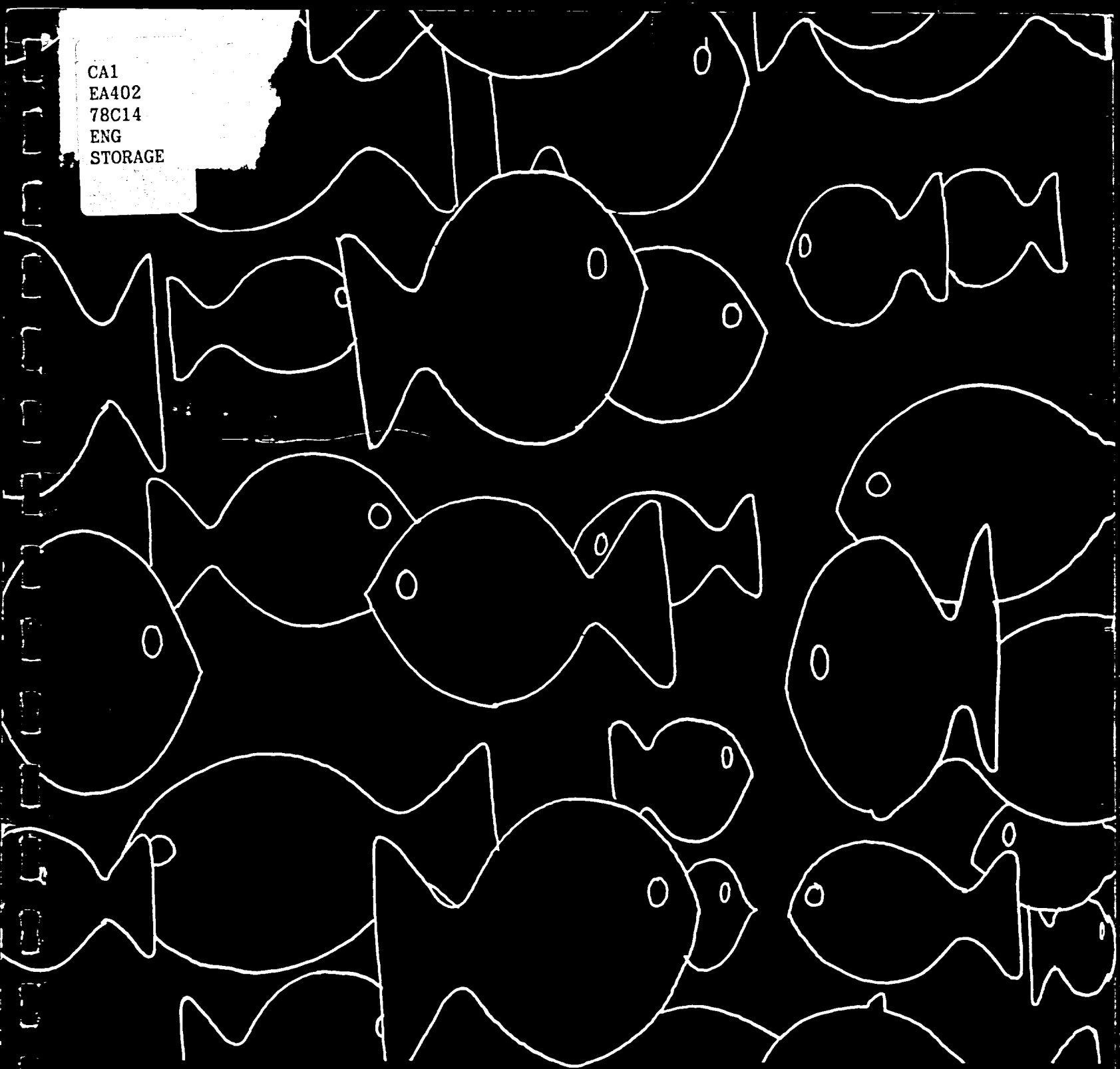
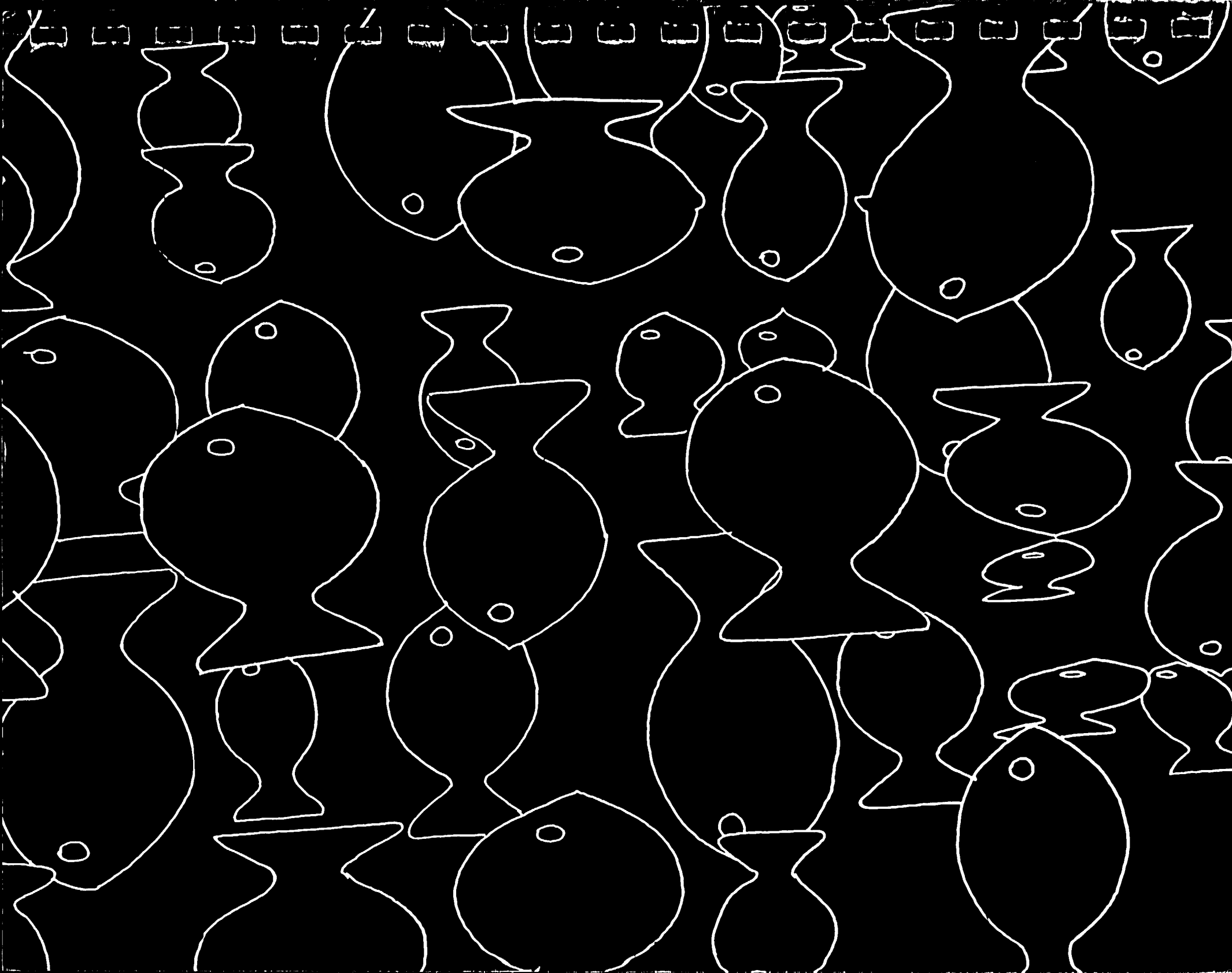


CANADA

& the law of the sea

RESOURCE INFORMATION



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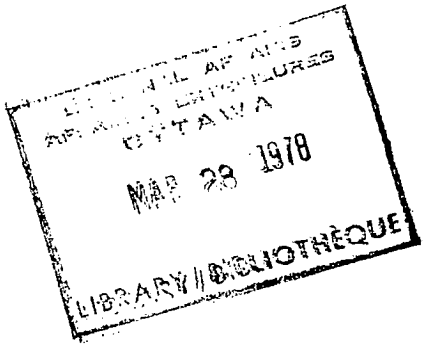


Ce dossier est disponible en français sur demande

Affaires extérieures Canada
External Affairs Canada
Bureau des Affaires publiques
Bureau of Public Affairs

February, 1978

Environment Canada
Environnement Canada
Fisheries and Marine Service
Service des pêches et des sciences de la mer

fisheries fact sheet

The Grand Banks

Stretching for nearly 2,000 miles along the northeastern Atlantic seaboard from Nantucket Shoals off New England to Flemish Cap at the eastern-most fringe of the Grand Banks of Newfoundland is a chain of the world's richest fishing banks.

Covering 36,000 square miles, the Grand Banks embrace a series of smaller banks, the most important of which are Grand Bank (Great Bank of Newfoundland), Green and St. Pierre Banks. From the viewpoint of history, this area has been fished for the longest time and is the best known of fishing grounds on the North American side of the Atlantic. From early times these grounds have been fished and sailed over by adventurers of western Europe. It was probably the Vikings in their horned helmets and high-prowed boats who first visited the area, later to be followed by Bretons, Portuguese, Spaniards, Frenchmen, Basques and Englishmen.

For centuries fish from the banks off Newfoundland have helped feed the nations bordering on the western ocean, and the exploitation of the fishing resources contributed greatly to the exploration of the New World. The exploring era began with John Cabot and his son Sebastian. It was Cabot who first noted the richness of the fishing grounds off Newfoundland. His interest was more or less casual because he had other things in mind. He had been commanded by King Henry VII, the reigning Tudor monarch of England, to scour the western sea until he found a new gateway to Asia and its riches. Cabot failed in that objective, but his discovery of Newfoundland had more

Fisheries patrol vessel Chebucto on duty at the Grand Banks

far-reaching effects than would rubies and silks from the Orient.

From Flemish Cap, the Grand Bank extends westward and southward more than 600 miles. Other grounds continue the chain, cutting through Green and St. Pierre Banks to the Western Banks, comprising several banks such as Misaine, Banquereau or Banquero, the Gully and Sable Island Bank. The chain continues southwest through Emerald Bank, Sambro, Roseway, LeHave, Seal Island Ground and Georges Bank with its southwestern extension to Nantucket Shoals.

The species of fish caught vary with the different banks. The Grand Banks area for instance, has been noted for its cod. Generally, however, various species of groundfish—cod, haddock, hake, halibut, redfish, pollock, cusk, etc.,—are found in varying quantities on most banks. The lobster, clam and oyster fisheries are inshore operations. The most extensive lobster fishing grounds are located in waters adjacent to the Maritime Provinces.

Next to the Grand Banks, Georges is the most important fishing ground along the eastern seaboard. There is evidence that Norsemen sailed over the area long before white men established permanent settlements in North America. Originally known as St. George's Bank, earliest records show that it was charted by a surveyor sent out to Virginia by King James I of England in 1610. Samuel de Champlain is also believed to have had a hand in charting that part of the coast in the early 1600's.

Like the Grand Banks, Georges has an interesting history. It was only within comparatively recent years that a deepsea scallop industry was developed there. This species was fished most heavily by Canadian fishermen. Although production of Georges Bank scallops has fallen off, there is still a substantial fishery there.

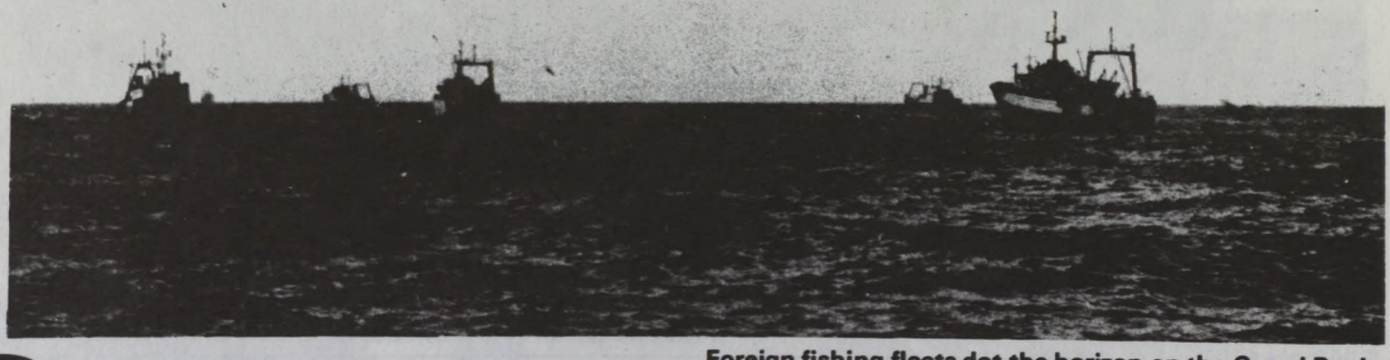
Scientists say that in the pre-glacial period, Georges was above the sea level and probably formed a part of the mainland. Pieces of fossilized wood occasionally hauled to the surface by fishing trawls indicate that pre-historic Georges was a wooded area.

Like the land, the bottom of the sea is composed of sandy plains; hills and valleys and mountains; rocky areas strewn with boulders, sometimes with abrupt faces, other times with sloping edges; there are weedy places and areas of slimy mud, and forests of coral trees. And also like the land where there are vast areas which have no food to support animal life, the sea has its areas where food is absent, and fish avoid them entirely. There are thousands of square miles of ocean where there are few, if any stocks of fish.

In this age of technology, fish can be spotted by electronic instruments. However, the fishing banks were well identified long before the age of electricity and its accompanying miracles. For more than 300 years, fishing captains of many nations charted the areas in the northwest Atlantic where the fish are. It was a hit-and-miss method, but it worked well. Today there are few, if any, places on the continental shelf—the ledge extending seaward from the mainland—where fish populations live undisturbed.

While the great banks off Newfoundland have been fished for centuries by vessels of several nations, the fishing grounds lying off New England and the Maritimes were exploited chiefly by Canadian and American fishermen right up to the beginning of World War Two. However, all that is changed now.

The war had not been over very long before the fishing fleets of Canada and the United States were joined by those of other nations in harvesting the northwest Atlantic sea



Foreign fishing fleets dot the horizon on the Grand Banks

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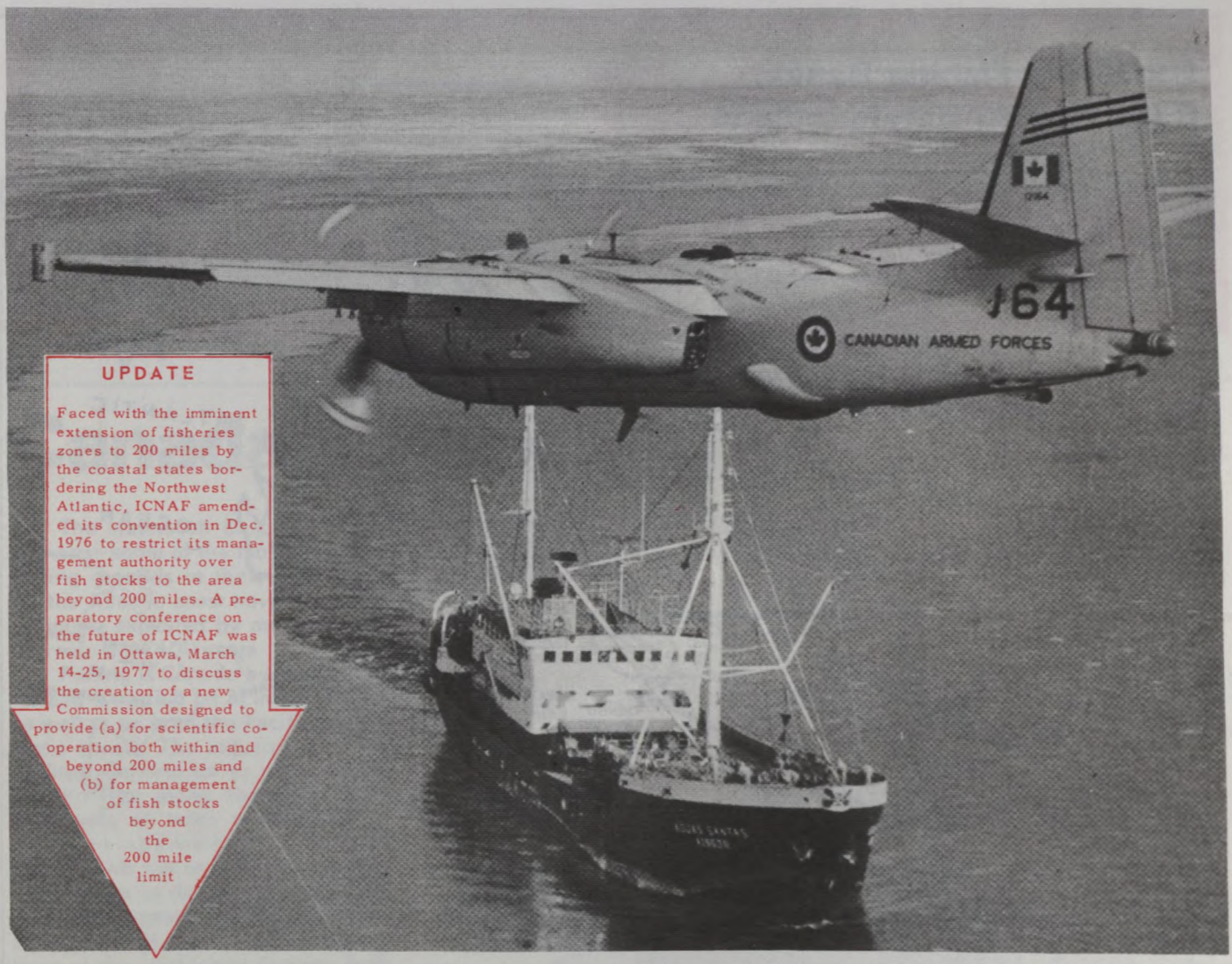


UPDATE

Faced with the imminent extension of fisheries zones to 200 miles by the coastal states bordering the Northwest Atlantic, ICNAF amended its convention in Dec. 1976 to restrict its management authority over fish stocks to the area beyond 200 miles. A preparatory conference on the future of ICNAF was held in Ottawa, March 14-25, 1977 to discuss the creation of a new Commission designed to provide (a) for scientific co-operation both within and beyond 200 miles and (b) for management of fish stocks beyond the 200 mile limit

Canadian Forces Tracker aircraft flies over a Portuguese fishing vessel while on a routine coastal patrol. **DND photo**

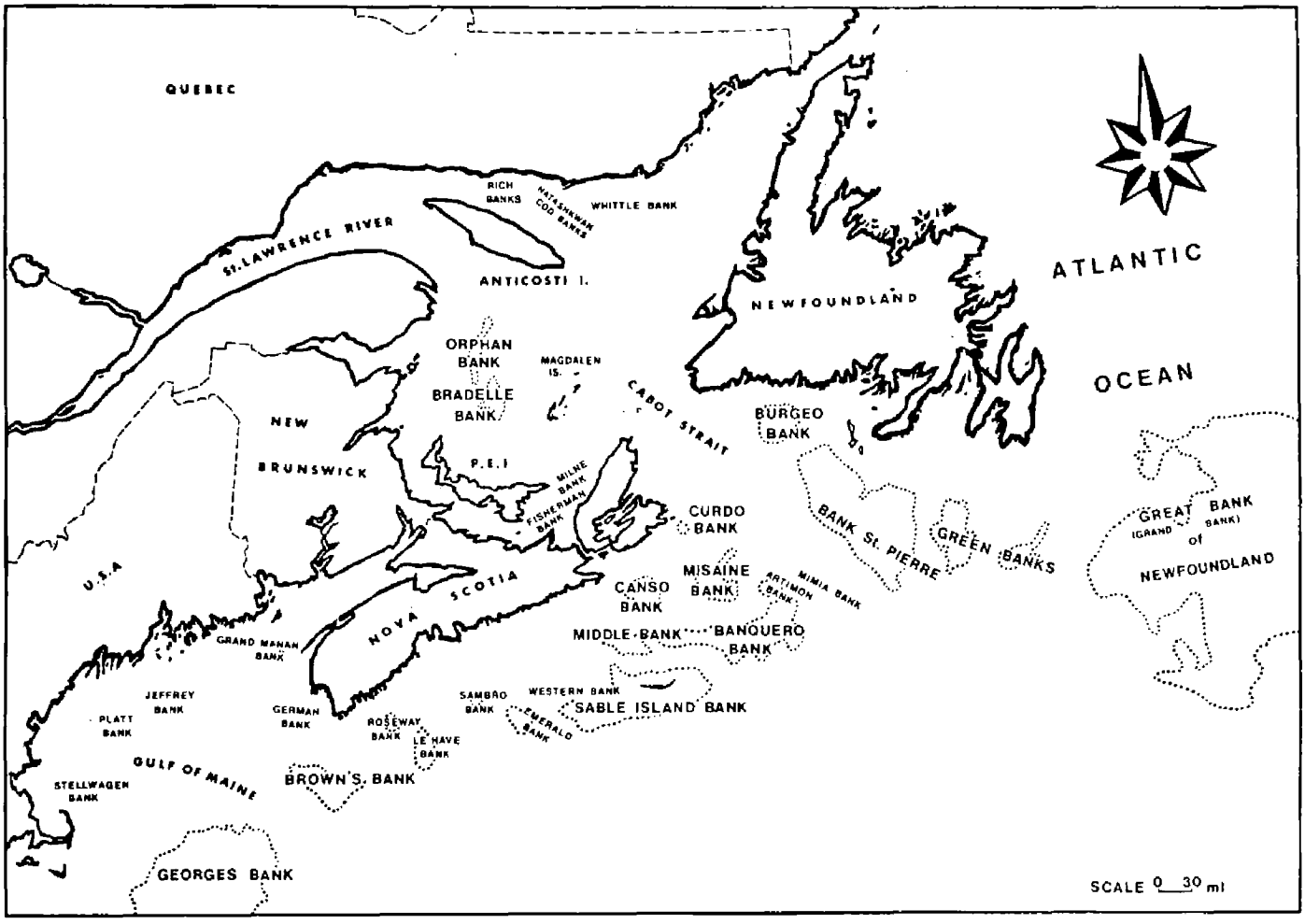
resources. Within the last two decades, the number of European fishing fleets on the banks has grown to 16. At the beginning the most formidable newcomer was the Soviet Union, but the other nations soon began to expand their fleets. Where once there were dozens of vessels on the fishing grounds, now there are hundreds.

By the late 1940's, the fishing pressure started to increase at a heavy rate. Scientists of the nations involved began to concern themselves with the effects of such heavy fishing on the northwest Atlantic fish stocks. That led to the formation of the International Commission for the Northwest Atlantic Fisheries of which Canada is a member. This commission instituted conservation measures to promote the best use of the fishing resource. This management program mainly involves regulating mesh sizes for the nets used. Minimum sizes have been set to permit the escapement of fish under commercial size. More recently, national catch quotas have been established for the more heavily-fished species such as herring, cod, plaice and hake.

While fish has been the main source of wealth in the northwest Atlantic, that sprawling piece of ocean also contains other wealth beneath its rolling surface. Oil and minerals are there, and the day may not be far off when these new resources will be yielding bountiful returns to those exploiting them.

All the large fishing banks have their stories. So do the smaller ones. On their bottoms lie the bones of ships wrecked in recent times and long ago. The most notable of these sea-bed wrecks is the mighty 40,000-ton Titanic. One still and chilly night in April 1912, the luxury liner sank a few miles south of the Grand Banks on her maiden voyage from England to New York. She struck an iceberg and sank, carrying more than 1,500 persons to their deaths. Since then the International Ice Patrol ships of the United States watch the north Atlantic sea lanes and warn ships of drifting bergs.

Off Shore Fishing Banks...
Cape Cod to Newfoundland



Environment Canada
Environnement Canada
Fisheries and Marine Service
Service des pêches et des sciences de la mer

fisheries fact sheet

Canada's Fisheries

The waters off Canada's coasts comprise some of the most important fishing grounds in the world. Those off the Atlantic coast have been continuously exploited by many nations for more than 400 years.

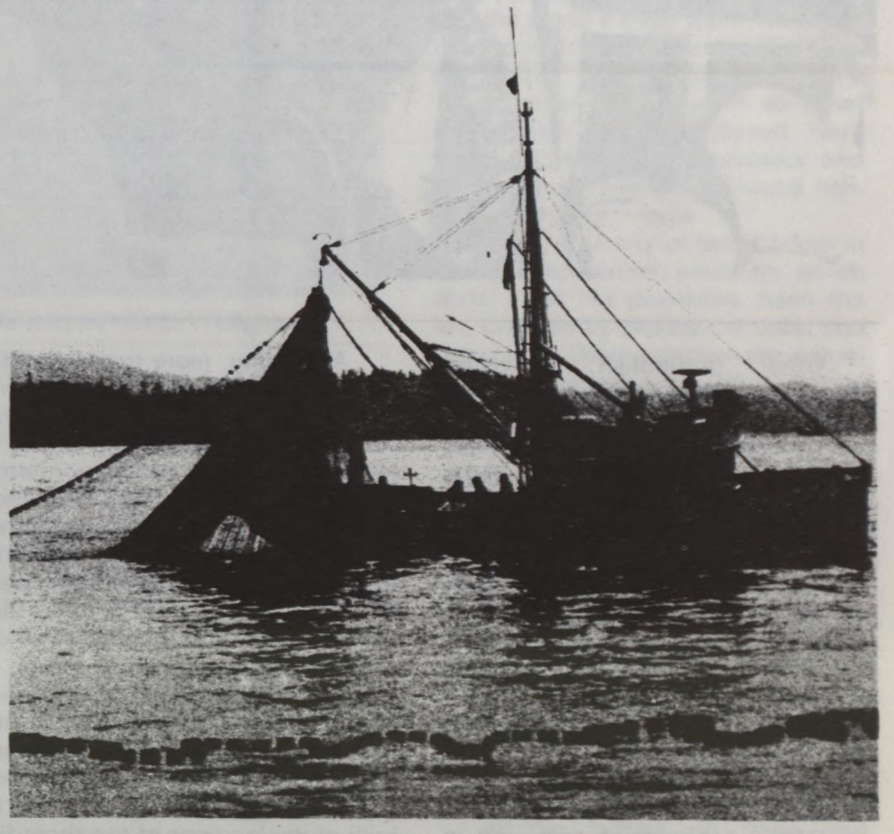
Fishing is Canada's oldest industry and is carried on in inland waters as well as on both the Pacific and Atlantic coasts. The industry is of the greatest importance to many of the communities along Canada's many thousands of miles of coastline. It provides approximately 82,000 people with full or seasonal employment either in fishing or in fish processing industries. The industry ranks among that of the 12 top fishing nations of the world, and Canada, with about two-thirds of her catch being sold in foreign markets, is one of the world's largest fish exporters. Approximately 2½ billion pounds of fish are caught annually, having a total marketed value of about $455 million.

Canada's fishing grounds fall naturally into three main divisions: Atlantic, Pacific and Inland, each with its own special characteristics.

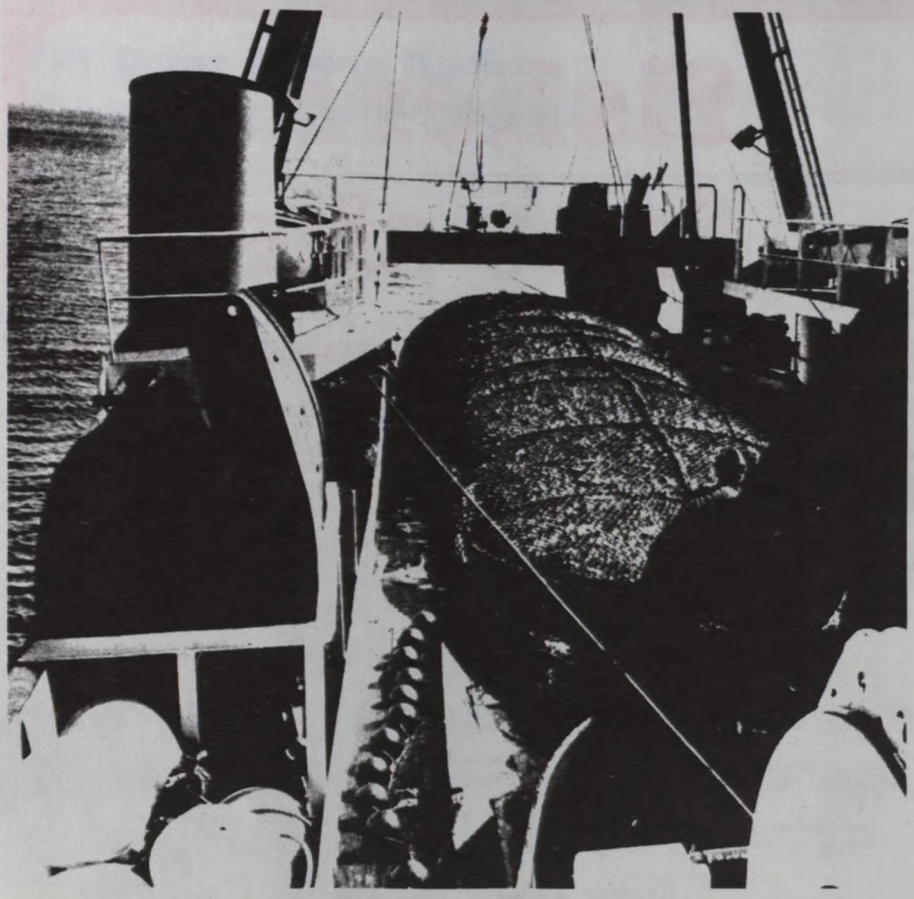
Atlantic Fisheries

The fisheries of Newfoundland, Nova Scotia, New Brunswick, Prince Edward Island and Quebec together account for more than one-half the marketed value of all Canadian fish.

The most valuable Atlantic catch is that of lobsters, which are mainly caught in the three Maritime Provinces, but are also found in the waters of Quebec and Newfoundland. Second in value among Atlantic fishery products is cod, taken by fishermen in all the five provinces, with Newfoundland and Nova Scotia predominating.



Purse Seine netting



A record 120,000-pounds being hauled aboard the stern trawler J. B. Nickerson on Canada's Atlantic coast.

Other "groundfish", so called because they feed at the sea bottom, are often taken with the cod. They include haddock, pollock, hake, cusk, redfish and catfish. Other inhabitants of deep waters caught by Atlantic fishermen are the flatfish: halibut, plaice, yellowtail, and flounder. In addition to lobster, other types of shellfish caught are clams and quahaugs, of which New Brunswick and Nova Scotia both produce considerable quantitites, oysters (chiefly from New Brunswick and Prince Edward Island) and scallops from Nova Scotia. Mussels, winkles and crabs are marketed on a smaller scale.

Of the fish species occurring in schools ("pelagic" fish) and those entering the river estuaries ("estuarial fish"), the herring are the most important. Immature herring landed in south-western New Brunswick are the basis of an important sardine canning industry. Other pelagic and estuarial fish are mackerel, smelts (which are caught in large numbers off New Brunswick and elsewhere), and Atlantic salmon.

Altogether, more than 30 different kinds of fish, shellfish and marine mammals such as seals and whales, are commercially taken by Canada's Atlantic fishermen. In addition, other marine products such as Irish moss and other sea-grasses are harvested.

There is a fairly clear distinction to be made between two branches of the Atlantic fisheries. The shore fishery, which is more important, is carried on in waters within 12 or 15 miles of land, while the deep-sea fishery is worked on the "banks" farther away. Individual fishermen fishing near their homes from small rowboats or motor-boats, produce the bulk of the landings of the shore fisheries. The Labrador Coast cod fishery is of a special type, being conducted mainly by Newfoundland fishermen who voyage there for the summer.

Handlines, and trawl lines with individually baited hooks, are the gear chiefly used in the shore fisheries to catch such fish as cod, haddock and halibut, but in Newfoundland the greater portion of the inshore cod catch is accounted for by cod-traps. Mackerel and herring are captured with seines, trap-nets and gill nets; lobsters are trapped in "pots"; and smelts are mostly caught in winter in box-nets and bag-nets through holes in the ice. Oysters are gathered from their beds by special rakes or tongs; scallops are landed by drags or dredges.

Years ago the offshore fishery was carried on by dory schooners which were wind-propelled and ranged in size from 75 to 125 tons or larger. The typical dory schooners carried 12 to 24 fishermen who fished in pairs from small open boats (dories), using trawl lines. These vessels have been replaced almost entirely by modern types such as the trawler, dragger and long-liner. The former two are propelled by powerful engines and catch fish by dragging an otter-trawl or similar device. This is a large baglike arrangement of nets which captures fish as the vessel tows it through the water. The nets with the captured fish are winched aboard by mechanical power. Long-liners derive their name from the long trawl lines which are used to catch the fish. These lines carry thousands of baited hooks and are hauled with their catch by means of power gurdies.

A considerable proportion of the groundfish landed in the Atlantic provinces continues to be salted and dried for export to Caribbean, Mediterranean and South American markets. In North America, however, these species are marketed mainly in the chilled or frozen state.

This has been made possible by the development in the past 30 years

Lobster boat Lady Cottreau sets out from Wedgeport, N.S.

of refrigerated distribution facilities, which now bring sea fish to all of the important interior markets. The long distances involved in this distribution process make the question of weight important and there has been a steady trend towards filleting at the coast and shipping only the edible portion of the fish to market. This not only reduces transportation costs but also makes cooking easier in the home.

Canning continues to be an important method of preserving and distributing other species, especially immature herring (sardines) and lobsters. Oily fish, mackerel, herring and mature herring—are still preserved in the pickled state for certain export markets, as well as in the frozen and canned forms.

The by-products from the filleting operations (livers and viscera) are the raw products for fertilizer, fishmeal, vitamins and industrial oils. To some extent whole fish are used for one or other of these purposes, as is the case with herring used by fishermen for bait.

PACIFIC FISHERIES

The fisheries of British Columbia, Canada's Pacific Coast province, are dominated by salmon, which account for over one half of the total value. Halibut with other flatfish (soles and flounders) contribute about one-third of the marketed value of the British Columbia catch. Ling and black cod (not related to the true cod), albacore tuna and clams, crabs and oysters also provide a source of income to fishermen.

Almost all fishing in British Columbia waters is carried on within sight of land and there are no very large vessels. But even small boats, usually highly powered and equipped with modern mechanical gear, navigational aids and radio, travel long distances up and down the coast following the seasonal movements of the fish and taking advantage of open seasons in widely scattered areas.

Among the typical craft and gear used are the purse-seine boats which are important in the salmon fishery. Mobility, modern equipment and efficiency characterize the Pacific fisheries which show a high degree of organization both among the fishermen and among the processing companies.

The greater part of the Pacific salmon catch is canned. The product enjoys a world-wide reputation for quality and is exported to many countries.

Fresh and frozen salmon, halibut and many other species, including shellfish, are supplied to Canadian and United States markets. Until recent years, large quantities of herring were caught off the B.C. coast and processed into fish meal and oil. However, due to a drastic decline in stocks, only herring fishing for human consumption is permitted at the present time as a conservation measure. There are now encouraging signs that the B.C. herring stocks are building up to former levels.

INLAND FISHERIES

Apart from being a great sport-fishing area, the inland waters of Canada, which comprise over one-half the world's fresh water, also support important commercial fisheries, particularly in Ontario, the Prairie Provinces and as far north as Great Slave Lake in the Northwest Territories. Quebec, New Brunswick and Yukon have commercial inland fisheries on a smaller scale.

A great variety of fish is taken in these inland waters; whitefish, which occur in all the provinces, head the list, followed by pickerel (or dore) and lake trout. Other species are sometimes of considerable local importance, e.g., saugers in Manitoba and eels in Quebec.

The Great Lakes, and the larger bodies of water in the Prairie Provinces and Great Slave Lake in the Northwest Territories are fished extensively in the summer, the fishermen using boats up to 46 feet in length (e.g., the whitefish boats on Lake Winnipeg) as well as skiffs and canoes. Gill-nets and pound-nets are the chief gear. Production is channelled through permanent shore stations with docking, icing, cooling, grading and warehousing facilities.

Winter fishing on large and small lakes with gill-nets set through holes in the ice is carried on by teams of men, many of whom are only part-time fishermen whose chief occupations are farming, lumbering or in the fur industries. Accommodation for the fishermen as well as handling facilities are available at hut camps or in the form of mobile cabooses. Dog teams, cars and snowmobiles are used to haul fish and equipment.

Most of the catch is marketed fresh or frozen, with a large proportion going to U.S. markets.

Two Cuban vessels get maximum fines for sea trespassing

HALIFAX (CP) — Two of three Cuban fishing vessels were given maximum fines after representatives ... three ships pleaded gu... provincial magistrate's ... yesterday to charges o... passing in Canadian ... torial waters.

The trawler Playa Co... and the factory ship O... Antartico were fined ... each and the trawler ... Giron was fined $1,50... result of a Nov. 8 incid... Nova Scotia that a seni... eral fisheries officer ... highlights cost and e... ment problems in con... veillance.

The destroyers Iroquois and Algonquin, aided by military aircraft and fisheries vessels, spent almost 12 hours locating ...

Hard line against violators–LeBlanc

By JEFF MATTHEWS
Staff Reporter

Canada will adopt a hard line against violators when the country's ...

... be subject to charges in Canadian courts.

Under terms of ... tional Con... licensing procedures ... for ships of other nations and ... bilateral agreements worked out w... for il... off ... syst... will ... "M... be...

... in Canadian courts which will levy heavy fines for violations.

There will also be provision for refusal to renew a vessel's licence or withdrawal of an ...

Royal Navy patrol boats go 'fishing'

The Guardian

LONDON — Three Royal Navy frigates, supported by Royal Air Force Nimrod patrol aircraft, are policing the ...

... to be resolved; the shareout of quotas among European Economic Community fleets in the rich ...

Foreign fleets honoring limit

Foreign fishing fleets appear to be respecting Canada's newly-declared 200-mile offshore management zone which became law New Year's Day.

Doug Johnson, Atlantic re... ... with the fed...

... tuna and swordfish "well out to sea" on the Scotian Shelf.

There is also limited activity in the traditional winter fishery off Labrador, he said. This is mainly by countries with long-established fishing vessels.

... fisheries ...

First a blip on the screen, then: 'We've got a visual'

By PETE McMARTIN

The little yellow blip popped on to the plane's radar screen 15 miles southwest of Cape St. James, the most southerly point on the Queen Charlotte Islands.

"I have a contact," the radar operator reported over the intercom. "About ...

... ship, bobbing alone in the steel-grey waters.

"We've got a visual," the pilot said. "If this list is right, she should be Japanese."

The s... seek green. She was a fishing vessel and probably Japanese but we had to go in close, the pilot said, to make a positive identification.

About three miles from the ship, we leveled. From the 500-foot level we were lying at the pilot nosed the little plane ... the bow of the ...

The plane used for patrols is called, logically, the Tracker, or the CP-121 as it is known to the pilots. There are three on the ... and ... another three tracking ... the ... similar to the CP-121 ... make up the squadron.

These small planes fly five or six-hour patrols, up and down the coast all week, and are complemented ...

Three vessels fined $5,500

By DENNIS HARPER

Two of three Cuban fishing vessels were given maximum fines after pleading guilty in magistrates court in Halifax Tuesday to charges of trespassing in Canadian territorial waters.

The trawler Playa Colorada and the factory ship Oceano Antartico were fined $2,000 each and the trawler Playa Giron was fined $1,500 as a result of a Nov. 8 incident off Nova Scotia which a senior federal fisheries officer says highlights cost and enforcement problems ... coastal surveillance.

At the time, the Canadian territorial limit was 12 miles; now is 200 miles.

"After hearing this case ... can use your imagination to ... how hard it'll be to enforce ... 200-mile limit," Stan Dudka, ... pervisor of international ... veillance for the federal f... eries department, said in an ... terview after the trial.

"It'll be impossible to enfo... the law unless the fishing ... tions agree to obey it."

Mr. Dudka estimated ... Nov. 8 pursuit by two Canadi... destroyers, two military a... craft and two fisheries vess... of the three Cuban vessels, ... of which were commanded ... Soviet skippers, cost Canadia... taxpayers $20,000.

"American and Canadia... ships and aircraft are still o... there looking for a missing 64... foot tanker with millions of ga... lons of heavy oil on board an... they can't find a trace of her," Mr. Dudka said.

"You can see the problem th... 200-mile limit creates and you know the answers to questions on surveillance problems before you ask them."

The destroyers Iroquois and Algonquin, aided by military aircraft and fisheries vessels, spent almost 12 hours locating the Cuban vessels and ordering them into Halifax.

The Cuban ships were later charged under the Coastal Fisheries Protection Act. They were first spotted on radar one mile inside the former 12-mile limit.

Testimony Tuesday indicated that Ivan Tsarev, Alexander Ivanov and Roberto Petancourt, captains of the three Cuban vessels, all said during questioning in November that they had arranged to meet off Nova Scotia in order to transfer fish from the trawlers to the factory ship.

They also said they wanted to transfer an injured seaman from one of the trawlers to the factory ship but Canadian authorities said a later search of ... any trace of such plans.

Although a storm moved into the area later that day there was no apparent reason why the three ships left open waters before dawn to transfer their catches, Mr. Dudka said.

Judge Nathan Green rejected a language barrier as the reason why the Cuban ships failed to respond to attempts by fisheries and naval officers to get them to stop.

He said any competent sailor should have been familiar with ... stroyers, and "common sense" should have convinced the captains that a 12-hour pursuit by naval destroyers mea... one wanted t...

"Whether ... people after th... order them to ... issue," he sai... have stopped."

Tuesday ... mar... time any member ... fishing fleet wo... North Atlantic ...

Foreign fishing fleets respect 200-mile limit

Federal Fisheries Minister Romeo LeBlanc said there does not appear to be any violations ... within ...

The total allowable catch by Canadians in the zone will rise slightly, to 339,000 metric tons from 336,000 in 1967.

... Britain, however, air and ... rols policing the new ... offshore fishing limits ... also went into effect there ... e new year, caught five ... d Communist trawlers ... ing in the first day. ... ee were Romanian and ... ulgarian. Both nations are ... ifically banned under the British Fishery Limits Act. ... ey were sighted fishing in ... English Channel, but government sources in London indicated there would be no unilateral British action in the early ... ages of the new offshore ... nits.

The trawlers were warned to vacate the new closed fishing zone.

The British have pressed ... minesweepers into fisheries protection duties and one new deep sea patrol vessel is already at work. Four more of these are on order. In addition, RAF long-range Nimrod maritime reconnaissance planes are checking every fishing vessel in the new 200-mile limit during daylight hours.

On another front, two of three Cuban fishing vessels were given maximum fines after pleading guilty in magistrates court in Halifax to charges of trespassing in Canadian territorial waters.

The trawler Playa Colorada and factory ship Oceano Antartico were fined $2,000 each and the trawler Playa Giron was fined $1,500 as a result of a Nov. 7 incident off Nova Scotia.

At the time of the incident the Canadian territorial limit was 12 miles.

The destroyers Iroquois and Algonquin, aided by military aircraft and fisheries vessels, spent almost 12 hours locating the Cuban vessels and ordering them into Halifax.

The Cuban Ships were later charged under the Coastal Fisheries Protection Act. They were first spotted on radar one mile inside the former 12-mile limit.

200-mile zone patrol is a cinch — LeBlanc

Journal Montreal Bureau

MONTREAL — Fisheries Minister Romeo LeBlanc tends to get a little testy when cynics suggest that Canada is unable to police the 200-mile coastal fishing zone which comes into effect Jan. 1.

His officials mutter darkly about shipbuilding and aircraft manufacturing interests who are somehow behind those critics calling for a vast expansion of surveillance facilities at the expense of more funds for basic fisheries research.

