



Aqaba Projects

Partner Country Priorities

NATO Forum

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International Funding and Regional Collaboration

Background



❖ The Red Sea Program (Gulf of Aqaba) 1996 -2001

- Ecosystem Approach for the entire Gulf of Aqaba
- Capacity building in terms of equipment and human resources
- Five partner countries Egypt, Germany Israel, Jordan, Palestine

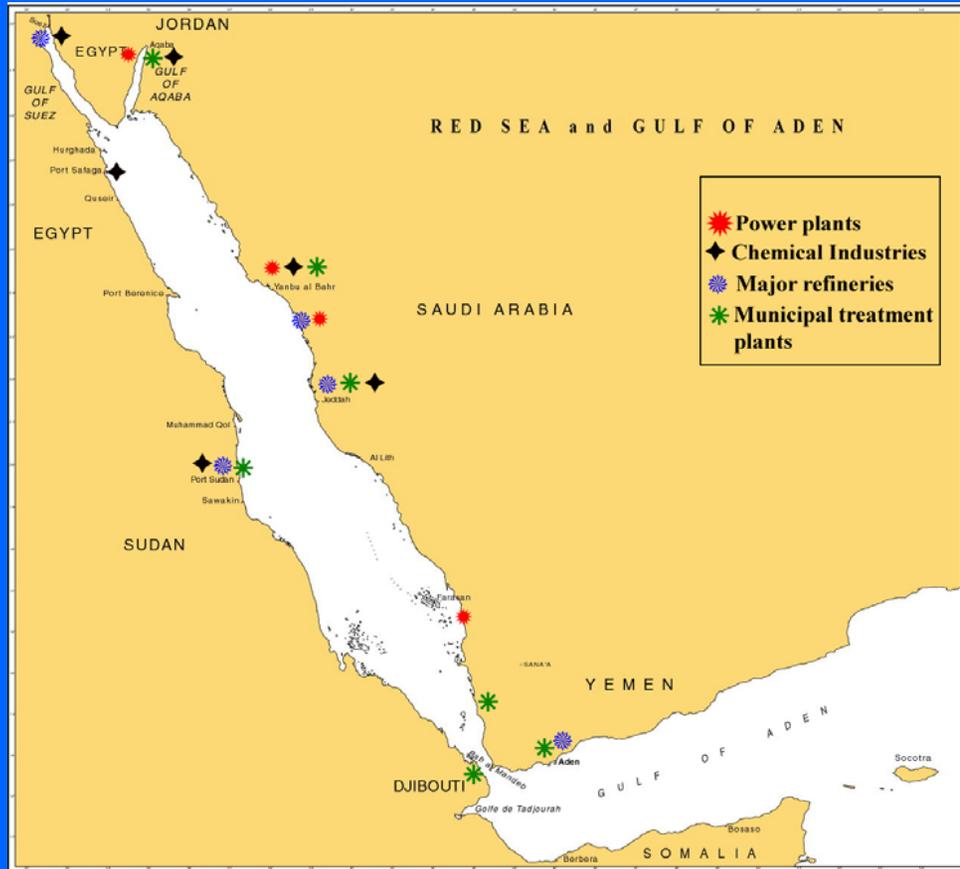


➤ MERC USAID (Northern Gulf of Aqaba) 1999 – 2003

e.g. RED SEA MARINE PEACE PARK PROGRAM



➤ GEF Entire Red Sea and Gulf of Aden (1999 – 2004)



➤ NATO "sfp" (Northern Gulf of Aqaba) 2006 – 2009

The MERC USAID Project has established the foundation for further collaboration

- NATO Officials were invited to the final symposium and expressed interest in supporting scientific research in the Gulf of Aqaba through the Science for Peace Program
- Several projects have been submitted out of which four have been accepted
- The projects focus on the environmental, socioeconomic and food security

❖ Real time surface current measurements to protect the Gulf of Aqaba (Eilat) against man-induced or accidental oil and other toxic spills

Objectives

- Provide near real-time surface circulation in the GOA for decision makers in a way that they can readily use to manage the various threats to the Gulf environment
- Validate the measurements of the HF radar using drifter trajectories and ADCPs. The coverage domain and fundamental aspects of the Gulf are unique in many ways.
- Compile and describe common surface circulation patterns in the GOA
- Investigate physical mechanisms responsible for driving the surface circulation. The relatively small size of the domain will enable us to observe and study sub-mesoscale features on the surface ocean.
- Strengthen trans-border scientific collaboration on the Gulf

Societal security and environmental impacts concerning mariculture in the Red Sea

Objectives:

