

Digitalization ship-port interface

2021 WCO TECH-CON

November 2021

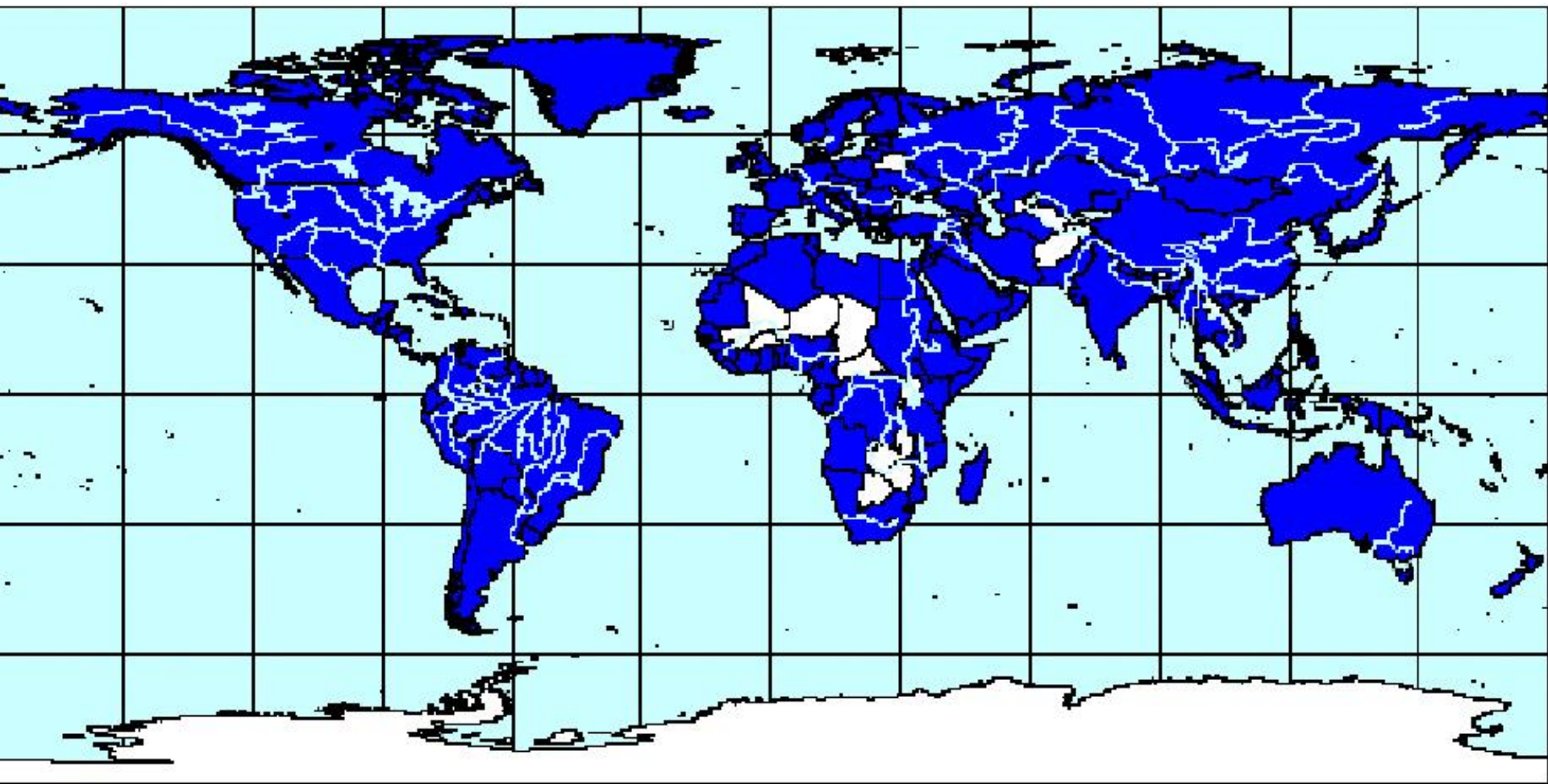


IMO

- sets standards for vessel safety
- protects the environment from shipping activities
- has established global provision for search and rescue
- ensures all seafarers are properly trained and competent
- ensures compensation is available when accidents happen



