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**REPORT OF THE
INTERNATIONAL MARITIME ORGANIZATION
TO THE COMMISSION ON SUSTAINABLE DEVELOPMENT
IN CONNECTION WITH THE
WORLD SUMMIT ON SUSTAINABLE DEVELOPMENT (WSSD)**

International Maritime Organization
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WORLD SUMMIT ON SUSTAINABLE DEVELOPMENT (WSSD)¹

CONTENTS

		Page No.
1	INTRODUCTION	1
2	MAJOR ACHIEVEMENTS SINCE UNCED	2
	2(A) REGULATORY DEVELOPMENTS	2
	Application of the precautionary approach	2
	- The human element.....	2
	- Promotion of wider ratification and effective implementation of IMO conventions (17.30(i)).....	2
	- Facilitating the process in providing support to individual States upon request to help overcome the obstacles identified by them (17.30(ii))	4
	- Prevention of marine pollution through port State control (17.30(iii))	4
	- Protection of special areas and particularly sensitive sea areas (17.30(iv)).....	5
	- Action to ensure respect of areas designated by coastal States (17.30(v))	7
	- Harmful aquatic organisms in ships' ballast water (17.30(vi)).....	7
	- Navigational safety and management of international straits (17.30(vii), 17.31)	8
	- Stricter pollution prevention for cargo ships (including bulk carriers) (17.30(viii)).....	9
	- Safe carriage of irradiated nuclear fuel by sea (17.30(ix))	9
	- Prevention of air pollution from ships (17.30(xi))	10
	- Compensation for pollution damage caused by HNS (17.30(xii))	11
	- Facilities in ports for the reception of wastes from ships (17.30(d))	12

¹ This report was approved by the forty-sixth session of the Marine Environment Protection Committee in April 2001 with inputs from IMO's Maritime Safety Committee, Legal Committee and Technical Co-operation Committee.

CONTENTS (*cont'd*)

	Page No.
- Oil and chemical pollution preparedness and response (17.33)	12
- Revision of Annexes II and III of MARPOL (Chapter 19)	13
- Harmful effects of the use of anti-fouling paints for ships (17.32)	13
- Assessment of the state of pollution in international straits (17.31)	14
- IMO's Web-site for oil and litter in connection with the Global Programme of Action on land-based activities causing marine degradation (GPA)	15
2(B) CAPACITY-BUILDING FOR SUSTAINABLE MARITIME DEVELOPMENT: IMO'S INTEGRATED TECHNICAL CO-OPERATION PROGRAMME	15
- General.....	15
- A tripartite relationship for development	16
- Areas of intervention	17
3 AREAS FOR FURTHER PROGRESS	21
- Prevention of marine pollution from offshore oil and gas activities (17.30(c)).....	21
- Other achievements (including new requests from CSD 7)	23
- Illegal, unregulated and unreported (IUU) fishing (CSD 7 CSD 7, Report, (III), paragraph 18).....	23
- Bunker convention.....	23
- Wreck removal.....	23
- Ship recycling	23
- Implications arising when a vessel loses the right to fly the flag of a State.....	24
- An integrated management and sustainable development project in coastal areas, including EEZ (17.24)	24
4 SUMMARY.....	24

1 INTRODUCTION

1.1 The International Maritime Organization (IMO) is a specialized agency of the United Nations system dealing with maritime safety, the protection of the marine environment, and capacity-building in those two areas. The Organization consists of an Assembly, a Council and four main committees: the Maritime Safety Committee (MSC), the Marine Environment Protection Committee (MEPC), the Legal Committee (LEG) and the Technical Co-operation Committee (TC). There is also a Facilitation Committee (FAL). A number of sub-committees support the work of the main technical committees.

1.2 With regard to the follow-up to UNCED, the main areas of responsibility for IMO are contained in Chapter 17 of Agenda 21. Some aspects of Chapter 3 (combating poverty), Chapter 8 (integration of environment and development in decision-making), Chapter 15 (biodiversity), Chapter 19 (chemicals), Chapter 20 (transport of hazardous wastes), Chapter 21 (solid wastes and sewage), Chapter 22 (radioactivity), Chapter 24 (women in development) and Chapter 39 (international legal instruments and mechanisms), are also relevant. The work of IMO in these areas covers:

- those management-related items aimed at the prevention, reduction and control of marine pollution (including air pollution and climate change questions, anchorage, ballast water issues, ship scrapping, reception facilities for ships' waste, etc.) caused by shipping and offshore oil and gas activities;
- other management items concerning improvements to the safety of navigation, which will have a beneficial effect on the protection of the marine environment; and
- the build-up of human and institutional capacities for the sustainable development and efficient performance of maritime/port sector activities in accordance with the global standards established by the Organization.

1.3 It will be recalled that IMO submitted its first report to CSD in 1994, which was primarily a summary of IMO's main activities in the maritime sector and what IMO planned to do to follow up UNCED. The fourth session of CSD (CSD 4), held in 1996, took note of this report, including information on prevention of marine pollution from offshore oil and gas activities (CSD 4, Decision 4/15, paragraphs 25 to 29).

1.4 IMO's second report was submitted to CSD 7 in 1999, and had as one of its main items "Oceans and Seas". IMO decided to submit the second report to CSD 7 as a follow up to its 1994 report. The main objective of the second report was to outline IMO's major achievements since UNCED and areas for further progress, for information and decision by CSD as appropriate.

1.5 This report is the third report on IMO activities, and is submitted in connection with the World Summit on Sustainable Development (WSSD). In addition to achievements in this period, this report will look ahead and discuss new items not

explicitly mentioned in this context before, i.e. navigational measures as no anchoring areas and areas to be avoided; shipwreck removal; ship recycling and future waste management policies integrating ships' waste into national waste strategies, as well as achievements not directly related to the protection of the marine environment, i.e. related to the enhancement of safety at sea, development of international law and technical assistance (i.e. elements from MSC, LEG and TC).

2 MAJOR ACHIEVEMENTS SINCE UNCED

2.1 Agenda 21, adopted by UNCED in June 1992, and the CSD meetings held annually since 1992, gave fresh impetus to IMO's activities in the maritime sector, especially in the area of prevention and control of marine pollution. Significant progress has been made since UNCED in many areas within the mandate of IMO. Some of the major achievements by IMO are reported as follows:

2(A) REGULATORY DEVELOPMENTS

Application of the precautionary approach

2.2 MEPC 37, being aware that Principle 15 of the Rio Declaration called for application of the precautionary approach in 1995, adopted resolution MEPC.67(37) entitled "Guidelines on incorporation of the precautionary approach in the context of specific IMO activities". Since then, the precautionary approach has been an underlying principle in MEPC activities.

The human element

2.3 IMO has increasingly prioritised the human element factor in its activities. Assembly resolution A.900(21) directs the Committees, *inter alia*, to focus their attention on:

- shifting emphasis onto people;
- ensuring the effective uniform implementation of existing IMO standards and regulations relating to maritime safety and environmental protection, placing particular emphasis on the implementation of the revised STCW Convention and the ISM Code, and on putting in place the necessary infrastructure for the implementation of the global SAR plan and the MARPOL requirements concerning reception facilities for ship-generated waste.

2.4 The 1995 amendments to the STCW Convention constitute a major shift towards including the human element as an underlying principle in all IMO activities.

Promotion of wider ratification and effective implementation of IMO conventions

2.5 It is one of IMO's main objectives to promote the widest possible ratification and more effective implementation of the conventions and protocols relating to maritime safety and prevention of marine pollution. As a result of IMO's consistent efforts, 35 out of 42 treaty instruments, for which IMO is responsible, are in force as at 31 August 2001.

2.6 It may be noted that the most important treaty instruments relating to maritime safety and prevention of marine pollution, SOLAS and MARPOL, have been ratified by 145 and 117 States respectively, as at 31 August 2001 (see Table 1).

2.7 In response to the call from UNCED that IMO should support wider ratification and implementation of relevant shipping conventions and protocols (paragraph 17.30(a) of Chapter 17 of Agenda 21) and being fully aware that there are still a number of treaty instruments adopted by IMO which are not in force and that those which are in force still need more effective implementation, IMO is making even greater endeavours in this regard and steady progress has been achieved.

