

CLIMATE CHANGE & DRAUGHT IN TURKEY

**19.10.2007
46th ECCE Meeting
ATHENS**

- **Population growth**
- **Urbanization**
- **Industrial development**
- **Changes in transportation**
- **Uncontrolled usage of natural resources**
- **Destruction of nature**

**These all have
important effects
on our lifestyles
pushing us into
new discoveries.**

The Sensitivity of Turkey Against Climate Changes

The Effects

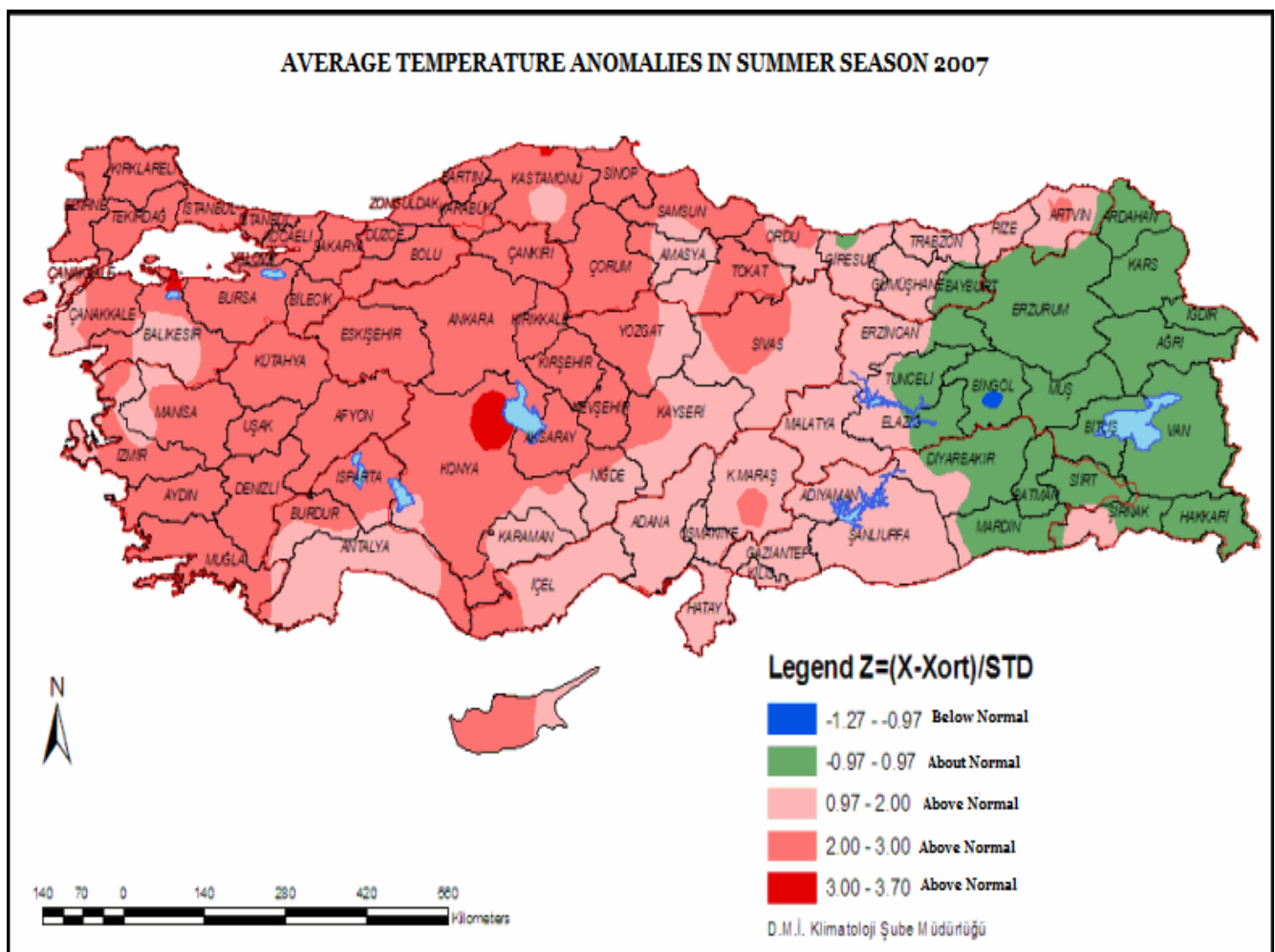
- *Weakening (reduction) in water sources*
- *Changes in agricultural productivities*
- *Drought*
- *Erosion*
- *Increase in forest fires*
- *Increase in communicable diseases and fatalities due to hot weather waves*