174 Member States, 3 Associate Members, NGOs and IGOS



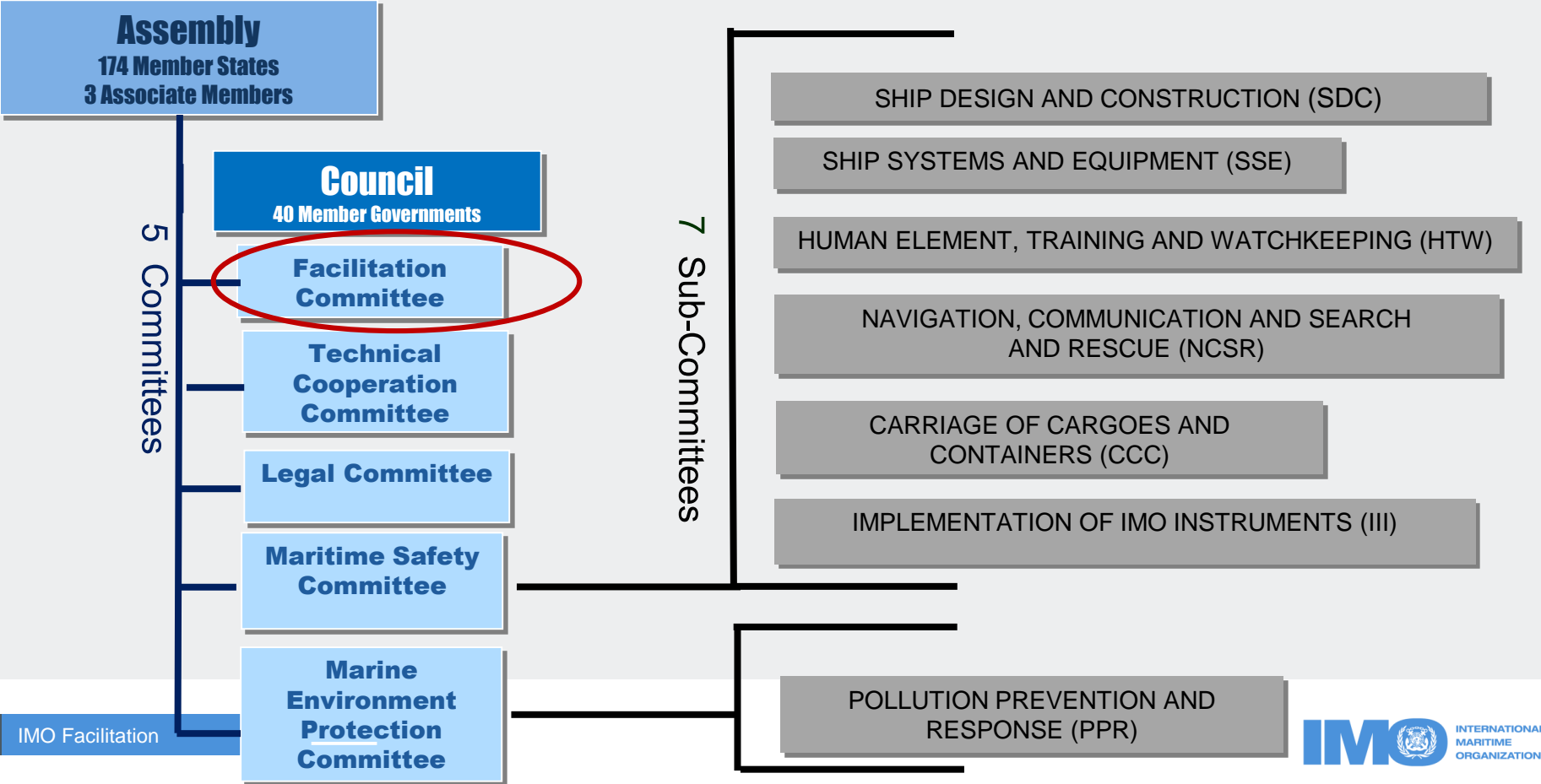
What IMO does.....

