



The Law of the Sea



and the
Caribbean

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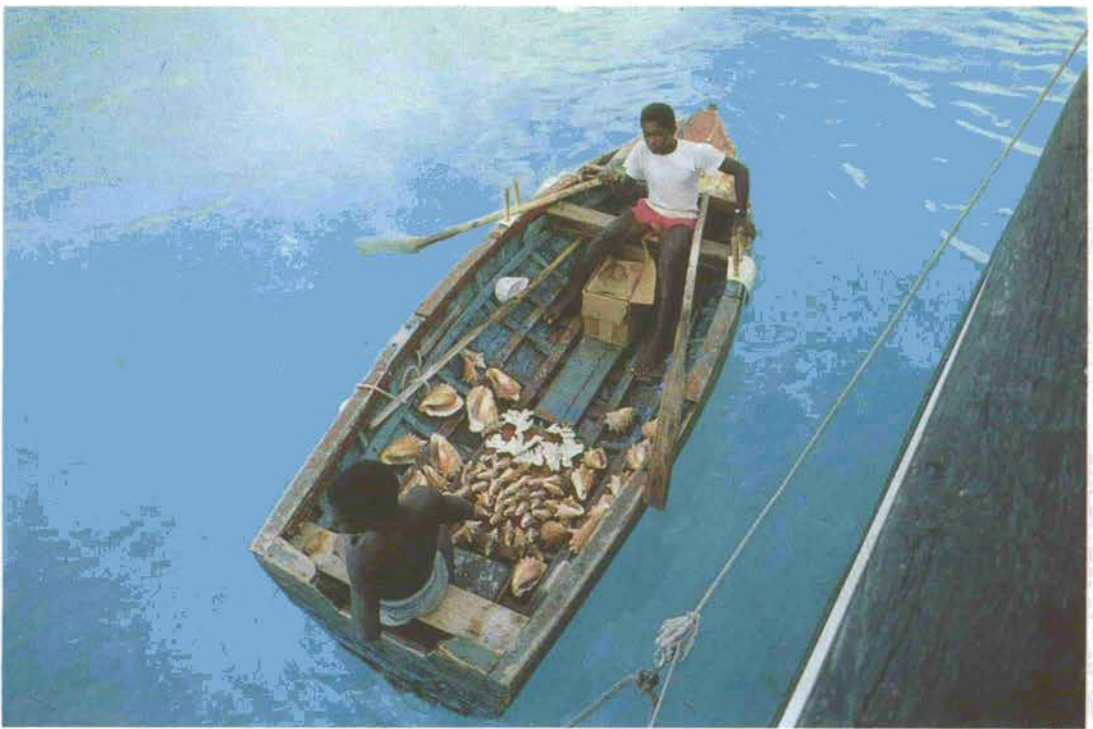


prepared for the
United Nations Environment Programme
and the
International Ocean Institute
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***Cover: the egrets which adorn mangroves
throughout the Caribbean depend on a
healthy marine environment.***



The Law of the Sea and the Caribbean

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"La gran pesca" by Elwin Todd, 1959.

A land of riches

The Caribbean Sea was formed about 180 million years ago with the separation of North America from a land mass consisting of both South America and Africa. It may have taken its present shape some 50 million years later, when South America separated from Africa.

Geologists believe that these movements led to the narrow Caribbean crustal plate being trapped between the westward drifting North American and South American plates. The sea received its name in the sixteenth century, at the time of the Spanish conquest of the Lesser Antilles, which at the time were occupied by Caribs, a warlike group of Indians. Their reputed practice of eating their enemies so struck the imaginations of the Europeans that they named the sea after these American Indians.

Since then, the history of the Caribbean as a regional sea has been eventful, and sometimes as stormy as the weather in this region, shaken now and then by Hunrakan or Huracan, the Maya-Quiché god of rain, lightning and thunder. Columbus discovered the Caribbean for Europe in his search for a passage to the Far East. In the following century, Spanish control of the Caribbean was practically undisputed. Finding gold and silver around the Caribbean resulted in a steady flow of treasure ships from the new lands back to Spain. These attracted pirates, freebooters and buccaneers. English, French and Dutch privateers and warships attacked fortified cities on islands and the Spanish Main, the mainland bordering the Caribbean. During the seventeenth century, the Lesser Antilles were settled by British, French, Dutch and Danish colonists. Jamaica was wrested from Spain by the British in 1655.

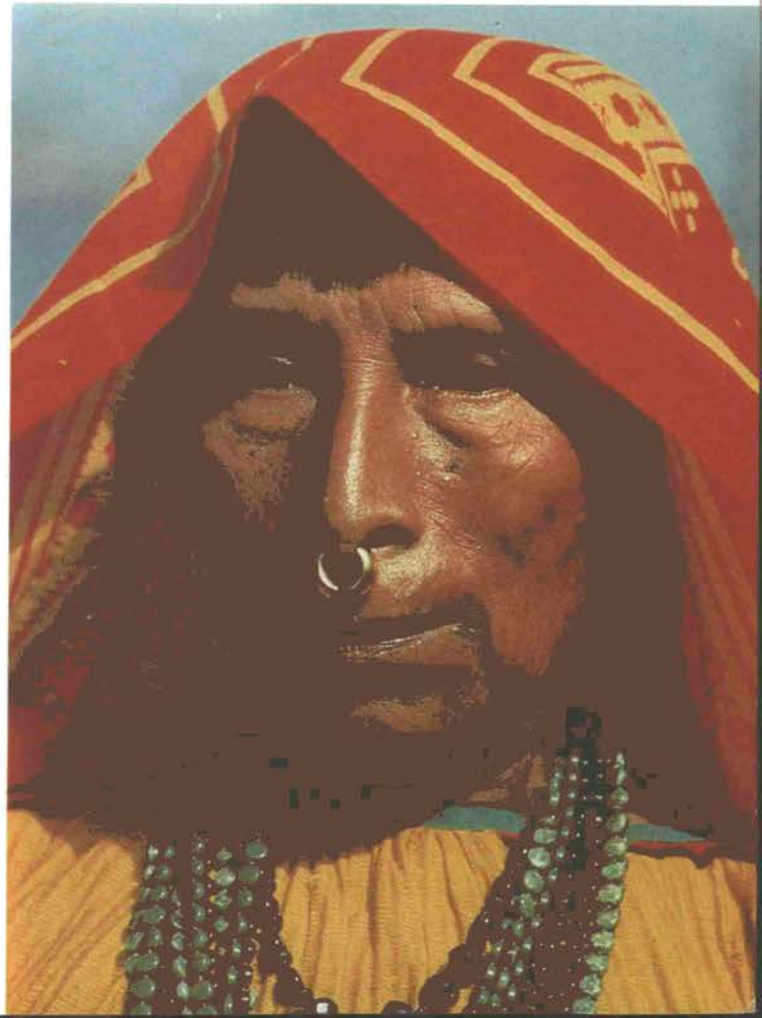
Slavery flourished in this European era, and many thousands of Negroes were brought from Africa. A plantation economy began to develop. Sugar and other plantation products generated great wealth for the European colonial powers. France, which took over the western part of Hispaniola from Spain in 1697, lost the colony when the Negroes revolted successfully during the French Revolution and Haiti became independent in 1804. Soon thereafter, the Spanish colonies began to break away. By 1850 Mexico, Guatemala, Honduras, Nicaragua, Costa Rica, Colombia, Venezuela, the Dominican Republic and Haiti were all free States.

