

IMO and its activity on the safe transport of radioactive materials

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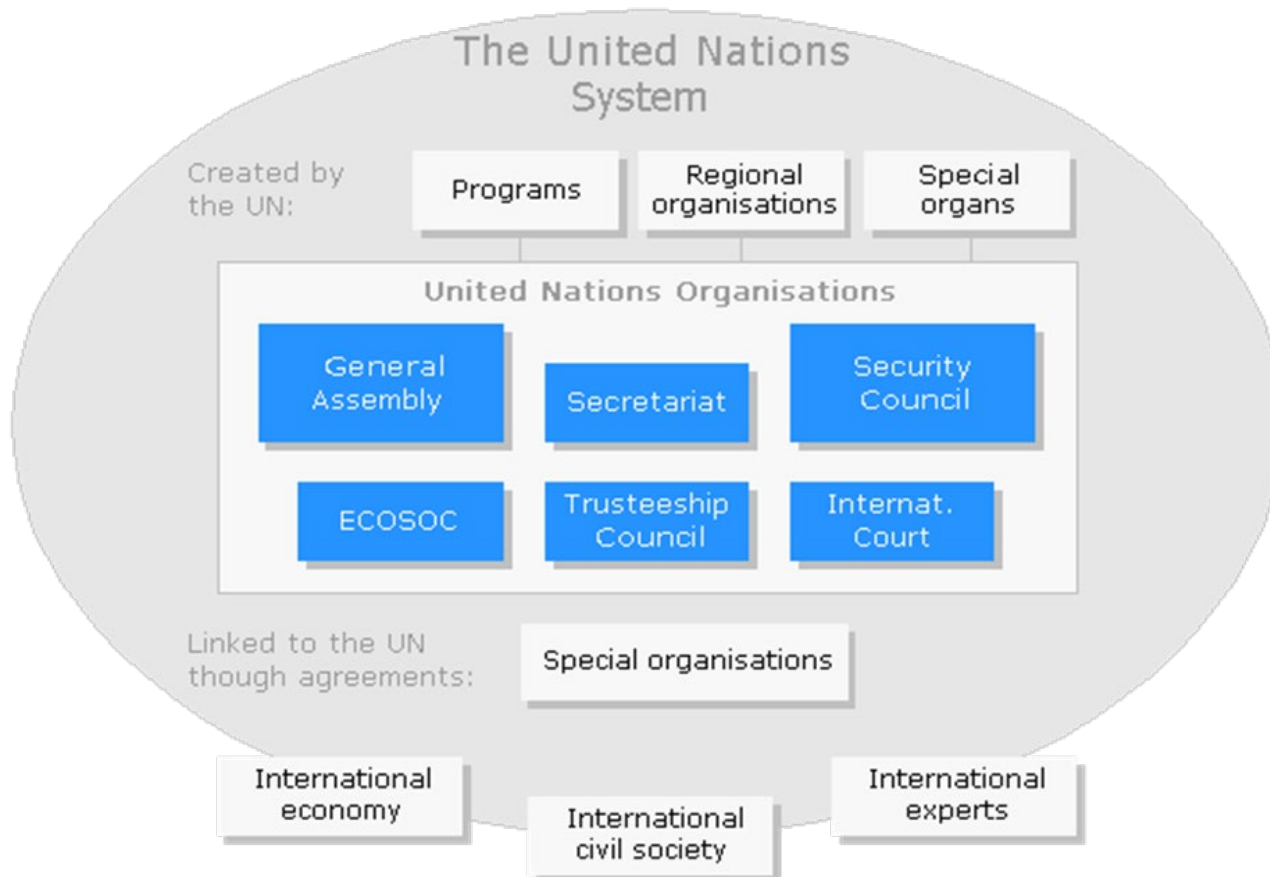


Brief introduction about IMO



Specialised UN agency

Focusing on developing and maintaining a comprehensive regulatory framework for shipping-safe, secure and efficient shipping on cleaner oceans



Brief introduction about IMO



to promote safe, secure, environmentally sound,
efficient and sustainable shipping through cooperation

