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THE ARAB LEAGUE EDUCATIONAL, CULTURAL
AND SCIENTIFIC ORGANIZATION

AND

UNITED NATIONS ENVIRONMENT PROGRAMME

**Programme for Environmental Studies,
Red Sea and Gulf of Aden**

**Jeddah II Conference
12 - 18 January 1976**

Provisional Report

Cairo 1976



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THE ARAB LEAGUE, EDUCATIONAL
CULTURAL AND SCIENTIFIC
ORGANIZATION (ALECSO)

Programme for Environmental
Studies on the Red Sea
and the Gulf of Aden
(PERSGA)

REPORT OF
JEDDAH II CONFERENCE
KING ABDUL-AZIZ UNIVERSITY,
JEDDAH, SAUDI-ARABIA

12-18 January 1976

The Jeddah II Conference is the second in a series of meetings for marine science experts and official representatives of coastal states of the Red Sea and the Gulf of Aden. The first was held in Jeddah, Saudi-Arabia, from 25 November to 1 December, 1974, resulting in a number of recommendations, a plan of action for 1975, a plan of action for the two years 1976, 1977 and a plan of action for post 1977.

The plan of action for 1975, includes a number of procedures and preparatory studies for submission to a second meeting in Jeddah scheduled 12 to 18 January 1976. The Arab Educational, Cultural and Scientific Organization (ALECSO) was charged with the implementation of the plan of action for 1975.

The plan of action for 1975, was duly fulfilled through the cooperation and assistance from several international and national organization. The United Nations Environment Programme (UNEP), the International Union for the Conservation of Nature and Natural Resources (IUCN), the Marine Sciences Division of the UNESCO, and the Intergovernmental

Maritime Consultative Organization (IMCO), were among the foremost collaborators in the fulfillment of the plan of action for 1975.

The Jeddah II conference was hosted by King Abdul-Aziz University, Jeddah, and took place in its premises as scheduled from 12 to 18 January, 1976. The University authorities did not spare any efforts for a well organized and successful meeting.

List of Delegates

Hashemite Kingdom of Jordan

Dr. Adnan A. Alawi Dept. of Biology, Faculty of Science, University of Jordan, Amman.

Kingdom of Saudi Arabia

Dr. Mohamed O. Zubeir Director (Acting), King Abdul-Aziz University.

Dr. Nizar I. Tawfeeq Dean, Faculty of Science, King Abdul-Aziz University.

Dr. Hassan H. Hajrah Head of Biology Dept., King Abdul-Aziz University.

Dr. Soliman A. Mosly Saline Water Conversion Corporation, Jeddah.

Mr. Fouad A. Dagstani Director, Fisheries Research, Ministry of Agriculture and Water, Jeddah.

Mr. Essam Sheikh King Abdul-Aziz University.

Dr. Abdul-Bar A. Al-Gain Director, National Meteorological Centre, Jeddah.

Dr. Abdul-Majeed
Nematallah Legal Adviser, Ministry of Foreign Affairs, Jeddah.

Dr. Mohamed Sabri Director General, Environmental Health, Ministry of Municipalities and Rural Affairs, Al-Riad.

Dr. Mustafa A. Eldegheither Assistant Director, Atomic Energy Dept., Ministry of Petroleum & Mineral Resources, Jeddah.

Dr. Mohamed A. El-Tassan Head, Sanitary Physics Division Atomic Energy Dept., Mineral Resource Directorate, Jeddah.

Eng. Ahmed B. Habashy Director, Industrial Research and Development, Jeddah.

Dr. Ahmed A.M. Bayoumi Fisheries Expert, Agricultural Research Centre, Ministry of Agriculture and Water, Jeddah.

Dr. Anwar A. Aleem Head, Marine Sciences Dept., Faculty of Science, King Abdul-Aziz University.

Dr. Abdul-Rahman El-Kholy Professor, Marine Sciences, Faculty of Science, King Abdul-Aziz University.

Eng. Ahmed S. Issa Saline Water Conversion Corporation, Jeddah.

Eng. Youssef H. El-Hazmy A.D.G., Research and Development Centre, Saline Water Conversion Corporation, Jeddah.

Dr. Bassel H. El-Rady Assist. Prof., King Feisal University, El-Dammam.

Mr. Fahd N. El-Sobey King Feisal University, El-Dammam.

The Democratic Republic of the Sudan

Dr. Zaki Mustafa Legal Adviser to the President of the Republic.

Dr. El-Sammani A. Yacoub Secretary General, National Council for Research, Khartoum.

Dr. Feisal A. Taha Head, Dept. of International Comparative Law, Faculty of Law, University of Khartoum.

Mr. Dirar H. Nasr Research Assistant, National Council for Research, Khartoum.

The Democratic Republic of Somal

Mr. Muridi A. Salah Technical Director, Somali Fisheries Company, Ministry of Fisheries and Marine Transport, Muqdisho.

Mr. Abdul-Rahman S. Mohamed Legal Adviser, Somal Shipping Company, Ministry of Fisheries and Marine Transport, Muqdisho.

The Arab Republic of Egypt

Dr. Abul-Fetouh A. Mahmoud Director, Institute of Oceanography and Fisheries, Cairo.

Dr. Ali M. El-Maghrabi Head, Oceanography Dept., Faculty of Science, University of Alexandria.

Mr. Fawzi M. El-Ibrashi Director, Legal and Treaties Dept., Ministry of Foreign Affairs, Cairo.

The Yemen Arab Republic

Mr. Mohamed A. Ghaleb Dean, National Institute of Public Administration, Sanaa.

Mr. Ali M. Yahia Ministry of Foreign Affairs, Sanaa.

Mr. Saeed M. Qassim General Director of Projects, Central Planning Organization, Sanaa.

Eng. Mohamed M. Ibrahim Mineral and Petroleum Authority, Ministry of Economy.

The People's Democratic Republic of Yemen

Mr. Abdul-Wahab S. Mohamed Director of Fishing Dept., Public Corporation for Fishery Resources, Aden.

Mr. Salem A. Fares Director of Treaties and Legal Affairs Dept., Ministry of Foreign Affairs, Aden.

Ethiopia

Com. Negash Zelleke Naval Headquarters, Addis Ababa.

Ato. Mogus Woldamanuel Ministry of Foreign Affairs.

Dr. Fisseha H. Meskal Associate Prof., Dept. of Biology, University of Addis Ababa.

Dr. Kitachew Woldetsadik Ministry of Mines and Energy.

Ato. Tadesse Kessela Director of Fisheries Division, Ministry of Agriculture and Forestry.

The Maritime Transport Arab Academy, Alexandria

Dr. Mohamed A. Fawzi Head, Applied Physics
and Chemistry.

Mrs. Faiza M. Zahran Specialist, Dept. of Legal
Affairs and Conferences.

The League of Arab States (General Secretariat)

Dr. Ibrahim H. Mussa Dept. of Legal Affairs.

The Middle East Regional Isotopes Centre for Arab States,
Cairo :

Dr. Salah El-Deen E.Hashish Director

The Saudi Sudanese Agency for Exploitation of Red Sea
Resources :

Mr. Awn H. Al-Abdaly Assistant Secretary General.

The Arab Educational, Cultural and Scientific Organization
(ALECSO):

Dr. Mohamed A. El-Kassas A.D.G. (ALECSO)

Dr. Youssef B. Abu-Gideiri Head, Dept. of Zoology,
Faculty of Science,
University of Khartoum.

Mr. El-Sayed M. Rifat Coordinator for the Regional
Programme (ALECSO).

Mr. Mohamed I. Mohamed Division of Science (ALECSO)

Mr. Georgi A. Hanna Secretariat (ALECSO).

United Nations Environmental Programme (UNEP)

Mr. Ramsis Mikhail Senior Programme Officer,
UNEP, Nairobi, Kenya.

Dr. Stjepan Keckes Programme Coordinator, UNEP,
Geneve, Switzerland.

Mr. Abdul Aziz S. Al-Hamdan Regional Representative UNEP,
Kuwait.

Reports and Working Papers

Jeddah Two/1	Report on the Marine Science Capabilities in Jordan	(in Arabic)
Jeddah Two/2	" " in Saudi Arabia	(" ")
Jeddah Two/3	" " in Northern Yemen	(" ")
Jeddah Two/4	" " in Southern Yemen	(" ")
Jeddah Two/5	" " in The Somal	(" ")
Jeddah Two/6	" " in The Sudan	(" ")
Jeddah Two/7	" " in Egypt	(" ")
Jeddah Two/8	Oceanographic and Fisheries Investigations in the Red Sea and the Gulf of Aden	(in English)
Jeddah Two/9	A Regional Plan for the Integrated Global Ocean Stations System (IGOSS) in the Red Sea and the Gulf of Aden	(in English)
Jeddah Two/10	The Regional Marine Biological Reference Centre	(in English)
Jeddah Two/11	The Regional Oceanographic Data Centre	(in English)
Jeddah Two/12	Technical and economical criteria for the selection of an oceanographic research vessel of medium displacement.	(in Arabic)
Jeddah Two/13	Building requirements for a Regional Marine Science Institute.	(in Arabic)
Jeddah Two/14	Observation and Surveillance of Marine Pollution in the Red Sea and Gulf of Aden	(in Arabic)
Jeddah Two/15	Plan of Establishment and Development of National Capabilities in the fields of Marine Environmental Studies in the countries of the Red Sea and Gulf of Aden.	(in Arabic)

- Jeddah Two/16 Training Courses for Specialists in the Fields of Marine Environmental Studies (in Arabic)
- Jeddah Two/17 Education and Training in Marine Science on the University Level, and Short Term Training Courses in Marine environmental studies within the Red Sea & Gulf of Aden Regional Programme for Environmental Studies. (in Arabic)
- Jeddah Two/18 Programme for Establishing a Network of Marine Nature Reserves in the Red Sea Region (in English)
- Jeddah Two/19 Draft Convention on the Protection of the Marine Environment of the Red Sea Area. (in Arabic & English)
- Jeddah Two/20 Draft Convention on Conservation of the Red Sea Region. (in English)
- Jeddah Two/21 Report on the Plan of Action for 1975 prepared by the Coordinating Committee for the Red Sea & Gulf of Aden Regional Programme (in Arabic)
- Jeddah Two/22 The role of the Marine Science Institute at Jeddah in the Regional Programme (in Arabic)
- Jeddah Two/23 The Organizational Structure for the operation of the Red Sea & Gulf of Aden Regional Programme (in Arabic)
- Jeddah Two/24 The Impact of Production and Transportation of Energy Resources on the Red Sea Environment (UNEP). (in English)
- Jeddah Two/25 Proposal for a Regional Marine Science Institute (proposed by Dr. A. Latif). (in Arabic)
- Jeddah Two/26 On the Regional Programme for the Red Sea (by Dr. A. Latif) (in Arabic)
- Jeddah Two/27 A Bibliography of the Red Sea and Gulf of Aden.

- Jeddah Two/28 Programme for Establishing Radio Active Pollution Monitoring Stations in the Mediterranean and the Red Sea. (in Arabic)
- Jeddah Two/29 Role of the Meteorological Department in Protection of the Red Sea Environment. (Saudi-Arabian Delegation). (in Arabic)
- Jeddah Two/30 Meteorological Department Services to Marine activities. (Saudi-Arabian delegation). (in Arabic)
- Jeddah Two/31 The Institute of Meteorology and Arid Areas (Saudi-Arabia) (in Arabic)
- Jeddah Two/32 A Study of Marine Pollution around Jeddah (Saudi-Arabia) (in Arabic)
- Jeddah Two/33 The Saudi-Sudanese Agency for Exploitation of the Red Sea Resources. (in Arabic)
- Jeddah Two/34 Projects of the Saline Water Conversion Corporation. (Saudi-Arabia) (in Arabic)
- Jeddah Two/35 Report of the Maritime Transport Arab Academy (in Arabic)
- Jeddah Two/36 Report on the Marine Science Capabilities in Ethiopia. (Ethiopian delegation). (in English)
- Jeddah Two/37 Telecommunication Network of the World Meteorological Organization.. (Saudi-Arabian delegation) (in English)
- Jeddah Two/38 The Sub-regional Fisheries Training Centre for the Gulf States (FAO delegation) (in Arabic & English)
- Jeddah Two/39 Proposal for a Training Course sponsored jointly by the United Kingdom (Ministry of Overseas Development) as a contribution to the IOC Trust Fund and the UNESCO Division of Marine Science (UNESCO-IOC delegation) (in English)

- Jeddah Two/40 Addendum to working paper
Jeddah Two/11 (Sudanese
delegation). (in English)
- Jeddah Two/41 Report by the Arab Republic
of Yemen Delegation. (in Arabic)
- Jeddah Two/42 Education and Training in
Marine Science for the Red
Sea and the Gulf of Aden.
(Dr. S. Morcos). (in Arabic)
- Jeddah Two/43 Draft Convention for the
Protection of the Mediterranean
Environment and its Protocols. (in English)
- Jeddah Two/44 Convention for the Protection
of the Baltic Sea Environment. (in English)
- Jeddah Two/45 Draft International Convention
for the Protection and Conser-
vation of the Marine Environment.
(in Arabic)
- Jeddah Two/46 Draft International Convention
for the Regulation of Scientific
Research in the Seas. (in Arabic)

Conference Procedure

The Opening Ceremonial Session was held, Monday morning 12 January 1976, in the Auditorium, Faculty of Science, presided by H.E. Sheikh Hassan Abdullah Al-Sheikh, Minister of Higher Education and President of the Board of Universities and attended by state dignitaries, arab diplomatic representatives, university staff, members of delegations and representatives of regional and international organizations, press and public information representatives.