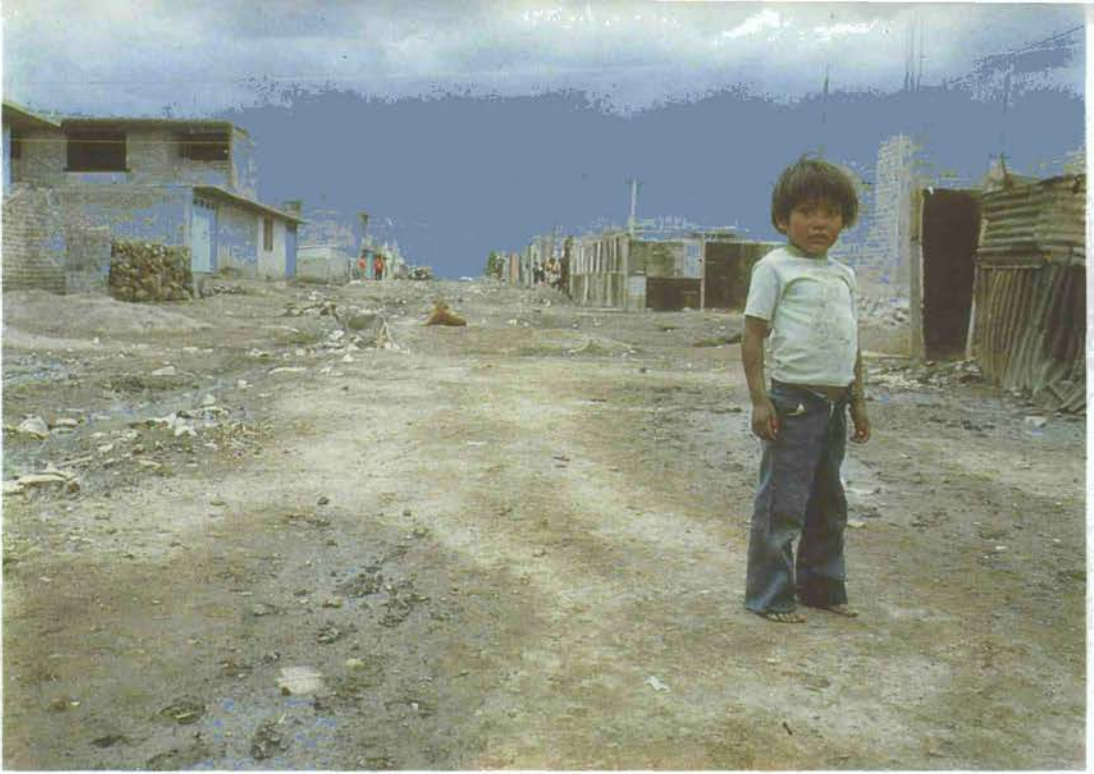
With the decline of the sugar trade, the abolition of slavery in all the islands and the trend toward freer trade, European interest in the Caribbean declined. However, at the same time, the United States, which replaced Spain as an imperial power in the region, increased its influence. The U.S. strengthened its control with the acquisition of Puerto Rico, the establishment of a protectorate over Cuba, the construction of the Panama Canal and the purchase of the Danish West Indies.

The sovereign States of the Wider Caribbean today are 17, including the United States. To these must be added the metropolitan powers, the United Kingdom, France, and The Netherlands, plus their possessions, bringing the total to 27 States and territories. This makes a complex of ministates, medium-sized States and a superpower, spanning the whole range of development and including a rich texture of indigenous Central American, European, African and Asian cultures and religions.

Population distribution in the Caribbean is uneven. In general, the West Indies are very densely populated as a result of the development of plantation agriculture. In contrast, Caribbean coastal regions of the mainland countries are sparsely populated, largely due to difficulties of settlement in the tropical forests. The tropical highlands of those countries are more thickly settled.

The Caribbean's indigenous cultures include the Kunas of Panama.





Throughout the Caribbean, poverty produces pollution.

In the past, the Caribbean countries provided a significant part of the world's supplies of sugar, bananas, cacao (cocoa and chocolate) and hard fibres, as well as oil from Venezuela, Colombia and Trinidad, iron ore from Venezuela, and bauxite from Jamaica. Recent decades have seen a massive shift of the population to urban areas. Urbanization and the decline of commodity prices have led to unemployment and underemployment in many of the islands. Statistics from CARICOM (Caribbean Commonwealth countries) show a steep decline in the performance of Caribbean economies in the late 1970s and in the 1980s. Growth in tourism has been unable to offset the losses in commodity export earnings.

Today the people of the Caribbean islands face hard choices: strenuous and costly renovation, restructuring, new approaches and new beginnings on the one hand, and a downward spiral on the other. Poverty produces only pollution. In the absence of a proper infrastructure, overcrowding generates waste disposal and water supply problems. Cultivation of marginal lands leads to soil erosion. Unplanned and uncontrolled coastal settlement, compounded by the destruction of mangrove forests, seagrass beds and coral reefs, cause damage to both land and sea. The poor are more vulnerable to natural catastrophes than the rich. As in other parts of the world, a new type of human victim has emerged in recent years: the environmental refugee fleeing ecosystems so degraded as to be incapable of providing even minimal support to human communities.

The new Law of the Sea

The United Nations Convention on the Law of the Sea was elaborated by the international community over a period of 13 years, beginning in 1968 when a committee to study the peaceful uses of the seabed was established. Committee sessions led to the convocation of the Third United Nations Conference of the Law of the Sea (1973-1982): the largest, longest, and most complex international conference in history. The Law of the Sea Conference, known as UNCLOS III, culminated in the adoption of the Convention at Montego Bay on 10 December 1982. This unique document consists of 320 articles and nine technical Annexes and constitutes a new order for the seas and oceans. Considering the growing contribution of the marine sector to the global gross national product (GNP) and the overwhelming importance of the oceans as a determinant of our planet's changing climates, the Convention is, potentially, a Constitution for the peaceful future of our world.

The Law of the Sea Convention offers a new beginning. It turns our attention away from scarce terrestrial resources to the wealth of wide ocean spaces. With the addition of "aquatories" far more extensive than their "territories", tiny islands are becoming large countries. The sea that once separated island from island now becomes a medium of unification.

The sea is contributing more than ever to Caribbean economies.





The Convention sets up a comprehensive and enforceable system for conservation of the marine environment.

Caribbean countries made important contributions to the preparation of the new Law of the Sea, and the spirit of the Caribbean continues to imbue the Preparatory Commission, established in 1983 following the adoption of the Convention, to carry out the preparatory work required for the International Seabed Authority and the International Tribunal on the Law of the Sea. These two institutions are to be established when the Convention enters into force. The Authority will be based in Jamaica, the Tribunal in Hamburg, Germany.

The Convention introduces into international law a number of important innovations, each of which has a bearing on the potential development of the Caribbean countries.

The most important of these innovations are:

- A redistribution of ocean space.
- The replacement of uncontrolled exploitation with a system of management.
- The principle of the interdependence of ocean uses.
- The principle of the Common Heritage of Mankind.
- A new type of international organization: the International Seabed Authority.
- A new regime for the conduct of marine sciences and the transfer of technology.
- A comprehensive, enforceable system for the protection and preservation of the marine environment.
- The enhancement of regional co-operation and development.
- The reservation of the oceans for peaceful purposes.
- A comprehensive, binding international system for the peaceful settlement of disputes.