The minister told a news conference last week: "Those who want me to build more vessels instead of putting a greater scientific effort into finding out what fish are in there are not performing a service to Canadian fisheries. You don't need a lot of new planes. The zone can be patrolled by a DC-3."

Research is a key aspect of making fisheries control effective: if you can predict with some degree of accuracy where fish are, how many of them, of what kinds, for how long and of what quality, you can then work out where the fishermen, both foreign and national, are likely to be. You also have the data on which to base regulations and restrictions.

L. H. Legault, a lawyer with the international directorate of the fisheries and marine service of Environment Canada said: "Jurisdiction ...

By Rob Bull

... to locate and identify every fishing vessel in Canada's offshore waters and keep a closer eye on those areas where boundary lines cross fishing banks, LeBlanc says.

Canadian inspectors will board at sea at least one-third of the foreign fleet and one-sixth of the Canadian fleet every month.

There will be 43 fisheries conservation and protection vessels operating on the East Coast and 51 on the West Coast with other vessels on call from fisheries research and the departments of transport and national defence.

In comparison, when the United States extends its jurisdiction to 200 miles in March, the U.S. Coast Guard will use 19 ships, 10 helicopters and 10 aircraft for fisheries enforcement on its east coast.

Iceland policed an area of 700,000 square kilometres of ocean last year with five patrol boats, one aircraft and two helicopters. At the height of the cod war, the country leased one or two more trawlers.

Jon L. Arnalds, secretary-general of Iceland's ministry of fisheries, said in an interview here that a key aspect of his country's fisheries enforcement is in ...

Foreign fleets are limited in size and in some cases individual ships are licensed.

"If we find a ship is unlicensed," Arnalds said, "we board it and bring it to shore. If necessary we can refuse to allow an individual ship permission to fish in our waters.

"Britain found that it did not pay to bring in warships to force the issue with us. Other countries saw how things were developing and were willing to negotiate with us.

"Although we cut their catches down, we didn't exclude them. The situation of the fish stocks is so bad that we may have to cut down our own catch even further.

"We owe a lot, however, to the courage and determination of the men on our patrol boats. They risked their lives. It is a surprise there was no ship sunk during the cod war."

William Gordon, northeast regional director for the United States national marine fisheries service, says his country also may be able to get some help in enforcement and fisheries activities from U.S. fishermen when the weather interferes with aircraft over-flights.

"I don't know if people appreciate the serious economic factor involved in penalties for breaking fisheries regulations," he added. "In an extreme case, if a boat shows up with no licence and ...

How can we prevent over-fishing by foreign fleets?

Canada now has the sovereign right to manage the living resources of the seas in a 200 mile zone and to set quotas for foreign fishing fleets.

9

DEPARTMENT OF EXTERNAL AFFAIRS
MINISTÈRE DES AFFAIRES EXTÉRIEURES

communiqué

No.: 116

DIFFUSION: FOR IMMEDIATE RELEASE
RELEASE: NOVEMBER 2, 1976

EXTENSION OF CANADIAN FISHERIES ZONES

The Secretary of State for External Affairs, the Honourable Donald C. Jamieson, and the Minister of Fisheries and the Environment, the Honourable Roméo Leblanc, announced today the publication in a special edition of the Canada Gazette, dated November 1, of the text of the Order-In-Council that the Government proposes to promulgate to extend to 200 miles the fisheries limits of Canada.

In accordance with applicable legislation, this text has been published 60 days in advance of its coming into effect. The Government announced on June 4, and again in the speech from the Throne, that in light of the crisis situation pertaining in the fisheries off Canada's coasts, the areas under Canadian fisheries jurisdiction on the Atlantic and Pacific coasts would be extended to 200 miles as of January 1, 1977. This action is in conformity with the emerging consensus of the ongoing Law of the Sea Conference, and is being taken to ensure the proper conservation and management of the living resources of the sea adjacent to these coasts. This consensus is also reflected in the bilateral fisheries agreements concluded over the past year with major fishing states operating off the Canadian coasts.

The proposed Order sets out the geographical coordinates of the new fishing zones, including coordinates which delineate the limits of the zones in areas adjacent to neighbouring states. The preamble of the Order notes that the limits of the fishing zones being established by Canada are intended to be without prejudice to negotiations with neighbouring states concerning the delimitation of the maritime boundaries. The preamble refers to consultations being pursued with the U.S.A., France (regarding St. Pierre and

Miquelon) and Denmark (regarding Greenland) which have coastlines adjacent or opposite to Canada. The Government will be seeking mutually acceptable settlements with these states by way of negotiation or by third party procedures. Pending the settlement of these maritime boundaries, interim fisheries arrangements, which will protect the full range of Canadian fisheries interests, are being sought.

The Government is also aware of the importance of safeguarding the fishing interests of the native peoples in the Arctic and the need to provide for development of fisheries in the Canadian Arctic regions. Consequently the Government has decided to extend the fisheries limits in the Arctic to 200 miles by March 1, 1977.

The following diagrams, prepared by the Canadian Hydrographic Service, illustrate the new 200 mile fishing zones as set out in an Order-in-Council dated January 1, 1977. The new zones have been designated as "Fishing Zone 4" and "Fishing Zone 5" (Fishing Zone 1, 2 and 3, also illustrated in these diagrams, were proclaimed in 1971). The new fishing zones came into effect on January 1, 1977. In another Order-in-Council effective March 1, 1977, an additional 200 mile fishing zone, was established in the Arctic as "Fishing Zone 6" (not represented on the diagrams.)

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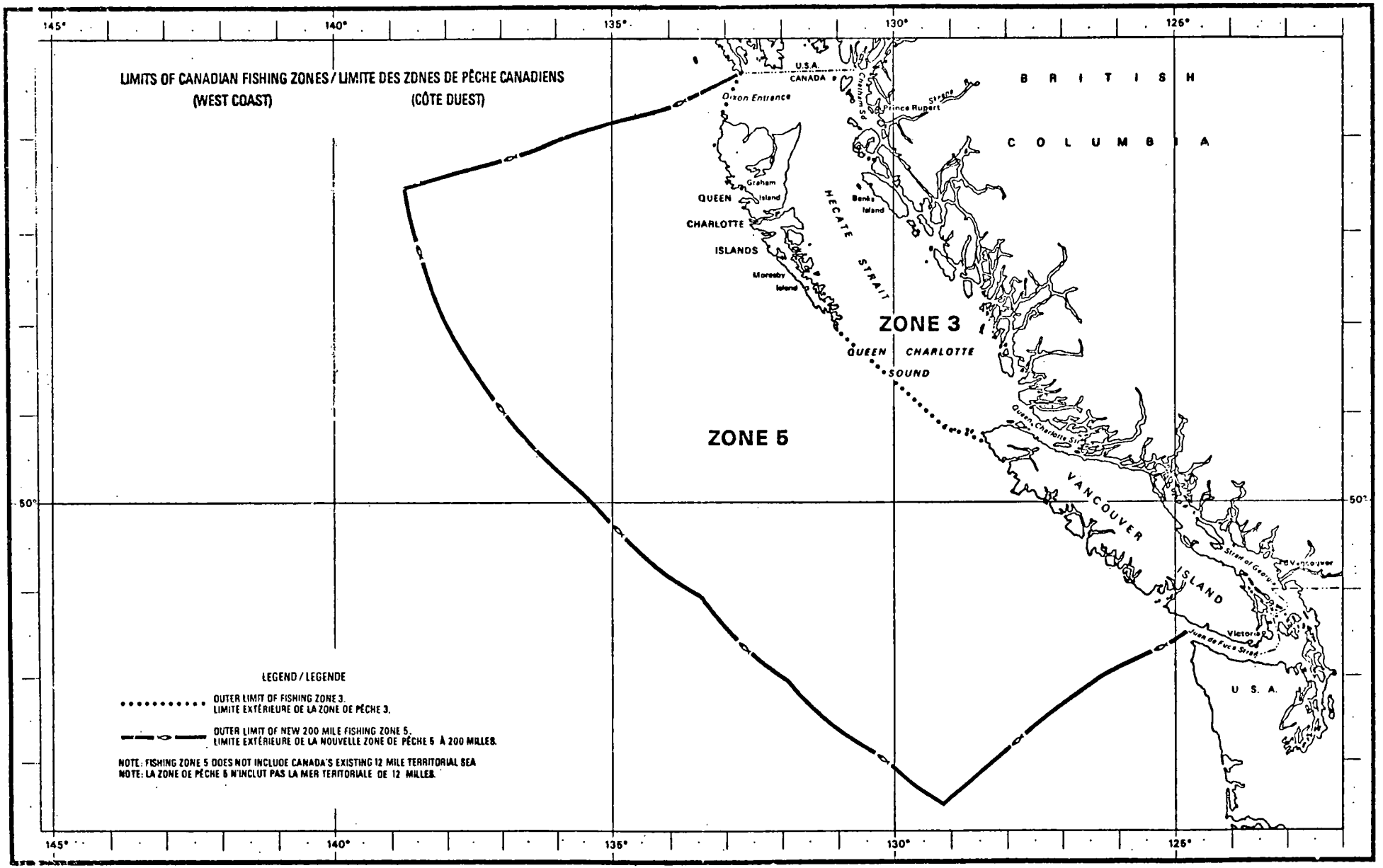
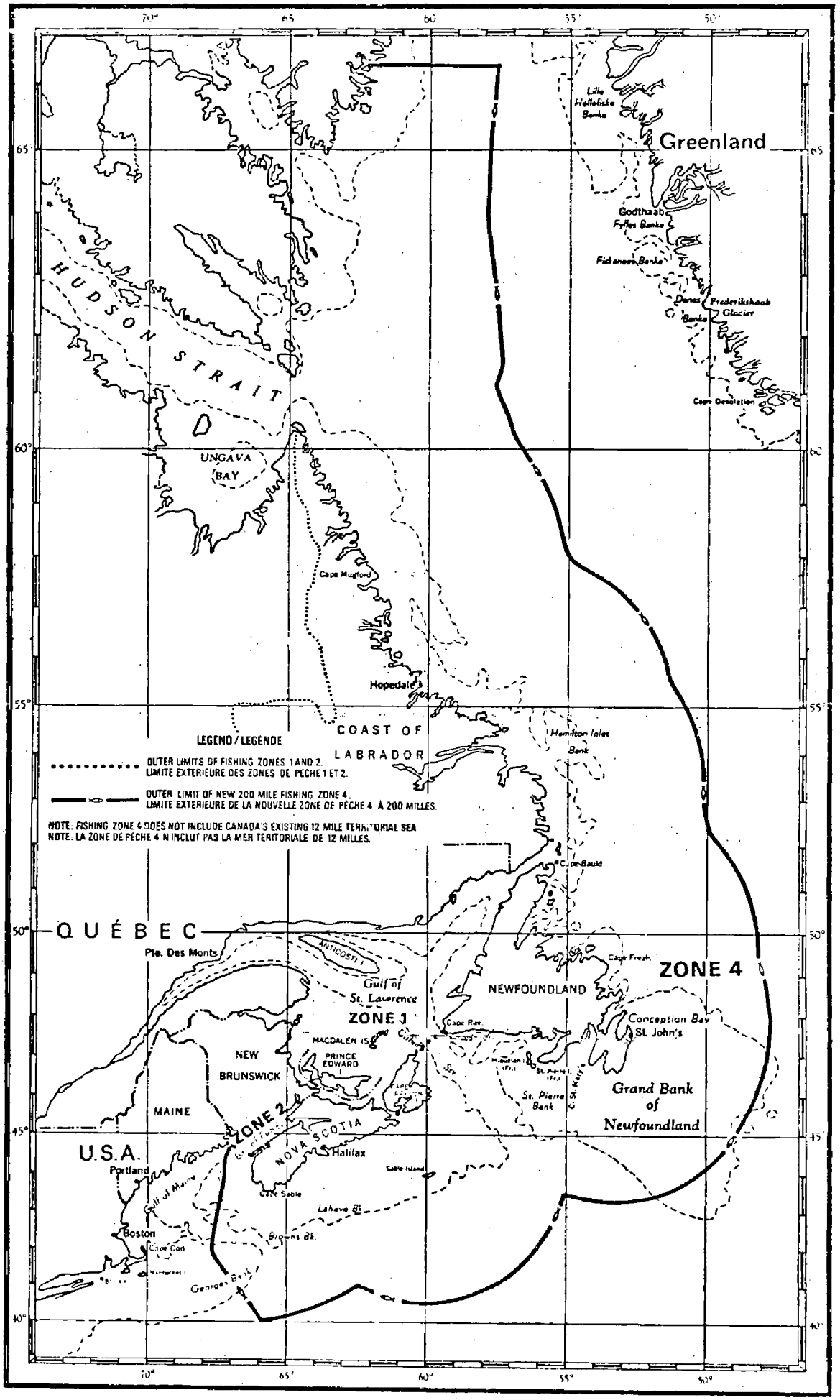
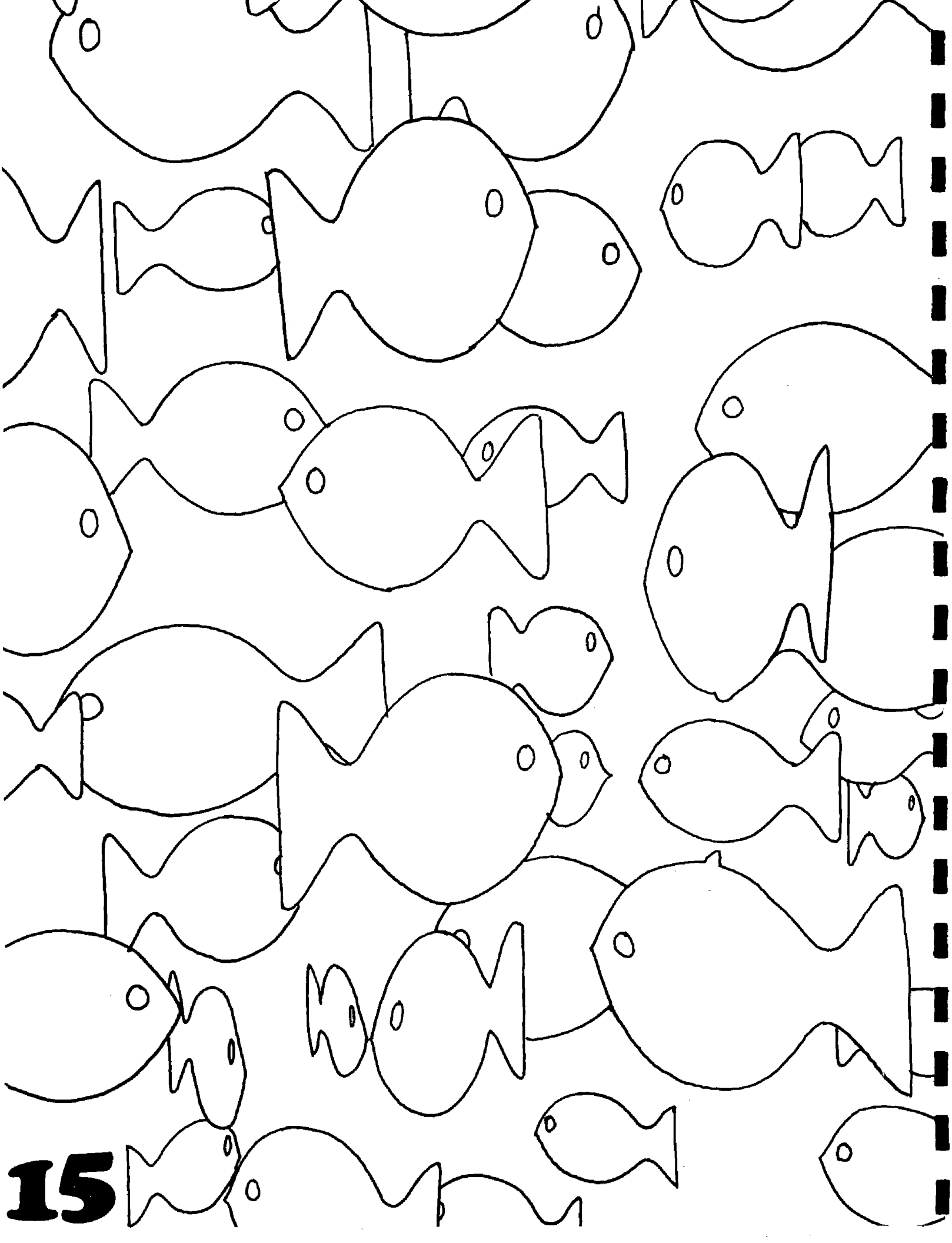
Pacific


LIMITS OF CANADIAN FISHING ZONES / LIMITE DES ZONES DE PÊCHE CANADIENS
(WEST COAST) (CÔTE DUEST)
145°
140°
135°
130°
126°
50°
U.S.A.
CANADA
Dixon Entrance
Chatham Sd.
Prince Rupert
Strait
B R I T I S H
C O L U M B I A
Graham Island
QUEEN CHARLOTTE ISLANDS
Moresby Island
Banks Island
HECATE STRAIT
ZONE 3
QUEEN CHARLOTTE SOUND
ZONE 5
Queen Charlotte Strait
VANCOUVER ISLAND
Strait of Georgia
Vancouver
Victoria
Juan de Fuca Strait
U. S. A.
LEGEND / LEGENDE
OUTER LIMIT OF FISHING ZONE 3.
LIMITE EXTÉRIEURE DE LA ZONE DE PÊCHE 3.
OUTER LIMIT OF NEW 200 MILE FISHING ZONE 5.
LIMITE EXTÉRIEURE DE LA NOUVELLE ZONE DE PÊCHE 5 À 200 MILLES.
NOTE: FISHING ZONE 5 DOES NOT INCLUDE CANADA'S EXISTING 12 MILE TERRITORIAL SEA
NOTE: LA ZONE DE PÊCHE 5 N'INCLUT PAS LA MER TERRITORIALE DE 12 MILLES.

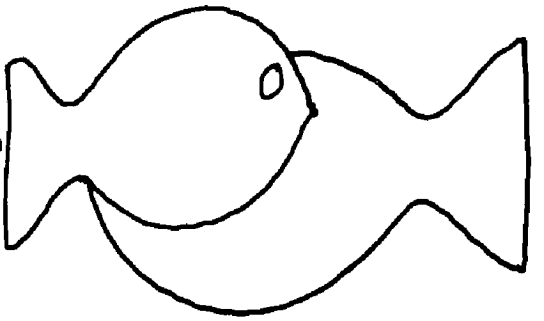


LIMITS OF CANADIAN FISHING ZONES / LIMITE DES ZONES DE PÊCHE CANADIENS

(EAST COAST) (CÔTE EST)



Canada's 200-Mile Fishing Limit



On January 1st, 1977, Canada's extension of jurisdiction over fisheries to 200 miles, came into effect. Here are some of the questions most frequently asked about the new Fisheries Zone.

Q. WHAT DO WE MEAN BY THE TERM "EXTENSION OF FISHERIES JURISDICTION"?
A. This means that Canada is the "owner and manager" of all fisheries within 200 miles of its coasts.

Q. WHY HAS CANADA EXTENDED ITS FISHERIES JURISDICTION TO 200 MILES?
A. Because action was needed to save both offshore and inshore fisheries which have been severely depleted in recent years owing to lack of effective management under international arrangements. This has seriously affected the welfare of Canada's coastal communities and its fishermen and fishing industry. Canada has come to the conclusion that the only way to ensure effective management and conservation is for the coastal state itself to assume management authority.

Q. WHY 200 MILES?
A. Nations of the world which have been considering fisheries and other matters at recent sessions of the United Nations Law of the Sea Conference have generally agreed on 200 miles as an acceptable limit for coastal state jurisdiction. On Canada's Atlantic coast, 90 per cent of all significant fish stocks are concentrated over prolific fishing "banks" within the 200-mile zone. On the Pacific coast, practically all important fish stocks are contained within this zone, except salmon which range well beyond its boundaries.

Q. WHAT WAS CANADA'S FISHING ZONE IN PAST YEARS?
A. Canadian jurisdiction over the sea fisheries used to be confined to waters within the traditional three-mile territorial limit. In 1964, Canada extended fisheries control nine miles beyond the territorial sea; in 1971, the three-mile territorial sea and nine-mile fishing zone were replaced by a twelve-mile territorial sea.

Also in 1971, special fishing zones were established by Canada in the Gulf of St. Lawrence and Bay of Fundy on the Atlantic Coast, and in Queen Charlotte Sound, Hecate Strait and Dixon Entrance on the Pacific coast. Finally, on Jan 1st, 1977 Canadian fisheries management jurisdiction was extended an additional 188 miles to establish a 200-mile fishing zone on both coasts.

Q. THE NEW FISHING ZONE NOW EXTENDS 200 NAUTICAL MILES - WHAT IS THE LIMIT IN STATUTE MILES?
A. One nautical mile = 6,080 feet. This 200 nautical mile zone works out to roughly 230 statute miles.

Q. HOW DID CANADA GO ABOUT EXTENDING ITS FISHERIES JURISDICTION?
A. The Territorial Sea and Fishing Zones Act, first enacted by Canada's Parliament in 1964 and amended in 1970, empowers the Government to establish fishing zones off Canada's coasts. The fishing zones in the Gulf of St. Lawrence, Bay of Fundy, Queen Charlotte Sound, Hecate Strait and Dixon Entrance were established in 1971 under authority of this Act.
The same authority was used to create the new 200-mile fishing zones on both Atlantic and Pacific coasts. Using this procedure, the Government published the proposed Order-in-Council in the Canadian Gazette, November 1st, 1976 providing for the extension of Canada's fishing zones to 200 miles. In a separate Order-in-Council effective March 1st 1977, 200 mile fishing zone was first established in the Arctic.

Q. WHY DID CANADA EXPECT FOREIGN COUNTRIES TO ACCEPT ITS DECLARATION OF A 200-MILE LIMIT?
A. Because
(a) the concept of a 200-mile fishing zone has won acceptance by the international community, as reflected in developments within the United Nations Law of the Sea Conference. The concept is now reflected in state practice, with an increasing number of countries having already taken action to extend their fisheries zones to 200 miles.
(b) Canada had already gained acceptance

of a 200-mile limit in bilaterial fisheries agreements negotiated during 1976 with the major fishing nations operating off Canadian coasts; Norway, U.S.S.R., Poland, Spain and Portugal. Fleets of these countries account for 88 per cent of all fish catches by foreign fishermen in Canada's Atlantic zone and most of the foreign catch in Canada's Pacific zone.

Q. WHAT IS THE SITUATION IN THE NORTHWEST ATLANTIC IN 1977, TAKING INTO ACCOUNT THE FACT THAT ICNAF HAS ALREADY ADOPTED REGULATIONS FOR 1977?

A. Canada undertook, as a transitional measure for 1977 only, to give effect to those regulations agreed within ICNAF with Canadian concurrence. Any foreign fishing in Canada's zone in 1977 is subject to Canadian licensing and enforcement procedures. Fish quotas set by ICNAF for 1977 generally correspond to those Canada would have set if the 200-mile fishing zone had been in force at that time. At Canada's insistence, total allowable catches of northwest Atlantic fish stocks have been set at levels low enough to ensure rebuilding of the stocks. Canada as a coastal state estimated its catch requirements on the basis of harvesting capacity, subject to conservation limits, and largely succeeded in having these amounts set aside for Canadian fishermen. For many stocks inside Canada's 200-mile zone, including most of those off Nova Scotia, only Canadian fishermen will be able to fish in 1977. For other stocks, foreign fishermen will be able to take that portion of the total allowable catch of a given stock which is surplus to Canadian harvesting capacity.

Q. WHAT ARE THE 1977 TOTAL ALLOWABLE CATCHES AND NATIONAL FISH QUOTAS?

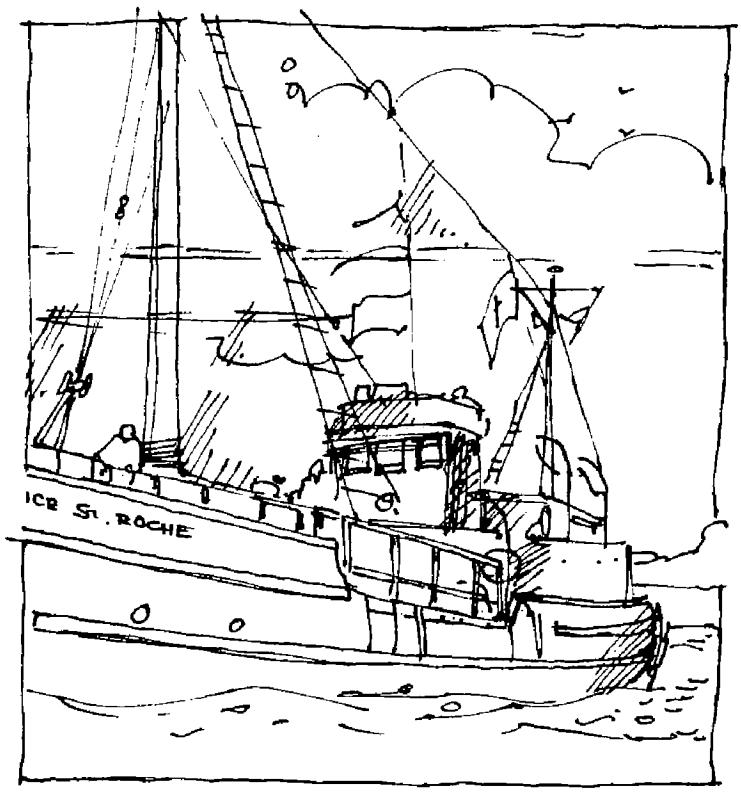
A. At ICNAF's 1976 meetings total allowable catches and national fish quotas were set for more than 50 stocks. For groundfish (cod, flounder, haddock and similar "white-fish" species) traditionally fished by Canadian fishermen, allowable catches for all nations combined have dropped from a 1976 level of 956,600 metric tons to 668,500 metric ton in 1977, a reduction of thirty per cent. Foreign fleets have absorbed nearly all the quota reductions on these stocks; their total share has dropped by 47 per cent, the reduction for some countries running as high as 68 per cent.

Canadian quotas for the same groundfish stocks have risen, slightly, to 339,600 metric tons in 1977 from 336,000 tons originally allocated for 1976. The Canadian percentage of the total thus rises from 35 per cent in 1976 to 51 per cent in 1977. Most of the surplus allocated to foreign nations lies in areas relatively far from the major Canadian fishing grounds. Even in these distant grounds, Canadian quotas, generally, will increase.

Q. WHAT IS THE FUTURE OF ICNAF?

A. Canada hopes that a revised ICNAF or some successor body will regulate fisheries in the Northwest Atlantic outside Canada's 200-mile fishing zone and provide for scientific and technical consultations on fisheries management. In December 1976, ICNAF adopted amendments to the Convention (subject to the approval of Member Governments) that restrict the Commission's management authority over fish stocks to the area beyond 200 miles, while providing for the Commission to offer scientific advice to coastal states upon their request.

In order to consider the framework for future multilateral fisheries cooperation in the Northwest Atlantic, a preparatory conference on the future of ICNAF was held in Ottawa in March 1977, to discuss the creation of a new Commission designed to provide (a) for scientific cooperation both within and beyond 200 miles and (b) for management of fish stocks beyond the 200 mile limit. A second preparatory meeting is scheduled to take place in June 1977, and the Government of Canada will be the host of a Diplomatic Conference, which is to be convened in Ottawa in October 1977, to consider the adoption of a new Convention on future multilateral cooperation on the Northwest Atlantic fisheries.



Q. HOW IS CANADA REGULATING FOREIGN FISHING, AND WHAT FOREIGN FISHING ACTIVITY IS ALLOWED WITHIN THE 200 MILE LIMIT?

A. Foreign fishing activity has been regulated by the application of new regulations being developed under the Coastal Fisheries Protection Act and the Fisheries Act. The basic Government position regarding foreign fishing in the Canadian zone is that Canada determines what the total allowable catch of the various stocks may be, determines the needs of her own fishermen, and has allocated the surplus to certain foreign fleets which have been allowed to fish subject to Canadian laws. It is precisely this approach which Norway, U.S.S.R., Poland, Spain and Portugal agreed to in recently negotiated bilateral treaties.

Q. ARE THESE FOREIGN VESSELS LICENSED?

A. Yes, a licensing system has been developed for all foreign fishing vessels fishing in the Canadian zone. The licensing system is one of the key elements facilitating effective Canadian supervision and control of foreign fishing activity.

Q. HOW WILL BOUNDARIES BETWEEN THE FISHING ZONES OF CANADA AND THE UNITED STATES, AND BETWEEN CANADA AND FRANCE (ST. PIERRE AND MIQUELON), BE DETERMINED?

A. Boundaries between Canada and her neighbours are the subject of discussions with the governments concerned.

Q. WHAT ABOUT FISH STOCKS BEYOND 200 MILES?

A. Canada takes the position that the coastal state has a special interest in the management and allocation of fish stocks in areas immediately adjacent to the zone, and Canada is seeking international recognition of this position.

Q. WHAT ARE THE GOVERNMENT'S PLAN'S REGARDING SURVEILLANCE AND ENFORCEMENT IN THE EXTENDED AREA OF JURISDICTION?

A. The government has adopted a new plan to meet the immediate increased enforcement and surveillance needs under extended fisheries jurisdiction. Beginning in 1976, the number of sea days on patrol by vessels on both coasts will roughly double to about 2,000. Offshore patrols will double on the Atlantic coast to about 1,500 sea days, and will increase on the Pacific coast to about 500 sea days. The number of boardings of fishing vessels at sea by Canadian inspectors will increase to between 1,200 and 1,400 per year, permitting at-sea inspection

of at least one-third of the foreign fleet and one-sixth of the Canadian fleet every month. The number of aircraft hours spent locating and identifying fishing vessels will more than double to over 4,000 per year. Fishing and Marine Service vessels will carry out about 56 per cent of sea patrols, DND vessels about 31 per cent and MOT vessels about 13 per cent. A 205-foot patrol vessel launched in June will begin operating in Newfoundland early in 1977; two high-speed, aluminum, 126-foot patrol vessels are also under construction for service on the Atlantic coast before the end of 1976.

Q. WHAT ABOUT INCREASED RESEARCH?

A. In taking over fisheries jurisdiction in an area within 200 miles of Canada's coast, Canada also assumes the obligation to manage the resources in the best interests of conservation. To do this job effectively, Canada must increase its own research and stock assessment efforts to a significant degree, but foreign involvement in research will continue as a requirement laid down by Canada for other countries permitted to fish in the Canadian zone. In addition, mandatory catch reporting systems are being developed to provide accurate and timely data on domestic and foreign catches to provide fisheries managers with the information required to make sound management and conservation decisions.

Q. WILL THE 200-MILE LIMIT MEAN THE RETURN OF GOOD TIMES FOR CANADIAN FISHERMEN?

A. In the immediate future, no, but eventually, yes. The stocks need several years to re-build. Fisheries authorities say it will take at least 10 years - perhaps 15 - to rebuild cod stocks, for instance to 85% of their peak levels of the past, although improvements should be noticeable within five years.

Q. WILL CANADA CONTINUE ITS EFFORTS TO GAIN ALL ITS OBJECTIVES AT THE U.N. LAW OF THE SEA CONFERENCE?

A. The Canadian Government is committed to international agreement concerning all uses of the oceans, including fisheries. Achieving such agreement has proven to be a lengthy and complicated process, however, and with the drastic decline in fish stocks, particularly on the Atlantic coast, the Government could not wait any longer to take action to rehabilitate these stocks. Canada's action is, however, consistent with the consensus emerging at the Law of the Sea Conference. Canada will continue to press for agreement at the Conference on other fisheries issues requiring resolution, including restrictions on the taking of salmon beyond 200 miles, the management of wide-ranging species, such as tuna, and the special interest of the coastal state in stocks beyond the 200-mile limit.

A new 200-mile fishing zone won't solve all the problems for Maritime fishing industry

By Bruce Little
For Financial Times News Service

HALIFAX, N.S. — After years of lamenting the decline of the fishery, denouncing foreign fleets for causing it and pressing for a 200-mile limit to reverse it, the Atlantic provinces are finally getting what they want — a fisheries management zone extending 200 nautical miles out into the ocean.

The fishing zone comes into force Jan. 1. For many in Eastern Canada, it is only now beginning to sink in that, despite the chauvinistic rhetoric of the last few years, Canada's right to manage the fish will not be a cure-all.

Canada is taking over a massive amount of territory — 500,000 square miles on the East Coast and 130,000 square miles of the Pacific Ocean.

"We are acquiring jurisdiction over an actively fished area which approximately doubles our present total maritime territorial responsibility," says Dr. Lloyd Dickie, director of the Institute of Oceanography at Dalhousie University, Halifax.

That responsibility puts the job of managing the fisheries zone squarely on Ottawa's back, and the fishing industries of a dozen countries as well as Canada will be sizing up the government's performance.

Move unilateral

Technically, Canada's takeover was unilateral: The Law of the Sea Conference has yet to produce an agreement. But in practice, Ottawa had persuaded the five countries whose fleets account for nearly 90 per cent of foreign fishing here to accept Canadian control even before it announced the extension of fisheries jurisdiction.

Far from solving the fishing industry's problems, the 200-mile limit has simply created more of them and each will be the subject of fervent controversy in the next few years.

Maritimers have a tendency to blame the ills of the industry entirely on the invasion of foreign fishing fleets whose ships scour the ocean with ruthless efficiency. But the industry had problems long before the foreigners came.

Since the Second World War, it has faced collapse every six or seven years. The latest crisis was all the more vicious because of its suddenness. In 1973, the groundfish industry was enjoying one of its best years, despite declining fish stocks. In 1974, the roof fell in as rising costs and evaporating markets squeezed the industry.

Ottawa responded first with a series of Band-aids that pumped $131 million of extra money into the industry and second with an over-all strategy to get the fishery back on its feet.

The strategy served notice that the government plans to intervene more and more in the industry to get it back on its feet. It also plans to maximize the social benefits of the fishery rather than allow pure economics to dictate development.

That approach is bound to bring Ottawa into conflict with portions of the fishing industry. James Morrow, vice-president of National Sea Products Ltd., Halifax, for one, is worried about too much interference from Ottawa.

Industry in jeproady

He wants the government to lay out a long-term plan that would allow depleted fish stocks to recover. Within that framework, fishing companies could maximize their catch in the most efficient way. Such a plan, he argues, would also permit a steady shipbuilding program which would bring new boats into use as the potential catch grows.

Mr. Morrow wants Ottawa to focus first on rebuilding cod stocks. He is worried that by the time other fish species recover there may not be a fishing industry left to save.

A basic requirement of good fisheries management is solid information about fish stocks but good research is lacking.

"Research is absolutely crucial," says Kenneth Lucas, senior assistant deputy minister who runs Environment Canada's fisheries and marine service.

"There are at least 60 stocks out there in Atlantic waters — a glittering national asset — and we simply do not know enough about them."

Numbers misleading?

Some argue that Canada can use figures gathered by the International Commission for the Northwest Atlantic Fisheries. Others say those numbers — based on catches reported by fishermen — are misleading. The solution, they say, is more research ships and more time.

So far, the environment department has been doing most of the work setting up the administration for the 200-mile fishing zone. Now there is pressure in Ottawa to put the management unit in this part of the country.

"When they try to manage from Ottawa, they get into a real mess," says Mr. Morrow. Dr. Dickie goes further, urging as much local input as possible from smaller communities that depend on fish.

One source in Ottawa says the management of the fishing zone will eventually be located in Eastern Canada. The big fight will come when both Newfoundland and Nova Scotia lobby for it.

Ottawa is trying to hire up to 100 new people for fisheries management. So many newcomers will affect the quality of Ottawa's work until they gain experience.

The ideal candidate, says Dr. Dickie, would be someone trained in biology and mathematics with some experience in the fishing industry and fishing communities. Such a broad range of qualifications inevitably narrows the field.

Policing questioned

This is already producing public controversy. Can Canada police its new territory? The problem was underlined last month when three Cuban fishing vessels were caught inside the 12-mile limit.

Fishermen who have often been frustrated by the presence of foreign fleets are sceptical of Canada's enforcement capacity and Vice-Admiral Douglas Boyle, the commander of Maritime Command, has hinted that the navy may not always be available for patrol work.

Ottawa is more sanguine. All foreign fishing ships will be licensed, say officials, and the government will know where and when they will be fishing. Canada will also have the power to inspect their catches and put fisheries officers aboard.

The power to charge violators in court and, more important, the power to withdraw licences — from countries as well as individual ships — will be a powerful weapon, they say.

The 200-mile fishing limit is only the beginning of Canada's new offshore activity. When the Law of the Sea Conference reaches agreement, the fishing zone will become a 200-mile economic zone, bringing with it even more responsibility for sound management.

Bruce Little is a freelance writer in Halifax

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Drawing the line

Page 12, The Citizen, Ottawa, Friday, February 11, 1977

Canada and U.S. attempt to settle their maritime boundary differences

By Alex Binkley
The Canadian Press

The final step to 200-mile fisheries jurisdiction — the negotiation of boundary lines — will probably take at least a year, federal officials think.

Of immediate interest in the talks are fish stocks in four "unsettled maritime boundaries" — the official term for areas where boundary claims are under dispute.

Issues at stake

The Americans are involved in boundary lines for the Georges Bank area off southern Nova Scotia; the Strait of Juan de Fuca area between British Columbia and Washington state; the Dixon Entrance between B.C. and Alaska; and the Beaufort Sea area between Alaska and the Yukon.

Following is a summary of some of the issues at stake in negotiations:

Georges Bank: Canada has drawn a boundary line equidistant from the U.S. and Canadian coasts that gives it the northeastern section of the bank, its teeming fish stocks, productive scallop ground and good petroleum potential. The U.S. has staked out a boundary line along the Fundian Channel, which would include all of Georges Bank. Georges Bank, a traditional fishing ground for Nova Scotians and New Brunswick, may be the most difficult problem to resolve.

Strait of Juan de Fuca: The boundary line inside the strait was settled in an 1846 treaty. Both countires agree that the boundary extension should be determined by equidistance but there is some technical disagreement on how the line should be drawn and there are several areas where boundaries proposed by the two countries overlap.

Dixon Entrance: Here, too, the two countries have agreed on equidistance but little else. The 1903 Alaskan Boundary arbitration, gave the U.S. the large panhandle along the Northern B.C. coast and was a major political issue of the day because Canada considered Britain sacrificed Canadian interests for good relations with the Americans.

The arbitration drew a line at the top of Dixon Entrance which Canada immediately said was the boundary line. The U.S. said it gave the U.S. the land north of the line and Canada the land to the south but made no provision for the water.

Unresolved

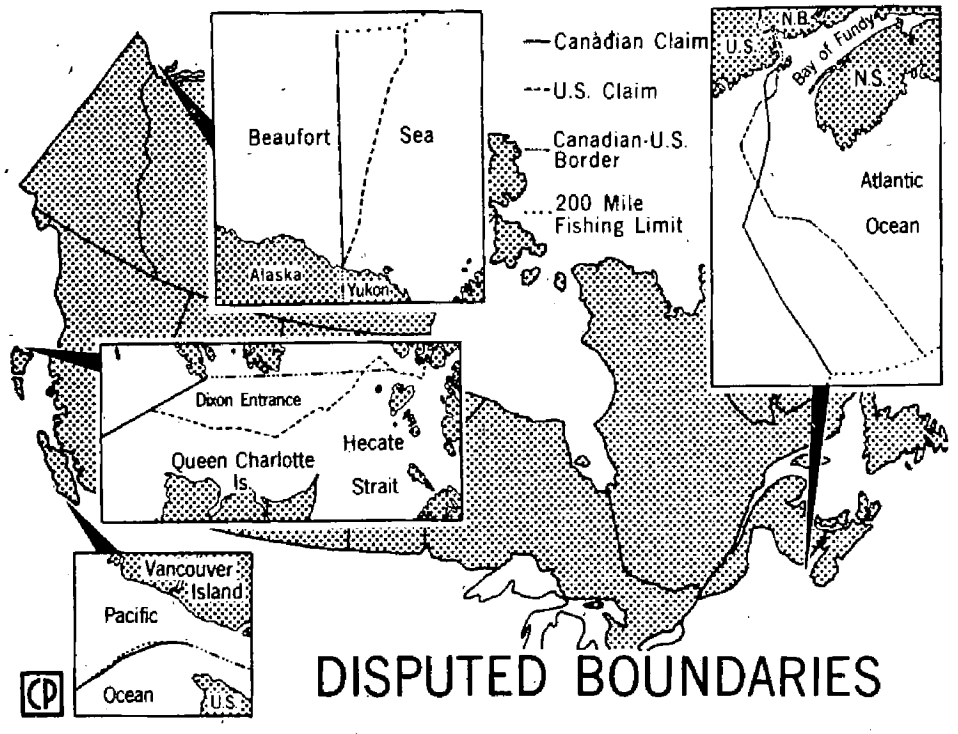
By the 1920s the line had become a "clear difference of opinion between the two countries" that has remained unresolved. Canada has drawn its boundary line by equidistance using the seaward terminal of the line as its starting point.

The U.S. has drawn its line from the inner end of the line, claiming a chunk of the inside portion of Dixon Entrance.

Beaufort Sea: An 1825 treaty between Britain and Russia established the boundary between the Yukon and Alaska including the *"water boundary up to the frozen sea".

†While Canadian officials admit that the term "frozen sea" is vague, they support the treaty's boundary definition. The U.S. wants an equidistant line starting from the head land which would cost Canada a hefty section.

The area is well to the west of the region where offshore drilling for oil is being attempted.



Editor's Note

* the "water boundary up to the frozen sea" is incorrect and should read " its prolongation as far as the Frozen Ocean".

