Table of Contents

1 Catalogue header information

Name: Interim Feature Catalogue for S-131
Scope: Global coverage of maritime areas
Field of Application: Marine Harbour Infrastructure
Version Number: 1.0.0-20220615
Version date: 2022-06-15
Producer information:
Individual name:
Organisation name: International Hydrographic Organization
Phone:
Address:

Delivery point	City	Administrative area	Postal code	Country	Email address
		4b quai Antonie 1er		Monaco	info@iho.int

Online resource information:
Hours of Service:
Contact Instructions: Portolan Sciences LLC
Position Name:
Role: pointOfContact
Classification: unclassified

2 Definition Sources

- Source Id (internal catalogue tag): IHOREG
  Title: IHO GI Registry
  Identifier:

- Source Id (internal catalogue tag): IHOCONREG
  Title: IHO Geospatial Information Registry - Concept Register
  Identifier:
  Other citation details: Existing concepts

- Source Id (internal catalogue tag): PROPOSED
  Title: IHO GI Register proposal, currently pending approval
  Identifier:

3 Simple Attributes

3.1 Administrative Division

Name: Administrative Division [IHOREG 384]
Definition: A generic term for an administrative region within a country at a level below that of the sovereign state.
Code: `administrativeDivision`
Remarks:
Aliases: (none)
Value Type: text

3.2 Applicable Load Line Zone

Name: Applicable Load Line Zone [PROPOSED applicableLoadLineZone]
Definition: The load line zone in which the port is located. Defined by the International Convention on Load Lines.
Code: `applicableLoadLineZone`
Remarks:
Aliases: (none)
Value Type: text

3.3 Application Profile

Name: Application Profile [IHOREG 389]
Definition: Name of an application profile that can be used with the online resource.
Code: `applicationProfile`
Remarks:
Aliases: (none)
Value Type: text

3.4 Approach Description

Name: Approach Description [PROPOSED approachDescription]
Definition: Description of the approach to a location.
Code: `approachDescription`
Remarks:
Aliases: (none)
Value Type: text

3.5 Associated Feature Name

Name: Associated Feature Name [PROPOSED associatedFeatureName]
Definition: The name of an associated feature.
Code: `associatedFeatureName`
Remarks:
Aliases: (none)
Value Type: text

3.6 Available Berthing Length

Name: Available Berthing Length [PROPOSED availableBerthingLength]
Definition: The length of a berth or dock which is available for use.
Code: `availableBerthingLength`
Remarks:
Aliases: (none)
Value Type: real

Unit of measure name: metre definition: SI Metre symbol: m

Quantity specification: length

Constraints

string Length	text Pattern	range		precision
(not specified)	(none)	lowerBound	0.0	(not specified)
		upperBound	(none)	
		closure	gtSemiInterval	

For real values, precision is the number of digits after the decimal point.

3.7 Berthing Assistance

Name: Berthing Assistance [PROPOSED berthingAssistance]
Definition: Classification of assistance for mooring or anchoring operations.
Code: `berthingAssistance`
Remarks:
Aliases: (none)
Value Type: enumeration

Listed Values

Label	Definition	Code	Remarks
`Berthing Information`	Information about assistance or arrangements for a service related to berthing operations. [PROPOSED berthingInformation]	`1`	
`Line Personnel`	Personnel specializing in the mooring and unmooring of vessels. [PROPOSED linePersonnel]	`2`	
`Mooring Boat`	A boat which assists the securement of a vessel to a berth or mooring with ropes or anchor. [PROPOSED mooringBoat]	`3`	
`Mule`	A locomotive for moving vessels. [PROPOSED mule]	`4`	
`Tugboat`	A powerful small boat designed to pull or push larger ships or powerless barges. [IHOREG tugboat]	`5`	"Tug" is also defined in the GI registry with a more limited definition: "A vessel specially built to perform towing operations." This feature catalogue uses the term with the more appropriate definition.
`Icebreaking Ship`	A ship equipped to make and maintain a channel through ice. [PROPOSED icebreakingShip]	`6`	

3.8 Bollard Description

Name: Bollard Description [PROPOSED bollardDescription]
Definition: A textual description of the type of bollard at a berth or mooring facility.
Code: `bollardDescription`
Remarks:
Aliases: (none)
Value Type: text

3.9 Bollard Pull

Name: Bollard Pull [PROPOSED bollardPull]
Definition: The rated pull force for a bollard or other structure used to secure a vessel's lines at a berth, a mooring facility or to a tug.
Code: `bollardPull`
Remarks:
Aliases: (none)
Value Type: real

Unit of measure name: Tonnes (force) definition: Tonnes of force symbol: Tonnes

Quantity specification: otherQuantity

Constraints

string Length	text Pattern	range		precision
(not specified)	(none)	lowerBound	0.0	(not specified)
		upperBound	(none)	
		closure	gtSemiInterval	

For real values, precision is the number of digits after the decimal point.

3.10 Bollard Number

Name: Bollard Number [PROPOSED bollardNumber]
Definition: An identifier used to locate a specific bollard.
Code: `bollardNumber`
Remarks:
Aliases: (none)
Value Type: text

3.11 Call Name

Name: Call Name [IHOREG 396]
Definition: The designated call name of a station; for example, radio station, radar station, pilot.
Code: `callName`
Remarks: This is the name used when calling a radio station by radio; for example, "Singapore Pilots".
Aliases: (none)
Value Type: text

3.12 Call Sign

Name: Call Sign [IHOREG 271]
Definition: The designated call-sign of a station (radio station, radar station, pilot, ...).
Code: `callSign`
Remarks:
Aliases: CALSGN
Value Type: text

3.13 Cardinal Direction

Name: Cardinal Direction [IHOREG 397]
Definition: Principal and intermediate compass points.
Code: `cardinalDirection`
Remarks:

Aliases: (none)
Value Type: enumeration

Listed Values

Label	Definition	Code	Remarks
North	348.75-011.25 degrees (true north). [IHOREG 1773]	1	
North Northeast	011.25 - 033.75 degrees. [IHOREG 1774]	2	
Northeast	033.75 - 056.25 degrees. [IHOREG 1775]	3	
East Northeast	056.25-078.75 degrees. [IHOREG 1776]	4	
East	078.75-101.25 degrees [IHOREG 1777]	5	
East Southeast	101.25-123.75 degrees. [IHOREG 1778]	6	
Southeast	123.75-146.25 degrees. [IHOREG 1779]	7	
South Southeast	146.25-168.75 degrees. [IHOREG 1780]	8	
South	168.75-191.25 degrees [IHOREG 1781]	9	
South Southwest	191.25-213.75 degrees. [IHOREG 1782]	10	
Southwest	213.75-236.25 degrees. [IHOREG 1783]	11	
West Southwest	236.25-258.75 degrees. [IHOREG 1784]	12	
West	258.75-281.25 degrees. [IHOREG 1785]	13	
West Northwest	281.25-303.75 degrees. [IHOREG 1786]	14	
Northwest	303.75 - 326.25 degrees. [IHOREG 1787]	15	
North Northwest	326.25 - 348.75 degrees. [IHOREG 1788]	16	

3.14 Cargo Service

Name: Cargo Service [PROPOSED cargoService]
Definition: Classification of services related to the goods or items carried by vessels.
Code: cargoService
Remarks:
Aliases: (none)
Value Type: enumeration

Listed Values

Label	Definition	Code	Remarks
Stevedoring	The loading, unloading, moving or handling of cargo, ship's stores, gear, or other materials, into, in, on, or out of any vessel.	1	

Label	Definition	Code	Remarks
	[PROPOSED stevedoring]		
Cargo Surveying	Inspection, evaluation or monitoring of the quantity, stowage, loading and unloading, and condition of cargo, and the effects of cargoes on vessel stability and safety. [PROPOSED cargoSurveying]	2	
Cargo Lashing	The securement of cargo to the ship's structure and/or other cargo. [PROPOSED cargoLashing]	3	
Draught Survey	Determination of the quantity of certain types of bulk cargo by assessment of its effect on displacement when loaded in a vessel. [PROPOSED draughtSurvey]	4	

3.15 Category of Authority

Name: Category of Authority [IHOREG 398]
Definition: The type of person, government agency or organisation granted powers of managing or controlling access to and/or activity in an area.
Code: categoryOfAuthority
Remarks:
Aliases: (none)
Value Type: enumeration

Listed Values

Label	Definition	Code	Remarks
Border Control	The administration to prevent or detect and prosecute violations of rules and regulations at international boundaries. [IHOREG 1789]	2	
Police	The department of government, or civil force, charged with maintaining public order. [IHOREG 1790]	3	
Port	Person or corporation, owners of, or entrusted with or invested with the power of managing a port. May be called a Harbour Board, Port Trust, Port Commission, Harbour Commission, Marine Department. [IHOREG 1791]	4	
Immigration	The authority controlling people entering a country. [IHOREG 1792]	5	
Health	The authority with responsibility for checking the validity of the health declaration of a vessel and for declaring free pratique. [IHOREG 1793]	6	
Coast Guard	Organization keeping watch on shipping and coastal waters according to governmental law; normally the authority with responsibility for search and rescue. [IHOREG 1794]	7	
Agricultural	The authority with responsibility for preventing infection of the agriculture of a country and for the protection of the agricultural interests of a country. [IHOREG 1795]	8	
Military	A military authority which provides control of access to or approval for transit through designated areas or airspace. [IHOREG 1796]	9	
Private Company	A private or publicly owned company or commercial enterprise which exercises control of facilities, for example a calibration area. [IHOREG 1797]	10	

Label	Definition	Code	Remarks
Maritime Police	A governmental or military force with jurisdiction in territorial waters. Examples could include Gendarmerie Maritime, Carabinierie, and Guardia Civil. [IHOREG 1798]	11	
Environmental	An authority with responsibility for the protection of the environment. [IHOREG 1799]	12	
Fishery	An authority with responsibility for the control of fisheries. [IHOREG 1800]	13	
Finance	An authority with responsibility for the control and movement of money. [IHOREG 1801]	14	
Maritime	A national or regional authority charged with administration of maritime affairs. [IHOREG 1802]	15	
Customs	The agency or establishment for collecting duties, tolls. [IHOREG 1803]	16	

3.16 Category of Berth Location

Name: Category of Berth Location [PROPOSED categoryOfBerthLocation]
Definition: Classification of a berth according to the method of describing its location or extent.
Code: categoryOfBerthLocation
Remarks:
Aliases: (none)
Value Type: enumeration

Listed Values

Label	Definition	Code	Remarks
Wharf Reference Metre Mark	A wharf or quay with reference position(s) given by one or more metre marks. [PROPOSED wharfReferenceMetreMark]	1	
Wharf Reference Position	A wharf or quay with reference position(s) given by one or more point or points in geographic coordinates. [PROPOSED wharfReferencePosition]	2	
Pier (Jetty)	A long, narrow structure extending into the water to afford a berthing place for vessels, to serve as a promenade, etc. [IHOREG pierJetty]	3	
Conventional Mooring	Mooring using the vessel's anchors and buoys to secure the vessel at multiple points. [PROPOSED conventionalMooring]	4	

3.17 Category of Cargo

Name: Category of Cargo [IHOREG 401]
Definition: Classification of the different types of cargo that a ship may be carrying.
Code: categoryOfCargo
Remarks: If item 7 is used, the nature of dangerous or hazardous cargoes can be amplified with category of dangerous or hazardous cargo.
Aliases: (none)
Value Type: enumeration

Listed Values

Label	Definition	Code	Remarks
Container	One of a number of standard sized cargo carrying units, secured using standard corner attachments and bar.	2	