Table 1: Status of relevant conventions

Titles of treaty instruments (abbreviated)	Number of ratifications/ world tonnage (%)*
1974 SOLAS	145/98.36
1972 COLREG	139/96.79
MARPOL 73/78	117/94.23
1966 LOAD LINES	146/98.34
1969 TONNAGE	130/98.1
1978 STCW	138/97.93
1990 OPRC	60/48.74

* as at 31 August 2001

2.8 The following are two developments since UNCED 92 which are directly aimed at improving effective implementation of existing rules and regulations:

1. the introduction of the International Safety Management (ISM) Code focuses on the shipowner's management responsibilities regarding marine safety and environmental legislation as reflected in resolutions A.788(19) and A.848(20). With the entry into force on 1 July 1998 of the 1994 amendments to the International Convention for the Safety of Life at Sea

(SOLAS), 1974, which introduced a new chapter IX into the Convention, the International Safety Management (ISM) Code was made mandatory. The ISM Code evolved through the development of the Guidelines on Management for the Safe Operation of Ships and for Pollution Prevention, adopted in 1989 by the IMO Assembly as resolution A.647(16), and the revised Guidelines, adopted two years later as resolution A.680(17), to its current form which was adopted in 1993 as resolution A.741(18); and

2. the development of the Flag State Self-Assessment Form adopted by the IMO Assembly in 1999 as resolution A.881(21) represents a significant measure to improve flag State implementation. The form establishes a uniform set of internal and external criteria which can be used by flag States on a voluntary basis to obtain a clear picture of how well their maritime administrations are functioning and to make their own assessment of their performance as flag States. The flag State will be able to determine its deficiencies and take positive steps to obtain assistance in overcoming them. The form may be submitted to IMO when requests are made for technical assistance; however, this should not be considered a prerequisite for seeking technical assistance. The form covers such issues as asking whether the administration has the necessary laws, infrastructure, and human resources in place to implement and enforce international maritime safety and pollution prevention instruments. The Assembly resolution urges Member Governments to use the Self-Assessment Form for the purpose of identifying their weaknesses, if any, in discharging their responsibilities as flag States. Member Governments are invited to submit copies of completed forms on a voluntary basis to enable the establishment of a database, which would assist IMO in its efforts to achieve consistent and effective implementation of IMO regulations. As at 11 September 2001, 39 States have submitted Self-Assessment Forms to IMO.

Facilitating the process in providing support to individual States upon request to help overcome the obstacles identified by them

2.9 Assembly resolution A.900(21) focuses on implementing the proactive policies agreed in the 1990s more actively and focuses, *inter alia*, on shifting emphasis onto people, ensuring effective, uniform implementation of existing IMO instruments, etc. Assembly resolution A.901(21) relating to IMO's programme for technical assistance, has as one of its main objectives to facilitate ratification and implementation of the appropriate international maritime legislation, emphasising institutional capacity building and human resource development (see section 2(B) of this report).

2.10 At the turn of the century, four geographical areas are worth highlighting. Through active co-operation from IMO, the States in the Gulf Area are now committed to ratification and enforcement of MARPOL 73/78, including the establishment of adequate reception facilities. Being among the main oil loading areas, this is a significant development and IMO is also providing assistance to other Arab and Mediterranean

States for the effective implementation of IMO's conventions on marine environment protection. Countries in South Asia are starting to co-operate on matters pertaining to reception facilities and control of ships, which could eventually lead to sub-regional co-operation on the establishment of adequate reception facilities and control systems for their uses. Furthermore, the small island States in the Pacific are starting a project working towards sustainable development of ports and harbours. IMO is also involved in significant activities on marine pollution from ships and reception facilities throughout Africa and, in co-operation with UNEP, is promoting the effective implementation of the Nairobi and Abidjan Conventions on marine environment protection. In Latin America and the Caribbean, countries have developed regional strategies and guidelines for improved marine environment protection through increased ratification and effective implementation of IMO's principal maritime safety and marine pollution treaties.

Prevention of marine pollution through port State control

2.11 Paragraph 17.30(a)(iii) of Chapter 17 of Agenda 21 requested IMO to assess the need for additional measures to prevent marine pollution from ships by more rigorous enforcement of MARPOL discharge provisions through regional co-operation.

2.12 In considering the request from UNCED, IMO recognizes that the primary responsibility for implementing the regulations provided for in IMO conventions rests with the flag State. However, it also acknowledges the need for port State control (PSC) with a view to promoting more effective implementation of all applicable standards for maritime safety and pollution prevention.

2.13 With the above in mind, IMO has adopted a number of resolutions in respect of PSC over the years. In 1995, resolution A.787(19) was adopted at the 19th Assembly of IMO amalgamating guidelines contained in relevant IMO resolutions with the aim of providing one set of basic guidelines on the conduct of PSC inspections. In 1999 resolution A.882(21), amending the procedures for port State control, was adopted.

2.14 Member Governments, through the conduct of PSC inspections at their ports and discussions at IMO, realized that more effective PSC could be conducted by signing regional agreements. To this end, the following eight regional PSC agreements have been signed and are currently in operation with no less than six of them having been developed as a direct result of technical assistance from IMO:

1. the Paris Memorandum of Understanding on Port State Control (Paris MOU), adopted in Paris on 1 July 1982;
2. the Acuerdo de Viña del Mar (Viña del Mar or Latin-America Agreement), signed in Viña del Mar (Chile) on 5 November 1992;
3. the Memorandum of Understanding on Port State Control in the Asia-Pacific Region (Tokyo MOU), signed in Tokyo on 1 December 1993;

4. the Memorandum of Understanding on Port State Control in the Caribbean Region (Caribbean MOU), signed in Christchurch, Barbados on 9 February 1996;
5. the Memorandum of Understanding on Port State Control in the Mediterranean Region (Mediterranean MOU), signed in Malta on 11 July 1997;
6. the Indian Ocean Memorandum of Understanding on Port State Control (Indian Ocean MOU), signed in Pretoria, South Africa on 5 June 1998;
7. the Memorandum of Understanding for the West and Central African Region (Abuja MOU), signed in Abuja, Nigeria on 22 October 1999; and
8. the Memorandum of Understanding on Port State Control in the Black Sea, signed in Istanbul, Turkey on 7 April 2000.

2.15 With active assistance from IMO, a regional MOU for the Gulf region is being prepared for consideration and adoption. When this regional MOU is signed, there will be a complete network of regional MOUs covering most regions of the world, thus ensuring more effective enforcement of international conventions adopted by IMO.

2.16 It is widely recognized that the IMO resolution on PSC and the regional MOUs have made significant contributions to the enhancement of maritime safety and prevention of marine pollution from ships. This exercise of interaction between port States and flag States and the consideration of such reports and comments at IMO meetings have become an effective tool to promote the implementation of IMO conventions.

Protection of special areas and particularly sensitive sea areas

2.17 Paragraph 17.30(iv) of Agenda 21 calls for increased protection of Special Areas and Particularly Sensitive Sea Areas. The concept of the "special area" was introduced by IMO in 1973 under MARPOL Annexes I, II and V in order to provide special mandatory measures for prevention of marine pollution from ships in those areas. For example, under MARPOL Annex I, any discharge into the sea of oily mixture from ships shall be prohibited while in a "special area" unless a number of stringent conditions are met.

2.18 The International Conference on Tanker Safety and Pollution Prevention (TSP), convened by IMO in 1978, introduced the concept of "particularly sensitive sea areas" (PSSAs). The Conference, taking into account that the concept of PSSAs was not introduced in MARPOL, invited IMO to address the matter of PSSAs around the world which are in special need of protection against marine pollution from shipping and dumping on account of the particular sensitivity of the areas in respect of their renewable

resources. The concept of PSSAs was also recognized by paragraph 17.30(a)(iv) of Chapter 17 of Agenda 21.

2.19 In response to the request of the 1978 TSPP Conference, the MEPC developed the "Guidelines for the Designation of Special Areas and the Identification of Particularly Sensitive Sea Areas", which were subsequently adopted at the seventeenth session of the IMO Assembly in 1991 under cover of resolution A.720(17). This IMO resolution sets out measures that may be used in connection with the management of PSSAs, such as the imposition of MARPOL special area discharge provisions, the adoption of areas to be avoided and other ships' routing systems under regulation V/8 of the 1974 International Convention for the Safety of Life at Sea (SOLAS), and the establishment of Vessel Traffic Services (VTS) schemes.

2.20 The Great Barrier Reef of Australia was recognized as the world's first PSSA by the MEPC under resolution MEPC.44(30). In 1997, the MEPC recognized the Sabana-Camagüey Archipelago of Cuba as another PSSA by resolution MEPC.74(40). These are the two PSSAs that have been fully established by IMO to date.