Develop and adopt regulations. 53 treaty instruments, many guidelines, Codes etc. Main conventions widely ratified.

- SOLAS 165 Parties 99.04% world tonnage
- Load Lines 162 Parties 99.03% world tonnage
- MARPOL I/II 158 Parties 99.01% world tonnage
- MARPOL VI 95 Parties 96.71% world tonnage
- COLREG 160 Parties 99.03% world tonnage
- STCW 165 Parties 99.03% world tonnage
- FAL 124 Parties 94.93% world tonnage

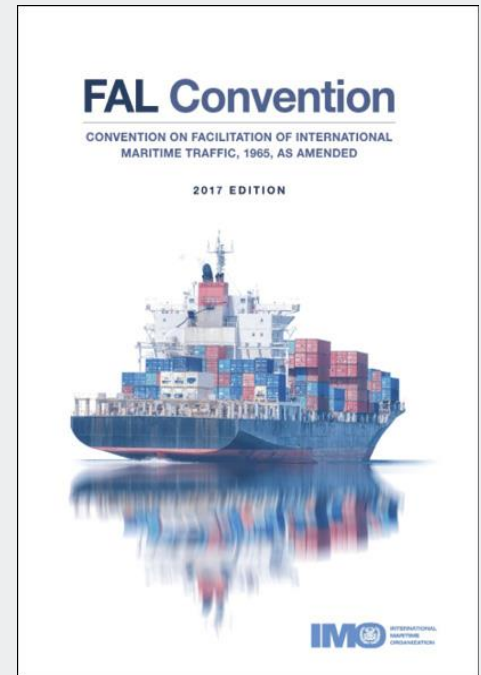


IMO MEETINGS



THE FAL CONVENTION - FACILITATION OF INTERNATIONAL MARITIME TRAFFIC

- ✓ Adopted: **1965**, Entered into force: **1967**
- ✓ Number of Contracting Governments: **125**
- ✓ Number of Associate Members: **3**
- ✓ World tonnage: **95.30 %** of the world's fleet
- ✓ **51** IMO member States are **not yet** part of FAL
- ✓ **Scope** of application: **Do not apply** to warships or pleasure yachts. It applies to all ships engaged in international voyages .
- ✓ **Structure**: 16 articles and an Annex of 7 chapters



THE FAL CONVENTION - FACILITATION OF INTERNATIONAL MARITIME TRAFFIC

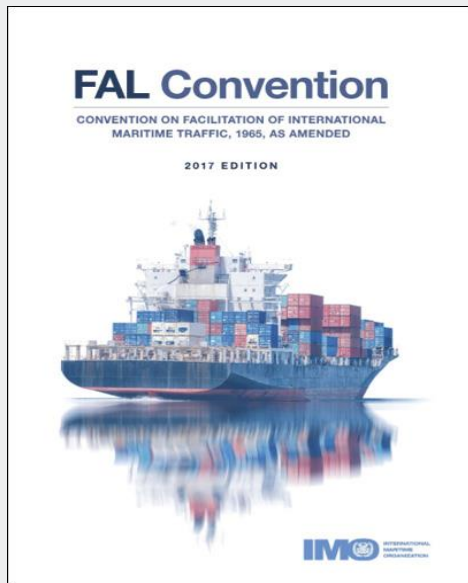
✓ **Articles:** Scope of the Convention, General Provisions, Amendment Procedures, Notifications, Entry into Force

✓ **Annex**

1. Definitions and general provisions;
2. Arrival, stay and departure of the ship;
3. Arrival and departure of persons;
4. Stowaways;
5. Arrival, stay and departure of cargo and other articles;
6. Public health and quarantine, including sanitary measures for animals and plants;
7. Miscellaneous provisions.

