

Türkiye Perspective to Maintaining Healthy Life of Rivers

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Turkish Water Institute (SUEN)

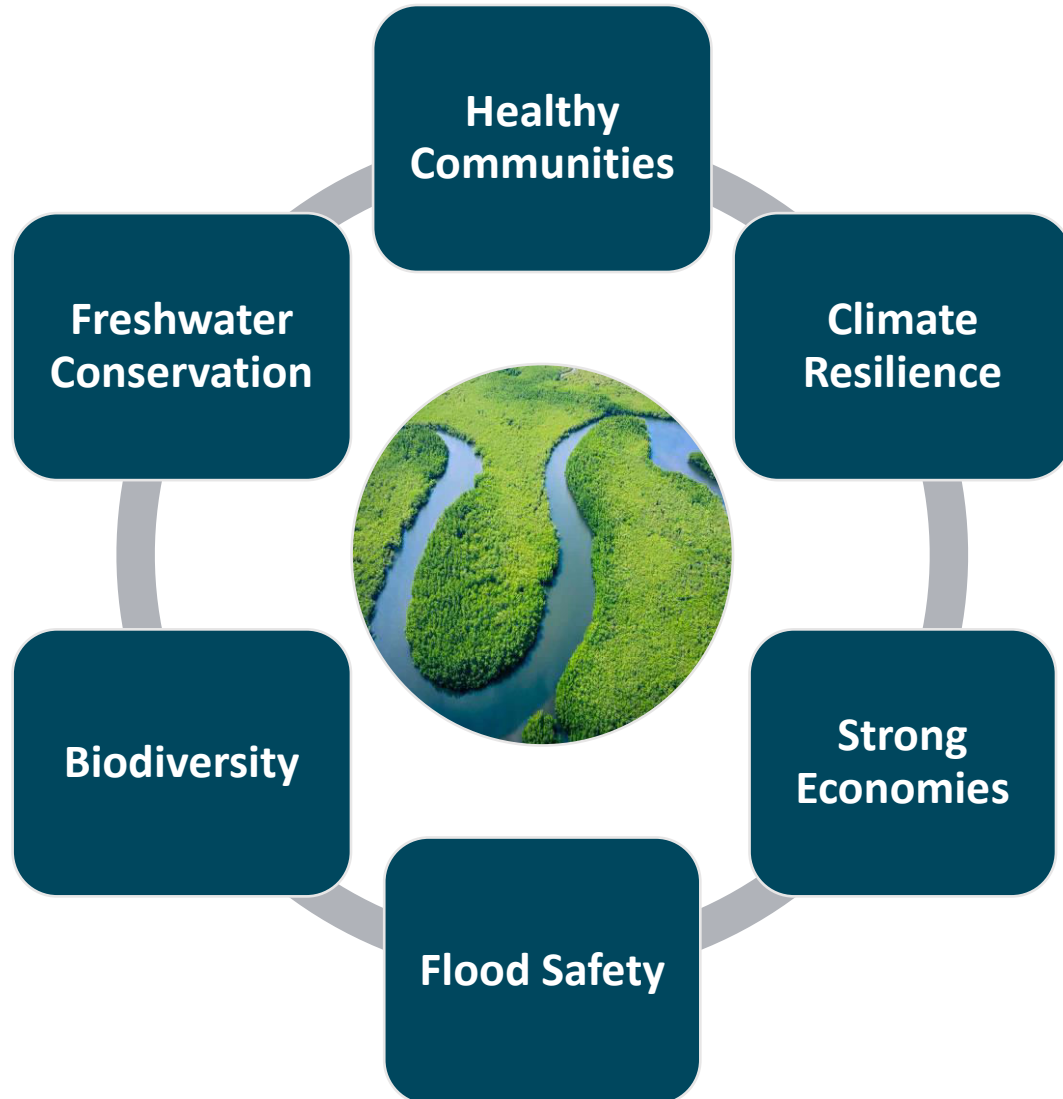


Turkish Water Institute (SUEN) is a think tank under the authority of the Ministry of Agriculture and Forestry of Turkey that aims to develop short and long term strategies, as well as national policies to achieve better water governance.