H.E. Sheikh H.A. Al-Sheikh opened the Conference by a word of welcome, confirming Saudi- Arabia's interest in scientific research in general, and support to the Programme for Environmental Studies on the Red Sea and the Gulf of Aden, in particular.

Prof. Dr. M.A. El-Kassas, A.D.G, ALECSO, expressed gratitude to H.R.H. King Khaled Ibn Abdul-Aziz and thanks to the Government of Saudi-Arabia, for their generous and unfailing support.

The Opening Session was concluded by Dr. Zaki Mustafa, head of the Sudanese delegation, who gave his speech on behalf of the delegations to the Conference.

The first working session followed. Officers of the conference, were elected as follows :

Chairman : Dr. Mohamed Omar Zubair^e (Saudi-Arabia)
Vice-Chairman : Dr. Zaki Mustafa (The Sudan)

Rapporteur : Dr. Hassan Hamza Hajrah (Saudi-Arabia)

The meeting, adopted a plan of procedure as mentioned below:

(a) to hold five plenary sessions to discuss

The Scientific Programme,
The Programme for Pollution Research and Monitoring,
Training and Education,
Organisational Subjects.

Steering Officers for subject sessions.

The Scientific Programme.

Chairman : Dr. A. Abdul-Latif Mahmoud. (Egypt)
Rapporteur : Dr. S. Morcos. (Unesco)

The Programme for Pollution Research and Monitoring.

Chairman : Dr. Adnan Alawy (Jordan)
Rapporteur : Dr. S.K. El-Wakeel. (IOC)

Training and Education.

Chairman : Dr. M.A. Ghaleb. (N. Yemen)
Rapporteur : Dr. S.E. El-Zarqa. (FAO)

Organizational Subjects.

Chairman : Dr. Alsamani-A. Yacoub. (The Sudan)
Rapporteur : Dr. S.K. El-Wakeel. (IOC)

(b) to form a legal committee under the chairmanship of Dr. Zaki Mustafa, with the following members:

Legal Members.

Dr. A. Nematallah (Saudi-Arabia)

Dr.F.A.Taha	(The Sudan)
Me. A.S. Mohamed	(The Somal)
Me.F.M.L.El-Ibrashi	(Egypt)
Me. A.M.Yahia	(N. Yemen)
Me. S.A.Fares	(S.Yemen)
Me. M.Woldamanuel	(Ethiopia)
Mrs. F.M.Zahran	(Maritime Transport Arab Academy Alexandria)
Dr. I.H Moussa	(League of Arab States)
<u>Scientific Counsellors to the Legal Committée.</u>	
Mr. A.S. Al-Hamdan	(UNEP)
Dr. Y.B.Abugideiri	(ALECSO)
Dr. J.Wonham	(IMCO)
Dr. R.M.Ali	(FAO)

The legal committee held five sessions to prepare the second draft of the Convention on the conservation of the Red Sea and the Gulf of Aden and its Protocols.

(c) to hold two plenary sessions of the Conference under the chairmanship of Dr. Zaki Mustafa, to read the report of the legal committee, to prepare final recommendations of the Conference and to sign the 1967 Jeddah Declaration.

(d) to hold the closing session on sunday, 18 January 1976.

The closing session was chaired by Dr.M.O.Zubair, who gave the word to heads of delegations .Dr M.A. El-Kassas,A.D.G, ALECSO, made the closing speech.

Work of the Conference
1- The Scientific Programme

The Scientific Programme was discussed in two sessions of the Conference based on the following working papers :

- Jeddah Two/8 Oceanographic and fisheries investigations in the Red Sea and Gulf of Aden.
- Jeddah Two/9 A regional plan for the Integrated Global Ocean Stations System (IGOSS).
- Jeddah Two/10 The Red Sea and Gulf of Aden marine biological reference centre.
- Jeddah Two/11 The Red Sea and Gulf of Aden oceanographic data centre.
- Jeddah Two/15 Plan for establishment and development of national capabilities in the fields of marine environmental studies in the countries of the Red Sea and Gulf of Aden.
- Jeddah Two/18 Programme for establishing a network of marine nature reserves in the Red Sea Region (proposed by the IUCN).
- Jeddah Two/26 On the regional programme for the Red Sea.

I. Summary of the Regional Scientific Programme

The conference adopted working paper No.8 as a basis for a programme of scientific studies and environmental monitoring for the regional machinery in the Red Sea and Gulf of Aden. The programme of studies covers the various branches of marine sciences as follows :

A. Physical Oceanography

- Survey of the hydrographic conditions, the water circulation patterns, and the dynamics of water masses in the Red Sea and the Gulf of Aden.
- Establishment of the regime of water-mass exchange between the Red Sea and the Gulf of Aden through Bab-el-Mandeb strait and between the Red Sea and the Mediterranean Sea through the Suez canal.
- Formation of the deep and intermediate waters in the Red Sea and the Gulf of Aden.
- The regimes of tides, tidal streams and Sea level variations.
- Establishment of a mathematical model for the surface and deep water circulation in the Red Sea and Gulf of Aden.

B. Chemical Oceanography

- Investigation of the oxygen minimum in the southern Red Sea.
- Study of the nutrient supply from the Gulf of Aden into the Red Sea through Bab-el-Mandeb and the general decrease in nutrients from south to north in the Red Sea.
- Study of organic matter in the sea water (both dissolved and particulate).
- Study of the concentration and composition of suspended matter in the sea water.

- Study of the precipitation and dissolution of calcium carbonates in the Sea particularly in the reef zones.
- Chemical investigation of the Red Sea Brines.
- Establishment of a model for the nutrient balance and its limiting factors under the seasonal variations of circulation.

C. Geological and Geophysical Investigations

- Geophysical survey of bottom and sub-bottom structure.
- Survey of sediments.
- Geomorphology of beaches.
- Effects of sea level changes.
- Construction of a geological model of the Red Sea and the Gulf of Aden concerning its origin, evolution and present geological and geophysical mechanisms, by integration of all data available.

D. Hydrobiological Studies

- Studies on the productivity and plankton in the Red Sea and the Gulf of Aden by measuring, through all seasons, the following parameters :

Estimation of the standing crop - The carbon 14 uptake - Chlorophyll and degradation products of chlorophyll - Zooplankton (wet and dry weights) - Amount of suspended matter (season) - Intensity of light penetrated - The different images of phosphorous, nitrogen and silicon.

- Species identification in large non-quantitative samples of plankton taken from both photic and below the photic zones.
- Temporal and spatial distribution of fish eggs and larvae.
- Examination of benthos in order to have a full picture of the food-chain. The hydrophytes, as sedentary producers, should be included .
- The above measurements of plankton and benthos should be taken in each of the four seasons covering the entire Red Sea and the Gulf of Aden.

E. Fisheries Investigations

- The fisheries investigations aim at exploration of living resources and management of their exploitation. Exploratory fishing cruises should be made to assess the economic potentials of those resources and to develop the adequate fishing technologies.
- Investigation of the high sea migratory fishes in the Red Sea and the Gulf of Aden e.g. the family scrombidae which favours the use of the long line from the surface to 200 metres below the surface.
- Investigation of the coral reef ecosystem and their fishes, as this group of fish represents an important ratio in the present market catch in the Red Sea region.

- Several processes of analyses should be carried out on the catch including :
species composition, length weight relationship, age, fecundity, ...etc.

- The presentation of the fish concentrations in the form of a complete atlas including detailed maps of the seasonal distribution of fish in the different areas of the fisheries grounds in the Red Sea and the Gulf of Aden.

- Experimentation in mariculture including shrimps, lobsters, oysters, pearl oysters, etc.

Field Tasks in the Regional Scientific Programme

Field studies on the regional level are carried out by an oceanographic research vessel for physical, chemical, geological, geophysical and biological investigations, while fisheries investigations are carried out by a special research vessel for fisheries and living resources.

A. Oceanographic Cruises

In the first phase, the oceanographic research vessel should carry out four seasonal cruises, along the axes of the Red Sea (including the Gulfs of Suez and Aqaba) and the Gulf of Aden, and on transections; occupying in each cruise about 150 hydrographic stations to measure the various parameters and to make the following collections and casts.

1. Hydrographic casts : to collect water samples by a set of Nansen bottles and to measure water temperature

at the standard levels. 0, 10, 20, 30, 50, 75, 100, 150, 200 meters below the surface, then every 100 meters down to nearbottom. For deep stations, a pair of reversing thermometers is used (one protected and the other unprotected).

Samples obtained are used for the determination of salinity, dissolved oxygen, and for other chemical analyses. Some of these determinations and analyses are carried out on board and the rest are carried out later at the laboratory.

2. Bathythermograph Observations

Bathythermograph observations are carried out to obtain a B.T. slide at each station to show temperature variations from the surface down to about 200 meters below surface.

The B.T. data should be coded in the standard IGOSS forms for transmission through the ship's radio to the nearest coastal radio station as a real-time BATHY report.

3. Current Measurements

At all stations, where it is possible for the ship to remain anchored, in coastal waters or in the open sea, current measurements should be carried out at different levels.

It is desirable to make diurnal observations at some selected stations, where samples are taken, observations and current measurements are made every one hour around the 24 hours.

4. Transparency

The transparency of sea water should be measured at every station.

5. Meteorological Observations

Air temperature, humidity, atmospheric pressure, wind speed and direction are taken throughout the cruise.

6. Geological Sampling

At some selected stations, where the depth and bottom nature permit, samples are taken by the usual grab and by other advanced techniques such as the piston corer. Samples should be of a quality enabling the study of bottom nature, sediments and the geological structure of the sub-bottom layers. Nearshore samples are also obtained for investigation. Special attention should be given to the hot brine areas in the Red Sea.

7. Hydrobiological Survey

Samples of plankton (zoo and phyto) are taken at some selected hydrographic stations for subsequent quantitative and qualitative analyses.

Deep-Sea bottom fauna would be obtained by grab and dredge in conjunction with the geological survey.

B. Fisheries Surveys

The following fishing operations are carried out in each of the four seasons.

- The use of light (with different wave lengths) to test its effect on the attraction of pelagic fish.
- The use of nets with different specifications in fishing operations.

- The use of long line for fishing down to 200 metres below surface.
- The use of different designs of traps in coral reef areas.
- The use of gill nets with 3 layers, trammel nets (drifting, fixed surface or bottom).

The following analyses of the catch are carried out : species composition, morphometric measurements, length-weight relationship, age, food and feeding, stomach index, nature of the ovaries and testes, fecundity.

II. Summary of the Scientific Programme for National Marine Research Stations

The Conference adopted working paper Jeddah Two/15 as a model programme for studies and field investigation that would be suitable for marine research stations, newly established within the regional programme.

The programme deals with baseline studies of physical, chemical, biological, geological oceanography and fisheries in coastal waters extending over the continental shelf.

The studies, in the first phase, are limited over a stretch of 50 kilometers along the coast centred around the marine research station. Observations and samples are taken along three sections perpendicular to the coastline and extending over the continental shelf.

During the first year, monthly cruises are made along the central section and seasonal cruises along the two side sections. In the next year, monthly cruises are made along all of the three sections.

Besides these periodic cruises, the marine research stations would record continuously or periodically other meteorological or seawater parameters.

Samples of the organisms and sediments should be well preserved with sufficient data for future studies when local facilities permit or for transmission to specialised laboratories.

The main research station would, further, assist the national universities in the fields of training and teaching.

- A. Physical Studies include determination of sea water temperature, salinity, transparency, tides and waves.
- B. Chemical Studies include taking samples of sea water from the surface and at the standard levels and carrying out analyses for Ph-number, oxygen concentration alkalinity and nutrients.
- C. Hydrobiological Studies covers the intertidal zone where macrophytes and macrofauna are collected during flood-tide, other creatures walking, burrowing or fixed are also collected. After preliminary sorting of collections, they are preserved properly and labelled for detailed and taxonomic studies. Seawater temperatures and salinities are determined during the sampling.