† The first sentence in the next paragraph should read," Canada takes the position that the langauge in the treaty indicates that the parties intended to delimit maritime as well as land territory. "

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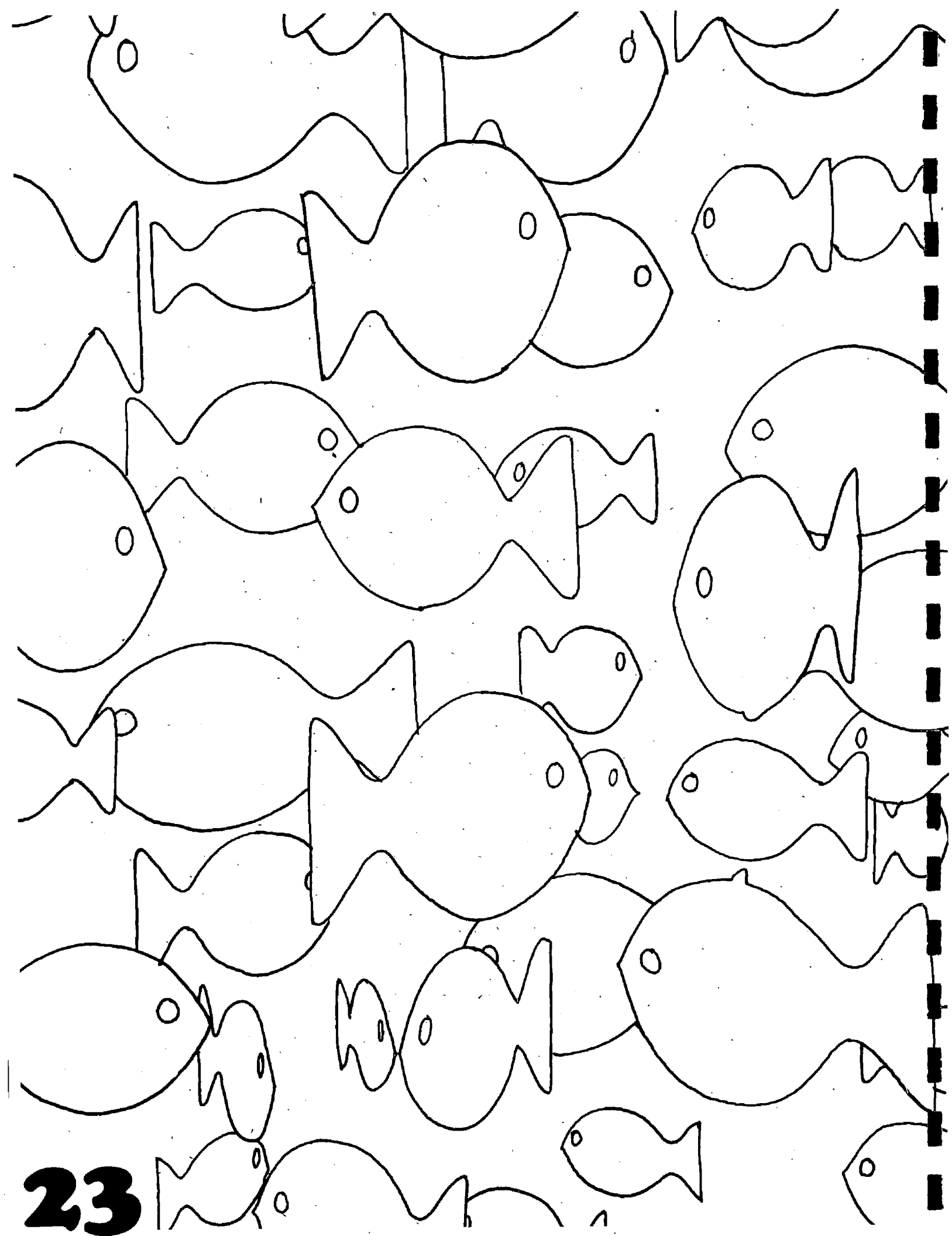


Salmon
A Special Case

IF THERE IS EVER
A TIME WHEN THE SALMON
NO LONGER RETURN,
MAN WILL KNOW HE
HAS FAILED AGAIN
AND MOVED ONE STAGE
NEARER HIS OWN
FINAL DISAPPEARANCE

THE MYSTERY OF THE
SALMON'S OCEAN WANDERINGS
AND FAITHFUL RETURN
HAS ALWAYS BEEN
A SOURCE OF FASCINATION
FOR MANKIND

TO suggest that the salmons are an endangered group would certainly be misleading, yet it is true that, on a world wide basis, their stocks are declining. As with all species of great natural abundance, there is a critical point of decline below which recovery becomes extremely difficult, if not impossible. To say that Atlantic salmon are within sight of this critical point is probably no exaggeration at all. To suggest that high seas fisheries could push many stocks, if not the entire species, below the critical point of survival is certainly true.

Yet the challenge can be met, the decline arrested. Many new things have been learned about the world's salmon resources in the past twenty or thirty years. For the first time there is some clear knowledge of the nature and pattern of their ocean movements. For the first time there is some clear understanding of the intimate hereditary relationship between a vast number of discrete local stocks and their precise freshwater environment. For the first time the possibilities of rehabilitation and development of existing natural stocks have been amply demonstrated. For the first time there is a real prospect of restoring the runs to their original numbers and perhaps well beyond them.

Canadians believe in the value of the salmon runs and their continuing potential. Canadians believe in the right-

DECLINING RETURNS MAKE
A MOCKERY OF ALL EFFORTS
TO PRESERVE AND IMPROVE
THE RESOURCE.
WITHOUT THE COOPERATION OF
OTHER COUNTRIES OF THE WORLD,
CANADA'S EFFORTS MAY
PROVE USELESS.

ness of developing runs to the point of maximum sustained yield. Canadians believe that this is a practical objective and a responsibility they bear, not only to themselves, but to the world. It is a responsibility they are prepared to accept. They are already accepting the responsibility for control, management and regulation of their own onshore fisheries to ensure, year in, year out, adequate numbers of spawning fish. They are already striving to ensure maintenance of the salmon's freshwater habitat in good order, and restoration of the habitat wherever it is needed. They are accepting these responsibilities as well as the hidden costs in increased industrial expenditures and alternative development opportunities foregone. But the burden of responsibility may become altogether too great if high seas fisheries are permitted to destroy the necessary precision of onshore management and if declining returns make a mockery of all efforts to preserve and improve the resource. Without the cooperation of other countries of the world, Canada's efforts may prove useless. Canada is asking for that cooperation from the nations gathering for the Third United Nations Conference on the Law of the Sea.

The salmons of the world are part of the world's history, part of the world's culture, part of the world's wealth. Given a healthy marine environment and reasonable consideration for their freshwater needs they can serve mankind indefinitely into the future. Is it better to permit a high seas fishery far from rivers of origin that will lead almost inevitably to the salmon's extinction? Or are

the salmons worth the effort and complexities of a prohibition of high seas fishing for them and for other anadromous species, such as the shad, the steelhead trout of the Pacific, the hilsa of the Indian Ocean and the European sea trout? Canadians believe there is only one possible answer and are asking recognition of the rights of the countries of origin in the following terms:

1.

That anadromous stocks should be fished only by coastal states and only in areas under their jurisdiction, subject, however, to any appropriate arrangements between neighbouring states of origin where there is intermingling of their respective stocks.

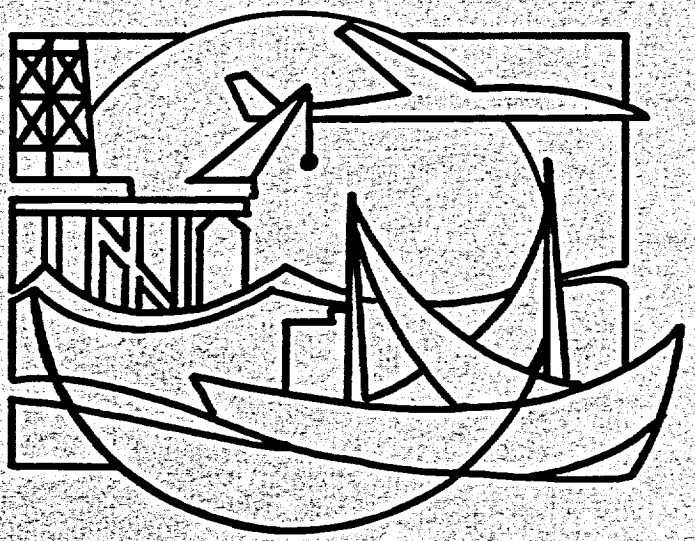
2.

That the conservation of anadromous stocks requires comprehensive management throughout their migratory range, aud that the state of origin has a special interest in such management.

3.

That a coastal state which, in its own area of jurisdiction, fishes for anadromous stocks originating in another state should take into account these conservation and management requirements and consult with the state of origin in this regard.

If weakness and indecision allow the salmons, in their abundance, to disappear from the rivers and the oceans, what hope can there be for the future of life itself?



The United Nations and the Law of the Sea

WHY A LAW OF THE SEA?

Because no borders mark the sea, it is necessary to frame a law that would ensure that the sea and its vast resources are used and developed fairly, rationally and peacefully for the benefit of all mankind. Such a convention must reconcile many conflicting interests. Here are some of the main issues.

How far can a country's sovereignty extend over an expanse of sea?

How far out may a State proclaim exclusive rights over resources, including fishing?

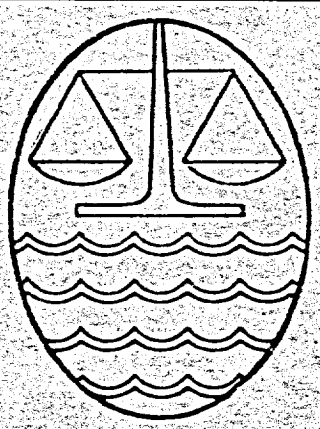
The area beyond national jurisdiction has been designated the common heritage of mankind. How should this area be exploited?

How can developing countries benefit from deep-sea exploration if developed countries control the necessary technology and capital?

How can marine pollution be prevented?

How can marine life be protected against extinction?

How should disputes arising from use of the sea be settled?



HOW HAS THE UNITED NATIONS HELPED TO DEVELOP A LAW OF THE SEA?

Framing a law governing all aspects of the use of the sea is bound to be a long and difficult undertaking. Consequently, delegates to recent United Nations discussions of the subject have agreed not to vote on each issue that arose but to work on the basis of a general agreement before a vote can even be considered.

So far the United Nations has organized three Conferences on the Law of the Sea which have dealt progressively with the different questions.

The First Conference, 1958, adopted **four conventions.** Briefly, they dealt with the territorial sea and the contiguous zone, the high seas, fishing and the conservation of the living resources of the high seas, and the continental shelf. This Conference, as well as **The Second Conference, 1960,** failed to define the limits of the territorial sea and fishing zone.

Between the Second Conference and the Third Conference (1974), there were important developments:

- in 1967 the General Assembly established an Ad Hoc Committee. Its sessions saw wide recognition of the sea-bed and ocean floor beyond the boundaries of national jurisdiction as an area to be used exclusively for peaceful purposes. Also several delegations felt that a new set of rules defining the limits of national jurisdiction was crucial to the whole situation.
- In 1968 the General Assembly established the **Committee on the Peaceful Uses of the Sea-bed and the Ocean Floor beyond the Limits of National Jurisdiction.** The work of this Committee resulted
- in 1970 in the adoption by the General Assembly of **the Declaration of Principles Governing the Sea-bed and the Ocean Floor.**

The Third Conference held sessions in New York and Caracas (1974), Geneva (1975) and New York (1976). It set up three main committees to deal respectively with the international régime;the territorial sea, the economic zone, islands, archipelagos, geographically disadvantaged countries and the continental shelf; and marine pollution and the transfer of technology.

WHAT PROVISIONS MIGHT A LAW OF THE SEA INCLUDE?

The Single Revised Negotiating Text. At the end of the Session, held in New York from 15 March to 7 May 1976, the Third Conference received a Revised Single Negotiating Text to be used as the basis for further negotiations on the final convention. This text is in four parts:

Part I sets out general principles to implement the basic concept that the **resources of the international sea-bed area** beyond the limits of national jurisdiction are a "common heritage of mankind". The text would establish an **International Sea-bed Authority** empowered to exploit the ocean bottom for its mineral wealth and to contract with outside utilities, including States and corporations, to permit them to engage in mining under the authority's control.

Part II contains provisions on **States' rights and duties** in a 12-mile territorial sea, a contiguous zone extending up to 24 miles from shore, a 200-mile exclusive economic zone, the continental shelf underlying these areas, archipelagic waters (within States which consist of archipelagos), and the high seas.

The provisions on the economic zone represent a new concept in international law. They would give coastal States sovereign rights over the fish and other living and non-living resources of that zone while reserving freedom of navigation and certain other freedoms to all States.

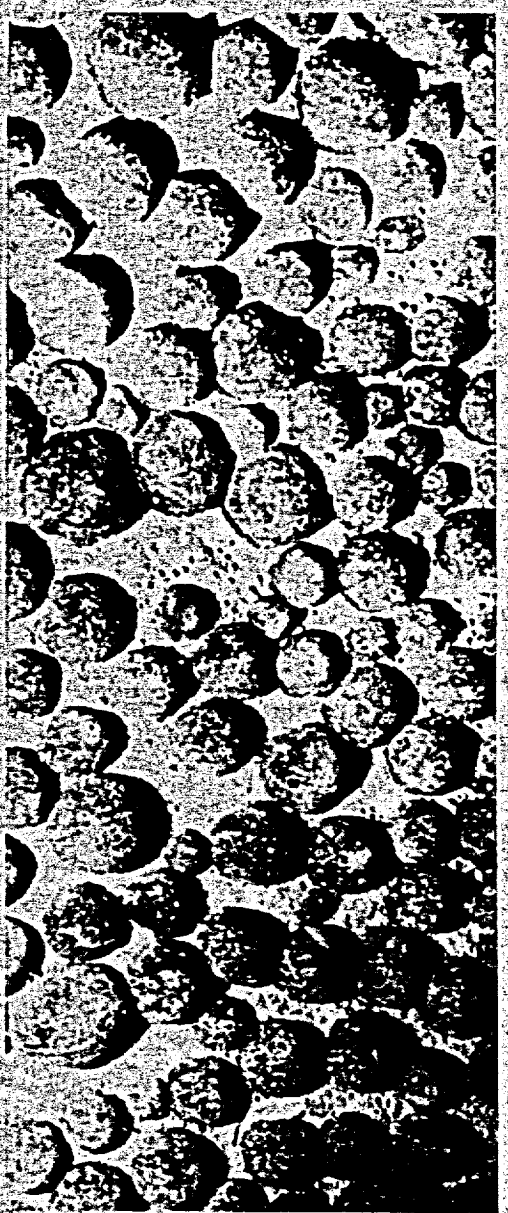
There are also provisions for a revenue-sharing system, and the granting of rights, subject to bilateral and regional agreements, to land-locked and geographically disadvantaged States to fish in the economic zone of neighbouring States.

Part III deals with **marine environment and scientific research.** Subject to certain safeguards relative to the consent of a coastal State or States, the text calls for provision of foreign States to conduct research in the economic zones of other States, as well as on the high seas.

On the marine environment, States would have different powers to enforce anti-pollution regulations, depending upon a number of relevant factors. Other provisions call for action to promote the development and transfer of marine technology.

Part IV, prepared by the President of the Conference, Ambassador H.S. Amerasinghe of Sri Lanka, proposes a system for the compulsory **settlement of disputes,** by means freely chosen by the parties. The choices include reference to a proposed Law of the Sea Tribunal, resort to the International Court of Justice, arbitrational tribunals, conciliation commissions and a new type of committee for handling technical disputes over fisheries, pollution, scientific research and navigation.

Seabed minerals from the area which constitutes "The common heritage of mankind"



These Seabed Minerals ordinary looking potato-shaped stones called nodules, may be the source of future revenues for the benefit of all mankind.

THE NOTION OF THE "COMMON HERITAGE OF MANKIND"

In Summary

The seabed & its resources constitute the "common heritage of mankind" and belongs to everyone

The first attempt to develop an international management system of some of the earth's resources

"The concept of the common heritage of mankind represents an extremely radical, novel and imaginative approach. While the waters superjacent to the international seabed area may continue to be subject to the laissez-faire doctrine of freedom of the high seas, except as amended by international fisheries, conservation, environmental and disarmament treaties, the seabed below and its resources will be subject to a regime of international management, governed by a new international authority. The potential implications of this new concept are truly far-reaching. It can re-shape the thinking of all of us about how to live together in harmony, sharing instead of competing for finite resources.

What the international community is attempting to do is to develop the first international management system for some of the resources of the planet earth, based on principles of sound conservation, rational development and equitable distribution of benefits.

My personal view is that any negation of individual rights or state sovereignty involved is far outweighed by the collective benefit that may ultimately ensue. The attitudes, legal concepts, the economic principles and the international area of the seabed, to be reserved for purely peaceful uses and for the common heritage of mankind, can teach us lessons in international co-operation which we can translate into action in other areas of human activity-even on land.

The experience we can gain in the first true example of "supra-nationalism" can have profound effects upon existing world order, founded, as it is, on the concept of the "nation-state" with little or no sharing of sovereignty even within the UN. Quite apart, however, from the potentially negative aspects, such as the possible threats to peace which could follow from failure to translate this beautiful idea into concrete rule of law, there are other equally important considerations of a more positive nature.

This can possibly be viewed as a prelude to the New International Economic Order

The point of major importance in my view is that the common heritage is directly relevant to - and may even be a pre-condition to -attainment of the New International Order. If the developed states resist this trend, they jeopardize the fate of the Conference as a whole and in the process do a great disservice to the international community."

..... extract from an address entitled The Third Law of the Sea Conference: The Consequences of Success or Failure. by J.Alan Beesley.

Find out about the New International Economic Order?

See article by Maria Eduardo Gonçales "Who Owns the Oceans?" for additional information on the links with the proposed New International Economic Order?

In summary - Coastal States should have the sovereign rights over the resources of both seabed and water column out to 200 miles; and jurisdiction over scientific research & conservation.

THE NOTION OF THE "ECONOMIC ZONE"

"....the economic zone concept originated from the patrimonial sea proposal put forth by certain Latin American states.... and certain other countries. All of these proposals had in common the same basic elements, namely, coastal state sovereign rights over the resources of both seabed and the water column - that is to say, both the living and non-living resources - out to a distance of 200 miles, coupled with certain defined and restricted jurisdictions for the purposes of preserving the marine environment and controlling scientific research. ....the coastal state does not exercise sovereignty or jurisdiction within the zone.

The above proposal, however is one of the most radical to emerge from the Law of the Sea Conference and it remains to some extent controversial, both in doctrinal and in more practical terms. The major maritime powers continue, for example, to assert that the waters of the economic zone have the status of high seas, while some states would consider them as quasi-territorial sea. The majority view, however, is quite clearly that the waters of the economic zone are neither high seas nor territorial sea but have a status incorporating some elements of each of these two regimes, but consituting, in fact, a totally new legal regime. There is criticism of the concept on the grounds that it divides up large portions of the world amongst coastal states. These criticisms characterize coastal states as being somehow outside the international community when, in fact over 90% of the peoples of the world reside in coastal states, and the coastal states comprise the majority of the states of the world. This is not, to suggest that the legitimate interests of the land-locked states should be overlooked. On the contrary, these states must be given equitable treatment in the new emerging regime... it is quite misleading to suggest that coastal states are seizing something from the international community when they together represent the major part of humanity. It follows, that they owe a duty to reflect the interests of states which do not have a coastline, or which have a very short one...."

.....extract from an address entitled The Third Law of the Sea Conference: The Consequences of Success or Failure by J. Alan Beesley. (1976)

Jurisdictional Claims - Economic - Fishing - Territorial

The following states claim jurisdiction over areas of the sea to a distance of 200 miles from the baselines from which the breadth of the territorial sea is measured or to the maximum distance possible where zone-locked. Where claims are non-specific, categories have been determined from the regimes exercised within the zone.

FISHING ZONE

State	Date entered into force	Approximate area involved
Angola	January 28, 1976	147,600 square miles
Belgium	January 1, 1977	800 square miles
Canada	January 1, 1977	857,000 square miles
Chile	April 11, 1953	667,300 square miles
Denmark	January 1, 1977	414,400 square miles
F.R.G.	January 1, 1977	10,400 square miles
France	January 1, 1977	32,200 square miles
Iceland	October 15, 1975	252,800 square miles
Ireland	January 1, 1977	110,900 square miles
Netherlands	January 1, 1977	24,700 square miles
Nicaragua	April 8, 1965	46,600 square miles
Norway	January 1, 1977	590,500 square miles
United Kingdom	January 1, 1977	274,800 square miles
U.S.A.	March 1, 1977	3,000,900 square miles
U.S.S.R.	March 1, 1977	1,257,100 square miles

TERRITORIAL SEA

State	Date entered into force	Approximate area involved
Argentina	January 4, 1967	339,500 square miles
Benin	March 24, 1976	7,900 square miles
Brazil	March 25, 1970	924,000 square miles
Ecuador	November 11, 1966	338,000 square miles
El Salvador	September 7, 1950	26,800 square miles
Liberia	December 24, 1976	67,000 square miles
Panama	February 2, 1967	89,400 square miles
Peru	November 11, 1965	229,400 square miles
Sierra Leone	April 17, 1971	45,400 square miles
Somalia	September 10, 1972	228,300 square miles
Uruguay	December 3, 1969	34,800 square miles

29 Countries have a 3 mile territorial sea and 58 have a 12 mile territorial sea

ECONOMIC ZONE

State	Date entered into force	Approximate area involved
Bangladesh	September 15, 1974	22,400 square miles
Burma		148,600 square miles
Comoros	June, 1976	72,100 square miles
Costa Rica	May 20, 1975	75,500 square miles
Dominican Republic		78,400 square miles
Cuba	February 26, 1977	105,800 square miles
France		
Guatamala	June 9, 1976	28,900 square miles
Haiti		46,800 square miles
India	January 16, 1977	587,600 square miles
Maldives	December 5, 1976	279,700 square miles
Mexico	June 5, 1976	831,500 square miles
Mozambique	August, 1976	163,900 square miles
Norway		
Pakistan	December 17, 1976	92,900 square miles
Portugal		517,400 square miles
Senegal	April 1, 1976	60,000 square miles
Sri Lanka	January 15, 1977	150,000 square miles

Excluding the Antarctic zone it is estimated that the total global area of potential 200-mile jurisdiction comprises 35,173,300 square miles of sea.

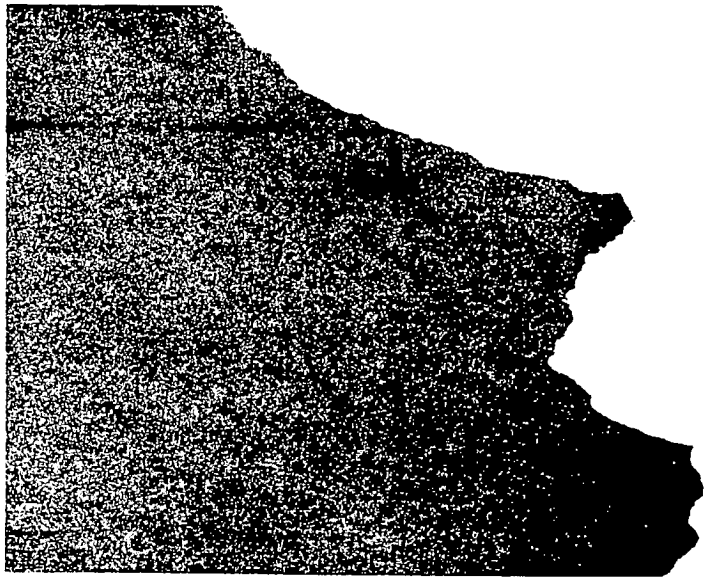
In addition to the above, it is reported that the following states have either draft, or enabling legislation which when implemented will extend jurisdiction to 200 miles:

Bahamas	Resource Zone
Papua New Guinea	Resource Zone
Japan	Fishing Zone
South Africa	Economic Zone
Sweden	Fishing Zone

CONTINENTAL SHELF

A total of 48 countries have continental margins extending beyond 200 miles including Australia, Brazil, Canada, India, Japan, Mexico, New Zealand, Norway, UK, USSR, U.S.

WHO OWNS THE OCEANS?



The United Nations and the international community in search of a new law of the sea

by
Maria Eduarda Gonçalves

MARIA EDUARDA GONÇALVES, *Portuguese jurist, is a member of the Portuguese delegation at the Third United Nations Conference on the Law of the Sea. A staff member of the department of international relations and co-operation at the State Secretariat for Fisheries, Lisbon, she is the author of many studies on the law of the sea and the protection of the environment.*

FOR centuries the oceans were regarded as "belonging to no one" *(res nullius)* and as subject to the principle of the freedom of the seas enunciated in 1609 by an exponent of international law, the celebrated Dutch jurist Hugo Grotius. The eventual result was that they were taken over, exploited and divided up by the then powerful maritime nations which set about building navies for the discovery and appropriation of "new worlds" and unknown seas.

With the passage of time, and primarily for reasons of defence, national custom and practice found formal expression in the rule that a coastal state had sovereign rights up to a distance of three miles from its shores, the maximum range of a ball fired from a cannon of that period. Beyond that limit the principle of freedom of the seas applied.

More recently, the long-accepted idea that the seas are an inexhaustible source of living resources and a suitable receptacle for all the waste and rubbish dumped into them has been challenged. Some developing countries have taken unilateral action to extend their zones of sovereignty to the 200-mile limit so as to exploit and protect their own fishing stocks. Other, industrially developed, countries have extended their jurisdiction to the continental shelf in the hope of exploiting its mineral resources.

The United Nations organized two Conferences on the Law of the Sea—one in 1958 and the other in 1960—at which the main concern was to establish limits for the territorial sea and to lay down principles for the conservation of the seas and their biological resources, in addition to discussing more traditional problems relating to shipping and communications.

But the seas continued to be seen as a potential source of exploitable wealth, providing they are properly managed. Recent investigations of the sea-bed beyond the zones of national jurisdiction and at great depths have resulted in the discovery of mineral resources such as nodules of manganese and have led industrially developed countries to create new technologies for exploiting them.

It was with that specific prospect ahead that in 1967 Malta's representative at the United Nations General Assembly proposed that immediate steps be taken to regulate the use of sea-bed mineral resources and ensure that they were exploited for peaceful purposes and for the benefit of all mankind.

It was feared that with the aid of technological progress, the industrially developed nations, enjoying strategic superiority, would scramble for resources of this kind located beyond the limits of national jurisdiction and use them for their own exclusive benefit, and to the detriment of the developing countries.

The Third United Nations Conference on the Law of the Sea began in 1974. It largely stemmed from the need to fill gaps in existing international legislation which did not cover these new uses of the sea.

However, by this time many new States which had played no part in the formulation of traditional maritime law had achieved independence. They had also become aware of the importance of their offshore resources for providing food supplies and as a means of economic and social development.

Growing attention was also being paid to problems of protecting the sea's living resources and the marine environment and of defending national sovereignty. All these factors led the U.N. Member States to agree on the need for negotiations to create a legal framework for dealing with such questions and to ensure that the uses of the oceans should not become a constant source of tension and conflict but develop harmoniously in a climate of mutual respect.

One of the major themes under discussion is the prospection and utilization of the minerals of the sea-bed beyond the area of national jurisdiction. The international community now accepts that these resources are part of the common heritage of mankind and should therefore not be appropriated by only those countries which have the immediate capacity to extract them. They should be administered by an international authority, still to be set up, in which all States would be represented on an equal footing.

The proposed International Sea-Bed Authority would be a revolutionary innovation within the United Nations family. It would be governed by the new concepts underlying international relations: the exploitation of the area beyond national jurisdiction should be for peaceful purposes only, and the benefits shared equitably among all States, with particular emphasis on the needs of the developing countries.

However, the industrially-developed countries have reservations about some of these proposals: in the last few years multinational companies have made massive investments in perfecting technologies for exploiting the sea-bed nodules as a major source of manganese, copper, nickel, cobalt and other minerals.

On another important question—the adoption of a 200-mile economic zone—there is more or less general agreement. In this zone coastal States would have various powers including exclusive jurisdiction over living resources, with the right to determine the size of the total allowable catch and the unused surplus that could be granted to another state by inter-party agreement.

The 200-mile limit would be a step towards better redistribution of the uses of the living resources of the sea, by restricting the major sea powers—hitherto guilty of over-fishing many species—in their access to the coastal waters of other states.

Contrary to what has happened up to now, coastal States would at last have control over the resources of their offshore waters in a 200-mile zone—and this, for the developing countries, is a matter of fundamental importance.

In fact, with this extension of national jurisdiction, one-third of the oceans will cease to be considered as the high seas (subject to the principle of "freedom of the seas") and will come under the coastal States' jurisdiction.

The international and regional fishing organizations to which interested States belong, and which are responsible for managing the resources of specific areas, will continue to play a big role in promoting scientific co-operation, collecting and distributing information and also in developing technical assistance to enable coastal States to make full use of the resources in their zones.

This co-operation is particularly necessary since some migratory species such as tunny move over a wide range through the economic zones of several States.

Agreement on these issues will only be possible if other States are given certain vital guarantees such as freedom of navigation, overflight and under-water cable-laying for communication, as long as these guarantees in no way prevent the coastal States

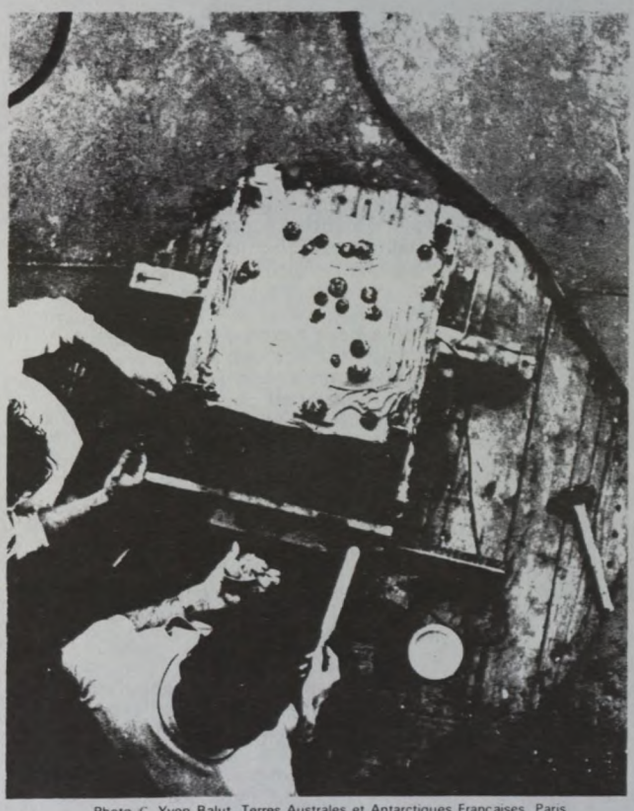


Photo © Yvon Balut, Terres Australes et Antarctiques Francaises, Paris

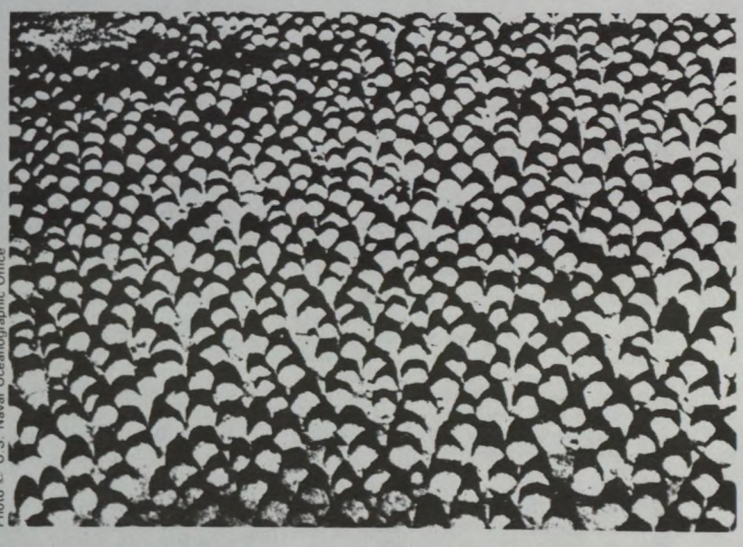


Photo © U.S. Naval Oceanographic Office

SIX MILLION TONS OF MINERALS A YEAR

Vast areas of the ocean are strewn with nodules like those shown above, containing minerals such as manganese, iron, copper and nickel. As much as 6 million tons of nodules may accumulate annually in this way in the Pacific Ocean alone. To exploit the world's several billion tons of ocean bed nodules with their mineral wealth new techniques are currently being developed. Left, scientists examine samples of ocean sediments. Nodules can be seen embedded on a "core" raised from the sea bed at a depth of 4,000 m. in the Madagascar Basin (Indian Ocean) during a French oceanographic expedition in May 1976.

In 1974, world fish production exceeded 60 million tons. About 90 per cent of the catch came from areas of the "High Seas" which may one day become "economic zones" under the exclusive jurisdiction of coastal States. For many countries fishing is a major food resource. Among them is Sri Lanka whose fishing fleet numbers the graceful catamarans seen in photo right on the beach at Negombo, near Colombo, the capital.

Photo David Holden © Parimage, Paris

from exercising their new rights.

This new legal order of the seas would be part and parcel of the effort to establish a New International Economic Order based on international co-operation and mutual respect and designed to reduce the present inequalities between developing countries and those of the industrialized world.

In seeking to include the law of the sea in the New International Economic Order, the Third Conference came up against another major issue in addition to the question of giving priority to the developing countries. This was the problem of landlocked countries and those which are at a disadvantage because of the smallness of their coastline.

These countries are struggling to achieve recognition of special rights giving them access to the economic zones of coastal States in their region, as well as the right to exploit under favourable conditions the resources of these zones, or at least to have preferential access to the unused surpluses of coastal States.

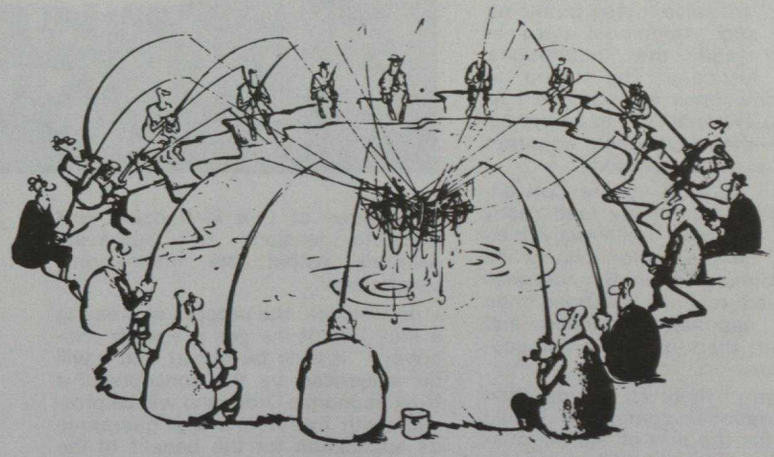
As for the protection of the marine environment, especially against pollution, the extension of the jurisdiction of the coastal States to 200 miles makes it necessary to redefine their competence in this field and harmonize their control standards with those adopted regionally or internationally.

The aim is to prevent pollution caused by oil tankers and other vessels or due to operations involving the discharge of pollutants, and to prevent or reduce damage to health and to living resources, and at least ensure that accidents in one area do not have repercussions in other parts of the ocean.

The developing coastal States also seek recognition of the right to control oceanographic research by ships and organizations from other countries in their coastal waters and to have such research placed under their jurisdiction. They are also demanding that their consent should be required in cases where the results of this research have a direct impact on their own marine resources. or are aimed at practical applications. It is claimed that the coastal States should thus have the right to take part in formulating research programmes and to participate in their execution, and have access to the results and their analysis.

However, the major powers still champion the principle of complete freedom of (non-applied) research, and view control by the coastal States as a threat to science and the acquisition of new knowledge. It is clear that regional and global bodies such as the Intergovernmental Oceanographic Commission could play an important role in promoting agreement between the countries concerned.

Generally speaking, the developing countries hope to benefit from the new regime for the oceans as a means of hastening their economic and social development. However, they are hampered by the lack of adequate infrastructures, of scientific



Quest for a new law of the sea

Drawing © Horst, from *Der Ueberblick*, Hamburg

and technical knowledge and a shortage of capital, to say nothing of the limits imposed by the huge cost of the technologies developed in the industrialized countries.

The costs are particularly prohibitive when it comes to exploiting mineral resources, whereas the technologies needed for exploiting living resources are within the reach of many coastal countries.

These points have been intensively discussed by the U.N. Conference and there is every reason to believe that the future Convention on the Law of the Sea will cover them by adopting principles which encourage the transfer of technology, although the industrialized countries are making a stand in favour of what they regard as fair payment for patents and equipment.

As can be anticipated in matters of such complexity in which such important interests are at stake, one can expect divergences regarding interpretation and even disputes regarding application of the future regime of the oceans.

The final agreement on these questions will thus depend on compromise and the setting up of international machinery for forestalling or settling any disputes that may arise. Two recent international disputes from which useful lessons can be drawn are the "cod war" between Iceland and the United Kingdom and the tension between Greece and Turkey over the delimitation of zones of jurisdiction in which mineral resources are thought to exist.

It is essential to settle such disputes by peaceful means in the spirit of the United Nations Charter, if mutual co-operation and understanding in the international community are not to be impaired and the solution of practical problems posed by the exploitation of the sea is not to be jeopardized.

Thus the Conference has studied the various mechanisms that States could use to solve these problems, including such traditional ones as arbitration and the International Court of Justice at The Hague, as well as new ones such as the Law of the Sea Tribunal (still to be set up) in which the developing countries would be well represented.

Delay in drawing up the Convention would undoubtedly lead many States to establish unilaterally their own laws on the exploitation of the sea's resources. Various countries have indeed recently extended their areas of national jurisdiction and transformed them into exclusive economic zones.

Conversely, there is the risk that big multinational companies would not wait for the end of the negotiations and would instead press for immediate exploitation of the seabed without limits or conditions and for the sole benefit of those who have least need of these resources.

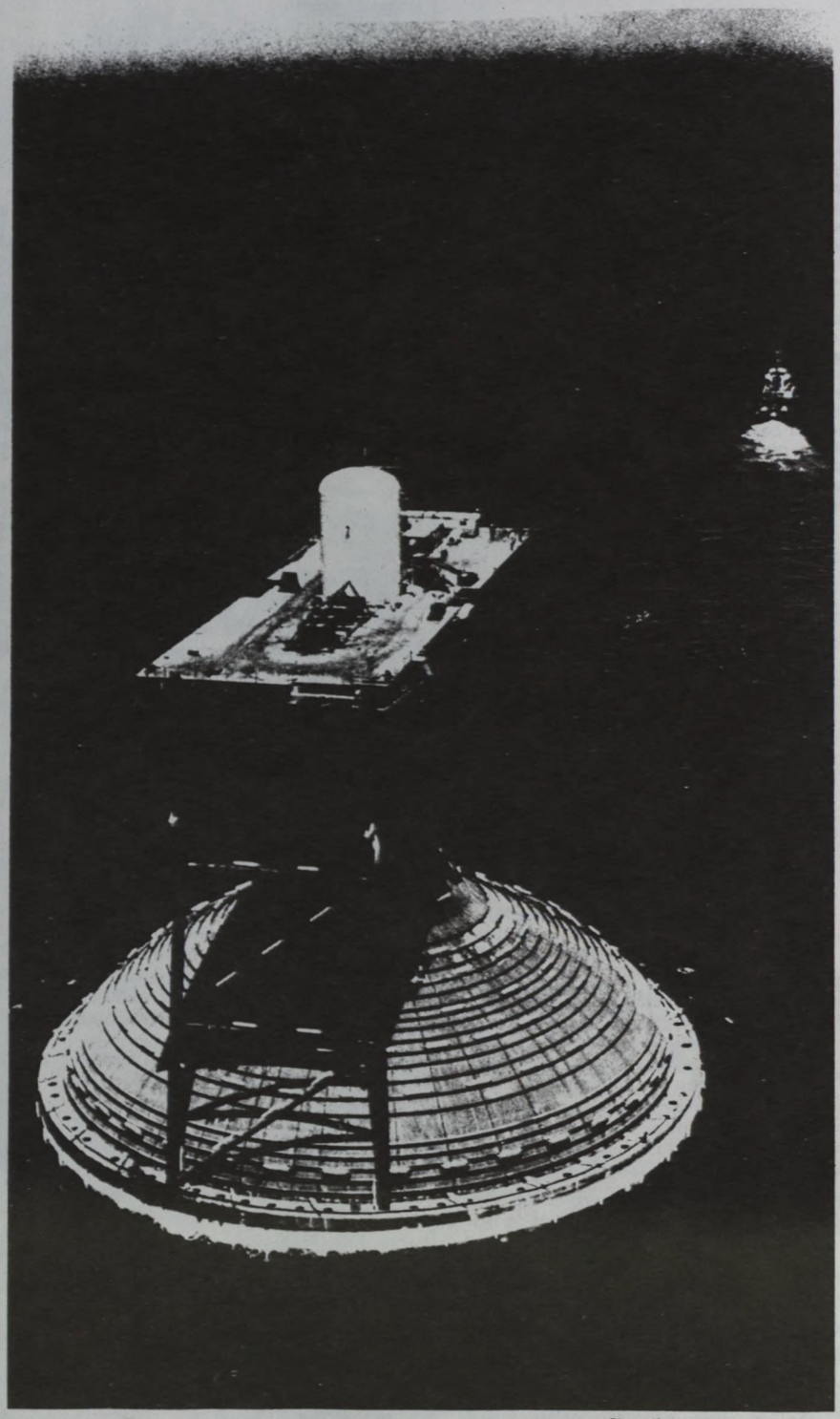


Photo © Parimage, Paris

A situation of that kind could well generate tensions and aggravate disputes within the international community.

In practice, the process of creating a new law of the sea is already underway. It is to be hoped that it will be influenced by the concepts of a New Economic Order and will be provided with institutions that guarantee its application for the benefit of the international community as a whole and taking also into account legitimate national interests.

■ **Maria Eduarda Gonçalves**

Canada's position on the Law of the Sea Conference.

The Law of the Sea conference: factors behind Canada's stance

By J. Alan Beesley

The United Nations on December 17, 1970, took a decision of considerable importance to Canada. The world body decided that a third UN Conference on the Law of the Sea would be held in 1973 if necessary preparations could be made by then. The first two such conferences were held in 1958 and 1960.

In Resolution 2750 adopted at the UN General Assembly's twenty-fifth session in 1970, it was agreed that among the subjects to be included on the agenda of a third conference were "the establishment of an equitable international regime — including an international machinery — for the area and the resources of the seabed and the ocean floor, and the subsoil thereof, beyond the limits of national jurisdiction, a precise definition of the area, and a broad range of related issues including those concerning the regimes of the high seas, the continental shelf, the territorial sea (including the question of its breadth and the question of international straits) and contiguous zone, fishing and conservation of the living resources of the high seas (including the question of the preferential rights of coastal States), the preservation of the marine environment (including, *inter alia*, the prevention of pollution) and scientific research".

The decision was arrived at after many weeks of negotiation, with some countries arguing that all that was needed was a conference limited to three issues: breadth of the territorial sea, passage through straits, and coastal fishing rights. Others, including, in particular, Canada, argued that any approach to redeveloping the Law of the Sea must be comprehensive and must deal with the whole range of issues left unresolved or resolved imperfectly at the first conferences. The Canadian delegation played an active part in the negotiations and in fact chaired the final rounds of negotiations that reached agreement. As a consequence, it was the Canadian delegation that introduced the "compromise" resolution into the UN and read into the record a number of "understandings" relating to the decision.

Canadians may wonder why Canada has taken and is continuing to take such an active interest in resolving the various contentious issues of the Law of the Sea and of the environment. The answer can be deduced in part simply by looking at a map of Canada. Canada is obviously a coastal state. It is said to have either the longest or the second-longest coastline in the world, and that is the first fact of life in determining Canada's approach to any attempt to resolve Law of the Sea issues. A second major fact of life, which is not quite so evident, is that Canada is not a major maritime power with an extensive shipping fleet, and this affects the Canadian position considerably, compared, for example, to that of many other Western states. A third important fact of life is that Canada is a coastal fishing nation interested in preserving the living resources in the waters adjacent to its coasts rather than a distant-water fishing nation.

These three facts, or factors, tend to group Canada with other coastal states, including, in particular, those of Latin America, but the matter is more complex than that. Canada is also one of the major trading nations of the world, and, as such, interested as much as any state in maintaining freedom of commercial navigation. Given the lack of a Canadian mercantile fleet, the Canadian approach to certain questions such as flag-state jurisdiction, especially flags of convenience, is understandably different from that of major flag states, however close Canada's relations with such states may be. An obvious example is the relevance to the world of today of present international law concerning flag-state jurisdiction to the problem of pollution by oil-tankers.

Continental shelf

Yet another factor influencing the Canadian position on the Law of the Sea is that, unlike many other coastal states (including most of the Latin American states), Canada has a huge continental shelf comprising an area amounting to almost 40 per cent of its land-mass. It is considered

to be the second-largest continental shelf in the world, exceeded only by that of the U.S.S.R., and is said to comprise approximately two million square miles. Moreover Canada's continental shelf, like that of Argentina, is deeply glaciated, with the consequence that it extends to great depths at considerable distances off Canada's coast in the north and off its east coast, so that simple distance or depth formulas for defining the outer limits of the continental shelf have little relevance to the Canadian situation. Thus, not surprisingly, Canada continues to support the "exploitability test" laid down in the 1958 Geneva Convention, defining the outer edge of the continental shelf in terms of the limits of exploitability and the recent decision of the International Court of Justice in the North Sea continental shelf case. This decision affirmed that the continental shelf was not some artificial, highly theoretical or abstract concept but the actual physical extention seaward of the submerged landmass.