Label	Definition	Code	Remarks
	[IHOREG 1808]		
Passenger	A fee paying traveller. [IHOREG 1811]	5	
Livestock	Live animals carried in bulk. [IHOREG 1812]	6	
Dangerous or Hazardous	Dangerous or hazardous cargo as described by the IMO International Maritime Dangerous Goods code. [IHOREG 1813]	7	
Heavy Lift	Indivisible heavy items of weight generally over 100 tons, and width or height greater than 100 metres. [IHOREG 1814]	8	
Dry Bulk Cargo	Commodity cargo that is transported unpackaged in large quantities. These types of goods usually need to be kept dry during the whole transportation period. [PROPOSED dryBulkCargo]	10	
Liquid Bulk Cargo	Liquids or gases that are transported in bulk and carried unpackaged. [PROPOSED liquidBulkCargo]	11	
Reefer Container Cargo	Cargo transported in refrigerated containers, generally perishable commodities which require temperature-controlled transportation, such as fruit, meat, fish, vegetables, dairy products and other foods. [PROPOSED reeferContainerCargo]	12	
Ro-Ro Cargo	Wheeled cargo, such as cars, busses, trucks, agricultural vehicles and cranes, that are driven on and off the ship on their own wheels or using a platform vehicle, such as a self-propelled modular transporter. [PROPOSED roRoCargo]	13	
Project Cargo	Project cargo is a term used to broadly describe the national or international transportation of large, heavy, high value, or critical (to the project they are intended for) pieces of equipment. Also commonly referred to as heavy lift, this includes shipments made of various components which need disassembly for shipment and reassembly after delivery. [PROPOSED projectCargo]	14	
Break Bulk Cargo	Goods that are stowed on board ship in individually counted units, and not in intermodal containers nor in bulk as with oil or grain. [PROPOSED breakBulkCargo]	15	

3.18 Category of Communication Preference

Name: Category of Communication Preference [IHOREG 402]
Definition: Classification of frequencies, VHF channels, telephone numbers, or other means of communication based on preference.
Code: categoryOfCommunicationPreference
Remarks:
Aliases: (none)
Value Type: enumeration

Listed Values

Label	Definition	Code	Remarks
Preferred Calling	The first choice channel or frequency to be used when calling a radio station. [IHOREG 1815]	1	
Alternate Calling	A channel or frequency to be used for calling a radio station when the preferred channel or frequency is busy or is suffering from interference. [IHOREG 1816]	2	
Preferred Working	The first choice channel or frequency to be used when working with a radio	3	

Label	Definition	Code	Remarks
	station. [IHOREG 1817]		
Alternate Working	A channel or frequency to be used for working with a radio station when the preferred working channel or frequency is busy or is suffering from interference. [IHOREG 1818]	4	

3.19 Category Of Dangerous Or Hazardous Cargo

Name: Category Of Dangerous Or Hazardous Cargo [IHOREG 406]
Definition: Classification of dangerous goods or hazardous materials based on the International Maritime Dangerous Goods Code (IMDG Code).
Code: categoryOfDangerousOrHazardousCargo
Remarks:
Aliases: (none)
Value Type: enumeration

Listed Values

Label	Definition	Code	Remarks
IMDG Code Class 1 Div. 1.1	Explosives, Division 1: Substances and articles which have a mass explosion hazard. [IHOREG 1834]	1	
IMDG Code Class 1 Div. 1.2	Explosives, Division 2: substances and articles which have a projection hazard but not a mass explosion hazard [IHOREG 1835]	2	
IMDG Code Class 1 Div. 1.3	Explosives, Division 3: substances and articles which have a fire hazard and either a minor blast hazard or a minor projection hazard or both, but not a mass explosion hazard [IHOREG 1836]	3	
IMDG Code Class 1 Div. 1.4	Explosives, Division 4: substances and articles which present no significant hazard [IHOREG 1837]	4	
IMDG Code Class 1 Div. 1.5	Explosives, Division 5: very insensitive substances which have a mass explosion hazard [IHOREG 1838]	5	
IMDG Code Class 1 Div. 1.6	Explosives, Division 6: extremely insensitive articles which do not have a mass explosion hazard [IHOREG 1839]	6	
IMDG Code Class 2 Div. 2.1	Gases, flammable gases [IHOREG 1840]	7	
IMDG Code Class 2 Div. 2.2	Gases, non-flammable, non-toxic gases [IHOREG 1841]	8	
IMDG Code Class 2 Div. 2.3	Gases, toxic gases [IHOREG 1842]	9	
IMDG Code Class 3	flammable liquids [IHOREG 1843]	10	
IMDG Code Class 4 Div. 4.1	flammable solids, self-reactive substances and desensitized explosives [IHOREG 1844]	11	
IMDG Code Class 4 Div. 4.2	substances liable to spontaneous combustion [IHOREG 1845]	12	
IMDG Code Class 4 Div.	substances which, in contact with water, emit flammable gases	13	

Label	Definition	Code	Remarks
4.3	[IHOREG 1846]		
IMDG Code Class 5 Div. 5.1	oxidizing substances [IHOREG 1847]	14	
IMDG Code Class 5 Div. 5.2	organic peroxides [IHOREG 1848]	15	
IMDG Code Class 6 Div. 6.1	toxic substances [IHOREG 1849]	16	
IMDG Code Class 6 Div. 6.2	infectious substances [IHOREG 1850]	17	
IMDG Code Class 7	Radioactive material [IHOREG 1851]	18	
IMDG Code Class 8	Corrosive substances [IHOREG 1852]	19	
IMDG Code Class 9	Miscellaneous dangerous substances and articles [IHOREG 1853]	20	
Harmful Substances in Packaged Form	Harmful substances are those substances which are identified as marine pollutants in the International Maritime Dangerous Goods Code (IMDG Code). Packaged form is defined as the forms of containment specified for harmful substances in the IMDG Code. [IHOREG 1854]	21	

3.20 Category of Depths Description

Name: Category of Depths Description [PROPOSED categoryOfDepthsDescription]
Definition: Classification of significant aspects of depths about which information is provided.
Code: categoryOfDepthsDescription
Remarks:
Aliases: (none)
Value Type: enumeration

Listed Values

Label	Definition	Code	Remarks
Shoal	A shallow elevation composed of unconsolidated material that may constitute a hazard to surface navigation. [IHOREG shoal]	1	
General Depth	General information about the vertical distance from the water surface to the bottom. [PROPOSED generalDepth]	2	
Controlling Depth	The least depth in the approach or channel to an area, such as a port or anchorage, governing the maximum draft of vessels that can enter. [IHOCONREG controllingDepth]	3	

3.21 Category of Harbour Facility

Name: Category of Harbour Facility [IHOREG 26]
Definition: Classification of harbour use.
Code: categoryOfHarbourFacility
Remarks:
Aliases: CATHAF
Value Type: enumeration

Listed Values

Label	Definition	Code	Remarks
RoRo Terminal	A terminal for roll-on roll-off ferries. [IHOREG 137]	1	
Ferry Terminal	A terminal for passenger and vehicle ferries. [IHOREG 138]	3	
Fishing Harbour	A harbour with facilities for fishing boats. [IHOREG 139]	4	
Yacht Harbour/Marina	A harbour facility for small boats, yachts, etc., where supplies, repairs, and various services are available. [IHOREG 140]	5	
Naval Base	A centre of operations for naval vessels. [IHOREG 141]	6	
Tanker Terminal	A terminal for the bulk handling of liquid cargoes. [IHOREG 142]	7	
Passenger Terminal	A terminal for the loading and unloading of passengers. [IHOREG 143]	8	
Shipyard	A place where ships are built or repaired. [IHOREG 144]	9	
Container Terminal	A terminal with facilities to load/unload or store shipping containers. [IHOREG 145]	10	
Bulk Terminal	A terminal for the handling of bulk materials such as iron ore, coal, etc. [IHOREG 146]	11	
Ship Lift	A platform powered by synchronous electric motors (for example syncrolift) used to lift vessels (larger than boats) in and out of the water. [IHOREG 147]	12	
Straddle Carrier	A wheeled vehicle designed to lift and carry containers or vessels within its own framework. It is used for moving, and sometimes stacking, shipping containers and vessels. [IHOREG 148]	13	
Service Harbour	A harbour within which the floating equipment (dredges, tugs ...) of harbour services are stationed. [IHOREG 149]	14	
Pilotage Service	The services of a person who directs the movements of a vessel through pilot waters, usually a person who has demonstrated extensive knowledge of channels, aids to navigation, dangers to navigation, etc., in a particular area and is licensed for that area, are available. [IHOREG 150]	15	
Service and Repair	A place where mechanical services or repairs can be undertaken to engines or other vessel equipment. [IHOREG 1391]	16	
Quarantine Station	A medical control center located in an isolated spot ashore where patients with contagious diseases from vessel in quarantine are taken. [IHOREG 1392]	17	

3.22 Category of Mooring/Warping Facility

Name: Category of Mooring/Warping Facility [IHOREG 38]
Definition: A place or structure to which a vessel can be secured.
Code: categoryOfMooringWarpingFacility
Remarks:
Aliases: CATMOR

Value Type: enumeration

Listed Values

Label	Definition	Code	Remarks
Dolphin	A post or group of posts, used for mooring or warping a vessel, or as an aid to navigation. The dolphin may be in the water, on a wharf or on the beach. [IHOREG 302]	1	
Deviation Dolphin	A post or group of posts, which a vessel may swing around for compass adjustment. [IHOREG 303]	2	
Bollard	Small shaped post, mounted on a wharf or dolphin used to secure ship's lines. [IHOREG 304]	3	
Tie-Up Wall	A section of wall designated for tying-up vessels awaiting transit. Bollards and mooring devices are available for both large and small ships. [IHOREG 305]	4	
Post or Pile	A long heavy timber or section of steel, wood, concrete, etc., forced into the seabed to serve as a mooring facility. [IHOREG 306]	5	
Mooring Cable	A chain or very strong fibre or wire rope used to anchor or moor vessels or buoys. [IHOREG 63]	6	
Mooring Buoy	A buoy secured to the bottom by permanent moorings with means for mooring a vessel by use of its anchor chain or mooring lines. [IHOREG 307]	7	
Heaving Lines From Shore	Ships must take heaving lines thrown from the shore. [PROPOSED heavingLinesFromShore]	8	This is actually a procedure or requirement, and as such does not fit within the attribute definition, which is "A place or structure to which a vessel can be secured."*(not used)*

3.23 Category of Port Section

Name: Category of Port Section [PROPOSED categoryOfPortSection]
Definition: Classification of subdivisions of a port or harbour area by usage.
Code: categoryOfPortSection
Remarks:
Aliases: (none)
Value Type: enumeration

Listed Values

Label	Definition	Code	Remarks
Port Fairway	The main navigable channel in a harbour or its approaches, for vessels of larger size. [PROPOSED portFairway]	1	
Harbour Basin	An enclosed area of water surrounded by quay walls constructed to provide means for the transfer of cargos from and to ships. [IHOCONREG harbourBasin]	2	

Label	Definition	Code	Remarks
Berth Pocket	A body of water at a berth or anchor berth, of adequate dimensions to allow a vessel to make fast to the shore, mooring buoys, berthing dolphins or to anchor. [PROPOSED berthPocket]	3	
Pilot Boarding Place	A location offshore where a pilot may board a vessel in preparation to piloting it through local waters. [IHOCONREG pilotBoardingPlace]	4	
Anchorage Area	anchorageArea [IHOCONREG anchorageArea]	5	
Dock Area	An artificially enclosed area within which ships may moor and which may have gates to regulate water level. [IHOCONREG dockArea]	6	
Seaplane Landing Area	A designated portion of water for the landing and take-off of seaplanes. [IHOCONREG seaplaneLandingArea]	7	
Seaplane Anchorage	An area in which sea-planes anchor or may anchor. [IHOCONREG seaplaneAnchorage]	8	
Dredged Basin	An area of water or channel enlargement of increased depth compared to adjacent areas, where the depth is maintained by dredging operations. [PROPOSED dredgedBasin]	9	
Dumping Ground	A sea area where dredged material or other potentially more harmful material, for example explosives, chemical waste, is deliberately deposited. [IHOCONREG dumpingGround]	10	
Port Safety Zone	The area around a port facility or harbour installation within which vessels are prohibited from entering without permission. [PROPOSED portSafetyZone]	11	
Lay-by Berth	A general berth for use by vessels for short term waiting until a loading or discharging berth is available. [PROPOSED layByBerth]	12	

3.24 Category of Relationship

Name: Category of Relationship [IHOREG 422]
Definition: Expresses constraints or requirements on vessel actions or activities in relation to a geographic feature, facility, or service.
Code: categoryOfRelationship
Remarks:
Aliases: (none)
Value Type: enumeration

