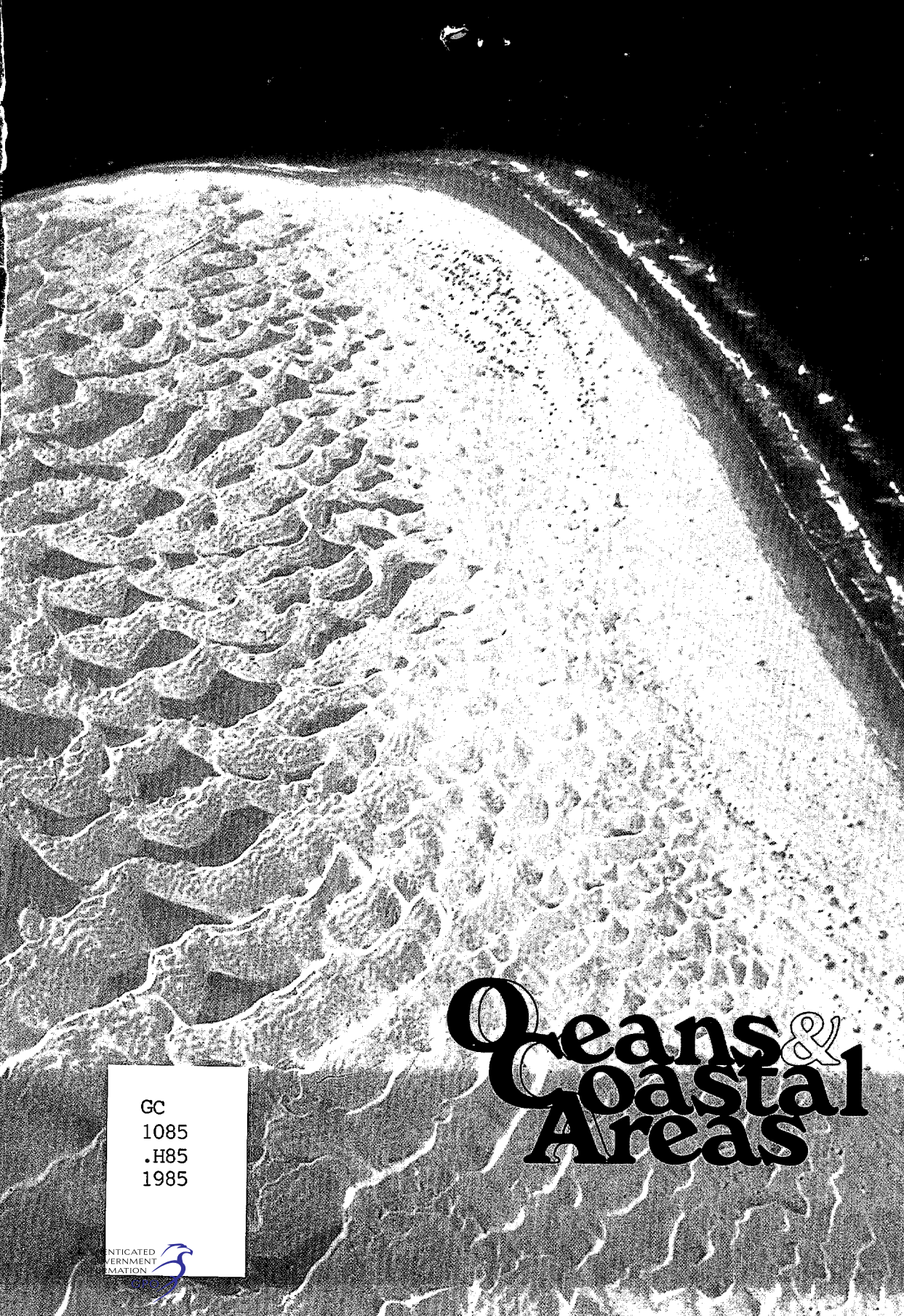

Oceans & Coastal Areas

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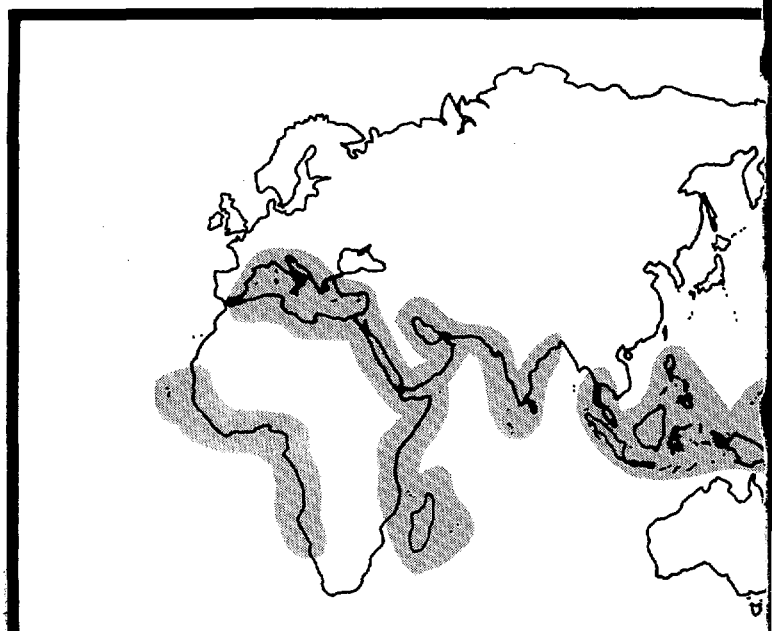
UNITED NATIONS ENVIRONMENT PROGRAMME

UNEP AND THE MARINE ENVIRONMENT



Regional Seas in UNEP's programme for oceans and coastal areas.

For most of human history we have left the ocean to look after itself, counting on its huge powers of self-renewal to give us an eternal harvest of fish and to absorb our wastes.

But over the last two or three decades the world has come to realize that the sea's living resources are not inexhaustible and the oceans can no longer be treated as a bottomless sink for pollutants.

Many of the sea's problems, it is clear, begin on land. And most of these problems eventually come back to the land to haunt us.

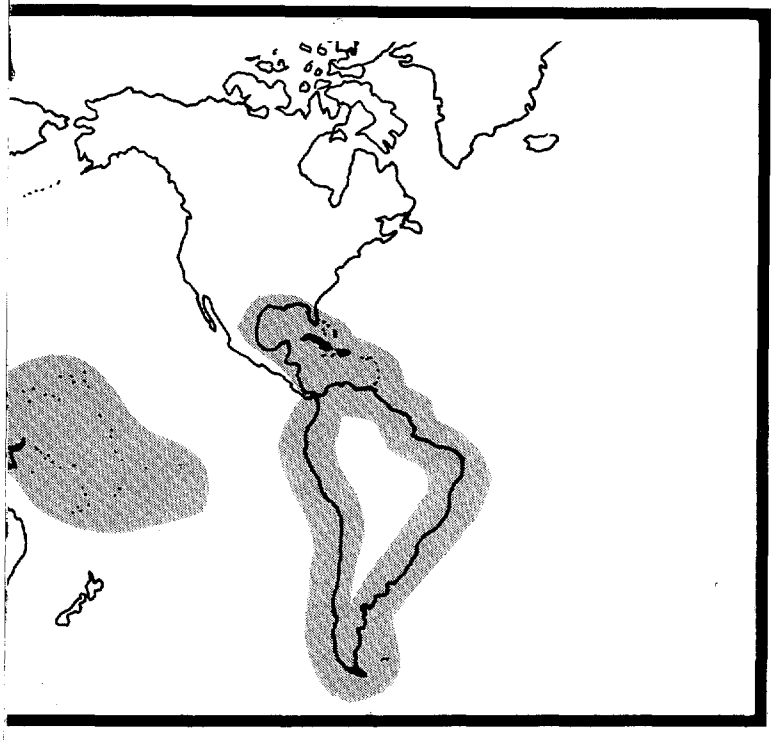
Rich and poor countries alike have felt the effects of unbridled development undertaken without concern for the marine environment. The results have included shrinking fisheries, crowding of the coasts, or destruction of irreplaceable wildlife habitats in the name of economic growth.

This was reason enough for the United Nations to consider "oceans" as a priority area in setting up its Environment Programme.

There were other good reasons for establishing the UNEP oceans programme. The seas have been the world's path for trade, human encounters and the exchange of ideas for as long as we have records.

Coastal problems, too, are seldom the concern of just one country. Neighbouring states often suffer when fish harvests decline, coastal waters are contaminated by wastes from towns and factories up the coast, and oil spills smear tourist beaches.

A WORLD OF NEIGHBOURS



When the same problem crops up in several countries of a region, even on a local scale, then it becomes a common problem. Everyone can benefit by looking for a common solution.

On a larger scale, nations that share a sea, though they may be thousands of kilometres apart, have a common interest in rational use of their marine environment, whatever their stage of development.

The sea unites nations, rather than divides them. It creates a world of neighbours.

Some 130 states, 14 United Nations agencies and over 40 other international and regional organizations take part in UNEP's efforts to protect the marine environment and to promote sound, sustainable use of marine resources.

The first regional action plan, for the Mediterranean, was adopted at Barcelona in February 1975. Since then, action plans have been put into effect, or are now being developed, for 10 other regions. Each plan is different, focusing on the particular challenges facing these widely contrasting regions.