Redistribution of ocean space

Prior to the Convention, the distribution of ocean space in the Caribbean was somewhat chaotic. A number of States were Parties to the four Geneva Conventions of 1958 which dealt with the law of the sea. Others were not. Some were Parties to one or the other, but not to all of the Conventions. As in other regions of the world, the territorial seas of Caribbean countries varied from three nautical miles (Cuba) to 200 nm (Panama). Some countries had fishing or fishery conservation zones, ranging from six miles (Haiti) to 200 miles (Costa Rica).

The 1982 Convention establishes a territorial sea of 12 nautical miles, an Exclusive Economic Zone (EEZ) of 200 nm, where a State has sovereign rights over the resources of the water and seabed, and a continental shelf which may, under certain well-defined circumstances, extend as far as 350 nm from the baseline. The Convention also introduces rules establishing Archipelagic States. Such States can draw their baselines to join the outermost points of the outermost islands and drying reefs of the archipelago, provided that within such baselines are included the main islands and an area in which the ratio of the area of water to the area of land, including atolls, is no more than 9 to 1.

Barbados, Dominica, Grenada and Guyana have established territorial seas of 12 nautical miles; Dominica claims a 24-nm contiguous zone. Seven States of the eastern Caribbean as well as Colombia, Costa Rica, Guatemala, Haiti, Honduras and Mexico have established Exclusive Economic Zones. The Bahamas and Guyana have established 200-nautical mile exclusive fishery zones. The Bahamas, Trinidad and Tobago, Antigua and Barbuda, and St. Vincent and the Grenadines have declared themselves Archipelagic States.

The delimitation of boundaries between States with adjacent or opposite coasts has caused numerous problems. Some of these have been solved through bilateral negotiations, others are still outstanding. In the eastern part of the Caribbean, for example, the island states have yet to sort out their boundary problems with Venezuela, as well as among themselves. Most of the islands in the northern and eastern Caribbean have not delimited their maritime boundaries, nor have the States in Central America, with the exception of Costa Rica and Panama. In the western Caribbean there is no agreement between Nicaragua and Colombia, nor between the Cayman Islands and Jamaica.

The acquisition of Exclusive Economic Zones has, potentially, transformed a number of tiny and resource-poor island States into much larger States with greater resources – consequently bringing new responsibilities of management, surveillance, and enforcement. But the carving up of the limited maritime space available creates a number of tiny units, inadequate for rational management. The Convention recognized



The Bahamas, an "Archipelagic State," has established a 200-mile EEZ.

such situations and calls on States in "semi-enclosed seas" to co-ordinate their policies and actions on marine living resources, environmental protection and scientific research.

At the time of negotiating the Convention, Caribbean experts and statespersons presented some extremely interesting proposals to address the geography of the region. Jamaica proposed that beyond a 12-mile territorial sea, marine resources should be pooled as the exclusive preserve of the Caribbean countries, and exploited with regard to the needs of the developing countries of the region. Trinidad and Tobago proposed that the concept of the Archipelagic State apply to the whole arc of Eastern Caribbean islands, regardless of its multinational character.

Such proposals may have seemed radical at the time, and as challenging the dominance of national sovereignty. But today, the concept of regional co-operation on ocean uses has seen considerable strengthening. The decision of the Members of the European Community to create a common fishing zone, and of Pacific Island States to closely co-ordinate and harmonize their fishing policies and legislation, are proof of the benefits of using regional frameworks to ensure more rational, sustainable development and management of marine resources.

From free-for-all to management

Living resources

Tropical and subtropical seas are generally less productive than temperate ones. In the case of semi-enclosed seas, however, the characteristics of the basin may create considerable local variation. The main fisheries in the Caribbean sea are:

- the shrimp fishery in the northern Gulf of Mexico, along the coast of the United States;
- the shrimp and demersal (bottom) fisheries on the Campeche Banks and on the Cuban platform;
- shrimp and sardine fisheries on the north coast of South America;
- a widespread lobster fishery, mainly in the island part of the Caribbean and along the Central American coast;
- scattered reef fisheries over all of the Windward and Leeward Islands of the Lesser Antilles; and
- a pelagic (open sea surface) tuna fishery scattered across most of the open waters of the area. The most popular pelagic fish caught in the region are barracuda, bill fish, bonito, dolphin fish, mackerel, the mackerel-like kingfish, skipjack as well as yellow fin tuna. Demersal species include butterfish, grunt and groupers, sea trout and various kinds of snappers.

Important reef fisheries are scattered throughout the Lesser Antilles.





The Convention gives States the right to exploit natural resources within a 200-mile zone.

The Convention requires a State to determine the allowable catch of living resources within its EEZ, taking into account the best scientific evidence available. The State must ensure through proper conservation and management measures that the living resource is not over-exploited. The measures designed by the State to maintain or restore the maximum sustainable yield ("sustainable development") may be qualified by relevant environmental and economic factors, including the economic needs of coastal fishing communities and the special requirements of developing States, and taking into account fishing patterns, the interdependence of stocks, and any generally recommended international minimum standards, whether subregional, regional or global.

In order to promote optimum utilization of resources, the State must determine its own capacity to harvest these living resources; and where it does not have the capacity to harvest the entire allowable catch, the State is obliged to give others access to its surplus. They too must comply with its conservation and management measures and with other terms and conditions established by national law. These may relate, for example, to payment of license fees and other forms of remuneration; specification of seasons and areas for fishing, use of gear, and data and information to be supplied; conduct of research programmes and enhancement of national capabilities; the local landing of catch; and the terms of joint ventures.

The Convention contains special provisions for the management of shared stocks and stocks which "straddle" the EEZ and adjacent high seas areas. For these stocks, the States concerned must seek agreement on their

management and conservation, either directly or through subregional or regional organizations. There are also special provisions on the management responsibilities of States and on the co-operation required for highly migratory species (such as tuna, marlin, swordfish and sharks), anadromous species (such as salmon), catadromous species (such as eels), and marine mammals. The Convention generally requires that where there is no appropriate international organization to effect the required co-operation, States must establish one and participate in its work.

These management and conservation rules are complex and sophisticated. It takes some time for a developing country to acquire the scientific knowledge needed for proper stock assessment (disregarding, for the moment, the fact that such knowledge is rarely sufficient, and where it is, is often disregarded). They also may involve considerable costs: not only for research and training, but to establish mechanisms to monitor changes in the environment, to regulate fishing activity, and to enforce the law.

The Convention contains special provisions for protecting marine mammals, including this Caribbean manatee.





Overexploitation of conchs has depleted them and required new conservation efforts to protect this valuable resource.

Left: a diver collects live animals.

Above: discarded shells.

These costs may be too high for individual, small island State. In the Caribbean, there is also the risk of duplicating management costs since practically all stocks move across boundaries. Thus, geographical and financial constraints work together to encourage maximum regional and subregional co-operation in living resource management.

Specific problems faced by the developing Caribbean fishing industry include the following:

- overfishing, especially of immature stocks;
- poor fishing methods and techniques;
- conflict between artisanal and industrial fisheries.

Storage and refrigeration facilities often are inadequate. In some areas, illegal harvesting of fish and shellfish by the use of dynamite is widespread. Pollution is not yet as threatening as it has been in the Mediterranean Sea, but the destruction of breeding grounds as a result of urbanization, the construction of tourist facilities, the reclamation of mangrove swamps, and the pollution of seagrass beds is a serious problem.

Even with maximal improvements in management, however, there is a limit to the exploitability of natural living resources. The total potential fish harvest for the entire region's continental platform is estimated at 3-4.5 million metric tons per year. The sustainable exploitable potential is

estimated at between 1.3-2.6 million metric tons per year, a limit which has already been reached. Some species, such as spiny lobster, are already severely overfished. There is, however, potential for increasing this total through the development of aquaculture.