Listed Values

Label	Definition	Code	Remarks
Prohibited	Use of facility, waterway or service is forbidden. [IHOREG 1953]	1	
Not Recommended	Use of facility, waterway or service is not recommended. [IHOREG 1954]	2	
Permitted	Use of facility, waterway, or service is permitted but not required. [IHOREG 1955]	3	
Recommended	Use of facility, waterway, or service is recommended. [IHOREG 1956]	4	
Required	Use of facility, waterway, or service is required. [IHOREG 1957]	5	
Not Required	Use of facility, waterway, or service is not required. [IHOREG 1958]	6	

3.25 Category of Schedule

Name: Category of Schedule [IHOREG 57]
Definition: The type of schedule, for instance opening, closure, etc.
Code: `categoryOfSchedule`
Remarks:
Aliases: (none)
Value Type: enumeration

Listed Values

Label	Definition	Code	Remarks
`Normal Operation`	The service, office, is open, fully manned, and operating normally, or the area is accessible as usual. [IHOREG 429]	`1`	
`Closure`	The service, office, or area is closed. [IHOREG 430]	`2`	
`Unmanned Operation`	The service is available but not manned. [IHOREG 431]	`3`	

3.26 Category of Temporal Variation

Name: Category of Temporal Variation [IHOREG 200]
Definition: An assessment of the likelihood of change over time.
Code: `categoryOfTemporalVariation`
Remarks:
Aliases: (none)
Value Type: enumeration

Listed Values

Label	Definition	Code	Remarks
`Extreme Event`	Indication of the possible impact of a significant event (for example hurricane, earthquake, volcanic eruption, landslide, etc), which is considered likely to have changed the seafloor or landscape significantly. [IHOREG 1241]	`1`	
`Likely to Change and Significant Shoaling Expected`	Continuous or frequent change (for example river siltation, sand waves, seasonal storms, ice bergs, etc) that is likely to result in new significant shoaling. [IHOREG 1242]	`2`	
`Likely to Change But Significant Shoaling Not Expected`	Continuous or frequent change (for example sand wave shift, seasonal storms, ice bergs, etc) that is not likely to result in new significant shoaling. [IHOREG 1243]	`3`	
`Likely to Change`	Continuous or frequent change to non-bathymetric features (for example river siltation, glacier creep/recession, sand dunes, buoys, marine farms, etc). [IHOREG 1244]	`4`	
`Unlikely to Change`	Significant change to the seafloor is not expected. [IHOREG 1245]	`5`	
`Unassessed`	Not having been assessed. [IHOREG 1246]	`6`	

3.27 Category of text

Name: Category of text [IHOREG 429]

Definition: Classification of completeness of textual information in relation to the source.
Code: `categoryOfText`
Remarks:
Aliases: (none)
Value Type: enumeration

Listed Values

Label	Definition	Code	Remarks
`Abstract or Summary`	A statement summarizing the important points of a text. [IHOREG 1996]	`1`	
`Extract`	An excerpt or excerpts from a text. [IHOREG 1997]	`2`	
`Full Text`	The whole text. [IHOREG 1998]	`3`	

3.28 Category of Vessel Registry

Name: Category of Vessel Registry [IHOREG 430]
Definition: The locality of vessel registration or enrolment relative to the nationality of a port, territorial sea, administrative area, exclusive zone or other location.
Code: `categoryOfVesselRegistry`
Remarks:
Aliases: (none)
Value Type: enumeration

Listed Values

Label	Definition	Code	Remarks
`Domestic`	The vessel is registered or enrolled under the same national flag as the port, harbour, territorial sea, exclusive economic zone, or administrative area in which the object that possesses this attribute applies or is located. [IHOREG 1999]	`1`	
`Foreign`	The vessel is registered or enrolled under a national flag different from the port, harbour, territorial sea, exclusive economic zone, or other administrative area in which the object that possesses this attribute applies or is located. [IHOREG 2000]	`2`	

3.29 Cathodic Protection System

Name: Cathodic Protection System [PROPOSED cathodicProtectionSystem]
Definition: A system used to protect metal structures against corrosion by supplying direct current to the immersed external surface of the structure.
Code: `cathodicProtectionSystem`
Remarks:
Aliases: (none)
Value Type: boolean

3.30 City Name

Name: City Name [IHOREG 434]
Definition: The name of a town or city.
Code: `cityName`
Remarks:
Aliases: (none)
Value Type: text

3.31 Communication Channel

Name: Communication Channel [IHOREG 74]
Definition: A channel number assigned to a specific radio frequency, frequencies or frequency band.
Code: `communicationChannel`
Remarks: The expected input is the specific VHF-Channel. The attribute 'communication channel' encodes the various VHF-channels used for communication.
Aliases: COMCHA
Value Type: text

3.32 Condition

Name: Condition [IHOREG 75]
Definition: The various conditions of buildings and other constructions.
Code: `condition`
Remarks: The default 'condition' should be considered to be completed, undamaged and working normally.
Aliases: CONDTN
Value Type: enumeration

Listed Values

Label	Definition	Code	Remarks
Under Construction	Being built but not yet capable of function. [IHOREG 804]	1	
Ruined	A structure in a decayed or deteriorated condition resulting from neglect or disuse, or a damaged structure in need of repair. [IHOREG 805]	2	
Under Reclamation	An area of the sea, a lake or the navigable part of a river that is being reclaimed as land, usually by the dumping of earth and other material. [IHOREG 806]	3	
Planned Construction	Detailed planning has been completed but construction has not been initiated. [IHOREG 808]	5	

3.33 Comparison Operator

Name: Comparison Operator [IHOREG 441]
Definition: Numerical comparison.
Code: `comparisonOperator`
Remarks: Provides the relation between the value given in the model and the real ship's value.
Aliases: (none)
Value Type: enumeration

Listed Values

Label	Definition	Code	Remarks
Greater Than	The value of the left value is greater than that of the right. [IHOREG 2039]	1	
Greater Than or Equal To	The value of the left expression is greater than or equal to that of the right. [IHOREG 2040]	2	
Less Than	The value of the left expression is less than that of the right. [IHOREG 2041]	3	
Less Than or Equal To	The value of the left expression is less than or equal to that of the right. [IHOREG 2042]	4	
Equal To	The two values are equivalent. [IHOREG 2043]	5	

Label	Definition	Code	Remarks
Not Equal To	The two values are not equivalent. [IHOREG 2044]	6	

3.34 Contact Instructions

Name: Contact Instructions [IHOREG 76]
Definition: Instructions provided on how to contact a particular person, organisation or service.
Code: contactInstructions
Remarks:
Aliases: (none)
Value Type: text

3.35 Country Name

Name: Country Name [IHOREG 449]
Definition: The name of a nation.
Code: countryName
Remarks:
Aliases: (none)
Value Type: text

3.36 Date End

Name: Date End [IHOREG 790]
Definition: The latest date on which an object (for example a buoy) will be present.
Code: dateEnd
Remarks: The Date End should be encoded using 4 digits for the calendar year (YYYY), 2 digits for the month (MM) (for example April = 04) and 2 digits for the day (DD). When no specific month and/or day is required/known, indication of the month and/or day is omitted, and replaced with dashes (-). When no specific year is required (that is, the event or date range ends at the same time each year) the following two cases may be considered:- same day each year: ----MMDD- same month each year: ----MM--This conforms to ISO 8601: 2004. Date End indicates the latest date of an event or the end of a date range. It is used to indicate the end of a fixed date range, the end of a periodic date range, or the removal or cancellation of a feature at a specific date in the future.
Aliases: DATEND
Value Type: S100_TruncatedDate

3.37 Date Fixed

Name: Date Fixed [IHOREG 791]
Definition: The date of an event.
Code: dateFixed
Remarks:
Aliases: (none)
Value Type: S100_TruncatedDate

3.38 Date Start

Name: Date Start [IHOREG 792]
Definition: The earliest date on which an object (for example a buoy) will be present.
Code: dateStart
Remarks: The Date Start should be encoded using 4 digits for the calendar year (YYYY), 2 digits for the month (MM) (for example April = 04) and 2 digits for the day (DD). When no specific month and/or day is required/known, indication of the month and/or day is omitted, and replaced with dashes (-). When no specific year is required (that is, the event or date range ends at the same time each year) the following two cases may be considered:- same day each year: ----MMDD- same month each year: ----MM--This conforms to ISO 8601: 2004. Date Start indicates the earliest date of an event or the start of a date range. It is used to indicate the start of a fixed date range, the start of a periodic date range, or the deployment or implementation of a feature at a specific date in the future.
Aliases: DATSTA
Value Type: S100_TruncatedDate

3.39 Date Variable

Name: Date Variable [IHOREG 82]
Definition: A day which is not fixed in the Gregorian calendar.
Code: `dateVariable`
Remarks: Examples: The fourth Thursday in November; new moon day of Kartika (Diwali); Easter Sunday.
Aliases: (none)
Value Type: text

3.40 Day of Week

Name: Day of Week [IHOREG 83]
Definition: Any one of seven days in a week.
Code: `dayOfWeek`
Remarks:
Aliases: (none)
Value Type: enumeration

Listed Values

Label	Definition	Code	Remarks
`Sunday`	The first day of the week. [IHOREG 813]	`1`	
`Monday`	The second day of the week. [IHOREG 814]	`2`	
`Tuesday`	The third day of the week. [IHOREG 815]	`3`	
`Wednesday`	The fourth day of the week. [IHOREG 816]	`4`	
`Thursday`	The fifth day of the week. [IHOREG 817]	`5`	
`Friday`	The sixth day of the week. [IHOREG 818]	`6`	
`Saturday`	The seventh day of the week. [IHOREG 819]	`7`	

3.41 Day of Week is Range

Name: Day of Week is Range [IHOREG 84]
Definition: A statement expressing if the days of the week identified define a range or not.
Code: `dayOfWeekIsRange`
Remarks: A True value is an indication that the identified days of the week define a range between and inclusive of those days.
Aliases: (none)
Value Type: boolean

3.42 Delivery Point

Name: Delivery Point [IHOREG 460]
Definition: Details of where post can be delivered such as the apartment, name and/or number of a street, building or PO Box.
Code: `deliveryPoint`
Remarks:
Aliases: (none)
Value Type: text

3.43 Display Name

Name: Display Name [IHOREG 94]

Definition: A statement expressing if a feature name is to be displayed in certain system display settings or not.
Code: displayName
Remarks: Where it is allowable to encode multiple instances of feature name for a single feature instance, only one feature name instance can indicate that the name is to be displayed (display name set to True).
Aliases: (none)
Value Type: boolean

3.44 Distance

Name: Distance [IHOREG 812]
Definition: A numeric measure of the spatial separation between two locations.
Code: distance
Remarks:
Aliases: (none)
Value Type: real

Unit of measure name: Nautical Mile definition: Nautical mile symbol: NM

Quantity specification: length

Constraints

string Length	text Pattern	range	precision
(not specified)	(none)	(not specified)	1

For real values, precision is the number of digits after the decimal point.