2.21 The special areas established by IMO under MARPOL 73/78 are set out in Table 2.

Table 2: Special areas under MARPOL 73/78 as amended

Annex I (oil)	Annex II (chemicals carried in bulk)	Annex V (garbage)	Annex VI (air pollution from ships)**
Mediterranean Sea	Baltic Sea	Mediterranean Sea*	Baltic Sea
Black Sea	Black Sea*	Black Sea*	North West European Waters
Baltic Sea	Antarctic Area	Baltic Sea	
Red Sea*		Red Sea*	
Gulfs Area*		Gulfs Area*	
Gulf of Aden*		North Sea	
Antarctic Area		Wider Caribbean Region*	
North West European Waters		Antarctic Area	

* The "special area" requirements for these areas have not taken effect because of lack of adequate reception facilities, and lack of ratification of the Convention by the coastal States concerned. It is anticipated that the Gulfs Area and the Gulf of Aden will have their "special area" status take effect in 2002-2003 (see paragraph on ratification/implementation of MARPOL).

** These areas become SOx Emission Control Areas after entry into force of the Air Pollution Annex.

2.22 It may be noted that the Antarctic "special area" under Annex II, the North West European Waters "special area" under Annex I, and the Baltic Sea "special area" and North West European Waters "special area" under Annex VI (called "SOx Emission Control Area") were established after UNCED.

2.23 MEPC 46 (23 to 27 April 2001) approved new guidelines for the identification and designation of "special areas" and "particularly sensitive sea areas" for submission to the twenty-second session of the Assembly for their adoption.

2.24 MEPC 46 approved in principle two new "particularly sensitive sea areas": around Malpelo Island off the coast of Colombia; and the marine area around the Florida Keys of the United States. MEPC 47 (4 to 8 March 2002) is expected to adopt the two new PSSAs.

Action to ensure respect of areas designated by coastal States

2.25 MEPC 45 revised the Manual "MARPOL - How To Do It" emphasizing enforcement, specifying, *inter alia*, the coastal States' rights and obligations regarding implementation of regulations in their own territorial seas.

2.26 The Guidelines on the Identification and Designation of Particularly Sensitive Sea Areas, referred to in paragraph 2.19, specify that guidelines for the designation of PSSAs can be used inside and outside territorial seas.

Harmful aquatic organisms in ships' ballast water

2.27 Ships' ballast water may contain harmful aquatic organisms that may settle as "harmful alien species" in new regions of the world, causing tremendous damage, either economically or in regard to the original biodiversity. An increasing number of such cases have been made known since the early 1970s.

2.28 Paragraph 17.30(a)(vi) of Chapter 17 of Agenda 21 requested IMO to develop legally binding provisions regarding ballast water management to prevent the introduction of harmful aquatic organisms through ships' ballast water. In response to this request and proposals from its Member States, IMO decided to give high priority to this matter, and adopted the first Assembly resolution A.774(19) in 1993, stating, *inter alia*, that the unwanted introduction of organisms through the uncontrolled discharge of ballast water and sediment has important global implications that can be effectively, equitably and responsibly addressed through co-ordinated and co-operative action.

2.29 In 1997 the IMO Assembly adopted resolution A.868(20) entitled 'Guidelines for the control and management of ships' ballast water to minimize the transfer of harmful aquatic organisms and pathogens' with the view to providing guidelines before the mandatory regulations are in place. The resolution requested Governments to take urgent action in applying the Guidelines as a basis for national requirements and measures.

2.30 Since 1994, the MEPC has been developing mandatory regulations for the control and management of ships' ballast water and sediments. The discussions are far-reaching and technically complicated and a Diplomatic Conference to adopt an instrument is tentatively planned for the biennium 2002-2003.

2.31 In 1998, IMO, with a grant from the Global Environment Facility (GEF), started a feasibility study for a project which should assist developing countries to engage in risk assessment as well as to provide for the necessary analytical and control machinery for the management of ships' ballast water.

2.32 In 2000, the GEF/UNDP/IMO project "Removal of Barriers to the Effective Implementation of Ballast Water Control and Management Measures in Developing Countries" started with participating ports in Brazil, China, India, Iran, South Africa, and Ukraine. This project is financed by the GEF and UNDP and managed by a Ballast Water Team at IMO, and is aiming at developing capacity in the ports and countries concerned, trials of different techniques, and that the six ports shall become centres of excellence and develop regional co-operation in these six areas on ballast water management.

Navigational safety and management of international straits

2.33 Paragraph 17.30(a)(vii) and paragraph 17.31 of Chapter 17 of Agenda 21 requests IMO to promote navigational safety by adequate charting of coasts and ship routeing as appropriate, and to address the matter of heavily used international straits with a view to ensuring compliance with generally accepted international regulations. IMO has also made progress in these two areas since UNCED.

2.34 Since 1994, a further number of routeing systems have been adopted by IMO, including new and amended traffic separation schemes, two-way routes, recommended tracks, areas to be avoided, inshore traffic zones, roundabouts, precautionary areas, deep-water routes including a mandatory routing system. There have been several navigational measures established for environmental reasons, i.e. the Area To Be Avoided to protect the Sabana-Camagüey PSSA off Cuba, the Routeing System in the German Bight, and the No Anchoring Areas to protect the three coral reef banks of the Flower Garden Banks in the Gulf of Mexico. In addition, amendments to the rules for vessels navigating through the Straits of Malacca and Singapore, new rules and recommendations on navigation through the Strait of Istanbul, the Strait of Canacale and the Marmara Sea, new rules for navigation of laden tankers off the coast of South Africa, and a partial system of archipelagic sea lanes in Indonesian archipelagic waters have also been adopted.

2.35 A new regulation 8-1 on ship reporting systems in chapter V of the SOLAS Convention entered into force on 1 January 1996. Since then, taking into account the density of traffic, navigational hazards and the vulnerable and sensitive environmental nature of the areas concerned, a number of mandatory ship reporting systems have been adopted by IMO, including "In the Straits of Malacca and Singapore", "In the Torres Strait and the Inner Route of the Great Barrier Reef", "In the Strait of Gibraltar", "In the

Strait of Bonifacio”, “In the Dover Strait/Pas de Calais” and “In the Great Belt Traffic area”, and two systems “off the north-eastern and south-eastern coasts of the United States” to reduce the threat of ship strikes of right whales.

2.36 A new regulation 8-2 on vessel traffic services in chapter V of the SOLAS Convention, which was adopted in 1997, entered into force on 1 July 1999. The IMO Assembly adopted a resolution on guidelines for vessel traffic services at its twentieth session in 1997. A voluntary vessel traffic information service (VTIS) in the Singapore Strait has been in operation since 1 October 1990, and became part of a mandatory ship reporting system as of 1 December 1998.

2.37 In December 2000, IMO adopted a revised version of chapter V of the SOLAS Convention, incorporating new requirements, which is expected to enter into force in 2002. The new regulation V/19 on the carriage requirements for shipborne navigational systems and equipment allows an electronic chart display and information system (ECDIS) to be accepted as meeting the chart carriage requirements of the regulation. The new regulation requires all ships, irrespective of size, to carry nautical charts and nautical publications to plan and display the ship's route for the intended voyage and to plot and monitor positions throughout the voyage. But the ship must also carry back-up arrangements if electronic charts are used either fully or partially.

2.38 Performance standards for ECDIS were adopted in 1995, by resolution A.817(19), which was amended in 1996 by resolution MSC.64(67) to reflect back-up arrangements in case of ECDIS failure. Additional amendments were also made in 1998 by resolution MSC.86(70) to permit operation of ECDIS in Raster Chart System Mode when ENC data is not available (i.e. a so-called dual fuel approach).

Stricter pollution prevention from cargo ships (including bulk carriers and oil tankers)

2.39 Paragraph 17.30(a)(viii) of Chapter 17 of Agenda 21 calls for stricter pollution prevention measures for cargo ships, including bulk carriers. Bulk carrier safety has been a major issue for the Maritime Safety Committee (MSC). Safety measures for bulk carriers, in the form of a new chapter XII of the SOLAS Convention, as well as amendments to resolution A.744 (18) to amplify the enhanced programme of inspection, were adopted by the 1997 SOLAS Conference. The aforementioned enhanced programme of inspections for tankers and bulk carriers (resolution A.744(18) as amended) was developed to reduce accidents and pollution. MSC 73 recently adopted (resolution MSC.105(73)) amendments to resolution A.744(18) relating principally to the evaluation of longitudinal strength of the hull girder of oil tankers of 130 m in length and upwards and of 10 years of age and over. The new amendments are expected to enter into force on 1 July 2002. IMO has considered stricter age limits for all single-hull oil tankers above 5,000 tonnes. A new global timetable for accelerating the phase-out of single-hull oil tankers was established by amendments to MARPOL 73/78 adopted in April 2001, including revised legislation that will have a major impact in minimizing pollution by oil tankers. It will see single-hull tankers scrapped several years earlier than previously

required and all single-hull oil tankers eliminated completely by 2017 or earlier. Double-hull tankers offer greater protection of the environment from pollution in the case of certain accidents. Additionally, in its efforts to enhance safety of oil tankers in order to prevent possible pollution, the MSC and MEPC undertook consideration of an extensive set of measures, including the issue of places of refuge for ships in distress, aiming at improving existing and developing new standards to improve safety and pollution prevention performance of oil tankers.

