

Climate change also poses a significant challenge to the maintenance of ES. Changes in temperature and precipitation patterns can have far-reaching impacts on ecosystems and the services they provide. For example, changes in water availability can affect agricultural productivity and food security. Adaptation strategies such as the development of drought-resistant crops or the implementation of sustainable water management practices can help to reduce these impacts.

Maintaining ES in the face of common territorial challenges requires an integrated approach that takes into account the complex interactions between different ecosystems and the multiple benefits they provide. Effective management and conservation of natural resources, balancing competing demands for natural resources, and adapting to climate change are all essential components of this approach.

The Black Sea region faces several common territorial challenges in maintaining its ES. These include eutrophication, pollution and poor fishing management, which have resulted in an overall decline of biological resources, the diversity of species and landscapes and of the aesthetic and recreational values of the Black Sea. Climate change also poses a significant challenge to the Black Sea region, with effects such as sea-level rise, erosion, ecosystem changes, natural meteorological effects, and elevation of temperature.

At regional level, to address these challenges, through Common Maritime Agenda for the Black Sea was established the environmental protection and sustainability in the exploitation of coastal and marine resources, based on cooperation and joint work to improve environmental protection of the shared natural heritage.

Based on the study of the mentioned elements for the 5 delta areas considered in the project - Danube Delta (Romania and Ukraine), Nestos Delta (Greece), Kızılırmak Delta (Turkey), Chorokhi & Kolkheti Deltas (Georgia), cross-border collaboration will put provision of data on the basis of which the evolutionary trend of ecosystems in the Black Sea Bioregion will be better understood, these elements being able to form the basis for the development of regional decisions and policies regarding invasive species and ES in the context of climate change.

PARTNERS

Romania: The Danube Delta National Institute for Research and Development - Coordinator

Romania: Danube Delta Biosphere Reserve Authority

Ukraine: Institute of Marine Biology of the National Academy of Sciences of Ukraine

Greece: Democritus University of Thrace(DUTH).

Turkey: Karadeniz Technical University - Faculty of Marine Sciences

Georgia: International Business and Economic Development Center

The monitoring scheme of the IASON+ project includes five spatially distanced deltaic study areas, sharing common characteristics, but with different environmental management backgrounds.

- Danube Delta (Ukraine & Romania)
- Nestos Delta (Greece)
- Kızılırmak or Halys Delta (Turkey)
- Kolkheti & Chorokhi Delta (Georgia)

Cover photo

Chorokhi Delta

Invasive Alien Species Observatory and Network Development for the Assessment of Climate Change Impacts and Contextual Ecosystem Services Evaluation in Black Sea Deltaic Protected Areas (IASON+)
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NEXT Black Sea Basin



Title: Invasive Alien Species Observatory and
 Network Development for the Assessment of Climate
 Change Impacts and Contextual Ecosystem Services
 Evaluation in Black Sea Deltaic Protected Areas (IASON+)

BSBN00174



Invasive Alien Species Observatory and Network Development for the Assessment of Climate Change Impacts and Contextual Ecosystem Services Evaluation in Black Sea Deltaic Protected Areas

C.1 Project overall objective

Project overall objective

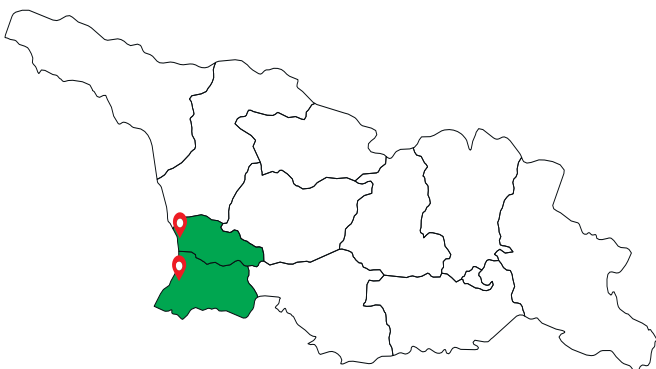
Please define the overall objective of the project.

- Make sure that it clearly contributes to the selected programme specific objective and field of action (please see Part I Section 5 Priorities and Specific Objectives).
- The overall objective should describe the broader goal of the project for the benefit of its target group(s) and should point to the results (change) to be achieved by the project.

The overall objective of the project is to continue the activities of establishing and performing joint monitoring actions for Invasive Alien Species (IAS), the evaluation of their influence in defining Ecosystem Services in Black Sea deltaic ecosystems from five countries (Romania, Ukraine, Greece, Turkey and Georgia) and assess the resilience under current and predicted climatic conditions, to create and promote climate change adaptation premises.

C.2.1 What are the common territorial challenge(s) that will be tackled by the project?

Georgia (Kolkheti & Chorokhi Delta)



Please describe why your project is needed in the programme area and the relevance of your project for the programme area, in terms of common challenges addressed.

Invasive alien species (IAS) have become an important driver of biodiversity change and exert severe pressure on natural ecosystems. The development of modelling approaches to assess and predict their distributions and impacts, and evaluate management options has increased substantially. At species/population level, most of the studies reported negative impacts; while at multispecies/ecosystem level, negative and both negative and positive impacts were similarly represented. It is important the development of the models to assess different impacts of IAS populations and highlight the need to advance their capabilities to predict future impacts at the Black Sea Bioregion. Further development of models that allow capturing the arrival, establishment and spread of IAS and assess their impacts in an integrated way is still needed. Spatial-temporal modelling techniques bridging with novel analytical capabilities may be the key for future achievement. On the other hand, Ecosystem Services (ES) are the benefits that people obtain from ecosystems. These include provisioning services such as food and water; regulating services such as flood and disease control; cultural services such as spiritual, recreational, and

cultural benefits; and supporting services such as nutrient cycling that maintaining the equilibrium conditions for the studied ecosystems. However, natural ecosystems are being degraded and destroyed at an unprecedented scale for Black Sea Bioregion, which poses a threat to the provision of these essential services.

One of the common territorial challenges in maintaining ES is the need for effective management and conservation of natural resources. This requires an integrated approach that takes into account the complex interactions between different ecosystems and the multiple benefits they provide. At the decision-making level, high-level science-policy platforms have been established to serve policy makers with integrated and agreed information on the extent of biodiversity and ecosystem loss and also present projections to the future. This information can be used to develop effective conservation and restoration strategies.

Another challenge is balancing the competing demands for natural resources. For example, land use changes such as deforestation for agriculture or urbanization can have negative impacts on ES such as water regulation and carbon sequestration. Effective land use planning and management can help to minimize these impacts and ensure the sustainable provision of ES.