The UNEP programme is co-ordinated by the Programme Activity Centre for Oceans and Coastal Areas (OCA/PAC).

CONSERVATION AND DEVELOPMENT:

GETTING THE PRICE RIGHT

We are all for "conservation" — but what does that mean?

Does it mean keeping a country in a state of poverty for the sake of rich vacationers from industrialised nations who want to enjoy some "unspoiled" nature?

Does it mean setting up wildlife parks rather than helping people develop the safest, long-term benefit from their natural resources? The South Pacific has seven times more endangered bird species per head of population than North America or Africa. But few small islands of the region could afford to create parks and reserves just to protect them.

Does our environmentalism demand that a poor country install expensive sewage systems to protect the ocean from industrial and municipal wastes, when richer nations have spent the last few centuries dumping their wastes, including toxic substances, untreated into the sea? Wastes and chemical loads in the Mediterranean, for example, come mainly from the highly developed northern coast rather than the more sparsely industrialised south.

Or don't we care what happens to our neighbours, so long as we do not feel the effects? This kind of conservation may seem cheap. But it is too costly in the long run.

We all support "development" — but how do we understand the term?

What if it involves mining an island so intensively that it can no longer support a human population and everyone has to be evacuated. That has happened to one South Pacific island, exploited for its phosphates.

What if it means letting industrial wastes and sediments smother lucrative oyster beds? This has been the fate of oyster fisheries in several estuaries of North America.

What if we cannot feed our populations because so much of the arable land is devoted to export crops whose earnings cannot even cover the cost of food imports?

For hundreds of years the Caribbean has been a food factory for the developed world, producing sugar, coffee, cocoa, cotton, bananas and rice for export in large quantities. In the days of colonialism, most of these crops were grown on large-scale estates owned and operated by foreign companies.

Since gaining independence, few states have been able to break free of this reliance on agricultural products to earn foreign currency. The region increasingly has to import its edible oils, cereals and dairy products. This has intensified pressure on marginal

Cays in the Great Bahama Bank of the Caribbean.

zones and coastal areas, as the poor seek land to make their homes and grow food.

Does development mean always giving commercial interests priority over concerns for an enjoyable marine environment?

This approach may already have doomed to extinction the blue whale, the largest animal ever to have lived on our planet. Over the past 150 years it was hunted so relentlessly that now we do not know whether there are enough blue whales left for the species to survive.

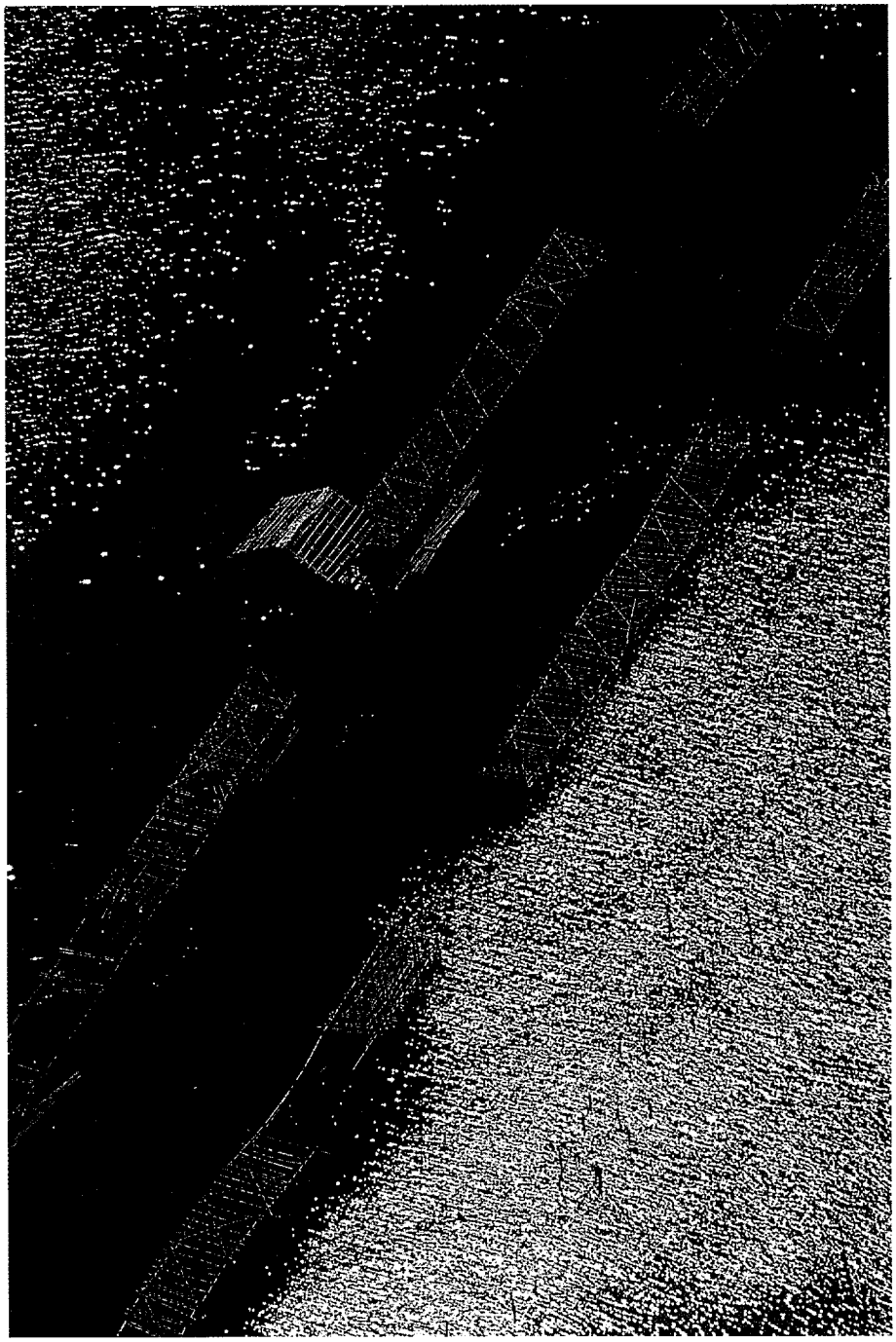
Sometimes we act as if it doesn't matter what we do, so long as the burden of cleaning things up falls on someone else, so long as we do not have to settle our environmental account today. This kind of development is unsafe at any speed. In a world that makes growing demands on scarce resources, it has become a luxury we can no longer afford.

For different communities the priorities are bound to vary. For some countries, coastal waters are virtually the only hope for increasing food production. But developing nations see fishing in other terms — as their major hope of economic self-reliance, if they can exploit the fisheries outside their coastal waters.

Pollution is often a relative term. How clean is "clean" water? Free of pollutants or free of nutrients? You may be talking about the same substance.

Around sewage pipes close to shore, conditions may be intolerable for all but a few species of worms. But by extending sewage pipes further out to sea, we can fertilise regions normally too poor in nutrients to support much life, and so increase the harvest of fish. For many countries sewage pipes are much more affordable than treatment plants. At least there is small risk they will break down, or be affected by the often frequent power cuts.

Fish farming near Jakarta, Indonesia.



In 1973 the United Nations Environment Programme decided to tackle the problems threatening the ocean environment by using both a global and a regional approach. Protection of marine mammals, standardised procedures for measuring the levels and effects of marine pollution, and similar activities obviously needed a global approach. But as most problems of the oceans are specific to particular regions, their solution was sought on a regional basis. Through its Regional Seas Programme, UNEP encouraged countries sharing a common sea to find regional solutions to problems of particular and common concern to them. They might find inspiration and guidance from programmes in other areas, and advice and support from international organizations, but they would decide the nature and contents of their own environmental "action plans".

The UNEP programme for oceans and coastal areas is designed to help decision-makers and planners choose the best options for development and the long-term health of the marine and coastal environment, but it does not try to decide for them. The regional action plans lay great stress on providing a solid scientific basis for environmental management decisions. This includes setting common standards for information-gathering and projects to help managers improve their ability to make decisions on their own.

Salt in evaporation ponds near Malini on the Kenya coast.

A LONGER VIEW

Sound environmental management tries to establish a non-destructive relation between human activities and natural systems.

This means more than cleaning up oil slicks after tanker spills, keeping rare fish and dolphins in a public aquarium, or banning pesticides.

It means taking steps to avoid pollution, degradation of our environment, and irreversible damage which wastes scarce and limited resources.

The Declaration of the United Nations Conference on the Human Environment, the 1972 Stockholm meeting that led to the founding of UNEP, pointed out: "Through fuller knowledge and wiser action, we can achieve for ourselves and our posterity a better life in an environment more in keeping with human needs and hopes."

Environmental management on sound principles demands knowledge not only of the potential environmental impact of major development activities taking place but also of the ways to reduce the harmful effects.

The Mediterranean provides a clear example. In tackling water pollution, states agreed to abide by water quality standards rather than control emissions at source, a compromise that avoided penalising the developing nations still building up their industries. They only need to worry about the quantity of effluents when these reach the coastal waters.

Peniscola, a small town on the Spanish Costa del Azahar.