In the littoral zone, zoo-plankton and phyto-plankton are collected and preserved in duplicate. Fish larvae and eggs are collected on the surface and bottom, samples of bottom sediments and organisms are also taken to study the distribution and types of sediments.

In the first phase, studies on the coral reef ecosystem will be confined to the nearest coral reef system where

samples of the organisms and their population are taken and identified, the physical and chemical conditions prevailing ascertained and samples of zoo-plankton, phyto-plankton and bottom sediments collected. Diving techniques should be employed to observe & register the underwater phenomena.

D. Fisheries Investigations

In the first phase, these studies would be limited to a survey of the fishes in the area of investigation using local fishing methods for pelagic and bottom fisheries and in collaboration with local fishermen to collect information about their marketable catch.

Samples are preserved for subsequent taxonomic and biometric studies.

Biological studies on fish of economic value include: feeding; growth; fecundity; frequency distribution of lengths; weights; ages; male-female ratio.

Such studies would give indications to the nature and seasonality of fish migration in the area of investigation.

Studies include marketable crustacea and identification of oysters and marine algae of economic value.

Some suitable coastal localities may be selected for experimentation on mariculture.

E. Marine Nature Reserves

The national marine research station would take part in selecting some areas as marine nature reserves where various species and habitats are represented. These areas present a natural environment for scientific research on marine organisms and population.

F. Geological Investigations

It is sufficient, in the first phase, to carry out studies on coastal sands, sources of sediments and their movements, especially in the vicinity of ports and mariculture establishments.

The nature and distribution of bottom sediments in the area of investigation should be ascertained.

Samples should be large enough for future chemical investigations, investigations for clay minerals and micro-organisms.

These investigations and studies are important for the preparation of maps showing the distribution of sediments and other parameters such as minerals, carbonates and organic matter.

All samples obtained by a marine research station should be kept in duplicate with all necessary information so that they can be utilised for taxonomic research carried out in collaboration with the Marine Biological Reference Centre.

The marine research station should, also, assimilate and retain all data on the recommended forms for future delivery to the Oceanographic Data Centre.

III. The Scientific Machinery

The scientific machinery of the Programme for Environmental Studies on the Red Sea and the Gulf of Aden includes : research institutes and stations, belonging to the states participating in the Programme and other centres of regional character which will be set up and run by a regional executive organ.

A. The Regional Scientific Machinery

In accordance with the recommendations of working groups for the plan of action 1975 and the recommendations of Jeddah II Conference, the Regional Scientific Machinery, includes :

- i. A Regional Institute of Marine Environmental Studies.
- ii. An Oceanographic Research Vessel.
- iii. A Fisheries Research Vessel.
- iv. A Regional Marine Biological Reference Centre.
- v. A Regional Oceanographic Data Centre.
- vi. A regional Marine Pollution Monitoring Network.

B. The National Scientific Machinery

Reports of fact-finding missions, visiting the states of the region during 1975, recommends the setting up of a number of national marine research stations, and the development of the existing ones. Other nonspecialised bodies would be urged to carry out some of the tasks in the regional scientific effort according to an appropriate system of coordination.

The situation in the countries of the region shows that the following bodies may take part in the Regional Programme.

JORDAN

1. The Marine Science Station (Aqaba)

This is a newly established station receiving attention and support from the Jordanian Authorities.

2. The Science Departments, University of Amman.
3. The Fishery Department , Ministry of Agriculture.

SAUDI ARABIA

1. The Marine Science Institute, King Abdul Aziz University, Jeddah.
This institute is, now, under establishment and when completed in the next few years, will possess material means enabling it to assume a major role in the Regional Programme, particularly, through its oceanographic research vessel.
2. The Agricultural Research Centre (Department of fishery resources), Jeddah.
The Centre is responsible, at present, for a fisheries research programme in the Red Sea and the Arabian Gulf. Facilities available at this Centre makes its participation, in the Regional Programme, essential.
3. The Marine Science Department and other departments, Faculty of Science, King Abdul-Aziz University, Jeddah.
4. The Institute of Applied Geology, King Abdul-Aziz University, Jeddah.
5. The Institute of Meteorology and Arid Areas, King Abdul-Aziz University.
6. The Department of Meteorology, Ministry of Defence and Aviation.
7. The Department of Mineral Resources, Ministry of Oil and Mineral Resources.

NORTHERN YEMEN

1. The Marine Science Station, Hudaida.
This Station is planned for establishment in the first phase of the Regional Programme.
2. The Faculty of Science, University of Sana.

3. The Meteorological Department.
4. The Department of Fisheries, Ministry of Agriculture.
5. The Department of Mineral and Oil Resources.
6. The Central Planning Organization.
7. The Ministry of Public Health (Programme for prevention of pollution).

SOUTHERN YEMEN

1. The Marine Science Station, Aden.
This station is planned for establishment in the first phase of the Regional Programme.
2. The General Organisation for Fisheries.
The Organisation runs fishing vessels and fishery research vessels which can be utilized for the programme.
3. The Institute for Training and Fisheries Research Centre, Aden.
Laboratory, training and educational facilities available at the institute can serve the Regional Programme.
4. The Meteorological Office, Department of Civil Aviation, Aden.
5. The Geological Survey Department, General Organization of Oil and Minerals, Aden.
6. The Port Authority of Yemen.

THE SOMAL

1. The Marine Science Station, Berbera.
This station is planned for establishment in the first phase of the Regional Programme.
2. The Ministry of Fisheries and Marine Transport,
(Department of Fisheries & Port Authority).
3. The Maritime and Fisheries Institute, Muqdisho.

4. The Meteorological Department.
5. The Geological Survey Department.

ETHIOPIA

1. The Marine Science Station, Massawa.
2. The Marine Science Station, Assab.
Both stations are non-existent, but, the Ethiopian authorities plan to establish them in the near future and in cooperation with the Regional Programme.
3. The Science Departments, Universities of Asmara and Addis Ababa.
4. The Department of Fisheries, Ministry of Agriculture and Forestry.
5. The Wildlife Conservation Organization, Ministry of Agriculture and Forestry.
6. The Ministry of Mines, Water Resources and Energy.
7. The Meteorological Department.
8. The Department of Marine.

THE SUDAN

1. The Institute of Oceanography, Port-Sudan.
The institute carries out studies in the area of Portsudan. It requires some development to assume a principal role in the Regional Programme.
2. The Marine Laboratory, Suakin.
This laboratory is an outpost for the Faculty of Science, University of Khartoum.
3. The Department of Zoology and other departments, Faculty of Science, University of Khartoum.
4. The Fisheries Research Department, Agricultural Research Organization.

5. The Meteorological Department, Ministry of Defence.
6. The Geological Department, Ministry of Industry.

EGYPT

1. The Institute of Oceanography & Fisheries, Suez.
The buildings of this institute suffered severe damages due to hostilities of 1967 war bringing its operation to a standstill. Reconstructions are in progress; and when completed, the institute will assume a major role in the Regional Programme.
2. The Marine Biological Station, Ghardaqa.
The Ghardaqa station has its name engraved in the history of marine research in the Red Sea. Due to recent wars in the area, the station was put out of operation for some years, but it is regaining its active role rather quickly. Support and assistance to the Ghardaqa station would be of value to the Regional Programme.
3. Department of Oceanography, University of Alexandria, and other Departments in Egyptian Universities.
4. The Meteorological Department.
5. The General Organization of Geological Surveying and Mining.
6. The Suez Canal Organization.

C. Contribution of National Scientific Bodies (Not specialised in marine sciences)

1. Meteorological Departments

These bodies would participate by feeding the National Marine Research Stations and Institutes with meteorological data measured at various meteorological stations. The meteorological parameters are used in studies on air-sea interaction. Furthermore, the radio communication systems belonging to meteorological departments

may serve to transmit and exchange oceanographic data and reports on marine pollution watch.

2. Geological Survey Departments

The laboratories available at these departments may cooperate in geological investigation.⁵ Field survey teams could assist in monitoring oil pollution on the beaches.

3. Port Authorities may collaborate by establishing and maintaining network of observation stations for tides and waves in ports and harbours.

Work of the Conference

2. Programme for Pollution Research & Monitoring

The Programme for Pollution ^Rresearch and Monitoring was discussed in one session with the following working papers submitted for the discussions :

- Jeddah Two/14 Programme for Observation & Surveillance of Marine Pollution in the Red Sea & the Gulf of Aden.
- Jeddah Two/28 Programme for Establishing Radioactive Pollution Monitoring ^Sstations in the Mediterranean and the Red Sea.

1. Summary of the Programme for Pollution Research & Monitoring (Working Paper Jeddah Two/14) :

The sources of Pollution in the Red Sea and the Gulf of Aden originate from.

- a) Domestic sewage which is limited in the area due to lack of intensive urbanization along the coast.
- b) Industrial wastes which is also very limited.
- c) The effects of mechanical operations involved in dredging harbours and waterways.
- d) Contamination by oil caused by pumping oil to or from tankers, or through pipelines, or by the discharge of cooling water or ballast water, natural seepage of oil from refineries and reservoirs, seepage of oil from industrial plants on the coast, oil exploration and drilling operations at sea, the evaporation of some hydrocarbon compounds in reservoirs or refineries and combustion products transported by air.

The impact of these factors vary from place to another. However oil pollution may be considered as the most probable and expected source in the Red Sea and the Gulf of Aden.

There are some other sources of pollution which may develop in the region, if proper measures are not taken beforehand, such as :

- a) Mining operations in the Sea bed.
- b) Radio active waste from atomic-desalination plants or atomic-powered ships.
- c) Pollution caused by scouring of pipes in desalination plants.
- d) Pollution caused by painting ships hulls in harbours.

Again, oil may be considered the main probable source of pollution at present in the region, although the Red Sea and the Gulf of Aden may be considered, at present to be one of the cleanest regions compared with other seas. This situation will not last forever, due to the continuous urban and industrial development and due to the increase in oil shipments. Base studies to monitor pollution should start in order to be able to formulate levels for detection of any environmental changes and to monitor any degradation in the living resources. Pollution studies on the Red Sea and the Gulf of Aden should be correlated to studies on the Indian Ocean and the Mediterranean Sea. Appropriate measures, to safeguard the marine environment, should be taken when planning for industrialization or urbanization through local or regional legislation and through measures for surveillance and abatement.

The Programme for Pollution Research and Monitoring forwards two plans of action ; a long term plan and a short term plan.

The Long Term Plan

This plan aims at monitoring of pollutants and evaluating their effects on the marine organisms and their ecosystems according to the guidelines set in the recommendation of the Mediterranean states (Barcelona 1974), where seven pilot projects proposed by Monaco workshop (September 1974), were adopted. These projects fall in two classes :

A. Pilot projects for continuous monitoring

1. Baseline studies and monitoring of oil and hydrocarbons in sea water.
2. Baseline studies and monitoring of metals, particularly mercury, in marine organisms.
3. Baseline studies and monitoring of DDT & PCB in marine organisms.

B. Coordinated research programmes

4. Effects of Pollutants on the marine organisms and their populations.
5. Effects of pollutants on marine communities and ecosystems.
6. Coastal transport of pollution.
7. Coastal water quality control.

Implementation of such programme would require the establishment of a network of stations for research and monitoring and the convening of seminars and workshops of scientific experts to elaborate the necessary detailed document and the operational plans.

The Short Term Plan

The plan consists of baseline studies on oil pollution as follows :

1. Baseline studies for continuous monitoring of oil in sea water.
2. Effects of oil on marine organisms and their ecosystems.

In the first phase, the staff of marine research stations set up according to the recommendations of the regional scientific programme would carry out work on marine pollution.

Baseline Studies for monitoring of oil in sea water

Baseline line data on particulate, dispersed and dissolved petroleum hydrocarbons, floating tar balls and beached oil are necessary.

Coastal states of the Red Sea and the Gulf of Aden would determine areas most susceptible for oil pollution, particularly, coastal waters, beaches and important harbours. Local vessels such as those belonging to the Coast Guard or Marine Waterway Authorities may carry out the observations and collect samples, whenever possible.

Studies and monitoring of pollution in offshore waters may be carried out by vessels and units belonging to the regional programme.

Observation of oil and tar balls floating in the sea water may be carried out by the marine research stations and fishing boats working in the area. At the same time these units would collect samples of sea water for laboratory analyses to monitor the contained pollutants. Tar balls on the beaches can be sampled by field teams belonging to the marine research stations or belonging to geological survey teams participating in the regional programme.

Effects of oil pollution on marine organisms and their ecosystems

It is suggested to carry out baseline studies of semi-quantitative nature on marine organisms in some intertidal

zones isolated from the effects of pollution. The same studies should be made simultaneously in an infected zone to assess the amount of change due to contamination.

