





T.R.
MINISTRY OF FORESTRY AND WATER AFFAIRS

TAIEX / ECRAN
Multi Beneficiary Workshop
Economics of Climate Change
Adaptation Measures

İstanbul- 11-13.04.2016

Bahar SEL
Ministry of Forestry and Water Affairs
TURKEY

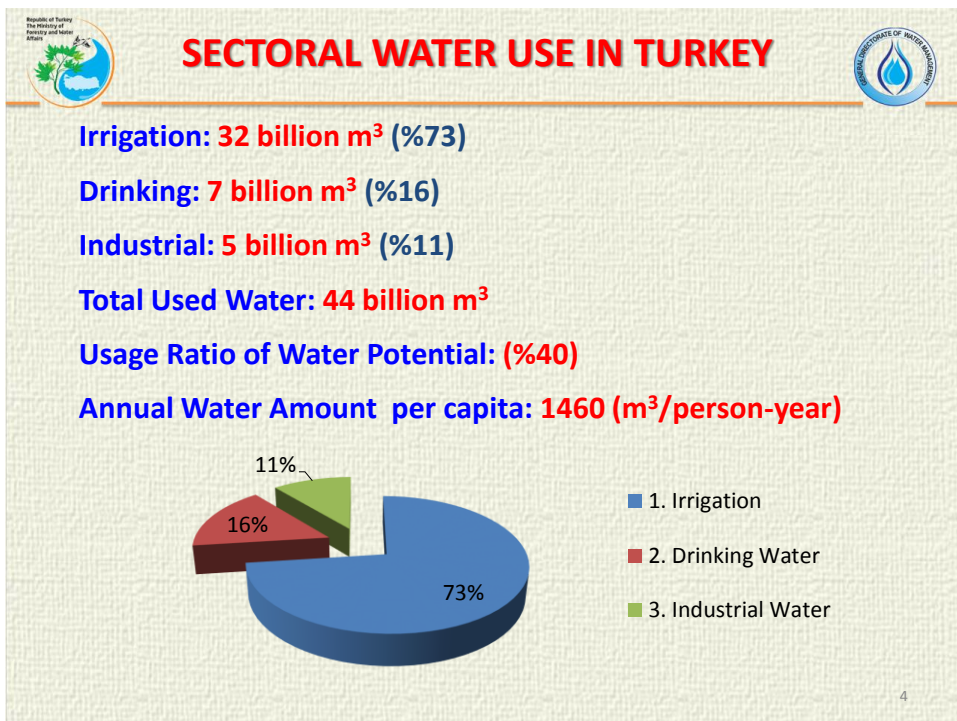
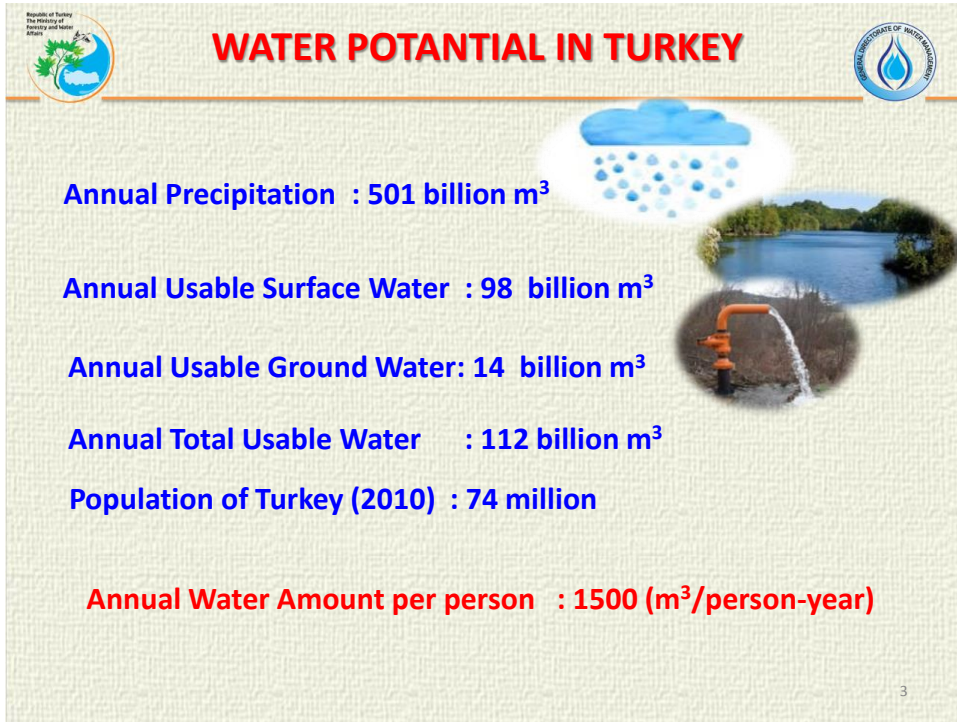
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OUTLINE