GROWING WISELY

Steps to halt pollution were the main focus of early efforts in the Mediterranean. It was a sea that plainly needed to be kept under close watch. Wastes, mostly untreated, poured into the offshore waters from 120 coastal cities and from mainland industrial regions along the rivers. Valuable fishing grounds were threatened. Oil from heavy tanker traffic tarred the equally valuable Mediterranean tourist beaches.

Through the Regional Seas Programme the Mediterranean Governments first acted to slow down the rate of increasing contamination of their sea. They signed agreements to stop marine pollution, tackle oil emergencies and curb the threats from land.

The Kuwait Action Plan Region, source of 60 per cent of the world's oil, has also concentrated on limiting marine pollution as a first step.

For other regions, the first priority has been to find a sound environmental road to development which would not destroy their seas. The Caribbean, West African and South Pacific regions have developed programmes that look at the whole environmental picture. It is in this framework that they see the marine environment and tackle its problems.

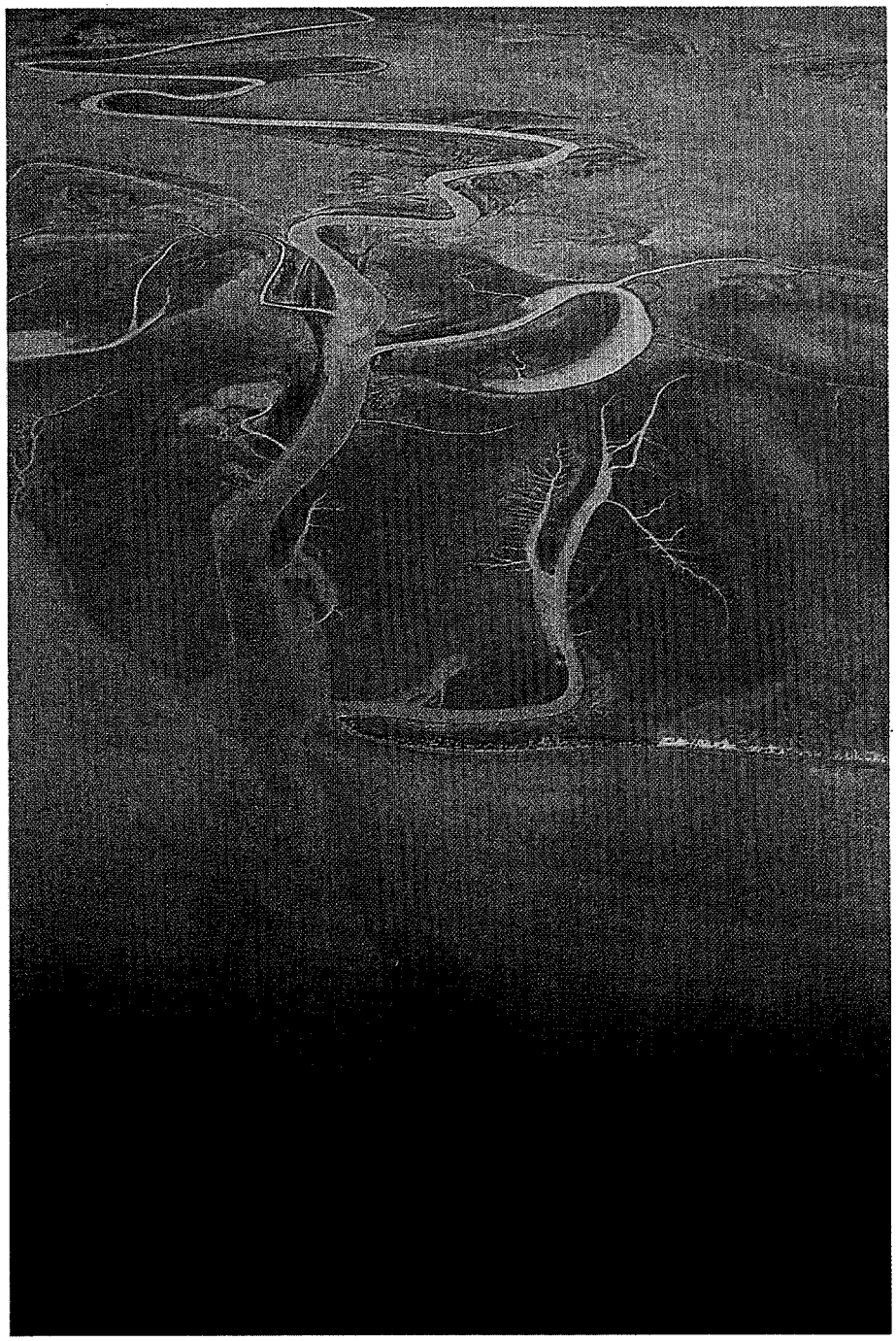
Furthermore, this approach fits their cultural traditions of respect for the "free gifts" of nature, rather than a manipulative view of the environment.

The latest Kuwait Action Plan Region and Mediterranean projects, too, put more of an emphasis on conservation measures.

Environmental management also plays a major role in the Action Plan for the Red Sea and Gulf of Aden. The sea holds special interest for scientists because of its unique geological qualities (it is thought to be an ocean in the first stages of formation) and its varied ecosystems which include some of the world's most spectacular coral reefs. But, fueled by oil revenues, coastal cities and industries have been growing fast.

The action plan, signed by six coastal states of the region, contains a chapter on environmental management designed to prevent damage to the marine and coastal environment by economic and social activities.

A river joins the sea from the desert near Bandar-e-Deylam, Iran. The sea, less than 16 kilometres deep for miles offshore, is one of the most fragile ecosystems on earth.



FOOD FROM THE SEA

By the year 2000 we expect to have four times as many people on earth as at the beginning of the century: around 6 thousand million, up from 1.5 thousand million in 1900.

Three out of four of these people will be living in the poorer regions of our planet, in countries that are still industrializing, still trying to build up their export trade, and struggling to feed a fast-growing population. Planners will be trying to give these people jobs, find places for them to establish a home, and offer them a decent life.

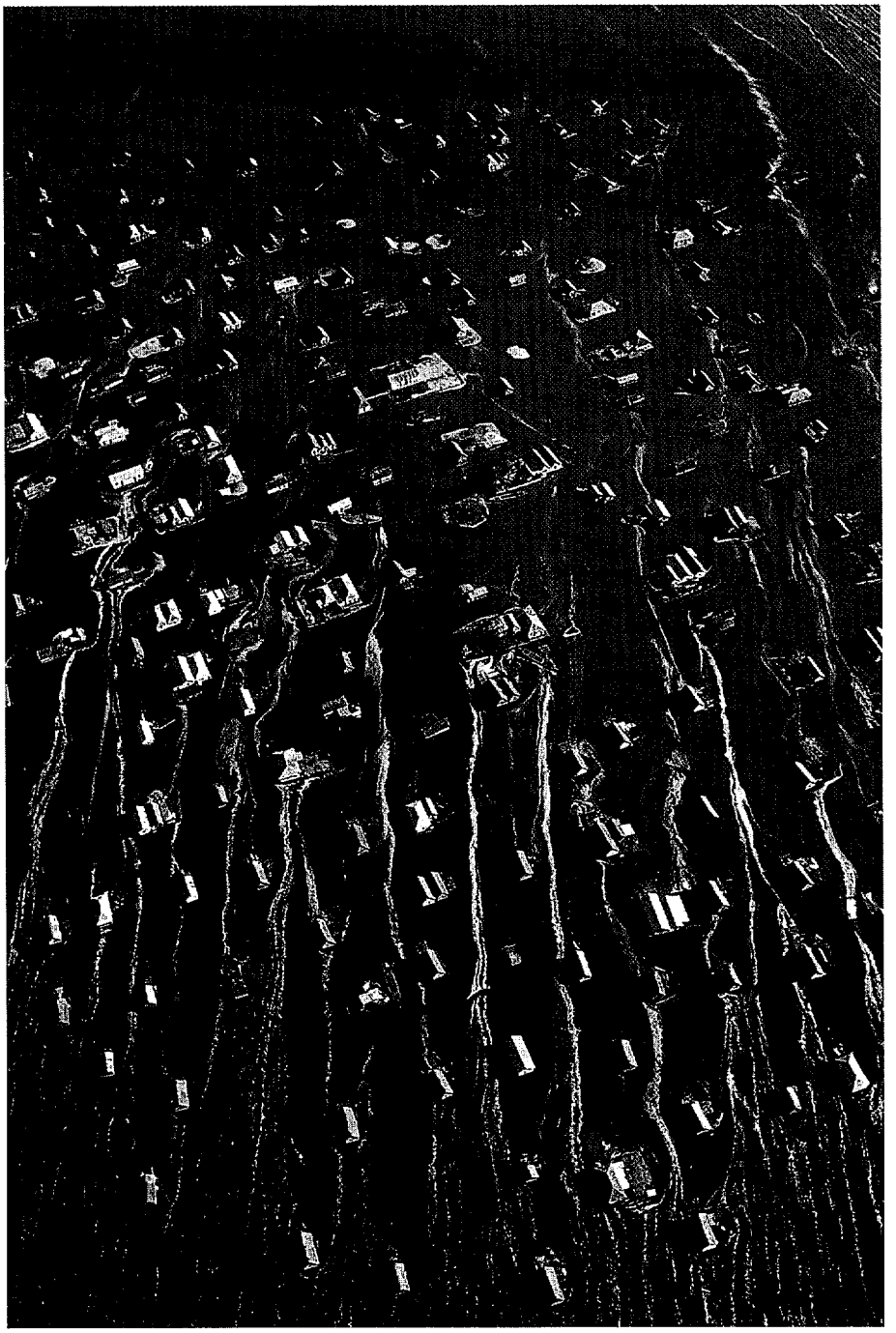
Many developing countries are looking increasingly towards the sea to provide them with a means of feeding their populations over the coming decades.