✓ **Appendixes**

- 1 - IMO FAL Forms
- 2 - Letter for arrival and departure of persons
- 3- Form of stowaway details
- 4- Additional info as per IMDG Code



THE FAL CONVENTION - FROM PAPER TO ELECTRONIC CLEARANCE IN PORTS

New amendments to FAL Convention introduced in 2016
(Annex, Section 1. C - Systems for the electronic exchange of information)

- ✓ Member States to set up electronic exchange of information to assist clearance processes in ports by **8 April 2019**
- ✓ Single Window approach is recommended

Implementation levels in 2020

- ✓ IAPH survey on implementation of FAL requirement (Oct. 2020)
 - 1/3 of respondents not started, 1/3 designing and 1/3 operational
 - Complexity of clearance processes (multi-stakeholder, legal framework)

THE FAL CONVENTION – FROM PAPER FORMS TO ELECTRONIC INFORMATION EXCHANGE

✓ The declarations for ship arrival and departure are:

- General Declaration (FAL form 1)
- Cargo Declaration (FAL form 2)
- Ship's Stores Declaration (FAL form 3)
- Crew's Effects Declaration (FAL form 4)
- Crew List (FAL form 5)
- Passenger List (FAL form 6)
- Dangerous Goods Manifest (FAL form 7)

Since 2018, additional declarations entered in force

- Security-related information as required under SOLAS regulation XI-2/9.2.2
- Advance electronic cargo information for customs risk assessment purposes
- Advanced notification form for waste delivery to port reception facilities

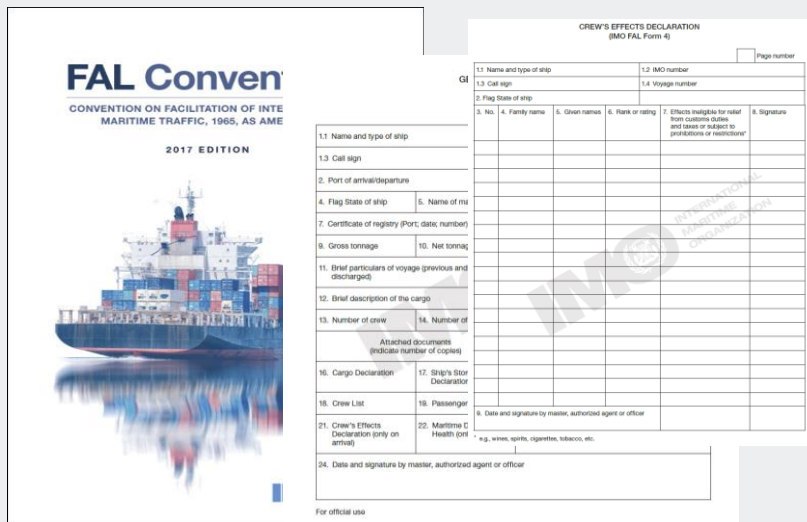
Two other documents may also be required:

- Maritime Declaration of Health (IHR)
- Document under Universal Postal Convention for mail

THE FAL CONVENTION – FROM PAPER FORMS TO ELECTRONIC INFORMATION EXCHANGE

FAL CONVENTION (2017 edition)

- ✓ FAL FORMS: Standardized documentation
- ✓ Limits the information requirements from onshore authorities when ships call ports
- ✓ Member States to set up electronic exchange of information to assist clearance processes in ports by 8 April 2019
- ✓ SW approach recommended



Ongoing review of the FAL CONVENTION (2021)

- ✓ Remove references to 'document' from the Convention to reflect electronic exchange of information
- ✓ From FAL forms to a set of information requirements
- ✓ Single Window approach to become mandatory (data submitted only once through one entry-point)

THE IMO COMPENDIUM ON FACILITATION AND ELECTRONIC BUSINESS

WHY

- Standards are essential facilitators for efficient and safe implementation of digitalization
- Need for harmonization since different standards are used in shipping

WHAT

- IMO Compendium is a tool for harmonization and linking to existing standards
- Consists of IMO Data Set + IMO Reference Data Model
- common semantics and representation that can be used unambiguously across and between different implementations/stakeholders
- Jointly developed with WCO, UNECE, ISO, the main organizations involved in the development of standards related to the FAL Convention
 - Partners provide syntax mapping to standards.
 - Partnership agreement (March 2020) with WCO, UNECE, ISO for maintenance & update