<https://www.suen.gov.tr/>



Maintaining Healthy Life of Rivers



Agriculture



Aquaculture



Fishing



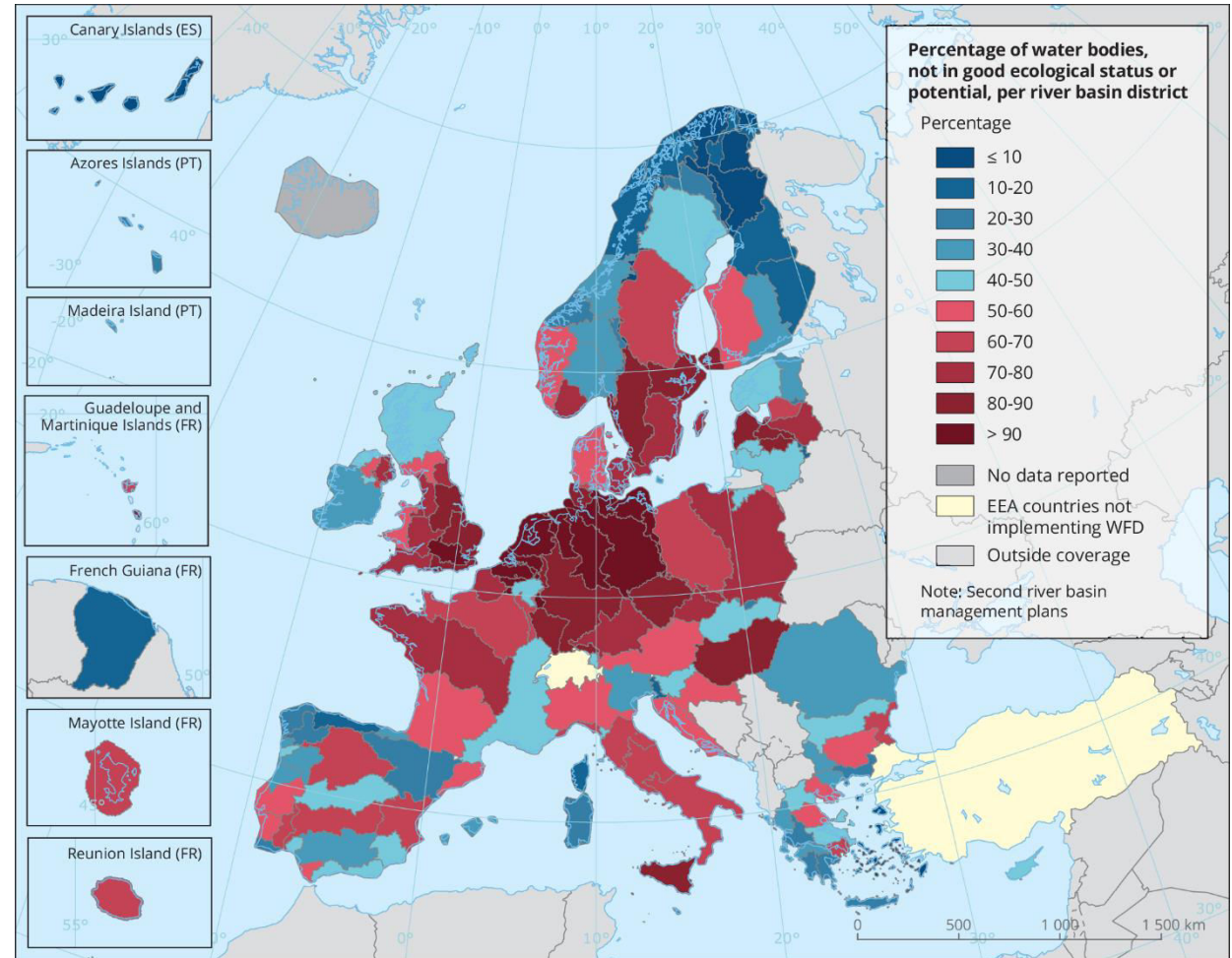
Recreation & tourism

