



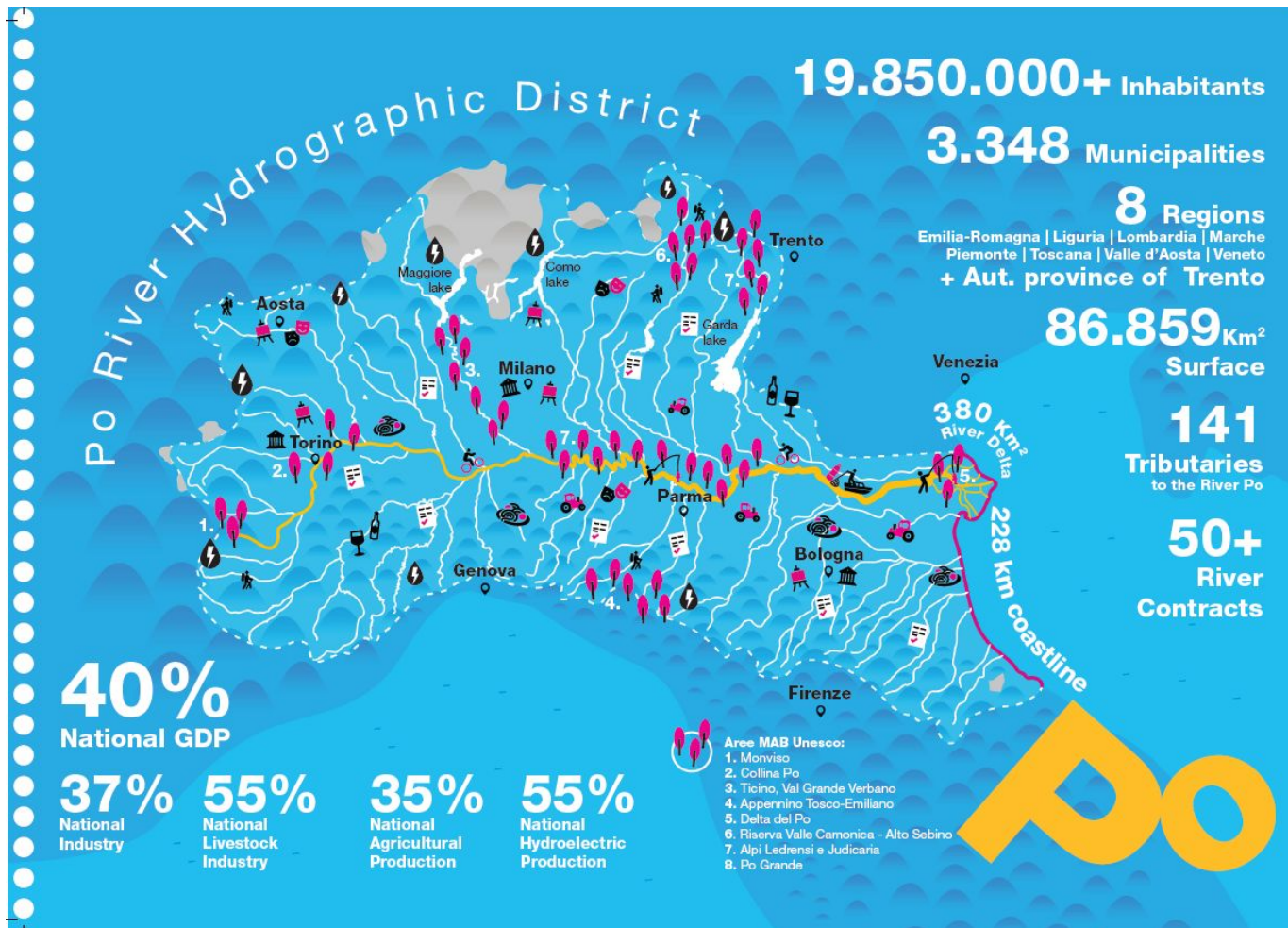
ADBPPO

Autorità di bacino distrettuale del fiume Po

# Manage planning in the Po basin to tackle climate change

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General Secretary  
(Bordeaux 8 October, 2024)