MILESTONES

- **FAL 28** (November 2000): First version, included standard UN/EDIFACT of FAL Forms + Security report only
- **FAL 42** (June 2018): approved new format and to expand the scope beyond the FAL forms.
- **FAL 43** (April 2019): approved new version (FAL.5/Circ.41), including data sets of FAL Forms + Security Report + Waste;
- **FAL 44** (October 2020): approved new version (FAL.5/Circ.43), with additional data sets: Maritime Declaration of Health and Timestamps for Just in Time Concept;
- **FAL 45** (June 2021): approved new version (FAL.5/Circ.44), with additional data sets: Stowaways, acknowledgement receipts.

THE IMO COMPENDIUM ON FACILITATION AND ELECTRONIC BUSINESS

IMO Compendium

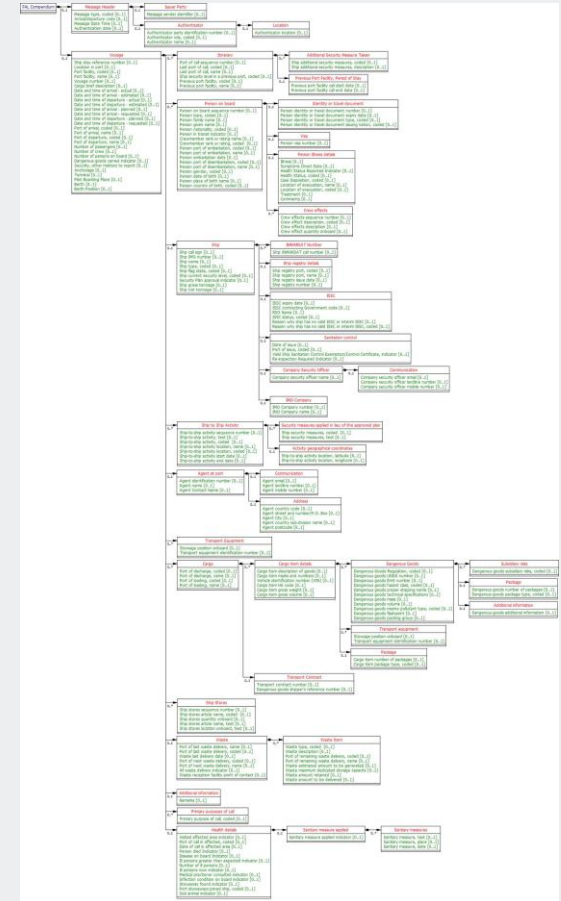
- Preamble of FAL.S/Circ.44
 - History
 - Read me
- Compendium**
- Purpose and use
 - IMO Data set
 - Introduction
 - IMO Data elements
 - IMO Reference data model
 - Implementation business rules
 - Codes maintained by IMO
 - Syntax mappings
- Overview of changes