This will be a major challenge.

Fish catches, estimated at 77 million tonnes in 1983, are no longer increasing as they used to. From more than 5 per cent a year during the 1950s and 1960s the growth rate has dropped to less than 2 per cent. Even if we can keep to this rate, it will take 35 years for this harvest to double.

Scientists differ in their explanation for the slowdown. Some blame overfishing, some pollution, some say it is part of a natural cycle beyond our control. They also disagree on how much of a harvest we can expect from the seas. Some pin their hopes on persuading people to eat different kinds of fish — only a dozen different types are consumed in large numbers. Others point to the explosive growth of aquaculture — fish breeding and cultivation in fresh and salt waters — as a way ahead.

The fishing village of Nueva Venecia (New Venice) in the Cienaga Grande de Santa Marta, a lagoon on the Caribbean coast of Colombia.



SUSTAINABLE DEVELOPMENT

Nowhere are nations more aware of these pressures than in Asia and the Asian Pacific. The region is the home of over half the world's present population, and has 11 of the 25 largest cities. By the year 2000 the total will be 15, and all but two are on the coast. Every one may have more than 10 million inhabitants.

Dumping of wastes into the sea is already causing critical conditions in several coastal areas. The marine environment, a major source of food, suffers tremendous and increasing pressure from these effluents, coastal land reclamation projects, building, and agro-chemical runoff from land.

In the South Asian seas, fish production is almost exclusively inshore. Fishermen from Bangladesh, India, Maldive Islands and Sri Lanka, working the coastal waters, take 95 per cent of their states' available catch. Fresh water fisheries and aquaculture do make a major contribution to food supplies, almost half the total fish harvest.

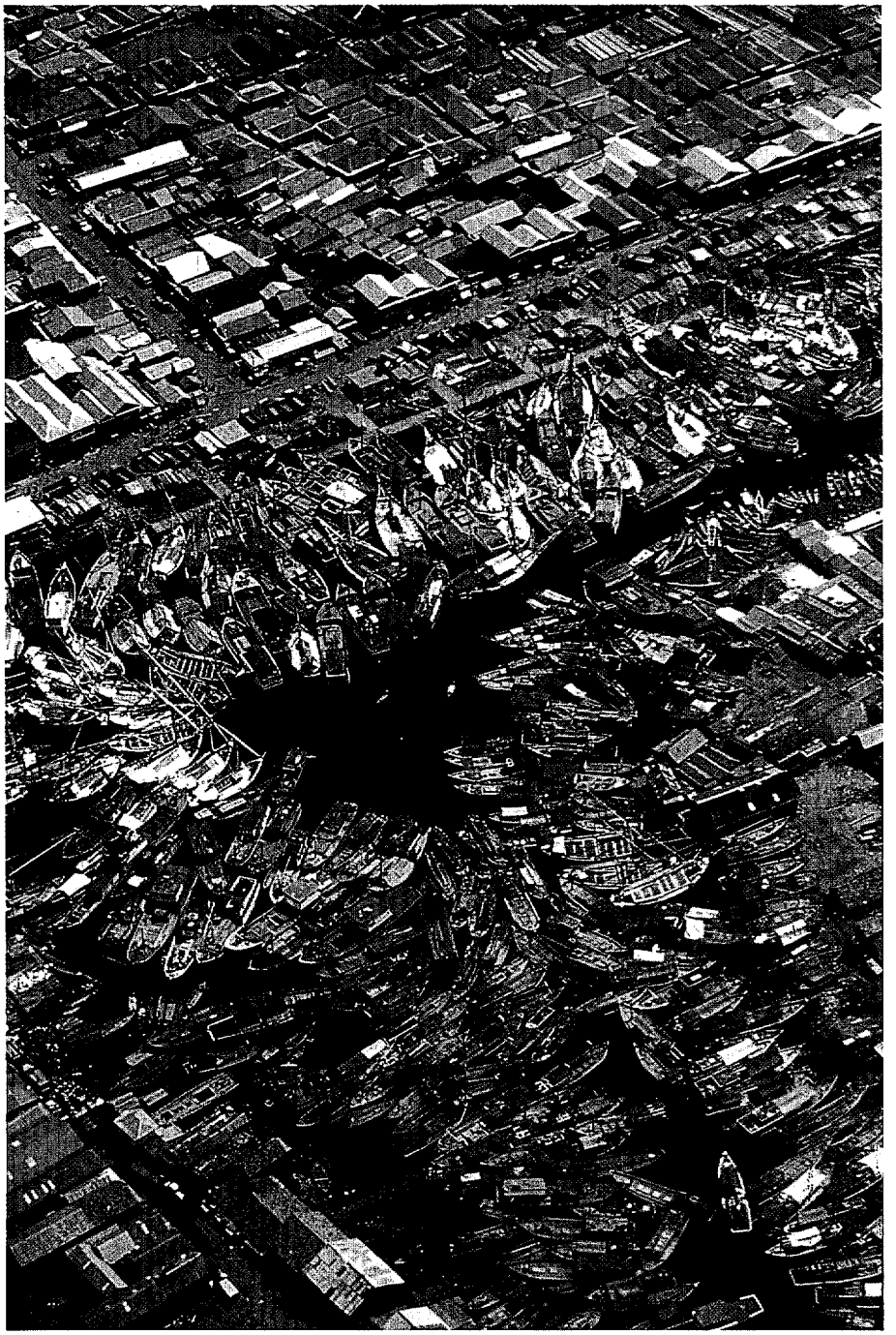
For this reason, their deliberations centre on keeping fisheries as sustainable resources by controlling the impact of development on the coastal environment. Other regions, too, are pushing ahead with fish farming projects.

BETWEEN THE DESERT AND THE DEEP BLUE SEA

The countries of West and Central Africa face the pressures of development in an acute form. The continent has the fastest-growing population in the world, and it is expected to double by the year 2000. West Africa has plenty of resources but these are being used up or degraded at rates the countries are unable to control. Agricultural lands are being chewed up by the desert to their east. Forests in the south are being torn down for short-term profits. People are crowding into the coastal zone, straining its capacity.

Caught between the desert and the sea, the African states look to the sea as an alternative source of food. But

A traffic jam of boats in a timber port near Jakarta, Indonesia.



foreign ships take 90 per cent of the catch. The tanker traffic between the Indian Ocean and Europe pollutes the coastal waters. Wastes from the shore and sediments pour in from eroded inland areas, creating local hazards to the health of coastal populations and artisanal fisheries. Rivers, lagoons, estuaries and coastal waters near some major cities are already suffering severely from developing industries.

Across the globe, other nations face similar problems: in South Asia, the Caribbean and parts of the South-East Pacific.

But the West and Central African states agreed on exceptionally close co-operation to deal with their problems. When adopting a Convention, and Protocol on co-operating in fighting pollution emergencies, the states approved a declaration giving naval vessels a right of "hot pursuit" against ships which discharge oil, even if this means entering a neighbouring country's national waters.

The states have started drawing up national contingency plans to cope with emergencies resulting from catastrophic failures of industrial plants.