# Po River Basin District and Climate Change



*Strategically important area in terms of:*

➔ Geographical

➔ Economic

➔ Social



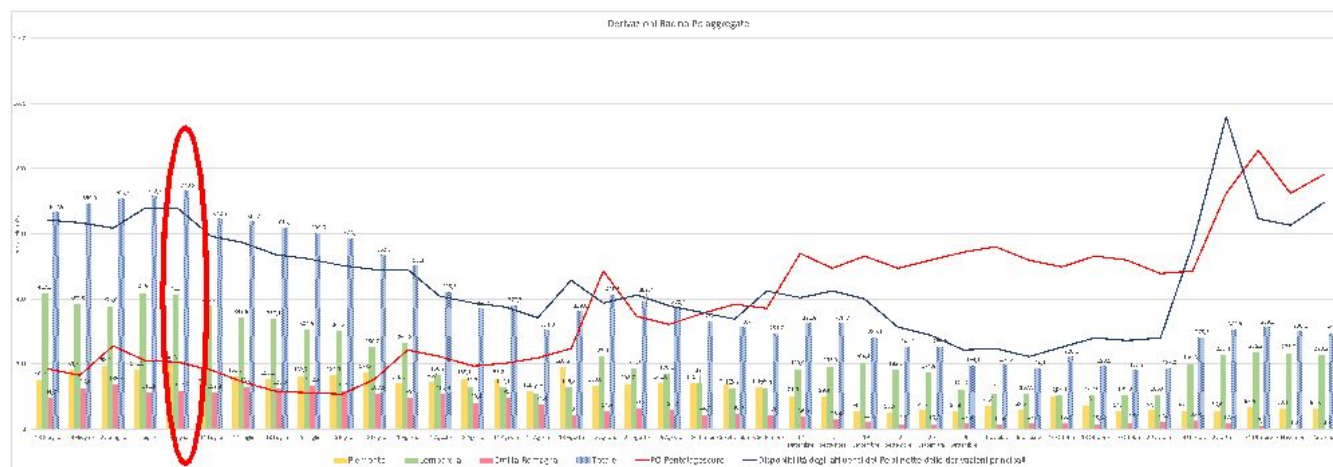
Area extremely vulnerable to Climate Change

Based on global and *regional climate forecasting models*, the District is located in the climatic transition zone between the Mediterranean and Northern Europe, in which *uncertainty* about the *future climate* is *higher* than in other European areas.

# Drought in Po Basin 2022

## Water withdrawals

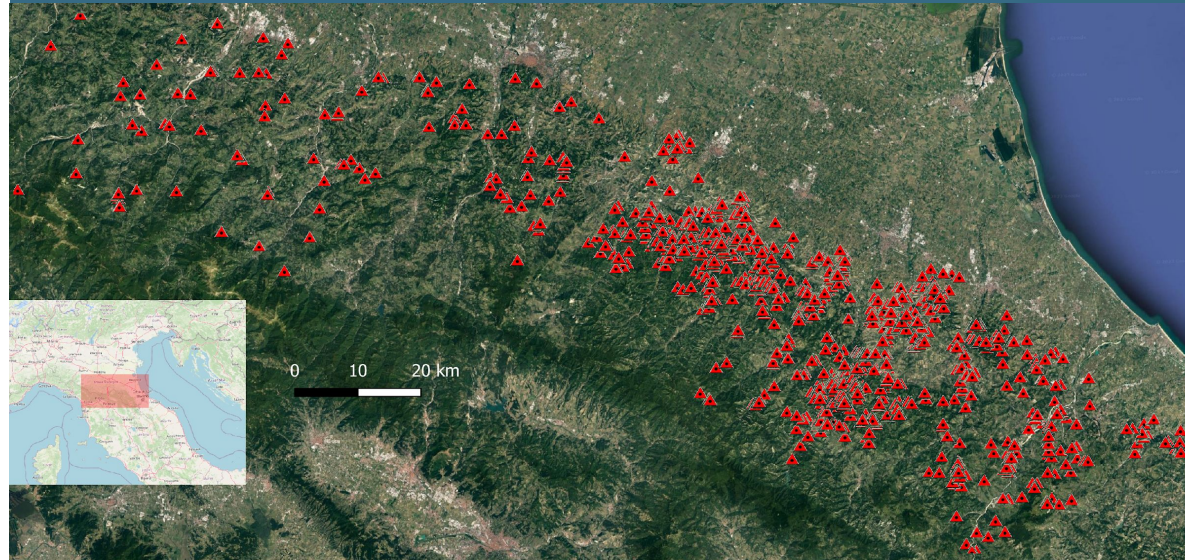
During the 2022 irrigation season, in spite of the overt drought, the cumulative volume of derivations was always higher than the Po flow rate at Pontelagoscuro until 22 August, with a delta that exceeded  $500 \text{ m}^3\text{s}^{-1}$  on 7 July when, against a total derivative flow rate of just over  $730 \text{ m}^3\text{s}^{-1}$ , the flow rate measured in the riverbed was just under  $200 \text{ m}^3\text{s}^{-1}$ .