IMO Compendium on Facilitation and Electronic Business

> Data set - Data Elements

Correlation to IMO Standard Forms

Chg.	Data number	Data element	Definition	Gen. Decl.	Cargo Decl.	Ships Store Decl.	Crew's Effects Decl.	Crew List	Pass. List	Dang. Goods Man.	Sec. Report	Waste Del. Report	Mar. Decl. Health	Just in Time Conc.	Stowaway	Ack. Receipt	Mar. Serv.	Format	Code Lists	Business rules	
		Carried out during the period of the last ten calls	Carried out during the period of the last ten calls																		
	IMO167	Ship-to-ship activity location, coded	A code representing the location of the ship-to-ship activity which has been carried out during the period of the last ten calls								3.4							an.5	UNLOCODE	BR 06	
	IMO168	Subsequent part of call name	The name and country of a scheduled subsequent port of call															an.256		BR 21	
	IMO169	Subsequent part of call, coded	A code representing a scheduled subsequent port of call															an.5	UNLOCODE		
	IMO170	Transport contract number	A reference number to identify a document evidencing a transport contract (e.g. Bill of Lading)															an.70			
	IMO172	Primary purpose of call, coded	A code representing the primary reason for the ship to enter the referenced port.								2.3							an.3	UNEDIFACT codes 8025		
	IMO173	Waste estimated amount to be generated	The estimated volume of waste to be generated between notification and next port of call (m3).									Page 2						n.16.6		BR 03 BR 07 BR 09 BR 13 BR 16	
	IMO174	Waste amount to be delivered	The volume of waste the ship plans to deliver (m3).										3					n.16.6		BR 03 BR 06 BR 13 BR 16	
	IMO175	Waste amount retained	The volume of waste the ship plans to retain on board (m3).									Page 2						n.16.6		BR 03 BR 07 BR 09 BR 13 BR 16	
	IMO176	All waste delivery indicator	A 'yes/no' indicator of whether the ship is delivering all waste on board the ship.									Page 2						n1	yes/no indicator (Y/N/0)		
	IMO179	Waste last delivery date	The last date when waste of any type was delivered.										2.7					an.35			
	IMO180	Waste maximum dedicated storage capacity	Maximum dedicated storage capacity on board for this type of waste in cubic metres (m3).									Page 2						n.16.6		BR 03 BR 07 BR 09 BR 13 BR 16	
	IMO181	Waste reception facility point of contact	The name of the person to contact at the waste reception facility regarding ship waste delivery.										2.1					an.70			
	IMO183	Waste type, coded	A code representing the type of waste being delivered.										3					an.3	To be defined		
	IMO184	Port facility, coded	A code representing the port facility at the port of call.										2.1					an.17	UNLOCODE Facility Identifier (e.g. IALRM-6456)	BR 06	
	IMO185	Port facility name	The name and country of a port facility at the port of call.															an.256		BR 22	
	IMO186	Dangerous goods additional information	A statement of any other information relevant to the characteristics or hazards of the referenced dangerous goods cargo item.																an.256		
	IMO187	Dangerous goods package type, coded	A code representing the package type of the referenced dangerous goods.															an.2	UNECE Recommendation 21 Annex VI (UNEDIFACT Codes)		



THE IMO COMPENDIUM ON FACILITATION AND ELECTRONIC BUSINESS

- ✓ New version available on **FAL.5/Circ.44**
(Approved by FAL 45 – June 2021)
 - Purpose and use
 - The IMO Data Set
 - The IMO Reference Data Model
 - Implementation Business Rules
 - Code lists maintained by IMO
 - Annexes**
 - ✓ Annex 1: WCO Data mapping
 - ✓ Annex 2: UNECE Data mapping
 - ✓ Annex 3: ISO Data mapping
- ✓ Available online [IMO Reference Data Model](#)
- ✓ Updates are annual and approved by the **FAL Committee**

THE IMO COMPENDIUM ON FACILITATION AND ELECTRONIC BUSINESS

- ✓ Partnership agreement (March 2020) with WCO, UNECE, ISO for maintenance & update.
- ✓ **IMO Expert Group on Data Harmonization (EGDH)** set up by the FAL Committee in 2019
 - Meets twice a year intersessionally;
 - Maintains the IMO Compendium;
 - Extends IMO Compendium beyond FAL Convention information requirements
 - Examples: WHO Maritime Declaration of Health, operational data (Just-in-time), stowaway's data, ship certificates, environmental data, ship reporting systems

JUST-IN-TIME CONCEPT /PORT CALL OPTIMIZATION

The FAL Committee supports other IMO bodies in electronic data exchange

✓ Just-in-Time Arrival Concept

- Resolution MEPC.323(74) – Invitation to Member States to encourage voluntary cooperation between the port and shipping sectors to contribute to reducing GHG emissions from ships.
- Maintaining the most efficient ship operating speed to arrive to the Pilot Boarding Station when availability is ensured of the berth, fairway and nautical services.
- Just-in-time requires good and early communication with the port and harmonization amongst all relevant stakeholders involved
- Two IMO Data sets to support JIT
 - Port arrival/departure timestamps
 - Port call services timestamps