Maintaining Healthy Life of Rivers

SUSTAINABLE DEVELOPMENT GOALS

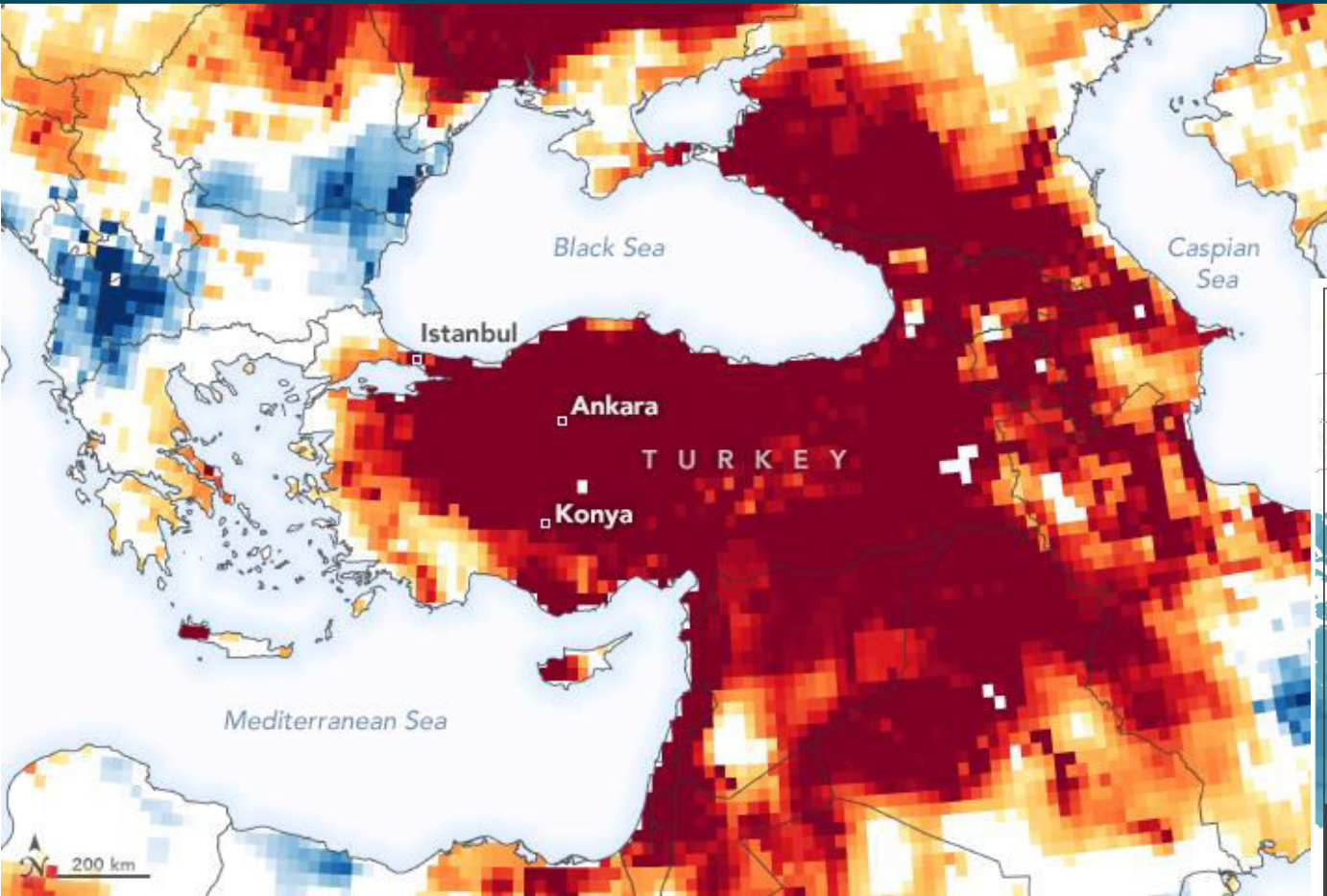


Percentage of water bodies, not in good ecological status or potential, per river basic district

