

Protection of Gulf of Aqaba against anthropogenic and natural stress during climate changes

NATO-SfP 981883



Dr. Dilek Ediger

TÜBİTAK-MRC Institute of Environment





**TÜBİTAK-MRC
Sinop Univ.**

**Faculty of Life
Sciences, Bar-
Ilan University-
Israel**

**Marine Science
Station, Aqaba,
Jordan**

Project Partners

name	city	country	
Iluz, David Dr.	Ramat-Gan	Israel	(PPD)
Al-Najjar, Tariq Hasan, Dr.	Aqaba	Jordan	Co-Director
Levent Bat, Prof. Dr.	Sinop	Turkey	Co-Director
Dilek Ediger, Dr.	Gebze	Turkey	(NPD)



Advantage of NATO-SfP Programme

- ❖ Project has two-step evaluation procedure
 - 1-Short application
 - 2-Full Project Plan (planning grant)
- ❖ Project partners have the opportunity to participate in a full discussion about the planned project
- ❖ The main aim is to collectively improve the project proposal
- ❖ Application is without unnecessary bureaucratic paperwork
- ❖ The last stage is to present the finalised project proposal in Brussels



NATO-SfP 981883

“Aqaba Antropogenic Stress”

- Started December 2006
- Expected duration of the project
October, 2010

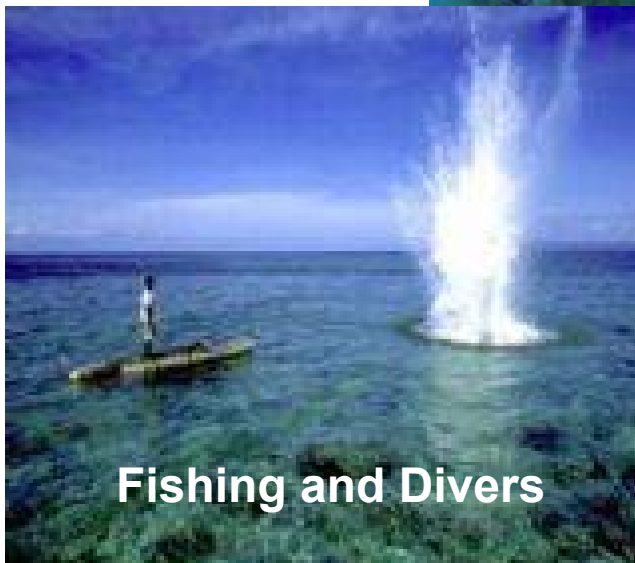
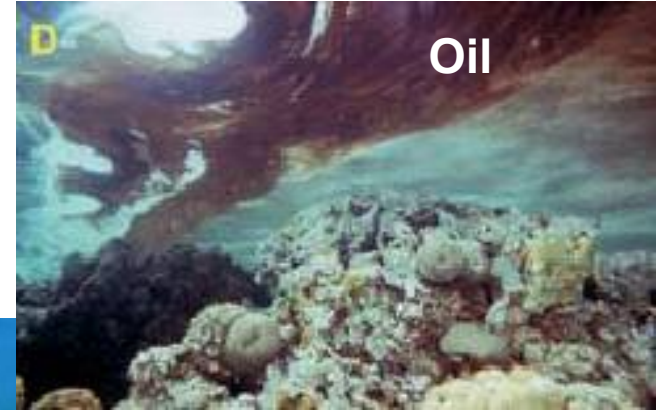




- Coral reef community has survived for thousand of years
- Main economic asset: international tourism and local recreation
- Coral reefs sustain highest biodiversity and also coastal fishery



Anthropogenic stress





- The reefs have been declining both in live coral cover, in biodiversity and associated biota
- These changes may be caused either by anthropogenic or by natural processes





- Gulf of Aqaba is exposed to the impact of global climate change
- Increasing dust deposition



OBJECTIVES

- ❖ Establish a cooperation between Israel, Jordan and Turkey in marine sciences
- ❖ Examine the effect of anthropogenic or natural perturbation on coral reef community
- ❖ Establish quantitative relationships between water optics and water quality for assessing coral health
- ❖ Gathering of historical and present data to use in a simulation model for predicting future ecosystem
- ❖ Training of students