Another factor of some importance is that Canada is not a major power. Although Canada is an ally of some of the world's major Western powers and therefore to some extent shares their preoccupations concerning global Western naval strategy, at the same time it has much in common with other coastal states concerned about their own security interests, particularly those involved in naval passage through straits, close to their shores. Another significant factor is that Canada is a non-nuclear power and is deeply committed to disarmament, and this has affected Canada's approach to such questions as the Arms Control Treaty and the denuclearization of the seabed. Not surprisingly, there has been a distinctly Canadian approach on that issue (as on most others in the related field of disarmament and environmental protection in international law in general).

Yet another factor, or rather a range of considerations, influencing Canada's approach to the Law of the Sea issues is that Canada is at one and the same time both a developed and a developing country. This dichotomy of perspective has particular application to the offshore, that is to say the continental shelf. Canada has the technology developing countries desire, gained the hard way by learning through doing, and in this respect Canadians probably rank amongst the foremost in the world. Canadian experts can be found involved in drilling operations and offshore exploration operations in widely-scattered parts of the globe. But, at the same time, Canada lacks the vast amount of risk capital required to develop its offshore resources (or considers that it does, which may have the same consequence in policy terms).

Huge investments

Exploration and exploitation of the petroleum resources of the seabed involve huge investments. On this issue, Canada's point of view is more analogous to that of developing countries concerned about controlling such investments in their interests than to that of many developed countries which are primarily concerned to protect their own investments in offshore exploration and exploitation operations near other countries' coasts from being nationalized. Canada tends to be more interested in guarding and protecting its own resources on its own continental shelf.

It is not surprising, perhaps, that it was a Canadian delegation that first proposed, in a UN forum, in September 1971 in the Sixth (Legal) Committee, that it was time for the world organization, to consider developing a code of ethics leading ultimately to a multilateral treaty to regulate the activities of multinational corporations. The Canadian proposal was based on the argument that, if states had long been the subjects of international law, and individuals were now the objects of international law, as in the Human Rights Conventions for example, why not attempt to develop international law applicable to the large multinational or transnational entities, many of them with budgets bigger than those of most Western governments, which were regulated on a hit-and-miss basis by unharmonized national legislation. The application of such an initiative to the question of pollution havens suggests the need for the development not only of trade law on these questions but of international law.

Time to consider a code of ethics for governing multinational firms

Connected with this aspect of the problem is one that is becoming increasingly important in Canada at present, and that is the whole issue of foreign ownership and control of multinational corporations. Merely to consider in a superficial manner the range of problems raised by the possibilities brought about by new technology to exploit the non-living resources of the continental shelf and the seabed beyond national jurisdiction is to be aware of the complexities of the problem. In the exercise of "sovereign rights" over the continental-shelf mineral resources, pursuant to the 1958 Continental Shelf Convention to which Canada is a party, the problem is perceived through the perspective of a country which requires a very clear-cut, authoritative interface for dealing with companies drilling off its shores —

Canadian laws geared to faster exploration and exploitation of resources

particularly with respect to pollution control, but also on many other commercial and economic issues. (This explains why Canadian legislation administered by the Department of Energy, Mines and Resources and by the Department of Indian Affairs and Northern Development is as tough as any in the world, both on pollution control and on such matters as the terms for exploration and exploitation of offshore mineral resources. However, Canada's laws on these questions are development-oriented and deliberately designed to encourage exploration and exploitation of resources. It is that element that makes Canadian legislation rather interesting to developing countries and this is why Canada's delegation has spent much time in the UN Seabed Committee explaining the approach embodied in Canada's legislation.)

Innocent passage

Another factor in the Canadian position is that, although Canada supports the general conception of the widest possible freedom of commercial navigation consistent with environmental protection and coastal state security, Canadians are understandably sensitive about the need to redevelop and "modernize" the conception of "innocent passage" through such straits as Canada's Northwest Passage. Under what conditions can loaded oil-tankers be capable of innocent passage of such straits? An additional and related factor is that Canada has already established the 12-mile territorial sea, which has long been claimed by the U.S.S.R. but is not accepted by Canada's major ally, the United States, except as a part of a comprehensive settlement of outstanding Law of the Sea issues. (As a result of Canada's 12-mile territorial sea, Canada has control of the eastern (Barrow Strait) as well as the western (Prince of Wales Straits) "gateways" to the Northwest Passage, whether or not other states accept Canada's long-standing claim that the waters of the Arctic archipelago are Canadian.)

Another factor in determining Canada's approach to the third Law of the Sea Conference relates to the question of freedom of scientific research. While, like other technologically-developed states, Canada has a high degree of expertise, enabling it to carry out its own scientific research in coastal waters and the subjacent seabed, Canada shares some of the concern of developing countries about the difficulty in differentiating between "pure" scientific research and commercial research by other states and about protecting Canada's "sovereign rights" over the continental shelf researches, not only on economic grounds but for well-founded reasons of national security. Although it shares some of the preoccupations of the developing country coastal states, Canada is at the same time interested in fostering and furthering, as are other developed countries, the freest possible basis for scientific research in coastal waters. Merely to consider the question is to perceive very clearly that the problem is not simply one of "free access to coastal waters" in return for "free access to scientific information" gained from research in such waters. One of the underlying problems is the lack of the technology on the part of many developing countries to make adequate use of the results of such research.

Marine environment

The final preoccupation of Canada — and one of the most important — flows from the first — the length of Canada's coastline. This is the need to protect Canada's own marine environment from degradation. It is sufficient to refer to Canada's Arctic Waters Pollution Prevention Act and the breakthrough it is achieving in developing international environmental law, and the recent amendment to the Canada Shipping Act extending Canadian pollution control to the Gulf of St. Lawrence, the Bay of Fundy — Hecate Strait, Dixon Entrance and Queen Charlotte Sound. Canada cannot be oblivious to any development concerning international environmental law, if only because of the position it has taken in its own national legislation. The importance of the issue to Canadians can be gathered from the fact that the Arctic pollution control legislation was affirmed unanimously in the House of Commons and, more recently, the Canadian stand on the Cherry Point pollution spill, which was also affirmed unanimously in the House of Commons.

In the light of the considerations outlined above, it is easy to see why Canada attached importance to being a member of the original 35-member *ad hoc* UN Committee on the Seabed (established as a result of the initiative of Malta), and the later Standing Committee of 42, now expanded to 96 members at the initiative of Sweden. Since passage of the UN resolution on a third Law of the Sea Conference, the mandate of the Seabed Committee has been extended to include preparatory work for the Conference on all of the issues mentioned in the 1970 Resolution 2750, together with any other issues that warrant consideration at that time.

Turning to how Canada is implementing its own approach to these Law of the

Sea questions, the best way of explaining the Canadian position is to say that Canada has adopted a pluralistic approach — acting unilaterally, bilaterally or multilaterally as appropriate.

Canada has not hesitated to move unilaterally when it was the only way to meet a particular problem. It was by this means that Canada established its Arctic Waters Pollution Prevention Zones, its 12-mile territorial sea, its fishing zones and its pollution-control zone.

In the light of the controversy that has arisen over Canada's "unilateral" legislation, it is appropriate to bear in mind that the Law of the Sea has always been developed by state practice, i.e. unilateral measures gradually acquiesced in and followed by other states.

The three-mile territorial sea, to the extent that it was a rule of law, was established by state practice. The 12-mile territorial sea, which is now virtually a rule of law, has been established in exactly the same way, by state practice, by countries doing just what Canada has done, namely passing their own legislation. Canada does not, however, take the position that every country has an unlimited right to set its own maritime boundaries. It recognizes, as is pointed out in the 1951 decision of the International Court of Justice in the Anglo-Norwegian fisheries case, that any act by a coastal state delimiting its maritime jurisdiction has effects on other states.

For just such reasons Canada has negotiated with other countries affected by its fisheries and pollution-control legislation. This is, of course, a difficult, laborious, time-consuming and delicate process — maintaining Canada's national position while still attempting to seek equitable accommodations with other states that are affected by its measures.

Series of agreements

Thus, it can be seen that, if Canada has been active unilaterally, it has been equally active bilaterally and has negotiated a series of agreements phasing out the fisheries activities, in Canadian territorial sea and fishing zones, of Norway, Britain, Denmark, Portugal and Spain (not yet in force), and has negotiated a completely new agreement with France concerning French fishing rights in the Gulf of St. Lawrence. Canada has also carried out intensive negotiations with Denmark and France concerning the delimitation of the continental shelf between Canada and those countries and has undertaken the process of negotiating continental shelf delimitations with the United States. Canada has also negotiated and recently renewed a reciprocal fishing agreement with the United States whereby the nationals of either country may fish up to three miles from the shoreline of the other.

Canada has also negotiated a fishing agreement with the U.S.S.R. applicable to waters off Canada's west coast and is engaged in negotiating an analogous agreement with the U.S.S.R. covering waters off Canada's east coast. Canada has also carried out a series of intensive negotiations with the United States and the U.S.S.R. and other Arctic countries concerning the possibility (not yet in sight) of developing a multilateral agreement to ensure the prevention of pollution and the safety of navigation in Arctic waters.

What has Canada been doing on the multilateral level? One need only look at the records of IMCO, of the Seabed Committee and of the Stockholm Conference to get some idea of how active Canada has been in attempting to develop international environmental law and a new international Law of the Sea.

Canada is probably as active as any other country on a whole range of Law of the Sea problems, technical rules of the International Maritime Consultative Organization and international environmental law issues. The question arises as to why Canada has consistently advocated a comprehensive co-ordinated and integrated approach to the Law of the Sea rather than an attempt to settle some of the easier issues first *seriatim* and proceed to the more intractable ones. There are three reasons for this approach. First, the Canadian view is that only at a comprehensive Law of the Sea Conference can there be a balancing as between the national interests of individual countries and as between national interests and those of the international community. Secondly, the comprehensive approach represents an attempt to meet the difficulty in reaching agreement as to which issues are the priority questions. States are generally agreed on the high priority of one issue — the seabed beyond national jurisdiction — but are deeply divided on the relative importance to be attached to almost all other issues. Thirdly, almost no single issue left unresolved in this field of contemporary international law can be settled in isolation from other unresolved issues. There is interpenetration and interconnection which can be illustrated by examining any one of them.

States in accord on high priority of seabed zone beyond national jurisdiction

For example, Canada from the beginning has been active in the Seabed Committee on the question of the seabed beyond the limits of national jurisdiction.

This question, raised by the Ambassador of Malta, concerns the limits to be designated for this region, the regime applicable and the machinery for implementation of such a regime.

Canada has accepted from the outset that there is an area of the seabed beyond national jurisdiction. While Canada supports the "exploitability test" laid down in the 1958 Geneva Convention on the Continental Shelf, it does not argue that this give it the right to march out into the very centre of the ocean. So Canada has taken a serious interest in this question, and made a number of proposals and suggestions and participated in all of the deliberations of the Seabed Committee.

Seabed issues

The issues being discussed in the Seabed Committee involve first the regime for the seabed beyond national jurisdiction. What international law will apply in that area? Where do the limits of the area begin? What are the kinds of legal rule states will agree to as governing exploration/exploitation in that area? What kind of international machinery will be required, if any, to implement this regime? There are a whole host of problems raised by this issue, ranging from such matters as serious security questions to basic economic problems for developing countries, the always very delicate issue of boundaries, although they are not national boundaries in the usual sense because no state has sovereignty over the Seabed beyond its own territorial sea. States are naturally zealous to protect their "sovereign rights" over the mineral resources of the continental shelf.

Zeal to protect 'sovereign rights' over resources of continental shelf

In addition to the seabed problems in the context which has been explained, there is a widespread feeling in the UN that the Continental Shelf Convention itself requires some elaboration and clarification. The Continental Shelf Convention, in Canada's view, represents a significant development of international law, and much of that convention will have to be retained in any new approach. The "exploitability test" is an elastic one, and it may be that the international community will have to devise some different legal basis for measuring the extent of national jurisdiction. There is a clear interrelation between the regime and limits of the seabed beyond national jurisdiction and the limits and regime of the continental shelf (which begins at the outer edge of the territorial sea and ends at the edge of the international area which will be preserved "for purely peaceful uses for the benefit of mankind, particularly the developing countries").

To take another example, Canada is very seriously concerned about the problem of over-fishing, and believes the time has come to do something about it. It is somewhat ludicrous, in an age when technology has made fishing quite a different thing from what it once was, to say simply that "freedom of the high seas" applies and that one of the freedoms is the right to fish at will. We think that the fishing problem has to be resolved through recognition by the international community, in the interests of conservation, that there will have to be an agreement on a management conception, with the coastal states playing a very large role in managing the fisheries resources off their coasts. We are not arguing that the coastal states should have exclusive rights to all the fish in such areas but are supporting the inclusive approach, whereby other states would be permitted to fish subject to certain preferential rights to the coastal state. All concerned, however — and this is important — would fish on the basis of strict conservation rules, so that it would no longer be a case of whoever comes first grabbing up all the fish and letting the others go home with empty ships.

The fisheries problem is linked to the problem of the breadth of the territorial sea, because a number of Latin American states claim a 200-mile territorial sea within which they restrict foreign fishing. Closely connected with the breadth of the territorial sea is an issue that has been raised by the United States and the U.S.S.R. — namely, the right of passage in straits that would be affected by the 12-mile territorial sea. What they want is an unrestricted right of passage, not innocent passage. That is a question that raises difficulties for many coastal states as well as Canada (with respect to the Northwest Passage). That is one of the issues that will have to be resolved if we want a complete accommodation and not merely a picking-away at the problem.

Pollution problem

The problem that, in a sense, is the most complex of all is that of pollution, first because the law is so undeveloped. This is why Canada acted unilaterally. It is why Canada reserved its position on the International Court on this issue. There is almost no environmental law on the international plane. What there is, Canada has helped to create. Canada has been consistent. In the Boundary Waters Treaty with the United States, as early as 1909, the two countries agreed to an obligation not to pollute their respective boundary waters.

The Trail Smelter case was an arbitration case involving a dispute between Canada and the United States, which went on for many years, ending in a ruling that a state could not so use its own territory as to damage the territory of another state. A big smelter in Trail, B.C., was sending fumes across the border and damaging trees and agriculture, etc., in the United States. Canada accepted state responsibility for the damage.

Canada had a very strong position on the Partial Test Ban Treaty (an environmental as well as an arms-control measure), on the Non-Proliferation Treaty (another arms-control measure with environmental implications), and on the seabed Arms Control Treaty (which also has environmental aspects).

A second reason why the pollution-control problem is so complex is that coastal states, in attempting to protect their environment, must necessarily pass measures that affect not only commercial vessels or fishing vessels or naval vessels or private yachts but all of these. Thus all normal means of navigation are at one and the same time subjected to controls by coastal states. However minimal the interference with freedom of navigation, these steps raise for major maritime powers basic questions concerning their conception of the freedom of the high seas.

What is the particular policy being pursued by Canada on the many unresolved Law of the Sea issues? The idea basic to a Canadian approach — unilateral, bilateral and multilateral — to all of the issues mentioned is "functionalism". The Canadian approach is not a doctrinaire one based on preconceived notions of traditional international law nor is it a radical or anarchistic approach careless of contributing further to the already chaotic state of the Law of the Sea. The Canadian position has been to analyze the problem and attempt to determine the specific measures needed to resolve the issues. On the multilateral plane, Canada, at both the 1958 and 1960 Law of the Sea Conferences, pioneered the functional approach (which was once embodied in the Law of the Sea) whereby states assert over various kinds of "contiguous zones" only that amount and that kind of jurisdiction necessary to meet the particular problem in question. When Canada has acted unilaterally, it has refrained as much as possible from asserting total sovereignty and instead has asserted just that jurisdiction necessary to fulfil the particular functions required.

Sovereignty comprises a whole bundle of jurisdictions — that is to say, everything from criminal law, customs law, fishing regulations, shipping regulations and anti-pollution control to security measures. A state will exercise its sovereignty, for example, in the territorial sea subject only to a right of innocent passage. States also exercise their sovereignty over their internal waters (subject to no qualifications.)

Canada suggested at the 1958 and 1960 Law of the Sea Conferences that a 12-mile territorial sea may or may not have been required at that time, but what was essential was to accord to coastal states fisheries jurisdiction out to 12 miles. This was the origin of the well-known Canadian "six-plus-six" formula (i.e. a six-mile territorial sea and a further six-mile exclusive fishing zone). The proposal failed by a fraction of a vote to become accepted at the 1960 conference as a rule of international law.

Fraction of vote blocked adoption of 'six-plus-six' coastal formula

Classic example

Canada's Arctic Waters Pollution Prevention Act provides a classic example of the functional approach. Only that degree of jurisdiction was asserted that was essential to meet the real (as distinct from the psychological) needs, as has been made clear by a number of statements by the Prime Minister and the Secretary of State for External Affairs. The same can be said of Canada's amendments to its Territorial Sea and Fishing Zone Act. Where total sovereignty was needed (as in the case of Barrow Strait, for example), it was asserted and, for this as well as other rea sons, Canada established a 12-mile territorial sea, replacing the 1964 Canadian legislation, which had established a 9-mile exclusive fishing zone adjacent to Canada's pre-existing 3-mile territorial sea and laid down the basis for determining it from straight baselines.

In the same 1970 amendments to the Territorial Sea and Fishing Zone Act, Canada laid down the legislative basis for proclaiming exclusive fishing zones "adjacent" to its coast. Subsequently, by Order-in-Council, the special bodies of water on the east and west coasts mentioned earlier were established as Canadian fishing zones. A little later, pursuant to amendments to the Canada Shipping Act, pollution control was established over those zones. (Canada did not legislate to implement its long-standing claims that certain bodies of water, such as, for example, the Bay of Fundy on the east coast and Hecate Strait and Dixon Entrance on the west coast, are Canadian internal waters. Canada simply asserted the kind of jurisdiction necessary to extend fisheries and pollution-control jurisdiction.)

The ways in which Canada has applied

the functional approach to such issues as marine pollution, fisheries control and the seabed beyond national jurisdiction will be discussed in subsequent issues of *International Perspectives*. But it may be useful at this point to explain the relation, in the Canadian view, between the UN Conference on the Human Environment held in Stockholm in June, the IMCO Conference in 1973 and the Law of the Sea Conference, also scheduled for 1973.

Aim at declaration of principles as a framework for environmental law

It has been the Canadian position since the decision of the UN to hold an environmental conference in Stockholm this year that such a conference could provide a unique opportunity to adopt a multi-disciplinary approach to the future development of international environmental law. Such law has been virtually non-existent until now, and it was the Canadian view that it would be a major achievement if the conference could reach agreement on a declaration of principles that would not only provide guidelines to states for their future action but lay down the framework for the future development of international environmental law. What was proposed by Canada to achieve this end was the adoption and endorsement by the Conference of marine pollution control principles and of a declaration on the environment which would embody principles of international environmental law founded on the Trail Smelter case.

Stockholm guidelines

Canada therefore argued strongly that the Stockholm Conference should produce legal principles as well as exhortations to co-operative action. Canada argued that these legal principles should then be referred by Stockholm to the 1970 IMCO Conference for information and guidance and translation into technical rules for the safety of navigation, since only IMCO has the necessary expertise to carry out such a task. Canada has argued further that the Stockholm principles should be referred to the Law of the Sea Conference for action. Only the Law of the Sea Conference provides a forum for the major redevelopment of the Law of the Sea so badly required, particularly that relating to the protection of the marine environment. (IMCO is not by its constitution a law-making forum, and it is the Canadian view that no attempt should be made to redevelop the Law of the Sea under the aegis of IMCO.)

With these considerations in mind, Canada was the first (and only) state to table a declaration of marine pollution control principles in the Inter-Governmental Working Group on Marine Pollution that was preparing for the Stockholm Conference. At the same time, Canada began to work with the United States and other countries to develop a convention to forbid dumping into the sea of certain toxic substances carried from land to sea in ships. Canada was also the first country to table a declaration on the human environment, and the Canadian declaration had a high degree of legal content, analgous to the UN declarations on human rights and on outer space.

The marine principles elaborated in the Working Group on Marine Pollution at Ottawa in November 1971 and the draft Convention on Dumping (first submitted by the United States at that Working Group and later redeveloped at a meeting in Reykjavik) have now been referred onward by the Stockholm Conference for action by the Seabed Committee (the preparation committee for the Law of the Sea Conference) and for the information of the IMCO Conference (in the case of marine-pollution principles), and to a separate conference to be held in London (in the case of the draft articles for a dumping convention).

Three principles endorsed

It is worth noting that not only the 23 marine-pollution principles agreed to at the November 1971 UN Working Group meeting in Ottawa were endorsed by the Stockholm Conference and referred to IMCO and the Seabed Committee but the three controversial Canadian coastal state jurisdiction principles were also referred to the Seabed Committee. It should be noted also that the draft Dumping Convention articles "blessed" by Stockholm are now no longer a "licence to dump" as was the case with the earlier drafts. The articles now provide the basis for an effective draft convention. It is effective for two reasons: first, environmentally, in that it specifies a "black list" of toxic substances that cannot be dumped at all and a "grey list" of other toxic substances that can be dumped only under strict controls, and, second, from a jurisdictional point of view, because it would permit enforcement by all parties to the Convention against ships "under their jurisdiction". (The action proposal actually approved at Stockholm read — "against ships in areas under their jurisdiction".) Thus the draft Convention may represent a real breakthrough in that it may lay down a basis for an accommodation between flag states and coastal states, enabling both to enforce the Convention against offending parties, much as is the case with respect to slave ships and pirate ships.

The draft declaration on the human environment approved by the Stockholm Conference contains a number of legal principles based on those embodied in Canada's original draft declaration, principally the duty of states not to carry out activities within their jurisdiction that degrade the environment of other states or the environment beyond any state's jurisdiction, and the duty to develop further the law of liability and compensation for such damage. Thus the first objective in Canada's three-pronged approach has been achieved. Needless to say, much still remains to be done.

One closing comment may be in order. The impression is sometimes created that Canada is attempting to assert its claims in ways that ignore the interests of other countries. An examination of the action taken by Canada and the statements made by Canadian representatives in a series of UN and other forums (going back to the 1969 Brussels IMCO Conference) indicates the contrary to be the case. Canada has attempted to work out the basis for an accommodation between coastal states and maritime powers, between coastal fishing states and distant-water fishing states. Canada has suggested that these issues be approached conceptually as matters in which maritime — distant-water fishing states — agree that coastal states exercise certain management and conservation and environmental preservation powers on behalf of the international community as a whole, subject to strict treaty rules and subject to third-party arbitration as to the manner in which such authority is applied. The concepts that Canada has been suggesting are "delegation of powers" by the international community to coastal states and the acceptance of the duties of "custodianship" by coastal states in the interests of the international community as a whole. Whether these concepts eventually find general support, it is worth noting that they were reflected in the third Canadian principle just referred by the Stockholm Conference to the Seabed Committee.

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Canadian Evaluation of the Third Law of the Sea Conference: Fifth Session 1976.

Introduction

The third Conference on the Law of the Sea held its fifth session in New York from August 2 to September 17,1976. The Conference had before it the Revised Single Negotiating Text (RSNT), comprising some 300 articles as well as annexes which the Chairman of the three Committees first presented at the third session in Geneva in 1975 and further refined during the fourth session in New York in March-May of this year. The RSNT, divided into four parts, covers all of the matters under discussion at the Conference. While it has no formal status, the text is, in effect, the working document of the Conference and has contributed to the considerable progress achieved to date on a wide range of issues.

It was hoped that by convening the fifth session as soon as possible after the fourth session, the momentum of the negotiations could be substained and agreement achieved on most, if not all, of the more contentious issues. Thus at the outset of the session, the Chairmen of the three Committees identified the outstanding key issues and established work programs aimed at achieving acceptable compromise formulae. Work was also to go forward on Part IV of the RSNT covering settlement of disputes and on the preamble and final clauses thus paving the way for the preparation of a consolidated draft Convention.

This ambitious work program was not fulfilled. Although significant progress was achieved on important issues in Committees II and III and informal meetings of the Plenary were able to complete a review of the provisions on settlement of disputes, Committee I reached an impasse over the question of the legal regime to apply to the exploitation of the deep seabed beyond the limits of national jurisdiction. And since there has been a general understanding from the outset of the Conference that the work of the three Committees is interrelated and that any final Convention on the law of the sea must embody all of the subject matter now covered by the RSNT, there was little hope of taking concrete decisions on the results of the work in Committees II and III until the deadlock in Committee I had been overcome.

Committee I

Committee I has as its main function the preparation of draft articles regarding the regime to apply in the international deep seabed area, that is, the seabed and ocean floor beyond the limits of national jurisdiction declared by U.N. resolution to be the "common heritage of mankind". At this session the Committee concentrated largely on the functioning of the proposed International Seabed Authority in the system of exploitation of seabed nodules, an issue which sharply divides major industrialized states and the developing countries. The industrialized states basically wish the future LOS treaty to provide guaranteed access to the deep seabed to private entities, while developing countries want access to private companies to be allowed only at the discretion of the International Seabed Authority and want the proposed International Enterprise, as the operating arm of the Authority, to have a preferred position in mining the deep seabed. The Socialist states of Eastern Europe, for their part, want guaranteed rights of access to states parties to the treaty, as opposed to private companies.

Towards the end of the session the U.S. Secretary of State introduced a proposal aimed at breaking the deadlock on the issue of access. Dr. Kissinger stated that the U.S. would be prepared to contribute to the financing of the Enterprise to make it commercially viable and enable it to begin mining operations during the same time frame as other state and private entities under an assured access system. There would, in addition, be a review mechanism after a stated period for those parts of the Committee I text applicable to seabed mining. It is to be hoped that this proposal can contribute towards achieving an accommodation on the most fundamental problem facing the Conference. States will undoubtedly look for greater elaboration of the U.S. proposal, perhaps during intersessional talks, before responding definitively.

Canada is taking a middle-ground position on this issue, holding that reasonable rights of access must be granted to private companies which might work parallel to, or in collaboration with, the Authority to mine the seabed, while also opposing unregulated and unrestricted access to the seabed, which would be contrary to the principle of the "common heritage of mankind". Of direct concern to Canada is the production control formula relating to exploitation of deep seabed manganese nodules to be incorporated in the RSNT. Canada has expressed grave concern over the potential effects of a draft provision which would preclude application of production controls by the International Seabed Authority at the level of less than 6% annual world nickel growth. In order to guard against the potential harmful effects of seabed production to land-based mining industry, which could result from preferential treatment being given to seabed producers, Canada proposed an alternative formulation at the last session. This formula would ensure against disruption of existing mineral markets due to sudden or artificially-induced seabed nickel production. The developing countries as a group submitted a proposal during this session which incorporated the Canadian approach, and indeed went somewhat farther, in protecting land-based nickel production.

Committee II

Some progress was achieved in Committee II which is concerned with all the traditional law-of-the sea jurisdictional issues as well as elaborating the new concept of the 200 mile economic zone.

Five Negotiating Groups established by the Chairman dealt respectively with:

1) the legal status of the exclusive economic zone and the rights and duties of the coastal and other states in the zone;

2) the right of access of landlocked states to and from the sea and freedom of transit;

3) the definition of the outer edge of the continental margin and revenue-sharing in respect of the exploitation of the continental shelf beyond 200 miles;

4) the question of straits used for international navigation;

5) the delimitation of the territorial sea, the exclusive economic zone and the continental shelf between adjacent or opposite states.

The concept of an exclusive economic zone in which the coastal state exercises triple jurisdiction over living and non-living resources, marine pollution control and marine scientific research appears now to be firmly enshrined in the RSNT as one of the key components of a new Convention. Differences remain, however, as to the legal status of the zone - that is, whether it is to be categorized as high seas or, as Canada has proposed, a sui generis zone which is neither high seas nor territorial sea, but which enbodies the right of functional jurisdiction by coastal states. It is the view of Canada that the RSNT in its Articles 44, 46, 47 and 75 has already provided for a fair balance of rights and obligations as between coastal and maritime states. As a means of accommodating maritime state interests more specific guarantees of traditional high seas freedoms in economic zones might be written into the text but without at the same time classifying the economic zone as high seas or otherwise prejudicing the rights and interests of coastal states, but no agreement has yet been reached on such a formula

Good progress was achieved on the question of rights of access and transit for interested states although the Group was unable finally to reach an overall compromise due to last minute reservations on the part of some landlocked states. It would seem, however, that with some minor changes, agreement on the relevant text in the RSNT (Part II, Chapter VI) could be reached at the next session, although the issue remains a difficult one.

The fisheries articles of the RSNT were not a focal point of discussion at the recent session and the concept of a coastal state's sovereign rights over the living resources in the economic zone remains firmly embodied in the draft text. This affords strong inter-

national support for action already taken by Canada and other states to extend national fisheries jurisdiction out to 200 miles. Final agreement has not, however, been reached on these articles.

The following are the basic elements of the regime governing the living resources in the exclusive economic zone as embodied in the RSNT and reflected in the national legislation of countries, including Canada, which have already extended to 200 miles;

1) the coastal state shall determine the total allowable catch and determine its harvesting capacity within that limit;

2) the coastal state shall promote the objective of optimum utilization of the living resources in the exclusive economic zone;

3) where a coastal state does not have the capacity to harvest the entire allowable catch, it shall, subject to its management and authority, give other states access to the surplus of the allowable catch.

One of the more difficult questions yet to be resolved is the claim by landlocked and geographically disadvantaged states to a preferential right to access to living resources in the economic zones of neighbouring states or states in the region. For the first time at the Conference, representatives of landlocked and geographically disadvantaged states began discussions with a representative grouping of coastal states during the recent session. The differences are still considerable but there is no longer two solitudes; common solutions are being explored and with further effort could be translated into a reasonable compromise on the question of access to the living resources of the economic zone at the next session.

From the outset of the Conference, Canada has strongly asserted a coastal state's sovereign rights over the natural resources of the entire continental shelf (a right recognized in the 1958 Continental Shelf Convention) out to the edge of the continental margin (comprising the physical shelf, the slope, and the rise). But coupled with this right, Canada and other broad-shelf countries have recognized our obligation in equity to share a percentage of the revenue derived from exploitation of the resources of the continental shelf beyond 200 miles. This basic approach is embodied in the RSNT. However, formulae for defining the outer edge of the shelf and a revenue-sharing scheme are yet to be agreed. Canada played a leading role in discussions on these matters and there are encouraging indications that states are closer to an agreement on a method of defining the outer edge of the continental margin (based on a formula drafter by Ireland and Canada) and on a formula for sharing the revenues derived from the exploitation of the mineral resources of the continental shelf beyond 200 miles, while safeguarding the sovereign rights of the coastal state over

these resources. Some states, principally the landlocked and geographically disadvantaged states, are still attacking the idea of coastal state sovereignty over the broad margin to its outer limits, but there is growing evidence of an emerging consensus which will accept the basic view of broad-shelf states.

The effect of a 12 mile territorial sea on passage through international straits has continued to be one of the more difficult issues at the Conference. There is widespread agreement that rights of passage must be maintained through those straits that are used for international navigation but that are overlapped by the territorial sea of one or more coastal states. Canada has supported this principle but has called also for rules tempering this right of transit which would protect the coastal state environment. A regime of "transit passage" is now embodied in the RSNT and is likely to be a central element of any Convention emerging from the Conference. However, some straits states are seeking more specific safeguards to accompany the right of transit passage and, based on encouraging indications at the recent session, there are hopes that through direct consultations between reparian and user states an accommodation will ultimately be reached thus resolving one of the more crucial issues at the Conference.

Finally, the Negotiating Group set up to deal with the economic zone boundary delimitation articles met only twice towards the end of the Conference and was not in a position to reach agreement on proposals put before it. Canada has expressed concern that Article 62 of the RSNT, as currently drafted, runs counter to existing principles of international law governing delimitation of maritime boundaries; in particular, the well established rule of equidistance. Accordingly, Canada has joined with Spain in introducing an amendment to Article 62 which clearly prescribes the median or equidistance line as the general rule for the delimitation of the exclusive economic zone between adjacent and opposite states while taking into account special circumstances, where justified, in order to reach an equitable result.

Committee III

The mandate of the Third Committee encompasses the protection and preservation of the marine environment, marine scientific research, and the development and transfer of technology.

With respect to marine pollution provisions, negotiations at the fifth session confirmed the emerging consensus in favour or a functional sharing of marine pollution jurisdiction between coastal, flag, and port states. the longstanding Canadian support for a global "umbrella" treaty laying down basic environmental obligations now appears to be generally accepted and is already embodied in the draft text.

However, negotiating efforts must continue to obtain satisfactory results on certain outstanding issues. The package deal reflected in the current draft text whereby coastal states forego standard-making powers (i.e., powers to enact national laws to protect and preserve the marine environment) in return for the right to enforce internationally agreed standards in respect of vessel-source pollution in the economic zone remains intact. However, there was an effort by a few maritime states to introduce more stringent restrictions on coastal state jurisdiction. Canada and other coastal states took a strong stand against such efforts warning that any further diminution of coastal state enforcement powers, already well hedged with flag state safeguards, would put at risk the delicately balanced compromise reflected in the current RSNT text.

With respect to coastal state powers to control marine pollution in their territorial seas, many maritime states have construed the right of innocent passage in an absolute sense so as to impose severe restrictions on the powers of a coastal state to set standards relating to vessel-source pollution. Canada and a number of other states, on the other hand, have insisted on the sovereign right of a coastal state to enact national laws within the territorial sea to regulate the design, construction, manning, and equipment of vessels in the absence or anticipation of agreed international standards applicable to such matters, as well as to set more stringent discharge standards. Some progress was achieved on this issue at the recent session in that the Chairman's final report acknowledged that this was a key issue on which further negotiation was essential in order to reconcile the navigation rights of shipping states with the sovereign prerogatives of the coastal state to enact and apply environmental laws in its territorial sea.

In the area of marine scientific research the key issue has been, and is likely to remain, whether the consent of the coastal state is required before any research activities are undertaken in its economic zone or on its continental shelf. The solution incorporated in the RSNT, Part III went some way towards a workable compromise, by making the consent of the coastal state necessary but also specifying that this consent would not be withheld unless the project:

"a) bears substantially upon the exploration and exploitation of the living or non-living resources;

b) involves drilling or the use of explosives;

c) unduly interferes with economic activities performed by the coastal state in accordance with its jurisdiction as provided for in this Convention;

d) involves the construction, operation or use of such artificial islands, installations, and structures as are referred to in Part Two of this Convention."

A few industrialized states remain opposed to a regime providing for the consent of the coastal state before research can be undertaken in its economic zone or on its continental shelf. Various proposals were discussed, and there were indications towards the end of the session that elements of a compromise may now be present based on a qualified consent regime, but intensive efforts will be needed at the next session to break the current impasse on this crucial issue.

Not much time was devoted to transfer of technology at the recent session although a number of amendments were submitted by developing countries who contend that the present text does not impose a sufficiently strong obligation on developed countries to provide assistance in this field. Since this part of the text must be coordinated with Part I provisions dealing with the role of the International Seabed Authority which the developing countries foresee as playing a key part in coordinating the collation and transfer of ocean-related technology, final agreement on a text covering transfer of technology must await further progress in Committee I.

Revised Part IV

A positive result of the last session was the complete revision in informal Plenary meetings of the Conference, of Part IV of the Single Negotiating Text on the settlement of disputes relating to law of the sea. The Conference President will shortly be issuing a revised text for Part IV, which will undoubtedly reflect the general desire expressed in the Plenary meetings for a simplified, and somewhat more restrictive, system for the settlement of disputes. At the same time, the text will probably confirm that states participating in the Conference are now ready to accept the principle of compulsory settlement of disputes relating to the law of the sea. An issue which will have to be addressed at future sessions of the Conference is the interaction between the Part IV settlement of disputes provisions and the mere restricted dispute settlement provisions applicable to seabed exploitation in Part I. Thought will have to be given as to whether these two mechanisms should be combined in one comprehensive dispute settlement procedure.

Canada strongly supports the inclusion of a comprehensive system of compulsory dispute settlement as an integral part of the Law of the Sea Convention. Such a system is particularly important in a Convention embodying rules which are new and radical. One of the major difficulties in reaching a generally acceptable third party regime is to define the scope of its application in respect of the exercise of a coastal state's discretionaly powers in the economic zone. It is the view of Canada that coastal states must be free to exercise their jurisdiction over the living and non-living resources, prevention of pollution and maring scientific research in the economic zone, so long as they remain within the specific bounds of the discretion vested in them and do not infringe the rights of other states. However, compulsory adjudication could apply in cases where coastal states grossly abuse their discretionary powers in the economic zone.

Intersessional Discussions

The next session of the Conference convenes in New York from May 23 to July 8, 1977, with the possibility of an additional week. In his final report on the fifth session the President expressed the hope that towards the end of the sixth session the progress in negotiations would enable him, in collaboration with the Chairmen of the main Committee, to prepare an informal single composite negotiating text on the basis of which the Conference could in the last week prepare a draft Convention. Whether these objectives are realized will depend largely on the course of negotiations in Committee I which are to be given priority attention in the first two or three weeks. It is a fairly general view, shared by Canada, that agreement on a regime for the deep seabed would have a positive effect on the work in other Committees and expedite a successful conclusion to the Conference.

Between now and May, 1977, intensive intersessional discussions are expected, particularly on deep seabed mining. Canada would hope to play an active part in some of these discussions and it is strongly of the view that if any progress is to be achieved, all major viewpoints should be adequately represented and be given a full opportunity to make a contribution. It is to be hoped that the intersessional discussions will, at a very minimum, serve to establish a dialogue between representatives of developed and developing countries which in turn could lead to an accommodation on the regime applicable to the deep seabed. In this regard one of Canada's concerns is that by focusing on the question of access and the discretionary power of the International Seabed Authority many delegates are losing sight of other equally important and interrelated issues pertaining to the seabed regime. The legal status of the Enterprise, the powers of the various organs of the International Seabed Authority, the system of reserved areas, the production control powers are all significant elements in formulating a regime governing deep seabed mining. Hence in Canada's view it is important to adopt a more comprehensive approach to discussions on Committee I issues both at the forthcoming intersessional talks and at the sixth session.

While it is obvious that intersessional discussions should have as their primary aim efforts to resolve the Committee I deadlock, other problem areas in Committees II and III should not be ignored in the period between now and the next session. For example, some attention might be given to the status of the economic zone and the regime applicable to marine scientific research. Further study could also be given to marine pollution items, particularly standard-setting powers in the territorial sea and the adequacy of coastal state enforcement powers in the economic zone.

Conclusion

Given the magnitude and complexity of its mandate, the Conference has made substantial progress but, if it is not to founder, a further major effort will be required to overcome the differences which still exist on the few remaining contentious issues, particularly on the regime for the deep seabed. A failure of the Conference would be a severe setback to the development of international law and could result in the proliferation of conflicts over the use of the world's oceans. Canada remains firmly committed to the realization of a new constitution of the oceans and will continue to play an active part in efforts to achieve that objective.

THE CONSEQUENCES OF SUCCESS OR FAILURE

THE IMPLICATION TO

WESTERN NORTH ATLANTIC COUNTRIES OF THE NEW LAW OF THE SEA

An excerpt from a speech by J. Alan Beesley, Q.C., Assistant Under-Secretary of State for External Affairs and Legal Adviser, Ottawa, Canada from a Seminar held in Bermuda, November 8-10, 1976 ... Consequences of Success or Failure -

A successful Conference would mean agreement on over 500 treaty articles, including annexes, which would together comprise a comprehensive constitution of the oceans - an area, we are often reminded, consisting of over 70 percent of the earth's surface. These rules of law would not exist in a vacuum. They would bind states to act in new ways. They would stipulate a wholly new régime for the rights of passage through international straits. They would lay down totally new principles concerning the management of ocean space. Admittedly, international straits, the areas of ocean space most in need of a management régime, would be exempt from the rules applicable elsewhere but the right of "freedom of transit" through international straits appears to be the price which the coastal states must pay to achieve the agreement of the super-powers on the other rules being developed.

The treaty would, for example, oblige all states to undertake the fundamental commitment to preserve the marine environment, to conserve its living resources, and to cooperate in the carrying out of scientific research. They would establish a single - twelve mile - limit for the territorial sea throughout the world. They would result in a major reallocation of resources as between distant water fishing states and coastal states, and, more importantly perhaps, from developed to developing states. They would effect a transfer of powers and jurisdiction on many issues - with the notable exception of military uses - from the most powerful states to the less powerful. They would give recognition to the concept of the archipelagic state, consisting of sovereignty over the waters of the archipelago - of particular interest to the Bahamas, for example - with clearly defined rights of passage and over-flight through sea lanes. They would bind states to peaceful settlement procedures on most - unfortunately not all - issues. They would, moreover, establish something new in the history of man - an international management system for a major resource of the planet earth - the seabed beyond national jurisdiction. They would reserve this area for purely peaceful purposes. They would subject it to a legal regime governed by an international institution unlike anything now in existance. The international community would actually become engaged in economic development activities whose benefits would be shared by mankind as a whole. Interestingly, the UN, in the process,

would engage in enconomic competition with states and, perhaps, private enterprise. These new rules, if accepted by the international community and coupled with binding peaceful settlement procedures, would undoubtedly make a major contribution to a peaceful world. Of equal importance perhaps, they would lay down an essential part of the foundation for a new international economic order.

What are the consequences of the other alternative - a failure of the Conference? A failed Conference would mean that while the 200 mile limit has come into existance as a fact of international life, none of the safeguards embodied in the draft treaty would necessarily apply. The 200 mile concept, if left to state practice following a failed Conference, is far more likely to become a 200 mile territorial sea than a 200 mile economic zone confined, as it is, to specific jurisdiction and coupled, as it is, with stringent safeguards. The 12 mile territorial sea is a fact of international life, but its application to international straits would not be coupled, as it is in the draft treaty articles, with specific rules concerning rights of passage. New proposals concerning the delimitation of marine boundaries could have sufficient legal weight to erode the pre-existing equidistant-median line rules, but they would not be linked to binding third party settlement procedures, without which the new "equitable" approach would have little meaning. The nine years of work on the international regime and

institutions to govern the seabed beyond national jurisdiction would be lost. Some developed states would almost certainly take unilateral action authorizing their own nationals and other legal entities to explore and exploit the deep seabed beyond the limits presently claimed by any state. Certain developing states might well respond by new kinds of unilateral action asserting national jurisdiction over these same areas. Indeed, they have said they would do so. Disputes over fishing rights, environmental jurisdiction, under-sea resource rights, conflicting delimitation claims, rights of passage in straits and claims to the deep ocean seabed could surface all over the globe. The conclusion is obvious. The Law of the Sea Conference has gone too far in developing new concepts and eroding the "old international law" for it to be permitted to fail at this stage. The particular interests of individual states, be they powerful or weak, maritime or coastal, land-locked or geographically disadvantaged, coincide with the general interest of the international community as a whole in the over-riding need for a successful conclusion to the Law of the Sea Conference. This is no longer merely a desirable objective. It is an international imperative.