3.45 Dynamic Resource

Name: Dynamic Resource [IHOREG 471]
Definition: Whether a vessel must use a shore-based or other resource to obtain up-to-date information.
Code: dynamicResource
Remarks:
Aliases: (none)
Value Type: enumeration

Listed Values

Label	Definition	Code	Remarks
Static	The information is static, or a source of up-to-date information is unavailable or unknown. [IHOREG 2073]	1	
Mandatory External Dynamic	An external source of up-to-date information is available and interaction with it to obtain up-to-date information is required. [IHOREG 2074]	2	
Optional External Dynamic	An external source of up-to-date information is available but interaction with it to obtain up-to-date information is not required. [IHOREG 2075]	3	
Onboard Dynamic	Up-to-date information may be computed using only onboard resources. [IHOREG 2076]	4	

3.46 Elevation

Name: Elevation [IHOREG 826]

Definition: The altitude of the ground level of an object, measured from a specified vertical datum.
Code: `elevation`
Remarks:
Aliases: ELEVAT
Value Type: real

3.47 Entrance Description

Name: Entrance Description [PROPOSED entranceDescription]
Definition: Description of the seaward end of a channel, harbour, dock, etc.
Code: `entranceDescription`
Remarks:
Aliases: (none)
Value Type: text

3.48 File Locator

Name: File Locator [IHOREG 101]
Definition: The location of a fragment of text or other information in a support file.
Code: `fileLocator`
Remarks: Application schemas must describe how the associated file is identified. The associated file will commonly be named in a file reference co-attribute of the same complex attribute. Each DCEG must specify requirements for the format of the associated file and the semantics of file locator. For example, the value of file locator may be an HTML ID in an HTML file, line number in a text file) or a bookmark in a PDF file.
Aliases: (none)
Value Type: text

3.49 File Reference

Name: File Reference [IHOREG 102]
Definition: The file name of an externally referenced text file.
Code: `fileReference`
Remarks:
Aliases: TXTDSC
Value Type: text

3.50 Firefighting Service

Name: Firefighting Service [PROPOSED firefightingService]
Definition: Services for combating fires, provided by different methods.
Code: `firefightingService`
Remarks:
Aliases: (none)
Value Type: enumeration

Listed Values

Label	Definition	Code	Remarks
`Shore-Based Firefighting`	Personnel and equipment that are capable of combating a fire from ashore. [PROPOSED shoreBasedFirefighting]	`1`	
`Onboard Firefighting`	Trained firefighting personnel with the capability of boarding and combating a fire on a vessel. [PROPOSED onboardFirefighting]	`2`	
`Firefighting Boat`	Specialised watercraft with firefighting apparatus designed for fighting shoreline and shipboard fires [PROPOSED firefightingBoat]	`3`	

3.51 Frequency Shore Station Receives

Name: Frequency Shore Station Receives [IHOREG 924]
Definition: The shore station receiver frequency.
Code: `frequencyShoreStationReceives`
Remarks:
Aliases: (none)
Value Type: integer

Unit of measure name: Hz definition: Cycles per second symbol: Hz

Quantity specification: frequency

Constraints

string Length	text Pattern	range		precision
(not specified)	(none)	lowerBound	1	(not specified)
		upperBound	(none)	
		closure	gtSemiInterval	

3.52 Frequency Shore Station Transmits

Name: Frequency Shore Station Transmits [IHOREG 925]
Definition: The shore station transmitter frequency.
Code: `frequencyShoreStationTransmits`
Remarks:
Aliases: (none)
Value Type: integer

Unit of measure name: Hz definition: Cycles per second symbol: Hz

Quantity specification: frequency

Constraints

string Length	text Pattern	range		precision
(not specified)	(none)	lowerBound	1	(not specified)
		upperBound	(none)	
		closure	gtSemiInterval	

3.53 GLN Extension

Name: GLN Extension [IHOREG gLNExtension]
Definition: The GLN extension component is used to identify internal physical locations within a location which is identified with a GLN. Must conform to the rules for GLN extension. (GS1 specification).
Code: `gLNExtension`
Remarks:
Aliases: (none)
Value Type: text

3.54 Headline

Name: Headline [IHOREG 108]

Definition: Words set at the head of a passage or page to introduce or categorize.
Code: `headline`
Remarks:
Aliases: (none)
Value Type: text

3.55 Global Location Number

Name: Global Location Number [PROPOSED globalLocationNumber]
Definition: A globally unique, standardised identifier for parties and locations in business processes or supply chains.
Code: `globalLocationNumber`
Remarks:
Aliases: (none)
Value Type: text

Constraints

string Length	text Pattern	range	precision
13	\d{13}	(not specified)	(not specified)

3.56 Heaving Lines From Shore

Name: Heaving Lines From Shore [IHOREG heavingLinesFromShore]
Definition: Ships must take heaving lines thrown from the shore.
Code: `heavingLinesFromShore`
Remarks: In lieu of the enum value in categoryOfMooringWarpingFacility
Aliases: (none)
Value Type: boolean

3.57 Horizontal Distance Uncertainty

Name: Horizontal Distance Uncertainty [IHOREG 837]
Definition: The best estimate of the horizontal accuracy of horizontal clearances and distances.
Code: `horizontalDistanceUncertainty`
Remarks: The error is assumed to be positive and negative. The plus/minus character must not be encoded.
Aliases: HORACC
Value Type: real

Unit of measure name: metres definition: SI Metres symbol: m

Quantity specification: length

Constraints

string Length	text Pattern	range		precision
(not specified)	(none)	lowerBound	0	1
		upperBound	(none)	
		closure	geSemiInterval	

For real values, precision is the number of digits after the decimal point.

3.58 ID Code

Name: ID Code [IHOREG 522]
Definition: Identification code as specified in predefined system. Also called identification number.
Code: iDCode
Remarks:
Aliases: (none)
Value Type: text

3.59 In Ballast

Name: In Ballast [IHOREG 524]
Definition: Whether the vessel is in ballast.
Code: inBallast
Remarks:
Aliases: (none)
Value Type: boolean

3.60 ISPS Level

Name: ISPS Level [IHOREG 533]
Definition: Classification of ISPS security levels according to the ISPS Code.
Code: iSPSLevel
Remarks:
Aliases: (none)
Value Type: enumeration

Listed Values

Label	Definition	Code	Remarks
ISPS Level 1	The level for which minimum appropriate protective security measures shall be maintained at all times.	1	
ISPS Level 2	The level for which appropriate additional protective security measures shall be maintained for a period of time as a result of heightened risk of a security incident.	2	
ISPS Level 3	The level for which further specific protective security measures shall be maintained for a limited period of time when a security incident is probable or imminent, although it may not be possible to identify the specific target.	3	

3.61 Language

Name: Language [IHOREG 120]
Definition: The method of human communication, either spoken or written, consisting of the use of words in a structured and conventional way.
Code: language
Remarks: The language is encoded by a 3 character code following ISO 639-2/T.
Aliases: (none)
Value Type: text

3.62 Local Knowledge Description

Name: Local Knowledge Description [IHOREG localKnowledgeDescription]
Definition: Description of local knowledge that may be needed, for example to traverse a location.
Code: localKnowledgeDescription
Remarks:
Aliases: (none)
Value Type: text

3.63 Location Maritime Resource Name

Name: Location Maritime Resource Name [IHOREG 546]
Definition: Location identifier, based on MRN. This can be either a specific identifier for an identified physical location or a type-only

identifier for a logical location, such as BERTH.
Code: locationMRN
Remarks:
Aliases: (none)
Value Type: URN

3.64 Logical Connectives

Name: Logical Connectives [IHOREG 547]
Definition: Expresses whether all the constraints described by its co-attributes must be satisfied, or only one such constraint need be satisfied.
Code: logicalConnectives
Remarks: This attribute is intended to be used with co-attributes that encode limits on vessel dimensions, type of cargo, and other characteristics. The combination of constraints described by logicalConnective and its co-attributes defines a subset of vessels to which information described by a feature or information type instance applies (or does not apply, is required, recommended, etc.). The relationship between the vessel subset and the information is indicated by an association - see PermissionType and InclusionType). The two listed values of logicalConnective are two of the basic operations of Boolean logic. The third basic operation (not) is not used.
Aliases: (none)
Value Type: enumeration

Listed Values

Label	Definition	Code	Remarks
Logical Conjunction	All the conditions described by the other attributes of the object, or sub-attributes of the same complex attribute, are true. [IHOREG 2487]	1	
Logical Disjunction	At least one of the conditions described by the other attributes of the object, or sub-attributes of the same complex attributes, is true. [IHOREG 2488]	2	

3.65 Online Function

Name: Online Function [IHOREG 577]
Definition: Code for function performed by the online resource.
Code: onlineFunction
Remarks:
Aliases: (none)
Value Type: enumeration

Listed Values

Label	Definition	Code	Remarks
Download	online instructions for transferring data from one storage device or system to another. [IHOREG 1894]	1	
Offline Access	Online instructions for requesting the resource from the provider. [IHOREG 1896]	3	
Order	Online order process for obtaining the resource. [IHOREG 1897]	4	
Search	To make painstaking investigation or examination. [IHOREG 1898]	5	
Complete Metadata	Complete metadata provided. [IHOREG 2510]	6	
Browse Graphic	Browse graphic provided. [IHOREG 2511]	7	

Label	Definition	Code	Remarks
Upload	Online resource upload capability provided. [IHOREG 2512]	8	
Email Service	Online email service provided. [IHOREG 2513]	9	
Browsing	Online browsing provided. [IHOREG 2514]	10	
File Access	Online file access provided (ISO 19115:2014) [IHOREG 2515]	11	

3.66 Online Resource Linkage URL

Name: Online Resource Linkage URL [IHOREG 580]
Definition: Universal Resource Locator of the online resource.
Code: onlineResourceLinkageURL
Remarks:
Aliases: (none)
Value Type: URL

3.67 Medical Service

Name: Medical Service [PROPOSED medicalService]
Definition: Services for the prevention or treatment of, or response to injury or illness.
Code: medicalService
Remarks:
Aliases: (none)
Value Type: enumeration

Listed Values

Label	Definition	Code	Remarks
Ambulance	A vehicle for conveying the sick or injured to or from a hospital. [PROPOSED ambulance]	1	
Fumigation	Disinfection or purification with fumes. [PROPOSED fumigation]	2	
Doctor	A place where a doctor is available to provide medical attention. [IHOCONREG doctor]	3	
Quarantine	The isolation of patients with contagious diseases. [PROPOSED quarantine]	4	
Vaccination Centre	A place where substances intended to procure immunity against one or several diseases are administered. [PROPOSED vaccinationCentre]	5	

3.68 Metre Mark Number

Name: Metre Mark Number [PROPOSED metreMarkNumber]
Definition: An identifier for a specific position along a linear or curvilinear extent of a wharf, quay, or jetty. Numbering may be continued over multiple segments.
Code: metreMarkNumber
Remarks:
Aliases: (none)
Value Type: text

3.69 Manifold Number

Name: Manifold Number [PROPOSED manifoldNumber]
Definition: An identifier for a specific location on a manifold (a pipe or chamber with several openings).
Code: `manifoldNumber`
Remarks:
Aliases: (none)
Value Type: text

3.70 Maximum Display Scale

Name: Maximum Display Scale [IHOREG 936]
Definition: The largest intended viewing scale for the data.
Code: `maximumDisplayScale`
Remarks:
Aliases: (none)
Value Type: integer

Constraints

string Length	text Pattern	range		precision
(not specified)	(none)	lowerBound	1	(not specified)
		upperBound	(none)	
		closure	geSemiInterval	

3.71 Membership

Name: Membership [IHOREG 556]
Definition: Indicates whether a vessel is included or excluded from the regulation/restriction/recommendation/nautical information.
Code: `membership`
Remarks:
Aliases: (none)
Value Type: enumeration

Listed Values

Label	Definition	Code	Remarks
`Included`	Vessels with these characteristics are included in the regulation/restriction/recommendation/nautical information [IHOREG 2499]	`1`	
`Excluded`	Vessels with these characteristics are excluded from the regulation/restriction/recommendation/nautical information [PROPOSED excluded]	`2`	

3.72 Minimum Berth Depth

Name: Minimum Berth Depth [PROPOSED minimumBerthDepth]
Definition: The least depth of the body of water at the berth or in a berth pocket adjacent to the berth.
Code: `minimumBerthDepth`
Remarks:
Aliases: (none)
Value Type: real

Unit of measure name: metre definition: SI metre symbol: m

Constraints

string Length	text Pattern	range		precision
(not specified)	(none)	lowerBound	0.00	(not specified)
		upperBound	(none)	
		closure	gtSemiInterval	

For real values, precision is the number of digits after the decimal point.

