

**TAIEX ECRAN Regional Workshop on the
WFD
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TURKEY

WATER MANAGEMENT IN TURKEY

WATER POTENTIAL IN TURKEY

Annual Precipitation : 501 billion m³

Annual Usable Surface Water : 98 billion m³

Annual Usable Ground Water: 14 billion m³

Annual Total Usable Water : 112 billion m³

Population of Turkey (2010) : 74 million

Annual Water Amount per person : 1500 (m³/person-year)



Sectoral Water Use in Turkey

Irrigation: 32 billion m³ (%73)

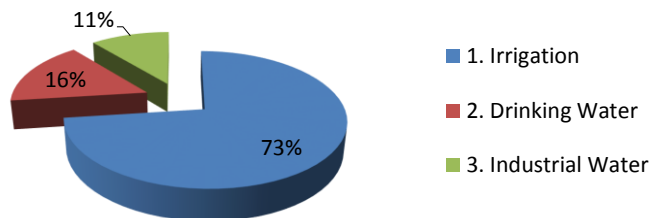
Drinking: 7 billion m³ (%16)

Industrial: 5 billion m³ (%11)

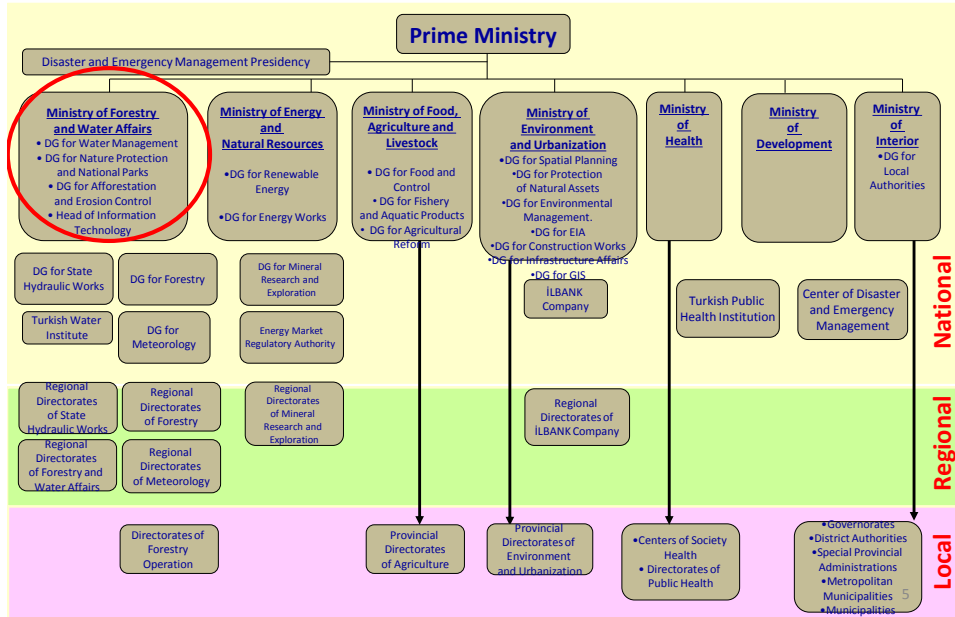
Total Used Water: 44 billion m³

Usage Ratio of Water Potential: (%40)

Annual Water Amount per capita: 1460 (m³/person-year)



Institutional and Legislative Structure of Water Management



TASKS OF GDWM - I

1. River Basin Management Planning
2. Coordination of Water Sector
3. Water Policy Determination
4. Coordination of Transboundary Waters issues
5. Legislation
6. Inventory and Water Data System
7. Sectoral Water Allocation
8. Qualitative Classification of Water
9. Developing Water Discharge Standards and Criterion
10. Water Quality Standards For Receiving Environment

TASKS OF GDWM - II

- 12. Determination and Monitoring of Sensitive Areas
- 13. Preparing of Quality Monitoring
- 14. Preparing of Flood Risk and Hazard Maps
- 15. Flood Management Planning
- 16. Drought Management Planning
- 17. Climate Change Adaptation
- 18. Water Efficiency

7

WFD IMPLEMENTATION IN TURKEY

8

BASIN BASED APPROACH

The Policy of Water Basin;

Approach to basin-based solutions instead of individual solutions :

- Wastewater Treatment Action Plan
- Basin Protection Action Plans
- River Basin Management Plans (WFD)



9

RIVER BASIN PROTECTION ACTION PLANS

River Basin Protection Action Plans for all 25 River Basins have been prepared.