Fish farming and other forms of aquaculture and mariculture are growing globally at a rapid pace (about six per cent per year) and there is a considerable potential for greater expansion in the Caribbean. Finfish such as redfish, groupers, bass and tilapia are already being cultured on an experimental basis. The same goes for molluscs, including conchs, oysters, angel clams and scallops, and results are encouraging although commercial production has not yet started. Most advanced is the mariculture of shrimps. Technologies which have been highly successful in various South American countries are being adapted to Caribbean environmental conditions. Edible algae are harvested from the wild as well as cultured; sea moss has been successfully cultured in St. Lucia. The future of aquaculture may well be determined by advances in genetic engineering, a field which offers new opportunities for South-South as well as North-South co-operation.

Experimental aquaculture in Guatemala. Fish farming is a growth industry in the Caribbean.





The sea bottom is a resource, too: the coral sand is dredged to create new sites for hotels, leaving the water heavily silted and deadly to marine life.

Non-living resources

Mining for sand and gravel for construction is a common practice throughout the Caribbean, and has dramatic effects on water quality and the survival of the region's many species of filter-feeding marine organisms.

Oil is another major problem. About one-sixth of the world's petroleum comes from the Caribbean region. The distribution of favourable source sediments and of shallow water depths in the Caribbean Sea and the Gulf of Mexico indicates that the best areas for production of oil and gas are those adjacent to North America and South America, at opposite ends of the region. The chief crude oil producers are Mexico (with 180,298 metric tons of coal equivalent in 1986), Venezuela, Colombia, Cuba, and Trinidad and Tobago. In the latter, production has dropped from 16,020 thousand metric tons in 1975 to 12,458 tmt in 1986. Its reserves are estimated at about 4-5 thousand million barrels and a few thousand million cubic metres of gas.

In the same 1975-1986 period, Cuba, with the help of Soviet technology, stepped up its production from 323 to 1,340 thousand metric tons. Barbados, with 111,000 metric tons, and Guatemala, with 413, are minor producers. There are small oil pools lying under shallow water depths to the south of Grenada, off the northern coast of Barbados and in Saba Bank between St. Christopher-Nevis, Saba and the U.S. Virgin Islands. Oil

resources may also exist in other shallow water areas, e.g. in the Grenadines between Grenada and St. Vincent and in Montserrat. As in other regions, the big multinational companies have limited their exploration efforts to giant fields. More modest resources, which might be adequate for local consumption and would reduce import bills of small island countries, have remained largely unexplored. Refining capacity is concentrated in Mexico and Venezuela, the Bahamas, Puerto Rico, the U.S. Virgin Islands, the Netherlands Antilles, Trinidad and Tobago, Jamaica, the Dominican Republic, Colombia and Cuba. The smaller islands, Guyana and Surinam have no refining capabilities.

A coastal State has sovereign rights over oil and gas and other natural resources in its EEZ (and on its continental shelf); for exploitation of the shelf beyond 200 miles, the Law of the Sea Convention calls for a State to pay up to 7% of its profits to the future International Seabed Authority for equitable distribution among States Parties, unless it is a net importer of the mineral resources involved. But since the Caribbean shelf is very narrow (80 nautical miles on average), this requirement would have no practical effect on offshore mineral production in the region.

The coastal State exercises exclusive jurisdiction over the establishment and use of installations and structures required for offshore development, including associated cables and pipelines. In the interests of navigational

***An offshore refinery off the coast of Venezuela.
The Caribbean produces about one-sixth of
the world's petroleum.***



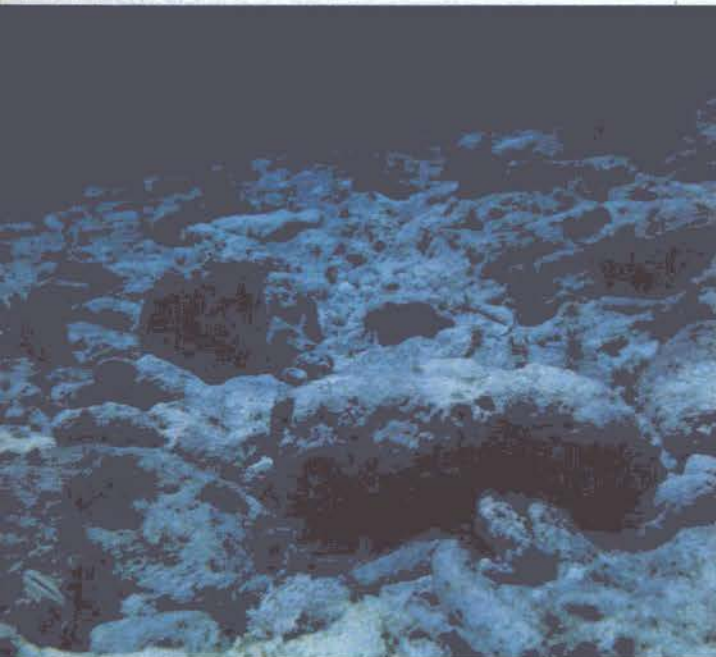
safety, the Law of the Sea Convention requires a coastal State to give due notice of their construction, maintain permanent means for giving warning of their presence, create safety zones around them where necessary, and normally to remove those which are no longer in use. The Convention called for the elaboration of international standards to deal with the growing number of abandoned structures and these have since been drawn up by IMO. They take account not only of navigational safety needs, but also of factors affecting fisheries and environmental protection, specifying those exceptional circumstances where structures can be left or only partly removed.

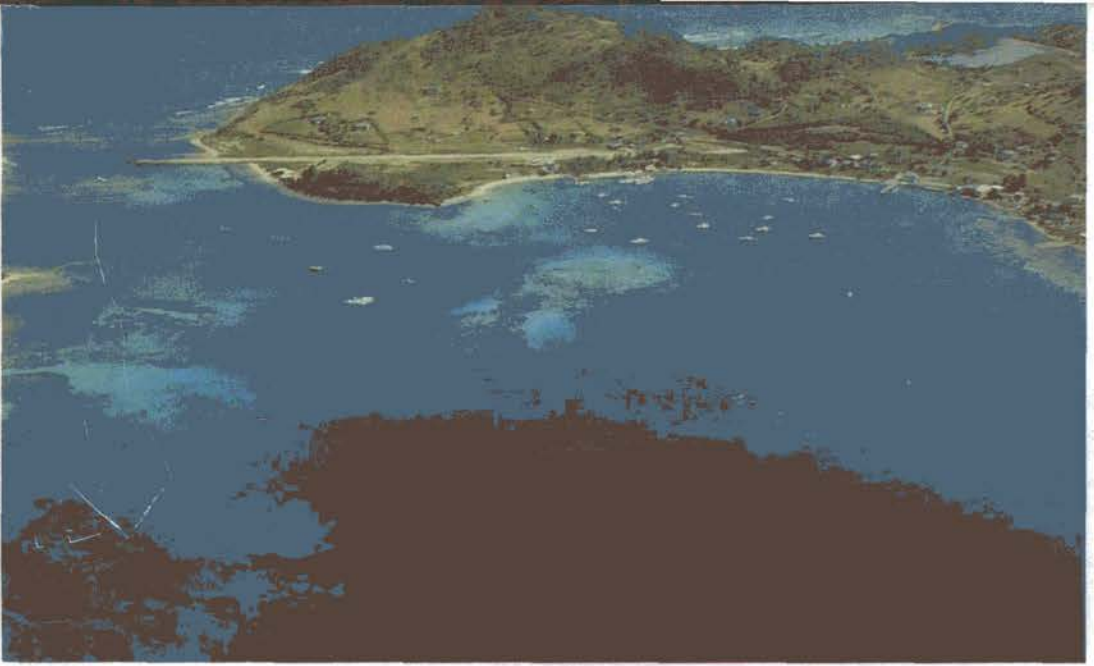
Coastal States must adopt and enforce laws and regulations for the prevention, reduction and control of pollution from offshore activities, just as they must for all other sources of marine pollution, and must endeavour to harmonize their policies at the appropriate regional level. Other measures that are required include contingency planning and notification of actual or imminent threats of pollution damage. Some regions have concluded protocols on pollution from offshore resources development; the Caribbean has yet to do so.