3.73 Method of Securing

Name: Method of Securing [PROPOSED methodOfSecuring]
Definition: The process, arrangement or scheme of attachment used to secure a vessel to a berth.
Code: `methodOfSecuring`
Remarks:
Aliases: (none)
Value Type: enumeration

Listed Values

Label	Definition	Code	Remarks
Bow to Seaward	Vessel is secured perpendicular to the wharf with bow to seaward. [PROPOSED bowToSeaward]	1	
Stern to Seaward	Vessel is secured perpendicular to the wharf with stern to the seaward. [PROPOSED sternToSeaward]	2	
Mediterranean Mooring	The vessel is secured perpendicular to the wharf. [PROPOSED mediterraneanMooring]	3	
Baltic Mooring	Mooring method/procedure used during onshore wind conditions without a tug. [PROPOSED balticMooring]	4	
Running Mooring	Mooring by maneuvering ahead and astern while dropping anchors to secure the vessel with reduced swinging room. [PROPOSED runningMooring]	5	
Standing Mooring	Mooring by using mainly wind and tide to position the vessel while dropping anchors to secure the vessel with reduced swinging room. Makes limited use of the engine to position the vessel. [PROPOSED standingMooring]	6	
Single Point Mooring	A mooring structure used by tankers to load and unload in port approaches or in offshore oil and gas fields. The size of the structure can vary between a large mooring buoy and a manned floating structure. [IHOCONREG singlePointMooring]	7	
Conventional Mooring	Mooring using the vessel's anchors and buoys to secure the vessel at multiple points. [PROPOSED conventionalMooring]	8	
Ship-to-Ship Mooring	Mooring alongside another vessel. [PROPOSED shipToShipMooring]	9	
Spider Buoy Mooring	Mooring system supported by a spider buoy. [PROPOSED spiderBuoyMooring]	10	

3.74 Minimum Display Scale

Name: Minimum Display Scale [IHOREG 941]
Definition: The smallest intended viewing scale for the data.
Code: `minimumDisplayScale`

Remarks:
Aliases: (none)
Value Type: integer

Constraints

string Length	text Pattern	range		precision
(not specified)	(none)	lowerBound	1	(not specified)
		upperBound	(none)	
		closure	geSemiInterval	

3.75 MMSI Code

Name: MMSI Code [IHOREG 131]
Definition: The Maritime Mobile Service Identity (MMSI) Code is formed of a series of nine digits which are transmitted over the radio path in order to uniquely identify ship stations, ship earth stations,coast stations, coast earth stations, and group calls. These identities are formed in such a way that the identity or part thereof can be used by telephone and telex subscribers connected to the general telecommunications network principally to call ships automatically.
Code: `mMSICode`
Remarks:
Aliases: (none)
Value Type: text

3.76 Name

Name: Name [IHOREG 134]
Definition: The individual name of a feature.
Code: `name`
Remarks:
Aliases: OBJNAM
Value Type: text

3.77 Name of Resource

Name: Name of Resource [IHOREG 135]
Definition: Name of the online resource.
Code: `nameOfResource`
Remarks:
Aliases: (none)
Value Type: text

3.78 Nationality

Name: Nationality [IHOREG 136]
Definition: Identifier of membership of a particular nation.
Code: `nationality`
Remarks:
Aliases: NATION
Value Type: text

3.79 Online Resource Description

Name: Online Resource Description [IHOREG 579]
Definition: Detailed text description of what the online resource is/does.
Code: `onlineResourceDescription`
Remarks:
Aliases: (none)

Value Type: text

3.80 Orientation Uncertainty

Name: Orientation Uncertainty [IHOREG 859]
Definition: The best estimate of the accuracy of a bearing.
Code: `orientationUncertainty`
Remarks:
Aliases: (none)
Value Type: real

3.81 Orientation Value

Name: Orientation Value [IHOREG 860]
Definition: The angular distance measured from true north to the major axis of the feature.
Code: `orientationValue`
Remarks:
Aliases: ORIENT
Value Type: real

Unit of measure name: degrees definition: degrees of arc symbol: °

Quantity specification: planeAngle

Constraints

string Length	text Pattern	range		precision
(not specified)	(none)	lowerBound	0.0	1
		upperBound	360.0	
		closure	closedInterval	

For real values, precision is the number of digits after the decimal point.

3.82 Pictorial Representation

Name: Pictorial Representation [IHOREG 142]
Definition: Indicates whether a pictorial representation of the feature is available.
Code: `pictorialRepresentation`
Remarks: The 'pictorial representation' could be a drawing or a photo. The string encodes the file name of an external graphic file (pixel/vector).
Aliases: PICREP
Value Type: text

3.83 Picture Caption

Name: Picture Caption [IHOREG 593]
Definition: Short description of the purpose of the image
Code: `pictureCaption`
Remarks:
Aliases: (none)
Value Type: text

3.84 Picture Information

Name: Picture Information [IHOREG 594]
Definition: A set of information to provide credits to picture creator, copyright owner etc.

Code: pictureInformation
Remarks:
Aliases: (none)
Value Type: text

3.85 Port Facility Number

Name: Port Facility Number [IHOREG portFacilityNumber]
Definition: Number assigned to the port facility in the IMO port facility database.
Code: portFacilityNumber
Remarks:
Aliases: (none)
Value Type: text

3.86 Postal code

Name: Postal code [IHOREG 602]
Definition: Known in various countries as a postcode, or ZIP code, the postal code is a series of letters and/or digits that identifies each postal delivery area.
Code: postalCode
Remarks:
Aliases: (none)
Value Type: text

3.87 Product

Name: Product [IHOREG 144]
Definition: The various substances which are transported, stored or exploited.
Code: product
Remarks:
Aliases: PRODCT
Value Type: enumeration

Listed Values

Label	Definition	Code	Remarks
Oil	A thick, slippery liquid that will not dissolve in water, usually petroleum based in the context of storage tanks. [IHOREG 979]	1	
Gas	A substance with particles that can move freely, usually a fuel substance in the context of storage tanks. [IHOREG 980]	2	
Stone	A general term for rock and rock fragments ranging in size from pebbles and gravel to boulders or large rock masses. [IHOREG 955]	4	
Coal	A hard black mineral that is burned as fuel. [IHOREG 982]	5	
Ore	A solid rock or mineral from which metal is obtained. [IHOREG 983]	6	
Chemicals	Any substance obtained by or used in a chemical process. [IHOREG 984]	7	
Milk	A white fluid secreted by female mammals as food for their young. [IHOREG 986]	9	
Bauxite	A mineral from which aluminum is obtained. [IHOREG 987]	10	
Coke	A solid substance obtained after gas and tar have been extracted from coal, used as a fuel.	11	

Label	Definition	Code	Remarks
	[IHOREG 988]		
Iron Ingots	An oblong lump of cast iron metal. [IHOREG 989]	12	
Salt	Sodium chloride obtained from mines or by the evaporation of sea water. [IHOREG 990]	13	
Sand	Loose material consisting of small but easily distinguishable, separate grains, between 0.0625 and 2.000 millimetres in diameter. [IHOREG 954]	14	
Timber	Wood prepared for use in building or carpentry. [IHOREG 991]	15	
Sawdust/Wood Chips	Powdery fragments of wood made in sawing timber or coarse chips produced for use in manufacturing pressed board. [IHOREG 992]	16	
Scrap Metal	Discarded metal suitable for being reprocessed. [IHOREG 993]	17	
Liquefied Natural Gas	Natural gas that has been liquefied for ease of transport by cooling the gas to -162 Celsius. [IHOREG 994]	18	
Liquefied Petroleum Gas	A compressed gas consisting of flammable light hydrocarbons and derived from petroleum. [IHOREG 995]	19	
Wine	The fermented juice of grapes. [IHOREG 996]	20	
Cement	A substance made of powdered lime and clay, mixed with water. [IHOREG 997]	21	
Grain	A small hard seed, especially that of any cereal plant such as wheat, rice, corn, rye etc. [IHOREG 998]	22	

3.88 Protocol

Name: Protocol [IHOREG 608]
Definition: connection protocol to be used. Example: ftp, http get KVP, http POST, etc.
Code: `protocol`
Remarks:
Aliases: (none)
Value Type: text

3.89 Protocol request

Name: Protocol request [IHOREG 609]
Definition: Request used to access the resource. Structure and content depend on the protocol and standard used by the online resource, such as Web Feature Service standard.
Code: `protocolRequest`
Remarks:
Aliases: (none)
Value Type: text

3.90 Quality of Horizontal Measurement

Name: Quality of Horizontal Measurement [IHOREG 215]
Definition: The degree of reliability attributed to a position.
Code: `qualityOfHorizontalMeasurement`
Remarks:

Aliases: QUAPOS
Value Type: enumeration

Listed Values

Label	Definition	Code	Remarks
Surveyed	The position(s) was(were) determined by the operation of making measurements for determining the relative position of points on, above or beneath the earth's surface. Survey implies a regular, controlled survey of any date. [IHOREG 1262]	1	
Unsurveyed	Survey data is does not exist or is very poor. [IHOREG 1263]	2	
Inadequately Surveyed	Not surveyed to modern standards; or due to its age, scale, or positional or vertical uncertainties is not suitable to the type of navigation expected in the area. [IHOREG 1264]	3	
Approximate	A position that is considered to be less than third-order accuracy, but is generally considered to be within 30.5 metres of its correct geographic location. Also may apply to an object whose position does not remain fixed. [IHOREG 1265]	4	
Position Doubtful	Of uncertain position. The expression is used principally on charts to indicate that a wreck, shoal, etc., has been reported in various positions and not definitely determined in any. [IHOREG 1266]	5	
Unreliable	A feature's position has been obtained from questionable or unreliable data. [IHOREG 1267]	6	
Reported (Not Surveyed)	An object whose position has been reported and its position confirmed by some means other than a formal survey such as an independent report of the same object. [IHOREG 2711]	7	
Reported (Not Confirmed)	An object whose position has been reported and its position has not been confirmed. [IHOREG 2710]	8	
Estimated	The most probable position of an object determined from incomplete data or data of questionable accuracy. [IHOREG 1268]	9	
Precisely Known	A position that is of a known value, such as the position of an anchor berth or other defined object. [IHOREG 1269]	10	
Calculated	A position that is computed from data. [IHOREG 1270]	11	

3.91 Ramp Number

Name: Ramp Number [PROPOSED rampNumber]
Definition: An identifier for a specific ramp (a sloping structure that can be used as a landing place for small vessels, landing ships, or a ferry boat, or for hauling a cradle carrying a vessel, or for the transfer of rolling cargo).
Code: rampNumber
Remarks:
Aliases: (none)
Value Type: text

3.92 Repair Service

Name: Repair Service [PROPOSED repairService]
Definition: Work or maintenance activities whereby vessels or equipment are restored to working order, renovated, or improved in

condition.
Code: repairService
Remarks:
Aliases: (none)
Value Type: enumeration

Listed Values

Label	Definition	Code	Remarks
Compensation of Magnetic Compass	The process of neutralizing or reducing to a minimum the magnetic effects the vessel itself exerts on a magnetic compass. It is based on the principle that the magnetic effect of the iron and steel of the vessel can be counterbalanced by means of magnets and soft iron placed near the compass. Also called compass adjustment, compass compensation, or magnetic compensation. [IHOCONREG compensationOfMagneticCompass]	1	
Diver Service	Underwater inspection and repair performed by divers. [PROPOSED diverService]	2	
Bridge Equipment Repair	Repairs to eqipment installed on the ship's bridge. [PROPOSED bridgeEquipmentRepair]	3	
Engine Repair	Repair of an engine or machine parts. [PROPOSED engineRepair]	4	
Electronic Equipment Repair	Repair of marine electronic instruments. [PROPOSED electronicEquipmentRepair]	5	
Hull Repair	Repairs to the ship's body, frame, or superstructure. [PROPOSED hullRepair]	6	
Navigational Equipment Repair	Repairs to equipment used in the act of navigating a ship. [PROPOSED navigationalEquipmentRepair]	7	
Propeller Repair	Repairs to propeller hub and blades. [PROPOSED propellerRepair]	8	
Salvage Gear Repair	Repairs to equipment used in salvage operations. [PROPOSED salvageGearRepair]	9	
Shaft Repair	Repairs to drive shafts used for transmitting mechanical power and torque to a propeller. [PROPOSED shaftRepair]	10	

3.93 Reported Date

Name: Reported Date [IHOREG 154]
Definition: The date that the item was observed, done, or investigated.
Code: reportedDate
Remarks:
Aliases: SORDAT
Value Type: S100_TruncatedDate

3.94 SMDG Terminal Code

Name: SMDG Terminal Code [PROPOSED sMDGTerminalCode]
Definition: A code from the SMDG (Ship Message Design Group) Terminal Code List.
Code: sMDGTerminalCode
Remarks:
Aliases: (none)
Value Type: text

3.95 Scale Minimum

Name: Scale Minimum [IHOREG 958]
Definition: The minimum scale at which the feature may be used for example for ECDIS presentation.
Code: `scaleMinimum`
Remarks: The modulus of the scale is indicated, that is 1:1 250 000 is encoded as 1250000.
Aliases: SCAMIN
Value Type: integer

