

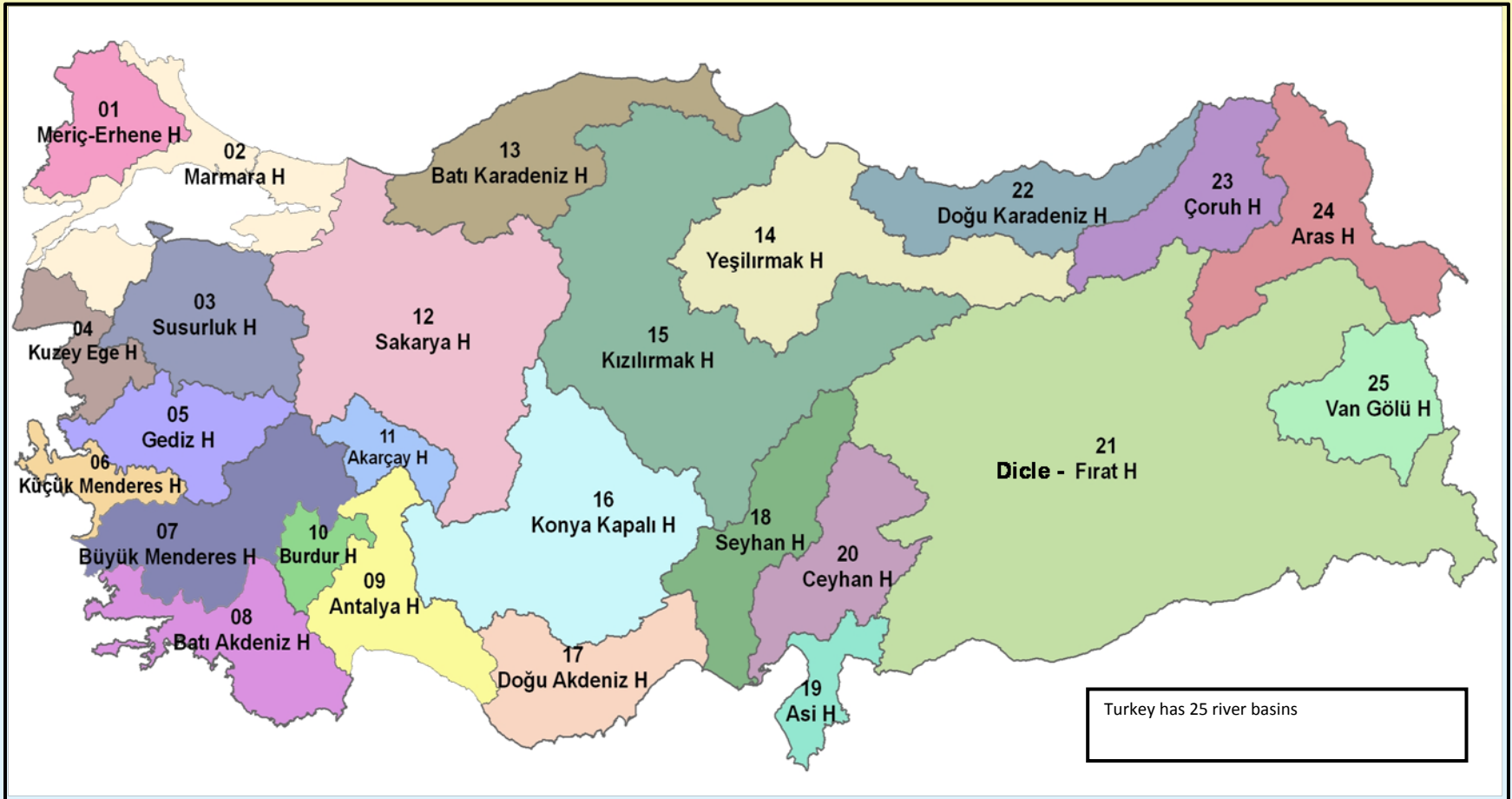


# CEO Water Mandate Third Working Conference: Engaging in Public Policy to Advance Sustainable Water Management by Business