Oil is transported by tankers and supertankers on routes criss-crossing the Caribbean. The prevention of oil pollution from tankers is governed by international conventions drawn up by the International Maritime Organization (IMO) in London, primarily by MARPOL 73/78 (the International Convention on the Prevention of Pollution from Ships,

adopted in 1973 and amended in 1978). Deliberate discharge of oil, as in tank washing, is strictly regulated, and Parties must provide port waste reception facilities instead. IMO rules and standards on ship construction and on navigational safety, such as those on ships' routing, also contribute to the prevention of pollution. In the Caribbean, as in a number of other regions, States have adopted a Protocol concerning co-operation in combatting oil spills caused by maritime incidents. Important information and guidance on combatting spills is available from IMO, particularly in its Oil Pollution Manual, which is regularly up-dated to keep abreast of new technology and the latest scientific findings.

A dead coral reef in the Florida Keys, where dredging is common.





The tourist industry is spreading everywhere in the Caribbean, with mixed results.

Other sea uses

Tourism has become one of the main industries of several Caribbean countries, accounting in some cases for 20 per cent of the gross domestic product (GDP). Expansion of this industry is considered by many islanders as the only real hope for raising incomes and providing employment. This hope may be misplaced, however, since tourism can produce negative effects, especially in small and undeveloped countries. The unplanned sprawl of tourist facilities – hotels, marinas, airports, roads, restaurants and casinos – can cause coastline destabilization and beach erosion, contribute to pollution by untreated or inadequately treated sewage, and lead to the destruction of coral by souvenir hunters and declining water quality. Frequently, hotels are built and owned by foreign companies. Imports of food, sports and entertainment equipment often outweigh the currency spent by the tourists in the islands, especially as most are now on package tours. Tourism companies thus tend to create a negative currency flow rather than contribute positively to the GDP of the host States. Tourism is fickle and faddish and tends to fluctuate for reasons beyond the control of the host country. It tends to distort the economy and leave a vacuum in its wake when the fad passes.

In-depth studies of the impact of tourism on island societies, economies and ecosystems are essential in order to plan for the healthy development of the industry for the maximum benefit of the local people. The Law of the Sea Convention encourages such studies, insofar as they relate to environmental implications; and it is implicit in its main tenet that marine resources shall be rationally utilized for the national benefit.

Shipping in the Caribbean, in general terms, can be divided into two categories: intraregional and interregional.

Intraregional trade goods are carried by wooden and steel-hulled vessels with either engines or sails or both, and seldom exceed 1,000 deadweight tons. These ships transport the bulk of the goods, mostly consisting of agricultural products, livestock and locally manufactured goods traded between countries.

Unfortunately, most of these ships are unclassified, uninsured, substandard and more than 25 years old. Masters are often not trained in modern navigation standards and technologies. So it is not surprising that the region has a world record in maritime distress incidents. According to some estimates, 80-90% of the vessels in the region would be declared unfit for service if the SOLAS (Safety of Life at Sea) Convention were to be enforced in all Caribbean countries.

Interregional trade is dominated by ocean-going vessels mostly owned by shipping companies in developed countries. Apart from bulk cargo, most of this trade is containerized, causing problems of technological infrastructure and unemployment. Most territories of the region still maintain the traditional metropolis-colony relationship in shipping; ties to the metropolis are much stronger than intraregional ties, which greatly affects the movement of goods within the region. Both regional governments and various international institutions have attempted to address the multifaceted shipping problem.

Some intraregional trade still takes place by means of wooden sailing vessels . . .





... while interregional trade is carried out largely by means of enormous container ships.

While there has been a considerable increase in shipping throughout the Caribbean, maritime safety legislation has not been keeping pace with development and, for the most part, is outdated.

The Law of the Sea Convention imposes on the coastal or island State the responsibility for safety of navigation. Measures may include the establishment of traffic separation schemes, vessel traffic reporting systems and vessel traffic management systems. Here, again, regional co-operation as well as intensified co-operation with the competent international organization (in this case, IMO) is indicated.

The interdependence of ocean uses

The Law of the Sea Convention declares in its Preamble that the problems of ocean space are closely interrelated and need to be considered as a whole. It was for this reason that there is now one, comprehensive instrument, rather than separate instruments on specific subjects as was done for the four 1958 Geneva Conventions. Throughout the Convention, moreover, there are constant reminders that other uses of the sea must be taken into account at the same time, thus focussing on the need for an integrated approach to the rational utilization of ocean spaces and resources.

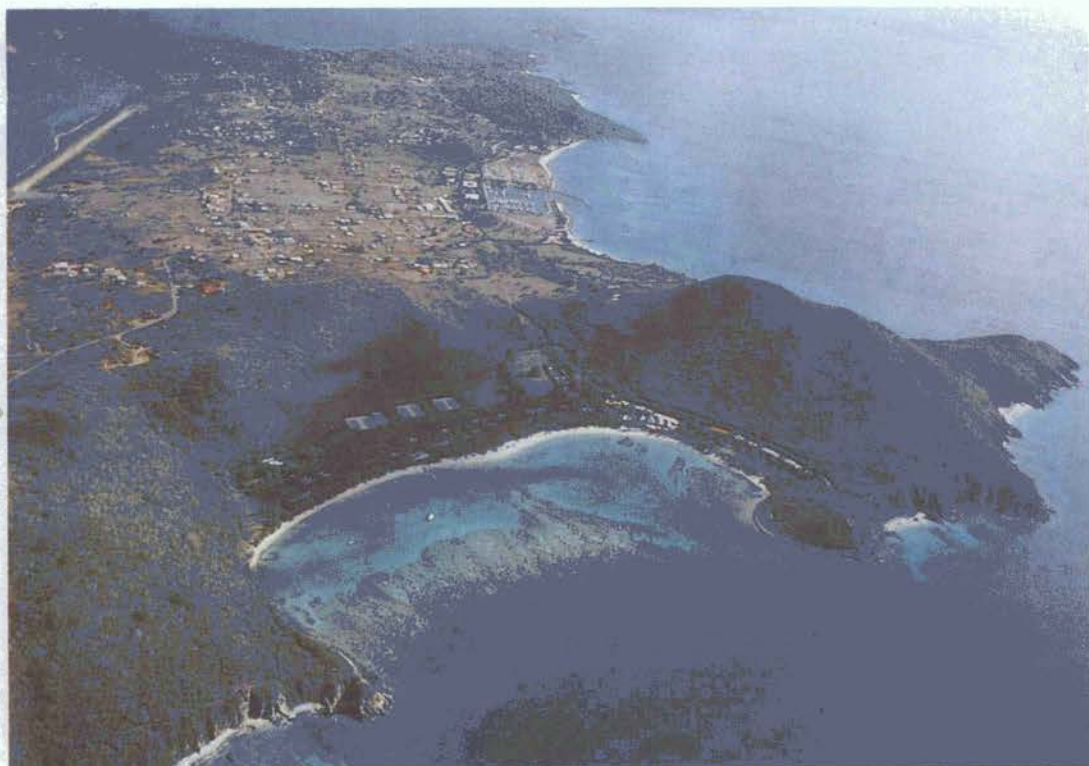
This can be a highly complex and demanding undertaking, both at the international and national levels. At the national level, an important first step can be to interrelate and integrate all relevant legislation, and to move away from traditional sectorally-oriented structures: Mexico has done a pioneering job of internalizing the new Law of the Sea through the promulgation of a Federal Law of the Sea, updating and harmonizing its

domestic laws (which were widely dispersed, in many cases obsolete, and occasionally conflicting) and bringing them into line with the Convention. Mexico has thereby attempted to create a framework for integrated ocean management. This has yet to be undertaken by most countries, both in the developing and developed worlds.