- Total water potential in Turkey
- Sectoral water use
- WFD - Basin based approach
- Basic measures
- Case study – Ergene River Basin

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WFD - 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)

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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

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Example of Basic Measures

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SPECIAL PROVISIONS FOR DRINKING WATER BASINS IN TURKEY



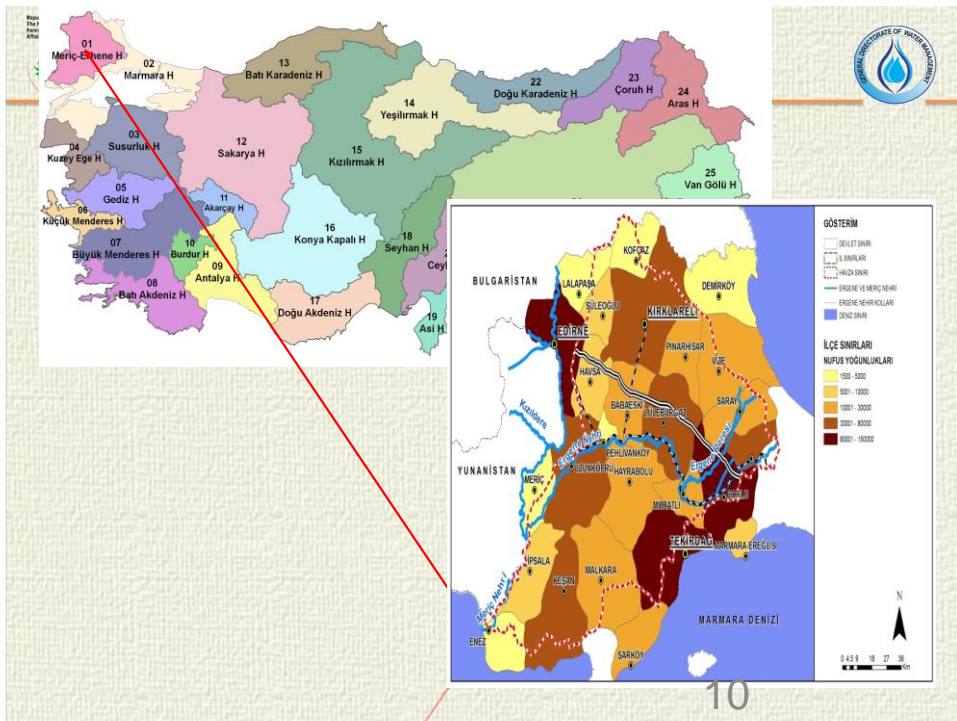
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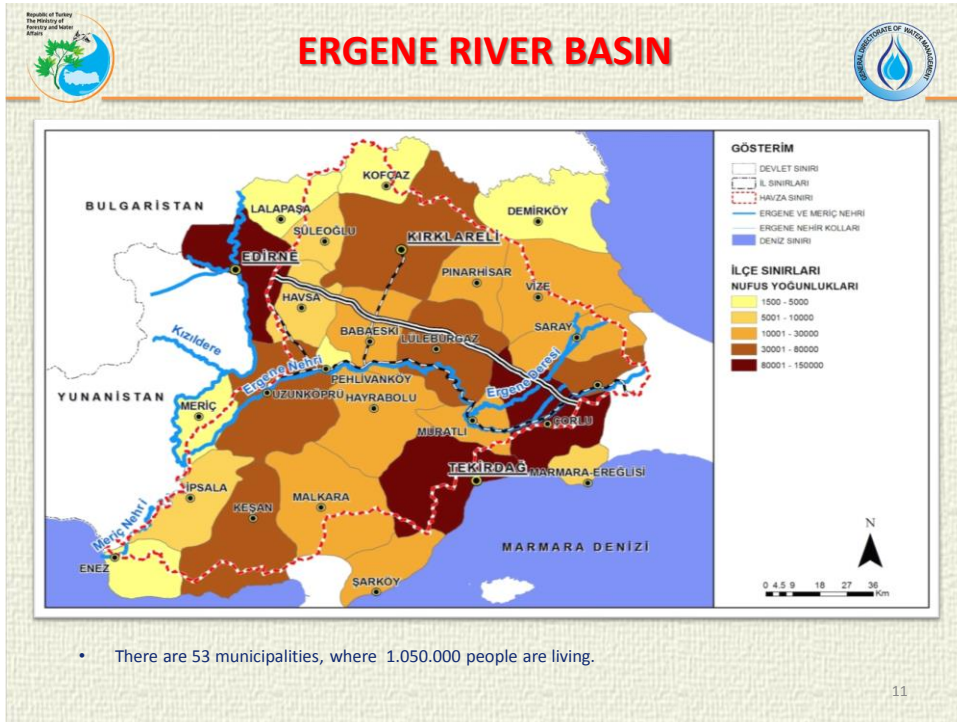
SPECIAL PROVISION STUDIES IN TURKEY



