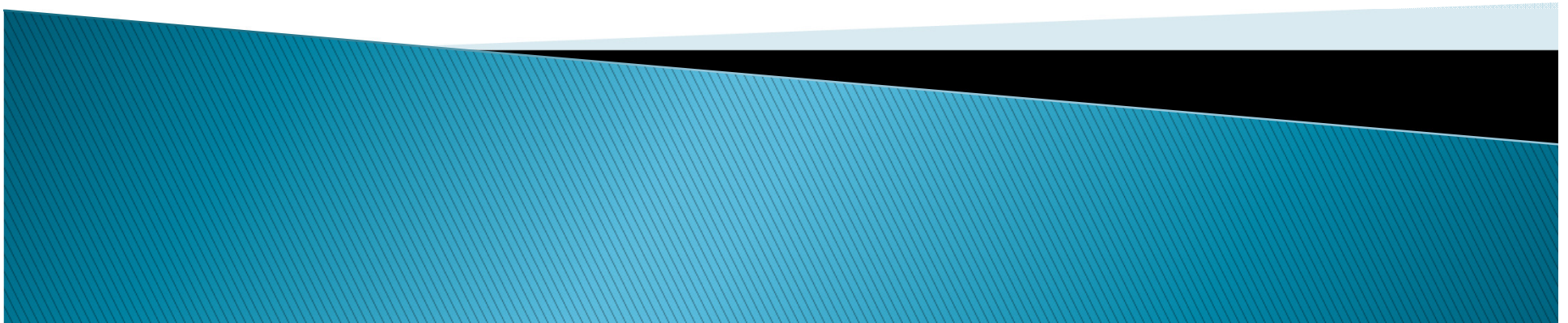




Romanian experience Practical case in green Infrastructure

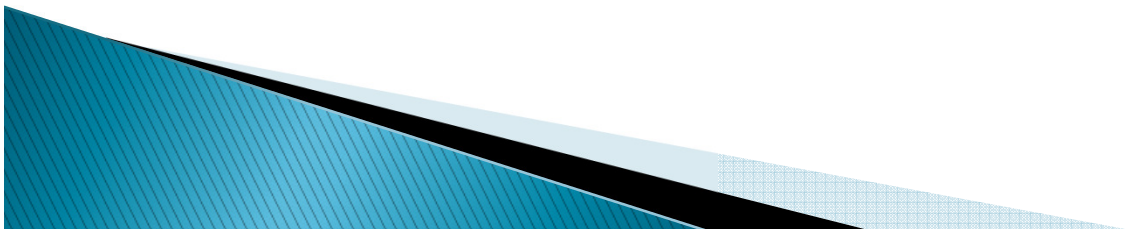
Vasilescu Ileana Doina-senior adviser
Department for Waters, Forestry and Fishery
Romania



Romanian experience

Practical case in green Infrastructure

- ▶ NWRN can contribute to the limitation the negative effects of floods and also can create a green infrastructure.
- ▶ The floods on 2006, 2010 in Danube River in Romanian sector imposed a new political thinking in water management by restoring of water related to ecosystems in order to create a green infrastructure.



Romanian experience

Practical case in green Infrastructure

- ▶ Romanian sector of Danube Flood Plain
 - in the second part of the XXth century a large process of damming
 - Approximatively 75% of the Danube Flood Plain areas (about 573.000 hectars) were protected against floods
 - a system of dams of 1,158 km length
 - negative effects upon :
 - the hidro-geo-morphological systems
 - topoclimate on local and regional level

Romanian experience

Practical case in green Infrastructure

- ▶ In the spring-summer periods of the year 2006
 - the biggest flow rates on Danube with significant floods and hard impact to the population of riparian localities
- ▶ Political measure in water management:
- ▶ Gov. Decision nr.1208/2006 for approval
the Programme of economic and ecological replanning of Danube Flood Plain on Romanian sector

Romanian experience

Practical case in green Infrastructure

- ▶ The Program had provided 3 stages:
- ▶ Elaboration of a digital model of the land in order to substantiate the concept of flood protection of the riparian localities.
- ▶ Reassessment of the limits of flood protection of the localities from Danube Flood Plain after a detailed analyse of current status of each enclosure and the modeling of hydrological and hydraulical processes.
- ▶ The assessment of economic and ecological pretability of the enclosures for agriculture activities in order to redimension them as mixed enclosures (for agriculture activities\ polders for water storage).