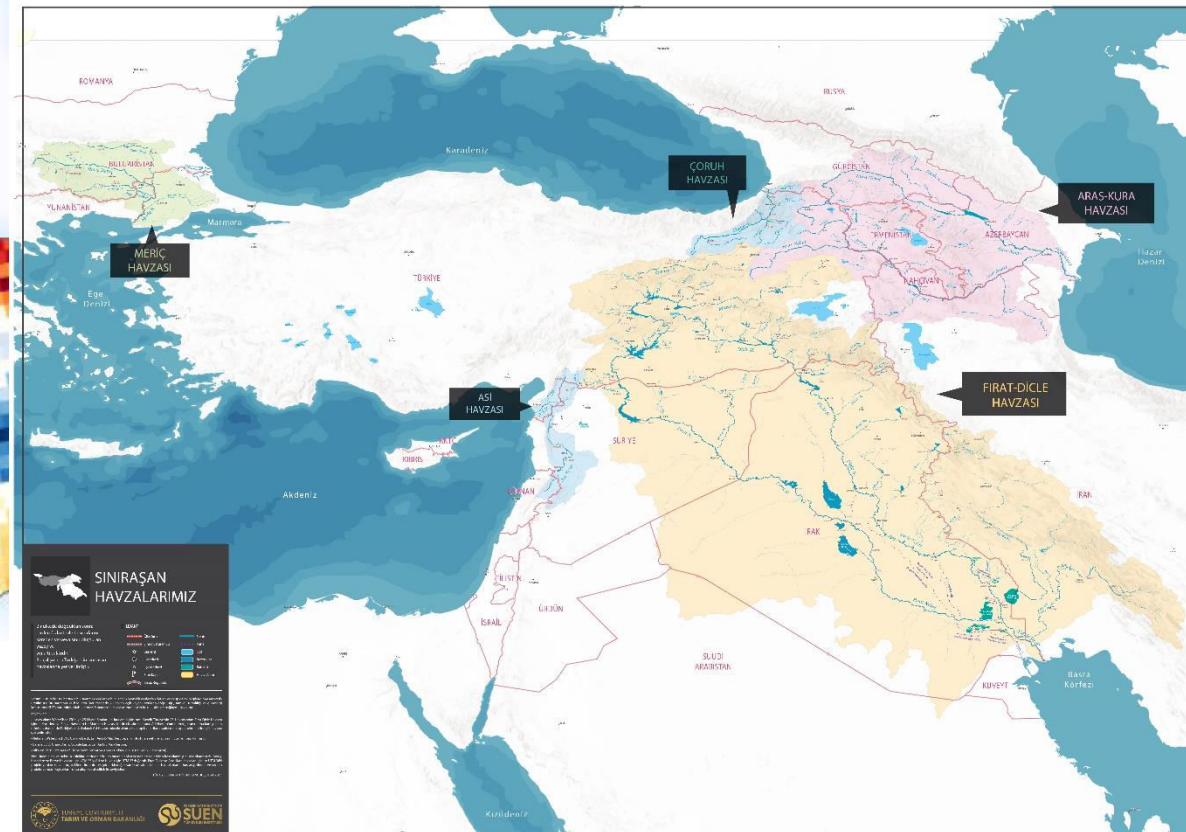


Reference data: ©ESRI | ©EuroGeographics

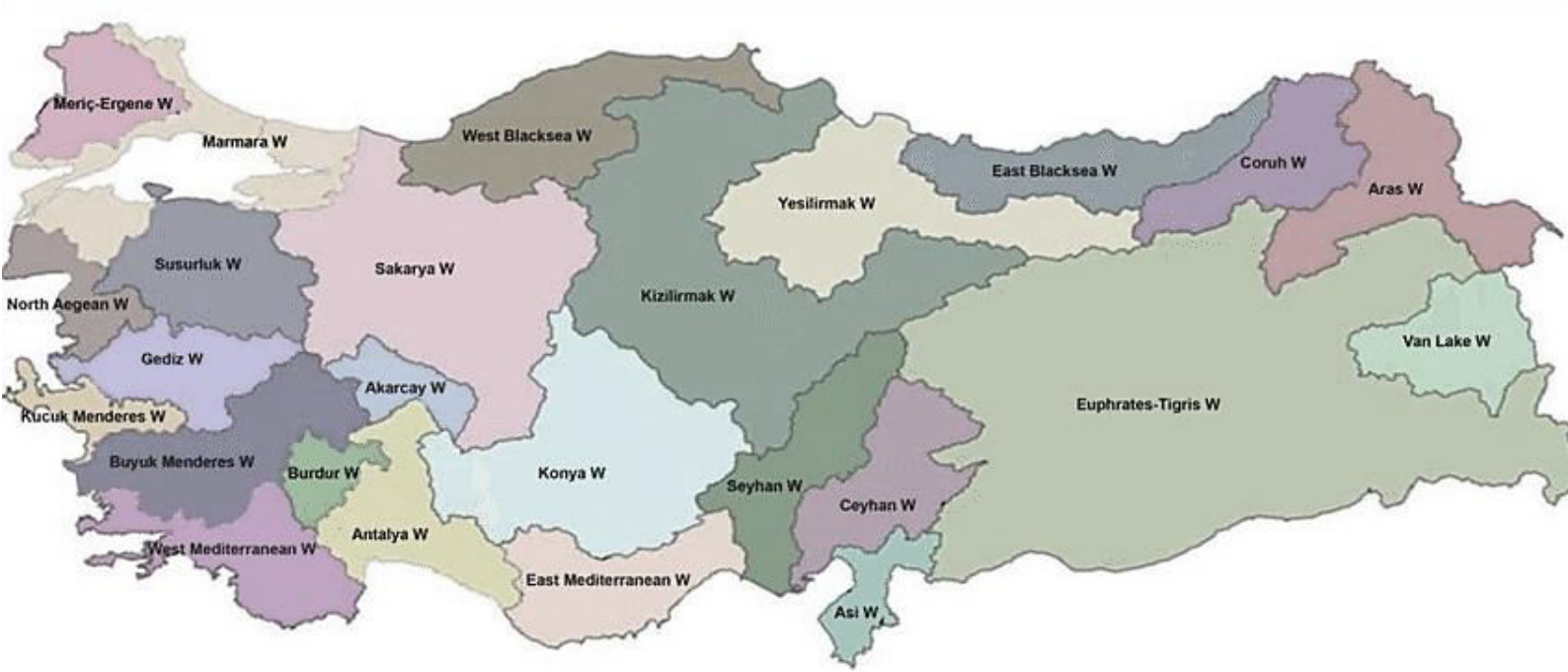
Türkiye



Precipitation in Turkey,
48% lower than the 1981-2010
average (NASA, 2021).



River Basin Management Plans (RBMPs)



Management Plans Stages:

- Characteristics of the River Basins
- Significant Pressures and Impacts
- Identification of Protected Areas
- Monitoring Programmes
- Environmental Objectives
- Economic Analysis
- Public Consultation and Information Measures and Resulting Changes
- Competent Authorities
- Contact Points for Background Information

**In Türkiye, River Basin Management Plans were prepared for 11 basins.
Plans for other basins are being prepared.**

Determination of Sensitive Areas and Water Quality Objectives on the Basis of Watershed in Türkiye

✓ 2012-2015

Sensitive Areas

Sensitive Areas to Nitrate

Sensitive Areas to Urban Wastewater

Vulnerable Zones to Nitrate

Nitrogen and phosphorus parameters added to the **Water Pollution Control Regulation** as discharge standards.



Determination of Assimilative Capacity of Stagnant Waters and Improvement of Water Quality

Türkiye water resources map



Studies conducted in the stagnant waters, the hydrological basins of these stagnant waters and the streams feeding the stagnant waters:

- Basin characterization
- Pressures and influences
- Water quality
- Bathymetry maps and water budget
- Assimilation capacity of stagnant water in terms of nutrients
- Measures for the improvement of stagnant waters.

✓ **Physico-chemical, biological, hydro-morphological parameters are analyzed to determine the water quality.**

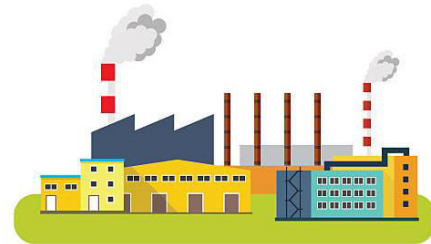
Towards Zero Discharge -> Water Reuse

Project for the **Evaluation of Reuse Alternatives of Used Water** prepared specifically for 25 river basins in Türkiye.