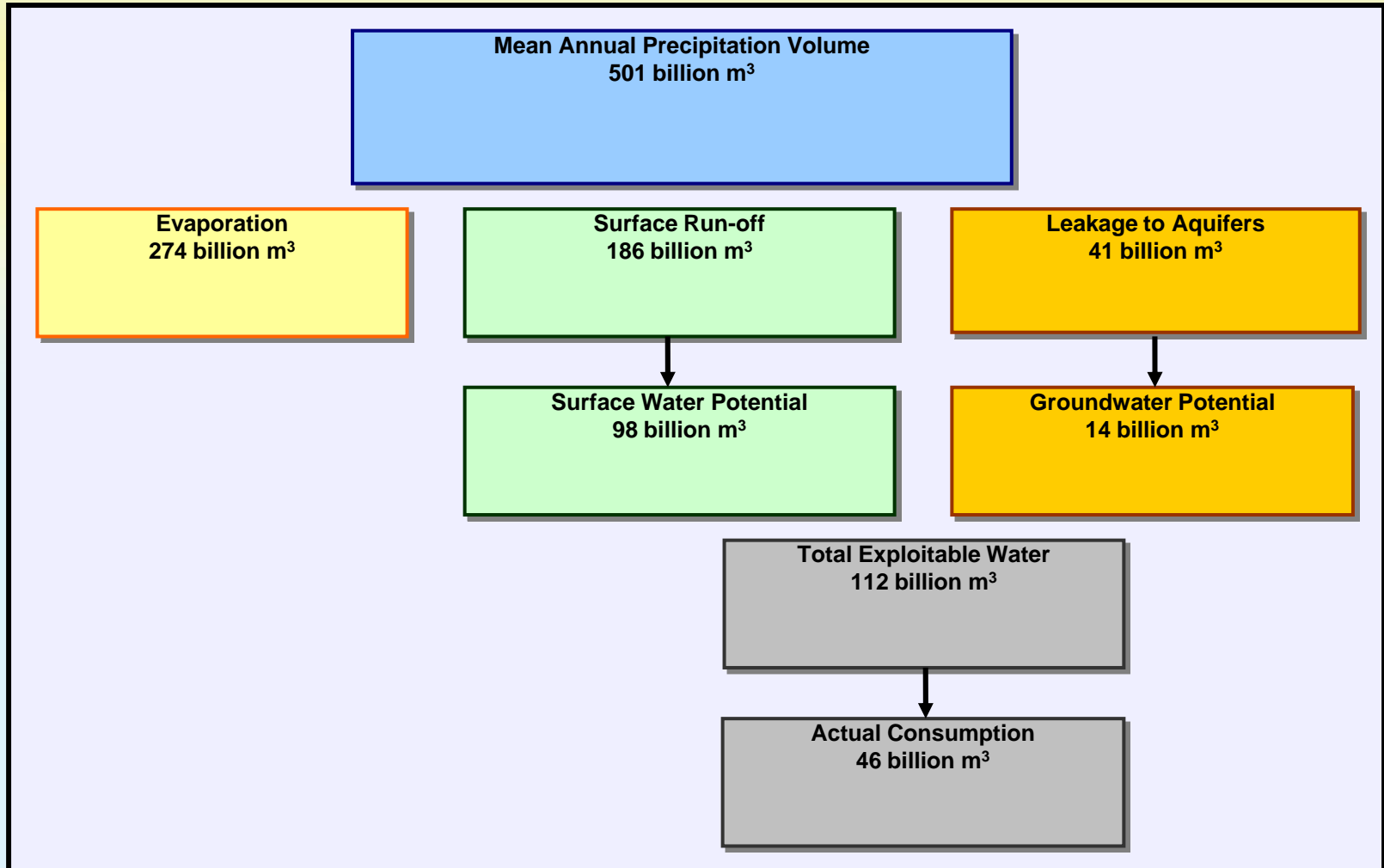
Panel Session 3: Stakeholder  
Perspectives on the Potential and Pitfalls  
of Corporate Engagement in Water  
Governance and Policy Setting

Dr. Hüseyin GÜNDOĞDU  
The State Hydraulic Works (DSI)  
March 16, 2009  
İstanbul-Turkey