Responsible Centre for Pollution Monitoring

One of the marine science institutes in the region Gulf of Aden where facilities are provided would be selected and supported with special equipment to receive samples and field observations made by the national marine research stations. The responsible centre would carry out subsequent studies in the field of pollution and would act as a training centre.

Training in the field of marine pollution

It is suggested that provision be made for on-the-job training at some advanced laboratories for a number of persons from the region. The training would take from 3 to 6 months. Fellowships offered by international organizations can be utilised. On the other hand special training courses ~~o~~ may be organized in the region itself.

2. Monitoring of Radioactive Pollution (Working Paper Jeddah Two/28)

This programme proposes a radioactive survey in the Red Sea and Gulf of Aden covering the sea water, the atmosphere, rain, soil and the food chain. It also includes research on the dynamics and metabolism of radioactive substances in some plants, crops and in some marine organisms. The programme aims at obtaining regular information on the radio active levels around the year in order to safeguard the coastal regions from the dangers of radio active contamination.

The plan of action includes the following :

- a) Training courses at the Regional Middle East Isotopes Centre for Arab States, Cairo.
- b) Equipment of the existing or proposed marine research stations to act as main stations for monitoring radio active contamination.
- c) Establishing two sub-stations in each country of ^{the} region, preferably, at some selected meteorological stations or at some scientific institutes to take samples and record data for periodic transmission to the main stations.
- d) The Regional Middle East Isotopes Center for Arab States would receive all data and samples from the main stations.

3. Marine Nature Reserves (Working Paper Jeddah Two/18)

The Programme for Establishing a Network of Marine Nature Reserve Areas in the Red Sea Region is proposed by the International Union for the Conservation of Nature and Natural Resources (IUCN).

The Paper was discussed in the sessions given to the scientific programme.

The programme concerned aims at assisting states of the region in selecting and establishing a network of marine nature and coastal reserve areas for various purposes of nature conservation, tourism, education and scientific research.

The Programme includes a series of 5 field surveys :

On the eastern side of the Red Sea north of Jeddah,
On the eastern side of the Red Sea south of Jeddah,
On the western side of the Red Sea north of Jeddah,
On the western side of the Red Sea south of Jeddah,
In the Gulf of Aden.

Each survey will take from 3 to 6 months and may be accomplished by a small team headed by an expert and assisted by a number of experts from the region. Small boats (about 15 metres long) available in the area are sufficient for field work.

Work of the Conference

3. Training and Education

Discussions on training and education took one session where two papers dealing with the subject were reviewed.

Jeddah Two/16 Training Courses for specialists in the fields of marine environmental studies.

Jeddah Two/17 Education and training in marine science on the university level and short term training courses in marine environmental Studies.

Dr. Selim Morcos, was eventually, requested by the Conference to prepare a third paper based on the ideas and proposals of the abovementioned working papers. The ensuing paper was entitled

Jeddah Two/42 Education and training in marine science for the Red Sea & the Gulf of Aden.

Summary of the Programme for Education and Training

A- Post Graduate Qualification

The programme recommends

1. to send a number (not less than 10) of B.Sc. graduates in science (or equivalent degrees) to join the department of oceanography, faculty of science, Alexandria for one academic year to obtain the diploma in marine science (biological) according to the adopted syllabus with extraperiod of field training at the Ghardaqa Marine Biological Station.

2. to organize a special training course on the ecology of the Red Sea in cooperation with the UNESCO and the Institute of Oceanography and Fisheries (Egypt) for a number of junior specialists working in universities, research institutes, fisheries, environmental protection organizations..etc.
3. to organize short training courses on marine environmental studies covering physical, chemical, geological biological and fisheries specialisations. Each course may take from 3 to 4 months.

B- Training of Technical Assistants

Technical assistant employed by a marine science institute fall into two groups according to nature of work:

1. Laboratory assistants whose work does not differ from the corresponding assistants in laboratories of physics, chemistry, geology or biology.
2. Assistants working in the field to collect samples of sea water or marine organisms or involved in fishing operations or operating ship-borne equipment or doing routine chemical analyses.

Marine research stations would obtain their technical assistants either from the available ordinary laboratory assistants with sufficient experience, or from secondary school graduates and giving them adequate on-the-job training.

As for assistants required for work on board research vessels, the paper recommends special training courses on the following subjects:

Fisheries.

Operation and maintenance of oceanographic equipment,

Hydrobiology

Chemical and physical analyses.

Data collection and treatment.

Each training course takes from 6 to 9 months and may provide for 30 to 40 trainees at a time.

The paper also recommends to arrange for a few weeks training on board research vessels.

C. Training of supporting crew

This includes skippers, navigators, marine engineers, mechanics, electricians, wireless operators, fishermen,....etc.

These grades can be obtained direct from the manpower available in the arab states. No provision should be made to arrange special training for such specialisations as they are apt to discontinue their work in research vessels at the first better chance.

However, some specialised organization in the arab world might assist in providing the supporting crew. The Maritime Transport Arab Academy (Alexandria), the Institute for Training and Fisheries Research Centre (Aden) and the Fisheries Training Institute Kuwait and others may be of use in this respect.

Work of the Conference

4. Organizational Subjects

These subjects were discussed in one session using working paper.

Jeddah Two/23 The Organizational Structure for the operation of the Red Sea and Gulf of Aden Programme

The discussion of the subject was resumed in the two plenary sessions convened with the legal committee, due to the fact that the Draft Convention on the Protection of the Marine Environment prepared by the legal committee, contains some articles recommending the setting up of a permanent commission to supervise and follow up the implementation of the convention and its protocols. The deliberations of the plenary sessions resulted in the preparation of the following documents:

A third protocol dealing with the Programme for Environmental Studies on Monitoring the Red Sea and the Gulf of Aden (Jeddah II resolutions doc.No.2).

The Rules of Establishment of the Programme for Environmental Studies on the Red Sea and the Gulf of Aden, (Jeddah II resolutions doc. No.3).

Organizational Structure of the Regional Programme

The organizational structure of the Regional Programme consists of the following bodies:

1. The Regional Scientific Machinery

This includes:

- a) A Regional Institute, Of Marine Environmental Studies.
- b) An Oceanographic Research Vessel,
- c) A Fisheries Research Vessel,
- d) A Marine Biological Reference Centre,
- e) An Oceanographic Data Centre,
- f) A Network of Marine Pollution Monitoring Stations.

2. The National Scientific Machinery

This consists of the network of marine science research stations or institutes, national universities and other national scientific organizations as outlined in the chapter dealing with the Scientific Programme.

3. Planning, Coordination and Follow-up.

It is proposed to set up a Board for the programme consisting of representatives of all the states of the Red Sea and the Gulf of Aden.

The Programme functions through :

- a) An Executive Organ responsible for implementing the resolutions of the Board and assuming all secretariat duties,
- b) A coordinating Committee steered by a full time Regional Coordinator,
- c) A Scientific Advisory Committee with the Regional Coordinator assuming the responsibilities of its secretariat.
- d) A Permanent Commission for the Convention with an independent secretariat.

4. The Programme Fund

A special fund for the Regional Programme shall be raised from the following resources

- a) Budgetary resources of ALECSO.
- b) Donations and assistance from special Arab Funds and Arab Organizations.
- c) Contributions, donations and special loans from the Red Sea & Gulf of Aden countries.
- d) Donations and assistance from the United Nations Environment Programme (UNEP) and the United Nations Development Programme (UNDP).
- e) Donations and assistance from the UNESCO and the FAO.
- f) Donations and assistance from other United Nations Organizations and related Bodies.
- g) Donations and assistance given by other countries or by research funding bodies.
- h) Resources of bilateral and multilateral agreements.
- i) Returns derived from the Programme activities or from the investment of the Programme Fund.

The Programme Fund shall be held intrust by the Board.

Work of the Conference
5. Draft Convention on the
Protection of the Red Sea & the Gulf of Aden
Environment.

The legal committee set up by the Conference had in hand the following working papers to consider for the preparation of the second draft of a Convention on the Protection of the Red Sea & the Gulf of Aden Environment.

- | | |
|---------------|---|
| Jeddah Two/19 | Draft Convention on the Protection of the Marine Environment of the Red Sea Area. |
| Jeddah Two/20 | Draft Convention on Conservation of the Red Sea Region. |
| Jeddah Two/43 | Draft Convention for the Protection of the Mediterranean Environment and its Protocols. |
| Jeddah Two/44 | Convention for the Protection of the Baltic Sea Environment. |
| Jeddah Two/45 | Draft International Convention for the Protection and Conservation of the Marine Environment. |
| Jeddah Two/46 | Draft Convention for the Regulation of Scientific Research in the Seas. |

The legal committee adopted working paper Jeddah Two/19 as the basic document for its work and introduced to this paper a number of amendments and additions. The committee prepared, in addition, the following protocols:

1. Draft Protocol on the settlement of disputes.
2. Draft Protocol for the control of dumping of wastes and other matter from ships and aircraft.

3. Draft Protocol on the setting up of the Programme for Environmental Studies on the Red Sea and the Gulf of Aden.

The text of the draft convention consists of twenty articles dealing with:

Definitions - Basic obligations - Measures for prevention and Abatement of the different types of pollution - Responsibility and liability - Pollution emergencies - Monitoring - Reports - The Commission - Composition of the Council and its sessions - General Secretariat - Procedural, Administrative and Financial Rules of the Commission - Claims regarding limits of maritime jurisdiction - Other Conventions and Treaties on the protection of marine environment - Settlement of disputes - Participation in the Convention and Protocols - Entry into Force - Reservations - Withdrawal - Amendments to the Convention and Protocols - Duties of the Depository Government.

Plan of Action for 1976 and 1977

I. Establishment and development of the national scientific machinery

The plan of action aims at the establishment and development of a network of marine sciences research stations and institutes in the Red Sea and Gulf of Aden region according to the following design :

a. Establishment of new marine sciences research station

Station for marine sciences research and pollution monitoring would be established at :

HUDEIDA	(N. Yemen)
ADEN	(S. Yemen)
BERBERA	(Somalia)
MASSAWA	(Ethiopia)
ASSAB	(Ethiopia)

b. Development of existing marine sciences research stations

These include :

The Marine Biological Research Station at GHARDAGA (Egypt).

The Marine Biological Research Station at AQABA (Jordan).

The Marine Biological Research Station at SUAKIN (Sudan).

The Division of Fisheries Research at JEDDAH (Saudi-Arabia).

c. Development of existing marine sciences research institutes

The Institute of Oceanography and Fisheries at SUEZ (Egypt).

The Institute of Oceanography at PORTSUDAN (Sudan).

The Institute of Oceanography and Fisheries at JEDDAH (Saudi-Arabia).

Plans for the establishment and development of the national machinery requires the elaboration of detailed implementation plans and feasibility studies for each station or institute. Such plans would be of a flexible character that would allow extending the period of establishment and development beyond the year 1977 according to financial and manpower resources available.

II. Detailed studies for the establishment of the regional scientific machinery

During the two years 1976 and 1977, detailed implementation plans and feasibility studies for the establishment of the regional scientific machinery, would be elaborated. The scientific regional machinery includes the following components :

1. A regional institute for environmental studies.
2. An oceanographic research vessel, a fisheries research vessel and their base station.
3. A regional marine biological reference centre.
4. A regional oceanographic data and information centre.

The implementation plans and feasibility studies should cover all details concerning qualified personnel, necessary constructions, apparatus, laboratory and field equipment; so that the establishment of these units can begin during 1978

according to the available resources and to the level of development of the national scientific machinery.

III. Planning, coordination, follow-up and financing

1. During 1976 the Directing Board for the Programme for Environmental Studies on the Red Sea and the Gulf of Aden (PERSGA) would be established.

2. During 1977 the Advisory Scientific Committee for the Programme should be formed; the Coordination Committee would be re-constituted.

3. During 1976 the Programme Fund would be established starting with contributions from the ALECSO (budget allocations and resources of agreements made with UNEP and other funding resources), contributions of international or regional organizations and bodies, and contributions from the countries of the programme.

IV. Training courses for personnel required for the national scientific machinery

1. The Academic year 1976-1977, 16 fellowships (2 for each country of the Programme) would be available for the Diploma of higher studies in marine sciences (biological) - Department of Marine Sciences, University of Alexandria.

2. During the Academic year 1977-1978, 8 fellowships (one for each country of the programme) for the Diploma of higher studies in marine sciences (chemical) Department of marine sciences, University of Alexandria.

3. In 1976, a short training course would be held jointly with the UNESCO and the Institute of Oceanography and Fisheries (Egypt) for 16 B.Sc. graduates (2 for each country of the programme). The course takes from 3 to 4 months.

4. In 1977 a training course would be held jointly with the Institute of Oceanography and Fisheries (Egypt) for 16 technical assistants (2 for each country). The course takes from 6 to 9 months.