Conclusions

It seems clear that the international community is facing the choice, on the one hand, of a very real danger to peace and security - quite apart from the damage to the UN - should the Conference fail, or, on the other hand, an opportunity to demonstrate the heights to which mankind can rise when we are

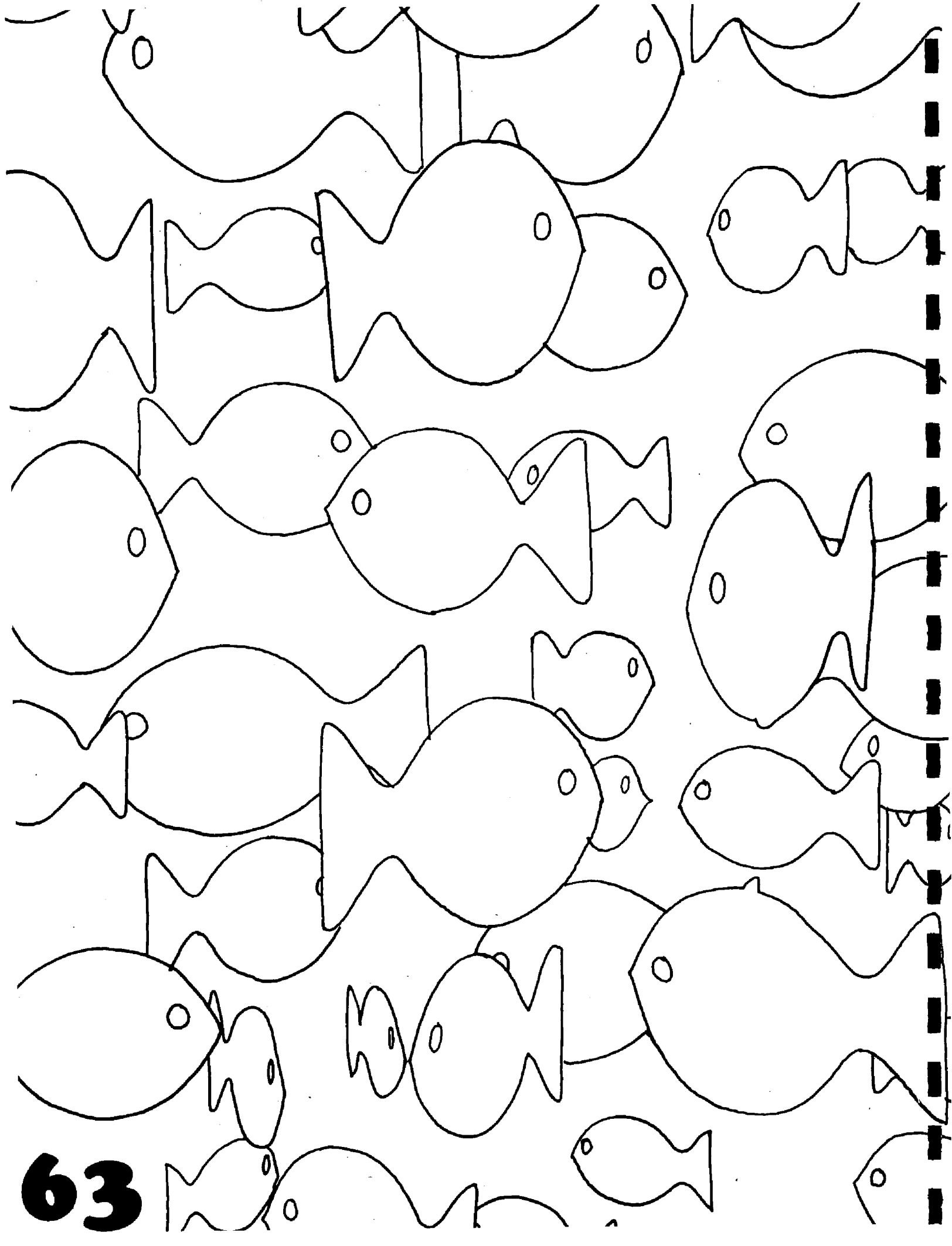
prepared to look beyond our narrow immediate interests to the broader long-term interests of all. In legal terms, the Law of the Sea Conference presents the opportunity to leave behind us both the narrow 19th century concept of sovereignty, and its faithful companion, the laissez faire principle of freedom of the high seas, and to create new laws in place of each, embodying a totally new conceptual approach reflecting the need to manage ocean space in the interests of mankind as a whole. For far too long, the Law of the Sea has been based on the notion of competing rights, with little or no recognition of the need reflected in even the most primitive systems of law, whereby duties go hand in hand with rights.

Areas of the sea have been treated as subject to the assertion of sovereignty of one state or another, with no corresponding duties concerning the conservation of fisheries in such areas or the preservation of the environment itself. The oceans beyond the territorial sea have been subjected to the principle of first come first served, a regime which tended to benefit the powerful at the expense of the weak, while defended under the name of freedom of the high seas. Freedom of the high seas has meant, increasingly, freedom to over-fish and licence to pollute. These are the freedoms which must be circumscribed, while the essential freedom of navigation for purposes of commerce and "other internationally lawful uses" (including legitimate self-defence) must be protected.

The difficulties in the way of harmonizing the conflicting

uses of the oceans and the divergent interests of states in a comprehensive constitution of the oceans are immense. The dangers of failure are increasingly acute. The benefits of success, however, are immeasurable. Whatever the imperfections of the proposed treaty, it offers the possibility of an orderly regime, in place of the chaotic situation which would otherwise pertain. It may not lie with those of us here tonight to bring about the success of the Conference. This cannot be achieved without the cooperation of many others outside this room. It does, however, lie with every one of us here present to use every ounce of our energy and all the influence we may singly and collectively represent to press forward with perseverence and determination toward the resolution of those problems still besetting the Conference. Alternatively, of course, it could lie with us, and others like us, to defeat the basic purposes of the Law of the Sea Conference through adopting unduly rigid attitudes based either on emotional attachment to traditional concepts of international law or to extreme or unduly acquisitive interpretations of some of the radically new concepts under consideration. As I see it, it is the duty of every one of us, particularly when meeting together as an important opinion-making group as has occurred at this Bermuda seminar, to use our best efforts to encourage our governments and our non-governmental organizations not to give up on the Law of the Sea Conference, but to go that last nautical mile, and to make one further effort to reach the noble objective, for that is what it is, of a global constitution of the oceans.

Surely there is no more fitting place for people like us to commit ourselves to such a worthwhile goal than in this beautiful island of Bermuda, where we see all around us the beauty of the marine environment which we must preserve, not only for its own sake, which is reason enough, but for the sake of mankind as a whole.



Oceanography and the Law of the Sea

by Mario Ruivo

THE great ocean expedition of the British corvette, H. M. S. "Challenger" (1872-1876) was a landmark in the development of the marine sciences. It was the first oceanographic venture organized on a world scale to learn more about the oceans—their depths, waters and living things.

Such knowledge was not only seen as important in itself. The need for making practical use of it was also recognized. And oceanographic research was made easier by the principle of freedom of the seas, allowing scientific observations and activities to be freely carried out.

The growing interest in the seas led to the creation of marine laboratories specializing in areas of particular scientific interest without any restriction on the part of local authorities. Scientists from many countries, including those without a seaboard were thus able to conduct research in coastal waters that were subject to national sovereignty.

Among such laboratories were the Russian Zoological Station (1884) set up at Villefranche-sur-mer (France), and the Naples Zoological Station (1872) founded by F. A. Dohrn and other German scholars for Mediterranean studies. These institutions were the precursors of forms of extended co-operation which were to develop almost a century later under the auspices of international bodies, but this time with stricter national limitations.

The beginning of the 20th century saw the birth of the first organization for inter-governmental co-operation in this field, with the creation in 1902 of the International Council for the Exploration of the Sea, founded by the countries of Northern Europe. Its aim was the promotion of exchange of information and ideas concerning biological resources and their fluctuations, and other questions affecting fisheries, with a view to better and more efficient exploitation and the co-ordination of oceanographic research.

On 30 December 1872, the British corvette H.M.S. "Challenger" (above) brought up its first samples from the ocean floor at the start of a 3-year research expedition that marked the start of modern oceanography. Criss-crossing the three great oceans, it accomplished a gigantic task (the results of which filled 50 volumes) making use of the most modern equipment then available (left).

Photos Unesco

At that time the only restrictions on ships taking part in oceanographic expeditions were those resulting from the three-mile limit of territorial waters. International collaboration was increasing, especially between the institutions of the developed countries of the northern hemisphere. But this process was interrupted by the Second World War.

The immediate post-war period and the 1950s were marked by a revival of the peaceful uses of the oceans, initially by the maritime powers and then, progressively, by a growing number of developing countries, which saw the exploitation of marine resources as an aid to economic and social development. In this context, the problems and conflicts resulting from intensive exploitation were becoming more acute.

They became even more serious when they ceased to be local ones (as in the case of the overfishing of a species in a specific area) and instead had regional or even global repercussions (coastal pollution resulting from accidents to oil tankers at

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sea and consequent damage to living resources and tourism). Thus new hazards were created and the need arose to adopt international standards and laws to meet the new situations and take account of the world community's growing involvement.

To protect their resources, some Latin American States, headed by Peru, have formulated the concept of "patrimonial sea" as a zone of sovereignty extending 200 miles from the coast.

The United States with its advanced technology extended, through President Truman's Proclamation of 1945, its jurisdiction over natural resources of the sea-bed and its subsoil up to its continental shelf.

In general, this period was marked by an extraordinary development of scientific research stimulated by concern for a better knowledge of the sea, and by the practical need to collect data for developing new technologies, for the rational exploitation of marine resources and measures for protecting and conserving the marine environment.

The post-war period has thus been marked by a spectacular revival of collaboration between scientists and institutions, especially those of the industrially developed countries. These activities, in which a growing number of developing countries are beginning to participate, may cover an entire region (International Indian Ocean Expedition) or focus on specific themes (productivity, evaluation of resources, pollution, etc.)

The application of marine sciences for peaceful purposes—and, behind the scenes—for military and security purposes—is intensifying and becoming increasingly complex. Oceanographic research is tending to become multidisciplinary. By the end of the 1960s it had come to be regarded as an integral part of any programme of economic development.

The establishment of the United Nations (in 1945) and its Specialized Agencies, some of which are exclusively or partially concerned with oceanography (U. N. Food and Agriculture Organization, World Meteorological Organization, Intergovernmental Maritime Consultative Organization, etc.) has helped to promote friendly collaboration among States aimed at solving economic, social and cultural problems, including fields relating to the use and investigation of the seas. In this context, Unesco has played a major part in promoting marine sciences and training scientific and technical staff.

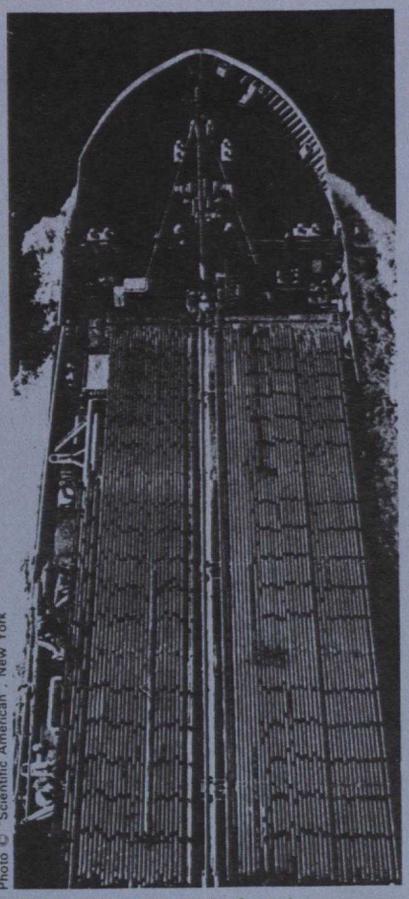


Photo © "Scientific American", New York

A spectacular tool of modern oceanography, the U.S. research vessel "Glomar Challenger" is named after the world's first oceanographic vessel (see opposite page). Piled on its forward deck are the tubes it uses for drilling in deep waters (several thousand metres) to bring up samples of the earth's crust from 1,500 metres below the sea bed.

During the past two decades many newly-independent nations have joined the ranks of the developing countries. Increasingly aware of the factors uniting them and of the inequalities separating them from the industrially developed countries, they began to organize themselves to defend their interests in matters relating to scientific research, including oceanography.

With more intensive use of the seas, contradictions arose between maritime practice and traditional maritime law. The first and second United Nations Conferences on the Law of the Sea, in 1958 and 1960, were thus convened with a view to working out a regime better suited to the realities of that time.

The four Conventions resulting from these Conferences contained provisions for the regulation of scientific research. They maintained the principle of freedom of the seas except in the case of prospection of the continental shelf. They also contained provisions under which coastal States should not normally withhold their consent to a request from a qualified institution to conduct purely scientific research on the continental shelf as long as they were allowed to participate in the research if they so wished. If the principle of a 12-mile maximum territorial sea limit were adopted restrictions on research would be correspondingly greater.

However, many of the newly independent countries held that the Conventions reflected the interests of the big maritime powers and did not feel bound by them, either because they had not shared in framing them or because they did not consider that their interests were properly protected.

The promotion of economic growth in the developing countries calls for a tremendous effort to exploit natural resources, including those of the oceans. This in turn demands in-

vestment, scientific research, coupled with appropriate technology and the training of enough local scientists and technicians.

Recently co-operation in oceanographic research, although still dominated by the industrialized countries, has been increasingly shared in by institutions and scientists of all continents. This trend has been helped by the creation of new international organizations, in particular Unesco's Intergovernmental Oceanographic Commission, one of whose functions is "to promote the scientific investigation of the oceans with a view to learning more about their resources through the concerted actions of Member States."

Initially established in 1960, it came to be regarded by 1970 as a specialized body serving other U. N. Agencies with responsibility for the investigation, use and management of the seas.

Science policies of developing countries depend on the training of specialized local staff through national efforts and also with bilateral and multilateral aid. This will become an important factor in their assessment of the implications of oceanographic research, with criticism already being voiced over the differentiation being made between "pure" and "applied" science and regarding scientific dependence on other countries, which is viewed as contrary to national interests.

At the Third Conference on the Law of the Sea criticisms were levelled against the regulations governing oceanographic research (see page 4). Among other causes of growing concern were the activities of long-distance fishing fleets, with the threat of over-fishing and depletion of resources, the problem of marine pollution, and the extraction of oil, natural gas and other non-biological resources at ever greater depths. A further reason for disquiet is the knowledge that valuable mineral resources (such as manganese nodules) exist on the ocean floor, as revealed by the oceanographic expeditions of the research institutes of the major countries, and the economic viability of exploiting them in the near future.

This explains why, at the start of the Third Conference on the Law of the Sea in 1974, there was a clash between two opposing viewpoints on oceanographic research : one primarily reflecting the developing countries' position, and the other that of the major powers and other industrialized countries.

Most of the developing countries refuse to make a distinction between "pure" and "applied" science, affirming that there can be no divorce between the acquisition of knowledge and its application. They point out that in some cases knowledge may be directed towards non-peaceful ends and in others, directly or indirectly lead to an overexploitation of resources. Hence the possibility of potential security risks to the coastal countries and of threats to their economic interests if a 200-mile exclusive economic zone is adopted.

These countries are firmly convinced of the need to protect their interests and to consolidate their rights on the Continental Shelf, already embodied in the 1958 Convention on this question. They are calling for the adoption of regulations guaranteeing that coastal States are informed in advance of research projects proposed by other States in order to be able to comment on them and also to control and benefit from the knowledge and information derived from those activities.

Developing countries favour regulations which require the prior consent of coastal States for oceanographic research by other countries or institutions. Industrially developed countries, however, argue for complete freedom of research.

These countries consider their vital interests, including questions of defence (though this is not said in so many words) are at stake, as well as global economic considerations.

In this contention they are backed up by their own scientists who maintain that the unravelling of some of the remaining mysteries of the seas

Photo C. Department of the Navy, Washington

and also the solution of practical problems stemming from the growing use of the oceans and their resources, depend on complete freedom of the sea.

There is, however, a growing trend towards the possibility of a compromise solution. The regime of consent should include provisions meeting some of the developing countries' demands. Such arrangements could include the adapting of oceanography programmes to meet local requirements and could provide for local scientists to be on board during research expeditions. This would be a form of co-operation and technology transfer, as well as a guarantee against possible abuses.

On the other hand, there are other trends running counter to the industrially developed countries' views and favouring the enlargement of the areas of exception to the regime of consent.

The experience gained during the past few years by international and regional organizations concerned with marine sciences could help to solve some of these problems, thanks to new forms of scientific co-operation devised to fit in with the future law of the ocean.

Under this new regime, international organizations such as the Intergovernmental Oceanographic Commission, among others, would be able to set up machinery for negotiating joint research programmes for maintaining essential services including documentation centres and data banks, and for facilitating technology transfers and mutual assistance.

This approach would lead to active participation by all States, and particularly those directly concerned in a given case, whatever their level of development. Steps could be taken to guarantee the national interests involved—those of the coastal States and those of the States carrying out research—as well as the interests of the world community.

Countries and scientists will need to adjust themselves to new rules of procedure for oceanographic research based on negotiation and the spirit of compromise. These rules will require a more rational and systematic use of international co-operation machinery within the United Nations and its agencies, either in their existing form or in a form still to be created.

■ **Mario Ruivo**

OCEAN SIMULATOR

Despite recent advances in knowledge and equipment, underwater exploration has still many major physiological and technological obstacles to tackle. To study these problems scientists use a variety of devices capable of reproducing in the laboratory the conditions found at various depths. Below left, water filled "ocean simulator" chamber at the Institute for Environmental Medicine of the University of Pennsylvania (U. S. A.). The diver is dismantling an oil wellhead in conditions simulating a depth of almost 500 metres—the first experiment of work at this depth ever made. Below, 16th-century Indian painting showing Alexander the Great being lowered to the sea bed in his glass diving bell. The Macedonian monarch (4th century B.C.) is said to have tried his hand at underwater exploration.

Photo © from "Oceans" by G.E.R. Deacon. Paul Hamlyn, London

Protection of the Marine Environment

Public opinion is rightly concerned over the continuing degradation of the marine environment; and more particularly, it is acutely aware that indiscriminate utilization of the sea may inflict long-lasting damage upon the marine environment.

In his search for new sources of food, man is relying more and more on the sea and shoreline which abound in nutritious living organisms. He is also strongly attracted by the sea environment for purposes of recreation. Oil spills or seepages from the seabed often have deleterious effects on the living resources of the sea and the quality of the shoreline, even though the pollution of the oceans is primarily caused by land-based sources. Norms are needed to keep man's activities in, over, below or on the sea within acceptable limits.

Protection of the marine environment from contamination has so far been discussed in two main international fora: the Intergovernmental Maritime Consultative Organization (IMCO) and the 1972 United Nations Conference on the Human Environment.

Since its inception, IMCO has been administering a number of conventions aimed at regulating navigation so that it will cause as little deterioration as possible of the marine environment; the most notable of these instruments are:

- the 1954 International Convention for the Prevention of Pollution of the Sea by Oil (amended in 1962, 1969);
- the 1962 Convention on the Liability of Operators of Nuclear Ships;
- the 1969 Convention relating to Intervention on the High Seas in Cases of Oil Pollution Casualties;
- the 1969 Convention on Civil Liability for Oil Pollution Damage; and
- the 1971 Convention on the Establishment of an International Fund for Compensation of Oil Pollution Damage.

Last year, outside the IMCO context, a Convention on the Dumping of Wastes at Sea established a total prohibition on the discharge of certain extremely noxious substances and provided for the strict regulation of dumping of other less dangerous materials; it also envisaged for the first time a role for the coastal state in the enforcement of these measures. Another convention, which at the time of writing is being negotiated, the Convention for the Prevention of Pollution from Ships, should go beyond the 1954 Convention since it would apply not only to oil but to the discharge from ships of all other noxious substances, including sewage and garbage. Except for the latter Convention, which will require ratification, the other Conventions, although useful, deal with specific types of pollution only and would be much more effective if they included strict enforcement and fair compensation mechanisms.

The 1972 Stockholm Conference elaborated a Declaration on the Human Environment whose widely-accepted statement of principles may be considered as laying down the foundation for the future development of international environmental law. Three of the principles of the Declaration have particular relevance to marine pollution. A first principle posits the duty of States to prevent marine pollution; a second reflects the responsibility of States to ensure that activities within their jurisdiction or control do not cause damage to the environment of other states or of areas beyond the limits of national jurisdiction; and a third calls upon states to cooperate in the further development of international law regarding liability and compensation for the victims of pollution and other environmental damage.

A Statement of Objectives concerning the Marine Environment, which was endorsed by the Human Environment Conference, recognizes the particular interests of coastal states with respect to the management of coastal area resources. The same statement also recognizes that there are limits to the assimilative and regenerative capacities of the sea and that, therefore, management concepts should be applied to the marine environment, to marine resources and to the prevention of marine pollution.

The Human Environment Conference also subscribed to 23 marine pollution principles which provide the guidelines and general framework for a comprehensive and interdisciplinary approach to all aspects of the marine pollution problem, including land-based sources. These principles represent the first step towards the application of management concepts, through both national and international measures, to the preservation of the marine environment. They elaborate in some detail the duties of States but do not fully deal with their consequential rights.

Although the three Stockholm statements deal with the human environment, and the marine environment in particular, in a truly comprehensive fashion, it cannot be said that they are declaratory of pre-existing law. They have, therefore, been referred to the Law of the Sea Conference for translation into binding treaty obligations in as much as they concern the marine environment.

The groundwork, therefore, seems to be sufficiently advanced for the Law of the Sea to elaborate a legal instrument pertaining to the whole realm of the marine environment or an "umbrella" treaty which would become the organic link between all other instruments, including those developed by IMCO, aimed at controlling specific sources of pollution of the marine environment. A great majority of states agree on the necessity of an all-embracing treaty which would have as its foundation the basic obligation of all states to protect and preserve the marine environment.

Such an obligation would embrace all sources of pollution, not only pollution from ships which is of primary concern to the Conference but as well pollution caused by seabed activities, pollution carried from land-based sources, through run-offs or through the atmosphere, and pollution arising from the disposal of domestic and industrial wastes.

The Conference will not be expected, however, to spell out the specific obligations and rights of states with respect to land-based sources of pollution as it is recognized that in accordance with existing international law, these sources will remain within the purview of each individual state which unquestionably has primary jurisdiction in respect of these sources.

What will be more particularly at stake at the Conference will be control over ship-generated pollution. The main questions which will have to be settled in respect of this type of pollution relate to who may adopt anti-pollution standards, which authority may enforce them and over which area they should be applicable.

Canada does, of course, subscribe to the idea that competent international organizations should establish appropriate, stringent standards of universal application against marine pollution. Canada also agrees that in areas beyond the jurisdiction of coastal states, the state of the ship's registry should have the primary responsibility for enforcing these standards.

But Canada, with its long coastline and its very special ecological conditions and physical hazards, considers that coastal states should be empowered to prescribe and enforce their own anti-pollution standards, to the extent necessary, over and above the internationally agreed rules, not only in their territorial waters but also within their areas of jurisdiction beyond. It is on that basis that Canada adopted in 1970 the Arctic Waters Pollution Prevention Act and related regulations under the Canada Shipping Act.

A number of states, mainly the important shipping nations, are adamantly opposed to any suggestion that would give a coastal state effective unilateral mechanisms to protect its marine environment since they fear that such jurisdiction would allow it to interfere indiscriminately with navigation. For these countries, only internationally agreed standards enforced mainly by the state of the ship's registry should be applicable not only on the high seas but in the territorial waters of coastal states as well.

The developing coastal states by and large adhere to the economic zone concept according to which the coastal state would have full jurisdictional powers in respect to marine pollution in the 200-mile zone. However, some of these states are having second thoughts regarding the adoption of high international standards, since they tend to view them as impediments in the way of their future development, in particular their shipbuilding projects.

Pollution control will assuredly be one of the crucial problems to be resolved by the Law of the Sea Conference. Extensions of coastal state jurisdiction automatically mean restrictions on some of the freedoms still cherished by many of the sea-faring nations. But given the precariousness of the marine environment and the disastrous consequences unchecked abuses could have on everyone's life, it would seem imperative that such freedoms as have existed heretofore be balanced by obligations. It is equally true that there should be guarantees on the part of coastal states not to overreact, not to over-control, so as not to interfere unduly with legitimate activities.

CANADA AND MARINE SCIENTIFIC RESEARCH

AN INTERNATIONAL PROBLEM IN A NATIONAL SETTING

All too often the debate about the freedom of scientific research in the oceans has tried to draw sharp lines between different categories of States and different categories of research. On the one hand, there have been arguments in favour of the "researching" States, and, on the other, the "coastal" States. Similarly, there have been long and heated debates over the difference between "pure" research in the ocean environment, and "applied" research. The great disadvantage in these categorizations is, of course, that they tend to ignore the vast grey area that exists between so-called "pure" research and "applied" research, and between the scientific aspirations of developing coastal States and the technologically advanced researching States.

Generally, the major researchers (the Maritime powers and the most technologically advanced countries) have argued for a freedom of research regime: a regime in which there would be the maximum freedom for research vessels to travel anywhere in the world and study the ocean and its resources. Facing these States in the debates of the Law of the Sea Conference have been the much more numerous developing countries, which have argued forcefully that, because of the jurisdiction of coastal States over resources adjacent to their coasts, no research should be undertaken in those areas without the explicit consent of coastal States.

Since the beginning of this debate, Canada has been right in the middle. Canadian scientists have considerable expertise and competence in marine research, but this country also has jurisdiction over vast areas of the oceans containing valuable resources, the management of which requires the most complete possible research knowledge from all sources. Thus, the Canadian Delegation to the Law of the Sea Conference has been able to approach the problem of marine scientific research with a great deal of sensitivity from both the research and coastal State resource management points of view.

Canada's commitment to ocean research is not insignificant. The Canadian Government spends hundreds of millions of dollars on marine science and technology each year. A significant proportion of this contributes to international research. Notable examples are the voyage of the Canadian research vessel HUDSON around the Americas in 1970 and the provision of the flag ship to the Global Atmospheric Research Program Atlantic Tropical Experiment of the World Meteorological Organization. Canadian expertise and knowledge is used in the Intergovernmental Oceanographic Commission, of which Canada was a founding member State. Through support of these programmes, Canada has indicated that it attaches great significance to marine scientific research, research which takes Canadian oceanographic vessels far beyond the ocean phenomena and processes and the weather patterns which are largely generated by them, it is necessary that studies be undertaken world-wide; in waters adjacent to Canadian

coasts, in the open ocean areas and the waters adjacent to the coasts of other States. Thus, Canadian Government officials are sensitive to the need to prevent unnecessary interference with valid research projects.

Canada also has jurisdiction over vast ocean resources, both living and non-living. In order to most efficiently manage those resources, the Canadian Government must have access to all of the data which is accumulated about them. It would not do, for example, for the Canadian Government to have to negotiate bilateral fisheries agreements with other countries on the basis of insufficient data. The other countries might have come to Canadian fishing zones and carried out research, on the basis of which they would hold a superior position at the bargaining table when negotiating for surplus fish stocks. Similarly, the exploitation of any offshore petroleum resources by Canada must be done at a pace that suits Canadian needs, and must not be done under pressure from other Governments based on their interpretation of their own research data. It is for these reasons that the Canadian Government feels that research in the fisheries zones and on the continental shelf adjacent to the Canadian coast must be subject to the consent of the Canadian Government. It is only through such a regime that we can ensure participation of Canadian scientists in the research projects, and can have complete access to the data accumulated therefrom.

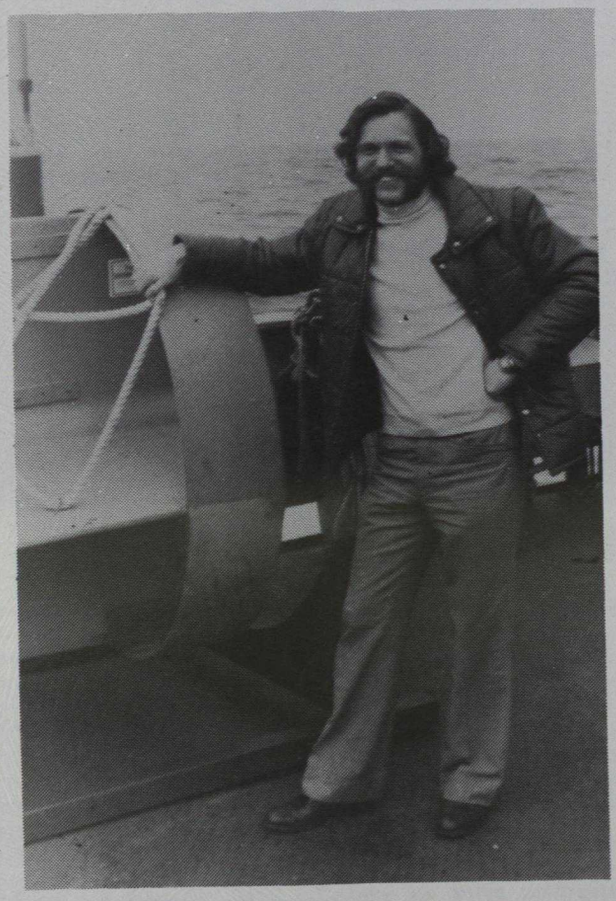
Thus, Canada sees both sides of the marine scientific research argument; - the argument in favour of removing unnecessary impediments to marine research, and the argument in favour of ensuring that coastal States have the proper degree of control over research in areas under their jurisdiction.

A recent project between Canada and the Governments of Senegal and The Gambia exemplifies the kind of cooperation that can be achieved in marine scientific research. The Senegalese and Gambians needed information about their offshore area, the extent of the continental shelf, the probable habitat for fish off their coasts and the topography of the ocean floor. At the same time, the Canadian Government could benefit from knowledge of this important area in the North Atlantic circulation pattern. It was agreed, therefore, that Senegal, The Gambia and Canada would cooperate in a research project. Much of the financial support for this came from the Canadian International Development Agency (CIDA), and the expertise and vessels were provided by the Canadian Department of Fisheries and the Environment. Recognizing the fact that this research could affect the resources of the area, Canada started from the principle that research would only be undertaken with the consent of the coastal State. This consent was rapidly received; - indeed the Senegalese and Gambian authorities were anxious to have the project undertaken. Both countries benefited from the exercise.

Another, and possibly more important, solution to this apparent dilemma over freedom of research lies in the development of better international mechanisms for the conduct of such research. Many organizations already foster cooperation between States in the undertaking of joint programmes. Some of these have been mentioned earlier. It is not impossible to imagine a world in which coastal States and researching States

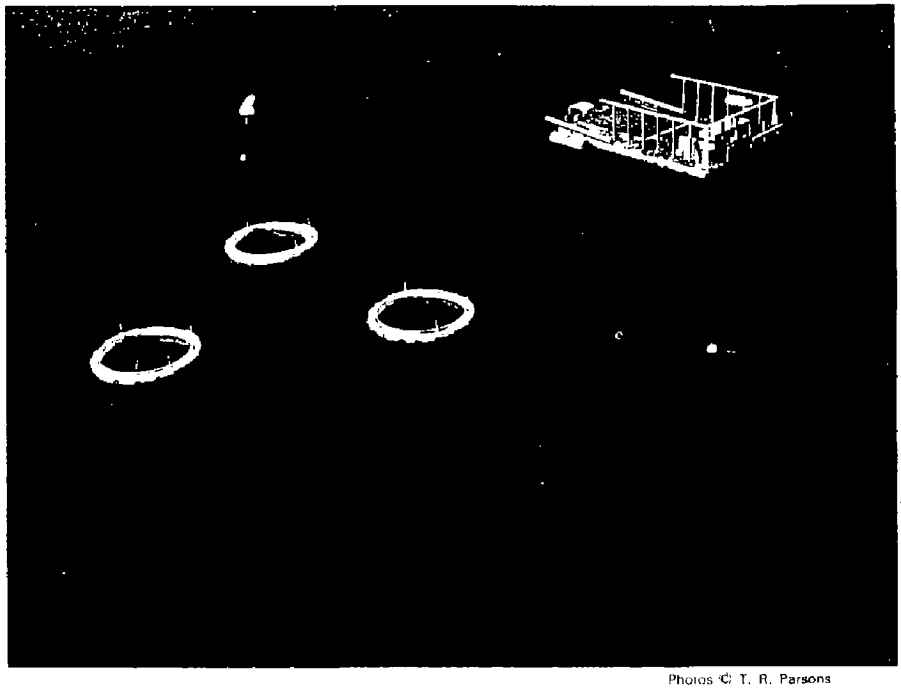
get together under the wing of some competent international organization to jointly design research projects which will be of benefit to all of the countries concerned, thus satisfying the needs of the researching States to undertake distant water research and the needs of the coastal States to ensure that such research does not adversely affect either their security or their resources.

What will probably come out of the Law of the Sea Convention will be a tidy compromise. A compromise in which consent is required for research, but not necessarily explicit consent. In such a system, the researching State could make known its intentions to a coastal State, and provided the coastal State does not object to such a research project within a specific period of time, the researching State can assume that the coastal State does not feel threatened by this research, and can proceed with the project. If this kind of compromise can be agreed upon, the resultant text will be quite similar to the ideas originally put forward by the Canadian Government: - not surprising really, when you consider that the problems that confront this country alone are in themselves a fairly accurate reflection of the broader international problem.



Excerpts from a speech by
Dr. J.D. Kingham
to the University of Guelph's
program on resource management,
February 1977.

Test Tubes in the Sea



Photos © T. R. Parsons

by Timothy R. Parsons

THE International Decade of Ocean Exploration is one of many oceanographic programmes sponsored by Unesco. Its purpose is to gain a fuller understanding of the world's oceans through scientific research projects. These projects are in some cases largely geological or physical, while in other cases they seek to better understand the biology of the sea, including man's impact on fisheries.

One of the International Decade projects is the Controlled Ecosystem Pollution Experiment (CEPEX). This project is largely financed by the United States National Science Foundation, and the principal countries involved are U.S.A., U.K. and Canada.

TIMOTHY R. PARSONS, *president of the International Association for Biological Oceanography, is professor of oceanography at the University of British Columbia, Vancouver (Canada). He was formerly a member of Unesco's Office of Oceanography.*

Reprinted from the UNESCO Courier by Timothy R. Parsons; January 1977

The purpose of CEPEX is to study the low level, long-term effects of pollutants on the marine environment. For some time it has been possible for the chemists to show that minute traces of potentially harmful substances such as copper, lead, pesticides and hydrocarbons, have been accumulating in the ocean. What we don't know is whether very small amounts of these substances are harmful to marine life.

Firstly, it would be impossible to test all the organisms in the sea in order to determine if they reacted to these low levels of pollutants; and secondly, the long-term effects of such slow accumulations of substances may not be apparent until much later, perhaps by the year 2000, when it might be too late to do anything about it.

In order to approach this very difficult problem of understanding low-level, chronic effects of pollutants in the sea, the CEPEX scientists decided that they had to isolate large bodies of water in which they could study the whole biology of any particular sea area. A similar approach is used by terrestrial ecologists when they fence off a piece of land to study it in isolation from other effects.

However, the problem for the oceanographer is that you can't just "fence off" sea water; finding a container for large amounts of sea water so that the sea water inside will remain a natural environment is a very difficult problem. The solution was found, however, in the form of a familiar shape to most scientists—the test tube.

The only difference was that the CEPEX test tubes had to be large enough to support a whole life system from sunlight to fish; at the same time the materials had to be strong enough to withstand ocean waves, clear enough to permit sunlight to enter and, above all, made from non-toxic material since it was the scientists' aim to add small amounts of toxic substances to these containers in order to understand their effect on the biology of the oceans.

The test tubes which were made are capable of holding over 2000 tons of sea water and they are designed to float in the sea, thus minimizing structural costs as well as replicating as nearly as possible the natural ocean environment.

The major site location for these test tubes is at Saanich Inlet—a fjord on the coast of British Columbia, Canada. Similar structures are being used by scientists in Loch Ewe, Scotland and in Kieler Bucht, Fed. Rep. of Germany. At present scientists are using three of these large test tubes and six smaller ones in their experiments.

The results which are being obtained through CEPEX are quite extensive and space would not permit coverage of this entire programme here. However, one of the more far-reaching discoveries concerns the structure of food chains in the sea and their possible alteration either by man or by natural events. In this respect it has been known for some time that the sea may sometimes produce large numbers of different kinds of jellyfish (ctenophores and medusae) and that commercial fish also fluctuate in their abundance.

A hypothesis now advanced as a result of work in CEPEX is that there may be some connexion between these two events. By studying the microscopic animals (the zooplankton) which in turn feed both the jellyfish and the young commercial fish, it has been found that two separate pathways exist which may either favour jellyfish production or commercial fish production.

Stated very simply, it is postulated that the production of very small plant cells (flagellates) may lead to the production of small zooplankton and these favour the growth of jellyfish; in contrast the production of large plant cells (mostly diatoms) leads to the production of large zooplankton and these animals favour the growth of young fish.

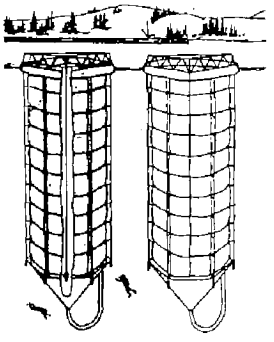
Obviously from the point of commercial fisheries it would be disastrous if the commercial fisheries declined and were replaced by jellyfish! The question is, what triggers the food chain of flagellates to jellyfish as opposed to the more useful large diatom food chain?

The answer to this question seems to lie in one of several effects. Through experiments at CEPEX it can be shown that small flagellate plant cells are often produced as a result of low level pollution, especially in the presence of heavy metals or petroleum hydrocarbons. However, the food chain favouring flagellates and jellyfish can also be set up in response to storms which are natural events.

Thus the hypothesis, if found to be correct, might explain why jellyfish become abundant in some years and not others, due to natural changes in our weather, as well as suggesting that the same events could be enhanced by man's pollution of the ocean to the detriment of world fisheries.

The CEPEX programme is expected to last for about ten years and to eventually involve many more scientists from other countries.

■ **Timothy R. Parsons**



These 30-metre-high plastic tubes (above), submerged containers each holding over 2,000 tons of sea water, are floating laboratories in which scientists are studying the long-term biological effects of pollutants. Photo above left shows 3 of these giant test tubes in Saanich Inlet, a fjord on Canada's Pacific Coast. From the surface only the 3 circular buoys keeping them afloat can be seen.

Arctic Sovereignty

There is considerable confusion and misunderstanding concerning Canada's Arctic sovereignty, due in part to the controversy concerning the status of the "Sector Theory", whose origin is associated with Canada, and in part to differences of views concerning the status of the waters of Canada's Arctic archipelago.

SECTOR THEORY

As pointed out by one of the leading authorities on Canada's Arctic sovereignty, the "sector theory" was first publicly propounded by Senator Pascal Poirier in 1907 during a debate in the Senate in which he proposed that Canada make a formal declaration of possession of the lands and islands situated to the North of Canada and extending to the North Pole. The theory consists of two elements, namely a baseline or arc inscribed along the Arctic Circle through territory undisputedly within the jurisdiction of a state bordering on the Arctic, together with lateral limits defined by meridians of longitude extending from the North Pole south to the most easterly and westerly points on the Arctic Circle, intersected by the territorial limits of the state in question. On the basis of the theory, states possessing territory extending into the Arctic regions have sovereignty over land, water and ice lying to their north. Much has been written and said about the "sector theory" since the date of Senator Poirier's statement. The point of importance to note, however, is that for many years no Canadian Government has either affirmed or disaffirmed the "sector theory" in explicit terms. It is of interest, however, that on April 16, 1926, the Prasidium of the Central Committee of the USSR adopted a decree "On the Proclamation of Lands and Islands located in the Northern Arctic Ocean as Territory of the USSR". The decree provides that "all lands and islands ... located in the Northern Arctic Ocean, north of the shores of the Union of Soviet Socialist Republics up to the North Pole between the meridian 32°04'35E. long ... and the meridian 166°49'30'W. long ... are proclaimed to be territory of the USSR". While some Soviet writers have advanced the theory as the basis for USSR sovereignty over waters and ice lying to the North of USSR land territory, it will be noted that the decree is limited to "lands and islands".

In the case of Canada, the outer limits of the "Canadian Sector" are utilized in defining the area subject to Canada's Northern Game Laws and the area for which Canada has assumed air-sea rescue responsibilities under the aegis of ICAO. The western limits of the area subject to Canada's Arctic Waters Pollution Prevention Act also utilize the 141st meridian (the western "limit" of the Canadian "sector"), as is the case with Canada's 200-mile northern fishing zone. However, Canada has for many years followed the "functional" approach in the Law of the Sea and has taken a leading role in advocating that states abandon the pre-existing approach consisting of either

claims to total sovereignty or claims to total freedom of the high seas. An example of the new "functional" approach is the economic zone concept (discussed elsewhere) consisting of limited forms of jurisdiction asserted by the coastal state for the purpose of meeting particular problems, in lieu of assertions of total sovereignty. Canada's Northern Game Laws, its air-sea rescue responsibilities, its Arctic Waters Pollution Prevention Act and its northern 200 mile fishing limit are all examples of this "functional" approach, pursuant to which it is no longer appropriate to ask where a state's "boundaries" end, since there are different limits for different purposes. It is for this reason that successive Canadian governments have declined to be drawn into disputes over the legal validity of the "sector theory".

CANADA'S ARCTIC ISLANDS

Canada's Arctic archipelago consists of an extensive group of islands lying northward of the mainland and Hudson Bay, some of which are located as far north as 83° degrees latitude, the northern tip of Ellesmere Island. Archipelagoes are groups of islands, varying in size and number, but which comprise a single geographical unit. In Canada's case, the Arctic archipelago consists of many hundreds of islands, some as large as Baffin Island (with an area of 195,928 square miles), and others which are only mere dots on a map. The whole archipelago forms a network of channels, the most important of which is the Northwest Passage, which runs from Baffin Bay through Lancaster Sound and Barrow Strait on the east, through Viscount Melville Sound and south through Prince of Wales Strait east of Banks Island to join with the Beaufort Sea on the west.

Canadian sovereignty over the islands of the archipelago has historical roots based on early British voyages of discovery and the grant of the territory to the Hudson's Bay Company by Royal Charter in 1670. British sovereignty over Rupert's Land and the northern Arctic islands was further assured by the relinquishing by France of its possessions in North America to Great Britain under the Treaties of Utrecht in 1713 and Paris in 1763. Subsequently, Imperial and Dominion Acts of Parliament as well as Orders-in-Council brought about the full transfer of the possessions of the Hudson's Bay Company, known as Rupert's Land, to the new Dominion of Canada shortly after Confederation.

Following the transfer of title from Great Britain, the Federal Government undertook governing the area and various pieces of legislation were passed and regulations made for the administration of the territory. In 1895, the Districts of Ungava, Yukon, MacKenzie and the northermost District of Franklin were created. The Government sent

expeditions in the latter part of the 19th and early part of the 20th Century to both explore the land and water territory of the Arctic and to enforce Canadian laws. In 1920, the RCMP began regular Arctic patrols. In 1926, the Federal Government established the Arctic Islands Game Preserve which included all the area within a triangle drawn from the North Pole to the extremities on the east and west coasts. The last lingering differences with Denmark over the status of Ellesmere Island and with Norway over Axel Heiberg and the Ringness Islands were settled in Canada's favour in 1920 and 1930 respectively. Since that time, Canada has continually and peaceably asserted its sovereignty over the islands of the archipelago.

THE WATERS WITHIN THE ARCTIC ARCHIPELAGO

The waters of the archipelago, particularly the Northwest Passage, were the objects of numerous British voyages of discovery, beginning with John Cabot in 1497 and Martin Frobisher in 1576 and continuing under the commands of Davis, Baffin, Hudson, Perry, Ross, Franklin, McClure and others. These explorers traced the coast and waters of the Canadian Arctic northward to the reaches of the polar area. In the early part of this century, official Canadian expeditions were led by Wakeham (1897), Low (1903-1904), Moodie (1904-1905), Bernier (1906-1907, 1908-1909, 1910-1911) and Stefansson (1913-1918).

Canada's jurisdiction over the waters of the Arctic archipelago has been manifested over a lengthy period of laws by a series of administrative and legislative acts, including, for example, regular RCMP patrols in the 1920's, the Federal Department of Transport ice-breaker patrols and Canadian Forces surveillance and supply flights. Customs jurisdiction under the Customs Act is applied to all the waters lying within the archipelago as internal waters of Canada. New forms of jurisdiction over the waters within the archipelago (as well as those lying beyond) were asserted by the establishment of a 12 mile territorial sea in 1970 and by Canada's Arctic Waters Pollution Prevention Act in 1970, and of 200 mile fishing limit in March, 1977.