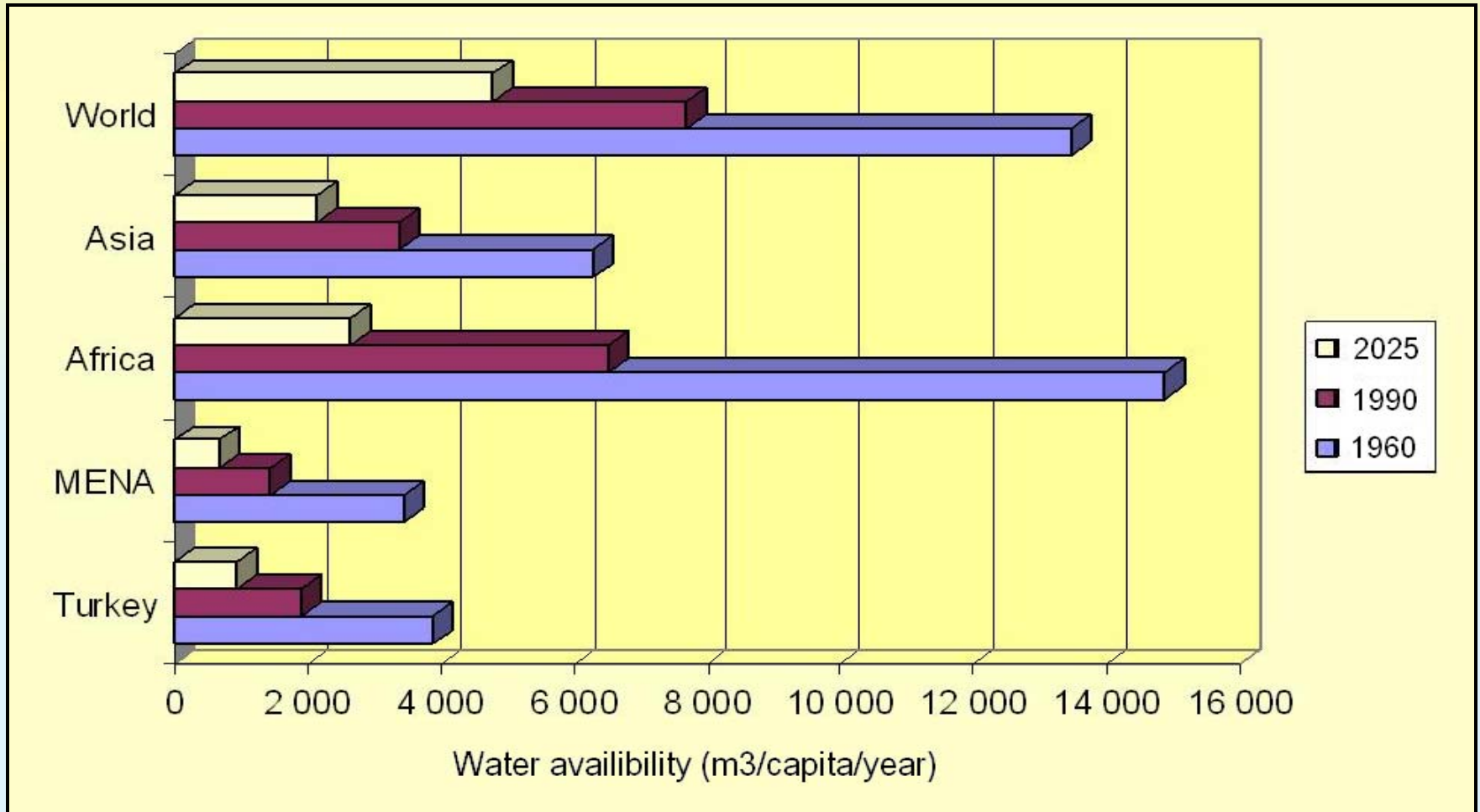
# WATER POTENTIAL



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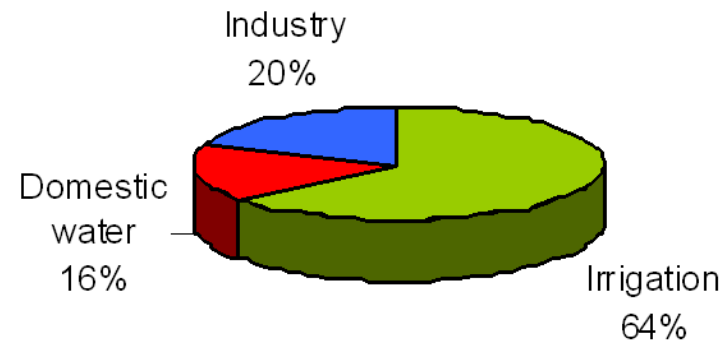
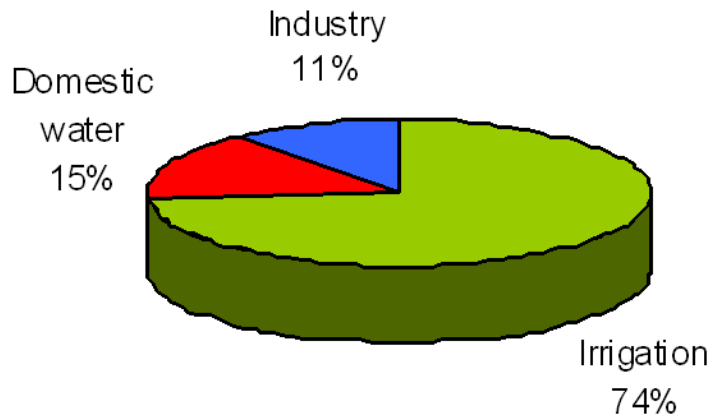