V. Symposium on development of marine science teaching at the university level

During 1976, a symposium would be arranged by the Association of Arab Universities for arab university academic staff concerned with marine sciences to exchange experience and promote marine science education. ALECSO will assist by providing the arab universities interested in teaching marine sciences, with the special study prepared by arab experts for Jeddah II Conference (+ working paper 17), with the studies on marine science teaching at the university level prepared by the UNESCO and with the recommendations of the regional TEMA meeting in Cairo 4-8 January 1976.

VI. Follow-up of the convention on the protection of the Red Sea and Gulf of Aden environment

1. During the two years 1976 and 1977, ALECSO will assist the General Secretariat of the League of Arab countries in following-up ratification and accession to the convention on the protection of the Red Sea and Gulf of Aden environment.

2. During the two years 1976 and 1977, ALECSO jointly with the Maritime Transport Arab Academy, Alexandria, will carry out a review of the legislations and regulations on combating marine pollution and protection of the marine environment and would assist countries of the region in drawing up the outlines of such legislations and regulations.

VII. During the two years 1976 and 1977, ALECSO will take necessary steps towards preparations for a third meeting in Jeddah during 1978 inviting countries of the region, international or regional organizations, and scientific bodies concerned with the state of the environment; for consideration of the plan of action 1976 and 1977.

Jeddah II Resolution Documents

- Doc. (1) Recommendations of the Conference
 The Scientific Programme.
 Programme for Pollution Research and
 Monitoring.

 Training and Education.
 Organizational Subjects.
- Doc. (2) Draft Convention on the Protection of
 the Marine Environment of the Red Sea
 and the Gulf of Aden and its Protocols.
- Doc. (3) Rules of Establishment of the Programme
 for Environmental Studies on the Red Sea
 and the Gulf of Aden.
- Doc. (4) 1976 Jeddah Declaration.

Jeddah II Resolutions, Doc.(1)

Recommendations of the Conference

I. The Scientific Programme

1. The Conference adopts the outlines of the regional scientific programme for the Red Sea and the Gulf of Aden (working paper Jeddah Two/ 8 : Oceanographic and Fisheries Investigations in the Red Sea and the Gulf of Aden); and recommends that ALECSO takes the necessary steps to prepare operational plans for the Programme.

2. The Conference recommends that member states give priority to develop their national capabilities which may contribute to the programme; when entering into agreements for technical, scientific or technological assistance related to the marine environment or marine resources.

3. The Conference urges International Organizations, Regional Organizations and research or development programmes, to assist this Programme.

4. The Conference urges :

a) the special Arab Funds to provide financial assistance and support to the Programme Fund.

b) the Executive Director of the UNEP to provide financial assistance and support from the UNEP Special Fund and other resources available at UNEP.

c) the Deputy Director General and the Near East Regional Representative of the FAO to make arrangements for their contribution to the Programme from financial resources available to them.

5. The Conference requests that Programme Executive Body undertakes to further exchange of information with

other similar programmes sponsored by United Nations organizations and regional organizations working in the area, in pursuit of consolidating activities and for avoidance of repetition of efforts.

II. Programme for Pollution Research and Monitoring

1. The Conference recommends the establishment of marine nature reserves, especially those related to fishery resources as breeding grounds, nursery grounds and migration areas. The selection of marine reserve area should be based on a careful survey and sufficient studies.

The Conference urges all member states to consider the establishment of marine nature reserves and their protection, a national obligation of first priority. Each state should appoint a special body to undertake those responsibilities.

2. The Conference urges all states to join the Intergovernmental Oceanographic Commission (IOC) and to participate in the Integrated Global Ocean Stations System (IGOSS).

The Conference urges meteorological departments in the region to utilize both coastal stations and floating station for the application of environmental monitoring systems.

3. The Conference adopts the short term plan for monitoring pollution in the Red Sea and the Gulf of Aden which deals with monitoring of oil pollution and its effects on marine organisms and their ecosystems confining the work in the first stage to the use of classical methods of monitoring oil pollution so that it can be applied in all the station belonging to the Network. For training purpose, use can be made of training programmes for combating pollution in the Mediterranean Sea and environmental programmes of the United Nations organizations.

As for pollutants, other than oil, programmes on monitoring and research would be delayed to a future phase.

4. The Conference recommends that ALECSO prepares a study on national legislations for the protection of nearshore marine environment, particularly, in the vicinity of ports, human settlements and industrial centres, and that ALECSO assists in working model guidelines for such legislations.

5. The Conference adopts the programme on monitoring radioactive pollution in the Red Sea, the Gulf of Aden, the Arabian Gulf and the Mediterranean Sea, prepared by the Middle East Regional Isotopes Centre for Arab States. In the first stage, it would be sufficient to collect samples in the Red Sea and Gulf of Aden and send them to Middle East Regional Isotopes Centre for Arab States where laboratory analyses are done. Consideration would be given to establish an experimental station at Jeddah, developing in due course into a main station for receiving the field samples from the region and doing the laboratory analyses.

The conference recommends that the Middle East Regional Isotopes Centre should apply nuclear methods for pollution monitoring and recommends that the Centre works out the necessary programme.

III. Training and Education

1. The Conference recommends that the study prepared by a special arab experts team and submitted to the Conference (working paper Jeddah Two/17), the UNESCO studies dealing with the teaching of marine sciences in the universities, and the recommendations of the TEMA regional meeting in Cairo 4-8 January 1976, should be circulated among arab universities interested in marine sciences.

2. The Conference recommends that the Association of Arab Universities arranges for a meeting among specialists in marine sciences in arab universities to discuss the development of teaching marine sciences in universities.

3. The Conference recommends that a number of fellowships be provided for junior university graduates to specialise in the different branches of marine sciences in specialised institutes and on board research vessels .

4. The Conference recommends that ALECSO, jointly with UNESCO and the Institute of Oceanography and Fisheries, organise a special course on the ecology of the Red Sea and the Gulf of Aden for a number ^{of} junior university graduates working in the fields of marine sciences.

5. The Conference recommends that ALECSO, jointly with the University of Alexandria, provides not less than 10 places for the B.Sc. graduates (or equivalent academic degree) at the department of marine science, University of Alexandria, to prepare for the diploma in marine science, during the academic year 1976-1977.

6. The Conference recommends that ALECSO arranges for a short training course (3 to 4 months) for a number of university graduates from the region who are not eligible for admission in the University of Alexandria. Assistance from United Nations Organizations may be sought.

7. The Conference draws attention to the importance of training the technical assistants and the supporting crew. For this purpose, various means can be utilised, e.g. oceanographic research vessels, fisheries research vessels, special training courses, and arab training institutes (the Maritime Transport Arab Academy, Alexandria, the sub-Regional Fisheries Training Centre, Kuwait and the Fisheries Training Institute, Aden).

8. The Conference urges arab scientists to compose write and edit, in the arabic language, books dealing with marine sciences, fisheries and the marine environment as this will be a fruitful contribution in the fields of teaching and standardisation of scientific terms.

9. The Conference recommends all countries of the region to include marine sciences and environmental subjects on the Red Sea and the Gulf of Aden in their general education system, that will develop the interest in marine sciences among new generations. The establishment of marine museums and aquaria will help the public education on the marine environment.

IV. Organizational Subjects

1. The Conference recommends that ALECSO takes the necessary steps towards forming a Directing Board for the scientific programme to assume functions of planning follow-up, and general policy of the programme Fund according to the provisions of resolutions document No.3.

2. The Conference recommends that the Programme Fund and other funding sources give priority to the development of the national capabilities in marine environmental studies that need financial support, taking into consideration that the establishment of the national machinery, is basically, a national obligation.

3. The Conference recommends that the Programme Fund supports the regional machinery in complementing the tasks of the national machinery.

4. The Conference recommends that the Institute of Marine Sciences, King Abdul-Aziz University, Jeddah, would be utilised in the Programme for Environmental Studies on the Red Sea and the Gulf of Aden. The Institute

will start as a national body, and will develop as it builds up into a national institute rendering regional services (after 1978). At a future stage, when it possesses the necessary constituents, it can be contracted as a Regional Institute.

5. The Conference recommends that ALECSO takes the necessary steps towards forming the Advisory Scientific Committee for the Programme to plan, follow up and evaluate the scientific programme. The Committee will consist of experts from the region and may seek the participation of foreign experts when necessary.

6. The Conference recommends that ALECSO undertakes to prepare the designs and detailed specifications for an oceanographic research vessel and a fisheries research vessel and to prepare detailed plans, designs and requirements for the establishment of the regional institute, the oceanographic data centre and the marine biological reference centre.

7. The Conference recommends that the Programme should include the establishment of the regional scientific machinery consisting of the following components :

- a) A regional institute for marine environmental studies.
- b) An oceanographic research vessel.
- c) A fisheries research vessel.
- d) A marine biological reference centre.
- e) An oceanographic data centre.
- f) Other scientific bodies recommended by the Directing Board.

Until this Directorate is set up, the Conference recommends that ALECSO takes into charge the application of the provisions of article 9 of the rules of establishment of the Programme for Environmental Studies on the Red Sea and the Gulf of Aden (resolutions document No.3).

8. The Conference urges member states to take necessary steps towards the adoption and ratification of the Convention on the Protection of the Red Sea and the Gulf of Aden Environment and its Protocols, in the light of the draft copy adopted by the Conference.

The Conference, further, recommends that the Secretary General, League of Arab States, takes the necessary steps towards convening a diplomatic conference for the Red Sea and Gulf of Aden States for the adaptation of the convention with Ethiopia invited as a full member.

9. The Conference urges all delegations of the Red Sea and Gulf of Aden States to ^{do} their best with the concerned departments in their respective countries in order to speed up all procedures for adoption and signing of the convention and its Protocols.

10. The Conference recommends that the Sudanese delegation be charged with the proper reformulation of the Draft Convention in the light of the Conference discussions and to prepare the english text of the Convention and Protocols.

11. When the Directing Board for the Programme, mentioned in the Rules of Establishment, is set up and assumes duties and authorities provided in those rules, it should undertake to continue the enforcement of the recommendations of this Conference and define its relationship with ALECSO as regards the recommendations which ALECSO is charged with implementation.

Jeddah II Resolutions Doc.(2)

Draft Convention on the Protection of the
Marine Environment on the Red Sea and the
Gulf of Aden and its Protocols

- 2.1 Draft Convention on the protection of the marine environment on the Red Sea and the Gulf of Aden.
- 2.2 First Protocol on settlement of disputes.
- 2.3 Second Protocol on combating, prevention and abatement of pollution by dumping of wastes and other matter from ships and aircraft.
- 2.4 Annex I to the Second Protocol on list of wastes and other matter, dumping thereof in the marine environment is prohibited.
- 2.5 Annex II to the Second Protocol on list of wastes and other matter requiring prior permit for dumping in the marine environment.
- 2.6 Annex III to the Second Protocol on provisions to be considered in establishing criteria governing the issue of permits for the dumping of matter at sea.
- 2.7 Third Protocol on The Programme for Environmental Studies on the Red Sea and the Gulf of Aden.
- 2.8 Amendments to the Draft Convention proposed by the Ethiopian Delegation.

Draft Convention on the Protection of
the Red Sea and Gulf of Aden environment

Ethiopia,
The Hashemite Kingdom of Jordan,
The Kingdom of Saudi-Arabia,
The Democratic Republic of Sudan,
The Democratic Republic of Somal,
The Arab Republic of Egypt,
The Yemen Arab Republic, and
The Peoples Democratic Republic of Yemen.

BEING the States bordering the Red Sea and the Gulf of Aden.

REALIZING the economic, cultural and social significance of the marine environment of the Red Sea and the Gulf of Aden,

RECOGNIZING their responsibility to protect the marine environment of the Red Sea and the Gulf of Aden for the benefit of the successive generations;

MINDFUL of the need for regional co-operation to protect the marine environment of the Red Sea and the Gulf of Aden against pollution from all sources;

HAVE AGREED AS FOLLOWS :

Article 1
Definitions

For the purposes of this Convention and its Protocols.

- a- "The Red Sea and the Gulf of Aden" means the water mass of the Red Sea and the Gulf of Aden within the frame of integrated ecosystems.

- b- "Pollution" means introduction by man directly or indirectly, of substances or energy into the marine environment resulting in such deleterious effect as harm to living resources, hazards to human health, hinderance to marine activities including fishing, impairment of quality for use of sea water, and reduction of amenities.
- c- "Ships and aircraft" means waterborne or airborne or amphibious craft of any type whatsoever, including hydrofoil boats, air cushion vehicles, submersibles, floating craft whether self-propelled or not, and fixed or floating platforms and any other structure.
- d- "Oil" means petroleum in any form including crude oil, fueloil, sludge, oil refuse and refined products, whose introduction might impair the marine environment.
- e- "Harmful ^s Substance" means all substance whose introduction or presence causes a danger threatening or impairing the environment.
- f- "The Board" means the Board for the Protection of the Marine Environment of the Red Sea and the Gulf of Aden established under Article 8 of this convention.
- g- "The General Secretariat" means the General Secretariat of the Board for the Protection of the Marine Environment of the Red Sea and the Gulf of Aden establishment ^{ect} under Article 10 of this convention.