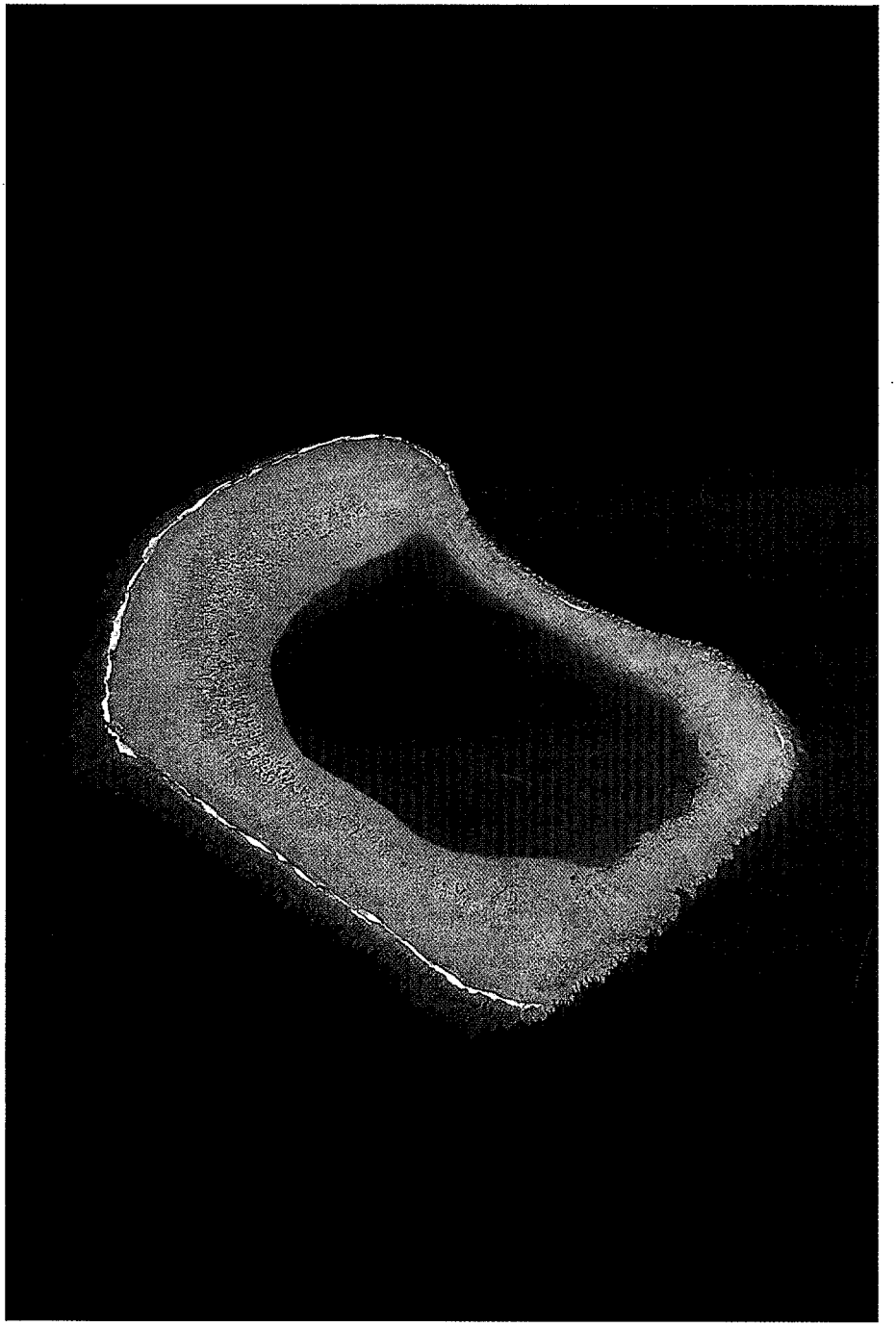
Ten states have said they want to take part in a project on controlling coastal erosion in West and Central Africa, and scientists are being trained to monitor marine pollution.

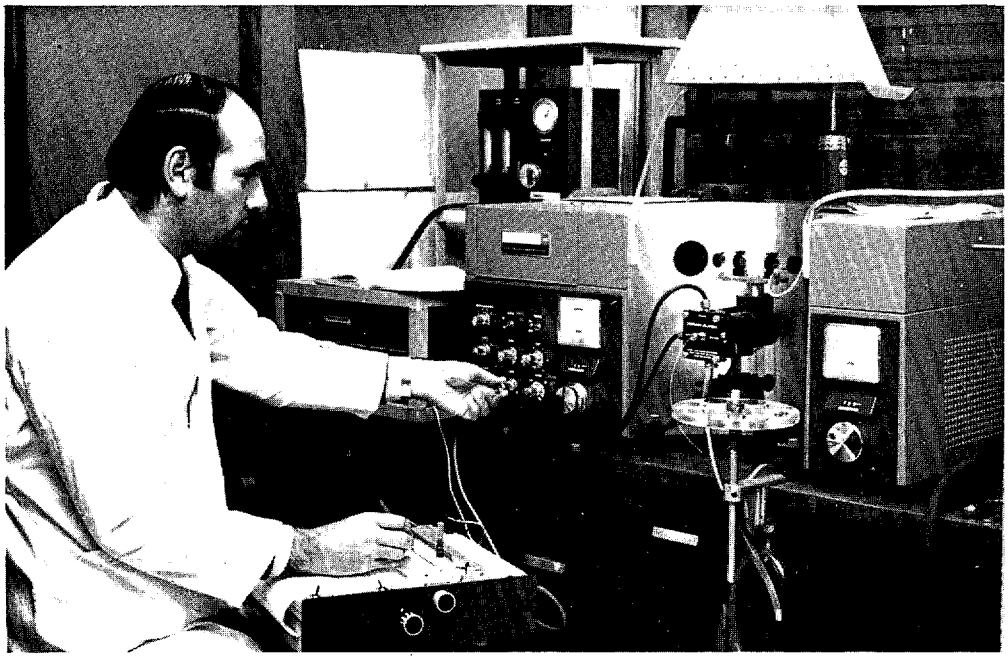
WORRIED ABOUT WASTE

The 22 Governments of the South Pacific region have been particularly worried about the effects of wastes. For the rest of the world, the South Pacific means sandy beaches, palm trees, clear water and a healthy way of life. Though true, this picture has another side: many of the countries are small and isolated islands with extremely fragile ecological systems. Management and disposal of hazardous wastes are especially difficult.

Yet because of its size, the South Pacific has been a favourite dumping ground for nuclear wastes as well as for atomic bomb tests. The concern of Pacific islanders culminated in a policy statement by the 1982 Conference on the Human Environment in the South Pacific, held at Rarotonga, to endorse an Action Plan for the South Pacific. The Rarotonga Declaration announced agreement that "the storage and release of nuclear waste in the Pacific regional environment shall be prevented". It also said: "Testing of nuclear devices against the wishes of the majority of the people in the Region will not be permitted."

Duff Reef, a coral halo in the Lau archipelago of the Fiji Islands.





THE FRAMEWORK FOR CO-OPERATION

In developing programmes for the marine environment, most regions have based their efforts on a framework designed by UNEP 10 years ago now. This proposed the following elements:

— a scientific programme including monitoring of the sources and level of pollutants and research into their effects;

— a legal convention embodying general commitments to environmental protection, with any number of supporting protocols on specific issues such as dumping, protected areas and actions to be taken in emergencies such as oil and chemical spills;

— a plan for rational development and resource management built on sound environmental and socio-economic principles, and

— financial and institutional back-up arrangements.

UNEP and other international organizations and regional groups put up the seed money for programmes, with the aim that Governments themselves will take over the financing as their programme develops. Both the Kuwait Action Plan Region and the Mediterranean programmes now effectively pay their own way. The Caribbean is expected soon to follow suit.

Developing countries, often short of scientific expertise, equipment and institutions, generally need technical assistance and training to take part fully in an action plan. Most of UNEP's support is channelled to meet these needs.

CORAL REEFS AND MANGROVES: THE SILENT CRISIS

Off the coasts in tropical waters are found the most complex of earth's marine inhabitants, the coral reefs. The calcium rocks formed from the skeletons of the tiny coral animals extend in some parts over 100 metres into the deep and have been estimated as being up to 160,000 years old.

Life in a reef is as stratified as in a tropical rain forest, so that species do not have to compete rapaciously for food and space. As a result, the coral reefs harbour a great diversity of species.

But many of the coral reefs are dying in a silent crisis. These treasure troves of marine life, offering food and shelter for about a third of all known fish species, are being smothered. They are being buried by sediments which run off from land as a result of intensive agriculture, deforestation and dredging. Sewage, piped untreated from the land to the sea, is a major coral killer. Reefs are being destroyed by fishermen using dynamite or poison, by coral hunters serving the tourist trade, and by thoughtless holidaymakers looking for a souvenir.

The immediate effects are not as spectacular as pollution, but they are perhaps even more important for the long-term health of the marine environment. Some scientists argue that habitat destruction is the main reason why species become extinct.

The same goes for mangrove swamps and salt marshes. The marshes provide food and a home for fish, shellfish, wildfowl and mammals. Ducks, geese and other wild birds stop over at coastal wetlands during migration. Flounder and bluefish use the marshes as nurseries, winter quarters and occasional feeding grounds.