# WATER AVAILABILITY





# WATER USES AND PROJECTIONS



## 2008

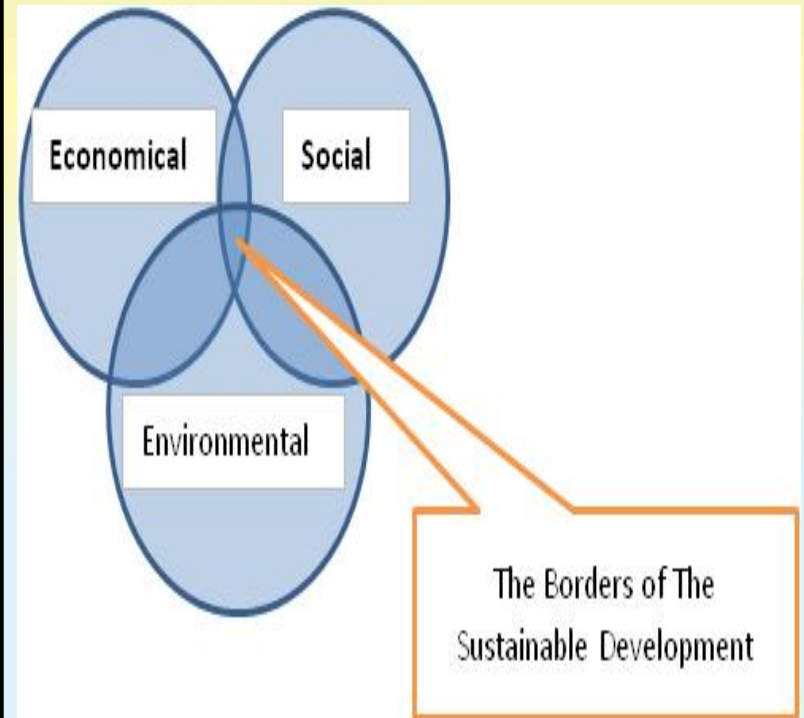
**Irrigation** : 34 billion m<sup>3</sup> (74%)  
**Domestic water** : 7 billion m<sup>3</sup> (15%)  
**Industry** : 5 billion m<sup>3</sup> (11%)  
**TOTAL** : 46 billion m<sup>3</sup>

## 2023

**Irrigation** : 72 billion m<sup>3</sup> (64%)  
**Domestic water** : 18 billion m<sup>3</sup> (16%)  
**Industry** : 22 billion m<sup>3</sup> (20%)  
**TOTAL** : 112 billion m<sup>3</sup>

# WATER MANAGEMENT POLICY

The main approach for the integrated water resources management is to manage them in a sustainable way in the basin scale. In this context, Turkey has taken great strides in sustainable water management. Turkey's water management policies are directed towards satisfying the increasing demand for domestic water supply, achieving food security, generation of energy, and conserving the environment in accordance with international standards.







# LEGAL and INSTITUTIONAL FRAMEWORK

- In Turkey, water-related activities are centrally planned. Water resources management is described in the Five Year Development Plans specifying the general principles and priorities of the implementation of medium and long term economical, technical, environmental, social and cultural policies.
- The Prime-Ministry, related Ministries and the State Planning Organization are the decision-makers. Governmental institutions make up the executive level. They have a two-tiered organization. The top management level is the office of the General Directorate of the State Organizations in Ankara, which has a number of different departments. The second managerial level consists of their regional directorates or provincial directorates throughout the country. At the user level, there are both governmental and non-governmental organizations for the operation and maintenance of the projects.



# LEGISLATION

- The basic legislation in water sector is the Turkish Constitution which states that water resources are natural wealth of the country, and under the authority of the State, to be used for the benefit of public. In this direction, the Turkish Civil Code covers water issues in two categories as common waters and private waters. Except some privately owned small springs, the development of water resources, including groundwater, are in general under the responsibility of the State. Nevertheless, utilization of groundwater resources is regulated by a specific law, which licenses the user upon request, within the limits of safe yield of relevant aquifer. Groundwater use rights can neither be transferred nor sold.





# INSTITUTION

- A number of governmental and non-governmental organizations have direct and indirect interest in the development and conservation of water resources in Turkey.
- Institutional framework has three levels; namely,
  - decision making,
  - executive and
  - users level.