3.96 Security-Safety-Emergency Service

Name: Security-Safety-Emergency Service [PROPOSED securitySafetyEmergencyService]
Definition: Protective services, law enforcement, or services for responding to sudden danger.
Code: `securitySafetyEmergencyService`
Remarks:
Aliases: (none)
Value Type: enumeration

Listed Values

Label	Definition	Code	Remarks
Coast Guard	Organization keeping watch on shipping and coastal waters according to governmental law; normally the authority with responsibility for search and rescue. [IHOCONREG coastGuard]	1	
Customs	The agency or establishment for collecting duties, tolls. [IHOCONREG customs]	2	
Environmental Emergency Information Centre	Office for reporting or obtaining information about sudden dangers to the environment such as spillage of polluting or hazardous substances. [PROPOSED environmentalEmergencyInformationCentre]	3	
Emergency Coordination Centre	An office or organisation for reporting or coordinating response to emergencies. [PROPOSED emergencyCoordinationCentre]	4	
Guard and/or Security Service	A place where a vessel is patrolled by a security service or stored in a secure lockup. [IHOCONREG guardAndOrSecurityService]	5	
Immigration	The authority controlling people entering a country. [IHOCONREG immigration]	6	
Police	The department of government, or civil force, charged with maintaining public order. [IHOCONREG police]	7	
Sea Rescue Control	A unit responsible for promoting efficient organization of search and rescue services and for coordinating the conduct of search and rescue operations within a search and rescue region. [IHOCONREG seaRescueControl]	8	
Rescue Station	A place where equipment for saving life at sea is maintained. [IHOCONREG rescueStation]	9	

3.97 Sector Bearing

Name: Sector Bearing [IHOREG 866]
Definition: A sector is the part of a circle between two straight lines drawn from the centre to the circumference. Sector bearing specifies the limit of the sector.
Code: `sectorBearing`
Remarks: The values given to the common limits of adjacent sectors should be identical. The orientation of bearing is from seaward to the central object. This conforms with the method used in 'List of Lights' publications. A generic term such as 'to shore' cannot be used; a specific bearing must be encoded. Where a light sector limit is defined as 'to the shore', it should be encoded using a value that ensures that, when the limit is drawn, it will fall entirely on land.

Aliases: SECTR1; SECTR2
Value Type: real

Unit of measure name: degrees definition: degrees of arc symbol: °

Quantity specification: planeAngle

Constraints

string Length	text Pattern	range		precision
(not specified)	(none)	lowerBound	0	(not specified)
		upperBound	360	
		closure	closedInterval	

For real values, precision is the number of digits after the decimal point.

3.98 Ship Sanitation Control

Name: Ship Sanitation Control [PROPOSED shipSanitationControl]
Definition: Application of measures to ensure that a vessel is free of disease and disease risks, or issue of completion or exemption certificates for such measures.
Code: `shipSanitationControl`
Remarks:
Aliases: (none)
Value Type: enumeration

Listed Values

Label	Definition	Code	Remarks
`Sanitation Measures Only`	Capable of applying measures to ensure that a vessel is free of disease and disease risks, but cannot issue a certificate. [PROPOSED sanitationMeasuresOnly]	`1`	
`Issue SSCC`	The competent authority can issue a Ship Sanitation Control Certificate after satisfactorily completing or supervising the completion of ship sanitation control measures. [PROPOSED issueSSCC]	`2`	
`Issue SSCEC`	The competent authority may issue a Ship Sanitation Control Exemption Certificate if it is satisfied that the ship is free of infection and contamination, including vectors and reservoirs [PROPOSED issueSSCEC]	`3`	

3.99 Signal Frequency

Name: Signal Frequency [IHOREG 962]
Definition: The frequency of a signal.
Code: `signalFrequency`
Remarks:
Aliases: SIGFRQ
Value Type: integer

Unit of measure name: Hertz definition: Cycles per second symbol: Hz

Quantity specification: frequency

Constraints

string Length	text Pattern	range		precision
(not specified)	(none)	lowerBound	0	(not specified)
		upperBound	(none)	
		closure	gtSemiInterval	

3.100 Sill Depth

Name: Sill Depth [IHOREG 992]
Definition: The greatest depth over a sill.
Code: `sillDepth`
Remarks:
Aliases: (none)
Value Type: real

Unit of measure name: metre definition: SI metre symbol: m

Quantity specification: length

Constraints

string Length	text Pattern	range		precision
(not specified)	(none)	lowerBound	0.0	(not specified)
		upperBound	(none)	
		closure	gtSemiInterval	

For real values, precision is the number of digits after the decimal point.

3.101 Source

Name: Source [IHOREG 220]
Definition: The publication, document, or reference work from which information comes or is acquired.
Code: `source`
Remarks: May be populated with the corresponding paper chart Notice to Mariners numbers, although other references are permitted.
Aliases: (none)
Value Type: text

Constraints

string Length	text Pattern	range	precision
150	(none)	(not specified)	(not specified)

3.102 Source Date

Name: Source Date [IHOREG 288]
Definition: The production date of the source; for example the date of measurement.
Code: `sourceDate`
Remarks:

Aliases: SORDAT
Value Type: date

3.103 Source Type

Name: Source Type [IHOREG 724]
Definition: Type of the source.
Code: `sourceType`
Remarks:
Aliases: (none)
Value Type: enumeration

Listed Values

Label	Definition	Code	Remarks
`Law or Regulation`	Treaty, convention, or international agreement; law or regulation issued by a national or other authority. [IHOREG 2685]	`1`	
`Official Publication`	Publication not having the force of law, issued by an international organisation or a national or local administration. [IHOREG 2686]	`2`	
`Mariner Report, Confirmed`	Reported by mariner(s) and confirmed by another source. [IHOREG 2687]	`7`	
`Mariner Report, Not Confirmed`	Reported by mariner(s) but not confirmed. [IHOREG 2688]	`8`	
`Industry Publications and Reports`	Shipping and other industry publications, including graphics, charts and web sites. [IHOREG 2689]	`9`	
`Remotely Sensed Images`	Information obtained from satellite images. [IHOREG 2690]	`10`	
`Photographs`	Information obtained from photographs. [IHOREG 2691]	`11`	
`Products Issued by HO Services`	Information obtained from products issued by Hydrographic Offices. [IHOREG 2692]	`12`	
`News Media`	Information obtained from news media. [IHOREG 2693]	`13`	
`Traffic Data`	Information obtained from the analysis of traffic data. [IHOREG 2694]	`14`	

3.104 Supply Service

Name: Supply Service [PROPOSED supplyService]
Definition: Classification of services for the provision of materials, goods, utilities, or personal services to vessels, passengers, or crew.
Code: `supplyService`
Remarks:
Aliases: (none)
Value Type: enumeration

Listed Values

Label	Definition	Code	Remarks
`Shore Power`	The provision of shoreside electrical power to a ship at berth while its main and auxiliary engines are shut down. [PROPOSED shorePower]	`1`	

Label	Definition	Code	Remarks
Fuel Oil Bunkering	Transfer of fuel oil to the fuel compartments of a ship. [PROPOSED fuelOilBunkering]	2	
LNG Bunkering	Transfer of liquefied natural gas to the fuel compartments of a ship. [PROPOSED lNGBunkering]	3	
Lubricants	Substances capable of reducing friction, heat, and wear when introduced as a film between solid surfaces. [PROPOSED lubricants]	4	
Steam	The gas into which water is changed by boiling. [PROPOSED steam]	5	
Potable Water	Water which can be used for drinking and food preparation. [PROPOSED potableWater]	6	
International Shore Connection	A universal hose connection for the supply of water for fighting fires. [PROPOSED internationalShoreConnection]	7	
Provisions	A place where food and other such supplies are available. [IHOREG provisions]	8	
Chandler	A dealer in ships' supplies. [IHOREG chandler]	9	
Mechanics Workshop	A place where mechanical repairs can be undertaken to engines or other vessel equipment. [IHOREG mechanicsWorkshop]	10	

3.105 Technical Port Service

Name: Technical Port Service [IHOREG technicalPortService]
Definition: Services for the adjustment of vessel equipment or for assessments pertaining to cargo, compliance with regulations, safety, or security.
Code: technicalPortService
Remarks:
Aliases: (none)
Value Type: enumeration

Listed Values

Label	Definition	Code	Remarks
Compensation of Magnetic Compass	The process of neutralizing or reducing to a minimum the magnetic effects the vessel itself exerts on a magnetic compass. It is based on the principle that the magnetic effect of the iron and steel of the vessel can be counterbalanced by means of magnets and soft iron placed near the compass. Also called compass adjustment, compass compensation, or magnetic compensation. [IHOCONREG compensationOfMagneticCompass]	1	Code tentative
Degaussing	Neutralization of the strength of the magnetic field of a vessel, by means of suitably arranged electric coils permanently installed in the vessel. See also Degaussing Cable. [IHOCONREG degaussing]	2	
Cargo Surveying	Inspection, evaluation or monitoring of the quantity, stowage, loading and unloading, and condition of cargo, and the effects of cargoes on vessel stability and safety. [PROPOSED cargoSurveying]	3	
Vetting	Assessment of quality and compliance with applicable law, regulations, and safety standards. [PROPOSED vetting]	4	

3.106 Telecommunication Identifier

Name: Telecommunication Identifier [IHOREG 174]
Definition: An identifier, such as words, numbers, letters, symbols, or any combination of those used to establish a contact to a particular person, organisation or service.
Code: `telecommunicationIdentifier`
Remarks:
Aliases: (none)
Value Type: text

3.107 Telecommunication Carrier

Name: Telecommunication Carrier [IHOREG 661]
Definition: The name of a provider or type of carrier for a telecommunication service. This service may include land line based, shore based or satellite based radio connections.
Code: `telcomCarrier`
Remarks:
Aliases: (none)
Value Type: text

3.108 Telecommunication Service

Name: Telecommunication Service [IHOREG 175]
Definition: Classification of methods of communication over a distance by electrical, electronic, or electromagnetic means.
Code: `telecommunicationService`
Remarks:
Aliases: (none)
Value Type: enumeration

Listed Values

Label	Definition	Code	Remarks
Voice	The transfer or exchange of information by using sounds that are being made by mouth and throat when speaking. [IHOREG 1085]	1	
Facsimile	A system of transmitting and reproducing graphic matter (as printing or still pictures) by means of signals sent over telephone lines. [IHOREG 1086]	2	
SMS	Short Message Service is a form of text messaging communication on phones and mobile phones. [IHOREG 1087]	3	
Data	A representation of facts, concepts or instructions in a formalised manner suitable for communication, interpretation or processing. [IHOREG 1088]	4	
Streamed Data	Data that is constantly received by and presented to an end-user while being delivered by a provider. [IHOREG 1089]	5	
Telex	A system of communication in which messages are sent over long distances by using a telephone system and are printed by using a special machine (called a teletypewriter). [IHOREG 1090]	6	
Telegraph	An apparatus, system or process for communication at a distance by electric transmission over wire. [IHOREG 62]	7	
Email	Messages and other data exchanged between individuals using computers in a network. [IHOREG 1091]	8	

3.109 Terminal Identifier

Name: Terminal Identifier [PROPOSED terminalIdentifier]
Definition: The unique identifier for a given terminal.
Code: `terminalIdentifier`
Remarks:
Aliases: (none)
Value Type: text

3.110 Text

Name: Text [IHOREG 176]
Definition: A non-formatted digital text string.
Code: `text`
Remarks: Should be used, for example, to hold the information that is for short cautionary or explanatory notes. Therefore, text populated in text must not exceed 300 characters. Text may be in English, or in a national language. No formatting of text is possible within text. If formatted text, or text strings exceeding 300 characters, is required, then an alternate concept should be used.
Aliases: INFORM; NINFOM
Value Type: text

3.111 Text Justification

Name: Text Justification [IHOREG 178]
Definition: The anchor point of a text string.
Code: `textJustification`
Remarks:
Aliases: (none)
Value Type: enumeration

Listed Values

Label	Definition	Code	Remarks
`Left`	Of, relating to, or located on or near the side of a person or thing that is turned toward the west when the subject is facing north (opposed to right). [IHOREG 1092]	`1`	
`Centred`	Equidistant from all bordering or adjacent areas; situated in the centre. [IHOREG 1093]	`2`	
`Right`	Of, relating to, or located on or near the side of a person or thing that is turned toward the east when the subject is facing north (opposed to left). [IHOREG 1094]	`3`	