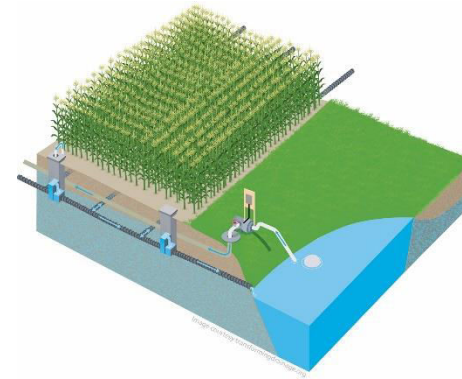
Used Water



Treated wastewater



Cooling water



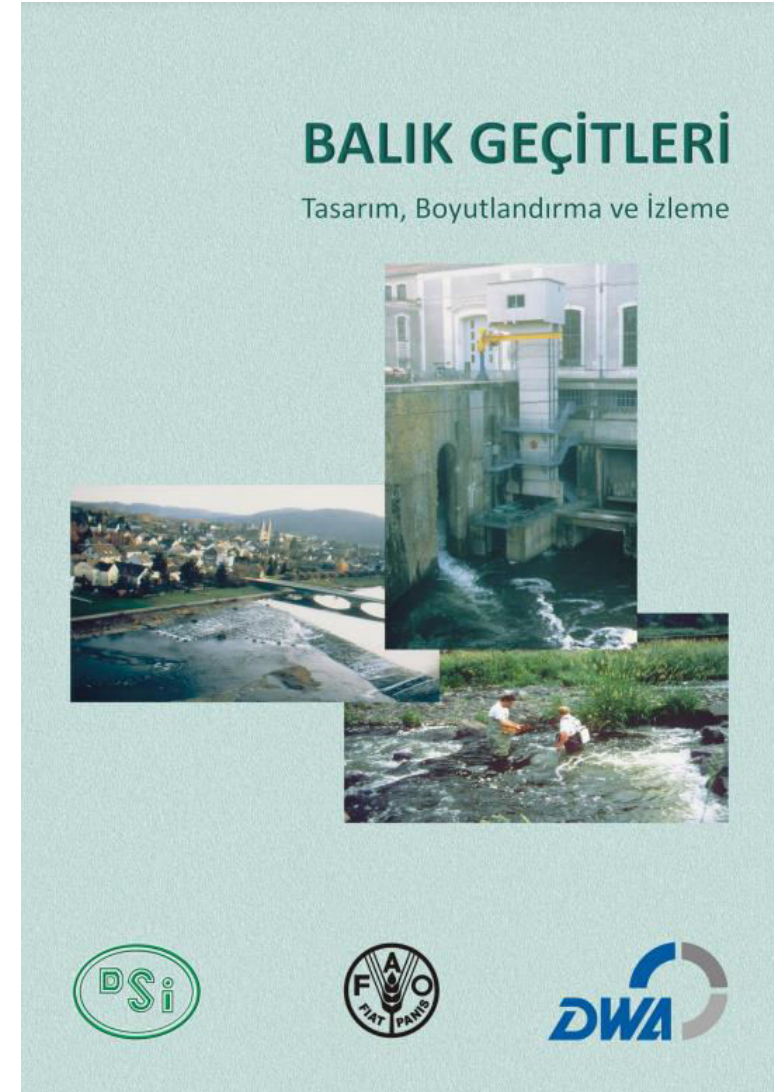
Drainage water returning
from agriculture



Rain Water

Some other studies conducted in Turkey for maintaining healthy life of rivers

Fish Passage at Dams studies on fish passages are carried out by the State Hydraulic Works in Türkiye.



Some other studies conducted in Turkey for maintaining healthy life of rivers

Environmental Flow is checked through Environmental Impact Assessment Regulation.

In Turkey, the environmental flowrates are **monitored online**.



