

Regional Cooperation On Water Issues

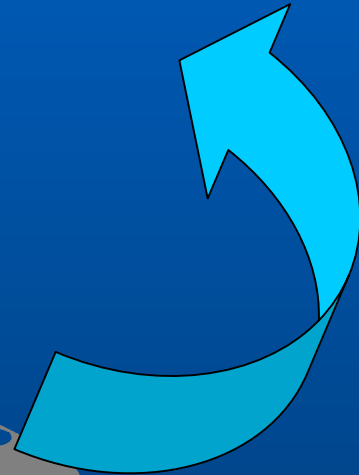
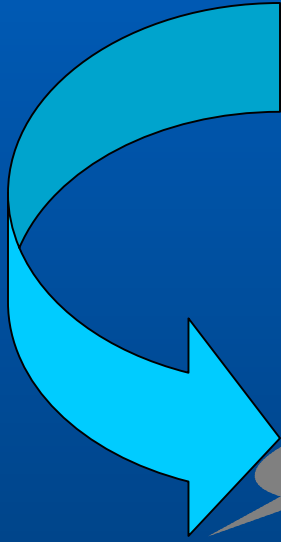
Middle East Peace Process

Bilateral Track

Multilateral Track

Political Issues

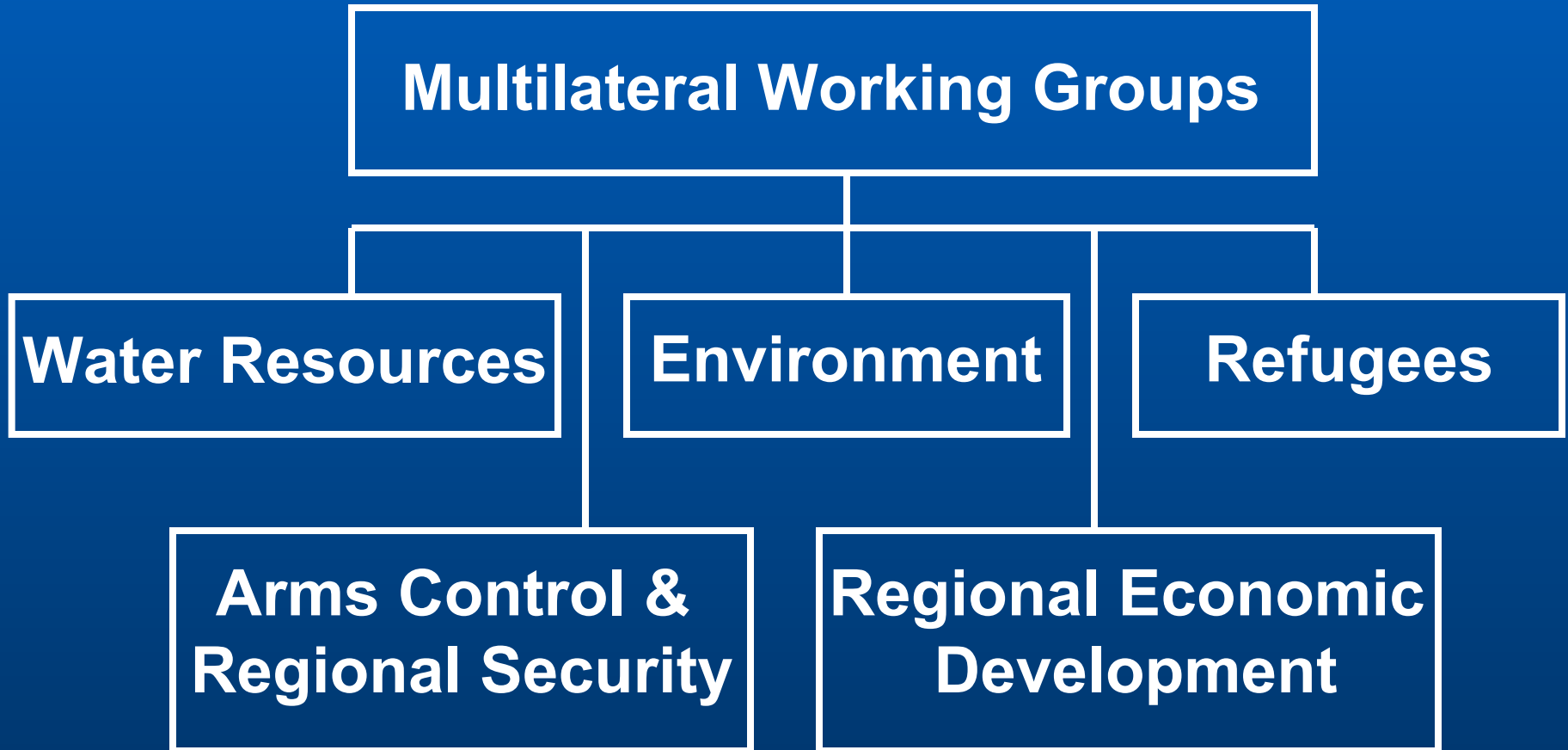
Bilateral Track



Multilateral Tracks

Technically Oriented Issues

Moscow Multilateral Middle East Conference



The Issues

- **Water scarcity & successive droughts.**
- **Huge accumulated fresh water deficit.**
- **Large population increase.**
- **Pollution of ground and surface water.**
- **Legislative, administrative and economic framework.**

**Win Win
Situation**

**Zero Sum
Game**

**A Catalyst For
Cooperation**

Efficiency

**Ability To
Raise Funds**

WATER

Competition

**A CAUSE FOR
WAR**

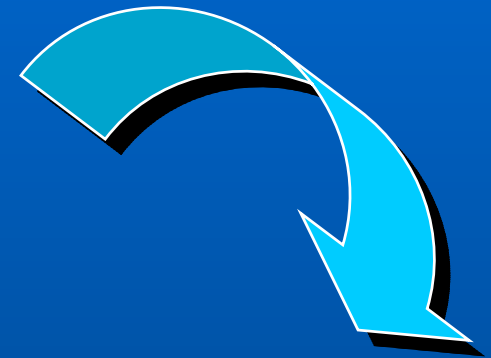
Solutions

- **Production of new sources and additional waters:**
 - Desalination of sea and marginal water.
 - Treatment of waste water for up to unrestricted uses.
- **Improved managerial and legislative framework.**
- **Data/knowledge of the resources.**
- **Education of users.**
- **Conservation measures.**
- **Joint discussions of issues.**

Multilateral Working Group on Water Resources

- **Enhancement of Water Data Availability**
- **Water Management Practices Including Conservation**
- **Enhancement of Water Supplies**
- **Concepts of Regional Water Management and Cooperation**