Safe carriage of irradiated nuclear fuel by sea

2.40 Paragraph 17.30(a)(ix) of Chapter 17 of Agenda 21 encouraged IMO and IAEA to work together to complete consideration of a code on the safe carriage of irradiated nuclear fuel in flasks on board ships.

2.41 As a result of considerations at MEPC and MSC, the IMO Assembly, at its eighteenth session in 1993, adopted the Code for the Safe Carriage of Irradiated Nuclear Fuel, Plutonium and High-Level Radioactive Wastes in Flasks on Board Ships, or INF Code in short, under cover of resolution A.748(18). The INF Code stipulates that all ships carrying INF materials, regardless of size, should comply with relevant requirements concerning damage stability, fire protection, temperature control of cargo spaces, structural considerations, cargo securing arrangements, electric supplies, radiological protection equipment and management, training and shipboard emergency plan. This is the first international code prescribing such requirements.

2.42 In view of the importance of the matter and the request of a number of Member Governments, the IMO Assembly, at its nineteenth session in 1995, adopted resolution A.790(19) on the review of the INF Code for the purpose of a thorough examination of all aspects of the carriage by sea of INF materials.

2.43 Pursuant to resolution A.790(19), MEPC 40 approved and the twentieth regular session of the IMO Assembly adopted resolution A.852(2) on Guidelines for a structure of an integrated system of contingency planning for shipboard emergencies to be annexed to the INF Code and resolution A.853(20) on Amendments to the INF Code which require the carriage of shipboard emergency plans and the notification in the event of an incident involving materials subject to the INF Code.

2.44 In the process of review, the matter of mandatory application of the INF Code was raised. As a result of intensive considerations, the MSC and the MEPC decided that the INF Code, together with subsequent amendments, should be made mandatory. At its sixty-ninth session in May 1998, the MSC approved and, following the MEPC's concurrence, MSC 71, adopted the amendments to chapter VII of the SOLAS Convention to make the INF Code mandatory and the revised INF Code in 1999. These amendments entered into force on 1 January 2001.

Prevention of air pollution from ships

2.45 Air pollution from ships was recognized as a problem by IMO in 1987. In order to address this problem, the MEPC of IMO, in September 1988, agreed to include an item on air pollution from ships in its work programme. An IMO resolution entitled "Prevention of air pollution from ships", prepared by the MEPC, was adopted by IMO's seventeenth Assembly in November 1991 as resolution A.719(17).

2.46 In the meantime, the MEPC drew up a set of objectives to control air pollution from ships. It also adopted an action plan aimed at developing a new Annex VI to MARPOL 73/78 covering CFCs, halons, SO_x/NO_x/fuel oil quality, VOCs and incineration of ship-generated waste.

2.47 In October 1992, the MEPC, taking into account paragraph 17.30 (a)(xi) of Chapter 17 of Agenda 21 which encourages States to support the ongoing activity within IMO, started the development of the new Annex VI to MARPOL 73/78. The drafting work of the regulations and other preparatory work were completed by the MEPC in March 1997, and a Conference of Parties to MARPOL 73/78 was held at IMO Headquarters from 15 to 26 September 1997. As a result of its deliberations, the Conference adopted the Protocol of 1997 to amend MARPOL 73/78 by adding the new Annex VI to the Convention entitled "Regulations for the Prevention of Air Pollution from Ships". The principle of the "Precautionary Approach" was taken into account in the development of new regulations as stated in the Preamble of the 1997 Protocol.

2.48 By 31 September 2001, three States had become Parties to the Protocol of 1997, which takes effect 12 months after the date on which not less than 15 States, the combined merchant fleets of which constitutes not less than 50% of the gross tonnage of the world's merchant shipping, have become Parties to the Protocol. In Conference resolution 1 to the Air Pollution Conference, the Marine Environment Protection Committee was invited to initiate, as a matter of urgency, a review to identify the impediments to entry into force of the Protocol and any necessary measures to alleviate those impediments if the conditions for entry into force are not met by 31 December 2002.

2.49 The adoption of the 1997 Protocol and the new Annex VI to MARPOL 73/78 was not an end in itself. The MEPC has kept the matter under review and has started follow-up actions with the aim of facilitating the entry into force of the Protocol. To this end, the MEPC has established an action programme, including development of relevant implementation guidelines. It is also the intention of the MEPC to deal with matters relating to CO₂ emissions (greenhouse gases) and it therefore invited Member Governments to submit proposals to its future sessions on technical and operational options for CO₂ emission control. This led to the commission of an IMO climate gas study reporting in 2000, making it possible for the MEPC to discuss technical measures as from 2001. In addition, the Organization decided in May 2000 to prohibit the use of perfluoro carbons (PFCs) onboard ships. PFCs have extremely long atmospheric lifetimes (in excess of 5000 years) and possess high global warming potential.

Compensation for pollution damage caused by hazardous and noxious substances (HNS)

2.50 Paragraph 17.30(a)(xii) of Chapter 17 of Agenda 21 called on States to support the on-going activity within IMO regarding the development of an international regime governing the compensation for pollution damage caused by HNS. This subject had been in the agenda of the Legal Committee of IMO as a highest priority since 1988.

2.51 As a result of the work undertaken by the Legal Committee of IMO, an International Conference held at IMO Headquarters in 1996 adopted the International Convention on Liability and Compensation for Damage in Connection with the Carriage of Hazardous and Noxious Substances by Sea, 1996, (the "HNS Convention"). The Convention establishes a regime of liability and compensation based on a two-tier system. It covers not only pollution but also other risks such as fire and explosion caused by hazardous and noxious substances (HNS). Compensation is accordingly provided not only for pollution damage caused by HNS in the territory, including the territorial sea and the EEZ of a State Party, but also for loss of life or personal injury on board and outside the ship and damage to property outside the ship. The HNS included in the scope of the Convention are defined by reference to existing lists such as the International Maritime Dangerous Code and Annex II of MARPOL. Limits of compensation regulated in the Convention are calculated using the Special Drawing Right (SDR) of the International Monetary Fund as unit of account. The HNS Convention introduces strict liability for the shipowner, higher limits of liability than the present general limitation regimes and a system of compulsory insurance and insurance certificates. The shipowner's liability, which creates a first tier of the Convention, is supplemented by a second tier, the HNS Fund, financed by cargo interests. The Conference decided to exclude radioactive materials, coal and other low-hazard bulk cargoes from the scope of application of the Convention. A resolution adopted by the Conference recommends that IMO and the International Atomic Energy Agency work together in defining and considering issues of liability and compensation for damage occurring during the transport of radioactive materials. The aggregate upper limit of compensation regulated by the HNS Convention is 250 million SDRs (approximately US dollars 362 million).

2.52 As of 31 March 2001, the HNS treaty had only been ratified by one State. In order to speed up the process leading to its entry into force, the Legal Committee included the monitoring of the implementation of HNS Convention in its work programme. The Legal Committee established a Correspondence Group with the aim of helping to resolve any practical difficulties in setting up the new regime and assisting potential claimants and contributors to the HNS Fund and relevant industry parties.

Facilities in ports for the reception of wastes from ships

2.53 Paragraph 17.30(d) of Chapter 17 of Agenda 21 invited States and IMO to assess the need for additional measures to address degradation of the marine environment by establishing port reception facilities for the collection of oil and chemical residues and garbage from ships, especially in MARPOL "special areas".

2.54 MARPOL 73/78 sets out requirements for port reception facilities and all Parties to the Convention are obliged to provide adequate reception facilities for ships calling at their ports. The requirement for such reception facilities is especially necessary in "special areas" where, because of the vulnerability of these areas to pollution, more stringent discharge restrictions have been imposed. MARPOL 73/78 also provides that these reception facilities should, in each case, be "adequate" for the reception of wastes from ships without causing undue delay to the ships using them.