There has been controversy in the past concerning the status of the Northwest Passage, but it is the long standing Canadian position that it has never attained the status of an international strait by customary usage, nor has it ever been defined such by conventional international law. This is not surprising, given the fact that for the most part of the year the numerous sea channels running through the Canadian Arctic archipelago are frozen over or ice-fast. Even in summer, few of the channels are free from ice, and under optimum conditions navigation

through the Northwest Passage is very difficult even with ice-breaker assistance. Consequently, only a small number of vessels have made the crossing through the Passage, the most historic having occured in 1942 when the RCMP schooner "St. Roch" made the first successful crossing of the Passage.

ARCTIC CONTINENTAL SHELF

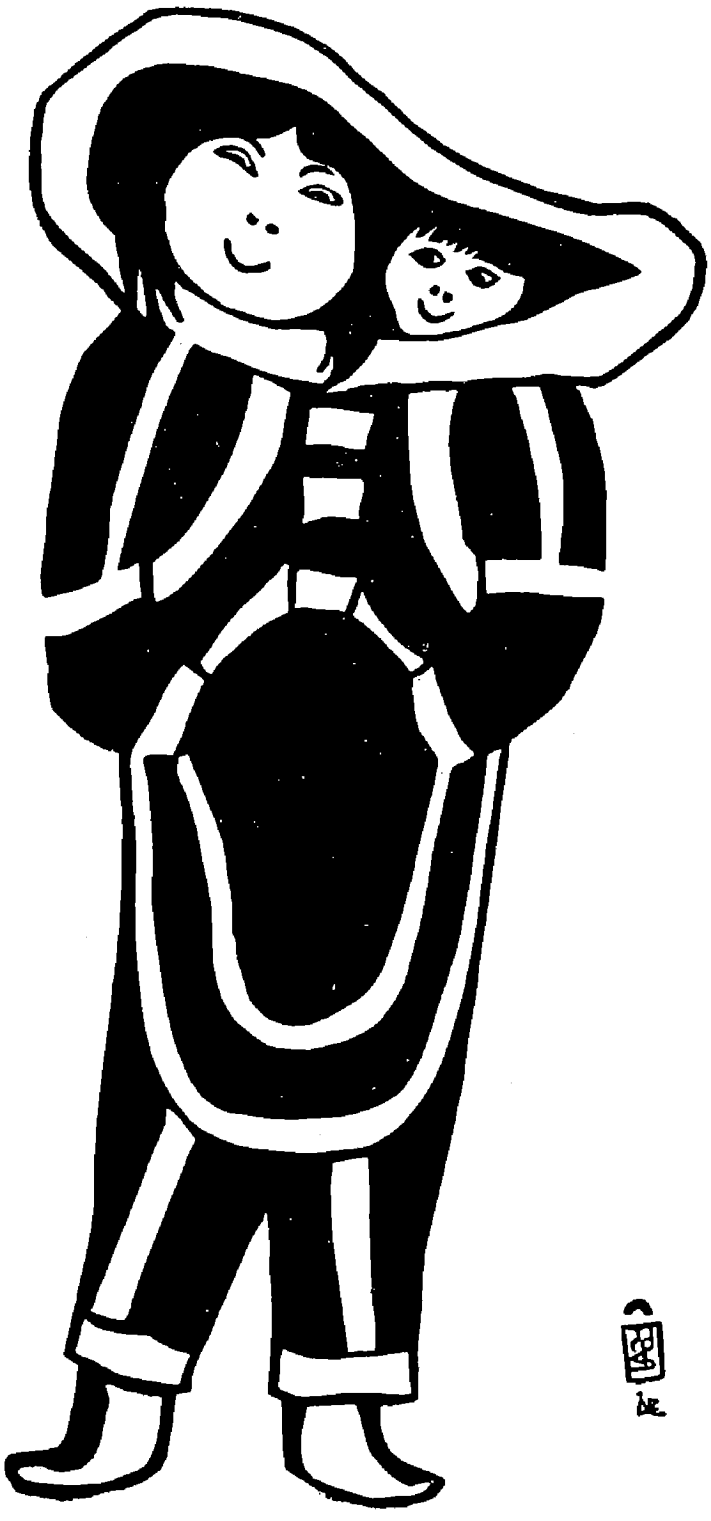
Canada exercises sovereign rights for the purpose of exploring and exploiting the resources of its continental shelf in the Arctic pursuant to the provisions of the 1958 Continental Shelf Convention, to which Canada is a party. Offshore drilling on the continental shelf in the Arctic is carefully controlled by Federal legislation and regulations.

ARCTIC ECOLOGY

To ensure that the delicate Arctic ecology is safeguarded from the threat of pollution damage, Canada passed the Arctic Waters Pollution Prevention Act in 1970. Under the Act, pollution control jurisdiction is exercised by Canada throughout all the waters of the archipelago and outward from the perimeter of the archipelago for 100 miles, as well as over the entire continental shelf in the Arctic with respect to offshore drilling. In 1976, the Department of Transport instituted a vessel reporting and clearance system applicable to the eastern Arctic.

FISHERIES JURISDICTION

Canadian fisheries jurisdiction under the Territorial Sea and Fishing Zones Act was extended to 200 miles around the permiter of the archipelago on March 1, 1977.



WE MUST KEEP OUR SEA ALIVE

WIJ MOETEN ONZE ZEE LEVENS HOUDEN

IL FAUT PROTÉGER LES RESSOURCES VIVANTES DE LA MER

ΠΡΕΠΕΙ ΝΑ ΑΦΗΣΩΜΕ ΤΗΝ ΘΑΛΑΣΣΑ ΝΑ ΖΗΣΗ

SCHÜTZT DAS LEBEN IM MEER

DEFENDIAMO IL NOSTRO MARE

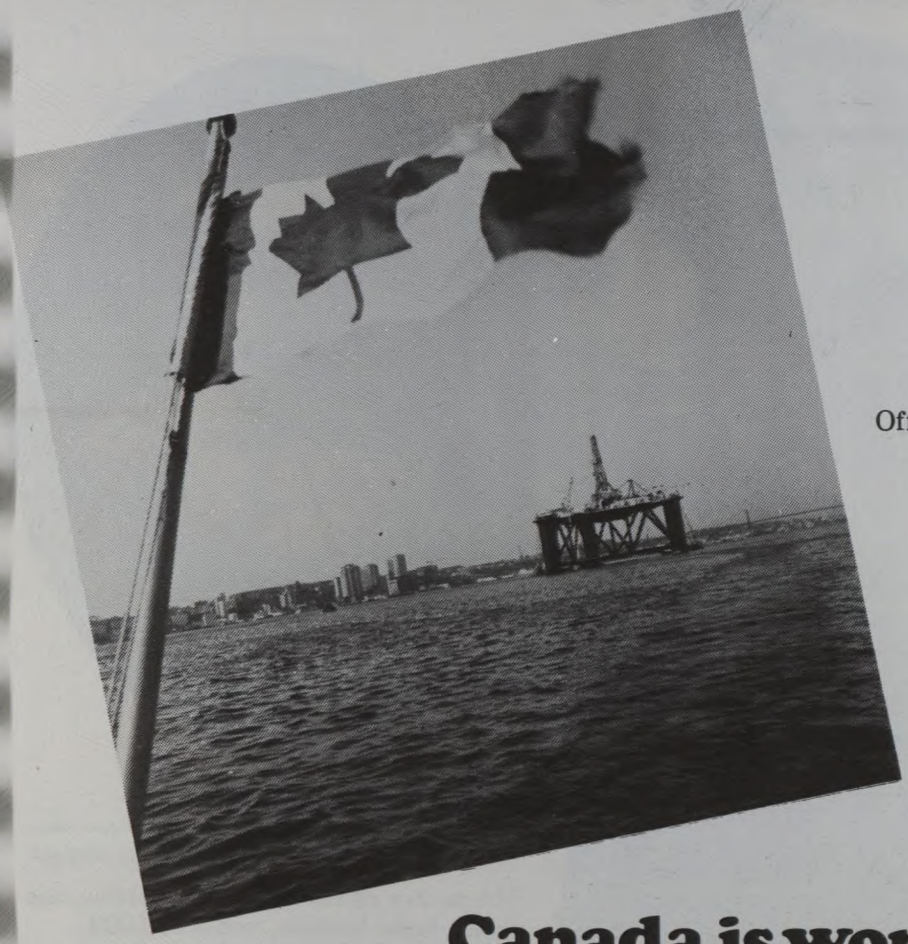
VI MÅ BESKYTTE LIVET I SJØEN VÅR

МЫ НЕ СМЕЕМ ПОГУБИТЬ МИРОВОЙ ОКЕАН

DEBEMOS CONSERVAR LA VIDA DE NUESTRO MAR

TEMOS QUE PRESERVAR A VIDA DO NOSSO MAR

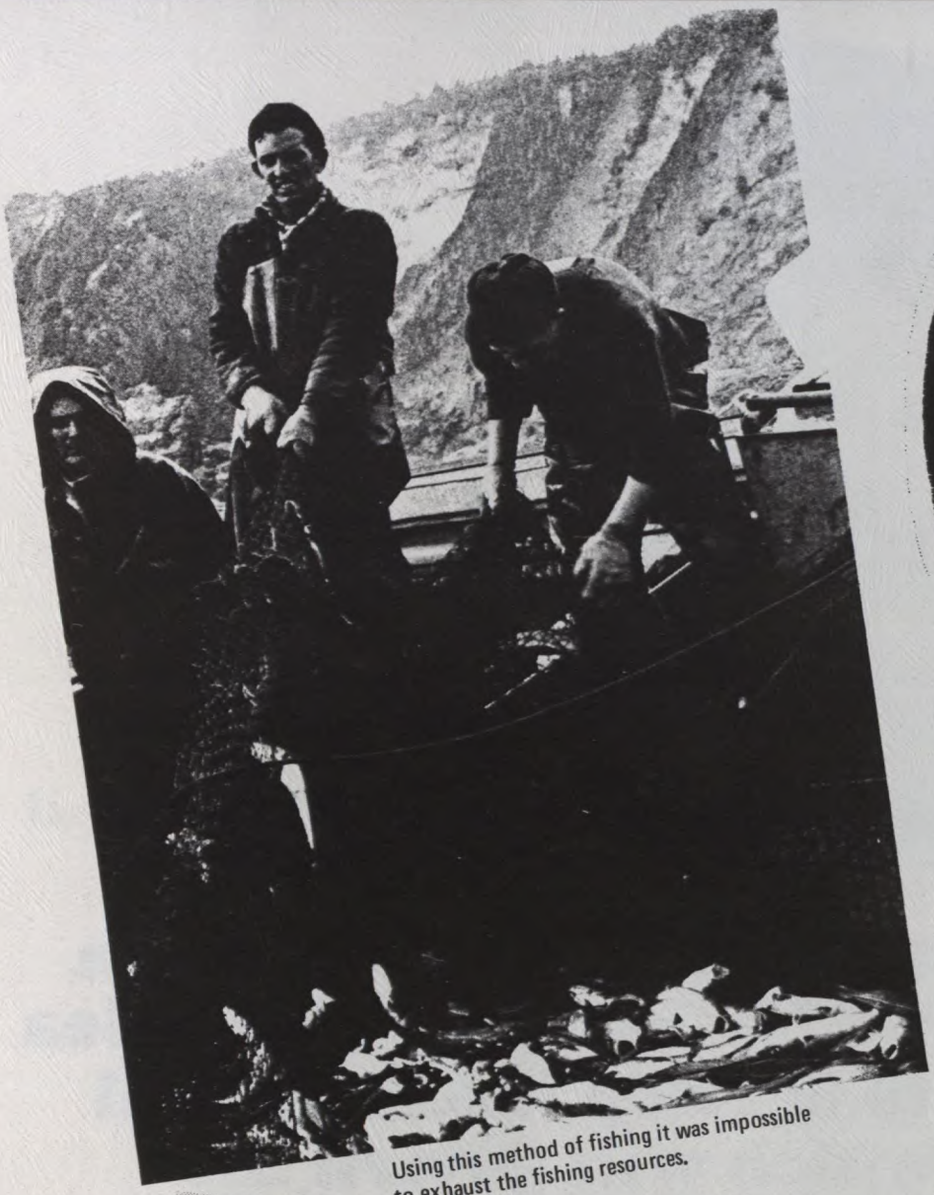
生きている海を守り続けよう



Off-shore drilling

Canada is working through the Third United Nations Law of the Sea Conference to develop international laws which will govern the future use of the Sea.

Where schooners and dories gathered smaller catches by dint of intuition, luck and patience, factory ships of the 1970's and their attendant trawlers are scientifically harvesting massive quantities of fish.



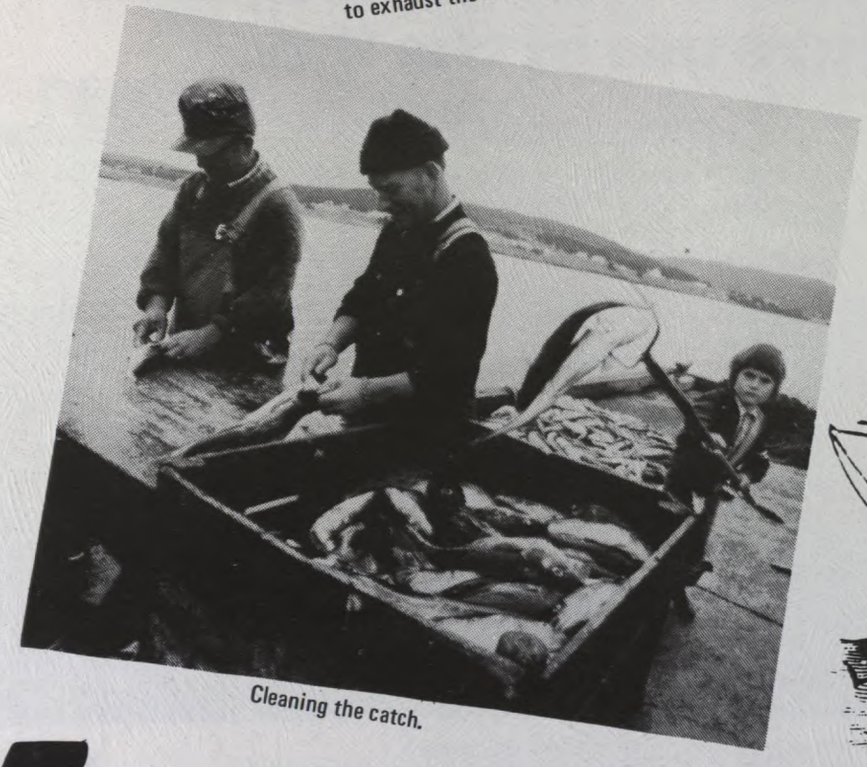
Using this method of fishing it was impossible to exhaust the fishing resources.

HUGO GROTIUS.

London, Published as the Act directs. July 12th 1806. by J. Wilkes

FROM THE COLLECTION OF MR. GERALD BODNER

The author of the high seas doctrine, the Dutch jurist Grotius, wrote in 1609 "Most things become exhausted with promiscuous use. This is not the case with the sea. It can be exhausted neither by fishing nor by navigation, that is to say, in the two ways in which it can be used" Grotius was right, for his time.

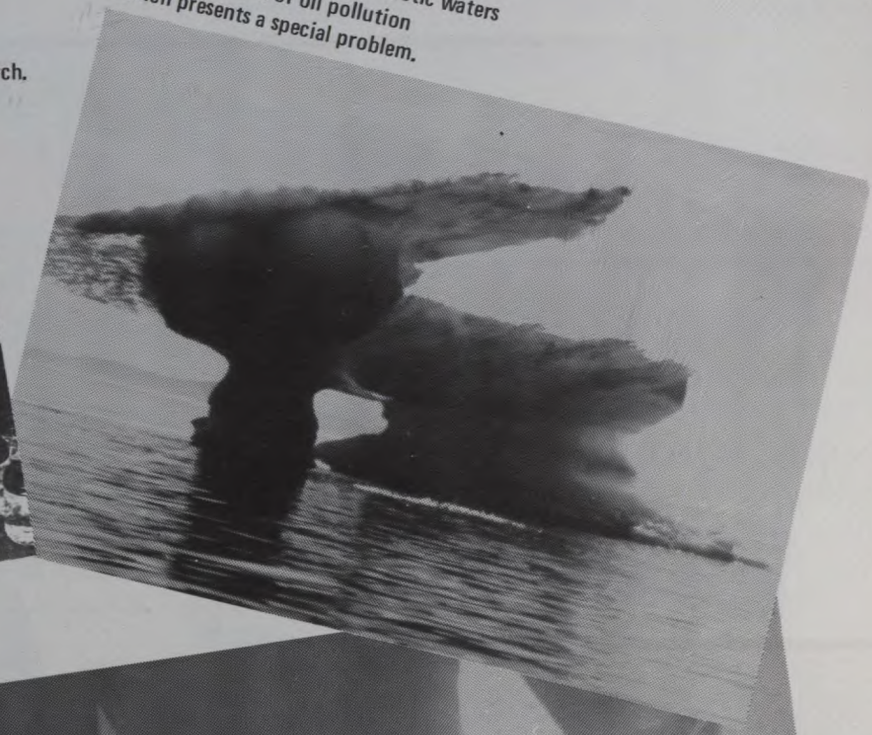


Cleaning the catch.

Sailing ship of yesteryear.

Marine research.

Icebergs such as this one in Arctic waters increase the risk of oil pollution which presents a special problem.



Grotius isn't right anymore.
Today we are:

exploring the ocean depths with complex scientific equipment, gaining knowledge that can be used for peaceful or military, or purely scientific or commercial purposes;

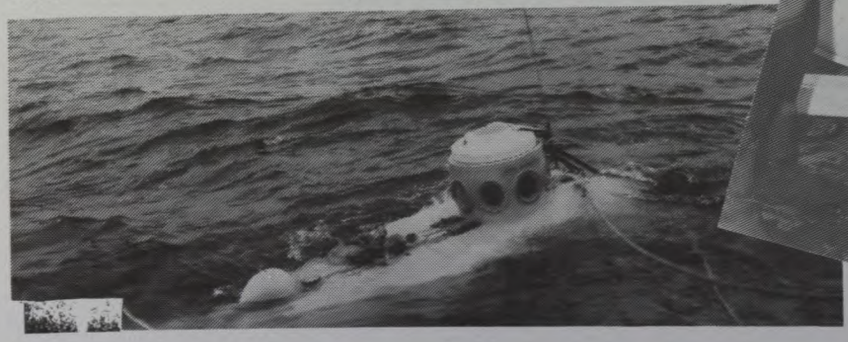
drilling the seabed for oil and gas;

transporting hugh quantities of oil and other noxious substances across the oceans in giant tankers or other ships;

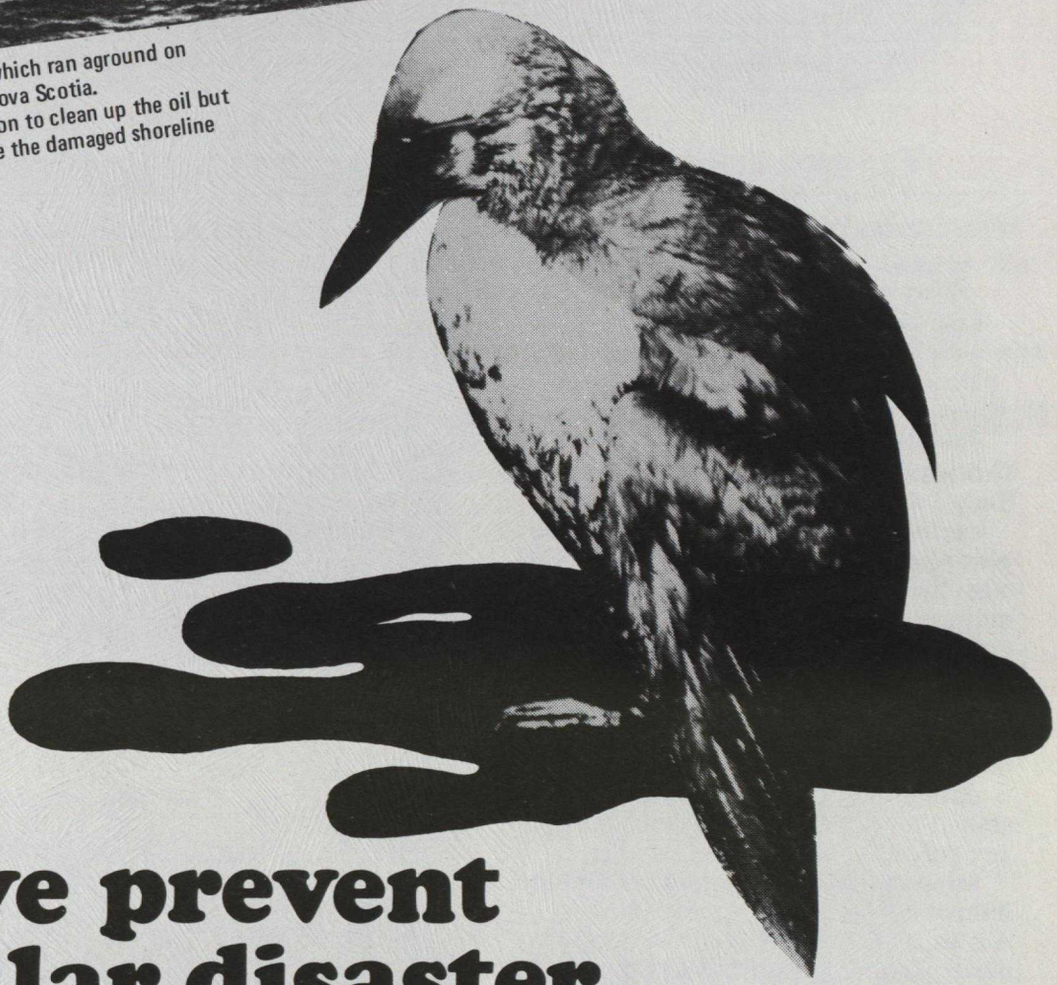
developing means of mining the abyssal seabed for minerals such as nickel, copper and cobalt;

using the sea as a dumping ground for human and industrial wastes, nuclear wastes, and such noxious materials as nerve gas and mustard gas left over the was.

Marine Scientific Research



The Arrow, a tanker loaded with oil which ran aground on Cerberus Rock in Chedabucto Bay, Nova Scotia. Canada had spent more than $3 million to clean up the oil but even then it was impossible to restore the damaged shoreline to its original state.



Can we prevent a similar disaster occurring in future?

Perhaps not, but by applying international standards to all navigation within a 200 mile zone off the coastline, recurrences will be less likely.

DEPARTMENT OF EXTERNAL AFFAIRS
MINISTÈRE DES AFFAIRES EXTÉRIEURES

communiqué

No.: 42

DIFFUSION: FOR IMMEDIATE RELEASE
RELEASE: MAY 19, 1977

CANADIAN DELEGATION TO THE SIXTH SESSION OF THE LAW OF THE SEA CONFERENCE, NEW YORK, MAY 23 TO JULY 15, 1977

The Secretary of State for External Affairs, the Honourable Don Jamieson, announced that he, together with the Honourable Ronald Basford, Minister of Justice and Attorney General of Canada, and the Honourable Roméo LeBlanc, Minister of Fisheries and the Environment, will head the Canadian Delegation to the sixth session of the United Nations Law of the Sea Conference which is to take place in New York from May 23 to July 8 or 15, 1977. Mr. J. Alan Beesley, Assistant Under-Secretary of State and Legal Adviser, Department of External Affairs, will be Deputy Head of the Delegation.

The sixth session of the Law of the Sea Conference will mark a critical phase in these long and difficult negotiations. Although the last session ended in an impasse on the issue of the rights to explore and exploit the deep seabed resources beyond national jurisdiction, significant progress has been achieved on most of the other key issues, including: general agreement in favour of the principle of the common heritage of mankind in respect of deep seabed resources; a 12 mile territorial sea; the concept of the 200 mile economic zone, including coastal state sovereign rights over living and non-living resources and jurisdiction in respect of the prevention and control of marine pollution. Canada's action, along with that of many other countries, to extend its fisheries zone to 200 miles was based on the emerging consensus at the Conference on the 200 mile economic zone.

However, this significant progress, which has already contributed to a radical revision of the law of the sea through state practice, must still be translated into an actual convention

commanding universal support. Before a convention can be adopted, the Conference has still to resolve the outstanding and most difficult issues, in particular the regime applicable to the deep seabed beyond national jurisdiction. There are still differences of view on the question of access to the deep seabed mineral resources by private and state entities on the one hand and the International Enterprise on the other hand. Intersessional discussions produced, for the first time, a constructive dialogue on this issue which gives solid ground for believing that an accommodation between opposing views will be realized at the next session. Nevertheless, exacting negotiations lie ahead on this and related issues as well as on such other questions as marine scientific research in the economic zone, coastal state powers to protect the marine environment, the rights of landlocked and geographically disadvantaged states and settlement of disputes.

In light of the substantial progress already achieved and without minimizing the difficult issues still to be resolved, Canada remains firmly committed to the realization of a new comprehensive law of the sea convention and the Canadian Delegation will be working actively to that end at the forthcoming session.

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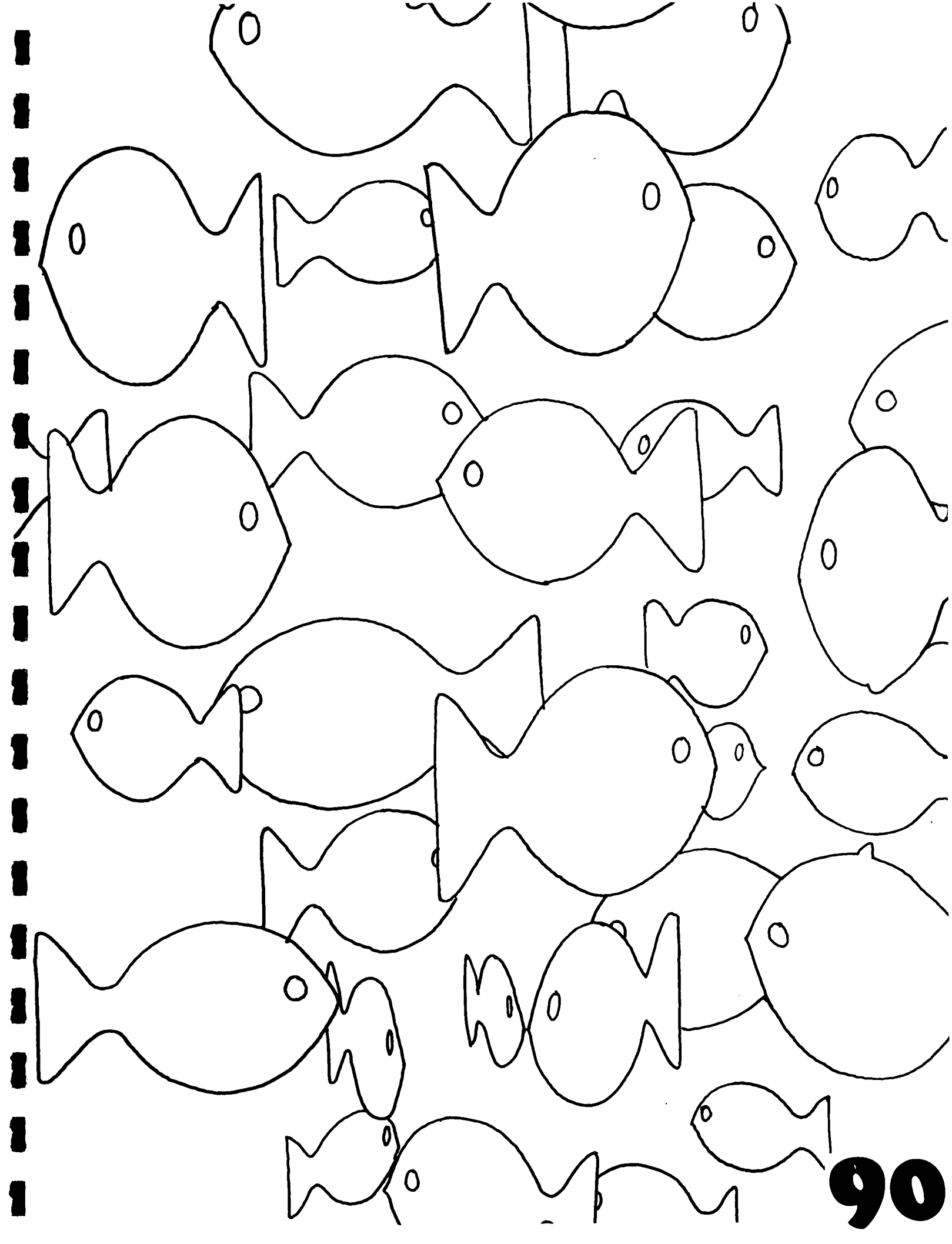


Notes from the wrap-up Press Briefing

Sixth Session Third U.N. Conference on the Law of the Sea New York, July 20, 1977

Deputy Head of Delegation and Representative

Mr. J. Alan Beesley, Q.C.
Assistant Under Secretary of State for External Affairs and Legal Adviser

Alternate Deputy Representative (First Committee)

Dr. Donald G. Crosby
Director,
Resource Management & Conservation Branch
Department of Energy, Mines & Resources

Mr. Beesley: I propose to begin with an overview of the results of this session as I see it followed by some comments of a more specific nature regarding Canadian interests. I believe this session of the Conference has probably achieved more than was obtained in the last two sessions together. I say this viewing the conference in broad terms, and not merely in the light of particular Canadian interests, although I don't know of any state other than the great powers which has more at stake in this Conference than Canada. We are pleased with the results of the session.

Now let me qualify this statement by saying that I doubt if any government represented at this Conference can say "this Informal Composite Negotiating Text is acceptable as is". We're dealing with between 151 and 157 states; we have produced a document 198 pages long with something over 400 articles including the provisions of the Annex so it should not surprise anyone that there will be difficulties on some issues for almost every state - but we knew that before we began the exercise. The point is that we have now reached a new stage in the conference process. We have a document that can be presented to the next session as a basis for making decisions on most if not all issues. That was the real point lying behind this attempt to produce for the first time one document comprising an informal composite negotiating text. It was more than a scissors-and-paste job, more

than a stapling exercise. The results of negotiations in three separate committees plus separate negotiations in plenary have been combined in one document which now looks like a draft treaty. More importantly, in the process we have moved closer to a consensus on a wide range of issues - a consensus not necessarily between each and every state but between major interest groups. I shall give some concrete examples of progress at this session on issues of importance to the Conference as a whole.

For nearly two years there has been a very difficult dispute running through the Conference which seemed to completely evade any sort of solution relating to the status of the economic zone. In simple terms, this was a disagreement about whether waters of the new 200 mile economic zone constituted "high seas", subject only to certain defined coastal rights, or whether, at the other end of the spectrum it was really the Territorial Sea under another name. Or, finally, as the vast majority of states argued, whether it was a new concept partaking of some elements of both the pre-existing high seas regime and the territorial sea regime, but constituting in essence something totally new and different from either. Only at this session were we able to finally achieve a degree of consensus on that issue, and it is one with more than theological or doctrinal significance. It has a tremendous impact, for example, on what some major maritime states see as the potential problem of creeping jurisdiction by coastal states. It also reflects the underlying importance of the extent to which freedom of navigation is maintained or is restricted. On that issue there have been continuing difficulties of a major order, but we now have the basis of a compromise between the coastal group and the major maritime powers. Not every member of the coastal group accepts this compromise; some of the territorialists have difficulty with it; so we're not out of the woods completely but we're much further advanced than we were. I mention this because it has always been recognized that this problem, because of its importance to the major powers, is a potential conference breaker.

An analogous difficulty relates to the extent to which coastal states could regulate scientific research in the economic zone. Only at this session did we finally come up with a text which struck a balance between the competing interests of the coastal states, jealous to protect their sovereign rights, and states, both coastal and non-coastal, with a shared as well as an individual interest in maximizing freedom of scientific research. This too is a tremendously important development.

On Committee I matters, it is also clear that there has been a major development in this session on the whole range of issues relating to the mining of the deep ocean seabed. Indeed that is the area perhaps of greatest progress in the negotiations carried out at this session. Views will differ as to whether the text accurately reflects the actual progress achieved in the negotiating process, but what is clear is that we have escaped from an "either-or" solution. The regime described in the text is not merely a licensing system, with no real powers to the proposed new International Authority, and which does not allow the proposed International Enterprise to actively mine and exploit the resources of the deep ocean seabed; nor, on the other hand, is it the opposite, a unitary system that permits only the International Enterprise to do the mining. Some of the drafting requires fairly careful interpretation

in order to define precisely what the text embodies; but, I have no hesitation in saying that we interpret this text as providing for "parallel access", or "guaranteed access"-the point of fundamental importance for so many developed states, namely, the right of states and private entities as well as for the proposed International Enterprise to mine and exploit the resources of the deep ocean seabed.

Unfortunately, because of certain new language embodied in the text, there may be differences of views requiring some further refinement of language and substantive negotiation. Nevertheless the text does reflect the major movement by many, many developing states which occured during the conference towards acceptance of a system that would permit the exploitation of the area both by the international enterprise and by states and entities such as multi-national corporations. We have been a long time getting to that point; nine years, to put it simply. Some of the language could be interpreted as for leading to different conclusions. I don't apologize for that since I am not responsible for the text - I was only "associated" with the collegial group which finally put Humpty Dumpty together in this fashion. While there in my capacity as Chairman of the Drafting Committee, I was really only an observer without any real responsibility for the language elaborated by the respective chairmen of committees. However, if you read the text carefully, I think you will find that the kind of movement which emerged in the negotiating process has found its way into the text, perhaps imperfectly, but visibly, and this is a major step forward.

QUESTION: You speak of progress, yet the text was written essentially by each committee chairman and then brought to the President. How does this differ from what we've had before?

Mr. Beesley: Interestingly, as you may know, the President did request that this exercise be performed at the last session and the one before that. There was resistance to the idea on the grounds that we weren't yet ready for it, that the text hadn't progressed sufficiently in the three committees to warrant putting them together in one single treaty. Now, from a purely technical point of view, what was entailed was a good deal of drafting, eliminating unnecessary cross references, putting them in where they were not there, avoiding using similar terms to mean different things, inconsistencies, loopholes, etc. - almost a formal exercise. But coupled with this was an attempt to alter the substance so as to move closer towards consensus, and this has occurred on a range of issues. Nevertheless, as you point out, there is some similarity to what occurred before. Because as a result of procedural decisions made, the authority to produce this text was not delegated, for example, to the President of the Conference. That may occur at the next session, when he may have the major carriage of the final text.

QUESTION: Did Mr. Engo, for example, write Committee I again for the third time?

Mr. Beesley: Yes he did, although he consulted with the collegial group. Ambassador Aguilar wrote the Committee II text, Ambassador Yankov wrote the Committee III text and President Amerasinghe produced the Provisions on Dispute Settlement text. But in the process, they consulted closely with one another to avoid inconsistencies, and also in an attempt to produce a formulation that would better reflect consensus. We began this process of taking it out of the three committees, of trying to weld it all together into a composite text; and I repeat this is more than a formal exercise. The process inevitably requires decisions on some of the outstanding issues such as the status of the economic zone, marine scientific research, etc. It is important to note also that this is a negotiating text, not a negotiated text.

QUESTION: On nickel production - Could your Dr. Crosby, in layman's terms, explain the significance on these figures of 60%, 40 or whatever?

Mr. Beesley: I am happy to defer to Dr. Crosby on this question.

Dr. Crosby: What it amounts to is this. The resource policy article (now Article 150) incorporates four main features. Item number one is an economic target for the deep seabed. This means that a number of mine sites will be allowed to begin producing as soon as commercial production is feasible in the deep seabed. The increase in world demand for nickel will be calculated over a period starting January 1, 1980 and continuing for seven years. On the basis of an appropriate split of that rate of increase in world nickel demand, the number of mine sites is calculated. That's the number of mine sites that will be allowed to come on production immediately.

Item number 2 is that the 'percentage' split between the land-based production and deep seabed production will be 40 land-based to 60 seabed. Now that split is of course the split in the increase in demand for world nickel.

QUESTION: Deep seabed gets 60% of the increase in world nickel demand, gets to supply that specific amount of nickel?

Dr. Crosby: Well, it's allowed to increase to that amount - that's the limitation that will be placed on it. It's not an allocation as such.

QUESTION: It doesn't guarantee it.

Dr. Crosby: No. It simply says that until such time as deep seabed production gets to that level, no controls will be placed upon it.

QUESTION: Which might be when?

Dr. Crosby: Well, a lot depends on how soon production begins. It will be as soon as possible if the people who are mining out there have anything to say about it because they will want to get their investment back as quickly as possible.

QUESTION: It's figured annually?

Dr. Crosby: That brings us to the third and fourth points. The third point is that the actual figure to be used to determine the rate of increase in world nickel demand is a rolling average figure. This will be adjusted every five years. You obtain it by averaging back for the latest ten year period available for which data are available.

QUESTION: Is this a difference from the earlier text?

Dr. Crosby: Yes, the main difference is that the previous text simply stated an average of 6% minimum. Now it will be adjusted in accordance with the actual figures.

QUESTION: The basis of calculation will change with time?

Dr. Crosby: Exactly. So as to remain very, very close to the facts.

The earlier text was quite unrealistic. Nobody expects the world rate of nickel demand to increase exponentially at 6% -- it would be virtually impossible. So this is far more realistic, and the fourth point makes it even more so. Because the base amount to which you apply this figure for rate of increase is also obtained by using actual figures. Here you will use the five most recent years for which there is data available, and again you will adjust them every five years. So all in all, it's a much more realistic formulation and indeed it does represent a real effort by Chairman Engo to reach a compromise.

QUESTION: Was this agreed on; was there a compromise?

Dr. Crosby: This is Chairman Engo's formulation and it's not fair to say that any delegation agrees with it, but it does represent an honest effort by Chairman Engo to reach a compromise situation.

QUESTION: How many sites do you think it might produce by 1990?

Dr. Crosby: A lot depends on what actually happens in the world nickel market. But let's assume that it does more or less what we might predict. Then probably those first seven years of "mine site credits", could add up to nine or ten mine sites by 1987.

QUESTION: What about the banking system?

Dr. Crosby: The text stipulates that there shall be a banking system. This has not really changed. Under this provision, for every area that a deep sea miner takes out, another area would be placed in the land bank.

QUESTION: He must prospect two areas and choose one?

Dr. Crosby: Yes, he must come to the Authority and say that this is what he is interested in. Then the Authority can choose which half will go to him. He may define two areas, one of which he'll get. Or it may be one large area of which he'll get half. In any case, one becomes a non-reserved area for which he has a contract. The other becomes an area reserved for the Enterprise.

QUESTION: Are there any time limits written into the contract?

Dr. Crosby: The figure quoted now in the text is 20 years. And there is a new stipulation that after 20 years of being in force, the system of exploitation will be reviewed.

QUESTION: But does it say what the system afterward will be?

Dr. Crosby: It does say that if, during the course of that review, it is impossible to reach agreement, then the Authority itself or the Enterprise in joint venture arrangements with other entities will be the operator in the international area.

QUESTION: So contractors will lose their sites?

Dr. Crosby: No, not at all, the existing contracts will not be affected in any way. This is just for contracts past that 20 year period, new contracts.

QUESTION: But if the existing contracts are for 20 years or more, ...

Dr. Crosby: They will not be affected, no.

QUESTION: Did I misunderstand, you said future contracts would have to be by joint venture?

Dr. Crosby: Well, under the terms of the Convention as now written, if no agreement could be reached during this review period, 20 years from the coming into force of the Convention, then yes, the Authority or the Authority in joint venture with other entities would be the operator in the area.

Mr. Beesley: You might look at Article 153 on page 85, not necessarily now, but that's the one that provides for this. Paragraph 6.

QUESTION: What compromises came out of that?

Dr. Crosby: Well, this is the compromise. At one extreme there were those who wanted no change. At the other extreme there were those who wanted the Authority to take over everything at the end of 20 years. The compromise is that you will try to reach agreement on a new regime or on amending the current regime.

QUESTION: So their offer in fact is exploration by joint venture?

Dr. Crosby: If agreement cannot be reached on a new regime or an amendment of the then existing regime or on just plain approval of an existing regime, yes that would be the end result. It would be mandatory joint ventures.

Mr. Beesley: We have taken the position that, by then, enough developing countries may have become interested in the activities in the non-reserved area, (the area not set aside for the international enterprise) that they would not be so anxious to alter the system. I think that this is a real possibility, especially if you take into account the possibilities of joint ventures provided for on a permissive basis, (not as a mandatory function) during the first 20 years. Not all of the consequences are clear and this is another area for some further work.

QUESTION: Say a private company goes through the process of getting a site, putting one in the bank, what is the Authority's role in this?

Dr. Crosby: The Authority, primarily through the Council, will administer the day-to-day activities in the area and the contractual relationships that may exist out there. And the operating arm of the Authority, the Enterprise, will conduct operations on its own.

QUESTION: What relationship will private companies have with the Authority? Will they have a contract and that's the end of it?

Dr. Crosby: There'll be a contract but just as under a system of national legislation, there will be administration and management of the actual activities.

QUESTION: Does this spell out what the contract will say or is that left up to the Authority when it negotiates?

Dr. Crosby: The outlines of a contract are spelled out here. The actual model of a contract is not yet determined. A great many blanks still exist; for example, the financial arrangements that will apply. An outline is now present for the first time in this text and it does stipulate certain types of financial payments that must be made. I could go over them very quickly if you'd like. There would have to be a fee, what we would call - I'll use Canadian type terminology rather than the terminology of the text - what we would call an application fee for a contract. That's not stipulated - it's left blank - but there would be that. Second, there would be an annual fixed charge for mining. Third, there would be a production charge - what we would call a royalty. There is a relationship between the annual fixed charge for mining and the production charge and the relationship is this: at the outset of mining probably your profits, or maybe even your level of production might not be at the maximum until you got geared up. So, for the first three years, you would pay this annual fixed charge. Thereafter,

you would pay the royalty and the annual fixed charge would be deducted from the royalty; so there is a relationship between the two. And the fourth item would be shared net proceeds - a profit-sharing method of sorts. The actual method of calculation of the net proceeds is not spelled out too clearly yet.

QUESTION: You don't know whether to deduct your own charges before you get your net?

Dr. Crosby: Well, no doubt operating charges and that sort of thing will be deductible.

QUESTION: They have a production charge and then they'll get a share of the net proceeds?

Dr. Crosby: Yes, well no doubt that will have to be allowed as we would allow in national legislation, we would allow royalties, for example ...

QUESTION: Canada has various arrangements for licensing. How does this compare?

Dr. Crosby: At first glance, it would appear to most people, and most developed states, to be a bit onerous. It depends how you define these things and how you relate one to the other. When you fill in the blanks, then we'll know. But I think it's fair to say the new national legislation for oil and gas for Canada lands and the territories and in the offshore has certain similarities to this system. Under that legislation there will probably be an application fee. There will be a royalty and there will be what we are calling under our legislation nationally, a PIR, a Progressive Incremental Royalty, which is in effect a share of the net proceeds. So you could roughly correlate this sort of system with a national system. The British system in the North Sea is not entirely dissimilar to this, nor is the Norwegian system. I think this reflects a growing sophistication globally about what the traffic will bear and how best to apportion financial charges for resource operations. So it may not be unreasonable. If, however, those blanks are filled in unreasonably, then it would be impossible to undertake mining. This of course is not meant to be the case - otherwise there's no point in writing a Convention.

QUESTION: Who's to fill in the blanks at the next meeting - the Authority?

Dr. Crosby: The blanks are supposed to be negotiated at the next session or the one following that as the case may be.