Purpose

- At the first instance, investigation of the water resources potential, point and diffuse pollution sources and existing water quality and the making of more economically viable, sustainable and efficient plans in the short, medium and long term

Actions

- Analysis of the pressures and impacts of the urban, industrial, agricultural, economic etc in the basin; characterisation of the existing status
- Listing the necessary measures in the basin to achieve good water status
- Planning urban waste water treatment plants for settlements, setting individual and/or joint treatment possibilities and capabilities
- Detecting the necessities for the renovation or rehabilitation of existing treatment plans, defining measures
- Scheduling the activities of all institutions and agencies which have responsibilities within the basin for undertaking the activities within the plan
- Ensuring the activities to be undertaken within this schedule under the observation of our Ministry

10

WATER MANAGEMENT COORDINATION COMMITTEE



**“Water Management Coordination
Committee” was established with
numbered 2012/7, Prime Ministry
Notice.**

11

TASKS OF WATER MANAGEMENT COORDINATION COMMITTEE

- Determination of necessary measures to conserve the water resources within the framework of integrated river basin management,
- Providing inter-sectoral coordination, collaboration and speeding up investment in water provision for an effective water management,
- Developing strategy, policy and plan for the realization of the objectives set out in the documents of national and international,
- Evaluation of implementation of the issues that must be met in public institutions and organizations in basin plans,
- Ensuring a high level of coordination and cooperation.

12

WATER MANAGEMENT COORDINATION COMMITTEE

Minister of Forestry and Water Affairs	
Minsitry of European Union Undersecretary	Ministry of Science, Industry and Technology Undersecretary
Ministry of Environment and Urbanization Undersecretary	Ministry of Foreign Affairs Undersecretary
Ministry of Energy and Natural Resources Undersecretary	Food, Agriculture and Livestock Undersecretary
Ministry of Internal Affairs Undersecretary	Ministry of Development Undersecretary
Ministry of Culture and Tourism Undersecretary	Ministry of Health Undersecretary
State Hydraulic Works General Director	Water Management General Director
Nature Conservation and National Parks General Director	Combating Desertification and Erosion General Director
Meteorology General Director	Head of Water Institute