Established in 1959

Headquarters in London, UK

Secretariat – about 270 staff, more than 50 nationalities



Brief introduction about IMO

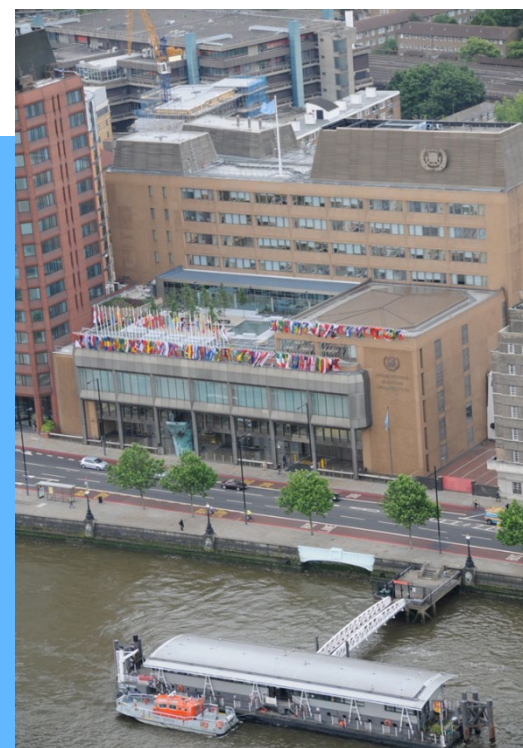


Financed by Shipping Nations

Annual budget £30+ million.

Contributions based on flat base rate with additional components based on ability to pay and merchant fleet tonnage.

Panama	£4.98m	14.99%
Marshall Islands	£3.40m	10.23%
Liberia	£3.38m	10.17%
Singapore	£1.97m	5.94%
Malta	£1.70m	5.12%
China	£1.43m	4.32%
Bahamas	£1.37m	4.13%
United Kingdom	£1.36m	4.09%
Greece	£0.96m	2.89%
United States of America	£0.90m	2.72%

