

ROPME
SEA KAPS



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**MEMAC'S REGIONAL
WORKSHOP ON OIL SPILL
TRAJECTORY MODELING**



BAHRAIN, 15-17 FEBRUARY 1998

OPENING OF THE MEETING



Mr. Khalid M. Fakhro
Director General of
Environmental Affairs
STATE OF BAHRAIN



H.E. Shaikh Khalid Bin Abdullah Al-Khalifa
Minister of Housing, Municipalities
and Environment
STATE OF BAHRAIN

MEMAC in cooperation with US National Oceanic & Atmospheric Administration (NOAA) organized the Workshop under the patronage of H.E. Shaikh Khalid Bin Abdullah Al-Khalifa, Minister of Housing, Municipalities and Environment, during the period 15-17 February 1998.

Mr. Khalid M. Fakhro, Director General of Environmental Affairs, opened the Meeting on behalf of H.E. Shaikh Khalid Bin Abdullah Al-Khalifa with a statement in which he highlighted the concern over the frequency and magnitude of oil spills in the Region and potential impacts on human health and marine ecology in addition to the economic loss. Thus, he added the need for consolidated efforts at the national and regional levels are required. He stated that experience has taught us that establishing a data base and accurate methods of computation are of vital importance in determining oil spill trajectories, quantification of spilled oil and in facilitating coordination of combating efforts at the national and regional levels. He further emphasized the need to utilize recent advances in information gathering, data analysis and communications.

In closing, Mr. Fakhro expressed his appreciation to ROPME/MEMAC for organizing workshops on capacity building such as this one with NOAA, which is the leader in the field of oil spill emergency preparedness and response.



Dr. William J. Lehr, Spill Response Group Leader, presented a statement on behalf of NOAA in which he expressed NOAA's pleasure to return to Bahrain to participate in this Workshop. He highlighted the importance of having the tools to model the trajectory and fate of oil spills in an area such as the ROPME Sea Area which has the world's largest oil production leading and transportation take place and still supports important fisheries resources, unique ecosystems and rare populations and species.

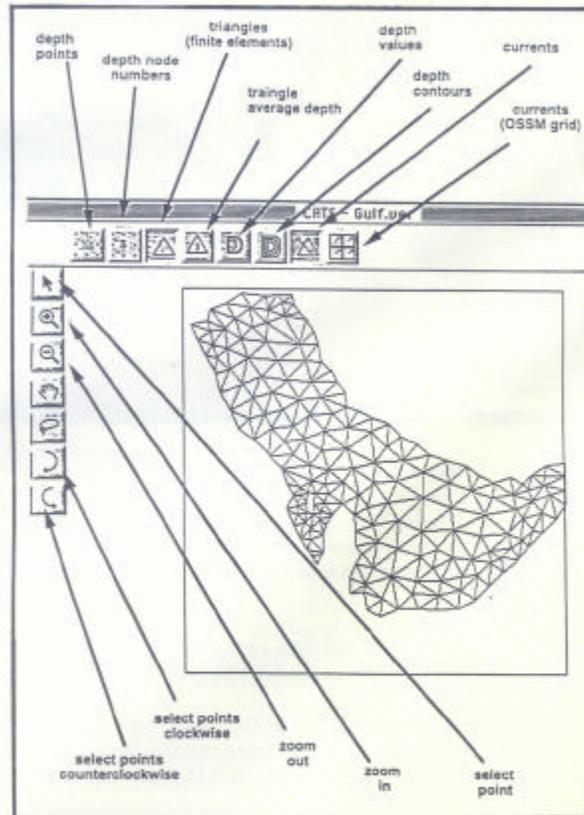
In closing, he called upon the fellow workshop participants to work hard to do their share protecting and preserving the environment of the ROPME Sea Area for future generations.

On behalf of the Executive Secretary of ROPME Dr. Abdul Rahman Al-Awadi, Capt. Abdul Munem Al-Janahi welcomed the participants. He noted that this Workshop, is being held in the year marking the 20th Anniversary of ROPME and MEMAC, as well as being the YEAR OF THE OCEAN.

He expressed appreciation to NOAA for their cooperation and support in the planning of the Workshop, by modifying and adapting their models to suit the needs of the ROPME Sea Area. He explained that the participants will be familiarized with oil spill trajectory modeling combined with the trajectory analysis, which is considered to be the most effective means to attain an early warning that helps to avoid the spread of oil pollution and reduce environmental damage.