Article 2
Basic Obligations

- 1- The Contracting Parties shall individually and in common take all appropriate legal, administrative or other relevant measures in accordance with the provisions of this Convention and the Protocols

thereto to prevent and abate pollution of the marine environment of the Red Sea and the Gulf of Aden.

- 2- The Contracting Parties covenant to implement this Convention and the Protocols thereto in such a manner as to avoid the pollution of sea areas outside the Red Sea and the Gulf of Aden.

Article 3

Measures for Prevention and Abatement of the Different Types of Pollution

- 1- The Contracting Parties pledge themselves to take all appropriate measures to prevent and abate pollution of the marine environment of the Red Sea and the Gulf of Aden caused by :
 - a) discharges from rivers, coastal establishments or outfalls, or originating from any other sources within their territories;
 - b) the exploration and the exploitation of the seabed and its subsoil;
 - c) ships ;
 - d) dumping from ships and aircraft.
 - e) other possible sources.
- 2- To this end they shall co-operate in the formulation and adoption of Protocols to this Convention, prescribing agreed measures, procedures and standards.

Article 4

Liability and Compensation

The Contracting Parties shall co-operate in the formulation and adoption of a Protocol to this Convention establishing appropriate procedures for the determination of responsibility and the remedies for damage resulting from acts or omissions in violation of the Convention and the Protocols thereto.

Article 5
Pollution Emergencies

- 1- Whenever there is an imminent danger to the marine environment, the coast or related interests of one or more contracting parties due to the presence of massive quantities of oil resulting from an accident or any other accidental cause or the accumulation of quantities of oil or the presence of any other substance harmful to the environment :
 - a) the Contracting Parties shall endeavour to cooperate and coordinate their efforts in combating this danger immediately and in a way that would confine the spreading of its damaging effects, avoiding means and methods use thereof would cause harm to the marine environment.
 - b) Any of the Contracting Parties who comes to his knowledge the presence of a danger mentioned in this article, shall undertake to inform, utilizing the quickest and most reliable communication, other party or parties who are nearest to the danger, at the same time informing the General Secretariat who, in turn, shall send immediate notification utilizing quickest and most reliable communication to all contracting Parties and the concerned international organization.
 - c) In the cases of item 6 of this article the General Secretariat shall ascertain the nature and size of danger and inform all parties affected or may be affected by the danger.

- 2- Each Contracting Party shall nominate and notify the General Secretary with the name and address of the competent national organization responsible for combating, prevention and abatement of pollution, to receive reports and notifications of pollution emergencies, to issue permits mentioned in the second Protocol to this

Convention; and which is responsible for other matters dealing with combating, prevention and abatement of pollution.

Article 6
Monitoring

The Contracting Parties agree to establish, in collaboration with the appropriate international bodies, a pollution monitoring system for the Red Sea and the Gulf of Aden.

Article 7
Reports

Each Contracting Party shall submit annually to the Board a report on the measures adopted in implementation of this Convention and the Protocols thereto.

Article 8
The Board

- 1- For the purposes of this convention, the Board for the Protection of the Marine Environment of the Red Sea and the Gulf of Aden is hereby established. The Board shall be charged with the following functions:
 - a) to exercise overall supervision over the implementation of this Convention and the Protocols thereto;
 - b) to keep under review the contents of this Convention and the Protocols thereto and to recommend to the Contracting Parties such amendments to this Conventions and the Protocols thereto as may be agreed;
 - c) to formulate programmes for scientific and technical research and studies concerning the protection the Red Sea & Gulf of Aden marine environment and to provide the necessary requirements of the execution of these programmes.
 - d) to take all measures for the conservation and rational utilization of the living resources in the Red Sea and the Gulf of Aden.

- e) to take all necessary measures for the management of protected areas within national jurisdiction of any of the contracting Parties, or that outside, agreed upon by them.
 - f) to set the guidelines, for the Contracting Parties, for the issuance of permits for dumping of substances provided for under the second Protocol to this convention.
 - g) to take appropriate action against any country not party to this Convention/^{or} against any national of this country who may violate the provisions of any ruling of this Conventions or Protocols thereto.
 - h) to cooperate with international and regional organizations or bodies in the fields of the protection of marine environment.
 - i) to study reports submitted by the Contracting Parties according to Article 7 and reports submitted by the General Secretariat according to the Article 10 of this Convention and to take necessary action thereto.
 - j) to adopt the budget of the Board and determine the share of each of the Contracting Parties.
 - k) to seek for amicable settlement of disputes between the Contracting Parties in interpretation or implementation of this Convention and its Protocols.
 - l) to undertake any other functions necessary for the execution of this Convention and Protocols thereto.
- 2- To achieve the objective of the Board in a proper scientific and technical way, the Contracting Parties undertake to contribute all necessary financial, technical and scientific requirements for the bodies established ^{under} and the provisions of the third Protocol to this convention.

Article 9

Composition of the Board and its Meetings

- 1- The Boards will be formed of a representative of each of the Contracting Parties. Each Party will have the right to add as many advisers or experts as may deem necessary.
- 2- The chairmanship will follow the succession rule for the Contracting Parties beginning with the Depositary Country hence according to the alphabetical order of the names of Contracting Parties (in Arabic). The term of the Chairman is two years.
- 3- The Board meets, at least, once annually, Meetings will be at the seat of the General Secretariat, unless otherwise agreed upon. The Chairman will fix the dates of the meetings.
- 4- The Chairman may invite the Board for a meeting whenever he deems necessary or at the request of one third of the Contracting Parties.
- 5- The Depositary Country shall invite for the first meeting of the Board, which shall hold this meeting within 90 days from the date this Convention enters into force.
- 6- Each Contracting Party has one vote only. A two third majority is required for adoption of the decisions of the Board.

Article 10

The General Secretariat

- 1- The Board shall appoint a General Secretary and lay down his term of office and terms of reference. The principle of rotation between the Contracting Parties should be followed.
- 2- The General Secretary will be responsible for :
 - a) the execution of the general policy and decisions of the Board and the fulfillment of duties assigned to him by this Conventions and Protocols or by the Board.

- b) the preparation for the meetings of the Board, and the preparation of the minutes of its meeting and keeping all documents for the Board.
 - c) the submission, to the Board, of annual reports on the General Secretariat activities.
- 3- The seat of the General Secretariat shall be at....
 - 4- The General Secretariat will have a sufficient number of personnel appointed according to the rule of equitable country representation whenever possible.

Article 11

Procedural, Administrative and Financial
Provisions for the Board

- 1- The working languages of the Commission shall be Arabic and English.
- 2- The Board shall issue its Rules of Procedure, Financial Rules, Administrative Rules and any other rules it deems necessary for its work.
- 3- The Board shall work out the Staff Regulations and Scales of payment for the General Secretariat.

Article 12

Claims regarding Limits of Maritime Jurisdiction

Nothing in this Convention shall affect the rights or claims of any Contracting Party with regard to the nature or limits of their maritime jurisdiction in conformity with International Law.

Article 13

Other Agreements and Conventions on the
Protection of the marine environment

The provisions of this Conventions and Protocols thereto will not be interpreted to interfere on the obligations of any of the Contracting Parties in accordance with other agreements or conventions on the protection of the marine environment previously concluded

by that party. It will neither be interpreted as excluding the accession to other agreements and conventions of similar objects.

Article 14

Settlement of Disputes

Any dispute between the Contracting Parties respecting the interpretation or implementation of this Convention and the Protocols thereto shall be settled according to the provisions of the first Protocol to this convention.

Article 15

Modes of Participation in the Convention
and Protocols

- 1- The Convention shall be open for signature at until by any Red Sea Coastal state.
- 2- The Convention shall be subject to ratification, acceptance or approval by the States which have signed it.
- 3- After (the Convention shall be open for accession by a state eligible to sign under Paragraph 1 of this Article. Subject to the prior approval of all the Contracting Parties, the Convention shall be open for accession by any other state interested in fulfilling the objectives of this Convention.
- 4- Instruments of ratification, acceptance, approval or accession shall be deposited with the Government of which shall act as the Depositary Government.

Article 16

Entry into Force

- 1- The Convention shall enter into force on the thirtieth day following the date of the deposit of the instrument of ratification, acceptance, approval or accession.

- 2- For each Contracting Party ratifying, accepting, approving or acceding after the deposit of the instrument of ratification, the Convention shall enter into force on the thirtieth day after deposit by such Party of its instrument of ratification, acceptance, approval or accession.

Article 17
Reservations

The provisions of this Convention shall not be subject to reservations.

Article 18
Withdrawal

- 1- Any Contracting Party may withdraw from this Convention after five years from the date of its entry into force by a written notification to the Depositary Country.
- 2- The Depositary Country shall, promptly, notify all Contracting Parties and the General Secretariat.
- 3- The Depositary Country shall call upon the Board to meet for consideration of the consequences of that withdrawal.
- 4- The withdrawal will be effective 12 months from the date of notification there of.

Article 19
Amendment of the Convention and Protocols

- 1- Any Contracting Party may propose amendments to the Articles of this Convention, or Protocols thereof.
- 2- Any such proposed amendment shall be submitted to the Board, or to the Depositary Government, which shall communicate it to all Contracting Parties.
- 3- The Contracting Parties shall within ninety days, inform the Depositary Government of their acceptance or rejection of the proposed amendment.
- 4- The amendment shall enter into force after the thirtieth day of receipt at the Depositary Government of the last instrument of ratification, approval or acceptance of such amendment.

First Protocol
Settlement of Disputes

- 1- In case of a dispute between the Contracting Parties as to the interpretation or application of the present Convention or Protocols, they should seek a solution by through amicable means.
- 2- If the Parties concerned cannot reach agreement by amicable means including the goods, offices of the Board for the Protection of the Red Sea and Gulf of Aden Environment; any such Parties may seek arbitration in accordance with rules and procedures under articles from 3 to 10 herebelow.
- 3- The Party or Parties seeking a requesting arbitration shall notify, in writing, the opposite Party or Parties in dispute stating the subject of dispute or disagreement and pointing out the articles of the Convention or Protocols interpretation or application thereof are disputable. Copy of the notification shall be sent to the General Secretariat who forwards the information thus received together with any additional information, to all Contracting Parties.
- 4- The arbitral tribunal shall consist of a representative appointed by each Party to the dispute; the two arbitrators so appointed shall designate by common agreement the third arbitrator who shall be the chairman of the tribunal. The latter shall not be a national of one of the Parties to the dispute, nor have his usual place of residence in the territory of one of these Parties, nor be employed by any of them.
- 5- (a) In case of the representatives of the Parties to the dispute fail to agree on the chairman of the tribunal, either Party was request to designate him within two months.

- (b) If one of the Parties to the dispute does not appoint an arbitrator within two months of receipt of the request, the other Party may inform the Secretary-General of the United Nations who shall designate the chairman of the arbitral tribunal. Upon designation, the chairman of the arbitral tribunal shall request the Party which has not appointed an arbitrator to do so within two months. After such period, he shall inform the Secretary-General of the United Nations who shall make this appointment within a further two month's period.
- 6- The arbitral tribunal shall hold its meeting in the place and at the time set by its chairman. The arbitral tribunal shall draw up its own rules of procedure.
- 7- The arbitral tribunal shall decide according to the rules of this convention or the Protocols concerned and according to the rules of international law.
- 8- (a) The absence or default of a Party to the dispute shall not constitute an impediment to the proceedings.
- (b) The tribunal may take all appropriate measures in order to establish the facts. It may, at the request of one of the Parties, recommend essential interim measures of protection.
- (c) The decisions of the arbitral tribunal, shall be taken by majority voting of its members.
- 9- The Parties to the dispute shall provide all facilities necessary for the effective conduct of the proceedings.
- 10- (a) The award of the tribunal shall be accompanied by a statement of reasons.
- (b) The award shall be final and binding upon the Parties to the dispute.
- (c) Any dispute which may arise between the Parties concerning the interpretation or execution of the award

may be submitted by either Party to the arbitral tribunal which made the award or if the latter cannot be seized thereof to another arbitral tribunal constituted for this purpose in the same manner as the first.