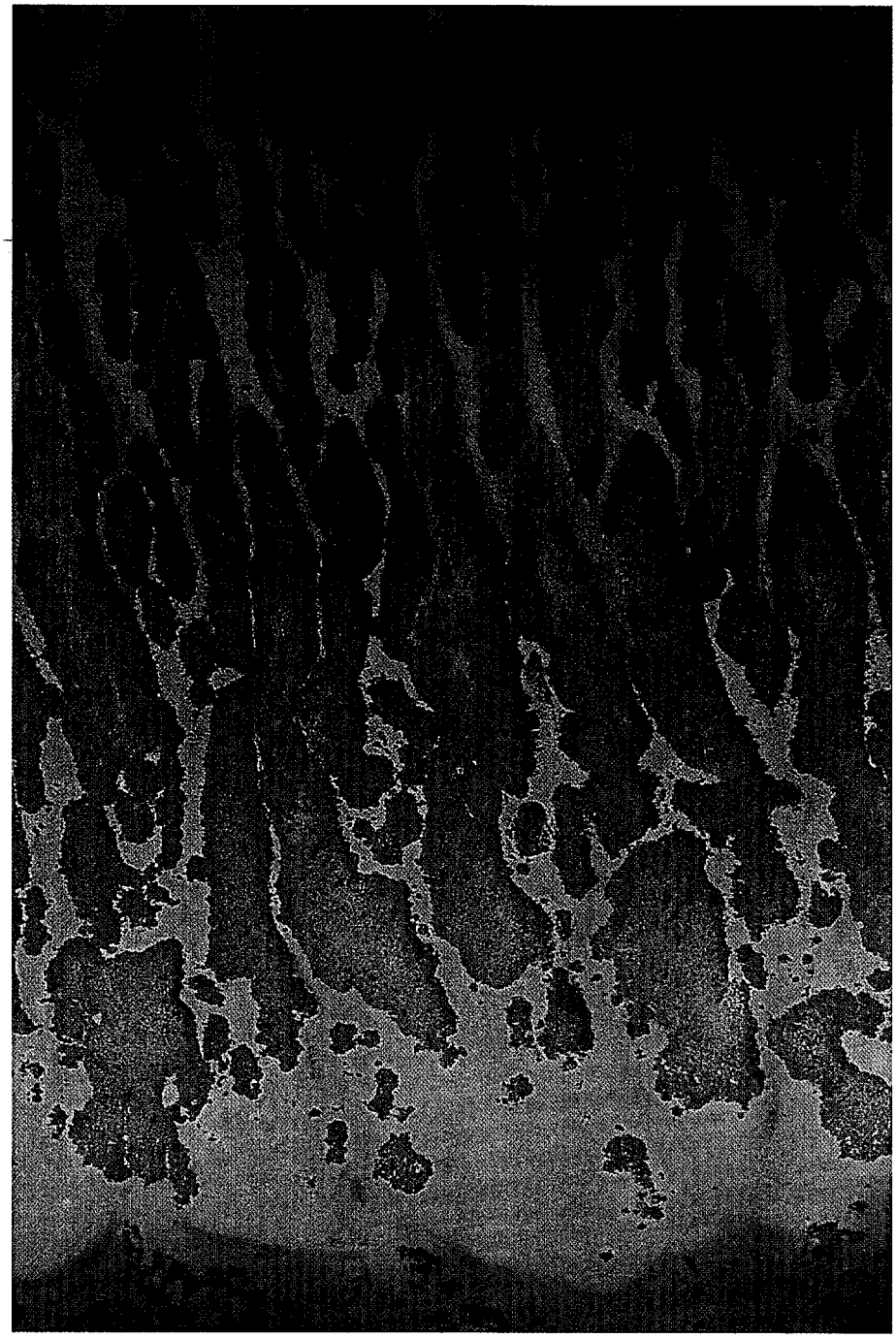
Tropical mangroves shelter many bird and mammal species, offering nursery and breeding grounds for freshwater and marine life, especially shrimp.

Industry, farmers and home builders, however, have traditionally filled in salt marshes or dredged them. They are a favourite site for refineries, power stations and dykes. Mangroves are torn up to provide fire wood in many regions. The swamps are turned into marinas.

Hardly anyone objects when a swamp is filled in — so precious mangrove life is threatened in several countries, from the Americas to southern Thailand.

Erosion often follows, because the salt marshes, mangrove swamps and coral reefs act as breakwaters preserving coastlines from buffeting waves. Because of coral mining off Sri Lanka, for instance, the coastline has been retreating some two metres a year over a distance of 10 kilometres.

Williamson Coral Reef near Fiji.



THE PRECIOUS FRINGE

The Eastern African region is fringed with coral reefs and mangroves, and abounds with fish. The Indian Ocean has at least 3,000 varieties of shore fish. The mangrove swamps provide oysters, crabs and mullet for the commercial market.

But a scientific mission sent by UNEP in 1981 to evaluate the state of the region's marine environment found widespread damage to coral reefs.

The region is also a major oil tanker route, and the mission found oil pollution throughout Eastern Africa. Land-based pollution, from fertilizers and untreated sewage were also problems.

The Eastern African states have now drawn up texts for a regional convention for the protection, management and development of the marine and coastal environment, a protocol on protected areas and wild fauna and flora, and a protocol on co-operation in combating marine pollution in cases of emergency.

A mangrove swamp in the Niger River delta, Nigeria.

TO PRESERVE AND PROTECT

The marine mammals — among them whales, seals and dolphins — have perhaps suffered most from being ruthlessly hunted. Several species are near extinction.

Whales have been hunted for their meat and blubber — as food for humans and household pets, for candle wax, a base of cosmetics, and fine lubricating oil. Several species are now endangered or existing precariously, despite international efforts to operate a global, scientifically-based agreement to keep whale stocks at an optimal level.

Coastal development and herbicide pollution are destroying the habitat of sirenians such as the Caribbean manatee, which live in sheltered areas near land.

Hundreds of thousands of dolphins and small whales die each year when they get caught in fishing nets. Marine otters are hunted for their pelts or killed by fishermen who exploit the sea urchins and molluscs on which they feed.

However, several Eskimo groups have lived for centuries on seals and whales. They say a blanket prohibition on killing, designed to curb commercial hunters, would destroy their traditional way of life.

Other nations argue that whale-hunting is a tradition whose abrupt end would cause misery and unemployment in their societies.

Marine mammals are by no means the only sea creatures at risk of vanishing forever from our planet as a result of human activities over the past decades. Marine reptiles are also threatened. In the Caribbean marine turtle populations have slumped in the past 10 years. Some 40,000 hatched on the Gulf of Mexico in 1974. Two years later only 700 were found and in 1977 just 450.

The Food and Agriculture Organization of the United Nations and the United Nations Environment Programme began work in 1978 on a Global Action Plan for the conservation and rational utilization of marine mammals. UNEP's Governing Council endorsed the plan in 1984 to serve as a framework for planning policy and drawing up programmes.

The States of the Mediterranean approved a protocol in 1982 to create a network of specially-protected areas to safeguard natural resources. The total of marine parks, reserves and other protected zones could rise to about 100. The plan will enable countries to establish zones to save endangered species or habitats for migratory birds.

The Kuwait Action Plan Region, concerned to protect its valuable marine mammals, is carrying out ecosystem studies to ensure the animals are not endangered.

A Galapagos sea-lion.

OPTIONS FOR TOMORROW

The very factors which have made the coastal environment so rich and attractive to humanity also put it under greater stress. The tides and currents which make coastal waters such biologically productive regions also make them vulnerable to pollution.

Rapid population growth, urbanisation, industrialisation and technological progress have added to the natural loads of minerals and chemicals in coastal waters. In some places they have become a toxic brew.

The problem facing the world's nations today is to find a balance between their needs and the cost in disruption to the environment. But conservation and development can go hand in hand. Through UNEP's programme for oceans and coastal areas, countries are already showing the way in managing the marine environment.

BASIC FACTS ABOUT UNEP'S REGIONAL SEAS PROGRAMME

THE MEDITERRANEAN REGION (MED)

(i) Geographically defined:

– for the purpose of the Action Plan (Barcelona, 1975): the Mediterranean Sea proper between the Straits of Gibraltar and the Straits of the Dardanelles with the adjacent coast defined on an ad hoc basis by the Governments of Spain, France, Monaco, Italy, Yugoslavia, Albania, Greece, Turkey, Cyprus, Syria, Lebanon, Israel, Egypt, Libya, Malta, Tunisia, Algeria and Morocco;
– for the purpose of the Convention for the Protection of the Mediterranean Sea against Pollution (Barcelona, 1976): «the maritime waters of the Mediterranean Sea proper, including its gulfs and seas bounded to the west by the meridian passing through Cape Spartel lighthouse, at the entrance of the Straits of Gibraltar, and to the east by the southern limits of the Straits of the Dardanelles between Mehmetcik and Kumkale lighthouses»;

(ii) Mediterranean Action Plan

– Participants: Algeria, Cyprus, Egypt, EEC, France, Greece, Israel, Italy, Lebanon, Libyan Arab Jamahiriya, Malta, Monaco, Morocco, Spain, Syrian Arab Republic, Tunisia, Yugoslavia.
– Adopted: February 1975. Barcelona, Spain.

(iii) Convention for the Protection of Mediterranean Sea Against Pollution.

– Adopted: 16 February 1976. Barcelona, Spain.
– Signed by: Cyprus, Egypt, EEC, France, Greece, Israel, Italy, Lebanon, Libyan Arab Jamahiriya, Malta, Monaco, Morocco, Spain, Tunisia, Turkey, Yugoslavia.
– Entry into force: 12 February 1978
– Ratified by: Algeria, Cyprus, Egypt, EEC, France, Greece, Israel, Italy, Lebanon, Libyan Arab Jamahiriya, Malta, Monaco, Morocco, Spain, Syrian Arab Republic, Tunisia, Turkey, Yugoslavia.

(iv) Protocol for the Prevention of Pollution of the Mediterranean Sea by Dumping from Ships and Aircraft.

– Adopted: 16 February 1976. Barcelona, Spain
– Signed by: Cyprus, Egypt, EEC, France, Greece, Israel, Italy, Lebanon, Libyan Arab Jamahiriya, Malta, Monaco, Morocco, Spain, Tunisia, Turkey, Yugoslavia.
– Entry into force: 12 February 1978
– Ratified by: Algeria, Cyprus, Egypt, EEC, France, Greece, Israel, Italy, Lebanon, Libyan Arab Jamahiriya, Monaco, Morocco, Spain, Syrian Arab Republic, Tunisia, Turkey, Yugoslavia.

(v) Protocol Concerning Co-operation in Combating Pollution of the Mediterranean Sea by Oil and Other Harmful Substances in Cases of Emergency.

