

Experiences with NWRM in the Danube river basin

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Integration of Natural Water Retention Measures (NWRM) in river basin management

- study launched by European Commission in 2013, aiming to:
 1. develop sound and comprehensive European knowledge on NWRM, structuring available information on technical, environmental, socio-economic, governance and implementation aspects of NWRM, mobilizing existing practical experiences, studies and stakeholders' knowledge.



Integration of Natural Water Retention Measures (NWRM) in river basin management

2. contribute to the development of a European NWRM “community of practice” by bringing together all parties interested in the design and implementation of NWRM the creation of partnerships and information exchange.
- This was achieved by the development of four informal regional networks: the **Danube river basin**, the Mediterranean Sea region, Northern Europe/the Baltic Sea and Western Europe.



The Danube regional process

- took into account the Danube specificities related to the implementation of NWRM
- provided case studies of NWRM applications in riparian countries
- supported the establishment of the regional NWRM network of practitioners and interested parties within the Danube River Basin
- raised awareness throughout the Danube River Basin on the potential role NWRMs can play in future WFD, FD or adaptation plans and strategies.



Danube region case studies

- 60 case studies collected in the Danube River Basin:
- NWRM mostly applied in Natural Areas, dealing with wetland restoration and creation; floodplains; re-meandering; revitalization of flowing waters; riverbed restoration; natural bank stabilization; restoration of lakes and levelling of dams/longitudinal barriers.
- several case studies identified in agricultural sector, dealing with: restoring and maintaining meadows and pastures; field margins and headlands; soil conservation crop practices: intercropping; no tillage or reduced/conservation tillage and green cover.
- two case studies have applied riparian buffers in forestry
- one Urban areas case study identified in Austria



Danube region case studies



The recently restored wetlands on Belene Island are among the most important places in the Lower Danube for the breeding and feeding of different water species of birds and fish. © Ivanov



The wetlands at Balta Geraiului had been drained to improve conditions for agriculture. Today, the restored site hosts growing biodiversity. © Ivanov



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Challenges and opportunities of NWRM in the Danube region

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- absence of national strategies on NWRM implementation and cost recovery.
- national institutions do not carry out monitoring unless required by law to do so, making it difficult to ensure WFD compliance for NWRM projects
- taking into consideration local characteristics and limitations (e.g. demographic, geographical)
- securing sufficient financing and investment
- collapsing irrigation and drainage systems
- difficulty in restoring areas that were either drained or dyked to create arable land



Challenges and opportunities of NWRM in the Danube region

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- European Union funds provide the primary financial means to implement natural water retention measures in the region.
- the existing network of experts and practitioners to meet and communicate experiences throughout the Danube Region and beyond
- ICPDR as organisation dedicated to water management in the Danube region



NWRM in the Danube region: ways ahead

- achieve policy coherence and integration within relevant framework directive requirements
- adjust the legal framework so that it conforms to new city, state and regional norms
- increase capacities of authorities and all practitioners
- during the new programming period, explore possibilities to mobilise EU funds and to allocate them for NWRMs.
- priorities should be given to “green” infrastructures that are still to be built and implement the latest technologies that are more adapted to the climate change
- communicate and raise awareness as much as possible concerning all possible options





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