

# Integrated water resources and coastal zone management in European lagoons in the context of climate change



THEME: **Spatial Planning and Governance**

CASE STUDY AREA: **Tyligulskyi Lagoon**

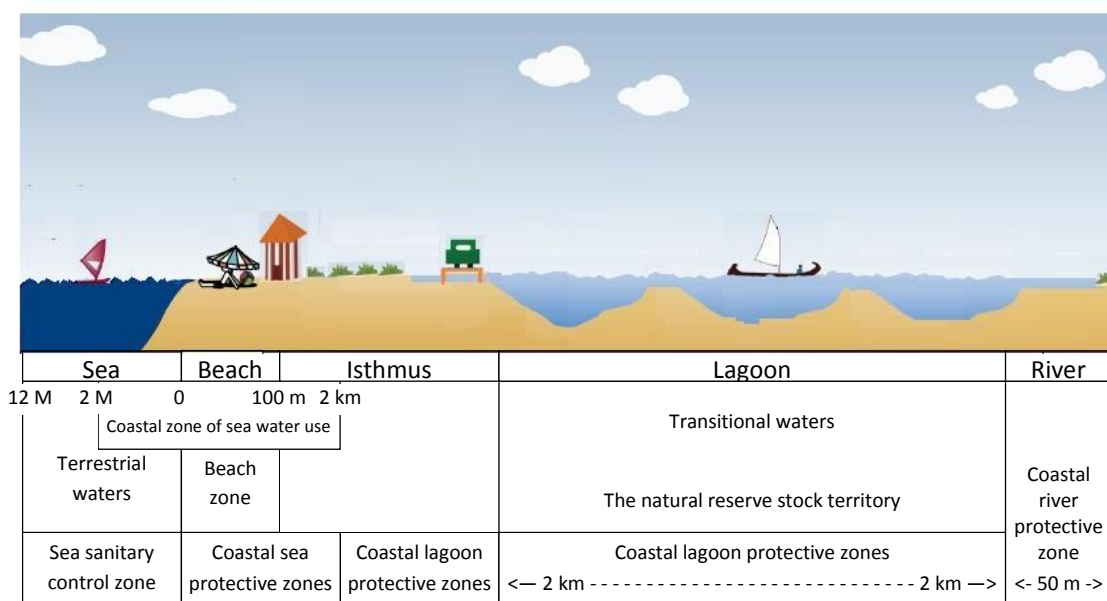
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## Spatial Concepts (WFD and others)

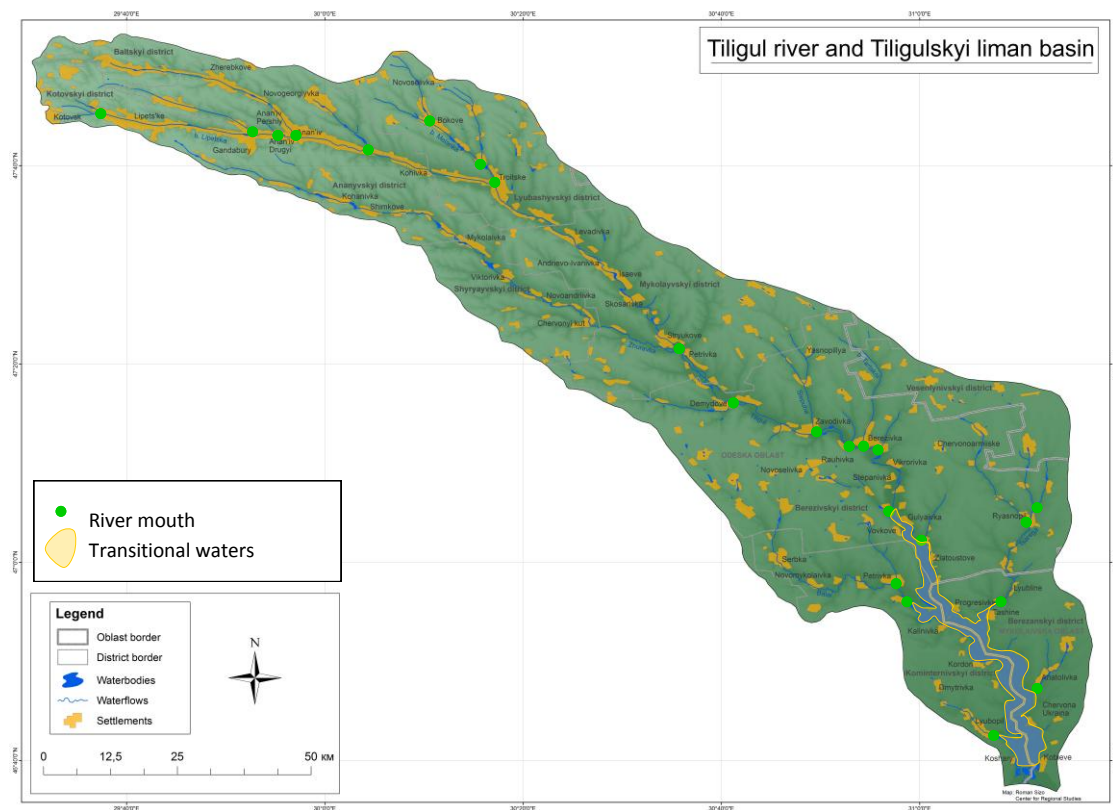
At present, the implementation of Water Framework Directive in Ukraine is in an initial stage. As for the Tyligulskyi Lagoon and its catchment basin, WFD's basic requirements such as the implementation of basin management model for catchment, river basin management plans, and programmes for the monitoring of water status are absent. Nevertheless, we can identify some water bodies in the Tyligulskyi Lagoon region as outlined below.