We are determining Special Provisions to protect Drinking
Water Basins

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ERGENE BASIN'S WATER QUALITY







Main Pressures


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

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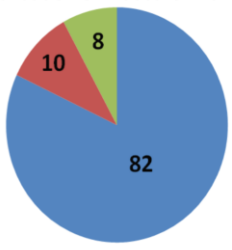


INDUSTRIAL DISTRIBUTION





Distribution of Industrial Plants in Basin



Province	Number of Plants
Tekirdağ	82
Kırklareli	10
Edirne	8

There are 2037 industrial plants in Ergene River Basin.

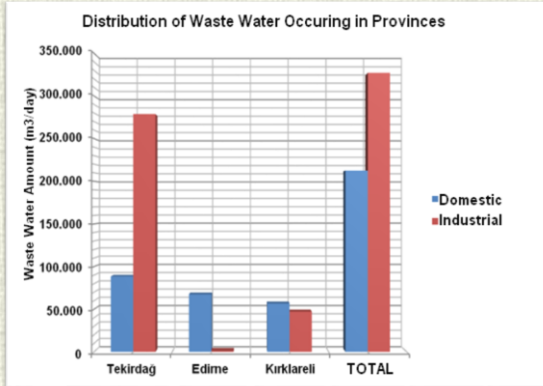
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AMOUNT OF WASTE WATER



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

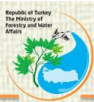


Domestic Waste Water: 230.000 m³/day

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.

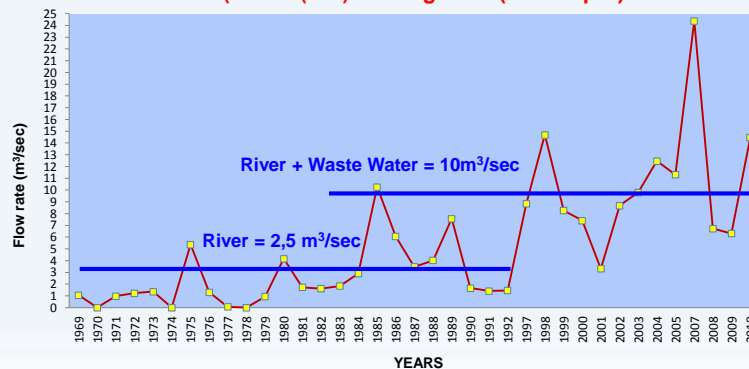
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AVERAGE FLOW RATE