**Regional Awareness
& Sensitivity to
Common Needs**



**Conceptualization
& Definition of
Regional Problems**



**Search for
Regional Solutions**



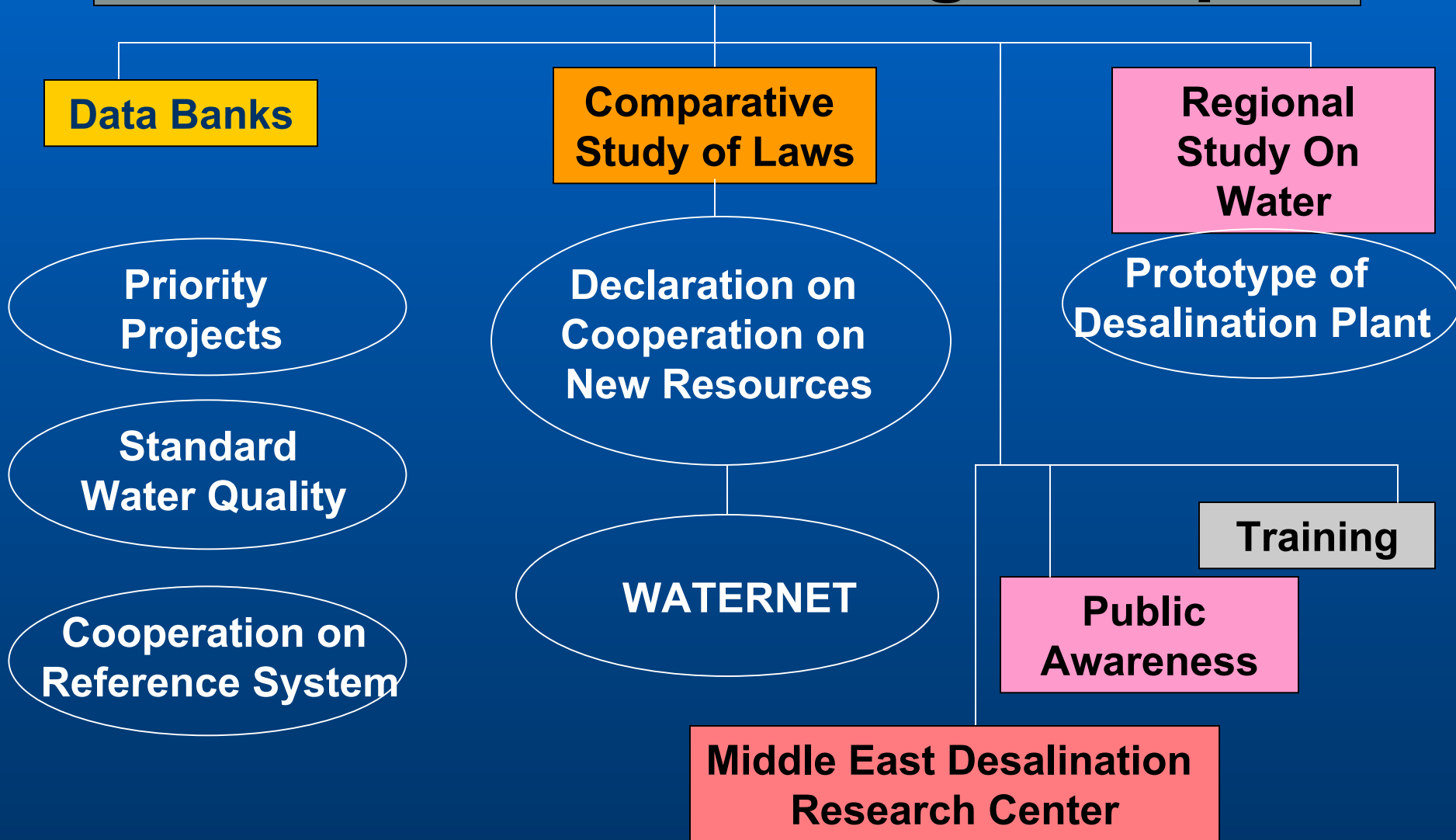
**Bilateral Problem
Solving**



**Regional
Cooperation**



The Water Working Group



Sharing Information - WEB

1. Executive Action Team (EXACT) Multilateral Working Group on Water Resources, Water Data Banks Project

[*http://www.exact-me.org*](http://www.exact-me.org)

2. Middle East Desalination Research Center (MEDRC)

[*http://www.medrc.org*](http://www.medrc.org)

3. WaterCare – Student Resource Book for junior high students

[*http://www.watercare.org*](http://www.watercare.org)

EXACT

Multilateral Working Group on Water Regional Water Data Banks Resources Project

- Implementation plan approved in November 1994
- Jordanian, Palestinian and Israeli (Core Parties).
- United States (Gavel holder), European Union, France and the Netherlands (Donor Parties)
- Executive Action Team (EXACT) meets twice each year.
- Throughout 10 successful years of fruitful cooperation, we have had 19 bi-yearly meetings, tens of technical meetings, workshops, consultations etc.