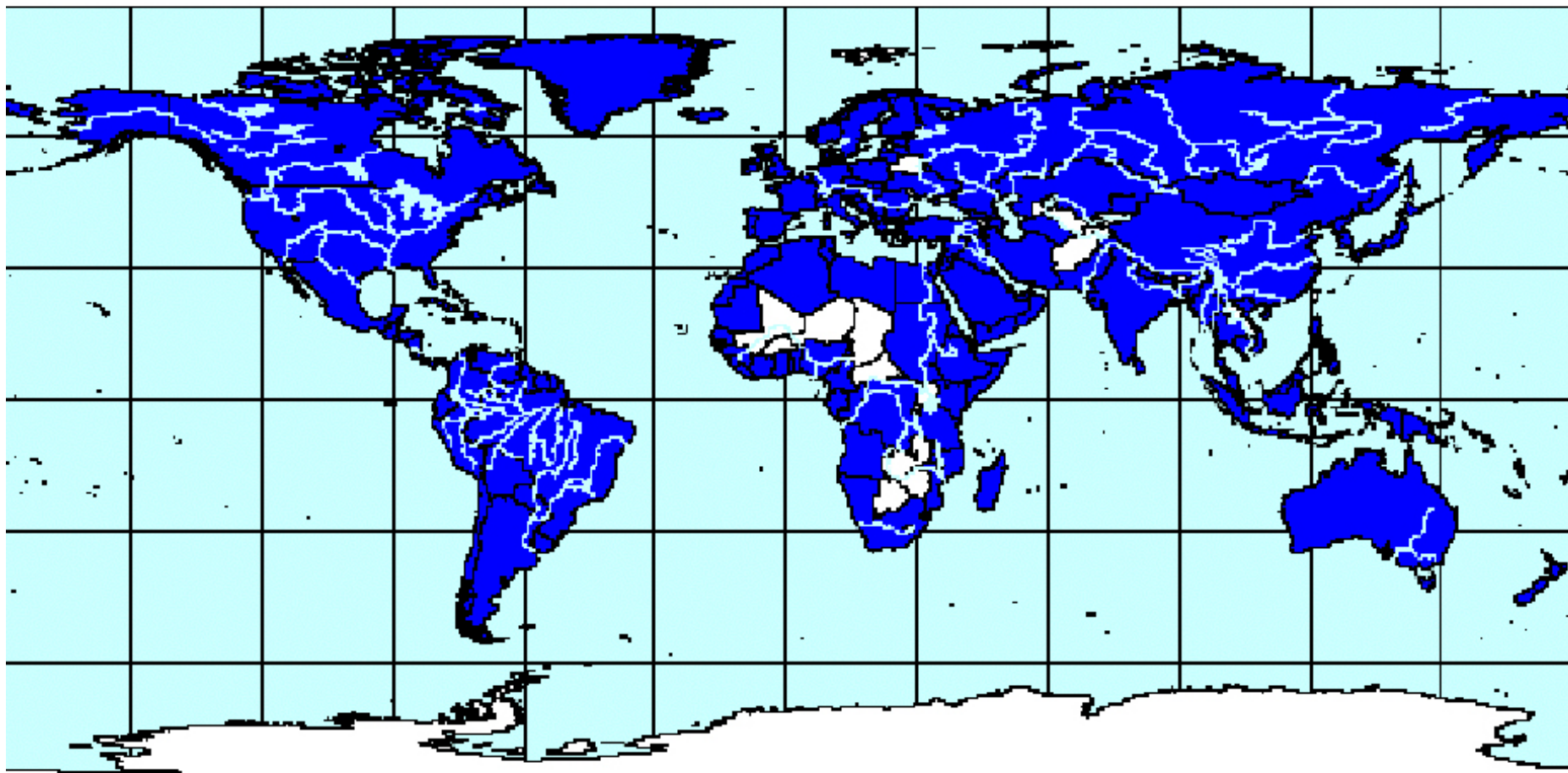


Brief introduction about IMO

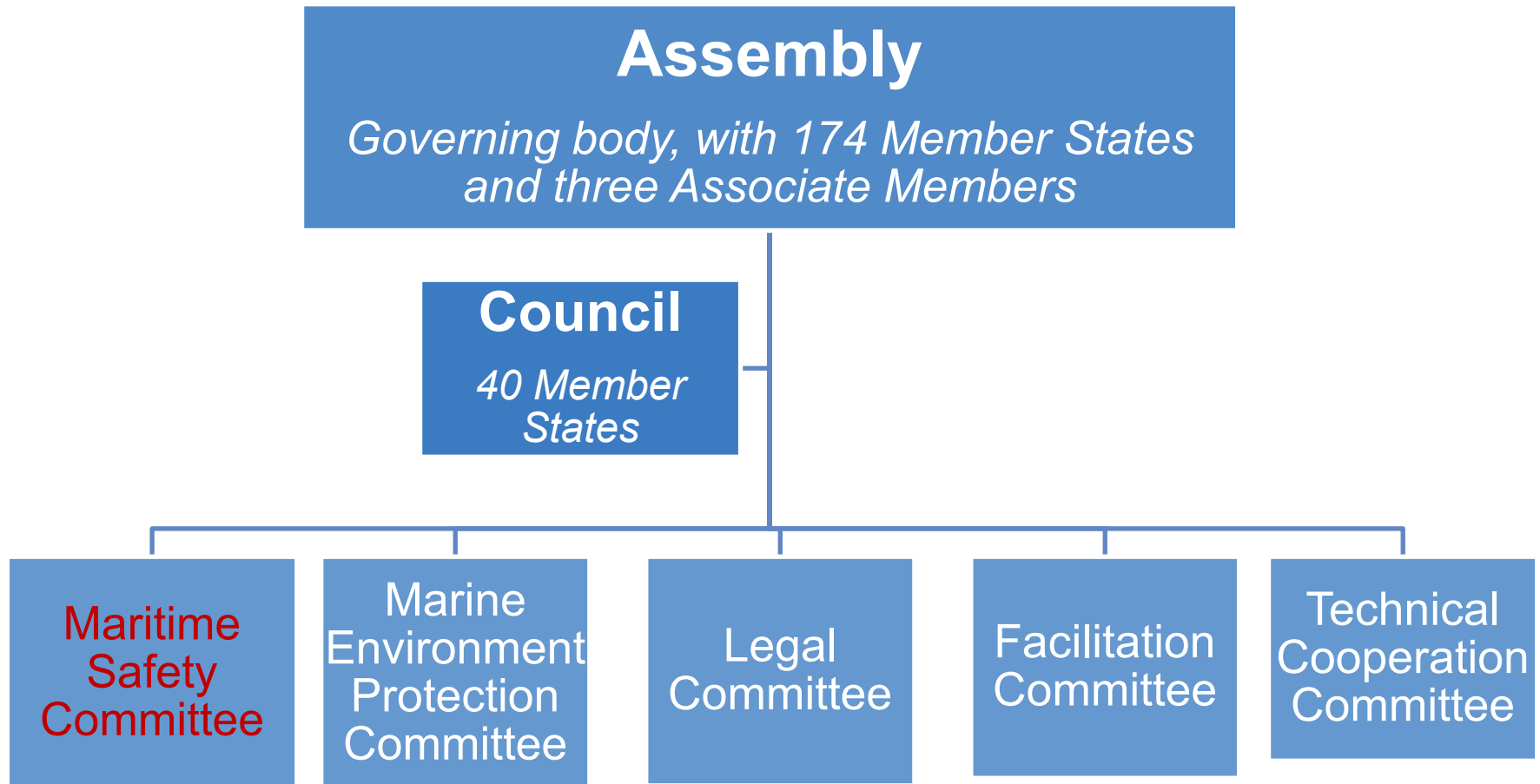


174 Member States, three associate members

IGOs and NGOs participate as observers



Brief introduction about IMO



IMO's regulation development

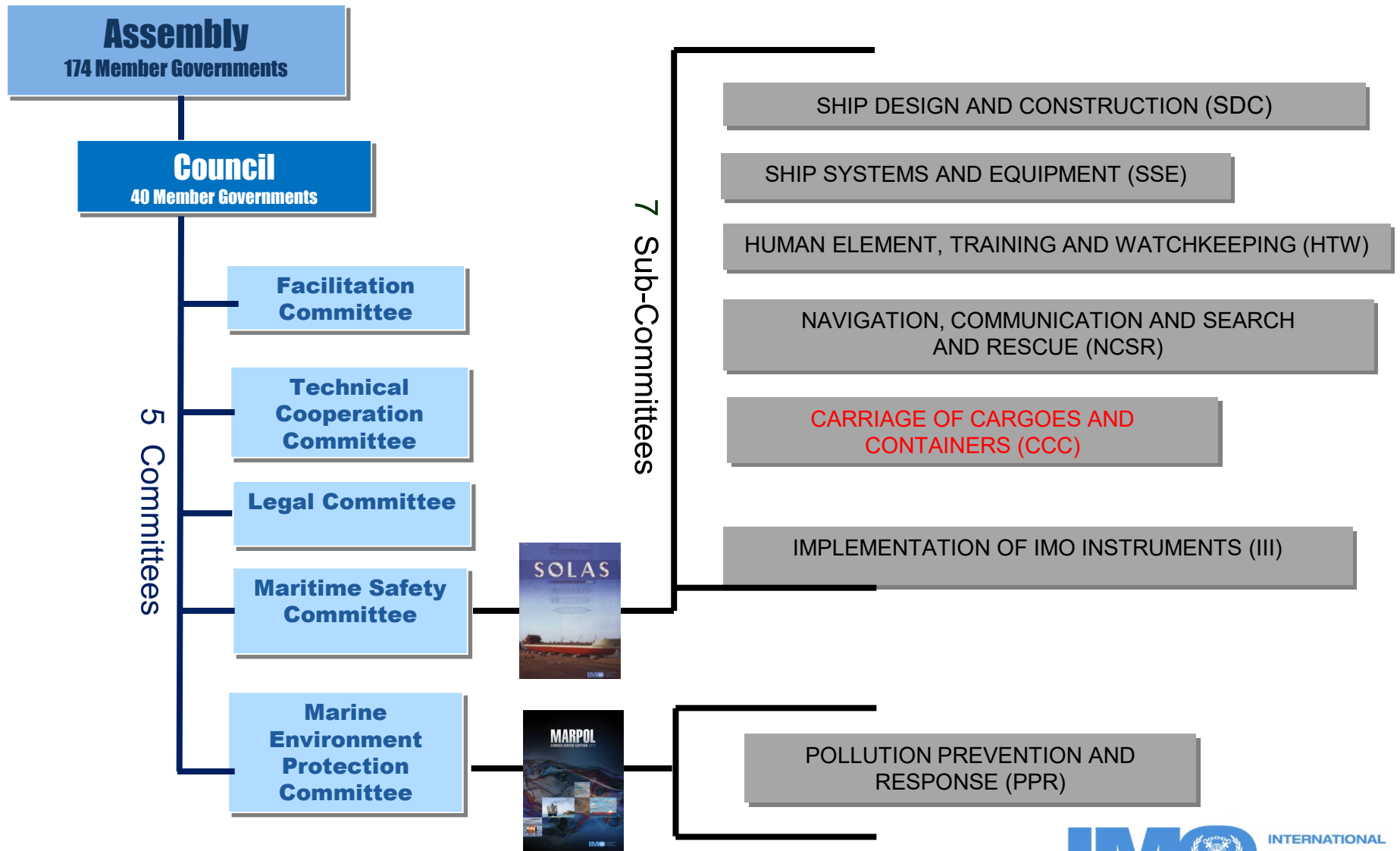


IMO is the intergovernmental body that deals with matters **on sea transport**, which are referred to it by its **Member Governments**.

IMO is mainly involved in development of international regulations, on the basis of **proposals** by Member Governments.

The practical design and application is the responsibility of the **maritime Administrations**.

IMO's regulation development



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- The collage displays six International Maritime Organization (IMO) manuals, arranged in two rows of three. Each cover includes the IMO logo in the bottom right corner.
- Top Left:** "Joint IMO/IHO/WMO Manual on **MARITIME SAFETY INFORMATION**" (2010 Edition). The cover features a dark, smoky background with a white flowchart illustrating the structure of the manual.
 - Top Middle:** "**FSS CODE** International Code for Fire Safety Systems" (2010 Edition). The cover shows a close-up of a fire hose nozzle with a red bar across the middle containing six fire safety icons.
 - Top Right:** "**SHIPS' ROUTING**" (2010 Edition). The cover depicts a blue sea with two ships sailing on a curved horizon under a clear sky.
 - Bottom Left:** "**IMDG CODE** INTERNATIONAL MARITIME Dangerous Goods Code" (2016 Edition). The cover shows a large industrial facility with multiple loading docks and cranes against a green and yellow background.
 - Bottom Middle:** "**MANUAL ON CHEMICAL POLLUTION** SECTION 2 - LEGAL AND ADMINISTRATIVE ASPECTS OF HAZARDOUS" (2010 Edition). The cover features three large metal drums (yellow, blue, and yellow) with various hazard labels.
 - Bottom Right:** "**GMDSS** GLOBAL MARITIME DISTRESS AND SAFETY SYSTEM **MANUAL**" (2010 Edition). The cover shows a stylized illustration of a ship's deck with various communication equipment and a red curved line representing a signal or path.