At the regional level, particularly in semi-enclosed sea areas like the Caribbean, recognition of the interrelationships between ocean issues is extremely important, and all possibilities for applying more rational and cost-effective measures through regional co-operation, in preference to individual State action, warrant the most careful consideration. At the international level, the competent organizations of the United Nations system, working through various consultative and co-ordinating mechanisms, endeavour to ensure that sectoral activities are adjusted and complemented whenever more comprehensive and integrated approaches are required. Further improvement in these mechanisms is necessary, particularly to lend better support to regional co-operative action.

The Caribbean is likely to face a particularly demanding challenge in integrating sea-use planning and development. While little is known as yet as to the regional and local consequences of global warming (the so-called "greenhouse effect"), a sea level rise of 15-20 cm is nonetheless

The well-being of island States, with their long shorelines, is especially dependent on the well-being of the sea.

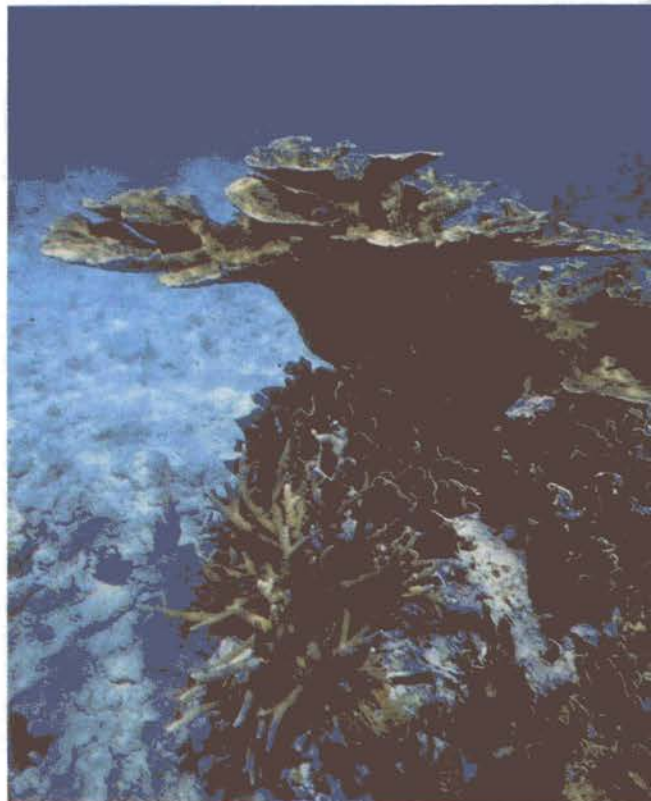




likely to occur in the Caribbean over the next 40 years. This will be due to natural subsidence of the land as a result of tectonic plate activity, compaction of fine-grained deposits and the oxidation of highly organic soils. Subsidence caused by the extraction of groundwater, compaction of sediments caused by building and other engineering projects, the mining of sand and gravel, and land reclamation and drainage projects are other contributing factors – all human in origin.

Sea level rise may severely affect coastal zones, coastal developments, fisheries, and tourism. Subsidence-causing activities should therefore be included when we consider the inter-relatedness of the problems of the oceans. This includes the emission of gases which might reinforce the natural trend towards sea level rise – especially if their reduction would constitute savings and thus be economically as well as ecologically advantageous. Integrated sea-use planning is a novel and indeed highly complex science.

Should sea level rise, or when land subsides naturally, many low-lying Caribbean islands could be severely affected (above). It is not known if coral can grow fast enough to keep up (below).



Our "common heritage"

The Convention declares the deep seabed area to be beyond the limits of national jurisdiction, and its mineral resources to be our "common heritage". This heritage, the Convention states, shall not be appropriated by any one; it is "nonproperty"; it must be managed for the benefit of all countries; and all countries have a right to participate in this management through a specially created International Seabed Authority. It must be reserved exclusively for peaceful purposes; it must be managed in such a way as to be conserved for future generations; and pollution from activities in the area must be prevented.

This revolutionary principle has a particular impact on the Caribbean people, since the new institution which represents it will be established in Jamaica. The Authority can be expected to become a focus for advanced science and technology, with potentially important spin-offs for Caribbean countries in strengthening their capabilities for exploring and exploiting their own marine resources – including, eventually, manganese nodules which are known to exist in the Caribbean – and for managing their ocean space.

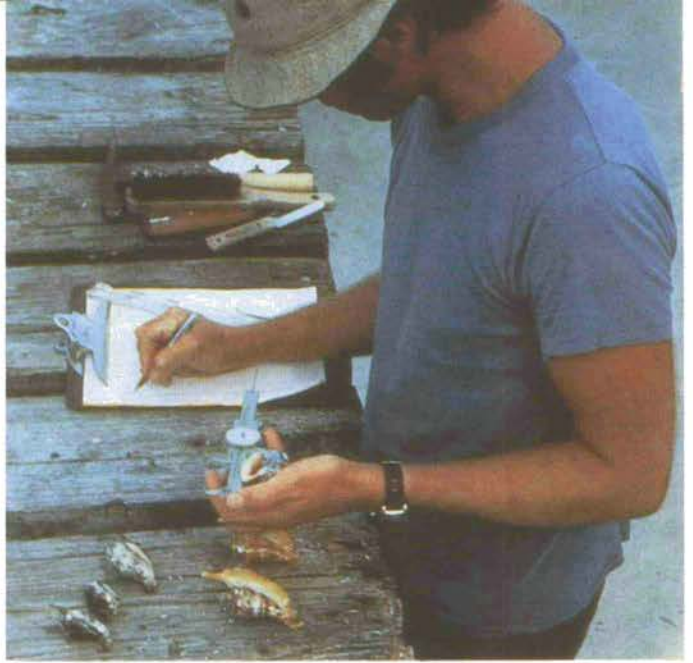
Caribbean people may contribute to the further development of the concept of "common heritage", by applying it regionally in their co-operative development programmes. Quite a few leading thinkers in the region have already given thought to this possibility.

The sea is our common heritage, to be preserved for future generations.



The International Seabed Authority

Although the initial shape of the authority is still under discussion and will depend on the technological and economic situation at the time it is established after entry into force of the Convention, it will be a unique global institution nonetheless. It will have operational rather than merely co-ordinating functions. It will generate revenue (through fees and taxes paid by mining operators) rather than depending on the support of national governments. Equally important, it will forge new forms of international co-operation in science and industry in both the private and public sectors.



A scientist measuring conchs in Belize. The Convention ensures that Caribbean States will benefit from research carried out in their waters.