Original Goals

- To improve the availability and applicability of water data and information.
- To establish a Palestinian water data bank while upgrading the existing Israeli and Jordanian data banks.
- To enable the exchange of consistent, compatible, and reliable water data and information to support decision making at both local and regional scales.
- Water data collection and dissemination programs will meet the specific needs of the Core Parties.
- Regional sharing and exchange of relevant water information will be promoted and enhanced.

Some Achievements

- **Actual upgrading of core parties hydrological and monitoring capabilities.**
- **Water managers and field technicians on-the-job and classroom training.**
- **Donors - core parties coordinated activities on groundwater, surface water, water quality, meteorological monitoring etc.**
- **A pilot real-time monitoring system for hydro-meteorological data measurements and transmission is being implemented.**

- **Advanced mobile laboratories were supplied to each of the Core Parties.**
- **The Parties adopted a regional standard analytical methods manual .**
- **Technical field manuals.**
- **Joint multilateral activities and meetings.**
- **Continued cooperation even under prevailing circumstances.**

On-Going Activities

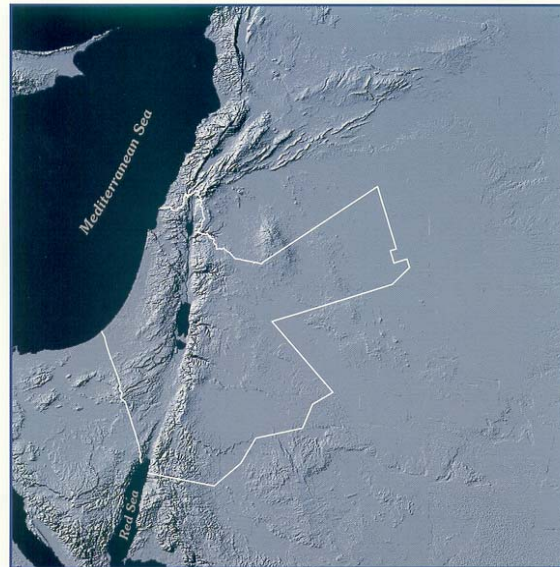
- **Advanced training, rehabilitation or construction of flow measurement, monitoring and climate stations.**
- **Purchase and installation of measuring and transmission equipment, ancillary equipment, and laboratory equipment.**
- **Improvement of measurement networks in selected areas (pilot projects).**
- **Database enhancement, extension of decision support systems for wastewater.**

- **Extension of a base-line survey of wastewater.**
- **Implementation of a suitable data transmission system.**
- **Processing, use and transfer of data in real-time.**
- **A small-scale water treatment and artificial recharge projects.**
- **Project to store, analyze, and exchange geological information related to groundwater resources in the region.**