13

BASIN MANAGEMENT COMMITTEES

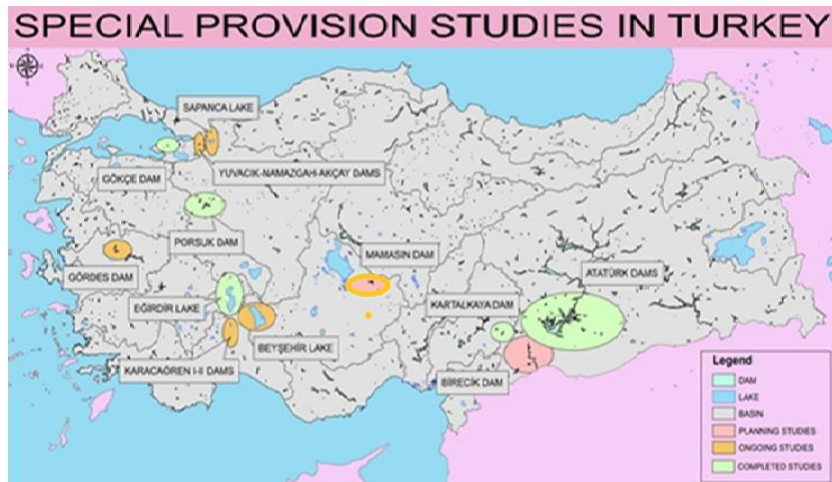


14

Example of Basic Measures

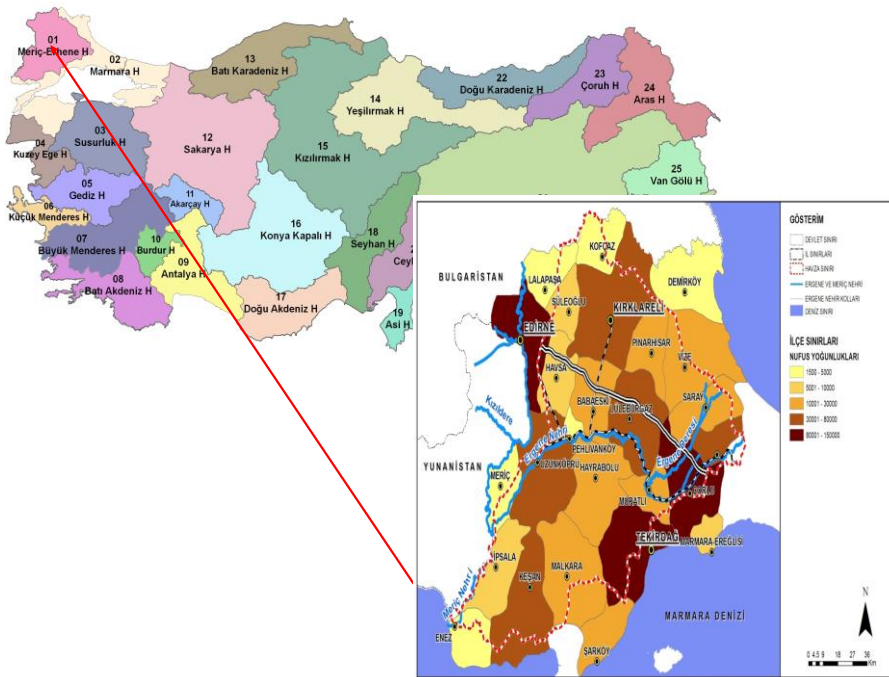
15

SPECIAL PROVISIONS FOR DRINKING WATER BASINS IN TURKEY



**We are determining Special Provisions to protect Drinking
Water Basins**

• CASE STUDY : ERGENE RIVER BASIN PROTECTION ACTION PLAN



ERGENE BASIN'S WATER QUALITY

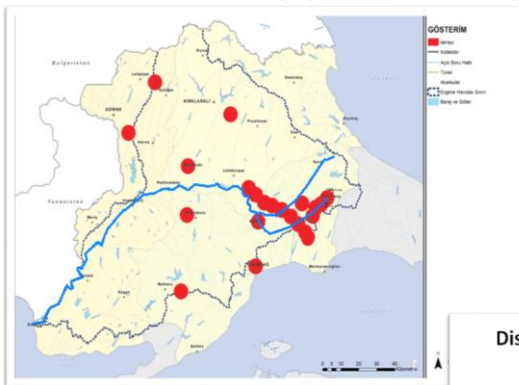


Main Pressures

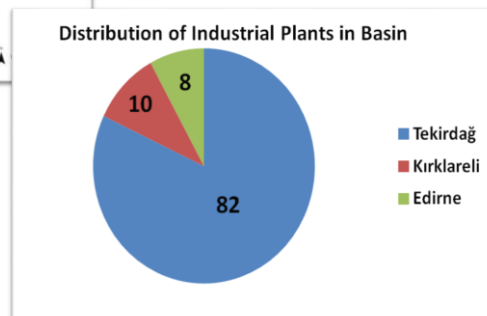
- ✓ Domestic and industrial waste water management,
- ✓ Solid waste management
- ✓ Environmental infrastructural services
- ✓ **RESULT: IV class Water Quality= POOR**

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INDUSTRIAL DISTRIBUTION

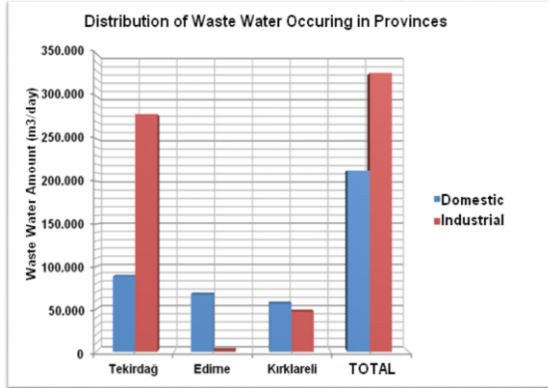


- There are 2037 industrial plants in Ergene River Basin.



AMOUNT OF WASTE WATER

- Since considerable amount of water consumption is met from ground water, level of ground water has been decreased to 100 meters.