Second Protocol
Combating, Prevention and Abatement of
Pollution by Dumping of Wastes and other
matter from Ships and Aircraft

- 1- For the purpose of this Protocol :
 - (a) "Dumping" means any deliberate disposal at sea of wastes or other matter from ships or aircraft.
 - (b) Any deliberate disposal at sea of ships or aircraft.
- 2- Dumping does not include :
 - (a) The disposal at sea of wastes or other matter incidental to or derived from the normal operations of ships or aircraft.
 - (b) Placement of matter for a purpose other than the mere disposal thereof, provided that such placement is not contrary to the aims of this Protocol.
- 3- The Contracting Parties shall take all appropriate measures to combat, prevent and abate pollution caused by dumping wastes or other matter that produce harmful effects to the marine environment of the Red Sea and the Gulf of Aden.
- 4- The dumping into Red Sea or Gulf of Aden of Wastes or other matter listed in Annex I to this Protocol is prohibited.
- 5- The dumping into the Red Sea or Gulf of Aden of wastes or other matter listed in Annex II to this Protocol requires, in each case, a prior special permit from the competent national or regional authorities.
- 6- The dumping into the Red Sea or the Gulf of Aden of all other wastes or other matter requires a prior

general permit from the competent national or regional authorities.

- 7- The permits referred to in Articles 5 and 6 shall be issued only after careful consideration of all the factors set forth in Annex III to this Protocol.
- 8- The provisions of Articles 4,5 and 6 shall not apply in case of force majeure due to stress of weather or any other cause when human life or the safety of a ship, or aircraft is threatened. Such dumping shall immediately be reported to the General Secretariat and to any Party or Parties likely to be affected, together with full details of the circumstances and of the nature and quantities of the wastes or other matter dumped.
- 9- If a Party in a critical situation of an exceptional nature considers that wastes or other matter listed in Annex I to this Protocol cannot be disposed outside the marine environment without unacceptable danger or damage for the safety of human lives, the Party concerned shall forthwith consult the General Secretariat. The General Secretariat, after consulting the Parties to this Protocol, shall recommend methods of storage or the most satisfactory means of destruction or disposal. The Party shall inform the General Secretariat of the steps taken in pursuance of these recommendations. The Parties pledge themselves to assist one another in such situations.
- 10- In cases of doubt about the possible effects of the matters to be dumped, the Contracting Parties shall consult to classify such matters and agree on the necessary measures.
- 11- Each Party shall apply the measures required to implement this Protocol to all :
 - (a) Ships and aircraft registered in its territory or flying its flag, and other structures at sea operating under its authority;

- (b) Ships and aircraft loading in its territory wastes or other matter which are to be dumped.
- (c) Ships and aircraft believed to be engaged in dumping in areas under its jurisdiction in this matter.

12- Each Party undertakes to issue instructions to its maritime inspection units to report to its authorities any incidents or conditions in the Red Sea or the Gulf of Aden which give rise to suspicions that dumping in contravention to the provisions of this Protocol has occurred or about to occur. That Party shall, report accordingly to any other Party concerned and to the Secretary General.

Annex I to the Second Protocol
List of Wastes and Other Matter
Dumping Thereof in the Marine
Environment is Prohibited.
(Article 4 of the Second Protocol)

- 1- Organohalogen compounds and compounds which may form such substances in the marine environment, excluding those which are non-toxic, or which are rapidly converted in the sea into substances which are biologically harmless.
- 2- Organosilicon compounds and compounds which may form such substances in the marine environment, excluding those which are non-toxic, or which are rapidly converted in the sea into substances which are biologically harmless.
- 3- Mercury and mercury compounds.
- 4- Cadmium and cadmium compounds.
- 5- Large quantities of acids and alkalis from titanium and aluminium industries.
- 6- Crude oil, fuel oil, heavy diesel oil, lubricating oils, hydraulic fluids and any mixtures containing any of these, taken on board for the purpose of dumping.
- 7- High-level radioactive wastes or other high-level radioactive matter, defined on public health, biological or other grounds, by the competent international body in this field, at present the IAEA, as unsuitable for dumping at sea.

- 8- Persistent plastics and other persistent synthetic materials which may seriously interfere with fishing or navigation, or other legitimate uses of the sea.
- 9- Material in whatever form (solids, liquids, semi-liquids, gases or in a living state) produced for biological and chemical warfare.
- 10- This Annex does not apply to substances which are rapidly rendered harmless by physical, chemical or biological processes in the sea provided they do not.
 - (a) Make edible marine organisms unpalatable; or
 - (b) Endanger human health or that of domestic animals.
- 11- This Annex does not apply to wastes or other materials (sewage wastes, ... etc) containing the matters referred to in 1, 2, 3, 4, 5, 6, 8 above as traced contaminants. Such wastes shall be subject to the provisions of Annexes II and III as appropriate.

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Annex II to the Second Protocol
List of Wastes and Other Matter
Requiring Prior Permit for Dumping
in the Marine Environment.
(Articles 5 and 6 of the Second Protocol)

- A- Wastes with high contents of Arsenic, Lead, Copper, Zinc and their compounds
Organosilicon compounds.
Cyanides and fluorides.
Pesticides not covered in Annex I.

- B- In the issue of permits for dumping of large quantities of acids and alkalis, consideration should be given to possible presence in such wastes of the substances listed in paragraph (A) and of the substances listed below :
Beryllium, Chromium, Nickel, Vanadium and their compounds.

- C- All kinds of containers, scrap metal and other bulky wastes liable to the sea bottom which may present a serious obstacle to fishing or navigation.

- D- Radioactive waste or other radioactive matter not included in Annex I. In the issue of permits for the dumping of this matter, the Parties should take full account of the recommendations of the competent international body in this field, at present the IAEA.

Annex III to the Second Protocol

Provisions to be considered in establishing criteria governing the issue of permits for the dumping of matter at sea taking into account Article 7 of the Second Protocol.

A. Characteristics and composition of the matter

1. Total amount and average composition of matter dumped (e.g. per year).
2. Form, e.g. solid, sludge, liquid or gaseous.
3. Properties: physical (e.g. solubility and density), chemical and biochemical (e.g. oxygen demand, nutrients) and biological (e.g. presence of viruses, bacteria, yeasts, parasites).
4. Toxicity.
5. Persistence: physical, chemical and biological.
6. Accumulation and biotransformation in biological materials or sediments.
7. Susceptibility to physical, chemical and biochemical changes and interaction in the aquatic environment with other dissolved organic and inorganic materials.
8. Probability of production of taints or other changes reducing market ability of resources (fish, shellfish, etc.).

B. Characteristics of dumping site and method of deposit

1. Location (e.g. co-ordinates of the dumping area, depth and distance from the coast), location in relation to other areas (e.g. amenity areas, spawning, nursery and fishing areas and exploitable resources).
2. Rate of disposal per specific period (e.g. quantity per day, per week, per month).
3. Methods of packaging and containment, if any.

4. Initial dilution achieved by proposed method of release, particularly the speed of the ship.
5. Dispersal characteristics (e.g. effects of currents, tides and wind on horizontal transport and vertical mixing).
6. Water characteristics (e.g. temperature, pH, salinity, stratification, oxygen indices of pollution - dissolved oxygen (DO), chemical oxygen demand (COD), biochemical oxygen (BOD) - nitrogen present in organic and mineral form including ammonia suspended matter, other nutrients and productivity).
7. Bottom characteristics (e.g. topography, geochemical and geological characteristics and biological productivity).
8. Existence and effects of other dumping which have been made in the dumping area (e.g. heavy metal background reading and organic carbon content).
9. When issuing a permit for dumping, the Contracting Parties shall endeavour to determine whether an adequate scientific basis exists for assessing the consequences of such dumping in the area concerned, in accordance with the foregoing provisions and taking into account seasonal variations.

C. General considerations and conditions

1. Possible effects on amenities (e.g. presence of floating or stranded material, turbidity, objectionable odour, discolouration and foaming).
2. Possible effects on marine life, fish and shellfish culture, fish stocks and fisheries, seaweed harvesting and culture.
3. Possible effects on other uses of the sea (e.g. impairment of water quality for industrial use, underwater corrosion of structures, interference with ship operations from floating materials,

interference with fishing or navigation through deposit of waste or solid objects on the sea floor and protection of areas of special importance for scientific or conservation purposes).

4. The practical availability of alternative land-based methods of treatment, disposal or elimination, or of treatment to render the matter less harmful for sea dumping.

Third Protocol

Programme for Environmental Studies
on the Red Sea and the Gulf of Aden

Article 1. Definitions

For the purpose of these rules :

- a- The Programme means the Programme for Environmental Studies on the Red Sea and the Gulf of Aden provided for in Article 2 of these rules.
- b- The Countries of the Programme means coastal countries of the Red Sea and the Gulf of Aden.
- c- The Programme Fund means the special fund for financing the programmes established under article 3 of these rules.
- d- The Board means the directing board established under article 4 of these rules.

Article 2. The Programme

The programme is a group of integrated scientific activities aiming at achieving the following :

- 1- Providing assistance to the Countries of the Programme to set up, support and operate the national scientific machinery in the fields of research, studies and observations of the marine environment in such a way as to be able to :
 - a) promote research and studies serving the development of national resources in national waters and coastal areas.
 - b) rationalise the exploitation of natural resources in national waters and coastal areas, and protect them against exhaustion.

- c) maintain the balance of ecosystems.
 - d) participate in regional studies.
- 2- To set up and support regional scientific machinery in the fields of research, studies and observation of marine environment in such a way as to be able to:
- a) undertake research and studies serving the development of natural resources in the Red Sea, the Gulf of Aden and their whereabouts.
 - b) rationalise the regional projects for exploitation of natural resources in the Red Sea basin, the Gulf of Aden, and contiguous areas.
 - c) provide assistance to national programmes of research and studies.
 - d) achieve integration of the national and regional programmes.
 - e) establish a network of stations for monitoring and surveillance of pollution and environmental degradation.
- 3- To provide assistance to the Countries of the Programme and to the regional scientific machinery in the fields of training scientific and technical manpower and to utilise national, regional and international training institutions for these purposes.
- 4- To provide technical assistance to sister and friendly countries, to strengthen cooperation and to exchange data between the programme and regional and international programmes concerned with research, studies and observation of marine environment.
- 5- To establish the regional scientific machinery including the following components :
- a) The Regional Institute for Marine Environmental Studies.
 - b) The oceanographic research vessel.

- c) The fisheries research vessel.
 - d) The Regional Marine Biological Reference Centre.
 - e) The Regional Oceanographic Data Centre.
 - f) The Regional Network for Monitoring Marine Pollution.
 - g) Other scientific units that the Board may deem necessary.
- 6- To follow up the formation, in each of the Countries of the Programme, of a national commission for research, studies and observation of marine environment.

Article 3. The Programme Fund

A fund shall be set up to finance the programme of research studies and observation of the environment of the Red Sea and the Gulf of Aden. The fund's resources shall include the following :

- 1- Allocations from the ALECSO budget.
- 2- Aids and donations provided by special Arab funds and Arab organization.
- 3- Subscriptions, donations and special loans given by states of the Red Sea basin and the Gulf of Aden.
- 4- Donations and aids granted by UNEP and UNDP.
- 5- Donations and aids granted by UNESCO and FAO.
- 6- Donations and aids granted by other UN organizations and affiliated bodies of the U.N.
- 7- Donations and aids afforded by sister and friendly countries and organizations for the support and funding of scientific research, specified or unspecified.
- 8- Resources of bilateral and multilateral agreements.
- 9- Revenues of the Program's activities or investment of the fund's capital.

Article 4. The Board; formation and functions

- 1- The Programme shall have a Board to be formed of a representative, of each of the Countries of the Programme.

- 2- The Board shall have the following duties and authorities :
- a) to approve the operational plans of the Programme.
 - b) to allocate the amounts for the purposes of the Programme from the fund's resources.
 - c) to follow up financing the Programme Fund from various sources.
 - d) to accept donations and aids.
 - e) to appoint the Executive Director of the Programme.
 - f) to determine the permanent headquarters of the Programme and to adopt the special agreement regulating the relationship between the Programme and the Country of Seat as well as the immunities to be enjoyed by the Programme in that country.
 - g) to form a coordinating committee for the Programme and to appoint a full time regional coordinator.
 - h) to form an advisory scientific committee for the Programme.
 - i) to adopt the budget of the Programme and its secretariat referred to under Article 6. of these rules.
 - j) to organise periodic meetings on the Programme for Environmental Studies on the Red Sea and the Gulf of Aden.
 - k) to undertake other duties which it may consider necessary for achieving its aims.

Article 5. The Board's meetings

- 1- Chairmanship of the board shall be given in succession to representatives of the Countries of the Programme according to the alphabetical (arabic) arrangement of the names of the Countries of the Programme. The term of the Chairman shall be one year.

- 2- The Board shall meet twice a year in the permanent headquarters of the Programme unless the Board decides otherwise. The Chairman of the Board may call for an extraordinary meeting if necessary or in case he receives a request from three Countries of the Programme for such meeting.
- 3- Each one of the Countries of the Programme shall have one vote.