– Adopted: 16 February 1976. Barcelona, Spain
– Signed by: Cyprus, Egypt, EEC, France, Greece, Israel, Italy, Lebanon, Libyan Arab Jamahiriya, Malta, Monaco, Morocco, Spain, Tunisia, Turkey, Yugoslavia.
– Entry into force: 12 February 1978
– Ratified by: Algeria, Cyprus, Egypt, EEC, France, Greece, Israel, Italy, Lebanon, Libyan Arab Jamahiriya, Malta, Monaco, Morocco, Spain, Syrian Arab Republic, Tunisia, Turkey, Yugoslavia.

(vi) Protocol for the Protection of the Mediterranean Sea Against Pollution from Land-Based Sources.

– Adopted: 17 May 1980. Athens, Greece
– Signed by: Cyprus, EEC, France, Greece, Israel, Italy, Lebanon, Libyan Arab Jamahiriya, Malta, Monaco, Morocco, Spain, Tunisia, Turkey.
– Entry into force: 17 June 1983
– Ratified by: Algeria, EEC, Egypt, France, Monaco, Spain, Tunisia, Turkey

(vii) Protocol Concerning Mediterranean Specially Protected Areas

– Adopted: 2 April 1982. Geneva, Switzerland
– Signed by: EEC, Egypt, France, Greece, Israel, Italy, Malta, Monaco, Morocco, Spain, Tunisia, Yugoslavia
– Ratified by: EEC, Egypt and Tunisia

(viii) Secretariat arrangements:

UNEP has been designated as responsible for secretariat functions of the Action Plan, the Convention, and the Protocols. A Regional Co-ordinating Unit has been established in Athens for this purpose.

(ix) Financial arrangements for the implementation of the Action Plan:

– The Mediterranean Trust Fund was established at the request of the contracting parties to the Convention, and it is administered by UNEP.

THE KUWAIT ACTION PLAN REGION (KAP)

(i) Geographically defined:

– for the purpose of the Action Plan (Kuwait, 1978): the sea area bounded in the south by the rhumb line defined by the Kuwait Regional Convention for Co-operation on the Protection of the Marine Environment from Pollution and the coastal areas identified by the Governments of Bahrain, Iran, Iraq, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates on an ad hoc basis depending on the type of activities to be carried out:
– for the purpose of the Kuwait Regional Convention for Co-operation on the Protection of the Marine Environment from Pollution (Kuwait, 1978): «the sea area... bounded in the south by the following rhumb lines: from Ras Dharbat Ali (16 39'N, 53 3'30"E) to a position 16 00'N, 53 25'E); thence through the following positions: 17 00'N, 56 30'E and 20 30'N, 60 00'E to Ras Al-Fasteh (25 04'N, 61 25'E).»

(ii) Action Plan for the Protection and Development of the Marine Environment and the Coastal Areas

of Bahrain, Iran, Iraq, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates.

– Participants: Bahrain, Iran, Iraq, Kuwait, Oman, Qatar, Saudi Arabia, United Arab Emirates.
– Adopted: 23 April 1978, Kuwait.

(iii) Kuwait Regional Convention for Co-operation on the Protection of the Marine Environment from Pollution.

– Adopted: 23 April 1978. Kuwait.
– Signed by: Bahrain, Iran, Iraq, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates.
– Entry into force: 1 July 1979
– Ratified by: Bahrain, Iran, Iraq, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates.

(iv) Protocol Concerning Regional Co-operation in Combating Pollution by Oil and Other Harmful Substances in Cases of Emergency.

– Adopted: 23 April 1978. Kuwait
– Signed by: Bahrain, Iran, Iraq, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates
– Entry into force: 1 July 1979
– Ratified by: Bahrain, Iran, Iraq, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates.

(v) Secretariat arrangements:

– The secretariat functions of the Kuwait Action Plan are carried out by the Regional Organization for the Protection of the Marine Environment (ROPME).

(vi) Financial arrangements:

Two mechanisms have been created for the implementation of the Kuwait Action Plan activities: i) The Kuwait Trust Fund was established at the request of the contracting parties to the Convention, and it is administered by UNEP, and ii) a Regional General Fund managed by ROPME.

THE WEST AND CENTRAL AFRICAN REGION (WACAF)

(i) Geographically defined:

– for the purpose of the Action Plan (Abidjan, 1981): the marine environment and coastal areas to be considered as part of the region will be identified by the Governments concerned on an ad hoc basis, depending on the type of activities to be carried out as part of the Action Plan;
– for the purpose of the Convention for Co-operation in the Protection and Development of the Marine and Coastal Environment of the West and Central African Region (Abidjan, 1981): «the marine environment, coastal zones and related inland waters falling within the jurisdiction of the States of the West and Central African Region, from Mauritania to Namibia inclusive, which have become Contracting Parties to this Convention under conditions set forth in articles 27 and 28(1)».

(ii) Action Plan for the Protection and Development of the Marine Environment and Coastal Areas of the West and Central African Region.

– Participants: Angola, Benin, Cape-Verde, Congo, Equatorial Guinea, Gabon, Gambia, Ghana, Guinea, Guinea Bissau, Ivory Coast, Liberia, Mauritania, Namibia, Nigeria, Republic of Cameroon, Sao Tome and Principe, Senegal, Sierra Leone, Togo, Zaire
– Adopted: 23 March 1981. Abidjan, Ivory Coast.

(iii) Convention for Co-operation in the Protection and Development of the Marine and Coastal Environment of the West and Central African Region.

– Adopted: 23 March 1981. Abidjan.
– Signed by: Benin, Congo, Gabon, Gambia, Ghana, Guinea, Ivory Coast, Liberia, Mauritania, Nigeria, Senegal, Togo
– Ratified by: Guinea, Ivory Coast, Nigeria, Republic of Cameroon, Senegal, Togo
– Entry into force: 5 August 1984

(iv) Protocol Concerning Co-operation in Combating Pollution in Cases of Emergency.

– Adopted: 23 March 1981. Abidjan.
– Signed by: Benin, Congo, Gabon, Gambia, Ghana, Guinea, Ivory Coast, Liberia, Mauritania, Nigeria, Senegal, Togo
– Entry into force: 5 August 1984.
– Ratified by: Guinea, Ivory Coast, Nigeria, Republic of Cameroon, Senegal, Togo

(v) Secretariat arrangements:

UNEP has been designated as responsible for secretariat functions of the Action Plan, the Convention and the Protocol.

(vi) Financial arrangements:

The West and Central African Trust Fund was established at the request of the Governments who adopted the Action Plan, the Convention and Protocol, and is administered by UNEP on their behalf.

THE WIDER CARIBBEAN REGION (CAR)

(i) Geographically defined:

– for the purpose of the Action Plan: (Montego Bay, 1981): «The insular and coastal States and Territories of the Carribbean Sea and the Gulf of Mexico, including the Bahamas, Guyana, Suriname and the French Department of Guiana, as well as the waters of the Atlantic Ocean adjacent to these States and Territories. Other countries may participate in the Action Plan if they so desire, and, in accordance with United Nations procedures, they will be classified in terms of the nature of their participation».
– for the purpose of the Convention (Cartagena de Indias, 1983): «the marine environment of the Gulf of Mexico, the Caribbean Sea and the areas of the Atlantic Ocean adjacent thereto, south of 30° north latitude and within 200 nautical miles of the Atlantic coasts of the States referred to in article 25 of the Convention.»

(ii) Action Plan for the Caribbean Environment Programme.

– Participants: Antigua and Barbuda, Bahamas, Barbados, Belize, Colombia, Costa Rica, Cuba, Dominica, Dominican Republic, EEC, France, Grenada, Guatemala, Guyana, Haiti, Honduras, Jamaica, Mexico, Netherlands, Netherland Antilles, Nicaragua, Panama, St. Christopher and Nevis, St. Lucia, St. Vincent and the Grenadines, Suriname, Trinidad and Tobago, United Kingdom, United States, Venezuela.
– Adopted: 23 April 1981. Montego Bay, Jamaica.

(iii) Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region.

– Adopted: 24 March 1983. Cartagena de Indias, Colombia.
– Signed by: Barbados, Colombia, EEC, France, Grenada, Guatemala, Honduras, Jamaica, Mexico, Netherlands, Nicaragua, Panama, St. Lucia, United Kingdom, USA, Venezuela.
– Ratified by: Netherlands, St. Lucia, USA.

(iv) Protocol Concerning Co-operation in Combating Oil Spills in the Wider Caribbean Region.

– Adopted: 24 March 1983. Cartagena de Indias, Colombia.
– Signed by: Barbados, Colombia, France, Grenada, Guatemala, Honduras, Jamaica, Mexico, Netherlands, Nicaragua, Panama, St. Lucia, United Kingdom, USA, Venezuela.
– Ratified by: Netherlands, St. Lucia, USA.

(v) Secretariat arrangements:

UNEP has been designated as responsible for the secretariat functions of the Action Plan, the Convention and the Protocol.

(vi) Financial arrangements:

The Caribbean Trust Fund was established at the request of the parties that adopted the Action Plan, and it is administered by UNEP.

THE EAST ASIAN SEAS REGION (EAS)

(i) Geographically defined:

– for the purpose of the Action Plan (Manila, April 1981): «the marine environment and coastal areas of Indonesia, Malaysia, Philippines, Singapore and Thailand without prejudice to its future extension so as to cover the marine environment and coastal area of all States bordering the East Asian Seas as may be determined at a later stage».