3.112 Text Offset Mm

Name: Text Offset Mm [IHOREG 993]
Definition: The distance in millimetres that text associated with a feature is positioned from the feature in an end-user system.
Code: `textOffsetMm`
Remarks:
Aliases: (none)
Value Type: integer

3.113 Text Type

Name: Text Type [IHOREG 179]
Definition: The attribute from which a text string is derived.
Code: `textType`
Remarks:

Aliases: (none)
Value Type: enumeration

Listed Values

Label	Definition	Code	Remarks
Name	The individual name of a feature. [IHOREG 1095]	1	

3.114 Thickness of Ice Capability

Name: Thickness of Ice Capability [IHOREG 967]
Definition: The thickness of ice that the ship can safely transit.
Code: thicknessOfIceCapability
Remarks:
Aliases: (none)
Value Type: integer

Unit of measure name: centimetres definition: Centimetres (SI) symbol: cm

Quantity specification: length

Constraints

string Length	text Pattern	range		precision
(not specified)	(none)	lowerBound	0	0
		upperBound	(none)	
		closure	gtSemiInterval	

3.115 Time of Day End

Name: Time of Day End [IHOREG 180]
Definition: The time corresponding to the end of an active period.
Code: timeOfDayEnd
Remarks: The time of day end must be encoded using 2 digits for the hour (hh), 2 digits for the minutes(mm) and 2 digits for the seconds (ss). This conforms to ISO 8601:2004.
Aliases: (none)
Value Type: time

3.116 Time of Day Start

Name: Time of Day Start [IHOREG 181]
Definition: The time corresponding to the start of an active period.
Code: timeOfDayStart
Remarks: The time of day start must be encoded using 2 digits for the hour (hh), 2 digits for the minutes(mm) and 2 digits for the seconds (ss). This conforms to ISO 8601:2004.
Aliases: (none)
Value Type: time

3.117 Transport Connection

Name: Transport Connection [PROPOSED transportConnection]
Definition: Classification of services for the conveyance of persons and/or goods, according to means of transport, nature of path, or representative installation.
Code: transportConnection

Remarks:
Aliases: (none)
Value Type: enumeration

Listed Values

Label	Definition	Code	Remarks
Airport/Airfield	A defined area on land (including any buildings, installations and equipment) intended to be used either wholly or in part for the arrival, departure and surface movement of aircraft. [IHOREG AirportAirfield]	1	
Heliport	A small airport for the use of helicopters and some other vertical lift aircraft. Heliports typically contain one or more touchdown and liftoff areas and also have facilities such as fuel or hangars. In some larger towns and cities, customs facilities may also be available. [PROPOSED heliport]	2	
Helipad	A small landing surface for helicopters, with minimal or no supporting installations or facilities. [PROPOSED helipad]	3	
Hired Boat	Small boat with crew that may be hired for single journeys. [PROPOSED hiredBoat]	4	
Bus Station	A building where buses and coaches regularly stop to take on and/or let off passengers, especially for long-distance travel. [IHOCONREG busStation]	5	
Ferry	A vessel for transporting passengers, vehicles, and/or goods across a stretch of water, especially as a regular service. [IHOCONREG ferry]	6	
Road	A route with a specially prepared surface that is intended for use by wheeled vehicles or pedestrians. [IHOCONREG Road]	7	
Motorway	A limited access dual carriageway road specially designed for fast long-distance traffic and subject to special regulations concerning its use. It may have more than two lanes. [IHOCONREG motorway]	8	
Launch	Large open or half decked boat. [IHOCONREG launch]	9	
Railway	A rail or set of parallel rails on which a train, tram, or rail wagon runs. [IHOREG railway]	10	
Inland Waterway Transport	The carriage of goods or passengers using navigable waterways such as canals, rivers, lakes, or other stretch of water that is not part of the sea. [PROPOSED inlandWaterwayTransport]	11	
Short Sea Transportation	The carriage of specified types of cargo between qualifying ports. The types of cargo and/or qualifying ports are generally specified by law or government regulation. [PROPOSED shortSeaTransportation]	12	
Marine Highway	Specially designated commercially navigable routes in coastal, inland, and intracoastal waters, frequently as waterborne relievers to congested landside routes. [PROPOSED marineHighway]	13	

3.118 Tug Information

Name: Tug Information [PROPOSED tugInformation]
Definition: Textual description of the types and capacities of available tugs.

Code: tugInformation
Remarks:
Aliases: (none)
Value Type: text

3.119 Uncertainty Fixed

Name: Uncertainty Fixed [IHOREG 885]
Definition: The best estimate of the fixed horizontal or vertical accuracy component for positions, depths, heights, vertical distances and vertical clearances.
Code: uncertaintyFixed
Remarks:
Aliases: POSACC; SOUACC; VERACC
Value Type: real

Unit of measure name: metre definition: SI metre symbol: m

Constraints

string Length	text Pattern	range	precision
(not specified)	(none)	(not specified)	1

For real values, precision is the number of digits after the decimal point.

3.120 Uncertainty Variable Factor

Name: Uncertainty Variable Factor [IHOREG 886]
Definition: The factor to be applied to the variable component of an uncertainty equation so as to provide the best estimate of the variable horizontal or vertical accuracy component for positions, depths, heights, vertical distances and vertical clearances.
Code: uncertaintyVariableFactor
Remarks:
Aliases: (none)
Value Type: real

3.121 UN Location Code

Name: UN Location Code [IHOREG 370]
Definition: Used to encode the UN Location Code (http://www.unece.org/cefact/locode/service/location.html) or - in Europe - the Inland Ship Reporting Standard (ISRS) Code.
Code: uNLocationCode
Remarks:
Aliases: (none)
Value Type: text

Constraints

string Length	text Pattern	range	precision
20	(none)	(not specified)	(not specified)

3.122 Vertical Clearance Value

Name: Vertical Clearance Value [IHOREG 905]
Definition: The vertical clearance measured from the horizontal plane towards the feature overhead.
Code: verticalClearanceValue

Remarks:
Aliases: VERCLR; VERCCL; VERCOP; VERCSA
Value Type: real

Unit of measure name: metre definition: SI metre symbol: m

Quantity specification: length

Constraints

string Length	text Pattern	range		precision
(not specified)	(none)	lowerBound	0.1	(not specified)
		upperBound	(none)	
		closure	geSemiInterval	

For real values, precision is the number of digits after the decimal point.

3.123 Vertical Datum

Name: Vertical Datum [IHOREG 193]
Definition: The reference level used for expressing the vertical measurements of points on the earth's surface. Also called datum level, reference plane, levelling datum, datum for sounding reduction, datum for heights.
Code: `verticalDatum`
Remarks:
Aliases: VERDAT; Datum Level; Reference Plane; Levelling Datum; Datum for Sounding Reduction; Datum for Heights
Value Type: enumeration

Listed Values

Label	Definition	Code	Remarks
Mean Low Water Springs	The average height of the low waters of spring tides. This level is used as a tidal datum in some areas. Also called spring low water. [IHOREG 1185]	1	
Mean Lower Low Water Springs	The average height of lower low water springs at a place. [IHOREG 1186]	2	
Mean Sea Level	The average height of the surface of the sea at a tide station for all stages of the tide over a 19-year period, usually determined from hourly height readings measured from a fixed predetermined reference level. [IHOREG 1187]	3	
Lowest Low Water	An arbitrary level conforming to the lowest tide observed at a place, or some what lower. [IHOREG 1188]	4	
Mean Low Water	The average height of all low waters at a place over a 19-year period. [IHOREG 1189]	5	
Lowest Low Water Springs	An arbitrary level conforming to the lowest water level observed at a place at spring tides during a period of time shorter than 19 years. [IHOREG 1190]	6	
Approximate Mean Low Water Springs	An arbitrary level, usually within 0.3m from that of Mean Low Water Springs (MLWS). [IHOREG 1191]	7	
Indian Spring Low	An arbitrary tidal datum approximating the level of the mean of the lower low	8	

Label	Definition	Code	Remarks
Water	water at spring tides. It was first used in waters surrounding India. [IHOREG 1192]		
Low Water Springs	An arbitrary level, approximating that of mean low water springs (MLWS). [IHOREG 1193]	9	
Approximate Lowest Astronomical Tide	An arbitrary level, usually within 0.3m from that of Lowest Astronomical Tide (LAT). [IHOREG 1194]	10	
Nearly Lowest Low Water	An arbitrary level approximating the lowest water level observed at a place, usually equivalent to the Indian Spring Low Water (ISLW). [IHOREG 1195]	11	
Mean Lower Low Water	The average height of the lower low waters at a place over a 19-year period. [IHOREG 1196]	12	
Low Water	The lowest level reached at a place by the water surface in one oscillation. Also called low tide. [IHOREG 1012]	13	
Approximate Mean Low Water	An arbitrary level, usually within 0.3m from that of Mean Low Water (MLW). [IHOREG 1197]	14	
Approximate Mean Lower Low Water	An arbitrary level, usually within 0.3m from that of Mean Lower Low Water (MLLW). [IHOREG 1198]	15	
Mean High Water	The average height of all high waters at a place over a 19-year period. [IHOREG 1199]	16	
Mean High Water Springs	The average height of the high waters of spring tides. Also called spring high water. [IHOREG 1200]	17	
High Water	The highest level reached at a place by the water surface in one oscillation. [IHOREG 1011]	18	
Approximate Mean Sea Level	An arbitrary level, usually within 0.3m from that of Mean Sea Level (MSL). [IHOREG 1201]	19	
High Water Springs	An arbitrary level, approximating that of mean high water springs (MHWS). [IHOREG 1202]	20	
Mean Higher High Water	The average height of higher high waters at a place over a 19-year period. [IHOREG 1203]	21	
Equinoctial Spring Low Water	The level of low water springs near the time of an equinox. [IHOREG 1204]	22	
Lowest Astronomical Tide	The lowest tide level which can be predicted to occur under average meteorological conditions and under any combination of astronomical conditions. [IHOREG 1205]	23	
Local Datum	An arbitrary datum defined by a local harbour authority, from which levels and tidal heights are measured by this authority. [IHOREG 1206]	24	
International Great Lakes Datum 1985	A vertical reference system with its zero based on the mean water level at Rimouski/Pointe-au-Pere, Quebec, over the period 1970 to 1988. [IHOREG 1207]	25	
Mean Water Level	The average of all hourly water levels over the available period of record. [IHOREG 1208]	26	
Lower Low Water Large Tide	The average of the lowest low waters, one from each of 19 years of observations. [IHOREG 1209]	27	
Higher High Water Large Tide	The average of the highest high waters, one from each of 19 years of observations. [IHOREG 1210]	28	

Label	Definition	Code	Remarks
Nearly Highest High Water	An arbitrary level approximating the highest water level observed at a place, usually equivalent to the high water springs. [IHOREG 1211]	29	
Highest Astronomical Tide	The highest tidal level which can be predicted to occur under average meteorological conditions and under any combination of astronomical conditions. [IHOREG 1212]	30	
Baltic Sea Chart Datum 2000	The datum refers to each Baltic country's realization of the European Vertical Reference System (EVRS) with land-uplift epoch 2000, which is connected to the Normaal Amsterdams Peil (NAP). [IHOREG 1213]	44	

3.124 Vessels Characteristics

Name: Vessels Characteristics [IHOREG (not provided)]
Definition: Characteristics of vessels
Code: vesselsCharacteristics
Remarks:
Aliases: (none)
Value Type: enumeration

