بسم الله الرحمن الرحيم

شبكة المعلومـــــات الجامعية

التوثيق الالكتروني والميكروفيلم

شبكة المعلومات الجامعية

جامعة عين شمس

التوثيق الالكتروني والميكروفيلم

﴿ قـــســـم ﴾

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها
علي هذه الأفلام قد اعدت دون آية تغيرات

يجب أن

تحفظ هذه الأفلام بعيداً عن الغبار

في درجة حرارة من 15 – 20 مئوية ورطوبة نسبية من 20-40 %

To be kept away from dust in dry cool place of
15 – 25c and relative humidity 20-40 %

بعض الوثائق الأصلية تالفة

بالرسالة صفحات

لم ترد بالأصـــل

Impact of Climate and Human Activities on the Water Chemistry and Coastal Resources of the Western Coast of Gulf of Aqaba.

THESIS
Submitted in Fulfillment for the Degree of
Ph.D. in Marine Science

BY
GALILA EBRAHIM MOHAMED HABASHE
B.Sc. in Chemistry
M.Sc. in Chemistry

DEPARTMENT OF MARINE SCIENCE
FACULTY OF SCIENCE
SUEZ CANAL UNIVERSITY
ISMAILIA-EGYPT

1998

SUPERVISORS

-Professor **SALAH GHARIB EL-ETREBY** S. El-Etreby

Head of Marine Science Department

Faculty of Science-Suez Canal University.

-Professor **MOHAMED E. EL-RAEY**

Department of Environmental Studies

Institute of Graduate Studies and Research Raey

Alexandria University.

-Professor **HUSSEIN YOUNES** (متوفى)

Late President-National Authority for Remote Sensing

and Space Sciences,

Ministry of Scientific Research.

-Professor **RAMSIS R. ABD ALLA**

Head of Hydrobiology Department

Institute of Oceanography and Fisheries, Alexandria.

Approval Sheet

Name of Candidate : Galila Ebrahim Mohamed Habashy
Thesis Title:

" Impact of Climate and Human Activities on the Water Chemistry and Coastal Resources of the Western Coast of Gulf of Aqaba "

The Ph.D. thesis has been approved by:

Prof. Mohamed Adel Yehia
Chairman of National Authority
for Remote sensing and Space Sciences

Prof. Naiem Mahmod Dewedar
Oceanography Department
Faculty of Science - Alexandria University

Prof. Mohamed E. El-Raey
Dean of Institute of Graduate studies and Research
Alexandria University

Prof. Salah G. El-Etreby
Head of Marine Science Dept.
Faculty of Science - Suez Canal University

DEDICATION

TO MY
HUSBAND AND MY
DAUGHTERS

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INTRODUCTION

I- INTRODUCTION

I-1. Background

It has been thought that the Gulf of Suez is formed in the Miocene with the first stage of the formation of the Red Sea and that only the marginal faults of the Gulf of Aqaba is formed at that time. The faults that actually bind the modern Gulf and that lie inside the marginal faults are considered to have been formed only 4 to 5 millions years ago, with the second stage of tectonism The origin of sharms as canyons eroded during the lowered sea level during the Würm glaciation followed by Holocene flooding appears to be well established (Friedman, 1985).

The Red Sea resources contribute substantially to Egypt's economy, particularly in the areas of oil production, navigation (Suez Canal), tourism and fisheries. Figure(1) shows the Red Sea coastal areas and the location of the Gulf of Aqaba. The Red Sea is shared by Egypt, Sudan, Ethiopia, Republic of Yemen, Saudi Arabia, Jordan and Israel (Mancy, 1983). It is a semi-enclosed, narrow water body with no river inputs, which extends for approximately 1936 km from the city of Suez to Bab- El-Mandeb. The area of the Red Sea is about 437,970 km^2 , and its mean depth is 491 m (U.S.Navey,1952). The Gulf of Suez is relatively shallow, with a maximum depth of about 64 m; outside its mouth the bottom slopes sharply to a depth of a bout 1255 m. In contrast, the Gulf of Aqaba attains a depth of about 1355 m and separated from the deep waters of the Red Sea by an entrance much of which is considerably less than 100 m deep (Mancy, 1983).

The western coast of the Gulf of Aqaba is an important and unique coastal environment. It is characterized by its coral reefs which offer great