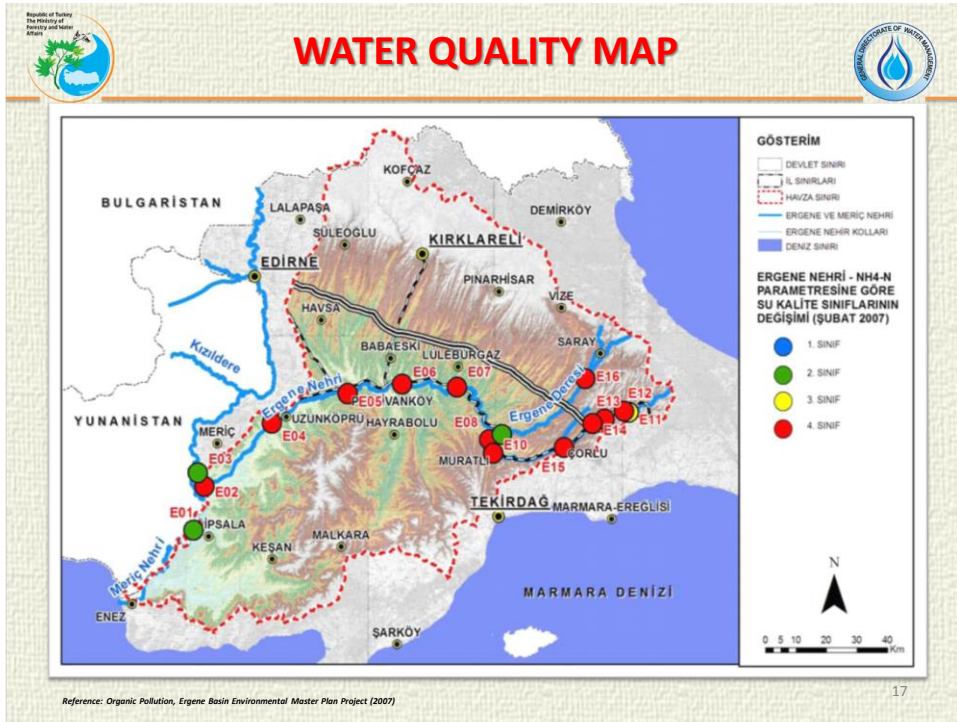


Average Flow Rates of Ergene River for August
(DSİ112(105) Yenicegörece (Uzunköprü))



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

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BASIC MEASURES

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ACTIONS VIA ERGENE RIVER BASIN ACTION PLAN


- 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

ERGENE
HAYVA KORUMA EYLEM PLANI TAMAMLANDI

Ergene hayata dönüyor


Ekim 2011

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BASIC MEASURES



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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