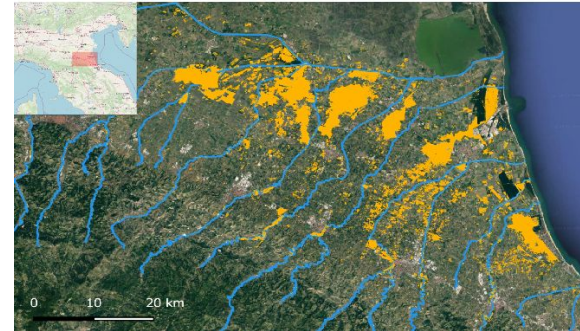
## Salt intrusion

The most critical condition of salt intrusion occurred during the month of **July**, when the flow rate in the Po at the Pontelagoscuro section was around  $114 \text{ m}^3\text{s}^{-1}$ , reaching maximum values of salt intrusion estimated up to about **40 km** from the mouth with high tide phenomena.

# Flooding in South East Po Basin in 2023/2024

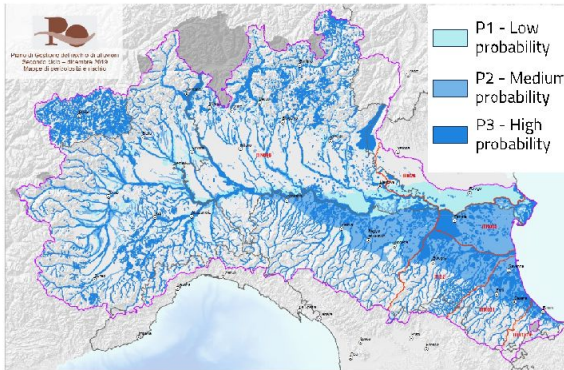


The rainfall events of 1-3 May and 16-17 May together accounted for **50% of the average annual rainfall** in the Emilia-Romagna region. The rainfall event affected the entire river network, both natural and artificial, causing the **flooding of 23 rivers**. Widespread flooding has occurred in the area between Bologna and Rimini, with **levee breaches** and widespread **slope instability** throughout the hilly and mountainous area (>80,000 landslides).



The main river network consists of the Po river and its main tributaries that flow in the plains and the main mountain valleys. The main river network has a length of about **6000 km**.