IMO's regulation development



IMO mission: safe, secure and efficient shipping on clean oceans



• SOLAS	167 Parties	98.89% world tonnage
• Load Lines	161 Parties	99.13% world tonnage
• MARPOL I/II	155 Parties	99.14% world tonnage
• MARPOL VI	88 Parties	96.16% world tonnage
• COLREG	156 Parties	98.72% world tonnage
• STCW	162 Parties	99.18% world tonnage

Maritime Regulatory Framework

Provisions on the carriage of radioactive material by sea are contained in:

1 SOLAS Convention

2 IMDG Code

3 INF Code

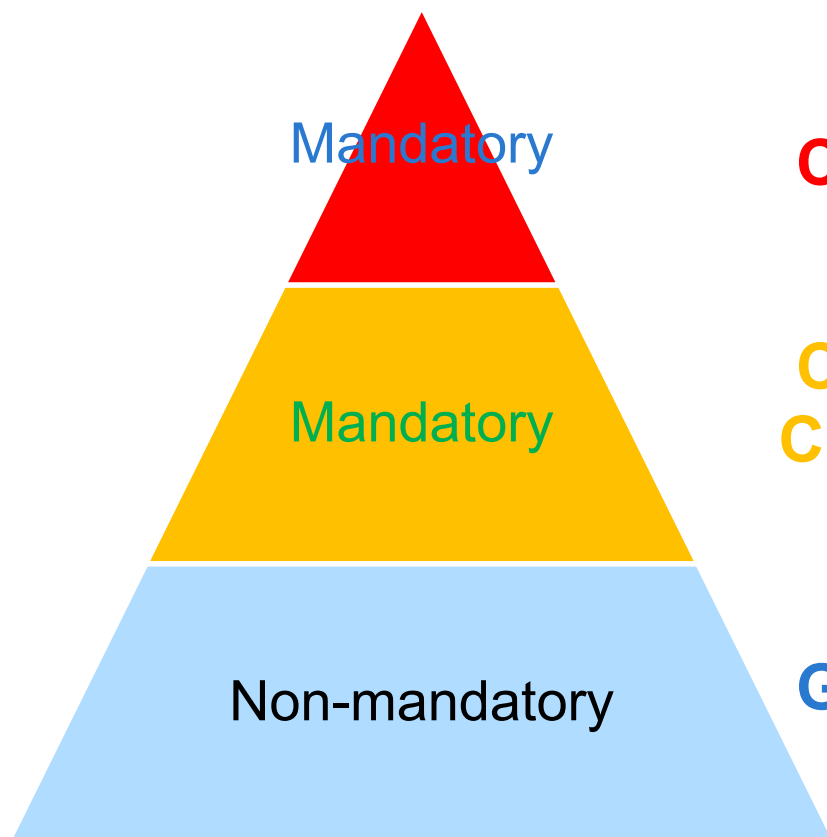
4 EmS Guide

5 ISPS Code

6 Related Documents



Maritime Regulatory Framework



Conventions (SOLAS)



reference/link

Codes (e.g. IMDG Code, INF Code, ISPS Code)



reference/link

Guidelines (e.g. MEAG, EmS, etc)

SOLAS Convention



First version adopted in 1914 when maritime nations gathered to develop international ship safety regulations following the loss of the **Titanic** two years earlier.

167 Parties **98.89%** world tonnage

SOLAS

Chapter VII, Carriage of Dangerous Goods

**Part A - Carriage of dangerous goods
in packaged form.**

**Part D - Special requirements for the
carriage of packaged irradiated nuclear
fuel, plutonium and high-level wastes on
board ship.**

**Regulations I/12, I/13, I/19 and XI/4
are relevant as well.**



Dangerous goods regulations



UN

ECOSOC



UN Recommendations on the transport of dangerous goods

ECE

IMO

ICAO

OTIF

MSC

MEPC

IATA

CCC

E&T
group

Road

Inland water

Rail

Maritime

Air

ADR
"European"
regulations.
Valid in 48
countries.

ADN
"European"
regulations. Valid
in 17 countries.

RID
"European"
regulations.
Valid in 47
countries.

