



## 1<sup>st</sup> Teaching Workshop on Environmental Economics

for the Middle East and North Africa

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## Environmental & Resource Economics Teaching & Research

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# Environmental & Resource *Economics Teaching & Research*

Began in **1969-70** with a ***valuation study*** of the Carmel National Park and a study on the *optimal location of Israel's second Electrical Power Plant.*

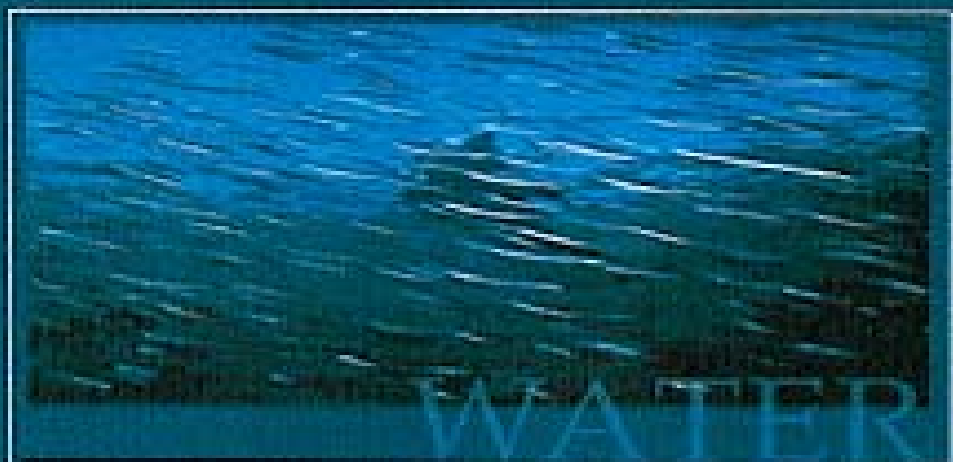
Undergraduate and graduate teaching began on a regular basis in the Department of Economics around 1972.

# Natural Resource & Environmental Research Centre (*NRERC*) University of Haifa

- Established in 1984
- Has carried *interdisciplinary* research in the areas of **natural** and **environmental resource economics and management**.
- All research funded by external grants from national and international agencies

# NRERC

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# Research

- **Over the past 35 years we conducted a large number of theoretical, applied and policy studies on the economics of:**
  - **water resources**
  - **water quality**
  - **air pollution**
  - **solid waste and recycling**
  - **preservation of natural areas and open spaces**
  - **energy and non-fuel minerals**
  - **climate change**
  - **biodiversity**

# **Environmental and Resource Valuation Projects**

*Valuing Recreational Use Values of a Threatened Natural  
Resource*

*Assessing recreational benefits of the Hula Valley  
Reclamation Project*

*Measuring loss of passive-use value: Monetizing ecological  
losses of the fire in Mt. Carmel National Park*

*Assessing damages to the coral reef in the Red Sea*

# Air Pollution

*Morbidity Damages of Air-pollution in the Haifa Region:  
An Epidemiological Study and Economic Valuation*

*Economic incentives in air pollution control in the Haifa bay region in a laboratory setting: Development and application of the "TELMA" Model*

*Valuation of air pollution damages from transportation  
in the Tel-Aviv Metropolitan Region and analysis of  
mitigation options*



# Water Resource Management

*A comparative analysis of water price support vs. drought compensation schemes*

*The gains from shifting from centralized planning to a market system: Lessons from the Israeli water sector*

*Using market mechanisms for an efficient allocation of scarce water resources in the Middle East*

*Economic aspects of maintaining water quality in managing groundwater aquifers*

*Groundwater pollution control: regulation and liability insurance*

*Sustainable agricultural use of aquifers in southern Europe: Integration between agricultural and water management policies (An EU Concerted Action)*

# Open Space Preservation

Preserving traditional agricultural landscapes:  
Developing a strategy and management policy for  
the preservation of Traditional Arab agricultural  
landscapes

# Waste Management

*Recycling and Reduction of Waste Production: An Integrated Approach An Advanced Multi-Disciplinary Research Project*

*Efficient solid waste management options for Israel*

*Economic incentives in solid waste management policy*

# Biodiversity

*Economic Valuation of Irreversible Damage to Biodiversity*

*Preservation of Optimal Portfolios of Biodiversity resources*

# Environment and Growth Projects

*Environmental quality and regional sustainable development: A regional input-output model for studying growth and environmental impacts in the Upper Galilee Region*

*Multi-criteria analysis of long-term electrical utility planning incorporating uncertainty and environmental considerations*

***RICAMARE - Research in global change in the Mediterranean: A concerted Action: The economic costs of global climate change in the Mediterranean***

**Partners: France, Spain, Germany, Israel, Turkey, Morocco, Portugal, Italy, Tunisia, Egypt, Algeria, Greece, Palestinian Authority (1998-2001)**

**Project coordination: Medias-France (Toulouse, France) and University of Toledo (Spain)**

**Funding: European Commission (ENRICH and INCO)**

# Economics of Climate Change

- Assessment of impact on **agriculture** and natural vegetation
- Economic assessment of climate change impact on Israel coastal resources due to **sea level rise**
- Reducing greenhouse gas emissions through **recycling of organic matter** in the solid waste stream
- Assessing the value of the loss of **biodiversity** resources due to climate change
- Incorporating **Economic Incentives** in Reducing Greenhouse Gas Emissions under the Kyoto Protocol: The Case of Israel
- A **computable general equilibrium** model to assess the economic impact of Kyoto Protocol mechanisms



# **GLOWA Jordan River**

**Vulnerability of Water Resources in  
Eastern Mediterranean Ecosystems**



Projects within the GLOWA Programme: “*Global Change in the Hydrological Cycle*”:

*GLOWA Danube* Integrative Techniques,  
Scenarios and Strategies for the Future of Water  
in the Upper Danube Basin

*GLOWA Elbe* Global Change Impact on the  
Environment and Society in the Elbe Region

*GLOWA IMPETUS* Integrated Approach to the  
Efficient Management of Scarce Water Resources  
in *West Africa*

*GLOWA Volta* Sustainable Water Use under  
Changing Land Use, Rainfall Reliability and  
Water Demands in the Volta Basin