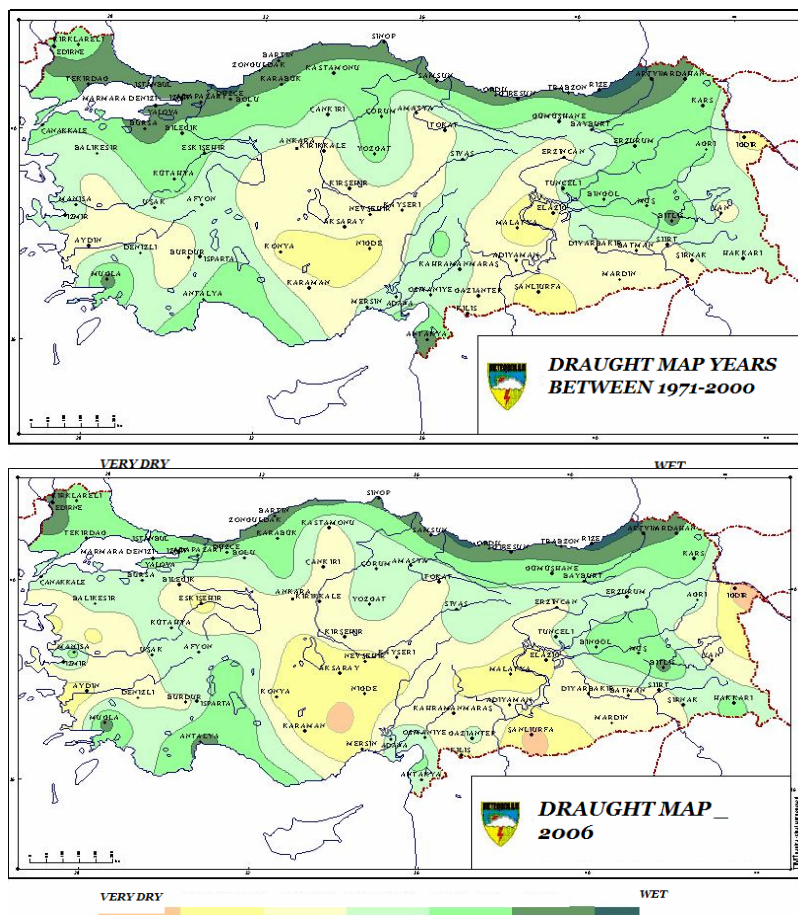
- **World Meteorological Organization (WMO) has counted Turkey in 76 countries that entertain a risk of draught.**
- **In Turkey, the time for blanket of snow on the land has been considerably shortened since 1987. This results in a decrease in underground water sources and ground water table level.**

