

Water and Climate Change: Problem & Solutions



The cumulative impact of human activities and climate change on water

Jean Claude Banon

Permanent Representative to the EU institutions

Human Activities: the main pressure on water resources

- Improving life quality standards
- Demographic trends and urbanization
- Industrial development
- Intensive agriculture
- Energy demand
 - **The combined effect of increased demand and polluted resources lead to local situations of water stress**
 - **Many countries and cities are living above their water means.**

Examples of human activities putting pressure on water resources

- **South East England:**
 - high population density per capita
 - rising demand
 - ageing water infrastructure
 - lower availability of good quality sources

- **Province of Almeria (Spain): intensive agriculture despite dry climate**

Climate Change increases the gap between growing needs and diminishing resources

- Climate change will affect the distribution of water over space and time and generate extreme episodes of flood or drought.
 - The water banks provided by the glaciers are melting little by little, in the Alps, etc. As they shrink, so too does their ability to release water during the dry season and to support rivers when their water level is low.
- **Climate change will increase water stress but present-day shortages are the result of other human actions .**

Solution to tackle stress on Water resources

A 'Twin-track approach'

- Managing Demand
- Optimizing Resources

**within a sound River Basin governance is
key to sustainable Water Management**

Reasonable Demand Management

- **Managing distribution efficiency:** leakage, pressure

- **Customer oriented measures:**
 - ➔ Design of water systems, devices and fittings
 - ➔ Need for European Acceptance scheme for materials
 - ➔ Need to advise customers about water use, & risks of in-house rainwater harvesting

- **Water tariff and pricing**
 - ➔ Better implementation of the “user pays” and the “polluter pays principle”

- **Water metering**
 - ➔ Rapid development of metering in all countries (Automatic Meter Reading)
 - ➔ Opportunity to implement innovative technologies

Optimising water resources

- Water reuse, grey-water reuse
- Aquifer recharge
- Rainwater harvesting
- Sustainable urban drainage
- Desalination

Sustainable Water Management implies:

- **Governance based on sustainable river-basin management**
- **Measures to dehydrate economic growth (domestic, industry and agriculture)**
- **Promote Sustainable Urban Development**
- **Responsible water pricing**