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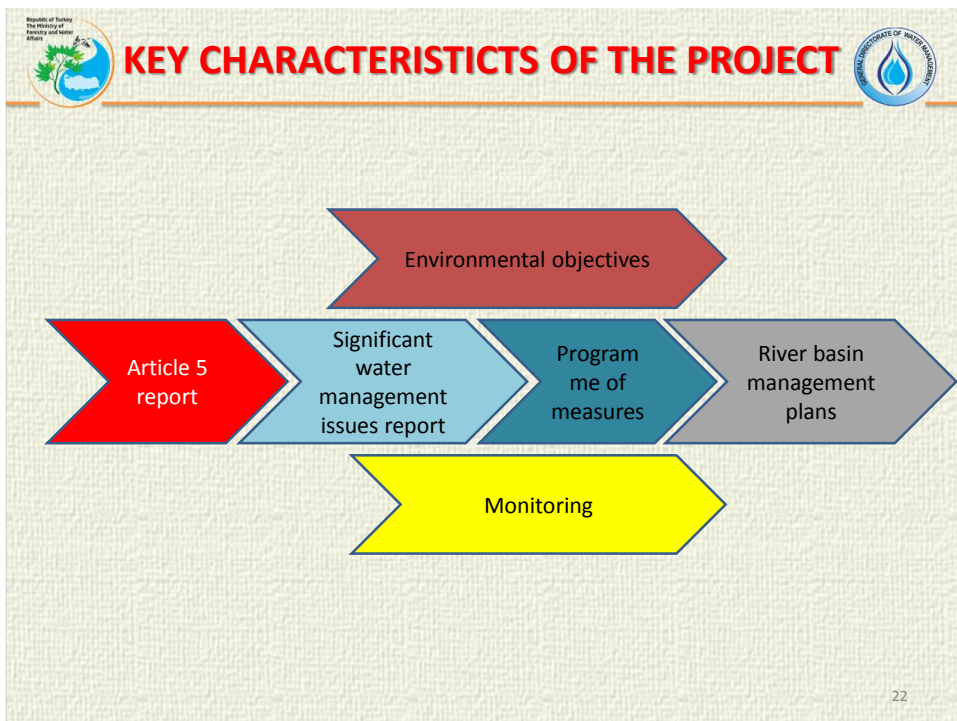
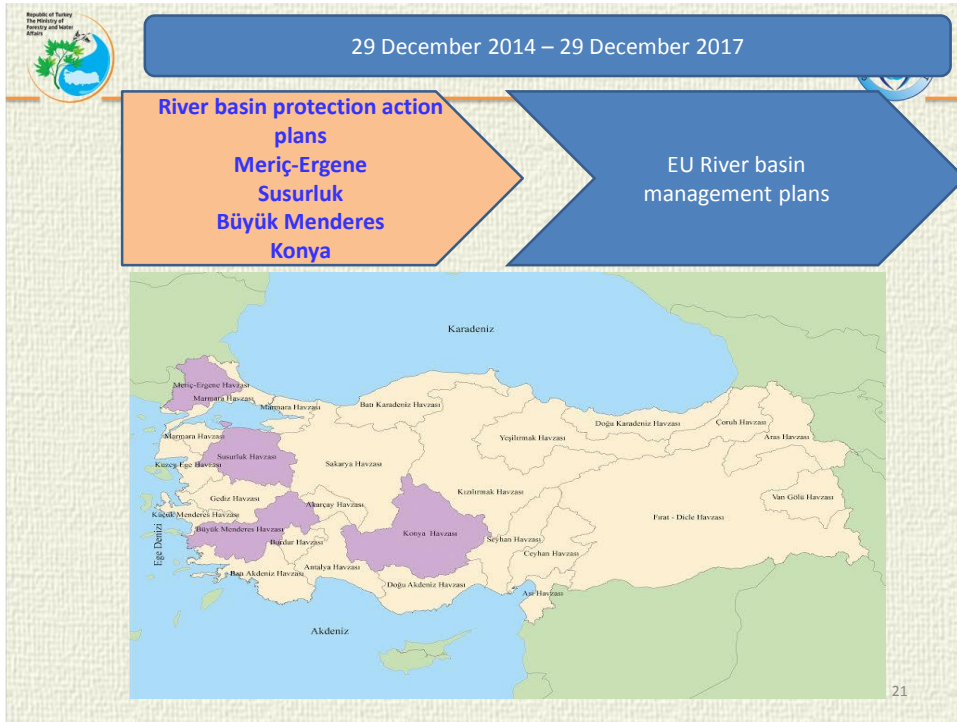
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RIBAMAP Project

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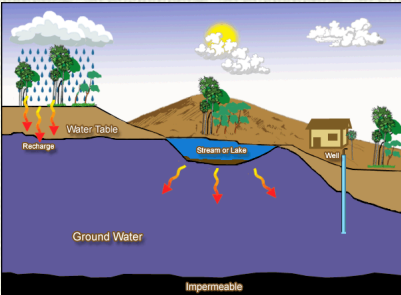