## FLOOD RISK MANAGEMENT PLAN - FRMP



Flood hazard map

### Some flood risk numbers

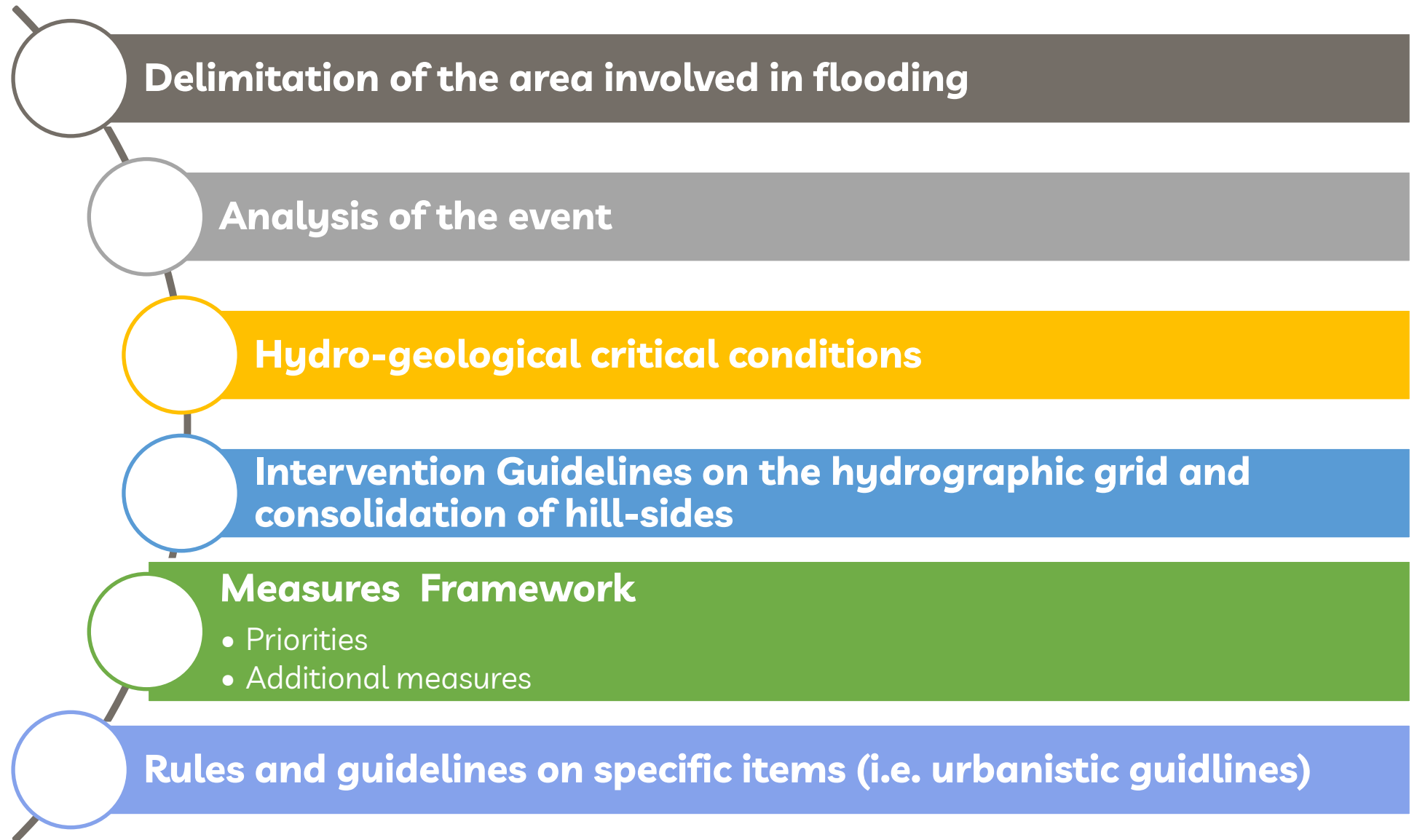
- 34%** District area potentially subject to flooding
- > 3 million** District inhabitants living in areas with medium flood hazard level (P2)
- ~ 4000 km** Total length of district rivers levees



# Special Plan for mitigation of the hydrological risk in the Po Valley

## Contents and Items

### Main contents of Special Plan



# FRMP – Plan measures typologies

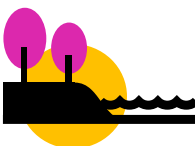
## Measures to adapt to climate change and win-win