2.55 However, unlike ships which are subject to survey and certification by the flag State Administration and port State control, the responsibility for providing reception facilities is a matter for individual Governments, and progress in this regard has not been satisfactory. In order to address the matter, IMO has developed a number of guidelines, the most recent of which have been published as a "Comprehensive Manual on Port Reception Facilities". The Manual provides guidance on many issues including waste management strategy, type and quantity of ship-generated wastes, planning, choice of location, collection and treatment, financing and cost recovery, and co-operation of port and ship requirements. IMO has also provided technical assistance over many years to a large number of countries in the form of seminars, symposia and workshops, mostly at the regional level. Progress has been made in certain parts of the world. It is apparent, however, that the general situation with regard to the provision of reception facilities is not improving.

2.56 The provision of adequate reception facilities worldwide is a matter of extreme complexity which involves the shipping industry, port operators, oil and chemical companies and Governments. A satisfactory solution to the shortage of reception facilities in many parts of the world has yet to be found. It is widely recognized that, if this problem is to be satisfactorily resolved, it will be necessary to address the economic as well as the technical aspects of this issue.

2.57 At its forty-second session in March 1998, the MEPC re-emphasised the problem of reception facilities and decided to set up a Working Group dedicated to consider the relevant issues with the aim of identifying problems and proposing solutions, including development of a generic port waste management plan which could be used by the Administration in any country in providing a national port waste reception strategy. This plan may be suitable for assisting ports in obtaining funding for the establishment of adequate waste reception facilities. It is expected that the outcome of this Working Group will facilitate the work of the MEPC in finding an appropriate solution to this long-standing problem.

2.58 This activity has led to the re-issue in 1999 of the Comprehensive Manual on Port Reception Facilities, with an extended chapter on financing of port reception facilities, and to the publication by IMO of the Guidelines for Ensuring the Adequacy of Port Reception Facilities (2000).

Oil and chemical pollution preparedness and response

2.59 Paragraph 17.33 of Chapter 17 of Agenda 21 invited States to consider ratifying the International Convention on Oil Pollution Preparedness, Response and Co-operation (OPRC Convention), which was adopted by IMO in 1990 in response to the necessity of preventing and minimizing enormous environmental consequences caused by major tanker accidents. Chapter 17 of Agenda 21 also invited IMO to consider possible extension of the OPRC Convention to cover chemical spill response.

2.60 With consistent efforts by IMO to facilitate the entry into force of the OPRC Convention, including numerous technical co-operation activities such as assisting developing countries to prepare national contingency plans, preparation and delivery of model training courses, upgrading and publication of relevant manuals and guidelines, the OPRC Convention came into force on 13 May 1995, accomplishing one of the objectives set by Chapter 17 of Agenda 21. At present, there are 55 Parties to the OPRC Convention.

2.61 Recognizing that chemical spills would have similar major environmental consequences like oil tanker accidents, and in response to the request of UNCED and to resolution 10 of the OPRC Conference, the MEPC developed a legal instrument to extend the OPRC Convention to cover hazardous and noxious substances (HNS). A Protocol to the OPRC Convention extending its role to cover other substances than oil, was adopted in the spring of 2000.

Revision of the MARPOL Annexes concerning carriage of chemicals in bulk (Annex II) and in packaged form (Annex III) of MARPOL 73/78

2.62 The UNCED process and the plea to revise and simplify the establishment of carriage requirements for chemicals established in Chapter 19 Agenda 21 have led to profound changes in the process of revising Annexes II and III of MARPOL 73/78 dealing with the transport of chemicals in bulk and in packaged form.

2.63 IMO has, within its means, participated in the co-ordination process in OECD, and taken the decisions made into account in its revision process. The IMDG Code, as an implementation vehicle for MARPOL Annex III, has been reformatted and has been issued in its co-ordinated form in October 2000 and entered into force on 1 January 2001.

2.64 Regarding MARPOL Annex II the revision process aims at being finalized in 2003. In particular, the classification of substances will be co-ordinated in the revised Annex II to take into account the OECD process.

Harmful effects of the use of anti-fouling paints for ships

2.65 Anti-fouling paints are used to coat ships to prevent sea life from attaching itself to the hull, thereby maintaining the economic speed of ships. The harmful effects of the anti-fouling paints which used tributyl tin (TBT) were first brought to the attention of IMO in 1988. By that time there was evidence that TBT compounds in anti-fouling

paints for ships can pose substantial risk of toxicity and other chronic impacts to ecologically and economically important marine organisms especially in coastal waters. A number of countries, based on their scientific studies and investigations, began to adopt measures at national or regional levels to control the use of TBT compounds in anti-fouling paints. With a view to protecting the marine environment, the MEPC has, since then, kept this matter under review.

2.66 In the discussion at subsequent MEPC sessions, it was agreed that there was a need to regulate the use of TBT anti-fouling paints at an international level. A major advancement in this direction was achieved in November 1990 when the MEPC adopted resolution MEPC.46(30) on "Measures to control potential adverse impacts associated with the use of TBT compounds in anti-fouling paints". This resolution recommended that Governments adopt and promote effective measures within their jurisdiction to eliminate the use of anti-fouling paints containing TBT compounds on small ships of less than 25 meters in length as they were causing deformations in oysters and sex changes in whelks. The resolution also encouraged development of alternatives to TBT anti-fouling paints so that appropriate ways could be found towards the total prohibition of the use of TBT compounds in anti-fouling paints for all ships.

2.67 As encouraged by IMO, Member Governments began to take measures to control the adverse effects of TBT anti-fouling paints for ships. At MEPC 41, in March 1998, information was provided on alternative anti-fouling paint systems, including their effectiveness and risk posed to the aquatic environment by these new systems.

2.68 In order to further the development of international measures to reduce the harmful effects of the use of TBT anti-fouling paints for ships, the thirty-eighth session of the MEPC, held in July 1996, established a Correspondence Group on this issue, and the final conclusions of the Group were presented to the forty-first session of the MEPC in March 1998. After an extensive exchange of views, the MEPC agreed that there was a need to expedite the process in IMO to phase out the use of organotin-based anti-fouling paints worldwide by introducing measures aimed at a total ban of organotin-based anti-fouling paints on ships and established a Working Group in October 1998 dedicated to the development of a global treaty addressing harmful anti-fouling systems. The Working Group subsequently developed a draft treaty instrument to prohibit the use of organotin-based paints on ships and to establish a framework for taking international action on other anti-fouling systems deemed to pose an unacceptable risk of adverse effects on the environment or on human health.

2.69 The International Convention on the Control of Harmful Anti-fouling Systems on Ships was adopted by a Diplomatic Conference convened by IMO in October 2001. This Convention prohibits the application of TBT on ships' hulls from 2003 and the presence of TBT on ships' hulls from 2008. The Convention will enter into force twelve months after the date on which not less than 25 States, the combined merchant fleet of which constitute not less than 25% of the world's merchant fleet, have either signed it without reservation as to ratification, acceptance or approval, or have deposited the requisite instrument of ratification, acceptance, approval or accession.

Assessment of the state of pollution in international straits

2.70 There is an on-going discussion in IMO regarding measures to be implemented in international straits to reduce or avoid marine pollution incidents as well as other accidents. This is being dealt with in the Sub-Committee on Safety of Navigation (NAV), a subsidiary body of the MSC, and is being discussed against the background of the United Nations Convention on the Law of the Sea (right of free passage).

2.71 Several measures have been installed or are under discussion including traffic separation schemes, deep-water routes, and compulsory tug assistance (see Table 3 below).

Table 3: Routeing measures in international straits

Type of measure	Sea Areas	Strait name
Traffic separation schemes	Baltic sea	The Sound (between Denmark and Sweden)
	Western European Water	Strait of Dover and adjacent waters
	Mediterranean Sea and Black Sea	Strait of Istanbul – north approach, Strait of Istanbul, Strait of Istanbul – south approach and Sea of Marmara, Strait of Canacale, Strait of Canacale – south west approach
	Indian Ocean	Gulf of Suez, Strait of Bab el Maneb, Strait of Hormuz
	South-east Asia	Straits of Malacca and Singapore
Deep-water routes	Australasia	Bass Strait
	The Baltic Sea	Navigation through entrances to the Baltic Sea
	South-east Asia	Malacca Strait

IMO's web site for oil and litter in connection with the Global Programme of Action on land-based activities causing marine degradation (GPA)

2.72 In response to paragraph 17.37(f) of Chapter 17 of Agenda 21, calling for the establishment of clearing-house mechanisms for marine pollutants and UN General Assembly resolution 51/189, which calls upon IMO to be the lead agency for the GPA clearing-house on oil and litter, a pilot scale version of an Oil and Litter Web-site has

been developed in 2000 under an agreement between Environment Canada and IMO. To further the development of the clearing-house, UNEP/GPA, IMO, Environment Canada and consultants commissioned by the Swedish Environmental Protection Agency agreed in November 2000 to establish early in 2001 a separate Oil-Web-site, to be hosted by IMO and a Litter-Web-site, to be hosted by the Swedish EPA. These sites will be further expanded and links would be invited with relevant regional and national web sites.