Article 6. The Administrative Budget

In addition to the budget for the projects financed by the Programme Fund, the Board shall adopt a special budget for wages, salaries and for administrative expenses.

Article 7. Procedural, administrative and financial rules

The Board shall issue its internal rules as well as the financial and administrative rules for the management of the Programme, its executive organ, the coordinating committee and the advisory scientific committee.

Article 8. The Executive Director

- 1- The Programme shall have an Executive Director appointed by the Board who shall, also, determine his term of office and terms of reference.
- 2- The Executive Director shall be responsible for :
 - a) Implementation of the general policy and decisions of the Board.
 - b) Preparation of the technical and exploratory studies which would help the Board in drawing the policy and plans of the Programme.
 - c) To act as secretary general of the Board and attend its meetings.
 - d) Other terms of reference conferred on him by the Board and provided for in the regulations issued by the Board.

- 3- The Executive Director shall be assisted by a suitable number of technical and administrative personnel, to be appointed in such a way as to guarantee the proper representation of the Countries of the Programme.

Jeddah II Resolutions Doc.(2.8)

AMENDMENTS OF THE DRAFT CONVENTION

1. It may be remembered that Ethiopia was invited to the Jeddah I meeting on an observer status. It would therefore be necessary, for the sake of accuracy, to make the following amendment to the introduction of the draft convention prepared by the Sudanese experts:

On page 1 of the introduction after the third sentence include the sentence "Ethiopia attended as an observer"

2. Since individual states have the responsibility of controlling pollution in their own territorial waters, we do not see the necessity of applying the convention on the internal and territorial waters as indicated in the introduction (P. 4) of the draft prepared by the Sudanese experts. We suggest that we follow the provision of the Baltic sea and the Mediterranean conventions where the internal and territorial waters were excepted from the application of the convention and state sovereignty over its internal waters was secured.
3. To give Article 3 a universal acceptability we suggest the inclusion of the phrase "Within the frame work of generally agreed international principles and standards" at the end of the sentence.
4. Include the above amendment at the end of Article 4 as well.
5. Article 14. We suggest that the draft should include items that have universal acceptability rather than obliging member states to relinquish their rights for reservation. We therefore suggest to omit this Article.

Rules of Establishment of
The Programme for Environmental Studies
on the Red Sea & the Gulf of Aden

Article 1. Definitions

For the purpose of these rules :

- a- The Programme means the Programme for Environmental Studies on the Red Sea and the Gulf of Aden provided for in Article 2 of these rules.
- b- The Countries of the Programme means coastal countries of the Red Sea and the Gulf of Aden.
- c- The Programme Fund means the special fund for financing the programmes established under article 3 of these rules.
- d- The Board means the directing board established under article 4 of these rules.

Article 2. The Programme

The programme is a group of integrated scientific activities aiming at achieving the following :

- 1- Providing assistance to the Countries of the Programme to set up, support and operate the national scientific machinery in the fields of research, studies and observations of the marine environment in such a way as to be able to :
 - a) promote research and studies serving the development of national resources in national waters and coastal areas.
 - b) rationalise the exploitation of natural resources in national waters and coastal areas, and protect them against exhaustion.

- c) maintain the balance of ecosystems.
 - d) participate in regional studies.
- 2- To set up and support regional scientific machinery in the fields of research, studies and observation of marine environment in such a way as to be able to:
- a) undertake research and studies serving the development of natural resources in the Red Sea, the Gulf of Aden and their whereabouts.
 - b) rationalise the regional projects for exploitation of natural resources in the Red Sea basin, the Gulf of Aden, and contiguous areas.
 - c) provide assistance to national programmes of research and studies.
 - d) achieve integration of the national and regional programmes.
 - e) establish a network of stations for monitoring and surveillance of pollution and environmental degradation.
- 3- To provide assistance to the Countries of the Programme and to the regional scientific machinery in the fields of training scientific and technical manpower and to utilise national, regional and international training institutions for these purposes.
- 4- To provide technical assistance to sister and friendly countries, to strengthen cooperation and to exchange data between the programme and regional and international programmes concerned with research, studies and observation of marine environment.
- 5- To establish the regional scientific machinery including the following components :
- a) The Regional Institute for Marine Environmental Studies.
 - b) The oceanographic research vessel.

- c) The fisheries research vessel.
 - d) The Regional Marine Biological Reference Centre.
 - e) The Regional Oceanographic Data Centre.
 - f) The Regional Network for Monitoring Marine Pollution.
 - g) Other scientific units that the Board may deem necessary.
- 6- To follow up the formation, in each of the Countries of the Programme, of a national commission for research, studies and observation of marine environment.

Article 3. The Programme Fund

A fund shall be set up to finance the programme of research studies and observation of the environment of the Red Sea and the Gulf of Aden. The fund's resources shall include the following :

- 1- Allocations from the ALECSO budget.
- 2- Aids and donations provided by special Arab funds and Arab organization.
- 3- Subscriptions, donations and special loans given by states of the Red Sea basin and the Gulf of Aden.
- 4- Donations and aids granted by UNEP and UNDP.
- 5- Donations and aids granted by UNESCO and FAO.
- 6- Donations and aids granted by other UN organizations and affiliated bodies of the U.N.
- 7- Donations and aids afforded by sister and friendly countries and organizations for the support and funding of scientific research, specified or unspecified.
- 8- Resources of bilateral and multilateral agreements.
- 9- Revenues of the Program's activities or investment of the fund's capital.

Article 4. The Board; formation and functions

- 1- The Programme shall have a Board to be formed of a representative, of each of the Countries of the Programme.

- 2- The Board shall have the following duties and authorities :
- a) to approve the operational plans of the Programme.
 - b) to allocate the amounts for the purposes of the Programme from the fund's resources.
 - c) to follow up financing the Programme Fund from various sources.
 - d) to accept donations and aids.
 - e) to appoint the Executive Director of the Programme.
 - f) to determine the permanent headquarters of the Programme and to adopt the special agreement regulating the relationship between the Programme and the Country of Seat as well as the immunities to be enjoyed by the Programme in that country.
 - g) to form a coordinating committee for the Programme and to appoint a full time regional coordinator.
 - h) to form an advisory scientific committee for the Programme.
 - i) to adopt the budget of the Programme and its secretariat referred to under Article 6. of these rules.
 - j) to organise periodic meetings on the Programme for Environmental Studies on the Red Sea and the Gulf of Aden.
 - k) to undertake other duties which it may consider necessary for achieving its aims.

Article 5. The Board's meetings

- 1- Chairmanship of the board shall be given in succession to representatives of the Countries of the Programme according to the alphabetical (arabic) arrangement of the names of the Countries of the Programme. The term of the Chairman shall be one year.

- 2- The Board shall meet twice a year in the permanent headquarters of the Programme unless the Board decides otherwise. The Chairman of the Board may call for an extraordinary meeting if necessary or in case he receives a request from three Countries of the Programme for such meeting.
- 3- Each one of the Countries of the Programme shall have one vote.

Article 6. The Administrative Budget

In addition to the budget for the projects financed by the Programme Fund, the Board shall adopt a special budget for wages, salaries and for administrative expenses.

Article 7. Procedural, administrative and financial rules

The Board shall issue its internal rules as well as the financial and administrative rules for the management of the Programme, its executive organ, the coordinating committee and the advisory scientific committee.

Article 8. The Executive Director

- 1- The Programme shall have an Executive Director appointed by the Board who shall, also, determine his term of office and terms of reference.
- 2- The Executive Director shall be responsible for :
 - a) Implementation of the general policy and decisions of the Board.
 - b) Preparation of the technical and exploratory studies which would help the Board in drawing the policy and plans of the Programme.
 - c) To act as secretary general of the Board and attend its meetings.
 - d) Other terms of reference conferred on him by the Board and provided for in the regulations issued by the Board.

- 3- The Executive Director shall be assisted by a suitable number of technical and administrative personnel, to be appointed in such a way as to guarantee the proper representation of the Countries of the Programme.

Article 9. Transitional Rules

- 1- The Director General of ALECSO shall invite the Countries of the Program to nominate their representatives in the Board and shall call for the convening of the first session of the Board. The quorum in this first session shall be six countries at least.
- 2- Until such time as the Executive Director and his assistants are appointed, the Director General of ALECSO shall delegate the authorities of the Executive Director to one of his assistants and assign a number of personnel to assist him.

Members of the Special Committee :

DR. NIZAAR TAWFIQ
DR. AL SAMMAANI YAQOUB
MR. ABDEL RAHMAN SHEIKH MUHAMMED
MR. ABDUL WAHHAB SHARAF ABDALLAH

1976 Jeddah Declaration

The Delegations of the states bordering the Red Sea
and the Gulf of Aden :

The Hashemite Kingdom of Jordan

The Kingdom of Saudi Arabia

The Arab Republic of Yemen

The Peoples' Democratic Republic of Yemen

The Democratic Republic of Somalia

Provisional Military Government of Socialist Ethiopia

The Democratic Republic of the Sudan

The Arab Republic of Egypt

convened in the form of an inter-governmental conference
hosted by King Abdul-Aziz University in Jeddah during the
period November 25 - December 1, 1974 (Jeddah I), and during
the period January 12-18, 1976 (Jeddah II) at the invitation
of the Arab Educational, Cultural and Scientific Organization
(ALECSO) to study the issues of scientific research on, and
monitoring of, the environment of the Red Sea Basin and the
Gulf of Aden and their relationship with the rational
exploitation and development of marine natural resources
on scientific bases, declare that :

1. The Red Sea and the Gulf of Aden are parts of the national responsibilities of these states. Accordingly, they intend to shoulder their responsibility as regards the conservation of its environmental conditions and protection of its waters against dangers of pollution and ecological degradation. They are also conscious of the special importance of the waters of this region as an international trade route. They will henceforth take the following steps :

- a- co-operate in setting up a network for monitoring the environment of the Red Sea and the Gulf of Aden; this network will consist of national stations run by the states participating in the regional network and will have the closest relations with monitoring networks in adjoining areas and with the international environment monitoring programmes supervised by the organizations and programmes of the United Nations ;
- b- adopt a convention between the states bordering the Red Sea and the Gulf of Aden concerning the conservation of marine environment and the preservation of the marine ecosystems ;
- c- set up the suitable regional organs to follow up the implementation of the convention and application of its rules.

. . .

2. The Red Sea and the Gulf of Aden comprise a region of special scientific importance. Therefore the states of this region intend to co-operate in setting up a programme of scientific research and ecological studies. For this purpose they will take the following steps :

- a- co-operate in establishing a regional programme for scientific research, and a special fund to finance this programme ;
- b- co-operate in setting up a network of national research stations that cover the coasts of the states bordering the Red Sea and the Gulf of Aden, and in establishing suitable organs for co-ordinating the work of these stations within the framework of integrated scientific plans and for ensuring the follow up of the implementation of these plans ;
- c- co-operate in establishing a network of marine natural reserves that represent various marine ecological conditions and areas of special scientific or geographical interest; they will associate this regional network with global networks of biosphere reserves that are being set under United Nations Environmental Programme (UNEP), UNESCO Man and Biosphere Programme (MAB), and programmes of the International Union for Conservation of Nature (IUCN);
- d- co-operate in setting up suitable regional scientific organs which include the following basic components :
 - a regional centre for marine environmental research,
 - research vessels for programmes of oceanographic and fishery studies,
 - marine biological reference collections,
 - oceanographic data centre.

They will co-operate in setting up the suitable regional organs to ensure optimum performance and close co-ordination of the work of the networks of national scientific units and these regional organs.

3. The Red Sea and the Gulf of Aden form an important part of the natural resources - both renewable and non-renewable - for the states of this area. Therefore, the states concerned intend to co-operate for the rational development of these natural resources on scientific basis aiming at the welfare (and legal interests) of the states concerned. Consequently, the conference:

- a- welcomes the initiative taken by the Kingdom of Saudi Arabia and the Democratic Republic of the Sudan in setting up a joint organization for the exploitation of the natural resources of their common zones.
- b- calls for consideration to set up joint inter-state establishments and organs to develop natural resources of the Red Sea and the Gulf of Aden.

Signed for the :

- Hashemite Kingdom of Jordan (Signed, Adnan Alawi)
- Kingdom of Saudi Arabia (Signed, Nizar Tawfik)
- Arab Republic of Yemen (Signed, Mohamed Anaam Galeb)
- Democratic Republic of Yemen (Signed, Abdul Wahab Sharaf Abdullah)
- Democratic Republic of Somalia (Signed, Muridi A. Saleh)
- Provisional Military Government of Socialist Ethiopia
- Democratic Republic of the Sudan (Signed, Zaki Mustafa)
- Arab Republic of Egypt (Signed, Abou Elfetouh Abdullatif)

Jeddah, 18 January 1976

translated from original
in Arabic