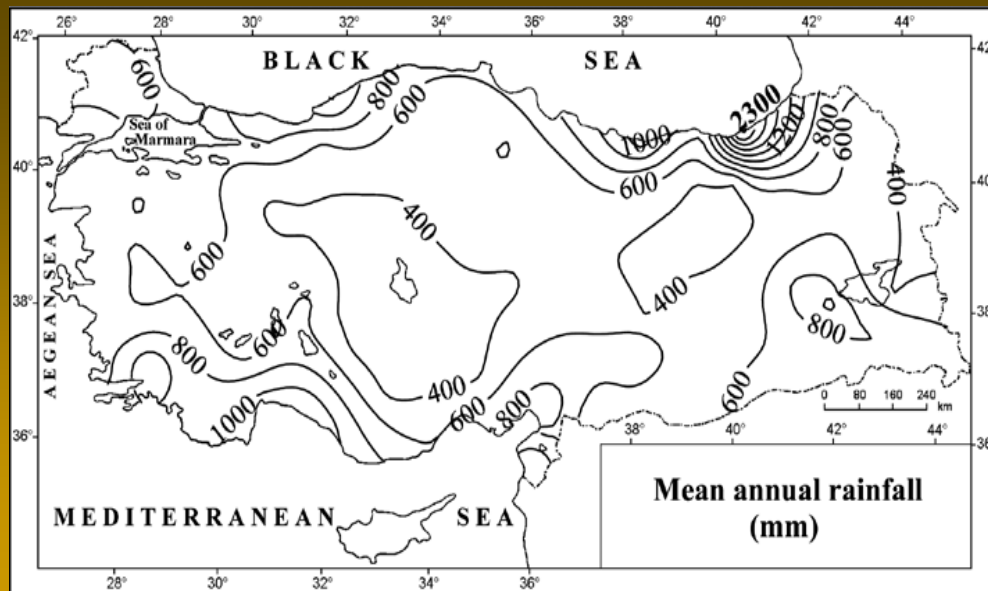
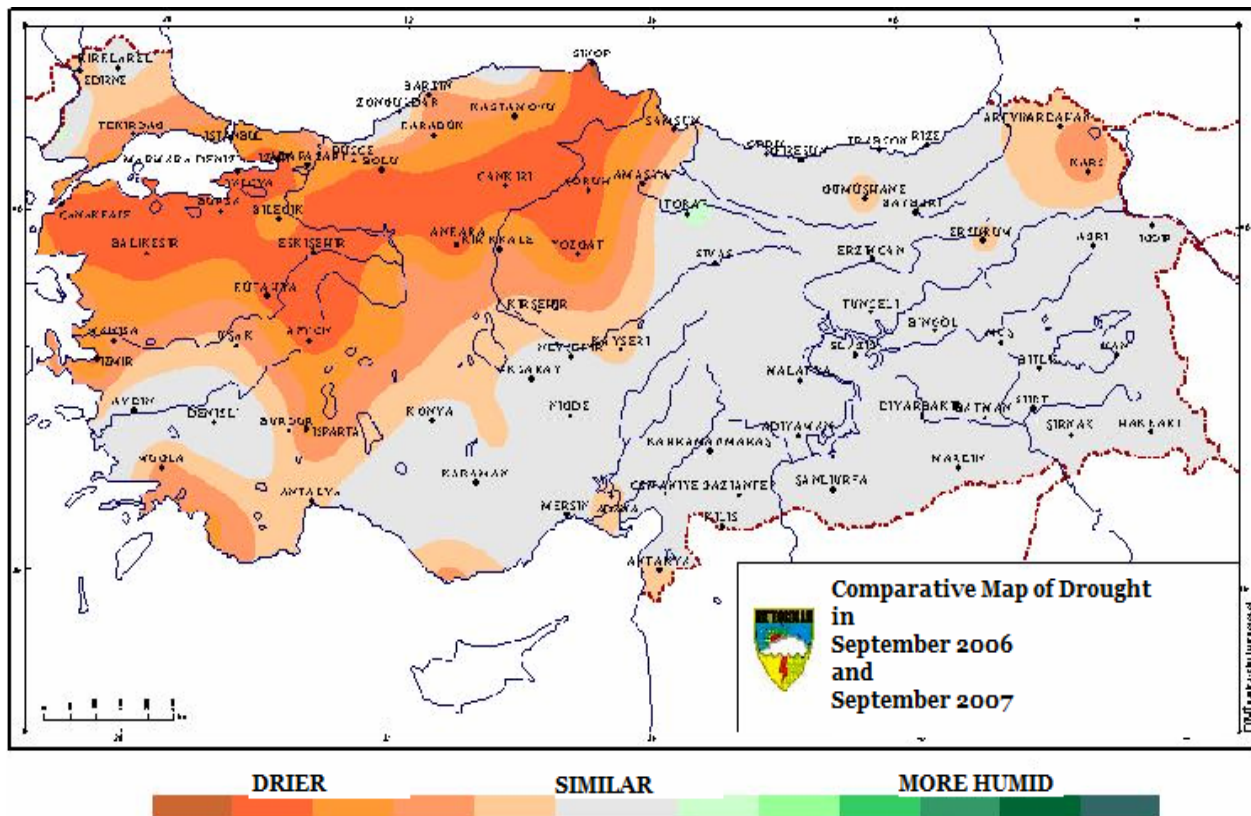


**1°C
increase
costs
about
700 million EUR**



**According to the predictions
about climate changes
in Turkey,
Turkey is going to get
by
an arid climate
from
semi-arid climate state.**





In the year 2007, cumulative precipitation decreased % 17,5 in comparison with the normal average and decreased % 18,0 in comparison with the last year.