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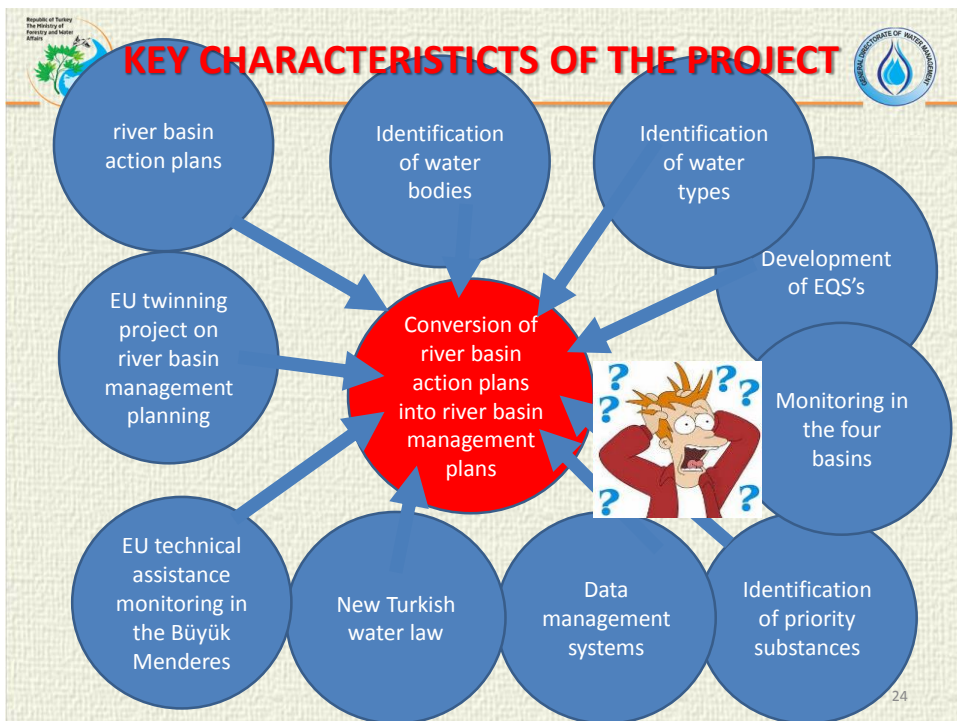
KEY CHARACTERISTICS OF THE PROJECT

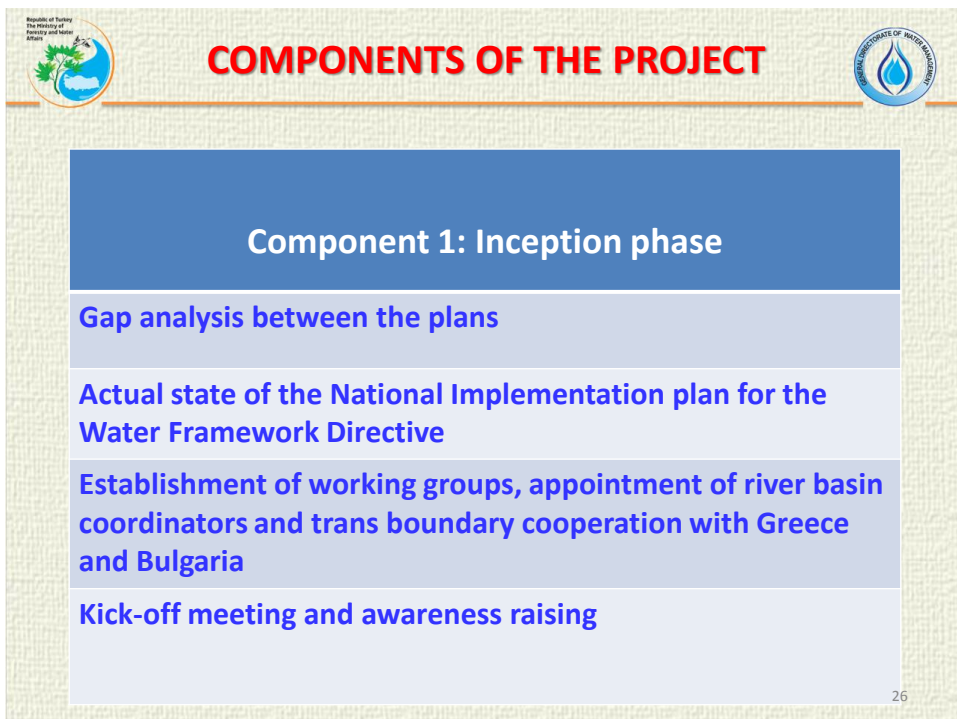
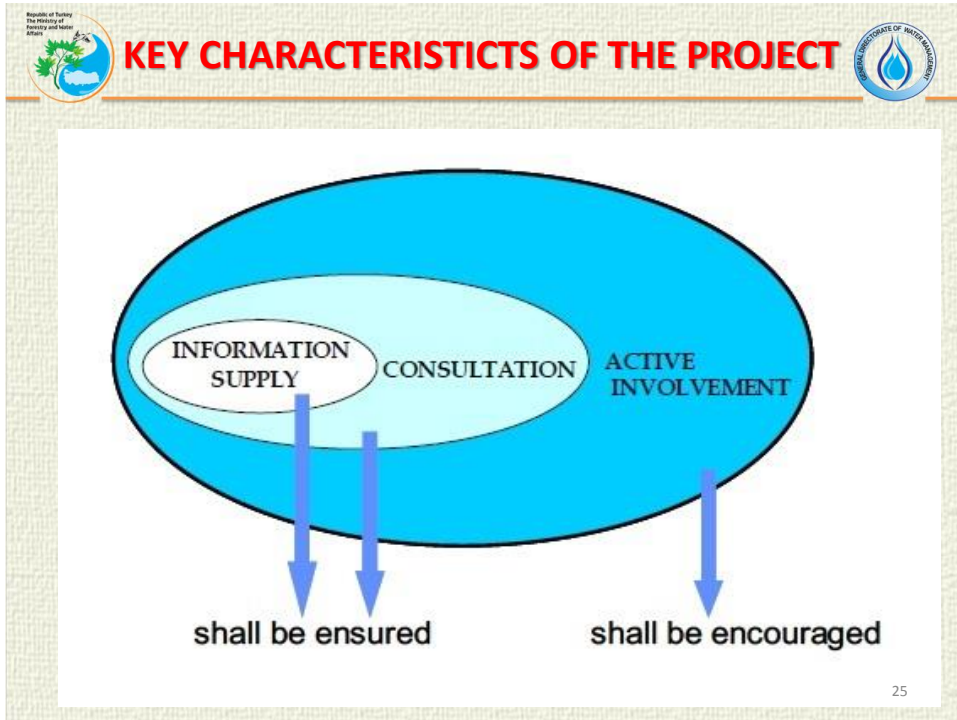
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Groundwater, lakes, rivers, coastal and transitional waters