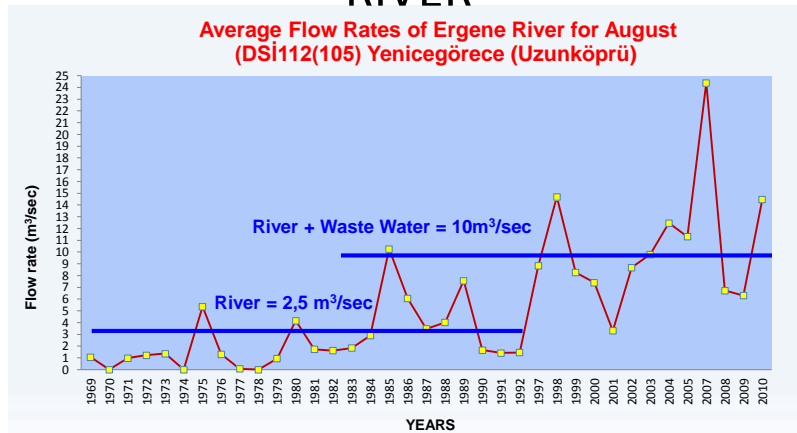


Domestic Waste Water: 230.000 m³/day

Domestic Waste Water: 330.000 m³/day

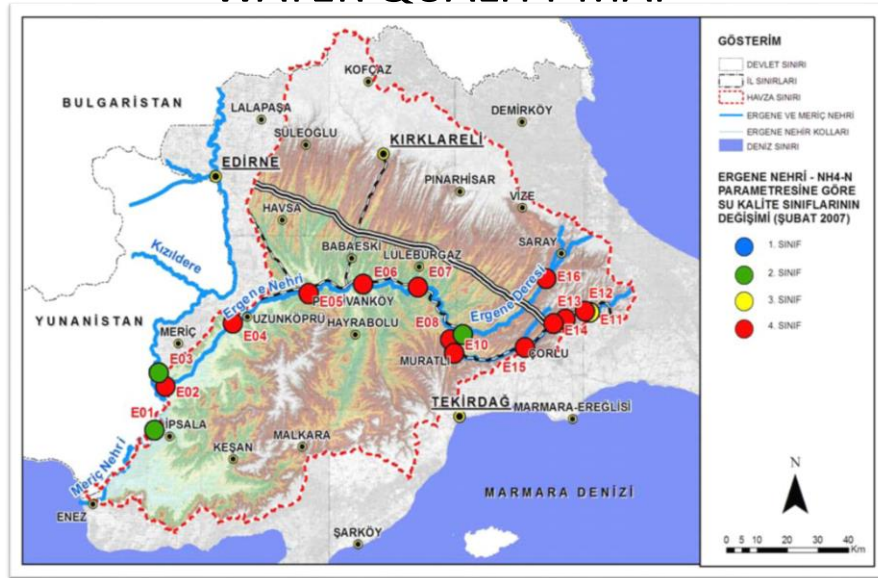
Recently, in parallel with economic developments amount of waste water has been increased to 400.000 m³/day.

AVERAGE FLOW RATE OF ERGENE RIVER



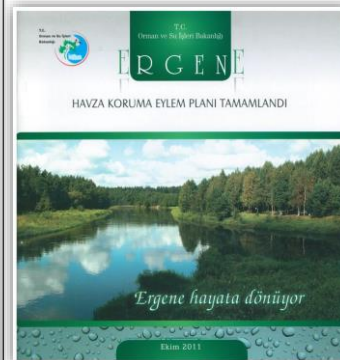
- With discharging waste water, the flow rate of Ergene River has been increased to 4 times of its original flow rate.

WATER QUALITY MAP



ACTIONS VIA ERGENE RIVER BASIN ACTION PLAN / BASIC MEASURES

- Action 1.** Rehabilitation of stream beds
- Action 2.** Construction of Municipal waste water treatment plants
- Action 3.** Establishment of Rehabilitation Organized Industrial Zones
- Action 4.** Construction of Advanced joint waste water treatment plants for industry.
- Action 5.** Processing less polluting raw materials and using less water. (BAT's for industry)
- Action 6.** Afforestation and combating with soil erosion
- Action 7.** Implementation of 1/25.000 scaled Spatial plans



ACTIONS VIA ERGENE RIVER BASIN ACTION PLAN / BASIC MEASURES

Action 8. Establishment of Solid and hazardous waste processing, recovery and disposal plants.