IPCC Projections:

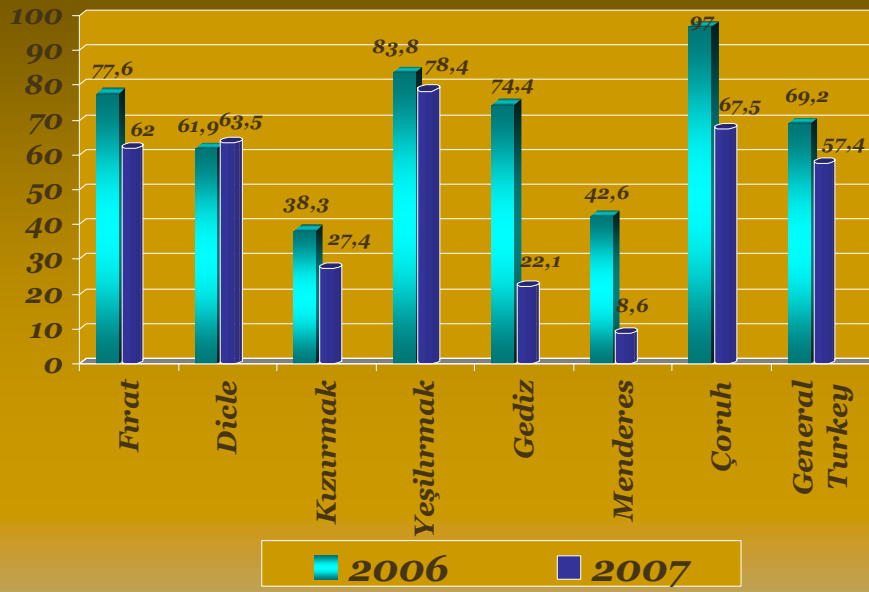
- **2 °c increase in average winter temperatures and 2-3 °c increase for those of summer.**
- **Precipitation regimes will change**



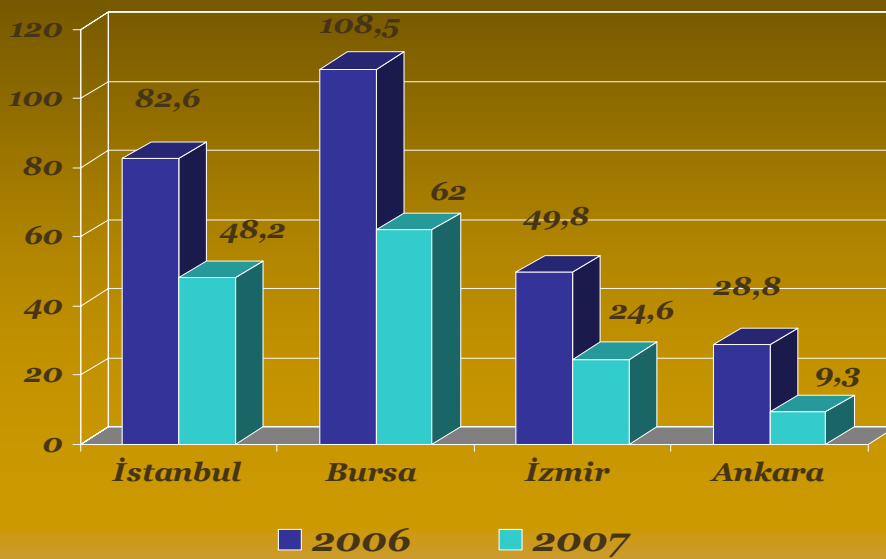
- **15-20 % decrease in the soil moisture content**
- **Precipitation among the seasons will change**
- **National parks like Birds Paradise will fade away**
- **Blanket of snow time on land will continue to shorten**