Achievements and Activities in Photos

Overview of Middle East Water Resources

Water Resources of Palestinian, Jordanian, and Israeli Interest



EXACT

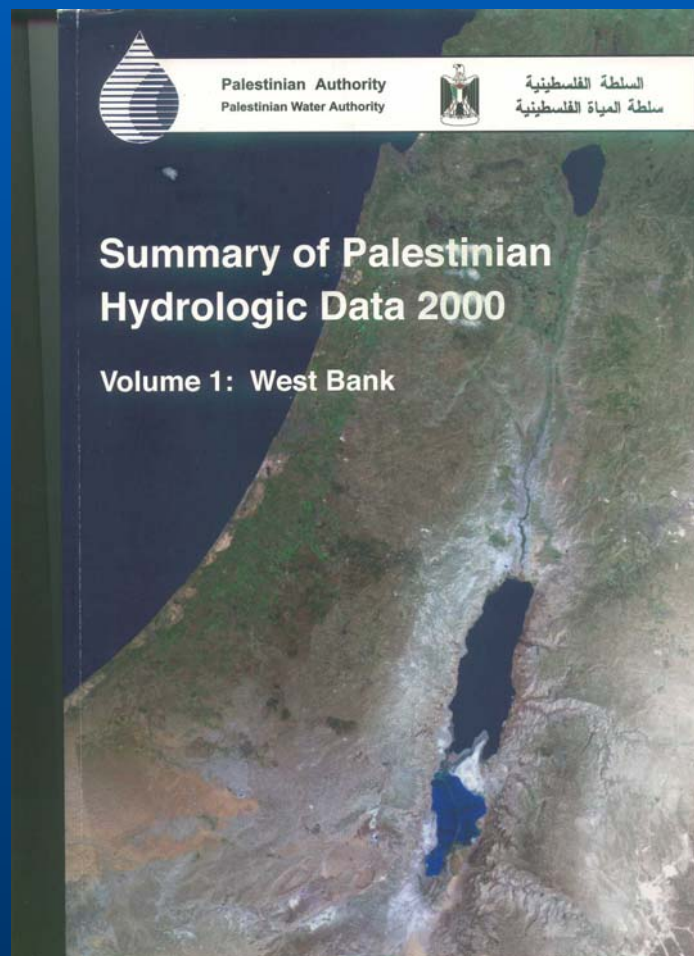


**Digitizing rainfall
data from strip charts
in Amman**



Measuring of dissolved oxygen







A pH measurement in the Palestinian mobile lab.

**Multilateral Working Group
On
Water Resources
Middle East Peace Process**

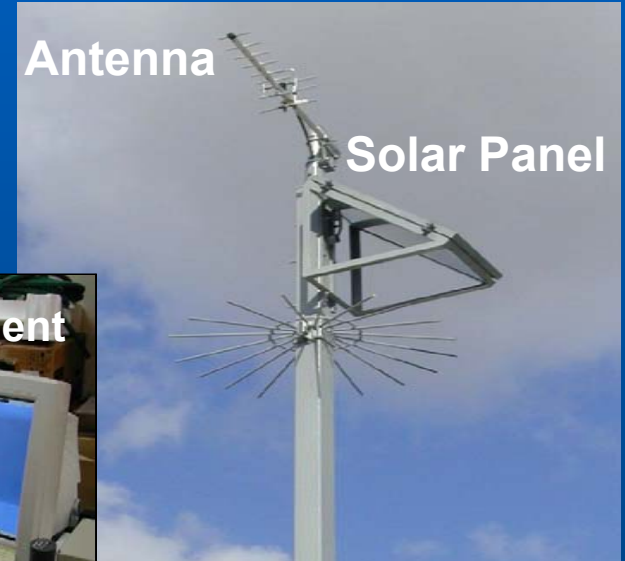


**Second World Water Forum
17-22 March 2000
The Hague**

Monitoring & Telemetry Systems



Raingauge

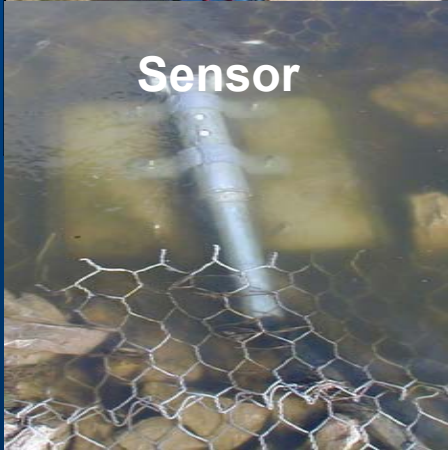


Antenna

Solar Panel



Receiving Equipment



Sensor



On-the-job Training



DCP

Remote Streamflow in Wadi Abu Barqa



Gauging Station

Parshall Flume

2002 11 14

Potential New Activities

- Regional water-quality assessment.
- Well-head protection project.
- Digitization of large amounts of raw data.
- Monitoring of resources.
- Conservation projects.
- Pollution prevention and treatment.
- Sewage treatment, management, and use.
- Sanitation and public health issues.
- Regional estimation of groundwater recharge.
- Development and uses of brackish groundwater.
- Regional water resources model.
- Water use, water demand analysis.
- Alternative water sources, including desalination.