A new regime for marine science

Marine sciences and services and marine technologies are covered in Parts XII, XIII, and XIV of the Convention. Scientific knowledge of oceanic processes, resources and ecosystems is a fundamental requirement for marine development and management, whether in fisheries, aquaculture, shipping and navigation, energy, coastal zone management, or pollution control. To ensure that developing countries can build their information base and strengthen capabilities, the Convention introduces a "consent regime" for the conduct of marine scientific research in national waters. Thus, the coastal and island States of the Caribbean have the right to authorize, regulate, participate in, and share in the benefits of scientific research carried out in their economic zones or on their continental shelf. At the same time, they have the duty to promote international scientific co-operation, including exchange of data and information and integration of scientific effort, in order to improve our understanding of the phenomena and processes at work in the marine environment and the inter-relationships between them.

Beyond that, the Convention encourages the strengthening of national infrastructures for science and technology and makes it obligatory for the competent international organizations to assist in this process. It also mandates the establishment of regional centres for the enhancement of marine sciences and the transfer of technology, and establishes the duty to co-operate at national, regional, and global levels.

An enforceable system of conservation

Part XII of the United Nations Convention on the Law of the Sea contains the first comprehensive international environmental law in history. It covers pollution from all sources, whether land-based, ship-borne, carried through the atmosphere or originating from seabed activities. It defines both the rights and the obligations of States and provides enforcement mechanisms and instruments for the settlement of disputes. It complements other parts of the Convention, dealing explicitly with the economic development of marine resources and ocean uses. The Convention is therefore the first international legal instrument for sustainable development since it integrates economic development and the protection and preservation of the environment.

The Convention is global in scope, providing the framework for related global instruments on specific subjects, such as those formulated by IMO to deal with pollution from ships, and for regional agreements, such as the Cartagena Convention and its Protocols for the Wider Caribbean. The Convention specifically calls for regional harmonization of environmental policies and, in recognition of the influence of characteristic regional features, endorses the development of regionally applicable rules and

standards (except on ship design and construction, etc., which must be international). In semi-enclosed seas like the Caribbean, it urges States to co-ordinate their actions.

The Convention is the first international legal instrument to promote sustainable economic development through environmental care. Pictured: an assorted catch from a deep-water fish trap.

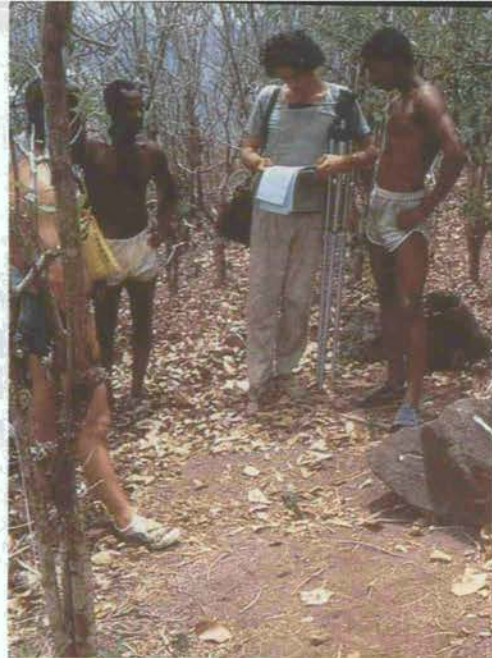
Regional co-operation on marine environmental protection is primarily carried out through the UNEP Regional Seas Programme, which now covers 10 regional seas and 130 countries.

In the Caribbean, regional efforts began with the establishment of a joint team from UNEP and the Economic Commission for Latin America and the Caribbean (ECLAC) in Port-of-Spain, Trinidad. It had the task of co-ordinating preparations for the development of an Action Plan for the Caribbean Environment Programme, following the model already established in the Mediterranean with the Barcelona Convention, its Protocols and the Mediterranean Action Plan.





The Convention protects Caribbean ecosystems and their inhabitants from both land-based and sea-based pollution. Turtles and mangroves are among the vulnerable.



An environmental education programme in St. Lucia; the Caribbean Action Plan stresses education and training.

The 27 countries of the Wider Caribbean were included in the consultations, as were the United Nations specialized agencies and the international and regional organizations, both governmental and nongovernmental, national organizations and a wide variety of experts from the region. A number of meetings and workshops, producing detailed sectoral overviews on such subjects as pollution, energy, environmental health, natural disasters, marine and coastal area development, food, tourism, education and training, led to the adoption of the Action Plan by a conference in Montego Bay in April 1981.

Four projects, in environmental education, the production of watershed management guidelines, oil spill contingency planning and environmental health, were given priority for implementation in co-operation with the Caribbean Conservation Association (CCA), IMO, CARICOM and the World Health Organization. A Regional Co-ordinating Unit

was established in Jamaica and began operating in 1987. A Monitoring Committee, consisting of representatives from nine member countries, meets at least once a year to oversee financial arrangements. National Focal Points, designated in each of the participating States and territories to deal with all matters relating to the Action Plan, completed the institutional infrastructure. Scientific and academic institutions in the region conduct the specific activities agreed by the Governments to be components of the Action Plan. Existing subregional and regional institutions, including non-governmental organizations, are used to the maximum extent possible for implementing specific activities or for co-ordinating specific Action Plan related activities.

The legal framework for the Action Plan is defined – again, following the Mediterranean precedent – in the Cartagena Convention, adopted in March, 1983. This Convention is strictly based on the Law of the Sea Convention, and also provides a regional framework for the settlement of disputes.

Supplementing the Convention are two Protocols, one on Co-operation in Combating Oil Spills (1986) and the other on Specially Protected Areas, (1989). The draft of a third protocol on land-based sources of marine pollution is now being developed.

Funding for the Plan's implementation comes from the Caribbean Trust Fund, established by the participating States, the UNEP Environment Fund, and national, bilateral, multilateral and other contributions. The initial budget amounted to US\$8,200,000 for a three-year period.



▲ *A tanker illegally discharges oily wastes into the Gulf of Mexico. Contracting Parties to MARPOL 73/78 are required to provide reception facilities, but many do not.*

▼ *Land-based reception facility for oily wastes in Venezuela.*



The creation of this system is a milestone on the road towards sustainable development, co-operation, and the implementation of the Law of the Sea Convention in the Caribbean. The records of the meetings of the Monitoring Committee, however, clearly indicate that financial commitments have remained below the original expectations. New approaches to strengthen regional financial resources must therefore be found, be it through tourist contributions or through more effective integration of the private sector.

Regional co-operation and development

The Law of the Sea Convention stresses the necessity for regional co-operation and development. A special Part (Part IX) is devoted to enclosed and semi-enclosed seas, such as the Caribbean, where it mandates co-operation in the management of living resources, the conservation of the environment, and the enhancement of marine sciences. Part IX, consisting of a mere two articles, is very concise. This, however, may turn out to be an advantage as it gives to each region the flexibility to develop the provisions according to its own conditions and requirements.

As indicated above, the Caribbean region has gone a long way in implementing and developing these two Articles. We should remember that, while the Regional Seas Programme is the only effort covering the Wider Caribbean as a whole, there are a number of efficient subregional organizations which are contributing to the development of a sustainable economy. Among these is CARICOM.