**IMDG
Code
International**

ICAO-TI
IATA-DGR
International



International Maritime Dangerous Goods (IMDG) Code



IMDG Code

Provisions deal with the **stowage, segregation, packaging, classification, labelling, marking and placarding** of dangerous goods,*including radioactive material*

Chapter 1.4 – Security provisions

Chapter 1.5 - General provisions concerning class 7.

Chapter 2.7 - Class 7 – Radioactive material.

Chapter 6.4 - Provisions for the construction, testing and approval of packages and material of class 7.

Chapter 7.3 - Special provisions in the event of an incident and fire precautions involving dangerous goods.



International Maritime Dangerous Goods (IMDG) Code



Structure of the IMDG Code

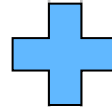
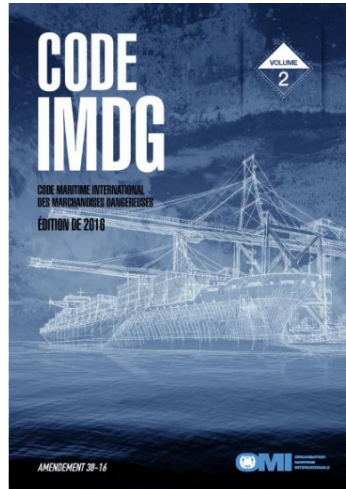
Volume 1

- **Part 1,2,4,5,6 and 7**
- General provisions, Definitions and Training
- Classification
- Packing and tank provisions
- Consignment procedures
- Construction and testing of packagings, IBCs, Large packagings, Portable tanks, etc.
- Provisions concerning transport operations



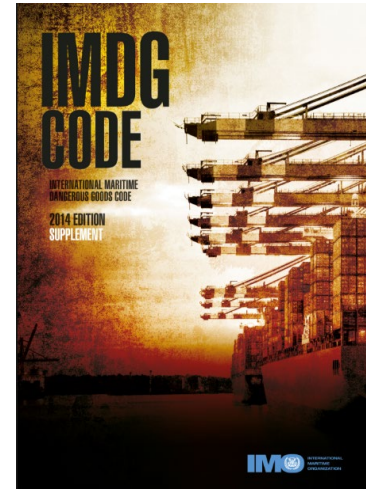
Volume 2

- **Part 3**
- Dangerous Goods List, Special Provisions and Exceptions



Supplement

- EmS Guide
- MFAG
- INF Code
- Related resolutions and circulars





International Code for the Safe Carriage of Packaged Irradiated Nuclear Fuel, Plutonium and High-Level Radioactive Wastes on board Ships

INF Code

**mandatory under SOLAS 1974 and
has entered into force effective
January 2001**

(Part D of chapter VII of the SOLAS Convention, a ship transporting INF cargo, as defined in regulation VII/14.2, shall comply with the requirements of the International Code for the Safe Carriage of Packaged Irradiated Nuclear Fuel, Plutonium and High-Level Radioactive Wastes on board Ships (INF Code).)

**Addresses issues related to the safe transport
of packaged irradiated nuclear fuel, plutonium
and high-level radioactive wastes carried as
cargo, in accordance with class 7 of the IMDG
Code, including shipboard emergency plan, and
notification in the event of an incident involving
INF cargo**

NOTE:

**In addition to the requirements of the INF Code,
the provisions of the IMDG Code shall apply
to the carriage of INF material**





INF Code Contents

Comprises of 11 chapters and an Appendix.

Chapter 1 -Definitions, application, survey and certification .

Chapters 2 to 8 - ship design, construction and equipment.

Chapter 9 - Management and Training.

Chapter 10 - Shipboard emergency plan.

Chapter 11 - Notification in the event of an incident involving INF cargo.

Appendix - International certificate of fitness for carriage of INF cargo

NOTE:

Generally, these requirements are considered to be more stringent than in SOLAS.