2(B) CAPACITY-BUILDING FOR SUSTAINABLE MARITIME DEVELOPMENT: IMO'S INTEGRATED TECHNICAL CO-OPERATION PROGRAMME

General

2.73 As indicated in paragraph 1.2 above, a further but equally important aspect to IMO's work in following up the UNCED process and giving effect to Agenda 21 concerns capacity-building for sustainable maritime development.

2.74 In this context, the IMO Assembly resolution A.901(21), already mentioned in paragraph 2.6, sets out a policy statement for IMO's Integrated Technical Co-operation Programme (ITCP), which was established with the sole purpose of assisting developing countries in building up their human and institutional capacities for uniform and effective compliance with the Organization's regulatory framework. By fostering capacity building in the maritime sector, the ITCP helps countries to ensure safe and effective shipping services, and protect their waters and coasts from the environmental degradation that can be caused by ships and related maritime activity.

2.75 There is, therefore, a necessary and direct linkage between IMO's regulatory and technical co-operation work, and because maritime transport and a clean marine environment play such an important role in the socio-economic growth of countries, there is also a further consequential linkage to sustainable development. This was affirmed in resolution A901(21), which states that IMO's work in developing global standards and in providing technical co-operation for their effective implementation and enforcement, can and does contribute to sustainable development, as illustrated in Table 4.

Table 4: Role of IMO’s technical co-operation work in promoting sustainable development

Action	Impact
Improving the safety and efficiency of maritime activities	<ul style="list-style-type: none"> • well-run merchant and fishing fleets • improved turn-around of vessels and port throughput • increased global trade • improved balance of payments
Enhancing marine environment protection	<ul style="list-style-type: none"> • cleaner waters and coasts • increased tourism • greater access to protein through improved fisheries catches • integrated coastal zone management
Promoting sustainable livelihoods and poverty eradication	<ul style="list-style-type: none"> • employment for seafarers in the global shipping and fisheries industries • advancement of women in the maritime sector • increased foreign exchange earnings • consequent beneficial impact at local level, especially in coastal/fishing communities

A tripartite relationship for development

2.76 Many of IMO’s treaties and resolutions contain provisions requiring States and organizations to provide or facilitate technical co-operation to developing countries, through IMO or bilaterally, so as to ensure the global and uniform implementation of maritime standards.

2.77 This recognition of a tripartite relationship between recipients, donors (developed countries, organizations and the industry) and the Organization itself, lies at the very root of the ITCP. The relationship ensures that IMO’s technical co-operation activities can effectively address the assessed needs of developing countries in the maritime field, capture and disseminate the related expertise of development partners, and promote greater awareness of and effective compliance with the regulatory developments described throughout section 2(A) of this report.

Areas of intervention

2.78 In this regard, since UNCED and the adoption of Agenda 21, IMO has provided technical assistance, in all of its fields of action, to well over 100 developing States through national regional, inter-regional and global activities. Table 5 provides a schematic representation of:

- the assistance delivered by IMO in relation to the Agenda 21 items that are directly relevant to the Organization and its ITCP; and

- those other areas of sustainable development under Agenda 21 in which IMO has played an active role as part of the related UN System initiatives following UNCED.

Table 5: Technical assistance and Agenda 21 in IMO

Agenda 21 items	Developing regions*				
	RAF	RAB/MED	RAS/PAC	CIS/EE	LA/CAR
Development and dissemination of environmental legislation, 8.16(a), 8.21(a)	✓	✓	✓	✓	✓
Wider ratification and implementation of maritime instruments, 17.30(a)(i)	✓	✓	✓	✓	✓
Facilitating the above process, 17.30(a)(ii)	✓	✓	✓	✓	✓
Prevention of marine pollution through PSC, 17.30(a)(iii)	✓	✓	✓	✓	✓
Special Areas and PSSAs, 17.30(a)(iv)					✓
Ballast water management, 17.30(a)(vi)	✓		✓	✓	✓
International straits, 17.30(a)(vii), 17.31			✓		
London Convention, 17.30(b)(i)	✓		✓		✓
Port reception facilities, 17.30(d)(i)	✓	✓	✓	✓	✓
OPRC Convention, 17.33, 17.34	✓	✓	✓	✓	✓
Marine environmental quality, 17.35(a)			✓		
Information exchange, 17.35(b)			✓		
Training of pollution response personnel, 17.38(a)	✓	✓	✓	✓	✓
OPRC courses, 17.38(c)	✓	✓	✓	✓	✓
Environmental aspects of ports, 17.38(d)					✓
Human resource development, 17.38(f)	✓	✓	✓	✓	✓
Support to Small Island Developing States, 17.129 to 17.137	✓		✓		✓
Training on dangerous goods, 20.27(d)	✓	✓	✓	✓	✓
Training on ship-generated waste management, 21.36			✓		✓
Advancement of women in the maritime sector, Chapter 24	✓	✓	✓	✓	✓
Promoting public awareness, 8.11 and 36(B)			✓		✓
Promoting training 36(C)	✓	✓	✓	✓	✓
Enhancing legislative capacities on environmental law, 39.1(d)	✓	✓	✓	✓	✓

* RAF Africa
 RAB/MED Arab States and the Mediterranean
 RAS/PAC Asia and the Pacific Islands
 CIS/EE Commonwealth of Independent States and Eastern Europe
 LA/CAR Latin America and the Caribbean

2.79 As may be seen from Table 5, IMO's technical co-operation activities since UNCED have covered a wide range of general and specific items of Agenda 21. In this respect, all the identified items fall naturally within the priorities for the ITCP established through resolution A.901(21), and illustrated in Table 6.

Table 6: Priorities of IMO's Integrated Technical Co-operation Programme

Priorities	Results
Advocacy of global maritime rules and standards	International treaty instruments ratified, and implementing national legislation put in place
Institutional capacity-building	Public sector departments capable of ensuring the effective exercise of flag, port and coastal State jurisdiction
Human resource development	Trained male and female experts to develop and manage national programmes for: <ul style="list-style-type: none"> • maritime safety administration • marine environment protection • development of maritime legislation • facilitation of maritime traffic • technical port operations • training of seafarers and shore-based personnel

2.80 Taking into account the above priorities, some of the principal achievements of IMO, in providing technical assistance to developing countries for the implementation of the Agenda 21 items shown in Table 5, can be summarized as follows:

- development and dissemination of maritime and environmental legislation: support has been provided to all developing regions covering all IMO treaties, codes and resolutions, including the preparation of model shipping and marine pollution legislation specifically for the Caribbean, but which has been disseminated also to other developing regions;
- ratification and implementation of maritime instruments: this is the very purpose of all IMO's technical co-operation activities and such support has been provided to all developing regions;
- facilitating the above process: such support has been provided to all developing regions through needs assessments, strategy development, institution building, technical advisory services and training;

- prevention of marine pollution through port State control: as stated in paragraph 2.11 above, IMO has supported the development of no less than six regional agreements on PSC and the Organization is continuing its support for this process through the training of ship inspectors;
- Special Areas and PSSAs: support was provided to Cuba in relation to the designation of the Sabana-Camagüey Archipelago as a PSSA, and similar assistance is currently being planned for Ecuador in relation to the Galapagos Islands;
- ballast water management: as stated in paragraph 2.29, an IMO/GEF/UNDP programme on “Removal of Barriers to the Effective Implementation of Ballast Water Control and Management Measures in Developing Countries” is providing related support in several countries, through initial pilot projects, the benefits and results of which will be shared with regional neighbours;
- international straits: an IMO/GEF/UNDP programme on “Partnerships in Environmental Management for the Seas of East Asia” has provided support for the introduction of marine safety and environmental protection measures in the Straits of Malacca;
- implementation of the London Convention and its Protocol of 1996: through a dedicated programme for this particular treaty instrument, IMO is supporting the development of integrated waste management systems for improved marine environment protection; the programme has delivered assistance to Africa (national waste management profiling and regional networking), Asia and the Pacific (national and regional seminars on the Convention and on waste management), Latin America (waste management in the context of integrated coastal zone management), as well as at the global levels (development of a waste assessment guidance set, and of public information materials);
- port reception facilities: support for the establishment of such facilities has been provided in all developing regions including, in particular, the preparation of national feasibility studies for their construction and operation in Africa, and an IMO/GEF/World Bank programme entitled “Wider Caribbean Initiative on Ship-generated Wastes”, which assessed the needs of that region for effective MARPOL 73/78 implementation and the legal and technical requirements for waste reception, management and ultimate disposal;
- OPRC Convention: support for the establishment of capacities to control and minimize marine pollution caused by ships has also been provided to all developing regions; of particular note has been the establishment of two IMO centres, in the Caribbean and the Mediterranean regions, to advise

countries on the introduction of marine pollution prevention and control measures, support on-scene response operations, and train related personnel;