- Assess the environmental impacts of fish farms in the northern Gulf of Aqaba
- Assess the rate of recovery after the fish farms are removed (Farms will be removed by 7/2008)
- Improve food security and environmental conditions in aquaculture by more effective feed conversion allowing the propagation of organisms in different trophic levels
- Study socioeconomic impacts connected with mariculture versus other coastal investment

Progress

- Two sampling and analysis campaigns have taken place in summer (July 2007) and winter (January 2008). A third campaign is planned in July 2008 to cover the period of fish farms operations
- A socioeconomic research team has been formed and started preparations for conducting investigations in Aqaba as a city that never had fish farms and in Elat as a city that had fish farms functioning for 18 years
- Preliminary results show localized modifications in sediment chemistry and benthos under the cages in a circle of about 80 m diameter
- The project findings are communicated to the public in a transparent manner as they become available
- The project is publicized on the web at the CRM web site <http://www.crm-online.de/> and an independent site for the project is currently being formed

THE PROTECTION OF THE GULF OF AQABA FROM THE ANTHROPOGENIC AND NATURAL STRESS IN THE FACE OF GLOBAL CLIMATE CHANGE

Objectives of project:

- a) Establish a cooperation between Israel, Jordan and Turkey in marine sciences
- b) Establish quantitative relationships between water optics and water quality
- c) Correlate algal pigment composition with gross taxonomic structure of phytoplankton.
- d) Phytoplankton pigmentation will be related to photosynthesis and quantum yield, and how these are affected by nutrients, pollutants and dust.
- e) Effects of nutrients, pollutants and dust on phytoplankton community structure, pigmentation and photosynthetic efficiency, will be studied.
- f) Satellite spectral images will be compared with the 30 years of available historical images
- g) A simulation model predicting present and future ecosystem processes based on historical data and data from the proposed project will be constructed as a tool for management of Gulf of Aqaba

Monitoring Natural and Anthropogenic Aerosol pollution and its impact on Ecosystem in the Gulf of Aqaba

Objectives

Work proposed here will strive to

- 1) quantitatively estimate the input from various natural and anthropogenic sources of nutrient and trace metal to the marine ecosystem in the Gulf of Aqaba;
- 2) to determine the fate of these pollutants within the system and the impact they have on the natural marine ecosystems.
- 3) Special emphasis will be given to dust deposition as this mode of nutrient input is particularly important in this arid region with minimal rain, river, or groundwater input.

To accomplish this we will use field, laboratory, modeling, and remote sensing data processing.

Products will be transferred to the end-users, the ministries of environment of Israel and Jordan, for decision making and improving the managements of the Gulf environment.

The strategic position and strategic role of Jordan

Jordan is a

- partner in the Mediterranean Dialogue Partner Countries
- Jordan is also a partner in the Red Sea Partner Countries (PERSGA)
- Jordan Enjoys good relationships with all neighboring countries

This gives Jordan the opportunity to play a strategic role in peaceful scientific collaboration around the two basins.

another Country that has the same status is Egypt.

☀️ Priorities for effective Scientific Research



❖ Peace



Productive and fruitful collaboration



❖ Combating Poverty



❖ Diversifying income resources

Fisheries



Aquaculture



Ports



Industry



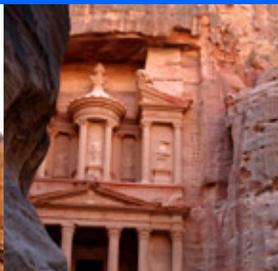
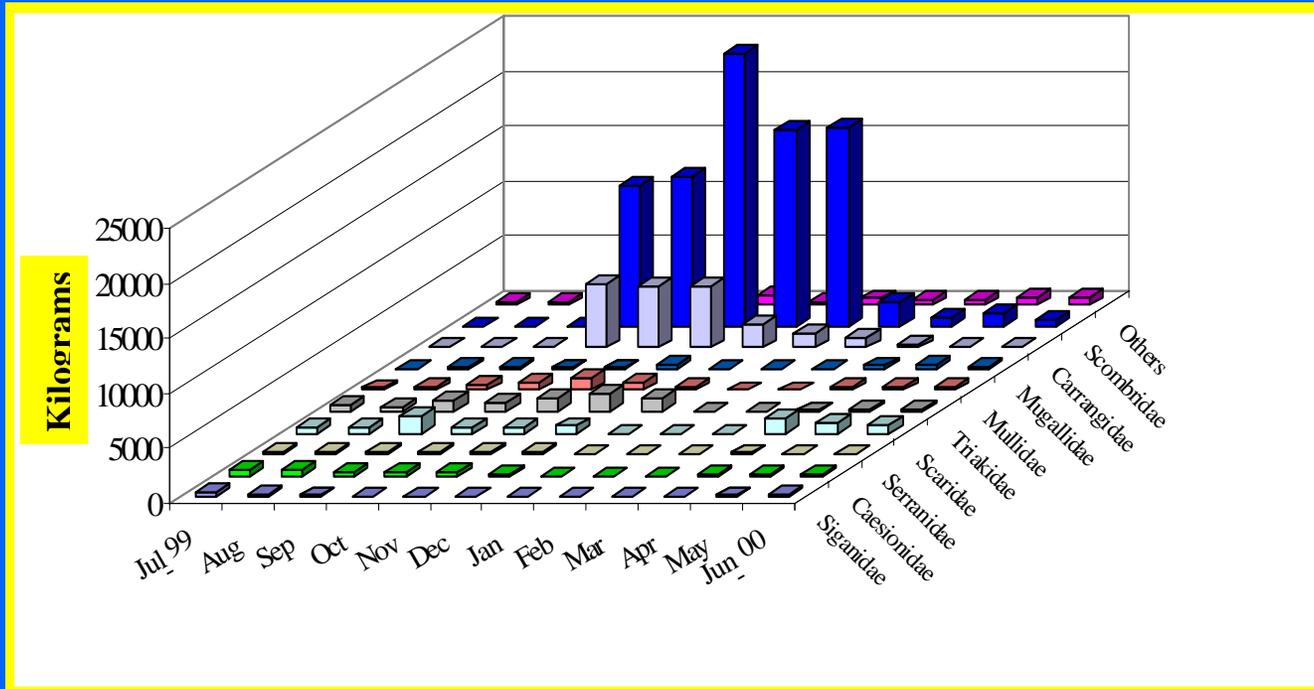
Tourism