He concluded by expressing appreciation to NOAA's lecturers, IOC for supporting the participation of colleagues from the Indian Ocean Region, Oil Companies, Port Authorities and other Institutions of the Region for their participation and to National Focal Point for their

representation at the Workshop. He reiterated on behalf of H.E. Dr. Abdul Rahman Al-Awadi, ROPME's thanks and appreciation to the Government of Bahrain, H.E. Shaikh Khalid Bin Abdulla Al-Khalifa, Minister of Housing Municipalities and Environment, Mr. Khalid Fakhro and the Staff of the Environment Department for their hospitality and cooperation.



The major topics addressed in the Workshop included:

1. The Development of a Quantitative Basis for Optimal Spill Response Planning.
2. Digital Distribution Standard for NOAA Trajectory Analysis Information.
3. Aerial Observations of Oil at Sea.
4. A User's Guide to the Trajectory Analysis Planner.
5. Use of Automated Data Inquiry for Oil Spills (ADIOS).
6. Current Analysis for Trajectory Studies (CATS)
7. Oil Spill Simulation Model (OSSUM).

IMPRESSIONS OF PARTICIPANTS

I am pleased to have the opportunity to participate in this important Workshop with so many experts and specialists in Oil Spill Trajectory Modeling. I would like to express my thanks to MEMAC for their efforts and hope that other such useful Workshops be organized to help us play our role in protecting the Earth ecosystems from pollution.

Mrs. Farideh ATABI
Research Associate
ISLAMIC REPUBLIC OF IRAN



I am pleased to express my thanks and appreciation to MEMAC for this very useful Workshop. I only hope that it could have been combined with a field exercise but that may be in the future.

Mr. Salim Abdulla AL-SUQRI
Coral Reef Expert
SULTANATE OF OMAN



This Workshop has been very useful for us all. I would like to thank the lecturers and MEMAC for their excellent efforts.

Capt. Saad Adam SHAFFI
Port Officer
Abu Dhabi National Oil Company (ADNOC)



I would like to express my deep appreciation to the lecturers and the Staff of MEMAC for organizing this valuable and successful Workshop. I would also like to thank the Government and people of Bahrain for their hospitality.

Mr. Payam ABDOLLAHI
Marine Scientist
Iranian National Center for Oceanography (INCO)
ISLAMIC REPUBLIC OF IRAN



DISCUSSIONS AND CONCLUSIONS

In general, the Workshop provided an excellent opportunity for interaction between the lecturers, advisors and the participants. The NOAA team kindly agreed to take into account the results of discussions and the observations made and further revise the model to render it more user-friendly to experts from the Region.



CLOSURE OF THE MEETING

In the closing Ceremony, participants requested that a cable of thanks to be sent to H.E. Shaikh Khalid Bin Abdulla Al-Khalifa, Minister of Housing, Municipalities & Environment and the Department of Environment of the State of Bahrain for their hospitality and cooperation.

LIST OF PARTICIPANTS

STATE OF BAHRAIN	Mr. Mirza Salman KHALAF Ministry of Housing, Municipalities & Environment Mr. Yousef Abdulla Yousuf ZAINAL Ministry of Finance & National Economy Directorate General of Ports Dr. Zahra Sadiq Al-ALAWI Ministry of Works & Agriculture Directorate of Fisheries Mrs. Ibtisam Abdulla KHALAF Ministry of Works & Agriculture Directorate of Fisheries
ISLAMIC REPUBLIC OF IRAN	Mr. Jahangir CHABOKSAVAR Department of the Environment Mrs. Farideh ATABI Islamic Azad University Department of the Environment Mr. Amir Hossein JAVID Islamic Azad University
STATE OF KUWAIT	Mr. Hamza Abbas A. KARAM Environment Public Authority Mr. Shaker M. MEDI Environment Public Authority
SULTANATE OF OMAN	Mr. Essa Bin Ali Bin Mubarak Bin Ali AL-RASHDI Ministry of Regional Municipalities & Environment Mr. Salim Abdulla AL-SUQRI Ministry of Regional Municipalities & Environment
STATE OF QATAR	Mr. Yousif Ibrahim AL-HAMAR Ministry of Municipal Affairs & Agriculture
KINGDOM OF SAUDI ARABIA	Mr. Hashim Haider AL-ZAWAD Meteorology & Environmental Protection Administration (MEPA) Mr. Yasser Sulman Dawi AL-OTAIBI Ministry of Defence & Aviation (MEPA)
UNITED ARAB EMIRATES	Major Mohammed A. AL-SAEEDI Ministry of Interior, Coast Guard Eng. Nasser AL-ANSARI Dubai Petroleum Co.
GAOCMAO	Capt. Salman GHULOUM Marine Operation Co-ordinator (QGPC) Mr. Khalid Ahmed AL-OBAIDL Asst. Environmental Eng.(QGPC) Mr. Peter William BOLTON A/Manager Environmental Affairs Dept.(QGPC)