**Sediments management**  
(General Sediment Management Programme)



**Monitoring and control of levee vulnerability**



**Vegetation management in the riverbed and floodplain areas**



**Assessment of residual risk in fascia C, flood forecasting, warning and emergency management**



**Return of naturalness to watercourses to improve the natural lamination of floods**



**Levee relocation**

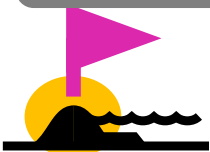


**Relocations**  
**Adjustment of bridges**



**Improvement of the outflow capacity and flood plains by lowering the flood plains**

## Grey measures

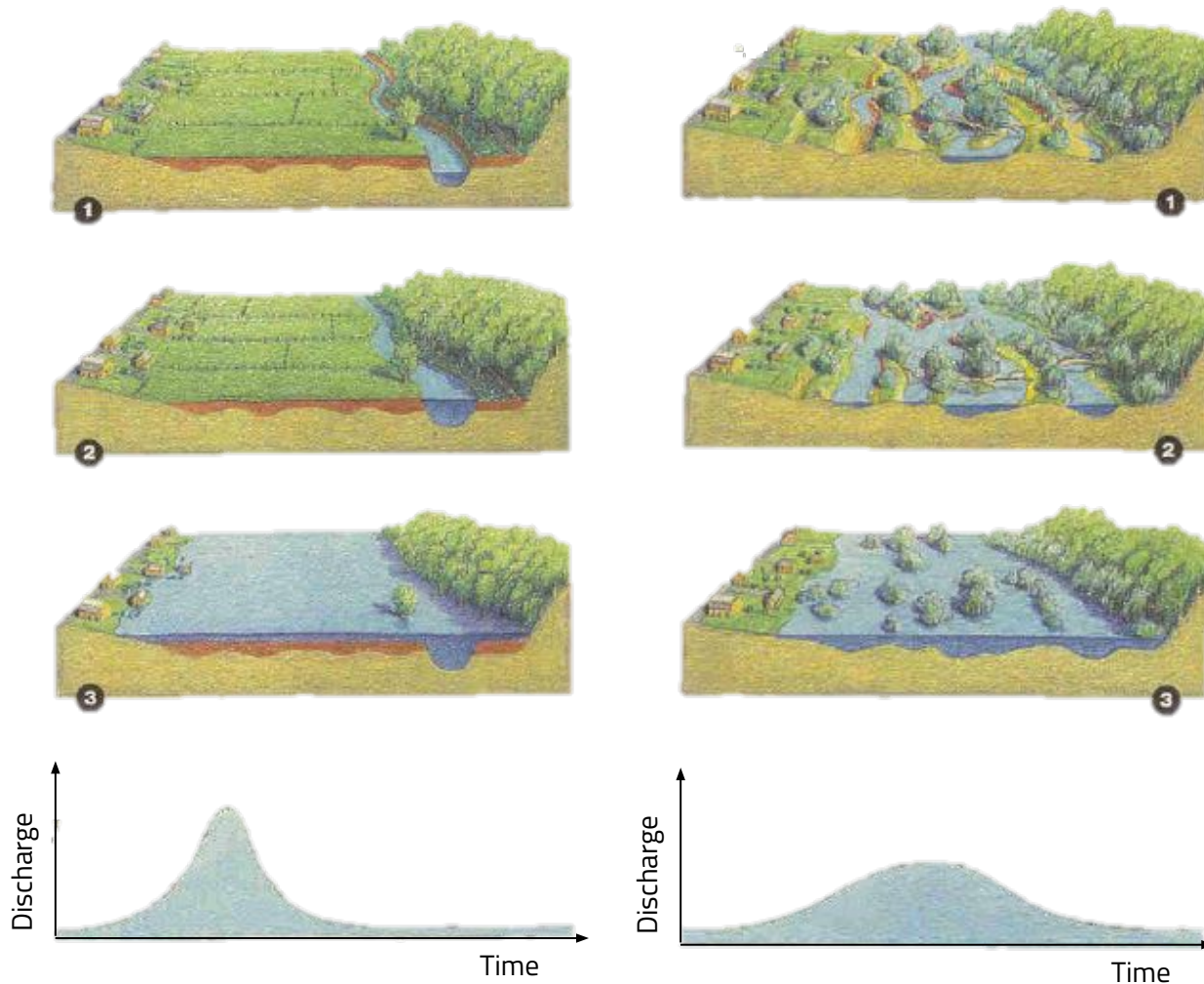


**Adjustment and completion of levee systems and expansion tanks**



**Controlled flooding**

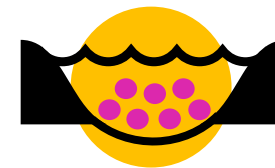
# Effective strategies: the Win-Win measures