- marine environmental quality: the above-mentioned IMO programme in the seas of East Asia has established eight demonstration sites in Cambodia, China, Indonesia, Malaysia, Philippines, Thailand, Vietnam and the Malacca Straits to address land-water interactions and the impact of human activity in coastal areas; it has also adopted a risk assessment and risk management framework for dealing with marine pollution;
- information exchange: the same IMO programme has also established networking arrangements and formal information exchange systems to improve the joint environmental protection of the seas of East Asia;
- training of pollution response personnel: such support is being provided by IMO throughout the developing regions, at both national and regional levels;
- OPRC courses: IMO has developed four model courses for the training of marine pollution response personnel at four distinct levels, namely, first responder, supervisor/on-scene commander, senior managers/administrators, and train-the-trainer;
- environmental aspects of ports: in Latin America, IMO supported the development of regional guidelines on the environmental impact assessment of port operations and development;
- human resource development: virtually all IMO programmes contain training components to build up administrative, legal and technical human capacities for more effective implementation of global maritime standards; additionally, the Organization has established three global training institutions – the World Maritime University, the International Maritime Law Institute and the International Maritime Academy – all of which provide post-graduate or specialized training on numerous topics including, in particular, marine environment protection and the development of marine environmental law;
- support to SIDS: through needs assessments and various technical co-operation programmes, IMO has participated actively in the SIDS process launched by the UN System as a result of UNCED; of particular note in this regard are two IMO programmes that were selected by the United Nations as “SIDS success stories” and which cover the development of model shipping and marine pollution legislation for the Caribbean and Pacific Islands regions;

- training on dangerous goods: technical advisory missions and courses on the handling, storage and transport of dangerous goods by sea have been delivered by IMO in all developing regions;
- training on ship-generated waste management: the above-mentioned IMO programme in the Wider Caribbean trained personnel from Latin American and Caribbean States on the reception, management and ultimate disposal of ship-generated wastes (oils, chemicals, sewage, garbage);
- advancement of women in the maritime sector: IMO has a dedicated Women-in-Development programme which promotes the increased participation of women in maritime activities, principally through training and gender-awareness seminars;
- promoting public awareness: IMO has launched several public awareness programmes targeting specific issues, especially for the protection of the marine environment in the Wider Caribbean and South-East Asia;
- promoting training: aside from the training provided through the entire range of IMO's technical co-operation activities, as well as its global training institutions, the Organization has also developed some 60 model courses for use by training institutions in developing countries, covering virtually all major topics falling under IMO's treaty and other instruments;
- enhancing legislative capacities on environmental law: IMO has provided support in all developing regions for the preparation of national legislation and implementing technical regulations covering marine pollution prevention and control, civil liability and compensation for pollution damage, and dumping of wastes at sea.

2.81 In delivering the assistance described above, IMO has been able to secure the financial and in-kind support of numerous development partners from the public and private sectors, including: donor and recipient Governments; UN System organizations; international funding agencies; regional organizations and development banks; the shipping industry; individuals; and, not least, non-governmental organizations involved in maritime and port activities.

2.82 Accordingly, fully in keeping with the letter and spirit of Agenda 21, IMO is working together with its partners towards sustainable development.

3 AREAS FOR FURTHER PROGRESS

3.1 As reported in the above, IMO has made significant progress in many areas, while recognizing that further work is needed in some areas, such as the development of new international legislation on ballast water management, finalising an instrument on TBT,

etc. However, there are also several other areas which may need the particular attention of CSD and WSSD.

Prevention of marine pollution from offshore oil and gas activities

3.2 Offshore oil and gas exploration and production activities are significant sources of marine pollution. In the North Sea, for example, it is estimated that between 1984 and 1990 some 14-27% of oily pollutants originated from offshore oil and gas activities.

3.3 Broadly speaking, discharges from offshore installations fall into two main categories: accidental and operational. Accidental discharges are covered to some extent by MARPOL 73/78 and the 1990 OPRC Convention with regard to Oil Pollution Emergency Plans on such installations.

3.4 Operational discharges from offshore installations, likewise, can also be divided into two categories: machinery space discharges and discharges "directly" arising from exploration and exploitation activities, such as oil in produced water, contaminated drill cuttings (oil-based muds) and production chemicals (residual process, drilling additives and well treatment).

3.5 Machinery space discharges from offshore installations are covered by regulation 21 and its unified interpretation of MARPOL Annex I (such as the 15 ppm discharge limit and the keeping of a record of all operations involving oil or oil mixture discharges). However, the release of harmful substances "directly" arising from the exploration, exploitation and associated offshore processing of sea-bed mineral resources is not covered by MARPOL 73/78 (MARPOL Article 2(3)(b)(ii)) or any other international instrument.

3.6 Although the scope of application of MARPOL regulations to offshore installations is currently limited as described above, there are no other mandatory regulations relating to offshore operational discharges at global level. There are, however, a number of regional agreements covering the matter, such as the Protocol to the 1976 Barcelona Convention and the Protocol to the 1978 Kuwait Convention, the 1992 Helsinki Convention and the 1992 OSPAR Convention.

3.7 Noting that there were still many regions where appropriate agreements controlling marine pollution from offshore installations have not yet been developed, paragraph 17.30(c) of Chapter 17 of Agenda 21 adopted by UNCED called on States, acting individually, bilaterally, regionally or multilaterally and within the framework of IMO and other relevant international organizations to assess the need for additional measures to address degradation of the marine environment from offshore oil and gas platforms.

3.8 In response to the call from UNCED, IMO, through MEPC, considered relevant issues. In its 1994 report to CSD, IMO addressed the matter of marine pollution from offshore platforms. After considerable debate and strong criticism from a number of

delegations, the conclusion in that report was that a "regional approach should be encouraged, and IMO sees no compelling need at this time to develop further globally applicable environmental regulations" (page 15 of IMO's 1994 Report to CSD and paragraph 8.8 of MEPC 36/22). The argument against international regulations was that, unlike ships which move from one part of the world to another and can therefore best be controlled through global regulations, offshore installations are generally fixed and, therefore, only pose a threat of local pollution, which can be dealt with by national regulations or regional agreements. The argument in favour of international regulations or guidelines was that there are still many offshore oil-producing regions that do not have the capacity to develop either regional or national standards; therefore, some kind of international regulations or guidelines will help those countries to protect their marine environment.

3.9 CSD 4 in April 1996 noted the 1994 report of IMO. With regard to the issue on further development of globally applicable environmental regulations for offshore activities, CSD 4 noted the conclusion in IMO's 1994 Report and encouraged States to continue relevant national and regional reviews of the need for additional measures to address the issue of degradation of the marine environment from offshore activities (CSD 4, Decision 4/15, paragraphs 26 to 28).

3.10 At its thirty-eighth session in July 1996, the MEPC reviewed the outcome of CSD 4 on the matter. It noted that, since 1994 when the MEPC concluded its report to CSD, offshore activities have been accelerated in many parts of the world. However, expectations for regional and national regulations have not been fulfilled. There are, in many regions of the world, no control mechanisms regulating the discharges from offshore activities. It was therefore suggested that the development of the current national, regional and global regulations should be assessed.

3.11 At its forty-fourth session, the MEPC recognized that the primary focus of action on environmental aspects of offshore oil and gas activities should continue to be at national and regional levels as recommended by CSD 7 and in view of the fact that there is still a lack of guidelines in some regions and that a number of countries requested IMO to provide relevant information on how to control marine pollution from offshore activities, the Committee agreed to take the following approach:

1. the countries concerned in those regions that already have guidelines and interested international organizations are invited to provide information to MEPC 46; and
2. the information provided by interested Members and international organizations could be reviewed and disseminated as MEPC circulars for reference by the countries and regions concerned when they develop their guidelines.