Action 9. Control of Pollution from agriculture

Action 10. Online monitoring of Ergene River

Action 11. Intimate inspections

Action 12. Practice of environmental friendly production

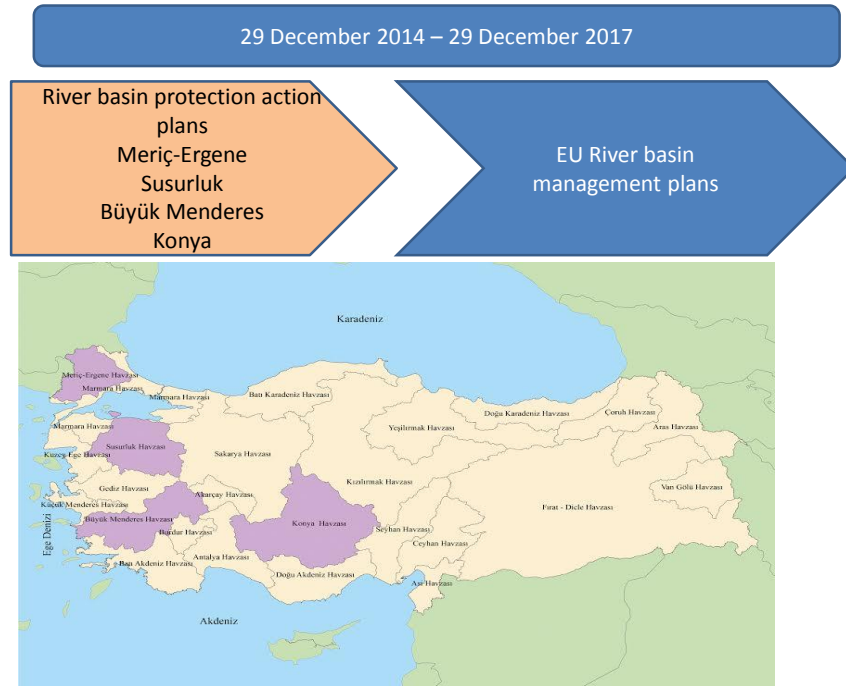
Action 13. Establishment of Early warning system against floods

Action 14. Control of Ground water consumption

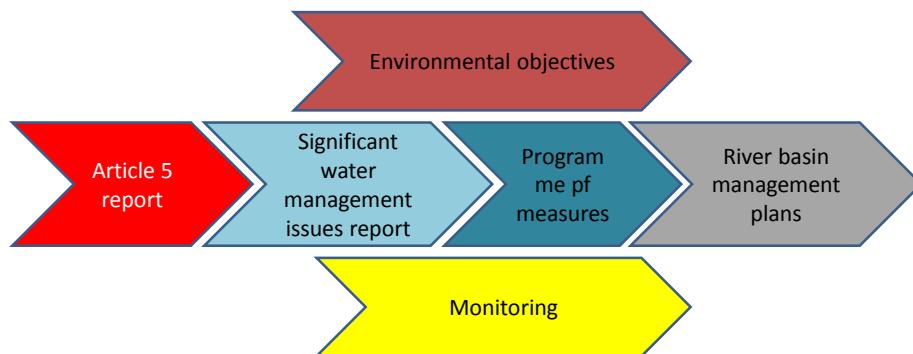
Action 15. Construction of Dams, ponds, irrigation facilities