Ship and Port Facility Security



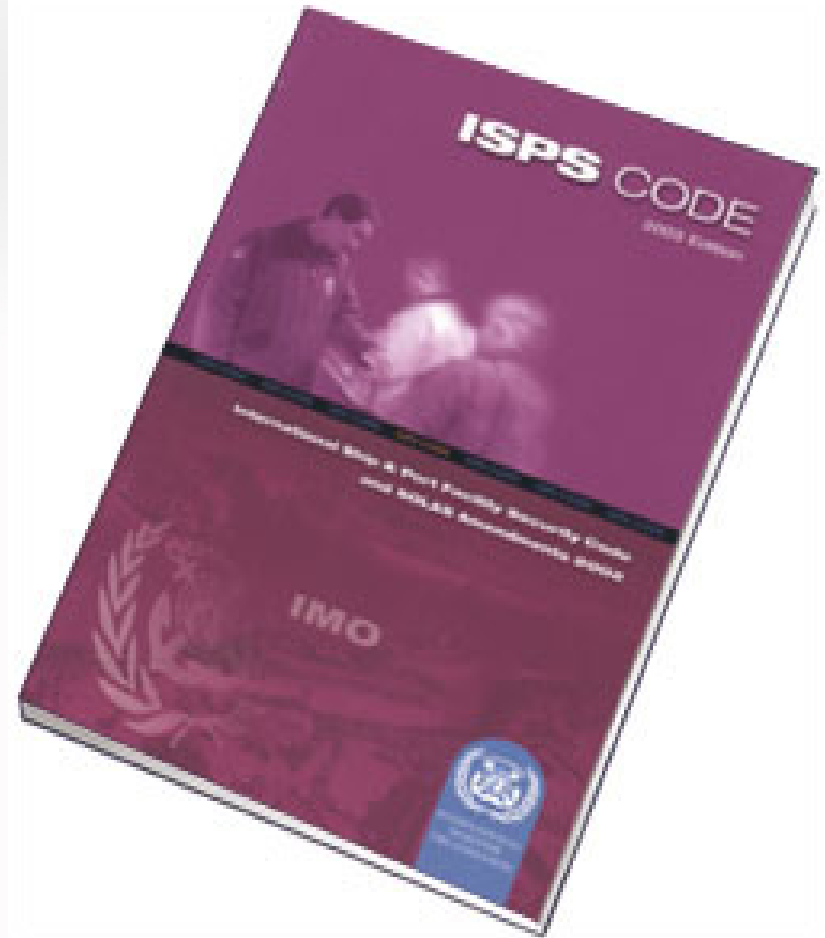
ISPS Code

ISPS Code adopted on 12 December 2002

Part A of the Code is mandatory from 1 July 2004
under the umbrella of **SOLAS Convention**
Chapter XI-2

Its Objective :

- creates an **international framework** involving Governments, local administrations and port/shipping industries to **detect/assess security threats** and **take preventive measures**
- sets the respective **roles and responsibilities** of all the parties concerned;
- provides a methodology for **security assessments**;
- advises on comparison and exchange of security-related information.



Ship and Port Facility Security



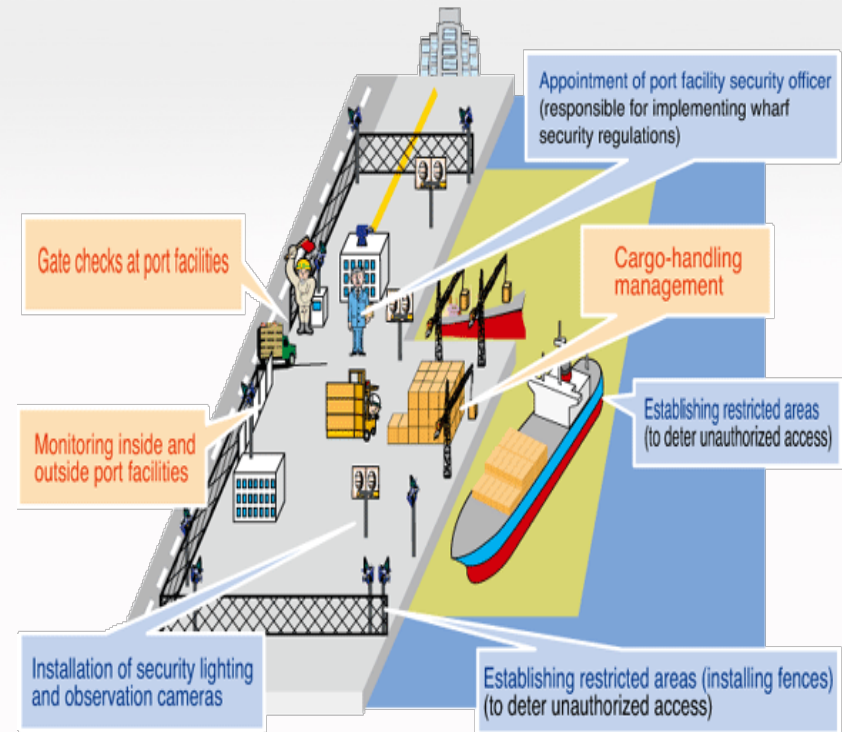
ISPS Code....cont

ships and port facilities can co-operate to detect and deter acts which threaten security in the maritime transport sector.

Entered into force on 1 July 2004

Currently applies to 167 States

Divided into two sections, the ISPS code contains detailed **security-related requirements** for Governments, port authorities and shipping companies in mandatory Part A, and **a series of guidelines** on how to meet those requirements in a non-mandatory Part B.