Other achievements (including new requests from CSD 7)

Illegal, unregulated and unreported (IUU) fishing

3.12 CSD 7 (CSD 7, Report, (III), paragraph 18) encouraged IMO to look into the matter of IUU fishing in co-operation with FAO on a global basis. Based on an initiative from FAO, IMO and FAO have established a joint working group on IUU fishing.

3.13 The first meeting of the Joint Working Group took place at FAO Headquarters in Rome, Italy, from 9 to 11 October 2000. During the discussion of the outcome of the first joint working group, MSC 74 recognized that there were many safety and environmental protection issues relating to illegal fishing which were within the purview of IMO, and the consideration of which would be of assistance to FAO. Consequently the item remains on the agenda of the relevant IMO sub-committee (Sub-Committee on Flag State Implementation).

Bunker Convention

3.14 A Diplomatic Conference was held at IMO in March 2001 adopting the International Convention on Civil Liability for Bunker Oil Pollution Damage, which provides for a strict liability and compensation regime for pollution damage, including the cost of preventive measures and for compulsory insurance or financial security.

Wreck removal

3.15 IMO's Legal Committee is for the time being developing an instrument regulating wreck removal, aiming at finalising an instrument in 2002-2003.

Ship recycling

3.16 CSD 7 further noted that scrapping of ships presents an issue of concern with regard to the pollution of the environment and therefore called on IMO to look into this issue and encouraged States to ensure that responsible care is applied with regard to the disposal of decommissioned ships, taking into account the need to provide adequate expertise and resources to developing countries.

3.17 MEPC 43, 44, and 46 discussed the inclusion of recycling of ships on the IMO agenda and agreed to take the item on board as a lead agency, in co-operation with the Basel Convention, ILO and other stakeholders. The MEPC has established a correspondence group to look into the matter and report to MEPC 47, in particular, on IMO's role and preparation of guidelines for ship recycling. Subject to confirmation by MEPC 47, the intention is to establish a working group on the above-mentioned guidelines for ship recycling, to be implemented by the shipowners/flag States further.

Implications arising when a vessel loses the right to fly the flag of a State

3.18 CSD 7 invited IMO as a matter of urgency to develop measures, in binding form where IMO Member States consider it appropriate, to ensure that ships of all flag States meet international rules and standards so as to give full and complete effect to UNCLOS, especially article 91 (nationality of ships), as well as provisions of other relevant conventions. In this context, the Commission emphasises the importance of further development of effective port State control.

3.19 This matter is under extensive discussion in the IMO Sub-Committee on Flag State Implementation.

An integrated management and sustainable development project in coastal areas, including EEZ

3.20 In order to adequately implement paragraph 17.24 of Agenda 21 in the seas of East Asia, which are facing serious national and transboundary environmental concerns, eleven countries in the region decided to work together on a project managed by IMO to protect the marine environment and to enable the sustainable use of their renewable resources through intergovernmental, interagency and intersectoral partnerships.

3.21 Since 1994, the Global Environment Facility (GEF) has provided funds for addressing marine pollution problems under the Regional Programme for the Prevention and Management of Marine Pollution in the East Asian Seas Region. A follow-on phase was launched in October 1999 totalling US\$28.7 million through "Partnerships in Environmental Management for the Seas of East Asia" (PEMSEA) with strategies that include: regional capacity to implement integrated coastal management programmes; transboundary environment issues in the Gulf of Thailand, Bohai Sea and Manila Bay; reinforcement and establishment of a range of functional networks to support environmental management; identification of environmental investment opportunities and other forms of developmental assistance; enhancement of scientific and technical inputs to support decision making; development of regional integrated information management systems, including public and civic participation strengthening of national capabilities for developing integrated coastal and marine policies; and promoting regional commitment for implementing international conventions and strengthening regional and sub-regional co-operation and collaboration using a sustainable regional mechanism.

4 SUMMARY

4.1 The WSSD is invited to take note of the following major achievements by IMO since UNCED:

1. the Protocol of 1997 to amend MARPOL 73/78 by adding the new Annex VI to the Convention entitled "Regulations for the Prevention of Air Pollution from Ships" has been adopted, and is being followed up by

further discussion on climate change gases, i.e. CO₂, with the aim of developing technical measures to reduce their emissions;

2. measures that have been taken, including adoption of guidelines and conduct of technical co-operation projects, to minimize the adverse effects of the introduction of harmful aquatic organisms through ships' ballast water, and the preparation of globally mandatory regulations is in progress for tentative adoption in 2002-2003;
3. a number of special areas under MARPOL 73/78 and particularly sensitive sea areas under IMO resolution A.720(17) have been established for those areas which are in need of special protection;
4. the countries in the Gulf Area, assisted by IMO, have established a politically binding project aiming at ratification of MARPOL 73/78 and providing adequate reception facilities in time for the area to be declared a functional "special area" as from 2002;
5. the 1990 OPRC Convention entered into force in 1995 and a protocol to extend the Convention to cover hazardous and noxious substances (HNS) was adopted in the spring of 2000;
6. the International Convention on Liability and Compensation for Damage in Connection with the Carriage of Hazardous and Noxious Substances by Sea (the HNS Convention) was adopted in 1996;
7. the International Code for the Safe Carriage of Packaged Irradiated Nuclear Fuel, Plutonium and High-Level Radioactive Wastes on Board Ships (the INF Code) was adopted in 1993, and amendments to chapter VII of the SOLAS Convention to make the Code mandatory have been adopted;
8. eight regional Memoranda of Understanding (MOUs) on port State control have been established, which have become effective tools to promote the implementation of IMO's treaty instruments on maritime safety and prevention of marine pollution, and more regional MOUs are being contemplated;
9. 35 out of 42 treaty instruments adopted by IMO are in force as at 31 August 2001, and the most important treaty instruments relating to maritime safety and prevention of marine pollution, such as SOLAS and MARPOL, have been ratified by over 100 States representing more than 90% of the world's total tonnage;
10. with a view to enhancing maritime safety and preventing marine pollution, more measures have been taken, including adoption of new and amended

traffic separation schemes, areas to be avoided, rules for navigating through the Straits of Malacca and Singapore and a partial system of archipelagic sea lanes in Indonesian archipelagic waters; a number of mandatory ship reporting systems have also been adopted, including "In the Straits of Malacca and Singapore", and "In the Torres Strait and the Inner Route of the Great Barrier Reef" and the "Systems for protecting North Atlantic right whales in sea areas off the north-eastern and south-eastern coasts of the United States";

11. IMO has provided further guidelines regarding reception facilities through the publishing of the Comprehensive Manual on Port Reception Facilities in 1999, and Guidelines to Ensure the Adequacy of Reception Facilities in 2000, as well as through an extensive programme of national and regional workshops in Asia, India and the CSD countries;
12. The International Convention on the Control of Harmful Antifouling Systems on Ships was adopted by a Diplomatic Conference held in October 2001;
13. A Diplomatic Conference was held at IMO in March 2001 adopting the International Convention on Civil Liability for Bunker Oil Pollution Damage, which provides for strict liability and compensation regime for pollution damage, including the cost of preventive measures and for compulsory insurance or financial security; and
14. through its Integrated Technical Co-operation Programme, IMO has provided considerable support to developing countries, and is continuing to do so, in order to promote sustainable maritime development through the widest possible ratification and effective implementation and enforcement of: (a) existing global standards for maritime safety and marine environment protection; and (b) the new instruments introduced by IMO in response to the UNCED process and the relevant management and implementation items of Agenda 21.

4.2 The WSSD is also invited to consider the following areas which are in need of further progress as requested by UNCED through Chapter 17 of Agenda 21, and by CSD 4:

1. in view of the environmental concerns with regard to pollution from offshore oil and gas activities, IMO is keeping the matter under review and Member States and interested organizations are invited to submit documents to the MEPC for consideration, in order for IMO to disseminate adequate information to States and regions concerned;

2. IMO is aiming at developing international guidance to ensure safer and more environmentally friendly procedures and methods for recycling of ships, in co-operation with the Basel Convention and ILO;
 3. IMO is assisting in the development of measures to reduce illegal, unreported and unregulated fishing (IUU) in a joint effort with FAO; and
 4. IMO is developing an instrument to secure the environmentally sound management and adequate compensation regarding shipwrecks, aiming at a Diplomatic Conference to conclude an instrument in 2002-2003.
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