QUESTION: But it will not be left to the Authority to fill in the blanks?

Dr. Crosby: No, if you look at paragraph 7 of Annex II, which is on page 160 of your text, you will see the blanks. It's intended they be filled in.

QUESTION: In effect, it's the actual rates?

Dr. Crosby: Yes, you'll see the actual rates just show lines there; they are meant to be filled in. That's the intent at the present.

QUESTION: This then satisfies the industrialized nations who were worried about the Authority ...

Dr. Crosby: Nobody's going to be entirely happy with it - many people are going to be worried about how it will be interpreted.

QUESTION: Yeah, but at least they are satisfied that the Authority does not have the right to set these arbitrarily - that they will be set during negotiations.

Mr. Beesley: These conditions will be negotiated rather than left to the discretion of the Authority - a possibility which had worried many states. I'd like to mention that it seems likely that there will be intersessional negotiations on financial terms of contract, because it is recognized that it is not only relevant to settle those questions but essential to do so. Previously we were too far away from that kind of specificity to make it necessary or worthwhile.

QUESTION: Will the intersessional meeting be concerned only with financial aspects?

Mr. Beesley: I can't say because it depends how it develops and who arranges it.

QUESTION: If I may go to the Article 159, the composition of the Council, to what extent does the new text represent any move towards a consensus?

Mr. Beesley: Well, it contains many changes from what had previously existed. It's also generally felt that it comes closer to representing a consensus, but I certainly would hesitate to venture an opinion on that aspect.

QUESTION: Would the U.S. get two seats under A and B - would they get one of each? They would obviously contribute the most towards the mining exploration and they would be a major importer of what they mine.

Dr. Crosby: I don't think it's intended that one nation would get two places.

Mr. Beesley: They would have two options though, if they wanted to make room for someone else, perhaps, like Canada.

QUESTION: Do you have a place in this Council?

Mr. Beesley: We hope we do - but that kind of thing can never be guaranteed.

QUESTION: What about the financing of the enterprise?

Mr. Beesley: It at least opens a way for Canada to be member of the Council if we decide not to just sit on our hands and stare at the ceiling.

QUESTION: There is no existing right of a big land-based producer to be represented?

Mr. Beesley: Yes, but two of the four who would be selected because they're major land-based producers would be developing countries, and that's a new wrinkle and of course one of the others - the developed countries - might be, for example, France, because of the words "under its jurisdiction" which would inlcude New Caledonia. And, if the USA decided to go in under that one because of the tremendous amounts of manganese nodules which will be within U.S. jurisdiction due to its islands in the South Pacific - who knows, they could be the two developed ones. I'm merely speculating, I'm not saying that that is what I think will happen, but there are no guarantees on this kind of thing.

QUESTION: Is an anti-monopoly clause in there somewhere?

Mr. Beesley: There is a provision and I don't think I'm in a position to comment on the extent to which it was a negotiated position. Certainly there were negotiations on that issue.

QUESTION: You say the current text would permit nine or ten mining sites by about 1987. How much would the previous text have limited in terms of mining sites?

Dr. Crosby: There was no limitation as such in the previous text.

QUESTION: So this, in fact, places a new limitation on the number of mining sites?

Dr. Crosby: This is a realistic limitation - I would say around ten mine sites. Before there really was no limitation. The formulation was simply a formulation that was meaningless because when you calculated it you never could reach the limitation.

QUESTION: What if the enterprise gets into trouble? Don't you run the risk of having a situation where company X is exploiting one side and, the enterprise is, say, floundering on the other half of that one? Can you go on to the next other site before the enterprise has got its first site going, - in other words, could you get to a point where the Enterprise is doing one

and private companies and state companies are doing nine?

Dr. Crosby: I think a lot will depend on the realities of the moment - how many are actually being developed by the Enterprise and how many are actually being developed by private companies or some state organization.

QUESTION: Just because it's reserved for the Enterprise does that mean the Enterprise must work it?

Dr. Crosby: Not at all. The Enterprise could enter into a joint venture arrangement with another party who had the financial and technical expertise and the technological capability. The Enterprise would put up the resource through the Authority, and you'd have a joint venture going. The Enterprise would, in effect, have a sort of carried interest, we would call it in Canada, which could turn into a working interest perhaps later on, by investment by the Enterprise.

QUESTION: So it doesn't have to start at the same time as the private company - it could lie there in the bank for a number of years while the private does its half?

Dr. Crosby: There is an intention, not a consensus, expressed in the Committee that the Enterprise would get into business about the same time as the other.

QUESTION: But supposing it just can't get its act together. Would a private company have to wait until the Enterprise can bring out the same equipment that the private company can?

Mr. Beesley: This isn't provided for. But the point has been made many times that the international enterprise ought to be able to operate in roughly the same time frame as private enterprise. That is the reason for proposals to give initial funding.

QUESTION: Does it say "ought to" or "have to"?

Mr. Beesley: Well, I think some of those questions might become acute if the Enterprise had difficulty getting going. But that's one of the reasons for the U.S. offer of funding, to help to get it started, to prime the pump.

QUESTION: Is that written in to the text - the funding of the Enterprise?

Dr. Crosby: Not in great detail. It has not yet been agreed upon in the Committee as a whole.

QUESTION: You still haven't answered the question though, I think, which is regardless of the "oughts" and "buts" and "possibles", does this text make it compulsory for these two things to go together or does it allow a certain

amount of drift? Regardless of what the consensus was in the meeting - what does this text do?

Mr. Beesley: I don't want to use the word "drift" - it allows a certain amount of "flexibility". I wouldn't like to predict the consequences of the Enterprise not ever getting started; it is recognized (as much by developed states as by developing states) to be an essential part of the overall accommodation, that one doesn't just pay lip service to the idea of the Enterprise. It must be an operating enterprise or the regime won't work. And that's the underlying protection - that politically it's hard to predict what might happen in the Council and in the Assembly if ten years went by with a good deal of development by private enterprise and by states and still the international enterprise is looking for financing, etc. It's here, I think, that you will find some of the permissive provisions coming into play. It may turn out to be very much in the interest of private contractors or states to get involved in the development of the reserved area because there is another opportunity to exploit but, of course, at some cost. It has been argued that there should be a linkage, a mandatory linkage. That has not been accepted by the developed states. But nevertheless linkage is possible and, speaking purely personally, I can see that is one of the best ways of making sure that we move in some kind of phased manner rather than on a hit-and-miss basis. But you won't find a mandatory linkage, and it would be unacceptable to developed states.

QUESTION: You mentioned ten mining sites which we're committed to produce by say 1987, - they could all be, in effect, private company mining sites, while there would be ten mining sites put aside in the land bank simultaneously.

Mr. Beesley: Well, there couldn't be 20 at that point.

QUESTION: but that's possible ...

Mr. Beesley: Well, Don, we should go back - are you talking about the period around 1987?

QUESTION: Judging on the basis of your production limitations.

Mr. Beesley: Now if there are ten, five will be reserved for the international enterprise. It's not first come, first served. Going back to one point, someone asked about anti-monopoly provisions. Look at Article 150, particularly paragraph (1)(f), but the whole article really. I wouldn't suggest you do it now but that's the reference. I think perhaps that it's fair to say that we haven't completed our negotiations on anti-monopoly provisions because it's an extremely complex range of questions that's raised by that.

QUESTION: That's not part of the package?

Mr. Beesley: Oh, I think it is, because some states, for example, Sweden, have said that it may not be possible for some years for them to participate but they don't want to be excluded. Countries like Sweden, and for that matter

Canada, have made very clear that they're not so interested in an anti-monopoly provision as they are in some non-discrimination provision, so that eventually they will have the right to participate. And a large number of countries take that view. There's a recognition that otherwise only the major technologically developed countries and countries with capital will ever really be out there in the non-reserved area.

QUESTION: How would a country, using Sweden as an example, participate?

Mr. Beesley: It's very hard to say; you might find a country like Sweden or Brazil and some other country - or, perhaps, a private entity from a country like Canada or the United States or Germany or Japan - all finding it in their collective interest to work together. I don't think it's too easy to speculate, but I have a kind of gut feeling that there will be a good deal of interest in that sort of activity, and that it won't be confined to developed states.

QUESTION: What about technological transfer provisions as they relate to the obligations of private companies?

Mr. Beesley: If you read this quickly, I think you may go away with the impression that there is mandatory transfer of technology. Read it more carefully and I think you will conclude that what is really provided for is that as a pre-condition to getting a contract, an entity or a country must give an undertaking to enter into a technology transfer the second time around after conclusion of its first contract. But even then, it's at "fair and remunerative prices", etc., under license or some other arrangement. There's no mandatory transfer of technology. I would fear from my conversations with legislators from some countries, that such provisions would kill the treaty.

QUESTION: Could I ask about the agreement on the EEZ - how it came out in the second committee?

Mr. Beesley: Well, the major development was the one I mentioned. For the first time we have a text which strikes a balance between the positions taken by coastal states and the positions taken by some of the major maritime powers. It's a very ingenious solution involving some skillful drafting and I believe it settles the basic dispute. That to my mind is at least as important as anything that has come out of Committee I in terms of working towards a Conference solution. Similarly, although it may not seem as important an issue, the unresolved problems relating to marine scientific research definitely were a potential Conference-breaker and we've now got over the hurdle on that one.

QUESTION: Could you say that the agreement rejects the territorialist position?

Mr. Beesley: The territorialist position? Well, they haven't been that unreasonable on this question of the status of the economic zone. They never alleged that it was territorial sea, but they've said absolutely that they could never accept a provision clearly categorizing it as high seas. From their point of view, they could go home and say we protected our basic rights under a new concept which didn't exist when we put forth our 200 mile territorial sea claim, but they can't go home and say that and then say "oh, by the way, it's called high seas". And we have to think of them as one element in the basic negotiation because they have an important position and it's an exercise, don't forget, intended from the beginning to strike a balance and to reach a compromise between those claiming wide territorial seas and those claiming narrow territorial seas. The economic zone represents that compromise.

QUESTION: Is there a transit right?

Mr. Beesley: Transit right is the wrong phrase. Navigational rights will definitely be protected.

QUESTION: So, anybody can sail through an economic zone without prior clearance.

Mr. Beesley: That leads me to the next point I wanted to make about the marine environment. By definition, when you act to preserve the marine environment you raise the question of all the known uses of the sea and in order to act effectively to preserve the marine environment you raise the possibility of interfering with the many uses of the sea. So I think that's always, at least for Canada, been one of the most important issues under negotiation at this Conference. We are by and large satisfied with the results of the Conference on marine pollution because the basic compromise consisting of several parts was retained. The central feature is a global umbrella treaty. It does not spell out every last aspect of the rights and obligations of states to preserve the marine environment. It does pick up under its umbrella all existing treaties, under IMCO auspices or otherwise, designed to preserve the marine environment. This is retained and it was an originally Canadian idea. Moreover, the draft treaty enshrines basic obligations to preserve the marine environment which have not existed in international law prior to this Conference. The major element of the compromise was that there would be concurrent or shared jurisdiction in the economic zone by both flag states and coastal states. That's been maintained, and the additional element is what's called port state jurisdiction. This is as new a concept as coastal state jurisdiction. As a result of these three elements in the package, we have a compromise, one that could come unstuck to be sure but hasn't so far. We should note however that in an attempt to take a balanced approach to the obligations to both flag states and coastal states, some changes were made which may simply water down the obligations of each. For example we

began with language which simply imposed an obligation to apply and implement "internationally agreed standards". Now we see an obligation to implement "generally accepted international standards". Now, if that were applied only to flag states, they could say "I don't think that's generally accepted - it may be in force but I haven't ratified it and other countries haven't ratified it". So you wouldn't have done very much to preserve the marine environmnet. Well, to meet that point, a curious thing occurred, namely, that the same language was used for coastal states, so that they too don't have to do anything unless everybody agrees on this obligation. That may be a kind of trade-off between a flag state and a coastal state but it's no way of preserving the marine environment because then both flag states and coastal states can say: well there are still a substantial number of states that haven't accepted these regulations. So we're not encouraged by that particular variation in the overall package compromise. Moreover, we and the USA have fought very hard to retain what we regard as the pre-existing right of coastal states to regulate construction, design, equipment and manning standards, in the territorial sea. That kind of right is reflected in U.S. legislation, the Port and Waterways Authority Act and in Canadian legislation, principally, the Canada Shipping Act, and in Russian legislation, interestingly enough. Well if the present amendment prevails, then it is an amendment that improves the text considerably, because previously a coastal state was not even allowed to legislate in its own territorial sea over which it has sovereignty in order to implement an internationally agreed standard. It was a ridiculous situation and the language was so broad that a coastal state may even have been deprived of its right to regulate fishing. In other words, while we've been fighting over the status of the economic zone, we've been altering the status of the territorial sea in a most peculiar fashion. There is reason for some satisfaction in that we have at least got rid of the pre-existing provisos that would have handcuffed the coastal state completely in its territorial sea. The coastal state now can act only to implement internationally agreed standards in its territorial sea, but even that wasn't possible on the basis of the previous text. I'm speaking now for Canada, not attempting to give any detached view. I don't like this partial solution and I hope that a better compromise could be found.

QUESTION: So it would wipe out your existing law?

Mr. Beesley: It wouldn't wipe it out - it would require its amendment. Ours, USA's and Russia's, amongst others. And I think that it's unwise. Even if it were accepted as part of an overall Conference solution, recalling the series of marine disasters that have occurred recently, I don't think coastal states will wait for internationally agreed standards before acting to protect an area that after all is close to 12 miles from their shore, and over which they have sovereignty. It's unrealistic. So, what will they do? They'll act and somehow interpret their actions as bieng consistent with the convention and we will be back to a kind of creeping jurisdiction, if you want, which we sought to get rid of. I think it would be far better to give this right in certain limited circumstances. So, I'm not happy with that solution and I find it a silly solution, but that's the one we've achieved at this session

and it is a better one than we began with.

QUESTION: Then there is no mechanism for setting international standards?

Mr. Beesley: Well, it lies in the eyes of the beholder. If anyone can tell me what is meant by an international standard or an internationally agreed standard, I'd feel more relieved. The history, as you know, of implementation of ratification of IMCO conventions has not been one that is very reassuring, and this is not a problem that is gradually going to diminish as the years go on. Obviously, there will be more and more tanker traffic, bigger and bigger tankers, and apparently more and more unseaworthy tankers. I don't want to over-emphasize the point but I do feel that this requires further work and I would hope that we could reach a better solution.

QUESTION: Doesn't most of what you're saying apply only to ships and pollution caused by ships - what about land pollution? Has it been agreed that the treaty won't deal with that pollution from land?

Mr. Beesley: No, on the contrary, the basic obligation applies to land-based pollution too and, in specific terms, to a particular kind of land-based pollution, namely the dumping at sea of noxious materials originating on land. It's very hard to go very far landwards in the law of the sea because once you get into internal waters, you get into the area of total sovereignty of the coastal state. You can't for instance go into a Law of the Sea Conference to regulate auto emission standards. Yet somewhere over 75% of marine pollution is said to be airborne pollution. But it is argued that at least we can improve the law on these issues. I think I should say in all fairness that we now have a totally new branch of the law which didn't exist before. If in passage through international straits, damage is done by state-owned ships not engaged in commercial activities, there is a radically new dimension of state responsibility involved which goes hand in hand with flag state jurisdiction. Well, that concept was never heard of until we began to talk about it a few years ago and I think that's an important concession from the major powers who have asked for free transit. So, I'm not all that disappointed, I suppose if you're measuring the results against the ideal, you'd be disappointed on every aspect of this treaty but it's the attainable that we've been seeking.

QUESTION: Say a company puts pollution into a river and it flows out to sea, is this pollution controlled now?

Ms. Walsh: Well, there is an attempt at control in the form of a global umbrella treaty - an agreement to try and control pollution from all sources. There is an article Article 208 on pollution from land-based sources. Similarly, there are articles on pollution from seabed activities such as continental shelf drilling. There's a dumping article which is sort of a land pollution activity carried out in an operation at sea. There is also an article on pollution transmitted through the atmosphere. But I think the main effect of these articles, - what they

basically try to say - is that the coastal state should establish laws and regulations implementing international standards and recommended practices with regard to pollution prevention. The difficulty is that in the law of the sea convention, you can try to attack pollution at source but, as Mr. Beesley said, you can go just so far. At least there is an article encouraging states to try and prevent pollution of the sea from all sources.

QUESTION: But basically there is no international standard as yet?

Mr. Beesley: The closest we've come to it is what we achieved during the Stockholm Environmental Conference when we put forth a proposal --- a clean river register, and that's being worked away at. Then there are a number of bilateral arrangements and multilateral in the European context and, under the aegis of the Boundary Waters Treaty of 1909 between the United States and Canada, through the International Joint Commission. But this is a law of the sea treaty and although land-based pollution does affect the sea, you can't reach inwards and start regulating what happens in factories - that's a matter of national sovereignty.

QUESTION: But is the text kept sufficiently general so that progress can be made within it?

Ms. Walsh: Well, the articles are general, like, for example, Article 208: land-based sources, which is basically an encouragement to prevent pollution and preserve the environment.

QUESTION: Could this article be used to ensure implementation?

Mr. Beesley: I wouldn't rule it out. We've got to go much further on liability and compensation. But as it might be hpyothetically possible to found a right of action on this treaty against what is occurring as a result of the activities of a particular state within its own land territory. But you'd have a lot of difficulty establishing that. Nevertheless, included in this draft treaty is a basic, fundamental obligation not to pollute the marine environment and that includes, of course pollution from land-based sources. This is still a very primitive undeveloped area of the law and it's got a long way to go. At least this treaty lays down totally new rules with respect to preservation of the marine environment - rules that were unimaginable ten years ago.

QUESTION: Well, does it set the direction?

Mr. Beesley: It doesn't merely set the direction - it lays down concrete obligations. If an incident occurs even beyond the economic zone and then the ship comes into the port of a state, the port state (that state where the port is situated) can take action against the ship. You're getting into a very technical branch of the law now.

QUESTION: Even something happening in the international area ---???

Mr. Beesley: Yes. That's very new too. And I think the USA is mainly, if not solely, responsible for the creation of that concept. We supported them very strongly and it was rejected by other important maritime states in IMCO, but ultimately accepted in this text, and I think it's a very important part of the package. It would be wrong to go away discouraged about what occurred on the environment but I don't think we'll ever be satisfied totally because we are striving for the ideal.

Do you want to enquire at all about why provisions relating to marine scientific research haven't turned into literally a Conference-breaker? It doesn't sound like an issue that would break up a Conference, yet it developed into just such an issue and the fact that we waded our way through is another indication of the very real progress we've made. Jane, do you have any comments on marine scientific research?

Ms. Caskey: We started this Conference with very polarized positions. The major maritime and researching states argued for freedom to conduct marine scientific research in these large areas which would be subsumed under the economic zone. A number of coastal states including Canada took the position that scientific research in the economic zone should only be conducted with the consent of the coastal state. In the last text, we had what might be called a qualified consent regime - in other words, the coastal state would give its consent to research in the economic zone except in certain specified circumstances. At this session, we managed to come up with what really amounts to a new regime for research conducted in the territorial sea, continental shelf and the economic zone. It uses language such as "coastal state shall in normal circumstances grant their consent to research". Now that whole phrase, of course, will be subject to a great deal of interpretation by coastal states and by researching states. The other part of that package, however, was that those provisions relating to a coastal state's right to refuse consent to conduct research and their right to cease or terminate any research that's going on are now removed from the dispute settlement articles.

QUESTION: What direction did that go? - tougher, or weaker?

Ms. Caskey: I'm sure a coastal state looking to have its rights protected would consider that this text, in fact, protects these rights.

QUESTION: To put it the other way around, they can now dispute and say no on any grounds they wish so long as they can argue that it comes under the heading of "not normal" circumstances. Right?

Ms. Caskey: In part, yes. The article further goes on and says the coastal state may, however, under their discretion withhold their consent to certain research. But this other provision which says that under normal circumstances consent shall be granted imposes a clear obligation on coastal states.

QUESTION: So that's an additional safeguard?

Ms. Caskey: That's an addition to the text. It leaves a very small loophole.

QUESTION: Will there be a further attempt to elaborate this "normal circumstance"?

Ms. Caskey: I doubt this will be a subject for further negotiations.

QUESTION: The state really ends up having full power then?

Mr. Beesley: It does tend to have ultimate power. But a provision that the state shall, for example, normally grant consent is not meaningless. It's not a blanket coastal state consent regime.

QUESTION: What about sharing of research information - is that written in yet?

Ms. Caskey: All of those provisions exist.

QUESTION: So, in other words, it really gets to be joint research.

Mr. Beesley: That's right.

Ms. Caskey: And, of course, throughout all of the text there are provisions which promote the conduct and facilitation of research which didn't exist before. There are certain obligations on the part of the coastal state to promote and facilitate research in areas under their jurisdiction.

QUESTION: The U.S. scientific community has been very loud and vocal on this. Do you think this will meet their needs or not?

Ms. Caskey: Concern isn't limited to the U.S. scientific community - I think it exists in every scientific community represented at the Conference. What this text does now is provide a balance between the rights and duties of coastal states to promote and facilitate research and their concerns on the other hand to receive fully the results of the research that has been conducted and to have some say in precisely what's going on.

QUESTION: Has the balance in fact swung away from the United States on this issue?

Mr. Beesley: I don't think so. Because of the difficulties encountered on this issue it was found necessary to go outside the Conference machinery again and have what was called an after-dinner group - a dozen countries who were the major protagonists. This group met night and day, and I mean

night and day, until 12:00 midnight, 1 a.m., etc., and it was a long arduous process but at the end of a three-week period, as a result of occasional creative tension, occasional drafting suggestions here and there, a series of proposals was presented, each one a development of an earlier one. Finally a proposal was presented which the USA accepted and which did meet their basic concerns. When one speaks about a small group meeting outside the normal conference process, it raises some very difficult issues. The countries not involved in that kind of negotiation tend to say "well, why weren't we there?" We've run into this so many times in the Conference, but again and again we've had to go outside the normal Conference procedures in order to get solutions.

QUESTION: How are the landlocked states taken care of in this - are they still sitting there as possible blocking potential?

Mr. Beesley: I hope they're not thinking in those terms, but they do take the position that they haven't yet had their interests adequately recognized in the composite text. Interestingly there were some informal negotiations even less formal or even more informal than previously had been the case, which resulted in a text which many people thought finally met the situation. Yet in the final analysis the landlocked and geographically disadvantaged group elected not to support the inclusion of that text in the composite text. This kind of thing happens but it doesn't mean they reject it. It could mean, for example that they feel that putting it in it would rob them of their bargaining powers at the next session.

QUESTION: Do you think that they are saving up so that they can become the centerpiece of a later session and use their numbers as a blocking third?

Mr. Beesley: I don't think so ...

QUESTION: This would seem to be tactically very intelligent.

Mr. Beesley: Well, it depends; if the Conference fails as a result of that kind of tactic, the big losers will be the landlocked and the next most important losers will be the geographically disadvantaged. They're the ones who can only achieve their objectives through a conference solution. And I think they recognize that and will adopt a more responsible position.

It's been alleged that if they'd utilized different tactics we'd have a solution now. And of course their bargaining position is weakened once many states have taken unilateral action on the 200 mile fishing zone. But I haven't heard anyone say that that's the end of it, that we're not going to negotiate with them. On the contrary we came close to a solution and speaking purely personally, I'm disappointed it didn't go into the composite text. But I understand full well the reasons and I think we have to respect the views of those states who feel that they want to maintain their options for the next session. I do hope it isn't threatening a vote, which could kill the Conference.

Mr. Beesley: If you put yourself in the position of the landlocked countries, understandably, you might wish to hold off agreeing to anything, even if it's acceptable, until you see the other parts of the package. There's always a possibility in this Conference of delegations or groups relating seemingly unrelated issues. If someone starts that kind of voting operation, it would be difficult to predict the result - there could be a kind of domino effect. For example, suppose the landlocked and GDS were able to kill off the continental shelf - well then there would be a strong thrust on the part of some of the states affected to ensure that the landlocked and GDS didn't get what they wanted on fishing, and this kind of thing would snowball to the point that we wouldn't have a negotiation - we'd just have an exercise in vindictiveness. What I think offsets that possibility is that although there is probably a blocking third on every issue, it's a different blocking third on each. And the result of that is a curious one, that we tend to need each other whether we want to or not, and it has to be a negotiated solution. I do think we're very close to a solution on that one but you won't find, for example, the so-called Irish Formula in this text giving a more precise definition to the continental margin, and without going into all the background the main reason is that the landlocked/GDS problem has still not been fully resolved. What you will find is quite important - new provisions on revenue-sharing which are very specific and do represent a large measure of negotiation - I'm talking about revenue-sharing with respect to the resources of the continental shelf beyond 200 miles and out to the outer edge of national jurisdiction. That is a very singular development - one of tremendous importance - because it's always been thought of as a part of the overall package and I suppose if anyone deserves credit on that one, it's Don Crosby who had the most to do with working out that compromise.

To sum it up the Canadian delegation is satisfied with the results of the Conference for the reasons we've explained. We haven't touched on everything - we haven't mentioned, for example, the maintenance of the Artic exception but it's there, it's unchanged, the maintenance of the special provisions on anadromous species - salmon - they're still there. No change on fisheries insofar as coastal state rights are concerned. No change in coastal state rights over the non-living resources within the economic zone or with respect to the continental shelf beyond. The only new development here is a much more specific provision, about sharing of revenues from the resources of the continental shelf beyond 200 miles. There are some new developments on straits which we think are an improvement over the earlier text. We're not particularly satisfied with the results on delimitation. We fear that we have produced an unworkable rule for delimiting maritime boundaries between states. A rule that permits one side to say that's the boundary line because it's equitable, while the other side can say no this is the boundary line because it's equitable and we find this a nonsense approach. We don't have a specific national interest because we have such a variety of geographical situations that sometimes we need the equidistance rule, sometimes we don't. But we don't like to see bad law. I think we've got, if anything, a retrogressive step with possibly five or at least four different kinds

of ways of delimiting marine boundaries. We're not happy with that, but it's not going to cause a national crisis.

For the reasons explained by Dr. Crosby, we think we have a much better approach to production controls in this text. I think it's to the credit of those delegations which supported that approach that they have been willing to seek alternative approaches. We're not entirely satisfied with the outcome - but at least we've got away from that simplistic skyrocket concept - that the seabed mining production could go wherever it wanted it to go but mainly upwards. For all these reasons, I think the Conference really is a much more successful one and this particular session has been a very real factor in taking us a long step closer to a final solution. Nodody can predict whether that will happen or not but at least what was needed has happened - a change in attitude, a change in psychology, a change in atmosphere. The negotiations on every issue have been friendly, constructive, sincere, they've been carried out in good faith.

There are some who may say, perhaps with good cause, that the results of the negotiations are not adequately reflected in the text. That's understandable given the system adopted - ultimately the power is delegated to individual chairmen. But we did find a real movement on the part of the Group of 77 on the one hand, and the major developed states on the other, on the issues relating to deep sea mining. Now that doesn't mean that it's in the bag and that all we have to do now is a little tinkering, a little drafting. There's still some further negotiating - tough negotiating - that must occur. But I think everyone's aware now that time is running out, that if we don't wrap this up in the next session, time will have run out. For example, important states will have begun to take unilateral action on the seabed. This brings me to the one important point I wanted to make to you.

I'm speaking purely personally here, but I have no doubt that the Canadian government would back me up on this, that everybody needs a Conference solution now. We've gone too far in redeveloping the law, in rejecting the pre-existing law not to carry the process through to fruition. No one can pretend now that the three mile territorial sea represents the norm - customary international law. Over 86 states now claim a territorial sea of twelve miles or beyond. That simple fact alone is the best reason for trying to achieve a Conference solution. Because if you couple the twelve mile territorial sea with the problems of the straits around the world, you've got a built-in conflict, unless you get agreed rules concerning passage through these international straits. You can extend coastal jurisdiction or coastal sovereignty by unilateral action but you can't protect freedom of navigation by unilateral action, except of the kind that most people consider unthinkable, namely the threat of use of force. There's more

at stake; we all tend to think that we have the economic zone pinned down, but many states have made it clear that if the Conference fails they would move to a 200 mile territorial sea. Well, if one thinks of the consequences of that for freedom of navigation and if one thinks of the intensive negotiations that have been devoted to resolving this problem of the status of the economic zone, one can see the implications just as a result of states claiming a 200 mile territorial sea. But I think there's a lot more at stake too. If we think of the delimitation provisions, the ones I just criticized, there too we will have certainly eroded the pre-existing rules but we won't have set up the kind of dispute settlement machinery which will be essential to prevent every state in the world from having another look at its boundaries and having another go at them; or, if they haven't already settled them, from making the most outrageous arguments. Because you can justify anything in the eyes of the beholder on the basis of equity.

It's when you get to the deep ocean seabed though that I think the real trouble occurs. I think it's a very gross error to assume that developed states will have a free hand to legislate as they see fit concerning the deep ocean seabed. I'm not now talking about the extent to which draft treaties or resolutions passed in the U.N. reflect the development of customary law. Leave that aside for the moment. I think that if states do act unilaterally, it's virtually certain that other states who've made their views known on this issue, would also act unilaterally in a different way. For every state that legislates to authorize its miners to go out into the deep ocean seabed, there would be states who would take the position that nothing has happened to alter the 1958 Geneva Continental Shelf Convention. And this Convention provides in specific terms that the outer limit of coastal jurisdiction over the continental shelf is the exploitability text. I suppose, at the least, you'd get a case in the international court. At worst, there would be conflicts. In some quarters, it's being argued that there should be military protection given to the deep sea mining just in case this kind of thing happened. My fear, I suppose, is that if the Conference is allowed to collapse at this stage, we will see the kinds of disputes which will be far worse, far more acute and much more complex and diverse in nature and variety than we've ever seen before breaking out all over the world. I really think that the difficulties we saw between some of our friends such as Iceland and the U.K., or Turkey and Greece would just pale into insignificance by comparison to what we could envisage if the Conference failed. Some states can protect their interests by unilateral action, but many cannot. Certainly any state that depends on freedom of navigation as a vital, strategic, global interest can't afford to have the Conference fail, and certainly can't afford to be the one that precipitates its failure by taking unilateral action. For all these reasons and for all that we're weary of this exercise, I think we just have to press on and finish it off. My hope is that we can do it in one more session.

QUESTION: Now you have what you should have had before you went into Caracas?

Mr. Beesley: Yes, precisely. It's taken that much longer. Of course, in terms of law-making, things take this long. I told someone before that I'd been involved in two seven-year law-making exercises, which were peripheral by comparison to this. Enough people have said it: this is a fundamental law-making exercise that may compare in importance to what occurred in San Francisco when the U.N. was founded. We have a chance to construct an orderly regime which can make a major contribution to peace and security while conserving the fisheries, oceans, preserving the marine environment, and laying down a system for proper husbanding and rational exploitation of both the living and non-living resources. The other alternative is chaos, should the Conference fail.

QUESTION: Is there a procedure in here concerning ratification under which after a certain number of countries have ratified the provisions will go into effect?

Mr. Beesley: The USA has often argued, and I think wisely, that there should be arrangements made for provisional entry into force. I'm still hopeful that they'll be successful in that matter.

QUESTION: I've heard some U.S. senators argue that, in fact, all this noise about U.S. legislation wouldn't really sink the Conference - it's just a lot of noise that's being made?

Mr. Beesley: I can give you my personal view based on what's been said to me by many, many delegates. Two influential delegates said they would walk out; one said he would recommend to his country that it no longer participate. Another said that he would give up the office he now holds in the Conference -- so I don't think it's going to be a minor event. It's not something that should be likened to unilateral action on fisheries. It would be regarded as an action diametrically opposed to one of the fundamental concepts emerging from this Conference; namely, the concept of the "common heritage of mankind".

QUESTION: Much of it is already accepted in international law, so it can't kill it.

Mr. Beesley: It'll never kill the 200 mile limit, but you might kill a 200 mile economic zone and create a 200 mile territorial sea instead.

QUESTION: Does this document say that there is a 12 mile territorial sea and a 200 mile economic zone?

Mr. Beesley: Yes, exactly.

QUESTION: Why do you think there was so much progress in this session?

Mr. Beesley: There were some new faces, some new people, some good people such as Ambassador Richardson, plus some new attitudes on the part of the people who aren't new. I think that there was a recognition, stemming in part from the negative developments at the last session, that we either really sat down and negotiated seriously or we could forget the whole thing. Governments are getting impatient, the public is getting impatient, the press is getting impatient, legislators are getting impatient. And what happened is that, while I don't like to use this term, the moderates took over and they no longer permitted this dialogue of the deaf which is so easy if one wants to maintain a national position and prevent movement. This shake-up began in Geneva when we had intersessional negotiations under Evensen's chairmanship. Now this is not the final settlement, but at least it's a far cry from the stalemate approaching paralysis in the first Committee at the last session.

QUESTION: What would the consequences be for Canada if the U.S. took unilateral legislation?

Mr. Beesley: I don't know. I don't know that there would be damaging consequences for Canada as distinct from our generalized interest in the desirability of a conference solution that would contribute to an orderly regime rather than chaos. We'd have to analyze that, I think.

QUESTION: Would it not destroy the Canadian wish to maintain land-based nickel production?

Mr. Beesley: It could, but needn't necessarily and we're not going to fold up and die anyhow, and it wouldn't necessarily have a direct impact. But if it were followed by unilateral action elsewhere and there was a concerted move towards rushing in to mine deep ocean resources without any regard to the impact on land-based producers then I'm sure it would have a negative effect on us. My own position on that issue hasn't been based on the problem of damage to Canada; only in the sense that as a member of the international community, we, like everyone, will be damaged if the Conference fails. I mean that some of the countries, I don't want to name any, who are seemingly closest to unilateral action are the ones who would lose the most as a result of it. Ironically, they are the countries that would attach overwhelming importance to the freedom of navigation. And they're the ones who'd kill it in one fell swoop. Don't forget a very important point when this Conference began, when we agreed that the mammoth undertaking of such a huge agenda, the basic trade-off being argued was "resources in return for freedom of navigation". Now think about that. Many of the developed states who argued that the basic trade-off would be resources for freedom of navigation have now led the rush to take unilateral action on fisheries. Some of the same states now want to lead the nickel rush in the deep ocean seabed. What are they going to have to offer to those who are able to interfere with freedom of navigation if they see fit to do so? The basis for the trade-off is gone. That's why I

think it's such a foolish thing to consider, especially when we all know that nobody is going to be out there until 1985 or 1987 anyway. There's a widespread feeling, which I can only describe as a false sense of urgency.

QUESTION: Well, these companies cannot just put their technology on the shelf while law of the sea continues its development. They must go ahead with the development of their technology.

Mr. Beesley: They're doing that anyhow.

QUESTION: Well, they're doing it but they're reaching a point where for their investment money, they're going to need some kind of settlement one way or another?

Mr. Beesley: Yes, of course. If you talk to the nickel miners, the people who know nickel, they'll tell you something quite different. You know we've been told 1976 was the year of decision, 1977 was the year, '78 was the year of decision. Companies were poised to leap out there. Now, everybody is admitting that it's really 1985 or 1987. We've said that consistently, not because we're any cleverer than anyone else but because, after all, we do have access to a lot of information on this matter. We are the major nickel-producer in the world so we tend to talk to people who produce nickel.

QUESTION: Have you heard more about manganese?

Mr. Beesley: Lately, I think there's more being said about it, but you find a lot of lobbies on this are made up of mining companies who've never seen a nickel nodule until they got involved in these consortia. They're not nickel-mining companies and that's why there's a lot of misinformation filtering around.

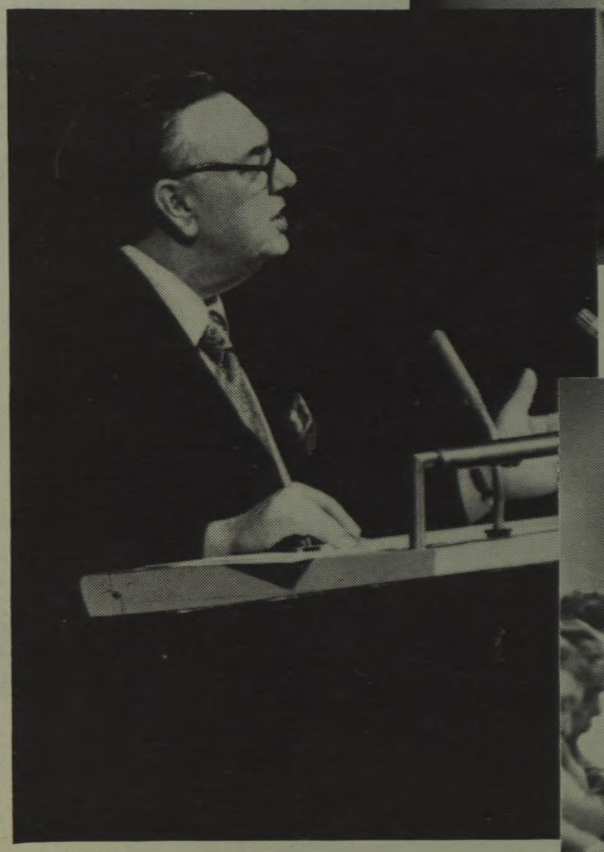
QUESTION: You'd think nickel was suddenly the most important thing in the world.

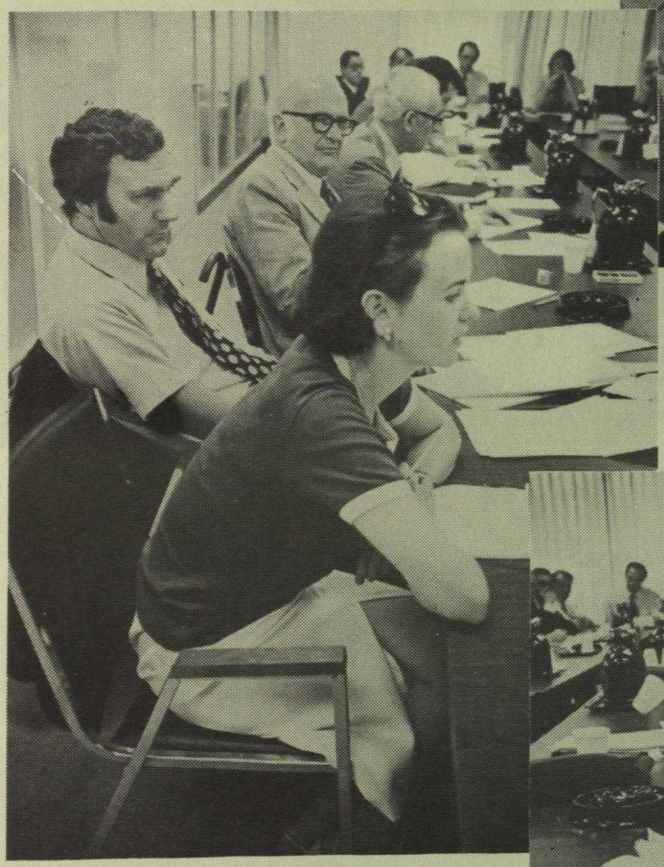
Mr. Beesley: That's right. Maybe it will be one day but ...

QUESTION: We're all going to be walking on nickel!

Mr. Beesley: Thank you very much.

The Negotiators





Canadian Delegation to the Sixth Session of the Law of the Sea Conference New York May 23-July 8 or 15, 1977

The Sixth Session of the Third U.N. Conference of the Law of the Sea was held in New York from May 23 to July 15, 1977. On the basis of the discussions which took place in formal and informal negotiating sessions of the three main committees and of the Plenary of the Conference, and in informal meetings outside the committee framework, the President of the Conference (H.S. Amerasinghe of Sri Lanka), together with the chairman of the three main committees (First Committee: Paul Bamela Engo, United Republic of Cameroon; Andrés Aguilar, Venezuela; Alexander Yankov, Bulgaria) and in association with the other officers of the Conference (Kenneth O. Rattray of Jamaica, the Rapporteur-General and J. Alan Beesley of Canada the Chairman of the Drafting Committee), produced a new Informal Composite Negotiating Test.

Failure of the Law of the Sea negotiations could result in a proliferation of conflicts over the use of the world's oceans, in particular resulting from differences of view as to the regime which governs deep seabed mining, the rights of passage through international straits falling within the territorial sea of states bordering such straits and the sovereign rights and jurisdictions of coastal states within a 200 mile zone.

CANADIAN DELEGATION TO
THE SIXTH SESSION OF
THE LAW OF THE SEA CONFERENCE
NEW YORK, MAY 23 – JULY 8 OR 15, 1977

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Alternate Heads of Delegation and Representatives	Hon. Ronald Basford, P.C., Q.C., M.P. Minister of Justice
	Hon. Roméo LeBlanc, C.P., député Ministre des Pêches et de l'Environnement
Deputy Head of Delegation and Representative	Mr. J. Alan Beesley, Q.C. Assistant Under Secretary of State for External Affairs and Legal Adviser
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Executive Director
Canadian Petroleum Association

THIRD U.N. LAW OF THE SEA CONFERENCE : SIXTH SESSION

A CANADIAN ASSESSMENT

Introduction

The Sixth Session of the Third U.N. Conference of the Law of the Sea was held in New York from May 23 to July 15, 1977. On the basis of the discussions which took place in formal and informal negotiating sessions of the three main committees and of the Plenary of the Conference, and in informal meetings outside the committee framework, the President of the Conference (H.S. Amerasinghe of Sri Lanka), together with the chairmen of the three main committees (First Committee: Paul Bamela Engo, United Republic of Cameroon; Andrés Aguilar, Venezuela; Alexander Yankov, Bulgaria) and in association with the other officers of the Conference (Kenneth O. Rattray of Jamaica, the Rapporteur-General and J. Alan Beesley of Canada the Chairman of the Drafting Committee), produced a new Informal Composite Negotiating Text (ICNT)./ The ICNT is a further step in the treaty-making process at the Conference, consolidating in one single working document the four separate parts of the old Revised Single Negotiating Text (RSNT) which had been produced at the end of the Fourth Session in May 1976 and incorporating many changes in an attempt to move towards consensus on a range of controversial issues.

While it is difficult to assess in definitive terms the outcome of the session in individual areas without the benefit of a more complete analysis of the ICNT, on the whole, the Conference would seem to have taken a step forward in the law-making process begun in Caracas in 1974. The Sixth Session, in fact, made more progress than the last two sessions combined and while many difficult and contentious issues remain unresolved, the session examined in depth virtually all outstanding issues and, in certain important areas, the Conference moved closer to consensus than heretofor. Thus, what has emerged is a list of issues which, taken together, could help point the way at the next session to a package of compromises leading to an overall consensus on a draft treaty.

Committee I

The primary focus of attention at the Sixth Session was the international system for deep seabed mining under discussion in Committee I. The first three weeks of the Conference were devoted exclusively to this subject in an attempt to break the deadlock that resulted at the Fifth Session between industrialized and developing countries over access by private corporations to the seabed area. There was broad agreement at the outset that

the committee should try to capitalize on the fruitful informal intersessional discussions held under the chairmanship of Jens Evensen of Norway in Geneva in February/March 1977. Mr. Evensen was asked by the chairman of Committee I to chair informal working group meetings of the Committee with a view to drafting new compromise formulations on the basis of intersessional discussions. This process proved largely productive and many of the new provisions in the ICNT, based on Evensen's drafts, represent a forward step from the analogous RSNT provisions.

As a result of the points raised in the informal Committee I working group, by concerned land-based mineral producers, including Canada, the ICNT now contains the framework (Article 150) for a workable formulation for achieving a relationship between deep seabed mining and total world production (in contrast to the old RSNT formula) which could go some way in meeting Canadian objectives to provide protection against market disruption of land-based producers of minerals due to deep seabed production of the same minerals, principally the production of nickel. The formula would allow an economic incentive of up to 9 deep seabed mine sites upon the outset of commercial production and it would further allow deep seabed production to compete for 60% of the cumulative growth of world nickel demand.

