisheries using an Ecosystem-based Approach*




http://msfd.eu/site/ecosystem-approach-dpswr/

<u>Economic component</u>

- Food and fisheries sectors are among the most vulnerable and prone to the deleterious impacts of the COVID-19 pandemic;
- Restrictive measures to curtail the spread of the virus: especially on mobility, social distancing, quarantine, and, in extreme cases, lockdown;
- Disruptions as result of the measures: safety at workplace, loss of harvest and processing activity, loss of export opportunities and income

<u>Environmental protection component</u>

- Marine environmental monitoring was not taking place and for some cases it was unclear when it would recommence;
- Environmental data collection for climate change and pollution has stalled due to the pandemic;
- The pandemic had led to the interruption of research and maintenance cruises

# Steps forward

- Danube and Black sea countries should adopt an approach to aquaculture and fisheries management that is used by best available scientific practices. Management systems employed around the world are diverse, and those that invest in limiting fishing pressure backed by comprehensive enforcement programmes, as opposed to enhancing fishing capacity, are more likely to experience stock recovery;
- It would be prudent to conduct an independent scientific review to ensure the long term plan and mechanisms by which Black Sea basin aquaculture and fisheries are managed to have the best possible chance of enhancing the future of communities through recovering resilient fish populations;
- The establishment of Marine Protected Areas (MPAs) is one of the most cost-effective ways to restore overexploited stocks and habitats on which fish depend, to the mutual benefit of the fishing industry who experience increased catches in grounds immediately outside of MPAs.

Any questions?