❖ Scientifically informed management



❖ Sustainable exploitation of resources



❖ Wider regional collaboration and international Support

- Internationally supported regional collaboration in Scientific Research is quite evident in the Northern Gulf of Aqaba
 - Broader coverage to cover the entire Red Sea region is essential for better environmental and socioeconomic security

❖ Target oriented administration

- As much as there is a need to improve funding of scientific research, there is a similar need for more effective management of scientific research and optimizing the use of available fund
- There is also a need for smoother mobility of scientists in the region

❖ Partnership with private sector

As much as it is important to attract international funding for regional scientific research,

It is also important to establish local sources mainly from the private sector

■ Specific Scientific needs

It is of high priority to the region that NATO

would continue to focus on

Environmental, socioeconomic and food security

Living and non living resources



■ Habitats health and recovery (coral reefs and mangroves)



■ Endangered species



The Regional Organization for the Conservation of the
Environment of the Red Sea and Gulf of Aden
(PERSGA)

*Regional Action Plan for the Conservation of Marine Turtles
and their Habitats in the Red Sea
and Gulf of Aden*

■ Monitoring, outreach and transparency



Environmental Appraisal of the Jordanian Coast of the Gulf of Aqaba, Red Sea

Designed and implemented by

**The Marine Science Station, Aqaba
University of Jordan / Yarmouk University**

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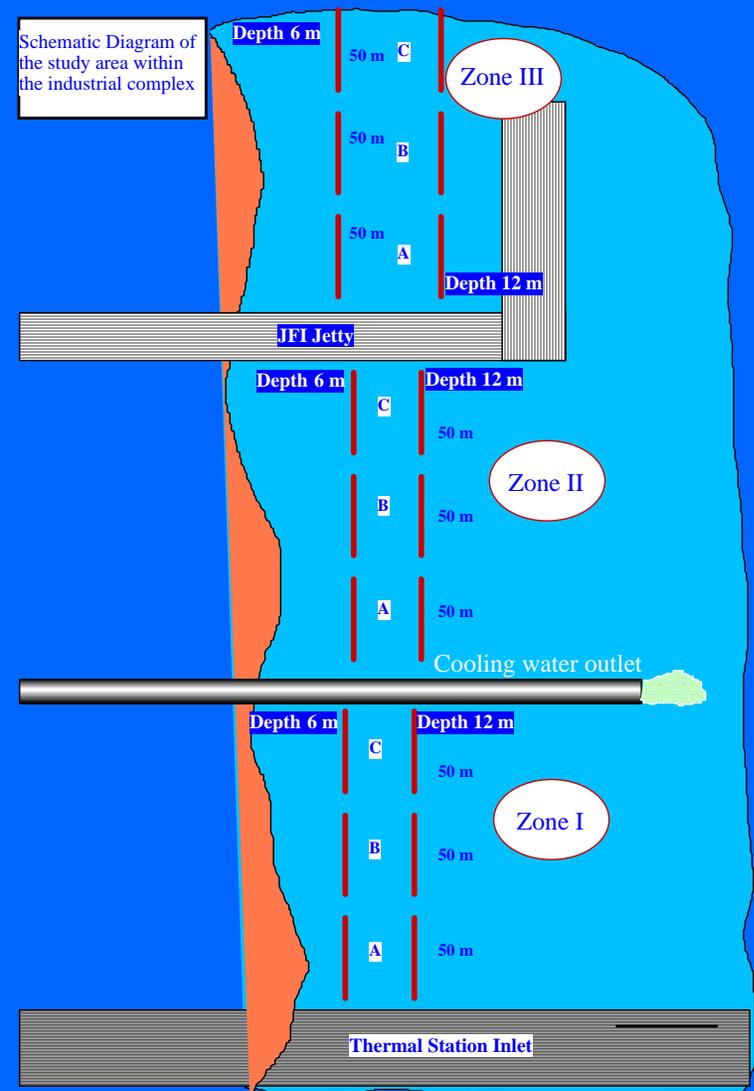
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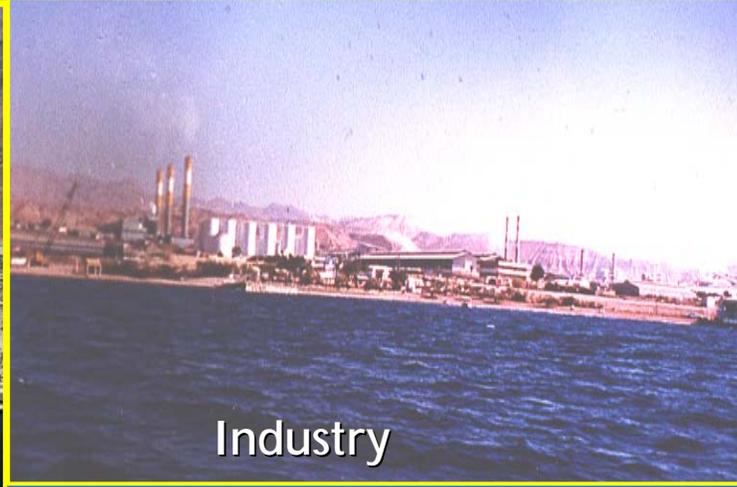
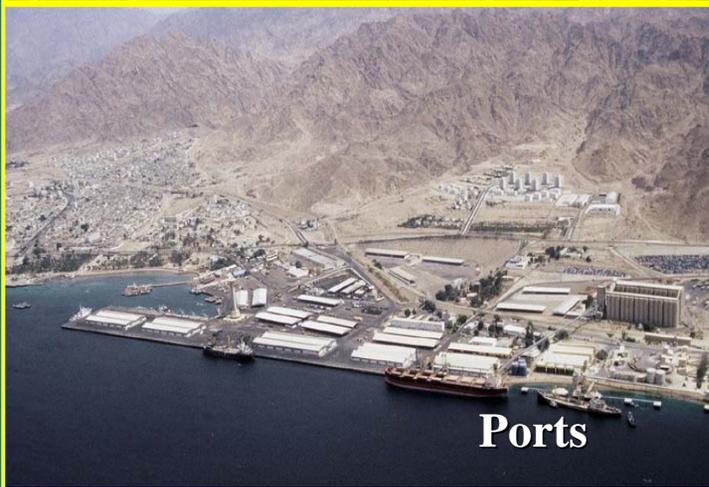
***The Environment Commission
Aqaba Special Economic Zone Authority
Aqaba Jordan***

National Monitoring Program,

***Annual report
2004***



■ Effects of land-based activities on the coastal and marine environment



- **Effects of shipping: ballast water and new oil and natural gas discoveries**

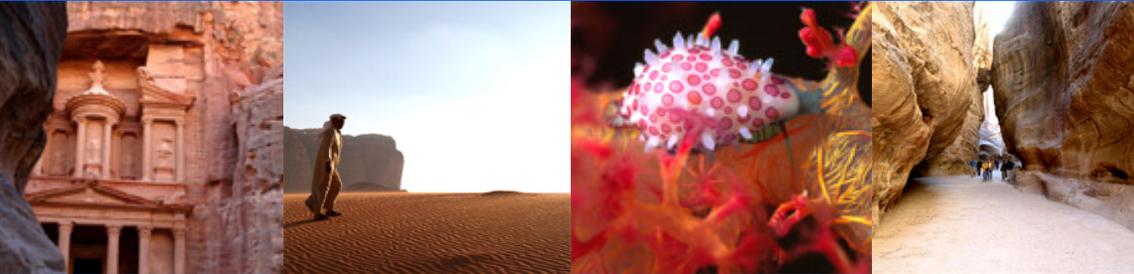


■ Tourism development

VISION & MISSION



THANK YOU...



PETRA
WADI RUM
AQABA

THE GOLDEN TRIANGLE...

- EXPLORE THE DESERT
- ENJOY THE BEACH
- DIVE THE DEEP-SEA