On the basic question of parallel access to the deep seabed (an issue over which the Conference was deadlocked at the Fifth Session), the ICNT article, while not free from major problems and some ambiguity, theoretically appears to ensure that private corporations or state entities will obtain contracts from the International Seabed Authority to mine in the international seabed area. The text of Article 151, when read in combination with the conditions for granting of contracts by the Authority in Annex II of the ICNT, could be interpreted as restricting access to the seabed area by imposing burdens on applicants respecting transfer of technology to the Enterprise; it does indicate however that conditions for such contracts must be under "fair and reasonable terms and conditions". Article 151 and Annex II diverge from the compromise formulations suggested by Mr. Evensen during the session and might prove difficult for most industrialized countries, whose corporations have invested considerable money in deep seabed research and development, to accept.

Useful time was devoted to discussing the legal status and financing of the Enterprise, a matter which the Committee had not yet reviewed in detail. While the ICNT text on both points will require considerable improvement, particularly with respect to the various approaches to financing the operations of the Enterprise, the text has helped at least to focus attention on the key problem areas. The objective is to develop a system for financing the Enterprise in order to allow it the means of becoming a going concern roughly in phase with the corresponding mining activities of private corporations or state owned entities.

For the first time the Conference examined in some detail the financial obligations to be borne by deep seabed mining contractors. The specific types of financial obligations cited in the ICNT are an application fee, annual fixed charge for mining, royalties and sharing of net proceeds. Whether or not these obligations turn out to be overly onerous will depend to a large extent on the precise figures eventually incorporated in the draft text.

The discussions also dealt with some of the very complex issues respecting institutional matters, particularly the structure, powers and functions of the Assembly, the Council and the organs of the Council (the Economic Planning Commission, the Technical Commission and the Rules and Regulations Commission). With respect to the important question of the composition of the Council — which is the "executive organ" of the Authority — the ICNT incorporates membership eligibility criteria aimed at providing a balanced, representative membership. Canada is not satisfied that the categories as set out in new Article 159 are entirely acceptable: as the world's largest producer of nickel, it is important to Canada to have fairly certain assurances that it will have a seat on the Council.

Finally, the Sixth Session considered the question of privileges and immunities to be accorded to the Authority and the Enterprise under the treaty. In some ways, the ICNT is an advance over the RSNT provisions but in Canada's view there is much work needed to ensure that the Enterprise is not accorded undue advantages over commercial entities, by being given a range of privileges and immunities usually granted to international organizations and not appropriate for profit-making concerns.

Committee II

1. Definition of Continental Margin and Payments or Contributions

At the Sixth Session, the Group of Land-Locked and Geographically Disadvantaged States (LL/GDS) reiterated their opposition to the definition of the continental shelf contained in Article 64 of the RSNT which provided that "the continental shelf of a coastal state comprises the seabed and subsoil of the submarine areas that extend beyond its territorial sea throughout the natural prolongation of its land territory to the outer edge of the continental margin, or to a distance 200 nautical miles from the baselines,"whichever is greater". The LL/GD states continued to insist that the rights of the coastal state over the resources of the continental shelf should be limited to a maximum of 200 miles from the baselines. Some of these states proposed cutting off coastal state sovereignty by reference to a depth criteria as an alternative approach.

The group of wide margin states (Canada, Australia, New Zealand, Norway, U.K., Ireland, India, Argentina, USA) on the other hand, remained united in insisting, consistent with the established rule in the 1958 Geneva Convention on the Continental Shelf and the "natural prolongation" principle established in the 1969 North Sea Continental Shelf Case, that states have the right to exploit the shelf out to the edge of the margin even where it extends beyond 200 miles. As well, the wide margin states supported a draft provision proposed by Ireland which defined the continental margin in precise fashion by reference to the thickness of sedimentary rock. The wide margin states or "margineers" as they are known, reiterated their willingness to agree to a formula for the contribution of payments to the international community derived from revenues earned from resource exploitation on the continental shelf beyond 200 miles, provided that the Irish formula for defining the margin was accepted by the Conference. As a result of the continuing opposition of the LL/GD group of states to coastal state sovereign rights to the edge of the margin, the ICNT does not contain the Irish formula in the definition of the continental shelf in Article 76. However, the position of the margineers is protected in Article 76 of the ICNT (old RSNT Article 64) which recognizes the continental shelf as extending to the outer edge of the margin. Furthermore, a revised revenue sharing formula along lines which would be largely acceptable to the wide margin states — from 1% up to a maximum of 5% of the well-head value — has been included in Article 82 of the ICNT. Canadian acceptance of a scheme for payments or contributions is conditional on an acceptable definition of the outer edge of the margin and the retention of coastal state sovereignty over shelf resources.

2. Legal Status of the Exclusive Economic Zone

One of the most difficult issues at the Conference is the problem of defining the legal status of the exclusive economic zone. On the one hand, the major maritime states wanted the zone legally defined as high seas in order to prevent erosion of traditional high seas freedoms of navigation and overflight. On the other hand, many coastal states considered that this zone was a zone of national jurisdiction and ipso facto distinguishable in law from the high seas. Canada together with several other members of the coastal state group took the position at the Fourth and Fifth Sessions that the solution to this impasse was to consider the zone sui generis, neither high seas nor territorial sea but partaking of some of the attributes of both; to a large extent, the new provisions in Part V of the ICNT reflect this conceptual approach. They result from intensive informal negotiations (which also concerned marine scientific research in the economic zone and exceptions from the settlement of disputes procedures, see below) and their effect is to avoid the problem of a specific definition in law of the exclusive economic zone and instead to provide a satisfactory balance between the rights of coastal states within the zone and the

rights of other states therein in respect of freedom of navigation and overflight, and the laying of submarine cables and pipelines and "other internationally lawful uses of the sea related to these freedoms". While a number of so-called territorialist states (those who support a 200-mile territorial sea concept or, at least, the definition of the 200-mile exclusive economic zone as a zone of national jurisdiction) may still oppose the ICNT formulations, it is hoped that the "balancing" approach reflected in the draft text can ultimately command a broad consensus, particularly since it can probably be accepted by the major maritime states, provided other outstanding issues are resolved. If such a consensus can be realized at the Seventh Session, the result will have been an important achievement in resolving what was one of the most difficult issues facing the Conference.

3. Fisheries

The economic zone regime now firmly entrenched in the negotiating text reflects the Canadian position on coastal state management and control of fisheries within the 200-mile limit. The provisions in the ICNT make it clear that the coastal state has sovereign rights over these resources, can establish total allowable catches and all other management measures required, provide for its own fishermen in accordance with their harvesting capacity, and distribute any surplus that remain to other countries. The clear consensus which has been reached on this subject at the LOS Conference has provided the basis for action by an increasing number of states, including Canada, which have found it necessary to extend their fisheries jurisdiction to 200 miles in advance of the conclusion of the Conference.

During the Sixth Session, fisheries-related discussions focussed on three major issues: (a) the problem of access to living resources by the land-locked and geographically disadvantaged states; (b) highly migratory species; and (c) anadromous species. Although the ICNT articles on these subjects (64, 66, 69 and 70) have been incorporated unchanged from the RSNT provisions, all of these issues will likely continue under consideration at the Seventh Session of the Conference.

One of the most difficult outstanding problems at the Conference concerns the demands by the LL/GDS Group to have preferential rights of access to the living resources of the exclusive economic zones of coastal states. Originally the LL/GDS Group had demanded access to more than simply the surplus in the EEZ. Coastal states, however, insisted that access to the EEZ by LL/GDS should be confined to the surplus in similar fashion to access by third states generally. Progress was made at the session in finding a means to resolve the problem, with the introduction, at the very end, of a new draft text which would protect all the vital interests of coastal states while providing considerable advantages for the LL/GDS Group and

although the proposed text has not been included in the ICNT, it could form the basis for discussions at the next session on this subject.

Progress was also made on the question of highly migratory species, through the introduction and consideration of a new formula which aims at promoting regional and international cooperation and at balancing the rights and interests of the coastal states with those of other states who fish for highly migatory species, to ensure both conservation and optimum utilization of the stocks.

The Article on anadromous species (Article 66 of the ICNT) remains unchanged from the RSNT provision. This Article is of importance to Canada because it establishes that the state of origin has the primary interest in and responsibility for stocks originating in its rivers and provides a basic prohibition on fishing for salmon on the high seas beyond 200 mile fishing limits. Canada is opposed to any alteration to Article 66 which could upset the present delicate balance in the text and jeopardize agreement on the entire anadromous stocks provision.

4. Lateral Delimitation of the Continental Shelf and Exclusive Economic Zone

Discussion focussed on the differing approaches to amending Articles 62 and 71 of the RSNT (delimitation of the exclusive economic zone and of the continental shelf, respectively, between opposite or adjacent states). Libya introduced a proposed revision reinforcing the RSNT text which provided for delimitation on the basis of equitable principles. Canada is concerned that by ascribing paramount importance to equitable principles a large element of uncertainty would be introduced into the law thus further complicating the resolution of marine boundary disputes. A Spanish proposal, co-sponsored by Canada and 20 other states, would stipulate the median line as the guiding principle for marine boundary delimitation along the lines of the present provision of the 1958 Continental Shelf Convention.

Despite intensive discussions, the Conference unfortunately remains polarized on this issue between the two opposing camps. As a consequence, the RSNT provisions have been incorporated unchanged in the ICNT. Canada is not in agreement with these provisions which by ascribing overriding importance to equitable principles and subordinating the median line concept constitutes an unfortunate departure from existing international law. Debate will continue at the Seventh Session and Canada together with like minded states will further efforts to obtain changes in the text aimed at confirming the median or equidistance principle as the paramount rule governing delimitation of continental shelves and establishing the same rule in respect of economic zones between adjacent or opposite states.

Committee III

1. Preservation of the Marine Environment

Discussion of outstanding marine pollution issues at the Sixth Session proved to be largely a repetition of the debate at the previous session, although positions of different countries and groups of countries became more clearly defined. Two issues of major concern to Canada are the standard setting powers of coastal states in the territorial sea and coastal state enforcement powers in the 200-mile economic zone. On both these issues, some progress was made, although the results as reflected in the ICNT were not satisfactory from the Canadian point of view. With respect to the legislative competence of the coastal state in the territorial sea, Canadian efforts to obtain deletion of Article 20(2) of Part II of the RSNT, which restricted the powers of the coastal state to pass laws affecting design, construction, manning or equipment of foreign vessels, were unsuccessful. These restrictions, which represent a significant erosion of sovereign rights which coastal states have traditionally exercised within their territorial sea under existing international law, were thus carried over into Article 21(2) of the ICNT. As a result of extensive consultations between sessions with other governments and close collaboration with like minded governments during the course of the session, Canada was able to obtain recognition among a broad cross-section of delegations of the unacceptably restrictive language in Article 20(2) of the RSNT. Article 21(2) of the ICNT thus incorporates less restrictive language. While the prohibition of the application of national design, manning, construction and equipment standards in the 12-mile territorial sea for foreign vessels is retained, coastal states would be granted the right to give effect to generally accepted international rules and the reference to prohibition of national laws relating to all other "matters" is deleted.

The amended text, while representing some improvement on the previous language, still creates serious difficulties for Canada. Although preferring the total deletion of Article 21(2), the Canadian delegation had also worked actively to find suitable alternative language which would represent a reasonable accommodation between coastal and flag state interests. In Canada's view the proposal put forward by Morocco and Kenya (which in addition to the deletion of "matters" would reserve to a coastal state at least the residual right to apply national design, construction, manning and equipment rules to foreign vessels in the territorial sea in the absence of international rules), while falling short of meeting its concerns, might offer a better basis for compromise than the text now incorporated in the ICNT. This will be a matter for further consideration in the intersessional period.

With respect to Part III of the RSNT, Canadian efforts to strengthen coastal state enforcement powers in the exclusive economic zone to the extent of allowing inspection of foreign vessels in cases of threatened pollution damage did not meet with success due to the strong opposition of the maritime powers. Conversely, determined efforts by a number of maritime powers to further limit coastal state enforcement powers in the exclusive economic zone were equally unsuccessful. However, the ICNT includes provisions (principally Article 212) which could have the effect of weakening both coastal state and flag state obligations alike in implementing international pollution standards in domestic law by allowing them the right only to pass laws which give effect to "generally accepted" international rules and standards in the exclusive economic zone.

The universal port state concept has been retained despite concerted efforts by some maritime powers to limit its scope. However an amendment agreed by the informal negotiating group of Committee III at the Fifth Session which would have entitled a port state to undertake an investigation of a vessel voluntarily within its internal waters, as well as within port or at an offshore terminal, which had committed a discharge violation on the high seas or in the internal waters, territorial sea or economic zone of another state, was not included in the ICNT. This matter will have to be considered at the Seventh Session.

Another important factor to emerge from the Sixth Session of importance to Canada is that the RSNT provision recognizing the right of the coastal state to apply special environmental standards in ice-covered waters, the "Ice-covered areas" article, has been incorporated unchanged in the ICNT, (Article 235) further strengthening international acceptance of Canada's Arctic Waters Pollution Prevention Act of 1970.

In summary, while there are some important inadequacies in specific articles, the basic concept of a comprehensive umbrella marine pollution control treaty based upon the zonal concept and a functional sharing of jurisdiction among coastal, flag and port states has been preserved in the ICNT. The effect of all these provisions, hopefully with further adjustments as noted, would be a major and radical change from the previous laissez-faire regime based upon the concept of unrestricted freedom of the high seas.

2. Marine Scientific Research (MSR)

One of the most contentious issues facing the session was the extent to which a coastal state should be given the power to withhold its consent to marine scientific research conducted in its exclusive economic zone or on its continental shelf. (There was no disagreement over the right of the coastal state to regulate marine scientific research within its territorial sea.)

As a result of intensive, informal negotiations, a draft provision (combined as a "package" with provisions on issues concerning status of the economic zone and settlement of disputes) was agreed to among the states principally concerned and incorporated in Article 247 of the ICNT which recognizes the principle of coastal state consent for MSR in the exclusive economic zone or on the continental shelf coupled with the important proviso that coastal states shall "in normal circumstances" grant their consent for MSR projects by other states. However, a coastal state may withhold its consent where such research directly affects the exercise of its sovereign rights over living and non-living resources in the exclusive economic zone or on its continental shelf (as well as under certain other circumstances as spelled out in the Article). As was the case in the RSNT, the ICNT also includes an implied consent provision, allowing research projects to go ahead after six months from the date on which notification by the researching state has been given to the coastal state unless within that period the coastal state has refused consent.

Another important provision in the ICNT resulting from negotiations at the Sixth Session would exempt from the compulsory dispute settlement proceedings cases involving the exercise of discretion by the coastal state in granting or withholding its consent to conduct MSR or in exercising its right to require a cessation of research in progress. As the ICNT is now drafted, it may not entirely satisfy the concerns of either major researching states or some coastal states. However, it does appear that a broad cross-section of delegations are prepared to agree to the new text, at least as a basis for further discussion and as a "package" linked to the status of the economic zone. As the ICNT provisions will have the practical effect of operating as a full consent regime for all research while simultaneously incorporating provisions for its promotion and facilitation, Canada is satisfied that they balance the rights of those states wishing to conduct research and the legitimate rights and interests of coastal states in controlling or regulating certain types of MSR bearing on the utilization of resources over which they exercise sovereign rights.

Plenary Discussions on the Settlement of Disputes

For the first time, the Conference had before it a draft text on the settlement of disputes (Part IV of the RSNT) having the same status as the other parts of the RSNT. Discussions of this subject were conducted in Plenary under the chairmanship of the President of the Conference and were directed to four basic ends: (1) improving the style and drafting of the RSNT; (2) consolidating the disputes settlement provisions of Part I of the RSNT on exploitation of the deep seabed with the comprehensive law of the sea dispute settlement system which had been

included in Part IV of the RSNT; (3) resolving certain substantive problems, in particular the question of certain types of disputes exempted from the dispute settlement process in Articles 17 and 18 of the RSNT; and (4) developing and confirming support for the general principle of compulsory dispute settlement in a future Law of the Sea Treaty.

Of major importance at the session was the general consensus accepting the creation of a separate Seabed Chamber of the proposed Law of the Sea Tribunal. The Chamber would have jurisdiction over disputes arising out of the application of the provisions of the ICNT respecting the exploitation of the deep seabed. The effect will be to amalgamate in one dispute settlement system all disputes relating to the application of the comprehensive Law of the Sea Treaty.

A major contentious issue related to the application of the dispute settlement procedures to the exercise by the coastal state of its sovereign rights over the living resources in the exclusive economic zone. Article 17 of Part IV of the RSNT provided for dispute settlement where the coastal state had "manifestly failed" to comply with specified conditions in the Convention relating to the exercise of its rights with respect to living resources. This provision was not acceptable to the majority of the coastal state group who argued for its deletion on the grounds that it would represent a derogation from the general concept of coastal state sovereign rights over the living resources within the exclusive economic zone. In response to this view ICNT Article 296 now provides that no dispute relating to the interpretation or application of the Convention with regard to living resources shall be brought before the Tribunal unless certain specific obligations with respect to the conservation and utilization of living resources have been breached by the coastal state and subject to the general qualification that in no case shall the exercise of discretion with respect to determining the total allowable catch or the extent of surplus in the exclusive economic zone be called into question. Nor shall the court or tribunal substitute its discretion for that of the coastal state in regard to living resources. An additional proviso stipulates that in no case shall the sovereign rights of a coastal state be called into question. The foregoing would appear to provide a high degree of protection to the coastal state; further study will be given to these provisions to ensure that coastal state jurisdiction with respect to fisheries will be protected and that coastal state discretion within the 200-mile zone will not be called into question.

Apart from the foregoing, discussion in Plenary indicated that the broad outlines of Part IV of the RSNT were generally acceptable to most states. There appeared to be a broad degree of consensus for the alternative procedures which have been included in Article 287 of the ICNT, giving states parties the option of choosing between the Law of the Sea Tribunal, the

International Court of Justice, an arbitral tribunal in accordance with Annex VI or a special arbitral tribunal in accordance with Annex VII, with the designation of the general arbitral tribunal as the residual choice of procedure in the absence of an alternative choice. Some difficulties remain with respect to the so-called "optional exceptions", particularly the provision in the RSNT which said that states could refuse to accept compulsory jurisdiction with respect to the question of disputes concerning the delimitation of sea boundaries, although any state availing itself of this exception would be required to accept a regional or other third-party procedure entailing a binding decision. The ICNT provision (Article 297) attempts to overcome the difficulty in this regard by providing that a state may declare that it does not accept settlement of disputes as provided for in the Convention in respect of boundary delimitation disputes, but prefers a regional or other third-party procedure, provided that such procedures shall exclude the determination of any claim to sovereignty or other rights with respect to continental or insular land territory.

Canada viewed the incorporation of binding third-party settlement procedures as an integral part of a new LOS Treaty of fundamental importance in ensuring a balanced and effective implementation of a new legal order of the oceans. Despite certain shortcomings the adjudication/arbitration procedures embodied in the ICNT are generally satisfactory from the Canadian standpoint and hopefully will obtain consensus support at the Seventh Session.

Prospects for the Conference

While substantial progress has been made in resolving most of the key issues at the Conference, intensive negotiations are still required to resolve remaining areas of difficulty, including in particular the proposed arrangements for international deep seabed mining. At least one more session, and possibly two, will be necessary to overcome these difficulties. The assessment of the Canadian delegation is that in spite of the remaining difficulties, consensus on the full range of seabed mining issues is very much closer as a result of the progress achieved at the Sixth Session, but if the momentum of the negotiations is to be sustained, intersessional meetings are essential regarding further refinement of the system of exploitation of deep seabed resources and clarification of certain parts of the ICNT. Given the progress achieved to date and the positive impact that the negotiations have already had on the development of international sea law, particularly with respect to coastal state sovereign rights over living resources, it seems likely that participating states will be willing to persevere towards a successful conclusion of the Conference even if it takes two more sessions to do so.

Failure to see the Conference through to a successful conclusion after it has accomplished so much would be a severe setback to international law and the U.N. Without agreement on a new convention, the functional approach to coastal state jurisdiction as now reflected in the ICNT would in all likelihood give way to the more absolutist approach of the territorialists, i.e. full sovereignty within a 200 mile zone. Failure of the Conference could result in a proliferation of conflicts over the use of the world's oceans, in particular resulting from differences of view as to the regime which governs deep seabed mining, the rights of passage through international straits falling within the territorial sea of states bordering such straits and the sovereign rights and jurisdictions of coastal states within a 200 mile zone.

Seventh Session

The next and Seventh Session of the Law of the Sea Conference is scheduled to be held beginning March 28 for seven to eight weeks in Geneva to continue the negotiating process and, hopefully, to move closer to an agreement on the text of a draft treaty. Canada is firmly on record as being committed to achieving a successful outcome to UNCLOS and the establishment of a new convention governing all aspects of ocean law. That commitment is unchanged and the Canadian delegation will continue to play its full part in the negotiations, both intersessionally and at the next session in Geneva.

External Affairs
Legal Operations

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BRIEF FOR THOMPSON INQUIRY ON WEST COAST OIL PORTS

Prepared by

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WEST COAST TANKERS: INTERNATIONAL LEGAL ASPECTS

The purpose of this presentation is to outline from the Canadian perspective recent developments with respect to international environmental law and their impact on Canadian policy and legislation. The matters reviewed encompass multilateral negotiations at the Third United Nations Conference on the Law of the Sea and in the Intergovernmental Maritime Consultative Organization and bilateral negotiations between Canada and the United States.

MARINE POLLUTION: LAW OF THE SEA TRENDS

2. The existing law of the sea rests on two traditional legal concepts, that of the high seas where freedom of the seas prevails, and that of the territorial sea which is under the sovereignty of the coastal state subject to the right of innocent passage by foreign vessels. On the high seas, traditionally, ships have been subject exclusively to the jurisdiction of the flag state. These basic principles have until recent years provided the basis for coastal state and flag state powers to set and enforce rules and regulations with respect to the preservation of the marine environment. It has become evident, however, that this system of law based on a firm doctrinal attachment to the principle of freedom of the high seas and restricted coastal state rights is no longer adequate, in light

of the problems created by modern technology, to ensure the preservation of the marine environment.

3. Canada, from the outset of the Law of the Sea Conference, has taken the initiative in pressing for the incorporation in a law of the sea convention of rules, global in scope, which would lay down basic rights and duties of all states for the protection of the marine environment. Such rules would include an obligation, heretofore uncodified, of the basic obligation of all states to protect and preserve the marine environment, the zonal approach to the prevention and control of vessel-source pollution and, most importantly, a functional sharing of jurisdiction among flag, coastal and port states in place of the traditional rule of exclusive flag state sovereignty beyond the territorial sea. The major maritime powers have strongly resisted any expanded role for coastal states in the enforcement of anti-pollution regulations on the grounds that any limitation of flag state jurisdiction over vessels of their registry in areas beyond the territorial seas of other states will lead to an erosion of high seas navigational rights. Conversely, however, coastal states, including Canada, have pointed out the inadequacy of the existing international legal rules in light of the clear evidence provided by the proliferation of oil spill incidents in recent years that flag state responsibilities have not kept pace with the doctrine of absolute flag state jurisdiction. Since coastal states invariably suffered the consequences of major oil spills and bore the main burden of clean-up operations, we considered it logical that they should have at least an equal part to play in

ensuring adequate standards and a share in the enforcement of these standards. We therefore submitted comprehensive proposals providing for broad coastal state powers to enforce international environmental rules within a 200 mile economic zone and to apply national standards to foreign vessels in the territorial sea and in areas beyond where unique ecological circumstances, such as in the Canadian Arctic, so warranted.

4. Considerable progress has been achieved on this question at the Conference. Negotiations at the most recent session confirmed growing support among states in favour of a global approach to the protection of the marine environment, including a general obligation to prevent, reduce and control marine pollution from any source, and an enhanced role for coastal and port states, concurrently with flag states, in enforcing anti-pollution rules and standards. These principles are clearly embodied in the Informal Composite Negotiating Text which was issued by the Conference President at the conclusion of the sixth session in July. The Composite Text, which represents a major step forward in the negotiating process at the Conference, will provide the basis for decisions leading eventually to the adoption of a draft convention, provided parallel progress is made in resolving other outstanding issues, in particular the international system of deep seabed mining, the precise definition of the outer edge of the continental margin and the rights of landlocked and geographically disadvantaged states.

5. The Composite Text provides that three categories of states will exercise jurisdiction in respect of vessel-source pollution; flag states, coastal states and port states. The draft text contains the following salient provisions:

I. Flag States

States are obligated to establish laws and regulations for the prevention, reduction and control of pollution of the marine environment applicable to vessels flying their flag; such laws should be at least as effective as generally accepted international rules and standards. The draft text then goes on to specify the enforcement measures which a flag state is obligated to apply to vessels of its registry; such measures to include obligations to:

(a) prevent any flag vessel not in compliance with international rules from sailing;

(b) ensure that vessels of their registry carry on board certificates of seaworthiness as required by international rules;

(c) conduct periodic inspection of their vessels;

(d) conduct an immediate investigation of any violation of international regulations by its vessels and to bring proceedings without delay in respect of alleged violations of pollution prevention rules irrespective of where the violation by its vessel has occurred.

Flag states will have the right within a prescribed time frame to preempt proceedings to impose penalties

begun in a coastal state in respect of pollution proceedings against a vessel of its registry except where the proceedings relate to a case of major damage to the coastal state or the flag state in question has repeatedly disregarded its obligations to enforce effectively applicable international rules. This right of preemption would be without prejudice to the right to institute civil proceedings in respect of any claim for loss or damage resulting from pollution of the marine environment.

II. Coastal States

Coastal states may establish and enforce national laws regulating ship traffic in the territorial sea including the right of physical inspection and, where necessary, arrest of a polluting vessel. However, with respect to design, construction, manning and equipment of foreign vessels, coastal states would be limited to enforcing only international rules. While unhappy with this constraint on the exercise of coastal state sovereignty, Canada was at least successful in obtaining the deletion of an even more restrictively worded text. In the economic zone, a coastal state will have the power to request information from a vessel where there are clear grounds for believing that it has violated applicable international rules or national laws

established in conformity with such rules. When such violation has actually resulted in substantial discharge and significant pollution, the coastal state may undertake inspection of the vessel in the 200 mile zone if that vessel has refused to give information or if the information is manifestly at variance with the factual situation. Finally, where there are clear grounds for believing that a vessel has committed a flagrant or gross violation of applicable international rules resulting in discharge causing major pollution damage or threat of such damage to the coastline or related interests of the coastal state, or to any resources of its territorial sea or exclusive economic zone, that state may cause proceedings to be taken against the vessel. Canada had sought unsuccessfully to strengthen the enforcement rules, particularly with respect to the investigatory powers of a coastal state. Corresponding efforts by flag states to weaken the text were equally unsuccessful.

The Composite Text incorporates a provision which recognizes the right of a coastal state to establish special national laws to preserve and protect the marine environment in ice-covered areas out to 200 miles. This fulfills a key Canadian objective at the Conference and it comes as considerable satisfaction that legislation

adopted in 1970 to protect our Arctic environment (Arctic Waters Pollution Prevention Act, Chap.2 (1st Supp.) RSC) which attracted so much criticism from major maritime powers has now obtained broad international acceptance.

III. Port States

The new concept of universal port state jurisdiction is incorporated in the text. This will mean that a port state may bring proceedings against a vessel voluntarily in its port in respect of a discharge violation occurring anywhere on the high seas. The port state will also be empowered to bring proceedings against a foreign vessel in respect of discharge violations in the internal waters, territorial sea or economic zone of another state upon the request of that state or the flag state.

6. The marine pollution provisions in the Composite Text, which are almost certain to be among the central elements of any draft law of the sea convention, constitute a major step forward in the development of the legal order of the oceans. These provisions have not been finally agreed and do not have legal force. And states, for the most part, will be inhibited from extending their pollution jurisdiction until the Conference has at least taken more definitive decisions on the Composite Text. But it is difficult to conceive how the traditional rule of

absolute flag state jurisdiction can prevail much longer in light of the developments at the Law of the Sea Conference, particularly the growing recognition of the right of a coastal state to play a central and expanded role in the protection of the marine environment.

7. In light of the objectives which Canada sought to achieve at the outset of the LOS negotiations, the Composite Text provisions on vessel-source pollution contain many positive features. However, the provisions dealing specifically with coastal state regulatory powers in the territorial sea and with enforcement rights out to 200 miles will have to be examined carefully in the context of Canadian requirements and existing legislation.

8. The U.N. Conference on the Law of the Sea reconvenes for a seventh session at Geneva in March, 1978. It is hoped that on the basis of the Composite Text substantial progress will be made towards achieving a consensus for the adoption of a draft convention.

MARINE POLLUTION: INTERNATIONAL AND CANADIAN CONTROLS

9. Under existing international law, different rules apply as regards coastal state powers to regulate foreign shipping within internal waters, within the 12 mile territorial sea and within the proposed new 200 mile economic zone under discussion at the Law of the Sea Conference.

10. Within internal waters, such as the Douglas Channel leading into Kitimat, the Strait of Juan de Fuca and the Strait of Georgia, the coastal state is recognized as having unrestricted sovereign rights to enact and enforce controls over shipping within such waters. Within the 12 mile territorial sea, the coastal state is entitled to exercise sovereignty subject to certain rules of international law, including a right of ships of all states to innocent passage. Under the 1958 Geneva Convention on the Territorial Sea and the Contiguous Zone, innocent passage is defined as "innocent so long as it is not prejudicial to the peace, good order or security of the coastal state" (Article 14(4)). Canada asserts the view, not necessarily shared by the major maritime powers, that the doctrine of innocent passage would allow the coastal state to suspend the passage of a foreign vessel which might result in pollution of its environment. Within the proposed 200 mile economic zone (beyond the 12 mile territorial sea), there is as yet no international agreement on the nature and extent of coastal state powers for purposes of pollution control. The Law of the Sea Conference has under discussion the extent to which a coastal state may apply and enforce internationally agreed anti-pollution standards in a 200 mile economic zone. The trend of the negotiations at the Conference on this matter is described in the previous section, including the concerns of maritime powers on the one hand and coastal states, including Canada, on the other.

11. At the present time, the main body of Canadian anti-pollution laws and regulations are to be found under Part XX of the

Canada Shipping Act. Under Part XX, regulations have been enacted dealing with such matters as: the discharge of pollutants and the amount of pollutants permitted on board; the use of navigational aids; the methods for loading and unloading pollutants; the methods of retention of oil and other wastes; the number of personnel and the prevailing procedures and practices to be followed by persons on board in order to ensure safe navigation. Civil liability is imposed on the owner of the vessel and the Act creates a Marine Pollution Claims Fund to reimburse those persons suffering loss or damage as a result of pollution. In addition, a pollution prevention officer is empowered by the Canada Shipping Act to require any ship to provide information concerning the condition of the ship and may go on board such ship to determine whether it complies with Canadian pollution laws. He may also order the ship to leave or divert it to an alternative destination if he is satisfied such action is justified to prevent discharge of pollutants.

12. The regulations under the Canada Shipping Act pertaining to navigational standards and pollution prevention and control matters take account of internationally agreed rules and standards, including those which are in force as international conventions and to which Canada is a party. These conventions and their provisions are described in a separate presentation dealing with the Intergovernmental Maritime Consultative Organization.

13. To ensure that all ships entering and navigating in Canadian waters are in compliance with the Canada Shipping Act and

regulations, the Canadian Coast Guard has instituted surveillance, inspection and prosecution procedures. Aerial surveillance is carried out by Department of National Defence aircraft on behalf of the Coast Guard and information regarding ships entering Canadian waters and bound for Canadian ports, as obtained by vessel traffic management systems, is utilized.

14. The Canada Shipping Act regulations apply in Canadian waters out to the edge of our 12 mile territorial sea, in the areas where vessel-source pollution could pose the greatest threat to our marine environment and coastline. These waters include:

- internal waters such as the Strait of Juan de Fuca;
- exclusive fishing zones in effect prior to January 1, 1977, including Queen Charlotte Sound, Hecate Strait and Dixon Entrance;
- the 12 mile territorial sea.

15. These regulations also apply to the new 200 mile fishing zones which were enacted on January 1, 1977 (Zone 4 on the east coast and Zone 5 on the west coast). However, the Canadian authorities have under review the question of enforcing regulations under Part XX of the Canada Shipping Act in the new fishing zones, taking into account developments at the Law of the Sea Conference and Canada's concern for the protection of the marine environment and its resources in these areas. Amendments to the Canada Shipping Act are under preparation with a view to providing more flexibility in its application in various zones of Canadian jurisdiction and to strengthen the powers of pollution prevention officers with respect to their ability to board and inspect vessels bound to or from

Canadian ports or at places in Canada.

16. Internationally accepted standards, as embodied in Canadian regulations, apply within the 200 mile fishing zones. For example, in accordance with the provisions of the 1954 Convention for the Prevention of Pollution of the Sea by Oil, as amended (to which Canada is a party), regulations under the Canada Shipping Act pertaining to the discharge of oil by tankers and other ships, the maintenance of oil record books on board ship and specified cargo tank sizes continue to apply. Under the provisions of the Convention, violations by foreign ships in the extended fishing zones are reported to the flag state for appropriate enforcement action.

17. In addition, Canada continues to reserve its right under customary and codified international law to take action as may be necessary in the new fishing zones and beyond to prevent, mitigate or eliminate grave and imminent danger of pollution damage to our marine resources, coastline or related interests arising from vessel-source pollution or threat of pollution. In 1969 a Conference under the auspices of the Intergovernmental Maritime Consultative Organization adopted the Convention relating to Intervention on the High Seas in Cases of Oil Pollution Casualties (the same Conference adopted a Civil Liability Convention, see section below on Liability and Compensation). Canada abstained on the final vote adopting the Convention on the grounds that customary law already accorded to a coastal state the right to intervene in cases of maritime casualties to protect its marine environment and the Convention failed to adequately reflect coastal state rights in this regard.

CANADA/USA COOPERATION ON VESSEL TRAFFIC MANAGEMENT IN THE JUAN DE FUCA AREA

18. Canada has expressed strong concern over the prospect of increased tanker traffic carrying Alaskan oil in the Strait of Juan de Fuca, a concern which has been conveyed to the USA authorities in a number of ways, including a resolution passed unanimously by the House of Commons on May 15, 1972.

19. Canada is not, however, in a position to take unilateral action to prevent such traffic since tankers could, if necessary, proceed from Alaska to USA ports through the Strait of Juan de Fuca without entering Canadian waters. The Canadian authorities accordingly initiated discussions with the USA authorities, including exchanges of information on possible alternative ports, with a view to ensuring that all possible measures are taken to enhance safety of navigation and to minimize environmental risks. The discussions have included:

- A Canada/USA agreement on an oil spill clean-up contingency plan for the Juan de Fuca area was concluded in 1975 under the umbrella agreement of June 19, 1974 (C.T.S. 1974, No. 22).
- A Canada/USA agreement on cooperative scientific research programs was concluded in 1975 with a view to better understanding of environmental conditions in the area.
- Liability and compensation arrangements (see separate paper).
- A vessel traffic management system in the Strait of Juan de Fuca.

20. A voluntary vessel traffic management system was instituted in the waters of the Strait of Juan de Fuca in August 1974 as part of a series of coordinated and parallel

measures taken by the Canadian and USA Coast Guards. In March 1975, the two Coast Guards instituted a voluntary traffic separation scheme providing for incoming traffic to use the south (USA) side of the Strait and outbound traffic to exit through the north (Canadian) waters of the Strait.

21. The vessel traffic management system comprises, essentially, a vessel movement reporting system and a traffic separation scheme. The traffic control centres provide timely information and advice to mariners to minimize the risk of collision and grounding. Traffic controllers assess the ability of a vessel to navigate safely through the waters prior to entering the management zone, monitor and regulate vessel movements within the zone, and assist vessels in proceeding to and from their intended destinations in a safe and expeditious manner by providing information on such matters as navigation aids, traffic density, local weather conditions and the status of anchorages. Vessels participating in the scheme communicate with the centres on a common VHF radio frequency. As vessels enter the zone or depart from ports within the zone, they are requested to provide the traffic control centre with information, including the name of the vessel, location, destination, tonnage, cargo, any defects in essential navigation or communication equipment, any deficiencies in charts, and any defects in its propulsion or steering equipment that may affect maneuverability. Through informal inter-agency cooperation, the two Coast Guards have established three vessel traffic management sectors managed, respectively, by the Tofino Traffic Centre, the Seattle Traffic

Centre and the Vancouver Traffic Centre (chart attached). In support of this system, the two Coast Guards have progressively installed a network of communications and radar surveillance equipment. It is expected that Canada will have installed such equipment in the order of $18 million by early 1978. Plans for similar improvements have been announced by the USA authorities.

22. The traffic separation scheme consists of a network of one-way traffic lanes with separation zones in between and precautionary areas. These areas have been well publicized in notices to mariners and are depicted on all current charts of the area. In the Strait, the traffic lanes are at least 1,000 yards wide, with separation zones at least 500 yards wide.

23. Between 85 and 95 percent of the ships using the Strait comply with the reporting and advisory system and with the recommended routing scheme but there have been several instances of non-compliance by foreign ships, creating serious navigation hazards. The two Governments have accordingly agreed to develop a comprehensive mandatory vessel traffic management system. A draft agreement to this effect is currently under discussions between officials of the two Governments. A number of meetings have been held in Ottawa and Washington. Canada is represented by an interdepartmental team of officials drawn from the Department of Transport, the Canadian Coast Guard, the Department of Fisheries and the Environment, the Department of Justice and the Department of National Defence, chaired by an official of the Department of External Affairs. The USA side has been represented by officials of counterpart agencies, chaired by the State Department. Federal officials have consulted with the B.C.

authorities from time to time on these and other ongoing discussions.

24. The proposed agreement would require ships to comply with clearance procedures and directions from the traffic control centres which would carry out functions analagous to those of air traffic control centres. As in the case of the Canada/USA agreement with respect to aircraft control near the common boundary (C.T.S.1963, No.20), it is considered desirable for Canadian traffic centres to exercise authority over vessels in certain USA waters and for the USA traffic centre to exercise authority over vessels in certain Canadian waters. Each Government would accept responsibility for enforcing compliance with vessel traffic management regulations in waters under its own jurisdiction. At the same time, each Government would undertake to develop vessel traffic management regulations which will be compatible, to the extent possible, with those of the other. A number of legal and jurisdictional problems are being addressed in the current discussions. Before the proposed agreement can be brought fully into effect, the USA will require implementing legislation and appropriate amendments to the USA Ports and Waterways Act are currently before Congress. (Canadian authorities already have the necessary legislative authority under the Canada Shipping Act.)

25. Both sides are re-examining these problems and it is hoped that early agreement can be reached.

LIABILITY AND COMPENSATION

26. Canada/USA consultations have been held over an extended period with a view to ensuring prompt and adequate compensation

for damages caused in Canada from pollution from tankers transporting oil from the Trans-Alaska pipeline to USA west coast ports. There are no bilateral or multilateral agreements in force as between Canada and the USA providing for liability and compensation to Canadian residents in the event of an oil spill. The rights and obligations of the two Governments are governed by general principles of international law, which are in a process of evolution. Specific remedies and procedures are to be found, in the first instance, under domestic laws of the two countries.

27. In the course of these consultations, Canada has taken the view that the transportation of Trans-Alaskan pipeline oil will create a significant risk of injury to Canada and Canadian residents with no corresponding benefits. It is, accordingly, a special situation subject to special considerations calling for the establishment by the USA of procedures to ensure prompt and adequate compensation for any damages incurred in Canada.

28. By passage of the Trans-Alaska Pipeline Authorization Act (TAPA Act), the USA has recognized these special considerations and has created a specific régime of liability and compensation for victims of oil pollution on a basis of strict liability without regard to fault. The Act provides for a fund of $100 million for payment of claims "for all damages, includling clean-up costs, sustained by any person or entity, public or private, including residents of Canada, as the result of discharges of oil

from such vessel". (Section 204(c) of the TAPA Act.) For detailed and authoritative information on the provisions of this Act, reference should be made to the Act (Public Law 93-153) and regulations adopted by the USA authorities pursuant to the Act.

29. A bill is currently before the USA Congress for enactment of a "Comprehensive Oil Pollution Liability and Compensation Act" (COPLCA Act). The new act, which would supersede and in some respects consolidate the provisions of the TAPA Act within a liability régime applicable throughout USA waters, provides for the establishment of a $200 million fund. The bill has gone through several versions and changes in the course of consideration by Congress. It has also been the subject of detailed discussions between Canada and USA officials and it is noted that a number of Canadian comments and concerns have been taken into account by the USA authorities. Of major concern for Canada in the current COPLCA bill has been a provision in a recent version of the bill which, if enacted, would make substantive changes to the compensation arrangements presently available to Canadian claimants under the TAPA Act. This provision would make the assertion of a claim by a Canadian citizen under the COPLCA Act subject to a requirement of reciprocity, whereby it would have to be established that Canada provides a comparable remedy for USA claimants. Canada has expressed concern to the USA authorities about this provision and has reiterated the view that compensation for damages suffered by Canadian claimants

as a result of a discharge of Trans-Alaska pipeline oil should not be made subject to reciprocity. The USA authorities have taken the position that existing Canadian access to the $100 million fund in respect of Alaskan oil should remain unimpaired and this position, along with Canadian concerns, have been conveyed to Congressional leaders.

30. Under Canadian law, the Canada Shipping Act (CSA) Part XX sets out provisions for liability and compensation for vessel-source pollution. The CSA applies to any discharge in Canadian waters caused by, or otherwise attributable to, a ship (regardless of nationality) that carried more than one thousand tons of oil (regardless of origin). Section 734 of the Act provides that the shipowner and the owner of the oil are jointly and severally liable for all damges and clean-up costs on a basis of strict liability. A claimant in Canada could, therefore, have recourse to compensation under the CSA as a result of a discharge of Trans-Alaska pipeline oil in Canadian waters. The limit of liability of the shipowner in such cases would be 210 million gold francs or about $16.8 million (at eight cents to the franc), unless fault is attributable to the owner, in which case, liability is unlimited. Under Section 737 of the CSA, a Maritime Pollution Claims Fund (MPCF), which now amounts to $40 million, has been established to satisfy certain claims as specified in the Act.

31. Both the USA and Canada are examining possible revisions to the two international agreements which deal, although not entirely adequately, with liability and compensation for damages resulting from tanker spills: the 1969 Brussels Convention on

Civil Liability for Oil Pollution Damage, and the 1971 Brussels Convention on the Establishment of an International Fund for Oil Pollution Damage. Taken together, these two conventions are designed to provide minimum international standards for compensation for vessel-source oil pollution damage. The 1969 Convention, limits the liability of the shipowner to 210 million gold francs for each incident, the same limitation applicable under the Canada Shipping Act. The 1971 Convention, which has not yet entered into force, establishes an International Oil Pollution Compensation Fund to provide for compensation to a maximum of about $30 million. Considering the fact that damages and clean-up costs caused by the 120,000 ton "Torrey Canyon" disaster in 1967 were estimated to be in the order of $20 million, however, this figure may have to be revised in the near future if it is to cover damages by super-tankers and the higher costs generated by inflation. Among the most costly oil spills to date that have caused damage in Canadian waters are: (1) the barge "Nepco 140" spill in the Thousand Islands area of the St. Lawrence in 1976 -- clean-up costs approximately $10 million; (2) the "Arrow" spill in Chedabucto Bay in 1970 -- clean-up costs approximately $4 million; and (3) the "Imperial Sarnia" spill in the St. Lawrence in 1974 -- clean-up costs approximately $2.4 million. Until the inadequacies in these agreements have been removed, there is little likelihood that they will be ratified by Canada or the USA.

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