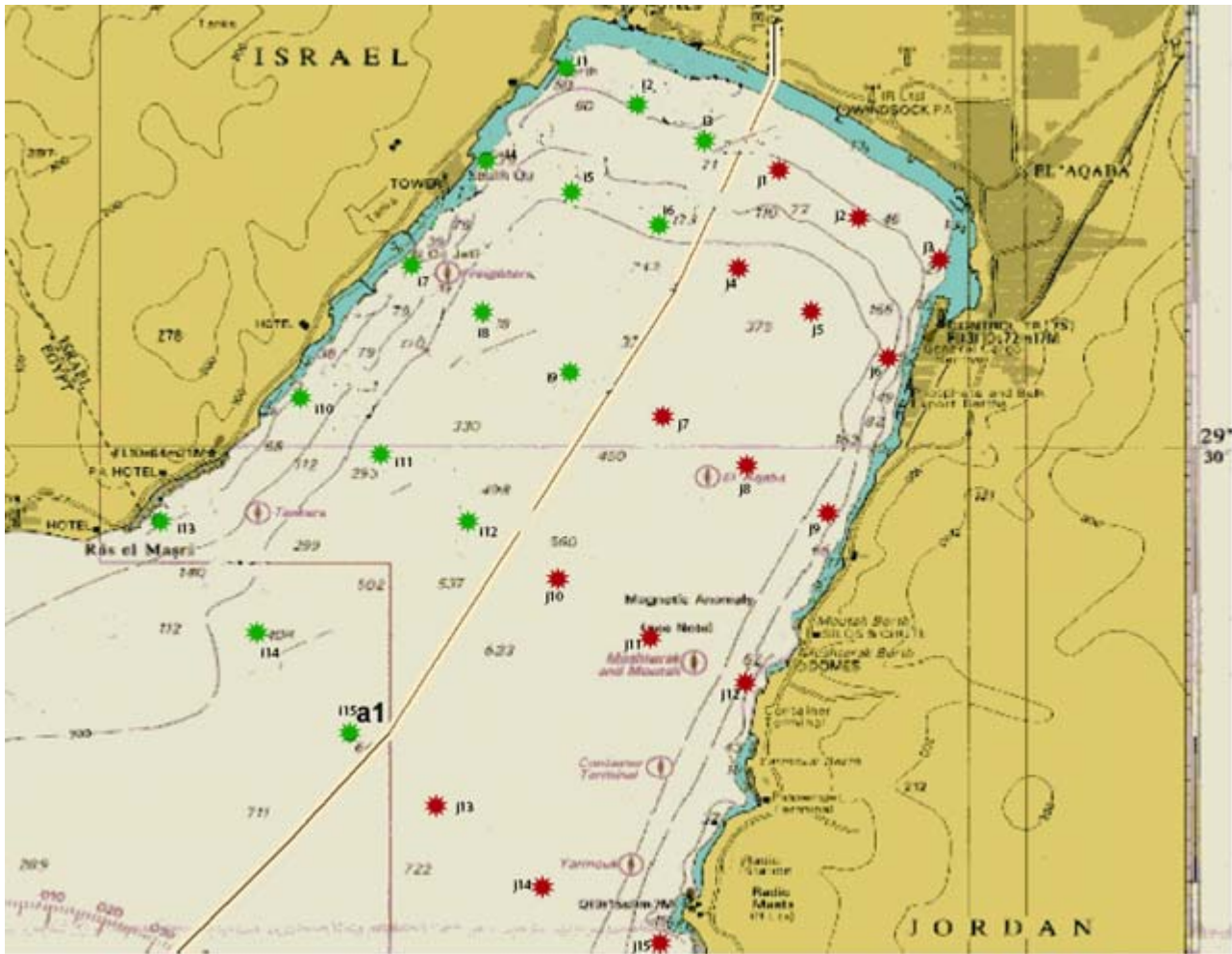
Allocation of Tasks

Israel- Bio-optics, phytoplankton, light field, primary production and mathematical model

Turkey- Pigment measurement (HPLC), phytoplankton identification and quantification

Jordan- Phytoplankton, Zooplankton, Nutrients, trace metals, and physical parameters





Map of Gulf of Aqaba Green stations in Israel side and red stations in Jordan side.



TÜBITAK
MAM

Inventory no	Property item	manufacturar	location
1	CTD	Seabird	Jordan
2	Underwater spectroradiometer	Biospherical	Israel
3	High Resolution Pre Configured Spectrometer +light source	Ocean Optics	Israel
4	Computer (not-book)	hp	Jordan
5	Photocopy machine		Jordan



AQAP - 160
2005 / 02



Overview of Progress

- ❖ 3 meeting was held in Aqaba and Turkey cruise details and responsibilities were discussed
- ❖ Monthly cruises conducted in the Gulf of Aqaba
- ❖ Six graduate students (3 from Israel, 2 from Jordan and 1 from Turkey) have started to work in this project.
- ❖ Five master studies were finalised under NATO SfP project work
- ❖ Fatih Şahin, visited to MSS and IUI, joined the cruise, and trained, Gal Dishon visited Sinop Univ.
- ❖ 6 progress reports were submitted to NATO



Overview of Progress

- ❖ The scientific results obtained from this project activities are published in various ways.
 - 2 poster and 2 presentation
 - 5 manuscript



Final Outcomes

- ❖ provide end users with a model allowing interpreting changes in bio-optical parameters
- ❖ establish a permanent Jordanian- Israeli task force focusing on the protection of Gulf of Aqaba Ecosystems,
- ❖ generate bilingual (arabic/hebrew) community outreach materials (Video, CDs, and educational publications) aimed at public awareness of the Gulf's unique life
- ❖ Capacity building (technological infrastructure and human resources) for the Jordan Institute



end-users

❖ **Aqaba Special Economic Zone Authority,**

❖ **Nature and Parks Authority, Israel**

❖ **Ministry of the Environment,**

❖ **Municipalities of Aqaba and Eilat**



THANK YOU