CARICOM's objectives are (a) economic integration; (b) functional co-operation; and (c) co-ordination of foreign policies. Among other things, CARICOM has been active in promoting and harmonizing fisheries legislation among member countries in such matters as size of nets, the delimitation of maritime space, and the conclusion of fishery agreements. CARICOM has co-operated with IMO, the United Nations Conference on Trade and Development (UNCTAD), and the United Nations Development Programme (UNDP) in trying to improve regional maritime safety capabilities, updating national laws and rendering other assistance in maritime safety matters to member States. Two major components of the projects are the establishment of a Maritime Safety Administration and the adoption of a Maritime Safety Code.

Another remarkably successful subregional effort is the Organization of Eastern Caribbean States (OECS), uniting the seven islands of the Lesser Antilles. In co-operation with the Food and Agriculture Organization of the United Nations (FAO) and various donor organizations in Canada and elsewhere, OECS is developing an efficient regional fisheries system. Following the example of the South Pacific islands working through the Forum Fisheries Agency, the OECS is developing a unified approach to the issuing of licenses to foreign fishing companies, common legislation for the control of marine pollution, a common system of monitoring and surveillance, and shared data banks.

IOCARIBE, the Caribbean branch of UNESCO's Intergovernmental Oceanographic Commission (IOC), and the Caribbean office of FAO have also made important contributions to regional and subregional development.

The efficiency of subregional infrastructure is bound to contribute to the success of the wider regional projects. These in turn are essential for the success of the global ocean regime.

"Reserved for peaceful purposes"

Without much controversy, or even discussion, the Law of the Sea Conference declared the High Seas reserved for peaceful purposes. Although the Law of the Sea Convention does not spell out the implications of this declaration, it is a "peaceful uses" Convention in every respect, aimed at promoting and maintaining peace and avoiding conflict.

Only peaceful uses are allowed.





A picture of harmony. The Convention reserves Caribbean waters for "peaceful purposes", but leaves it to future generations to develop and apply the concept.

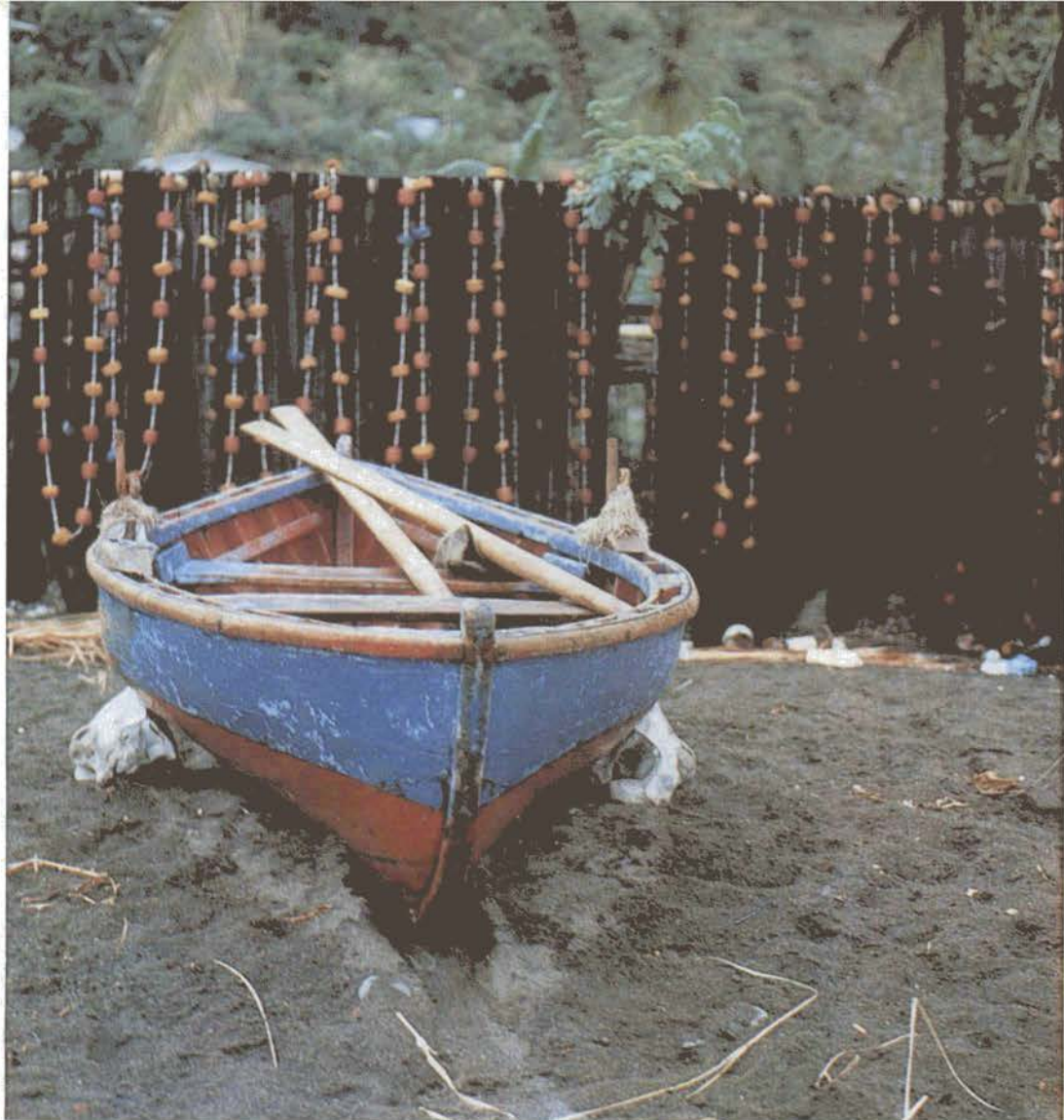
Settling disputes

The United Nations Convention on the Law of the Sea contains the most comprehensive, flexible yet binding system for the peaceful settlement of disputes ever devised by the international community. Any State becoming a Party to the Convention undertakes to accept as binding decisions by the International Tribunal for the Law of the Sea, the International Court of Justice, or arbitral tribunals. States are free to choose the procedure and the forum they prefer, but they must choose one; and, with the exception of very few types of litigation enumerated by the Convention, they are bound by the decision. And even in exceptional cases, procedures are prescribed ("mandatory conciliation") which will put moral pressure on States to comply with the rules of international law and respect community interests along with self-interest.

The Convention thus clearly puts **right** over **might** and protects the weak against the powerful. This, obviously, is important particularly for the developing countries, including those of the Caribbean. With the Cartagena Convention, the Caribbean States have fully embraced this system and adapted it to regional needs.

In many cases it may be less costly and psychologically preferable to settle disputes at the regional level, where judges may be more directly familiar with the circumstances of a litigation and more directly known to the parties. National, regional, and global judiciary systems will interact.

The part will strengthen the whole, and the whole will strengthen the parts.



A new world order

The adoption of the United Nations Convention on the Law of the Sea was hailed by the Secretary General of the United Nations as the most important event since the establishment of the organization. This brief survey of its most important innovations should confirm this statement. The Caribbean nations have much to gain from effective implementation of the Convention, its further development and regional adaptation. They have taken the first steps, and these are highly promising. Much remains to be done, but the initial efforts are usually the hardest.

The earth, in mythologies in all parts of the world, is the child of the sea. The new order for the seas and oceans may give birth to a new order for the world.



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It would probably be one of the ironies of history that the sea which has so effectively separated the unit territories of the region over the centuries should now itself become the *raison d'être* for co-operation among the countries. Such co-operation will indeed set a new pattern for regional economic development in the area and constitute a breakthrough in mankind's quest for global solutions to the problems of the marine environment.

– *The Rt. Hon. Dr. Eric Williams, 1973*

***Back cover: We are all children
of the sea.***