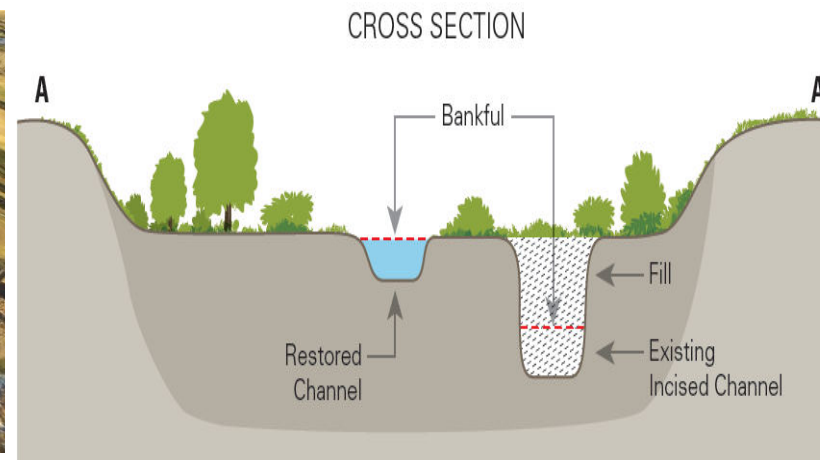
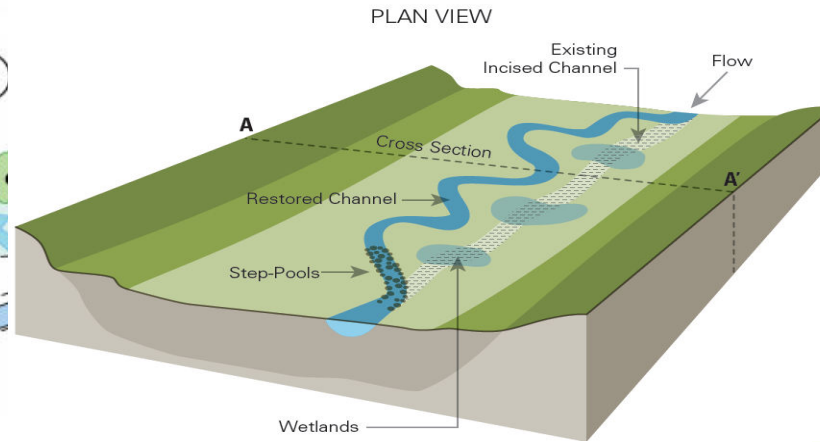
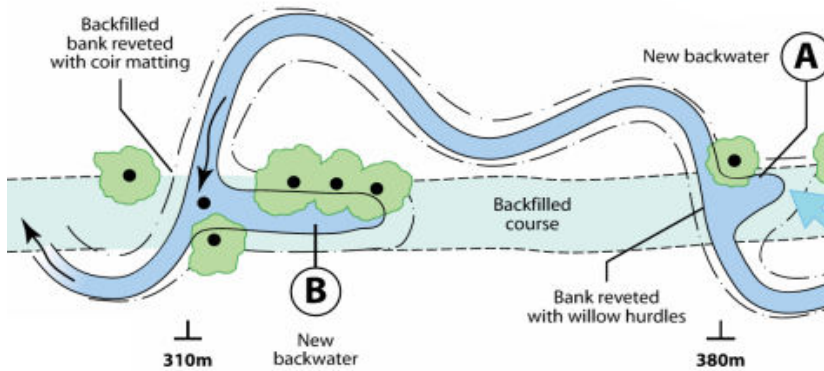
Some other studies conducted in Turkey for maintaining healthy life of rivers

Water Quality Monitoring:
Physicochemical, biological, ecological and morphological monitoring in compliance with the Water Framework Directive is carried out periodically in Türkiye.

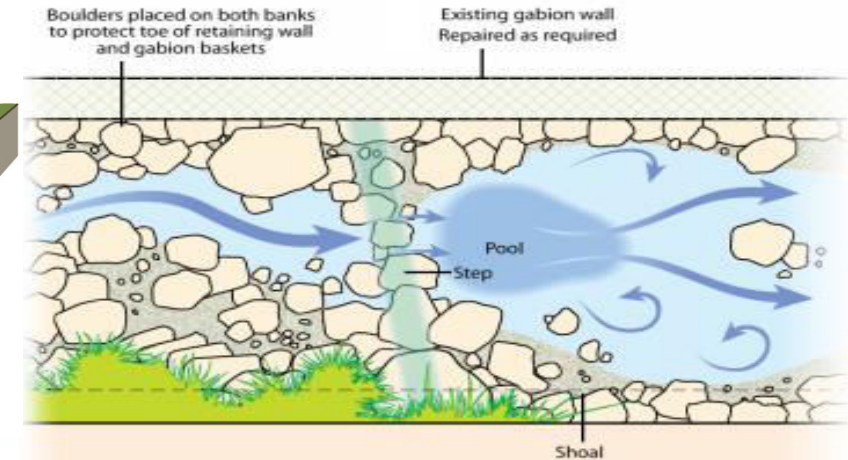


Floodplain restoration in the light of maintaining the healthy life of rivers

River re-meandering



River bank stabilization



Floodplain restoration in the light of maintaining the healthy life of rivers

Examples of some applications



Bishan Park-SINGAPORE



Netherlands



Okanagan River, USA

Floodplain restoration in the light of maintaining the healthy life of rivers

Examples of some applications



England



Australia



Thank you!