At the national level, principles of natural resources usage in Tyligulskyi Lagoon are conditioned by Land Code (1992), Water Code (1995), Forest Code (1994), Law "On the natural reserve stock of Ukraine" (1992).

The Water Code assigns particular conditions for the use of water stock lands and coastal protective zones. These conditions extend to the Tyligulskyi Lagoon, rivers at its catchment with ponds and reservoirs. For the sea and lagoon coast, the Water Code assigns the coastal protective zone with the width  $\geq 2$  km and the beach zone with the width  $\geq 100$  m from the shoreline respectively. Some activity is restricted within the coastal protective zone: the use of permanent and strong pesticides, the arrangement of domestic and industrial waste landfill as well as sewage ponds, the catchpits for household and domestic waste waters with the volume

$\geq 1 \text{ m}^3/\text{day}$ , the filtration field, other facilities for the reception and disinfection of liquid wastes. The coastal protective zone can be only used for military constructions, facilities for “clean” power generation and constructions for its transmission, health-improving institutions with mandatory central water supply and sewerage, hydraulic and hydrometric structures, outside plants. Within the beach zone, any constructions are restricted excepting hydraulic and hydrometric structures, outside plants.



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The coastal protective zone is a part of sea sanitary control zone regulated by the “Sanitary regulations and standards for protection of coastal waters from contamination at water use sites” (1988). The sea margin of sanitary control zone is in line with borders of territorial waters 22 km (12 miles), and land one is the 10 km from the shoreline. The border for the coastal zone of public sea water use, with special requirements on the sea water quality and monitoring, sea water protection under economical activity, is determined at  $\geq 3.9 \text{ km}$  (2 miles) in the line of sea and 2 km in the line of land from the shoreline.

## Spatial Planning and Management Tools

Local authorities decreed to establish two regional landscape parks (> 20000 ha) at the Tyligulskyi Lagoon and adjacent territories as well as a few wildlife preserves: botanical “Kalinovskyi” (92 ha), ornithological “Tyligulska Peresyp” (390 ha) and landscape “Kairovskyi” (150 ha). Moreover, the national ornithological preserve “Kosa Strelka” is located at the coasts of Tyligulskyi Lagoon. All these institutions are included in the natural reserve stock of Ukraine with relevant land use described in the law “On the natural reserve stock of Ukraine”.

According to the recommendations of Pan-European Biological and Landscape Diversity Strategy as well as with the view of setting up of Pan-European Ecological Network, Ukraine passes laws “On national program for setting up national ecological network for 2000-2015”(2000) and “On ecological network” (2004). Under these laws, Odessa Regional Council has passed “Program for setting up national ecological network in Odessa region for 2000-2015”. The scheme of regional ecological network in Odessa region was developed in 2011. According to this scheme, the southern part of the Tyligulskyi Lagoon with adjacent territories and the isthmus is included in the Azov-Black-Sea International Natural Ecological Corridor, the middle part is in the South Ukrainian State Ecological Corridor, and the Regional Landscape Park “Tyligulskyi” with Tyligul River main bed and adjacent water protection zones is contained in the Tyligul Regional Ecological Corridor. The scheme is the basis for the development of various design documentation for land management, municipal engineering, economical activity.

Another local act is the “Strategy of social and economic development in Odessa region for 2012” that defines strategic lines and plans of natural resources use. Some lines and plans relate to the Tyligulskyi Lagoon: preservation of Black Sea coastal limans; developing the integrated system of coastal zone use; strategic planning the coastal zone development; developing schemes of coastal zone functional zoning; optimization of coastal zone use according to ecological requirements and local priorities; estimation of impacts and developing actions for the adaptation to climate change.

The table below provides some tools for application domain considered important within the Project:

Domains	Tools
<b>Spatial Planning</b>	Land Code of Ukraine Law of Ukraine “On land management” Law of Ukraine “On national program for setting up national ecological network for 2000-2015” Law of Ukraine “On ecological network” “Program for setting up national ecological network in Odessa region for 2000-2015” “Strategy of social and economic development in Odessa region for 2012”
<b>Water Resources</b>	Water Code of Ukraine
<b>Nature Conservation</b>	International Convention: – Convention on Wetlands of International Importance especially as Waterfowl Habitat (Ramzar) – Convention on the Conservation of European Wildlife and Natural Habitats (Bern) – Convention of Biological Diversity (Rio-de-Janeiro) – Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters (Aarhus) Law of Ukraine “On preservation of natural environment”

	<p>Law of Ukraine “On the natural reserve stock of Ukraine”</p> <p>Law of Ukraine “On fauna”</p> <p>Law of Ukraine “On flora”</p>
<b>Sea</b>	<p>International Convention:</p> <ul style="list-style-type: none"> <li>– Convention on the Protection of the Black Sea Against Pollution</li> <li>– The Black Sea Biodiversity and Landscape Conservation Protocol</li> <li>– Strategic Action Plan for the Rehabilitation and Protection of the Black Sea</li> </ul> <p>“Regulations for protection of inner sea waters and terrestrial waters from pollution”</p> <p>“Sanitary regulations and standards for protection of coastal waters from contamination at water use sites”</p>
<b>Tourism</b>	<p>Law of Ukraine “On health resorts”</p> <p>Law of Ukraine “On tourism”</p> <p>“Strategy of tourism and resorts development in Ukraine”</p>
<b>Fisheries</b>	<p>Law of Ukraine “On fishery, fish industry, and water bioresources”</p>
<b>Forestry</b>	<p>Forest Code of Ukraine</p>