

Back to Nature through international co-operation, the Danube Delta - RO

1. Policy Objective & Theme

- SUSTAINABLE USE OF RESOURCES: Preserving coastal environment (its functioning and integrity) to share space
- SUSTAINABLE ECONOMIC GROWTH: Balancing economic, social, cultural development whilst enhancing environment

2. Key Approaches

- Integration
- Participation
- Ecosystems based approach
- Socio-economic

3. Experiences that can be exchanged

The Danube delta has suffered significant changes due to human intervention. Following the establishment of Biosphere Status, international cooperation through successive projects have brought best practice knowledge to the assessment of the problems and the development of ICZM plans for the delta coastline. These measures have significantly restored the natural state and equilibrium of the delta area.

4. Overview of the case

The use of spatial planning as a tool to divide land use within a conservation area. The importance of international co-operation and a constant source of funding to realise the aims and objectives of an overall vision and strategy developed to bring sustainability to rural communities living in an area of high ecological value.

5. Context and Objectives

a) Context

The Danube River is Europe's second longest river with a total length of 2,857 km. The drainage basin covers 817,000 km² in 15 countries. The river divides into two deltaic tributaries draining into the Black Sea, the Chilia in Ukraine – marking the border with Romania - and the Tulcea (further downstream dividing into the Sulina and Sf. Gheorghe) in Romania. The coastline of the delta is ca. 240 km of which 160 km lies in Romania. The delta is flat and low-lying and susceptible to human intervention and climate change impacts, including sea level rise.

Since the mid-nineteenth century, the natural flow of the Danube has been adversely affected primarily by straightening the water-course and building dams for hydro-electric power both along its main course as well as on its tributaries. At the coast, an 8 km long jetty, to ease navigation into the Sulina canal has strongly influenced the circulation of near shore currents and sediment transport and interrupted the dominant southward longshore sediment drift. This has led to increased erosion.

Within the delta itself, from the middle of the last century canals have been dug, fish-ponds created and wetlands converted to agricultural polders. Whilst intending to enhance food production, navigation and industrial output these measures have lost tidal land, increased pollution and increased erosion. Further construction of sluices, to increase freshwater fish production and a reservoir of water for irrigation, has transformed the lagoon system into a series of large coastal lakes with salinity

changed from brackish to freshwater. By 1989, the Danube delta as a natural system was heavily impacted and on the verge of destruction.

b) Objectives

The primary aim is to achieve sustainable management of the area through managing the nature conservation values of the area and restoring the natural equilibrium of the delta.

6. Implementation of the ICZM Approach (i.e. management, tools, resources)

a) Project Management

The Danube Delta Biosphere Reserve is managed by the Danube Delta Biosphere Reserve Administration (DDBRA) under the authority of the Romanian Ministry for the Environment and Forests.

b) ICZM tools

The restoration process of the Danube delta began in 1991 with the creation of the UNESCO Danube delta biosphere reserve of 580,000 ha. This was the result of World Bank funding and the WNF/Auen Institute and significant international co-operation with the Netherlands Ministry of Transport, Public Works and Water Management. They assisted in capacity building, planning and organisation, exploration of vegetation and water quality and advising on ecological restoration of the former fish ponds. Spatial planning was the main tool used with the entire area divided into three zones viz. strictly protected areas (50,600 ha.) and areas of traditional economic use e.g. fishing and reed harvesting with quotas (306,100 ha.) separated by buffer zones (223,300 ha.). A Vision until 2025 for the delta has also been drawn up in the form of an outline ICZM Strategy for the whole Romanian coastline. Dutch organisations were again influential with Royal Dutch Haskoning (a consultancy group) and EUCC (an NGO) involved through a Dutch government funded project executed by the Romanian Ministry for the Environment and Sustainable Development. The Vision points to restoration of coastal dynamics, less pollution, promotion of sustainable activities like eco-tourism all designed to improve the delta ecosystems and improve living standards.

EU Structural Funds have been made available for the development of a more sustainable infrastructure for the coastal settlements. These needed urgent modernisation not only to combat poverty but to improve sewage systems by introducing home sanitation units, generating electricity from solar energy, re-introducing controlled coastal fisheries and promoting eco-tourism. Key concepts have also been introduced as a result of international co-operation in important European initiatives. Both the EU initiatives EUROSION and the follow-up work in CONSCIENCE have been instrumental in introducing several key concepts. The coast has now been divided into different sediment cells, coastal resilience has been recognised and strategic sediment reservoirs have been identified. These solutions were further elaborated by a US government funded project which aimed at integrating them into an overall, coastal protection plan which would abide to the ICZM strategy for the entire Romanian part of the Danube delta coast. An important driving force for improving the water networks is the Water Framework Directive.

7. Cost and resources

Total costs are not known.

8. Effectiveness (i.e. were the foreseen goals/objectives of the work reached?)

The funding of the Dutch and US governments as well as the World Bank and EU has dealt with critical delta issues. There are now new, comprehensive and integrated plans to include the restoration of human coastal settlements which will help fight poverty, create employment and sustainably develop the delta's coastal resources. They will provide a more sustainable and long-term solution along the whole deltaic coastline.

9. Success and Fail factors

Restoring and sustainably managing the nature conservation values raised a number of delicate issues. It was deemed especially important to retain the trust of the local communities and maintain their traditional habits. It was felt that, as much as possible, the management regime to mitigate the impacts of human intervention, should be minimal with the delta restoration allowed to take its own course. Stakeholder consultation has been important in getting acceptance for the plans by the local communities. European and International sources of funding has been available throughout the last two decades.

10. Unforeseen outcomes

The ICZM strategy has yet to be approved by the Parliament

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13. Sources

- The Danube Delta, back to nature through international cooperation (2010) A. Stanica in Climate of Coastal Cooperation. Ed. R. Misdorp. Publ. Boekenbent (available in hard-copy only).
- www.ddbra.ro/en