(ii) Action Plan for the Protection and Development of the Marine and Coastal Areas of the East Asian Seas Region:

– Participants: Indonesia, Malaysia, Philippines, Singapore, Thailand.
– Adopted: 29 April 1981. Manila, Philippines. 11 December 1981, Bangkok, Thailand.

(iii) Secretariat arrangements:

UNEP has been designated as responsible for the Secretariat functions of the Action Plan.

(iv) Financial arrangements:

The East Asian Seas Trust Fund was established, at the request of the parties that adopted the Action Plan, and it is administrated by UNEP.

THE SOUTH-EAST PACIFIC REGION (SE/PCF)

(i) Geographically defined:

– for the purpose of the Action Plan (Lima, 1981): «the marine environment and the Pacific coastal areas of the following States: Colombia, Chile, Ecuador, Panama and Peru».
– for the purpose of the Convention for the Protection of the Marine Environment and Coastal Zones of the South-East Pacific (Lima, 1981): «the sea area and the coastal zones of the South-East Pacific within the 200-mile maritime area of sovereignty and jurisdiction of the High Contracting Parties and beyond that area in the high seas up to a distance within which pollution of the high seas may affect the area».
– for the purpose of the Agreement on Regional Co-operation for Combating the Contamination of the South-East Pacific by Hydrocarbons and other Harmful Substances in Cases of Emergency (Lima, 1981): «the sea area of the South-East Pacific within the 200-mile maritime area of sovereignty and jurisdiction of the High Contracting Parties and beyond that area in the high seas up to a distance within which discharged pollutants constitute a danger... to the waters of the aforesaid maritime area».

(ii) Action Plan for the Protection of the Marine Environment and Coastal Areas of the South-East Pacific.

– Participants: Colombia, Chile, Ecuador, Panama, Peru.
– Adopted: 12 November 1981. Lima, Peru.

(iii) Convention for the Protection of the Marine Environment and Coastal Area of the South-East Pacific.

– Adopted: 12 November 1981. Lima, Peru.
– Signed by: Colombia, Chile, Panama, Peru.
– Ratified by: Ecuador

(iv) Agreement on Regional Co-operation in Combating Pollution of the South-East Pacific by Hydrocarbons and Other Harmful Substances in Cases of Emergency.

– Adopted: 12 November 1981. Lima, Peru.
– Signed by: Colombia, Chile, Ecuador, Panama, Peru.
– Ratified by: Ecuador.

(v) Protocol for the Protection of the South-East Pacific against Pollution from Land-Based Sources.

– Adopted: 22 July 1983. Quito, Ecuador.
– Signed by: Colombia, Chile, Ecuador, Panama, Peru.

(vi) Complementary Protocol to the Agreement on Regional Co-operation in Combating Pollution of the

South-East Pacific by Hydrocarbons and Other Harmful Substances in Cases of Emergency.

– Adopted: 22 July 1983. Quito
– By: Colombia, Chile, Ecuador, Panama, Peru.

(vii) Secretariat arrangements:

The general secretariat of the Permanent Commission for the South-East Pacific (CPPS) has been designated as responsible for the secretariat functions of the Action Plan, the Convention, the Agreement and the Protocols.

(vi) Financial arrangements:

A South-East Pacific Trust Fund was established at the request of the parties that adopted the Action Plan and the Convention, and it is administered by the CPPS.

THE RED SEA AND GULF OF ADEN REGION (RED)

(i) Geographically defined:

– for the purpose of the Action Plan and the Convention: «the Red Sea, Gulf of Aqaba, Gulf of Suez, Suez Canal to its end on the Mediterranean, and the Gulf of Aden as bounded by the following rhumb lines: from Ras Dharbat Ali (Lat. 16 39'N, Long. 53 03'E), thence to a point (Lat. 16 00'N, Long. 53 25'E), thence to a point (Lat. 12 40'N, Long. 55 00'E) lying E.N.E. of Socotra Island, thence to Ras Hafun (Lat. 10 26'N, Long. 51 25'E).» The coastal area to be covered by the Action Plan will be identified by the relevant Governments of the Region on an ad hoc basis depending on the type of activities to be carried out.

(ii) Action Plan for the Conservation of the Marine Environment and Development of Coastal Areas in the Red Sea and Gulf of Aden.

– Participants: Democratic Yemen, Jordan, Palestine, Saudi Arabia, Somalia, Sudan, Yemen.
– Adopted: 14 February 1982. Jeddah, Saudi Arabia.

(iii) Convention for the Conservation of the Marine Environment of the Red Sea and Gulf of Aden.

– Adopted: 14 February 1982. Jeddah, Saudi Arabia.
– Signed by : Democratic Yemen, Jordan, Palestine, Saudi Arabia, Somalia, Sudan, Yemen.
– Ratified by: Palestine, Sudan, Yemen.

(iv) Protocol Concerning Regional Co-operation in Combating Marine Pollution by Oil and Other Harmful Substances

– Adopted: 14 February 1982
– Signed by: Democratic Yemen, Jordan, Palestine, Saudi Arabia, Somalia, Sudan, Yemen.
– Ratified by: Palestine, Sudan, Yemen.

(v) Secretariat arrangements:

The Red Sea and Gulf of Aden Environment Programme Office (PERGSA) – which is operated by the Arab League Educational, Cultural and Scientific Organization (ALECSO) – was designated as the secretariat of the Action Plan on an interim basis until the establishment of the Regional Organization for the Conservation of the Marine Environment.

(vi) Financial arrangements:

The parties that adopted the Action Plan and the Convention contribute towards an agreed budget in addition to contributions from ALECSO.

THE SOUTH PACIFIC REGION (SPCF)

(i) Geographically defined:

– for the purpose of the Action Plan (Rarotonga, March 1982): «area of responsibility of the South Pacific Commission, together with any associated national maritime resource management zones. Countries and territories within this area are: American Samoa, Cook Islands, Federated States of Micronesia, Fiji, French Polynesia, Guam, Kiribati, Marshall Islands, Nauru, New Caledonia, Niue, Northern Mariana Islands, Palau, Papua New Guinea, Pitcairn Island, Solomon Islands, Tokelau, Tonga, Tuvalu, Vanuatu, Wallis and Futuna and Western Samoa.»

(ii) Action Plan for Managing the Natural Resources and Environment of the South Pacific Region.

– Participants: American Samoa, Australia, Cook Islands, Federated States of Micronesia, Fiji, France, French Polynesia, Guam, Kiribati, Marshall Islands, Nauru, New Caledonia, New Zealand, Niue, Northern Mariana Islands, Palau, Papua New Guinea, Pitcairn Island, Solomon Islands, Tokelau, Tonga, Tuvalu, United Kingdom, United States of America, Vanuatu, Wallis and Futuna, Western Samoa.
– Adopted: 11 March, 1982, Rarotonga, Cook Islands.

(iii) Convention for the Protection and Development of the Natural Resources and Environment of the South Pacific Region.

– Being negotiated, adoption expected in late 1986

(iv) Protocol for the Prevention of Pollution of the South Pacific Region by Dumping.

– Being negotiated, adoption expected in late 1986

(v) Protocol Concerning Co-operation in Combating Oil Pollution Emergencies in the South Pacific Region.

– Being developed, adoption expected in late 1986

(vi) Secretariat arrangements:

The South Pacific Commission (SPC) through the Secretariat of the South Pacific Regional Environment Programme (SPREP), is responsible for the technical co-ordination and implementation of the Action Plan. The central co-ordination and guidance is provided by the Co-ordinating Group consisting of representatives of SPC, the South Pacific Bureau for Economic Co-operation (SPEC), ESCAP and UNEP.

(vii) Financial arrangements:

Financial support to SPREP is provided by the organizations participating in the Co-ordinating Group and by special government contributions.

THE EASTERN AFRICAN REGION (EAF)

(i) Geographic coverage (provisional):

– The marine and coastal environment of the Indian Ocean falling within the jurisdiction of Comoros, France, Kenya, Madagascar, Mauritius, Mozambique, Seychelles, Somalia and the United Republic of Tanzania.

(ii) Action Plan for the Protection and Development of the Marine and Coastal Environment of the Eastern African Region:

– Adoption expected in 1985.

(iii) Protocol Concerning Co-operation in Combating Marine Pollution in Cases of Emergency.

– Adoption expected in 1985.

(iv) Protocol Concerning Protected Areas and Wild Fauna and Flora.

– Adoption expected in 1985.

THE SOUTH-WEST ATLANTIC REGION (SWAT)

(i) Geographic coverage (provisional):

– The Atlantic coastal waters and the adjacent coast of Argentina, Brazil and Uruguay.

THE SOUTH ASIAN SEAS REGION (SAS)

(i) Geographic coverage:

– The marine and related coastal environment of Bangladesh, India, Maldives, Pakistan and Sri Lanka.

The edge of the sea: fertile in life, but fragile. Salt marshes are the nursery grounds for many marine species. But their environmental value is often overlooked by developers, and we only realize how much we have lost when the sun sets on such salt flats for the last time. Sound environmental management matches the demands of ecology and economics.

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Front cover: The meeting of land and sea at Guerrero Negro on the Baja California Coast, Mexico. Photo Georg Gerster

Back cover: Remote Antarctica, seen from the ice of the Western Ross Shelf near the point where it breaks up into the sea. Photo Georg Gerster

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