Romanian experience

Practical case in green Infrastructure

- ▶ The Program was based on a complex study elaborated by an international consortium.
- ▶ The purpose of the study:
 - to assure the more favorable conditions for water flow in Danube Flood Plain area
 - to allow the rehabilitation and recovery of ecological characteristics of a part of Danube Flood Plain to initial conditions.

Romanian experience

Practical case in green Infrastructure

- ▶ Conclusion of the study: balanced vision by combination of 3 technical variants:
- ▶ Conservation and development of agricultural activities in some enclosures by consolidation and modernization of exiting dams;
- ▶ The construction of control flooding enclosures for the periods of big floods: economic activities/polders, as non-permanent water storage and for attenuation of peaks of the floods
- ▶ Renaturation of some areas as wetlands and creation of specific conditions for development of ecosystems.

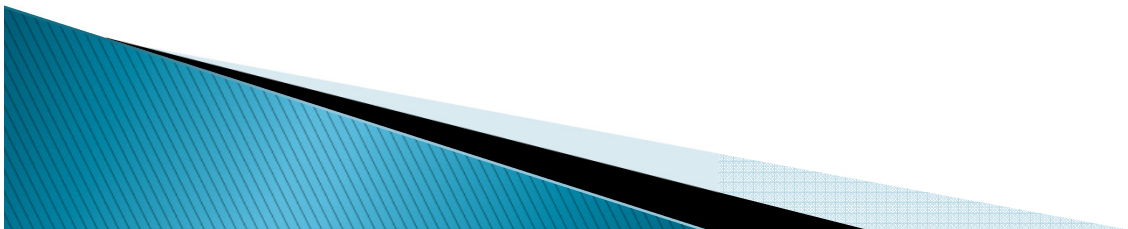
Romanian experience

Practical case in green Infrastructure

Total investments for construction works and rehabilitation is about 476.406.000 Euro (more than 2 billion Lei).

From total costs of investments:

- ▶ Rehabilitation of hydrological works related to the enclosures for agriculture activities represents 35.38%
- ▶ The enclosures for mixed functions (polders and agricultural activities) represents 51.89%
- ▶ Renaturation as wetlands represents 12.73%.



Romanian experience

Practical case in green Infrastructure

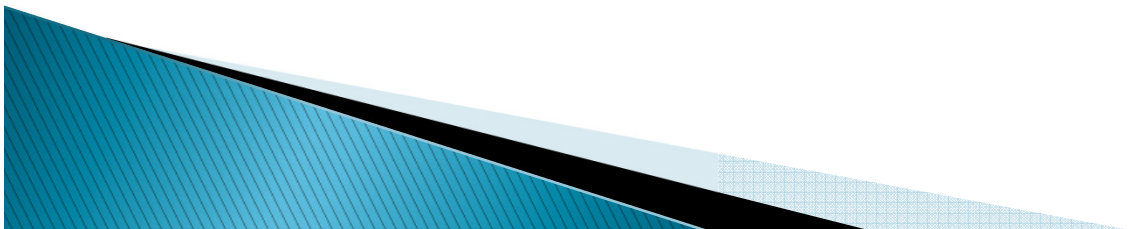
- ▶ The financial support for the implementation of the complex study:
 - Sectoral Operational Programme,
 - other European Funds,
 - External loans and other sources by the Public Central Waters Authority.
- ▶ The results of the complex study will be putted into practice gradually and will be adopted by a legal norm.

The implementation authority Public Central Waters Authority by National Administration "Apele Romane" during the period 2014-2020.

Romanian experience

Practical case in green Infrastructure

- ▶ The renaturation of 15.9% from total damming area of Danube Flood Plan - an important step from the implementation of the Program for economic and ecological replanning of Danube Flood Plain in Romanian Sector
- ▶ The promotion of the concept of mixed enclosure puts into practice the provisions of WFD (“more space for rivers”) and the provisions of National Strategy for the Management of Risk due to the Floods.





Thank you for your attention!