Change Indicator	Data Number	Data Element	Definition	Just in Time Concept		Code lists	Business rules
				Just in Time Concept	Format		
+	IMOG231	Pilot Boarding Place					
+	IMOG232	Berth					
+	IMOG233	Berth Position					
+	IMOG234	Date and time arrival - requested		X	en_35		
+	IMOG235	Date and time arrival - planned		X	en_70		
+	IMOG236	Date and time departure - requested		X	en_17		BR 01
+	IMOG237	Date and time departure - planned		X	en_35		BR 01
	IMOG014	Authentication date	The date of authentication.	X	en_35		
	IMOG019	Authenticator name	The name of the person allowing to the validity of the transmitted information.	X	en_70		BR 23
	IMOG017	Authenticator party identification number	The party allowing to the validity of the transmitted information.	X	en_17		BR 01
	IMOG003	Date and time of arrival - actual	The date and time the ship arrives at a specified location, ETA.	X	en_35		BR 01
	IMOG004	Date and time of arrival - estimated	The date and time the ship is estimated to arrive at a specified location, ETA.	X	en_35		BR 01
	IMOG005	Date and time of departure - actual	The date and time the ship departs from a specified location, ETD.	X	en_35		BR 01
	IMOG006	Date and time of departure - estimated	The date and time the ship is estimated to depart from a specified location, ETD.	X	en_35		BR 01
	IMOG108	Port of arrival - coded	The code representing the port where the ship arrives.	X	en5	UNLOCODE	
	IMOG128	Authenticator role - coded	A code representing the role of the person allowing to the validity of the transmitted information.	X	en_3	ISOPACT codes (3035)	
	IMOG183	Ship stay reference number	The reference number assigned by a port authority to the stay of a ship in the port.	X	en_35		
	IMOG229	Anchorage	The area in which ships anchor or may anchor (IMO Hydrographic Dictionary S-32).	X	en_206		
	IMOG230	Terminal	A number of berths grouped together and provided with facilities for handling cargo (IMO Hydrographic Dictionary S-32).	X	en_206		

THE MARITIME SINGLE WINDOW – IMO GUIDANCE

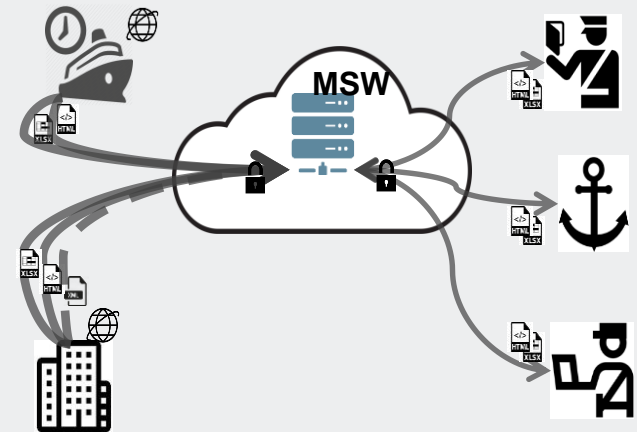
- ✓ **IMO Guidelines for setting up a Maritime Single Window**
FAL.5/Circ.42/Rev.1- Approved FAL 45 (June 2021)

Purpose:

- ✓ Assisting IMO Member States in setting up a MSW
- ✓ Guidelines cover the entire life cycle of the setting up of a MSW
- ✓ Increase competitiveness of IMO Member States
- ✓ No preference on standards!

Contents:

- ✓ Definitions and an roles among the parties, user groups
- ✓ MSW guidelines (Scope, Data Elements, Harmonization, Legislation)
- ✓ Case studies, best practices



THE MARITIME SINGLE WINDOW – TECHNICAL COOPERATION

- IMO Maritime Single Window project for SIDS
 - MSW Antigua and Barbuda funded by Norway
 - Technical expertise provided by the Norway
 - The MSW source code is Open Source and is available to other IMO Member States
- IMO SWiFT project in partnership with Singapore
 - Initial pilot project supported by Singapore and IMO
 - MSW development targeting medium size ports
 - Provides port-to-port connectivity features (API)
- IMO capacity building activities on FAL Convention, MSW, electronic data exchange
 - Raise awareness and understanding of PCS/MSW within key stakeholders
 - Needs assessment missions



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