RIBAMAP Project

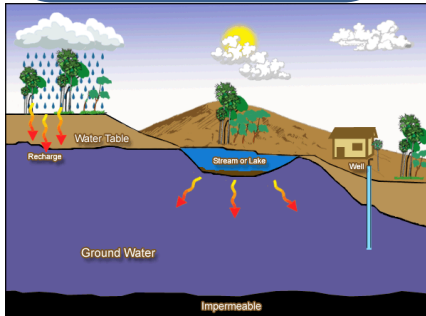


Key characteristics of the project

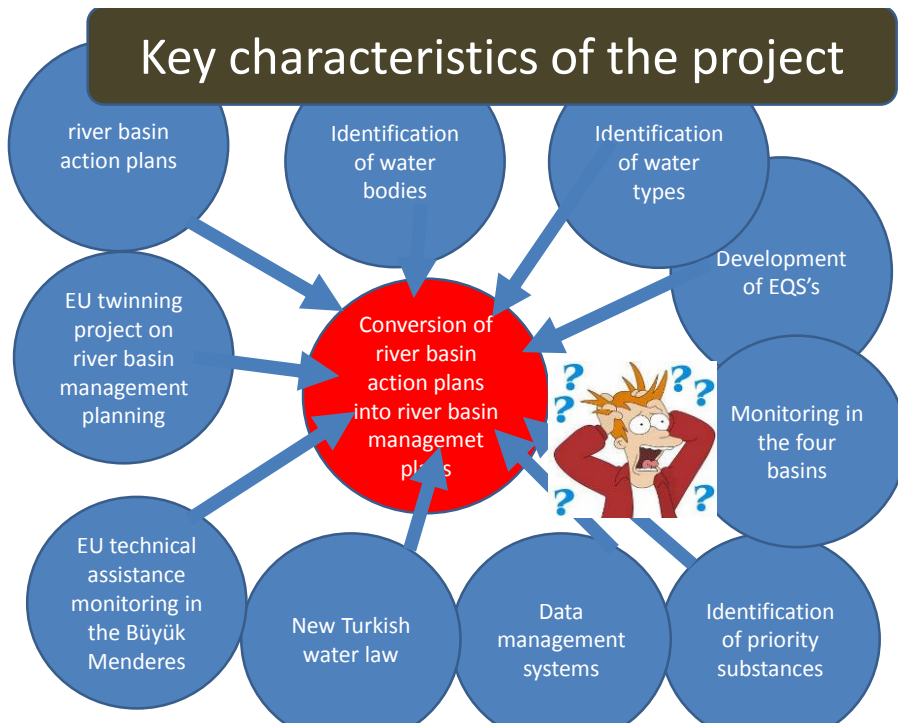


Key characteristics of the project

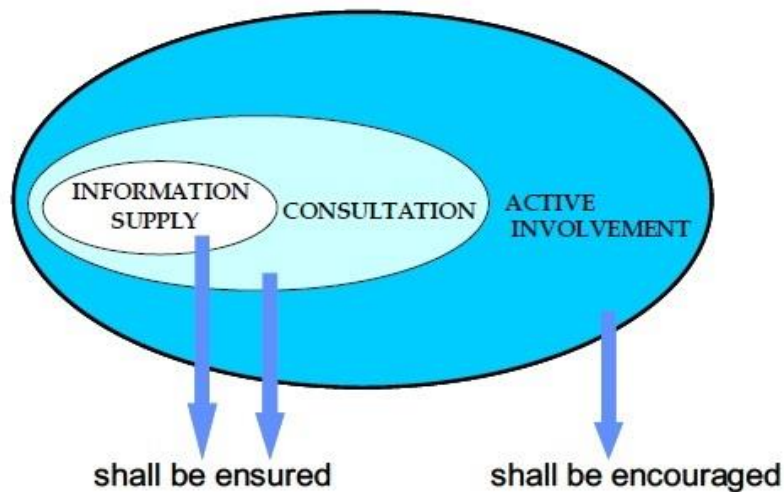
Groundwater,
lakes, rivers,
coastal and
transitional waters



Key characteristics of the project



Key characteristics of the project



Component 1: Inception phase

Gap analysis between the plans

Actual state of the National Implementation plan for the Water Framework Directive

Establishment of working groups, appointment of river basin coordinators and trans boundary cooperation with Greece and Bulgaria

Kick-off meeting and awareness raising

Component 2: characterisation and significant water management issues

Characterisation report

Significant water management issues report

Public involvement

Training

Component 3: monitoring

Status classification of all water bodies in:

1. Susurluk
2. Konya
3. Meriç-Ergene

Biological monitoring

Chemical monitoring

Hydro morphological monitoring

Component 4: Programme of measures and conversion of the River Basin Protection Action Plans into River Basin Management Plans

Objectives

Cost-effectiveness analysis of measures

Exemptions and derogations

Public involvement

Training and guidelines and manuals

Component 5: Water Information Systems

Data Management System

GIS mapping

Decision Support system (Aquatool)

Training

Internships

Component 6: Update of the National Implementation Plan for the Water Framework Directive and Training Programmes

Update of the National Implementation Plan

Legal text for the transposition of the EU Acquis

Legal gap analysis

Training programs for the other 21 river basins

THANK YOU
for your interest