OCCUPANCY RATES OF DAMS

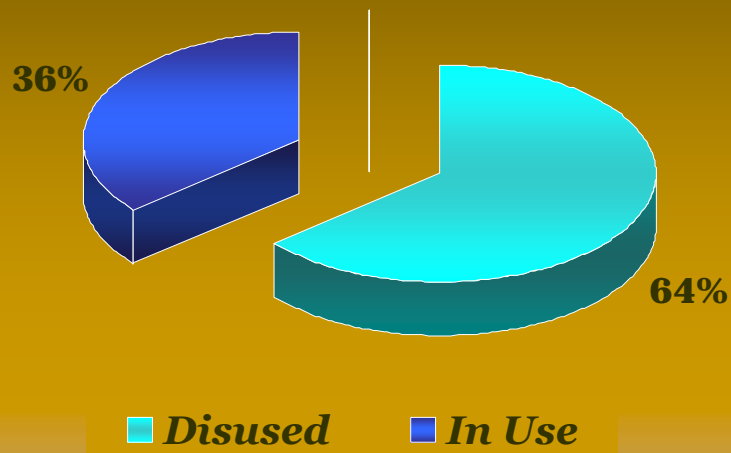


OCCUPANCY RATES OF DAMS SUPPLYING FRESH WATER FOR METROPOL CITIES



Our basins which are rich in water potential are found in the regions with thinly scattered population while we have limited sources of water in the regions with high density of population.

USAGE OF WATER POTENTIAL



The Effects of Climate Changes on Agriculture

- **Vegetable and animal product efficiencies**
- **Irrigation water supply**
- **Soil moisture and fertility**
- **Increase in diseases and detriments**
- **Lose of agricultural land in coastal regions**
- **Erosion and desertification**

FORESEEN SITUATION FOR GRAIN CULTIVATION

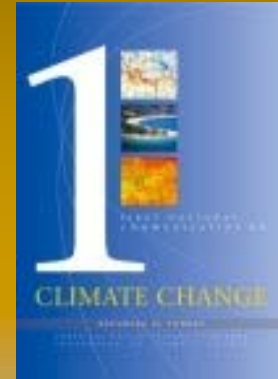
CITIES	FORESEEN CULTIVATION LOSS (%)
KONYA	10
ADANA	30
ŞANLIURFA	20
ANKARA	10
HATAY	30

PRECAUTIONS TO BE TAKEN

- 1. PRECAUTIONS RELATED TO INCREASING SUPPLY**
- 2. PRECAUTIONS RELATED TO DECREASING DEMAND**
- 3. ADMINISTRATIVE PRECAUTIONS**

Climate Change Framework Convention (CCFC)

Turkey has become a party to the agreement as the 189th country on May, 2004. In accordance with the liabilities Turkey assumed by this context, the “1st National Notification” had been presented to the Secretariat of Climate Change Framework Convention.



Council of Coordination of Climate Change Working Groups (2004):

- **Working group of research on effect of climate changes**
- **Working group of inventory of emission of greenhouse gas**
- **Working group of reducing greenhouse gases in the sectors of services, waste management, building and industry**
- **Working group of reducing greenhouse gases in the sector of energy**
- **Working group of reducing greenhouse gases in the sector of transport**
- **Working group of forestry and land usage**
- **Working group of policy and strategy development**
- **Working group of education and public-education**

OFFICIAL POLICIES

ENERGY&TRANSPORTATION

- **Production of energy considering environmental extent with the principle of sustainable development**
- **Effective usage of energy resources**
- **Focus on the usage of national resources of energy**
- **Reducing the possible risk factors of increase of import energy**
- **Usage of fuels with low carbon intent**



OFFICIAL POLICIES

ENERGY & TRANSPORTATION

- **Betterment of thermal power plants**
- **Encouraging the usage of public transportation**
- **Betterment of fuel quality**
- **Removal of old vehicles from traffic**
- **Benefit from different resources of energy for energy production**
- **Reducing density of energy providing energy efficiency**



OFFICIAL POLICIES

AGRICULTURE, FORESTRY AND LAND USAGE

- **Rehabilitation and review of land use plans**
- **Usage of biomass instead of fossil fueled energy sources**
- **Usage of the best techniques in the agricultural area**



OFFICIAL POLICIES

WASTE

- **Spread of methods of coordinate storage and recycle**
- **Usage of methane gas obtained from coordinate storage for obtaining energy**
- **Informing public and local administrative about recycling solid wastes.**



OPPORTUNITIES OF TURKEY

- **New and renewable resources of energy (wind, sun, biomass, hydraulics, geothermal),**
- **Variety of resources of energy**
- **High potential of energy savings**
- **Opportunity of utilization from new energy technologies,**
- **Potential of lands which may be transferred into green fields**
- **Potential of investment**

Thank you for your attention...