Expansion of selected ideas for new activities

Sea water intrusion into aquifers

- **Monitoring.**
- **Identifying dangers;
Rehabilitation;
Remedies.**
- **Sustainable development of the aquifers.**



Using brackish water for agriculture

- Identifying the best ways to use brackish water in the agricultural sector - options and directions for using different qualities of brackish water without desalination.
- Analyzing and identifying: water sources; quantities and qualities; adapting of irrigation with brackish water to the types of soil and plants; types of crops that can grow on brackish water; water-soil-plant interdependence; economic viability; solutions for optimal use.

Using low quality water for industrial cooling towers

- Setting the proper parameters for using low quality water/brackish water/treated waste water.
- Considering economic viability.
- Identifying methods for efficient and safe treatment of drainage water with high concentration of salinity.

Regional training



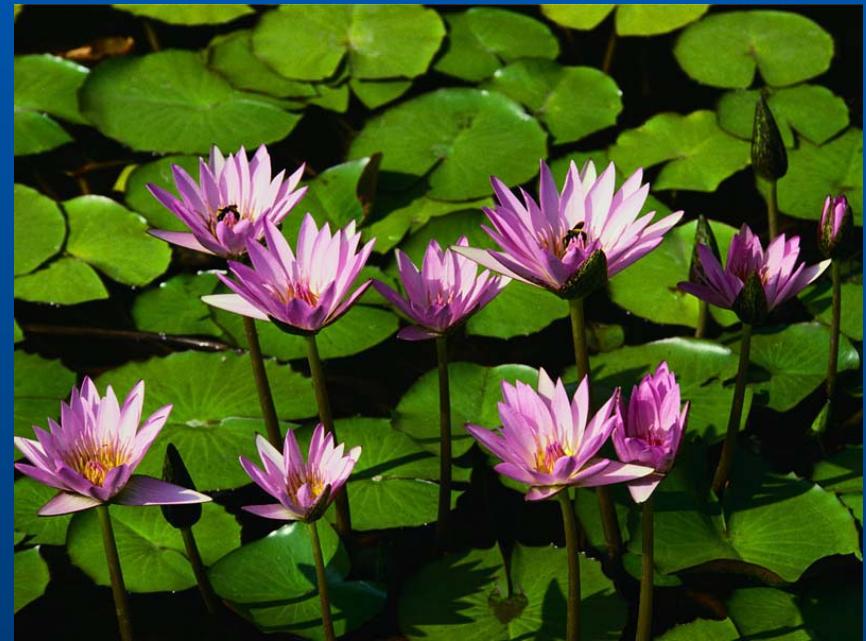
- Training managers and professional workers at all levels in managing, treating and using.
- Interrelations between water service providers and the regulations.

Integrated decision support data base for the planner in water related issues

- **Develop data base that will include all the available local information on water and water related issues which must be dealt with during the process of municipal and physical planning**
- **Such as: Water conservation; Water supply; Pollution prevention; Flood catchments; Rain harvesting; Wastewater collection, treatment and re-use; Ground water recharge and all the related scientific data.**

Nature as a legitimate water consumer and a stakeholder-consumer chart

- To build a comprehensive interdisciplinary database for decision makers to set policies relating to allocation and operation of water in quantities and qualities required by nature as a consumer, according to priorities.



The text "our vision" is rendered in a bold, sans-serif font with a 3D perspective effect. The letters are yellow and appear to be floating above a series of parallel, slightly curved lines that converge towards a vanishing point in the upper center of the frame. This creates a strong sense of depth and focus. The background is a solid, vibrant blue.

our vision

10 years of success of the MWGWR - a beacon for other regions in the world.

- **Continuation and enhancement of our project portfolio.**
- **Promoting sustainable development in water.**
- **Welcoming new M.E. participants.**
- **Mobilizing additional International support and commitment.**

Together, we can discover new synergies and new ways to resolve shared problems

Together, we can usher in an era of peace, prosperity and global cooperation

We hope that you will join us

Thank you