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COMPONENTS OF THE PROJECT

Component 2: characterisation and significant water management issues



Characterisation report

Significant water management issues report

Public involvement

Training

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COMPONENTS OF THE PROJECT

Component 3: monitoring

Status classification of all water bodies in:

1. Susurluk

2. Konya



3. Meriç-Ergene

Biological monitoring

Chemical monitoring

Hydro morphological monitoring

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COMPONENTS OF THE PROJECT

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

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COMPONENTS OF THE PROJECT


Component 5: Water Information Systems

- Data Management System
- GIS mapping
- Decision Support system (Aquatool)
- Training
- Internships

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COMPONENTS OF THE PROJECT



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

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PLANNED PROJECTS



Technical Assistance on Economic Analyses within River Basin Management Plans and Water Efficiency Aspects in 3 Pilot River Basins in Turkey

- Financing Contract with European Commission is signed under the IPA-2013 programme.
- Implementation period is 33 months and 4.500.000 Euro is reserved for this project.
- Yeşilırmak, Akarçay and Batı Akdeniz Basins will be the pilot working basins.
- Additionally it is planned to make quick scanning for Meriç-Ergene, Konya, Büyük Menderes, Susurluk Basins.
- ToR of the Project is at the stage of approval.



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PLANNED PROJECTS




With in the scope of the Project;

- Economical Analysis of RBMPs will be completed at EU standarts,
- Cost Recovery level covering the environmental costs and resource costs of water services at actual situation will be evaluated,
- Capacity regarding the economical principles and applications of economical tools for RBMPs will be improved,
- Program of Measures will be developed and capacity improvement actions on evaluation of costs and efficiencies will be operated,
- Technical studies on increasing the water efficiency will be done,
- Studies on reuse of wastewater in agricultural irrigation will be done,
- Studies on the management and removal of water loss and leakages in the drinking water supply systems will be done.

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PRIORITISATION OF MEASURES



- **Prioritisation of the Basins;**
 - according to the pollution and water quality status
- **Prioritisation of the Measures;**
 - according to the cost effectiveness

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