**Integrated measures** capable of ensuring both **flood risk reduction** and the improvement of the **ecological status** of rivers and the **protection of ecosystems** and **biodiversity**.



**Restoring rivers** to improve the natural flood lamination and the hydromorphological processes



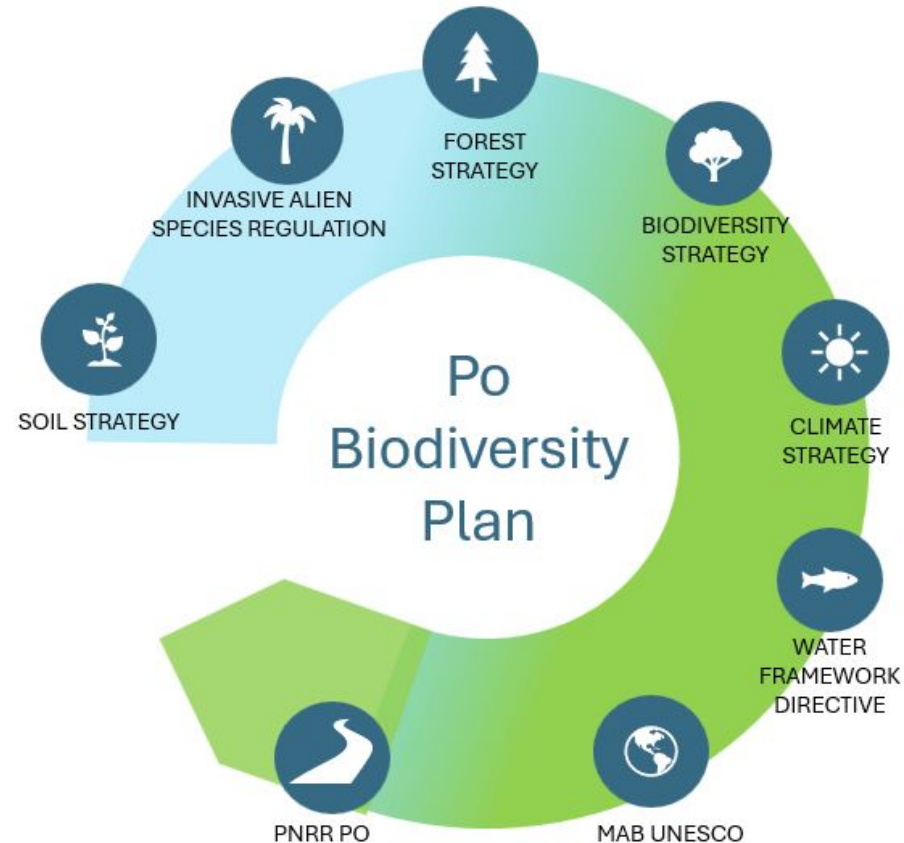
**Sediments** management and solid transport balance.



Levee **relocation**

# Research and development for the biodiversity of the Po River District

Concrete actions for **WORKING WITH NATURE** to increase natural capital through the **protection, management and restoration** of the functions of complex aquatic ecosystems



ACTIVITY 1 – Organization of the “First Forum on Biodiversity, Natural Capital and Ecosystem Services in the Po River District”



ACTIVITY 2 – Biodiversity Plan of Po district - Guidelines and proposals for measures for the integration of biodiversity protection objectives into district planning

Working groups

ACTIVITY 3 – Creation of the Nature Positive Solutions Network, with the economic world





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