Piracy and armed robbery against ships

IMO has taken various measures on piracy in cooperation with relevant organizations

- The number of piracy peaked in the region of south-east Asia around year 2000, off the coast of Somalia around 2010 and now in west and central Africa
- internationally co-ordinated measures include many IMO guidelines/resolutions, naval ships patrol, industries' best management practice; and regional cooperation scheme initiated by IMO
- IMO Guidance to PMSC (private maritime security companies) providing PCASP (privately contracted armed security personnel)
- Cyber security, Counter-terrorism, Drug smuggling, Capacity building, etc.



Emergency response



EMERGENCY RESPONSE PROCEDURES FOR SHIPS CARRYING DANGEROUS GOODS

(EmS Guide)

Contains guidance on emergency response procedures for ships carrying dangerous goods including the emergency schedules to be followed in case of incidents involving dangerous goods regulated under the IMDG Code

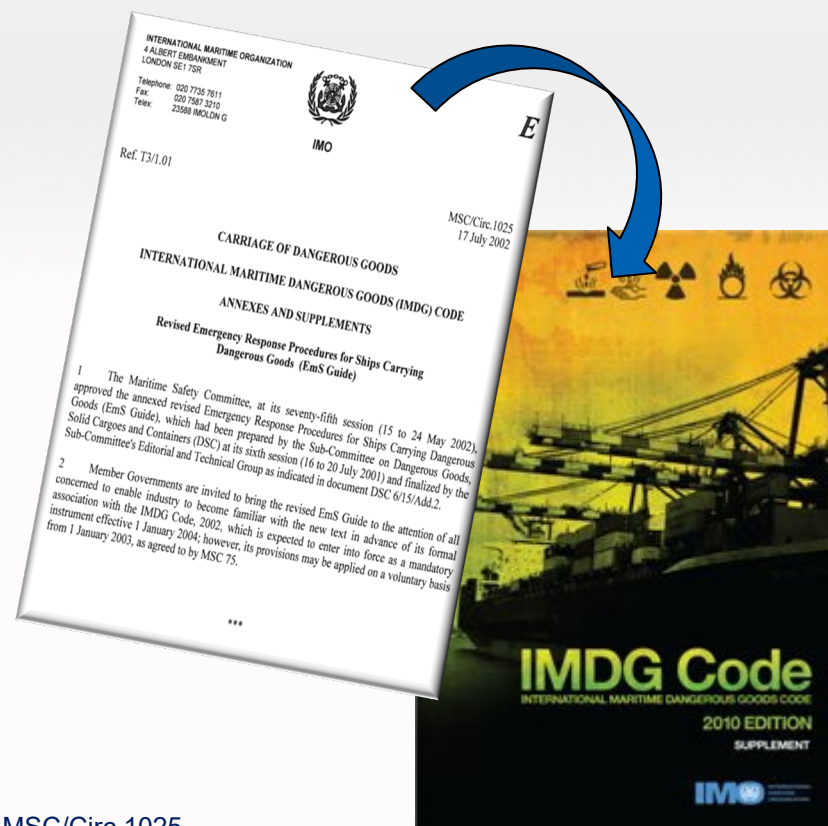
Guidance mainly in two parts, 'F' and 'S'

Part 'F' dealing with fire schedules

Part 'S' dealing spillage schedules

NOTE:

Schedules 'F-I' and 'S-S' developed in cooperation with IAEA's safety regulations and therefore the Agency's relevant provisions are incorporated



MSC/Circ.1025

(as amended by MSC.1/Circ.1025/Add.1)

17 July 2002

**Revised Emergency Response Procedures
for Ships Carrying Dangerous Goods (EmS Guide)**

Relevant instruments



Guidelines for a structure of an integrated system of contingency planning for shipboard emergencies (A.852(20))

IMO/WHO/ILO Medical First Aid Guide for Use in Accidents Involving Dangerous Goods (MFAG)

Revised Guidelines for the Prevention and Suppression of the Smuggling of Drugs, Psychotropic Substances and Precursor Chemicals on Ships engaged in International Maritime Traffic (MSC.228(82))

Guidelines for developing shipboard emergency plans for ships carrying materials subject to INF Code (A.854(20))

Guidelines for voyage planning (A.893(21))

Revised recommendations on the safe transport of dangerous cargoes and related activities in port areas (MSC.1/Circ.1216)

On-going discussions



Close collaborations with IAEA

Training materials for the safe and efficient transport of radioactive materials by sea, i.e. an e-learning course for sea transport

TI and CSI limits

Responses to radiological and nuclear emergencies

Denials and difficulties of shipment





IMO has chosen to make 2021 a year of action for seafarers, who are facing unprecedented hardship due to the COVID-19 pandemic, despite their vital role as key workers for global supply chains.

The World Maritime Theme for 2021, "Seafarers: at the core of shipping's future" seeks to increase the visibility of seafarers by drawing attention to the invaluable role they play now and will continue to play in the future.

Thank you !



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