In decision making level, Prime-Ministry, State Planning Organization and ministries take place.



# ORGANIZATIONS (Central Policy making)

Organization	Responsibility
Ministry of Environment and Forestry	Environmental management, setting policies and rules ,coordination of national and international activities on water resources
The Ministry of Agriculture and Rural Affairs	Responsible for the development of agriculture, assistance in the development of the water and soil resources, carrying out investigations and research, planning programs, and projects to meet the needs for protection and development of the soil and water
The Ministry of Energy and Natural Resources	Setting policies on energy and natural resources, coordination of national and international activities on energy and natural resources
The Ministry of Public Works and Settlement	carrying out civil works and major repairs concerning public buildings, and highways as well as providing services related to physical planning, land development and housing for low income families as well as extending disaster relief.
The Ministry of Health	Monitoring the water quality, performing, physical, chemical and mic0-biological analysis of water, issuing the licences and permitting for water use



# ORGANIZATIONS (Executing)

- Governmental organizations under the ministries are at the executive level.



# ORGANIZATIONS (Executing)

General Directorate of State Hydraulic Works (DSİ)	Main investor large dams and large water supply investments. a competent water authority, is the main organization responsible for water resources management
The General Directorate of Bank of Province (ILBANK)	Providing infrastructure projects on a turnkey basis for municipalities, providing credits, technical assistances
The General Directorate of Electrical Power Resources Survey (EİE)	Carrying out hydrological studies, geotechnical investigations, and mapping activities to evaluate the national hydro electrical potential
The State Meteorological Services	Making observations, providing forecast, climatological data, archiving data
Special Provincial Administrations	work under the auspices of provincial governors. The responsibilities of SPA related to water issues include <b>supplying potable water to rural communities.</b>



# LOCAL GOVERNMENTS

Municipalities	Urban water supply and treatment services and all related infrastructure investments belongs to the municipalities and metropolitan municipalities.
Municipal Water Administrations	Constructing, operating, and maintaining water supply and treatment facilities



# ORGANIZATIONS (Users-Irrigation)

- There are both governmental and non-governmental organizations at the water users level for the operation and maintenance (O&M) of the irrigation projects.
  - Village administrations,
  - Municipalities,
  - Cooperatives, and
  - Water User Associations (WUAs).





# WATER USER ORGANIZATIONS

- The O&M activities were carried out by the governmental organizations till the early 1990s. The governmental organizations are entitled to transfer the operation and maintenance of irrigation systems to Water User Organizations (WUOs) such as village administrations, municipalities, cooperatives, and Water User Associations (WUAs). The government has had a program to transfer of O&M responsibility for irrigation secondary and tertiary canals to WUOs. However, by 1993, DSI was only able to transfer of O&M irrigation systems of some 70,000 ha to various types of WUOs. In order to perform O&M of irrigation and drainage infrastructures more efficiently and ensure farmers' participation, this process has gained momentum since 1993.
- Presently 96% of all irrigation networks are operated and maintained by the WUOs. The program of Turkey in this regard, is used as a best practice to developing countries how irrigation management transfer could be accomplished. Turkey has been shown as a good example considering the implementation of transfer to the other developing countries.



# NGOs

- The regional, national and international NGOs are actively involved in many water and environmental problems in order to create public awareness and to encourage public participation. They propose efficient solutions and act as pressure groups in the decision making process.



# WHERE IS THE PRIVATE SECTORS?

?



# THEY ARE AT:

- Planning (involving in preparation of Planning report, feasibility study, Environmental impact assessment report, O&M manuals, e.t.c.)
- Project and design (designing the infrastructures , EU or international funded projects)
- Construction (construction the infrastructures)
- BOT Projects
- Manufacturing
- Consultancy



# BOT Projects (Energy)

- In order to overcome the financial problems on investment of hydraulic energy and hence decreasing the financial responsibility of state budget, provision of technology transfer and on time implementation, the policy of the encouragement of local and foreign private sector has been adopted by Turkish government. In this way within the frame of Build-Operate-Transfer (BOT) Model and the %100 Foreign Credit Turn-Key Model, that came into force, therefore important improvements in realization of hydro-electric projects have been obtained by private sector.



# BOT Projects (Irrigation)

- Investment for irrigation only by government has not been met the demand up to now,
- Required legal arrangement has been done for private sector involvement in irrigation sector,
- According to this arrangement; Private sector will do investment then operate the system about 20 years and then transfer O&M to WUA. It is a kind of BOT model.
- Revising studies of the Model is going on.





BRIDGING  
DIVIDES  
FOR WATER

THANK YOU