Listed Values

Label	Definition	Code	Remarks
Length Overall	The maximum length of the ship (L.O.A.). (http://en.wikipedia.org/wiki/Ship_measurements; 24 July 2010) [IHOREG 2637]	1	
Length at Waterline	The ship's length measured at the waterline. [IHOREG 2638]	2	
Breadth	The width or beam of the vessel. [IHOREG 2639]	3	
Draught	The depth of water necessary to float a vessel fully loaded. [IHOREG 2640]	4	
Displacement Tonnage	A measurement of the weight of the vessel, usually used for warships. (Merchant ships are usually measured based on the volume of cargo space; see tonnage). Displacement is expressed either in long tons of 2,240 pounds or metric tonnes of 1,000 kg. Since the two units are very close in size (2,240 pounds = 1,016 kg and 1,000 kg = 2,205 pounds), it is common not to distinguish between them. To preserve secrecy, nations sometimes misstate a warship's displacement. [IHOREG 2641]	6	
Displacement Tonnage, Light	The weight of the ship excluding cargo, fuel, ballast, stores, passengers, and crew, but with water in the boilers to steaming level. [IHOREG 2642]	7	
Displacement Tonnage, Loaded	The weight of the ship including cargo, passengers, fuel, water, stores, dunnage and such other items necessary for use on a voyage, which brings the vessel down to her load draft. [IHOREG 2643]	8	
Deadweight Tonnage	The difference between displacement, light and displacement, loaded. A measure of the ship's total carrying capacity. [IHOREG 2644]	9	
Gross Tonnage	The entire internal cubic capacity of the ship expressed in tons of 100 cubic feet to the ton, except certain spaces with are exempted such as: peak and other tanks for water ballast, open forecastle bridge and poop, access of hatchways, certain light and air spaces, domes of skylights, condenser, anchor gear, steering gear, wheel	10	

Label	Definition	Code	Remarks
	house, galley and cabin for passengers. [IHOREG 2645]		
Net Tonnage	Obtained from the gross tonnage by deducting crew and navigating spaces and allowances for propulsion machinery. [IHOREG 2646]	11	
Panama Canal/Universal Measurement System Net Tonnage	The Panama Canal/Universal Measurement System (PC/UMS) is based on net tonnage, modified for Panama Canal purposes. PC/UMS is based on a mathematical formula to calculate a vessel's total volume; a PC/UMS net ton is equivalent to 100 cubic feet of capacity. [IHOREG 2647]	12	
Suez Canal Net Tonnage	The Suez Canal Net Tonnage (SCNT) is derived with a number of modifications from the former net register tonnage of the Moorsom System and was established by the International Commission of Constantinople in its Protocol of 18 December 1873. It is still in use, as amended by the Rules of Navigation of the Suez Canal Authority, and is registered in the Suez Canal Tonnage Certificate. [IHOREG (not provided)]	13	

3.125 Vessels Characteristics Unit

Name: Vessels Characteristics Unit [IHOREG 712]
Definition: The unit used for vessel characteristics attribute.
Code: vesselsCharacteristicsUnit
Remarks:
Aliases: (none)
Value Type: enumeration

Listed Values

Label	Definition	Code	Remarks
Metric Ton	The tonne or metric ton (U.S.), often redundantly referred to as a metric tonne, is a unit of mass equal to 1,000 kg (2,205 lb) or approximately the mass of one cubic metre of water at four degrees Celsius. It is sometimes abbreviated as mt in the United States, but this conflicts with other SI symbols. The tonne is not a unit in the International System of Units (SI), but is accepted for use with the SI. In SI units and prefixes, the tonne is a megagram (Mg). The Imperial and US customary units comparable to the tonne are both spelled ton in English, though they differ in mass. Pronunciation of tonne (the word used in the UK) and ton is usually identical, but is not too confusing unless accuracy is important as the tonne and UK long ton differ by only 1.6. [IHOREG 2649]	3	
Ton	Long ton (weight ton or imperial ton) is the name for the unit called the "ton" in the avoirdupois or Imperial system of measurements, as used in the United Kingdom and several other Commonwealth countries. It has been mostly replaced by the tonne, and in the United States by the short ton. One long ton is equal to 2,240 pounds (1,016 kg) or 35 cubic feet (0.9911 m) of salt water with a density of 64 lb/ft (1.025 g/ml). It has some limited use in the United States, most commonly in measuring the displacement of ships, and was the unit prescribed for warships by the Washington Naval Treaty for example battleships were limited to a mass of 35,000 long tons (36,000 t; 39,000 ST). [IHOREG 2650]	4	
Short Ton	A unit of weight equal to 2,000 pounds (907.18474 kg). In the United States it is often called simply ton without distinguishing it from the metric ton (tonne, 1,000 kilograms) or the long ton (2,240 pounds / 1,016.0469088 kilograms); rather, the other two are specifically noted. There are, however, some US applications for	5	

Label	Definition	Code	Remarks
	which unspecified tons normally means long tons (for example, Navy ships) or metric tons (world grain production figures). Both the long and short ton are defined as 20 hundredweights, but a hundredweight is 100 pounds (45.359237 kg) in the US system (short or net hundredweight) and 112 pounds (50.80234544 kg) in the Imperial system (long or gross hundredweight). [IHOREG 2651]		
Gross Ton	Gross tonnage (GT) is a function of the volume of all ship's enclosed spaces (from keel to funnel) measured to the outside of the hull framing. There is a sliding scale factor. So GT is a kind of capacity-derived index that is used to rank a ship for purposes of determining manning, safety and other statutory requirements and is expressed simply as GT, which is a unitless entity, even though its derivation is tied to the cubic meter unit of volumetric capacity.Tonnage measurements are now governed by an IMO Convention (International Convention on Tonnage Measurement of Ships, 1969 (London-Rules)), which applies to all ships built after July 1982. In accordance with the Convention, the correct term to use now is GT, which is a function of the moulded volume of all enclosed spaces of the ship. [IHOREG 2652]	6	
Net Ton	Net tonnage (NT) is based on a calculation of the volume of all cargo spaces of the ship. It indicates a vessels earning space and is a function of the moulded volume of all cargo spaces of the ship. [IHOREG 2653]	7	
Suez Canal Net Tonnage	The Suez Canal Net Tonnage (SCNT) is derived with a number of modifications from the former net register tonnage of the Moorsom System and was established by the International Commission of Constantinople in its Protocol of 18 December 1873. It is still in use, as amended by the Rules of Navigation of the Suez Canal Authority, and is registered in the Suez Canal Tonnage Certificate. [IHOREG 2648]	9	

3.126 Vessels Characteristics Value

Name: Vessels Characteristics Value [IHOREG 908]
Definition: The value of a particular characteristic such as a dimension or tonnage of a vessel.
Code: `vesselsCharacteristicsValue`
Remarks:
Aliases: (none)
Value Type: real

3.127 Vessel Performance

Name: Vessel Performance [IHOREG 710]
Definition: A description of the required handling characteristics of a vessel including hull design, main and auxiliary machinery, cargo handling equipment, navigation equipment and manoeuvring behaviour.
Code: `vesselPerformance`
Remarks:
Aliases: (none)
Value Type: text

3.128 Waste Disposal Service

Name: Waste Disposal Service [PROPOSED wasteDisposalService]
Definition: Service for the reception of residues, polluting substances, refuse, oily wastes, and by-products from ships.
Code: `wasteDisposalService`
Remarks:
Aliases: (none)
Value Type: enumeration

Listed Values

Label	Definition	Code	Remarks
MARPOL Annex I Oily Bilge Water	The service with facility to receive oil related waste/residue of the type "Oily bilge water" as specified in MARPOL Annex I. [PROPOSED mARPOLAnnexIOilyBilgeWater]	1	
MARPOL Annex I Oily Residues	The service with facility to receive oil related waste/residue of the type "Oily Residues (sludge)" as specified in MARPOL Annex I. [PROPOSED mARPOLAnnexIOilyResidues]	2	
MARPOL Annex I Oily Tank Washings	The service with facility to receive oil related waste/residue of the type "Oily tank washings (slops)" as specified in MARPOL Annex I. [PROPOSED mARPOLAnnexIOilyTankWashings]	3	
MARPOL Annex I Dirty Ballast Water	The service with facility to receive oil related waste/residue of the type "Dirty ballast water" as specified in MARPOL Annex I. [PROPOSED mARPOLAnnexIDirtyBallastWater]	4	
MARPOL Annex I Scale and Sludge from Tank Cleaning	The service with facility to receive oil related waste/residue of the type "Scale and sludge from tank cleaning" as specified in MARPOL Annex I. [PROPOSED mARPOLAnnexIScaleAndSludgeFromTankCleaning]	5	
MARPOL Annex I Other Oily Waste	The service with facility to receive oil related waste/residue of the type "Other" as specified in MARPOL Annex I. [PROPOSED mARPOLAnnexIOtherOilyWaste]	6	
MARPOL Annex II Category X	The service with facility to receive chemical/Noxious liquid substances related waste/residue of the type "Category X" as specified in MARPOL Annex II. [PROPOSED mARPOLAnnexIICategoryX]	7	
MARPOL Annex II Category Y	The service with facility to receive chemical/Noxious liquid substances related waste/residue of the type "Category Y" as specified in MARPOL Annex II. [PROPOSED mARPOLAnnexIICategoryY]	8	
MARPOL Annex II Category Z	The service with facility to receive chemical/Noxious liquid substances related waste/residue of the type "Category Z" as specified in MARPOL Annex II. [PROPOSED mARPOLAnnexIICategoryZ]	9	
MARPOL Annex II Category OS	The service with facility to receive chemical/Noxious liquid substances related waste/residue of the type "Other substance" as specified in MARPOL Annex II. [PROPOSED mARPOLAnnexIICategoryOS]	10	
MARPOL Annex IV Sewage	The service with facility to receive waste/residue of the type "Sewage" as specified in MARPOL Annex IV. [PROPOSED mARPOLAnnexIVSewage]	11	
MARPOL Annex V Plastics	The service with facility to receive garbage related waste/residue of the type "Plastics", as specified in MARPOL Annex V [PROPOSED mARPOLAnnexVPlastics]	12	
MARPOL Annex V Food Wastes	The service with facility to receive garbage related waste/residue of the type "Food wastes", as specified in MARPOL Annex V [PROPOSED mARPOLAnnexVFoodWastes]	13	
MARPOL Annex V Domestic Wastes	The service with facility to receive garbage related waste/residue of the type "Domestic wastes", as specified in MARPOL Annex V [PROPOSED mARPOLAnnexVDomesticWastes]	14	
MARPOL Annex V Cooking Oil	The service with facility to receive garbage related waste/residue of the type "Cooking oil", as specified in MARPOL Annex V [PROPOSED mARPOLAnnexVCookingOil]	15	
MARPOL Annex V Incinerator Ashes	The service with facility to receive garbage related waste/residue of the type "Incinerator ashes", as specified in MARPOL Annex V [PROPOSED mARPOLAnnexVIncineratorAshes]	16	
MARPOL Annex V Operational Wastes	The service with facility to receive garbage related waste/residue of the type "Operational wastes", as specified in MARPOL Annex V	17	

Label	Definition	Code	Remarks
	[PROPOSED mARPOLAnnexVOperationalWastes]		
MARPOL Annex V Animal Carcasses	The service with facility to receive garbage related waste/residue of the type "Animal carcasses", as specified in MARPOL Annex V [PROPOSED mARPOLAnnexVAnimalCarcasses]	18	
MARPOL Annex V Fishing Gear	The service with facility to receive garbage related waste/residue of the type "Fishing gear", as specified in MARPOL Annex V [PROPOSED mARPOLAnnexVFishingGear]	19	
MARPOL Annex V E-Waste	The service with facility to receive garbage related waste/residue of the type "E-waste", as specified in MARPOL Annex V [PROPOSED mARPOLAnnexVEWaste]	20	
MARPOL Annex V Cargo Residues - non-HME	The service with facility to receive garbage related waste/residue of the type "Cargo residues not determined to be harmful to the marine environment", as specified in MARPOL Annex V [PROPOSED mARPOLAnnexVCargoResiduesNonHME]	21	
MARPOL Annex V Cargo Residues - HME	The service with facility to receive garbage related waste/residue of the type "Cargo residues harmful to the marine environment", as specified in MARPOL Annex V [PROPOSED mARPOLAnnexVCargoResiduesHME]	22	
MARPOL Annex VI Ozone-Depleting Substances	The service with facility to receive air pollution related waste/residue of the type "Ozone-depleting substances" as specified in MARPOL Annex VI. [PROPOSED mARPOLAnnexVIOzoneDepletingSubstances]	23	
MARPOL Annex VI Exhaust Gas-Cleaning Residues	The service with facility to receive air pollution related waste/residue of the type "Exhaust gas-cleaning residues" as specified in MARPOL Annex VI. [PROPOSED mARPOLAnnexVIExhaustGasCleaningResidues]	24	

3.129 Action or Activity

Name: Action or Activity [IHOREG 974]
Definition: The action or activity of a vessel.
Code: actionOrActivity
Remarks: codeListType=open enumeration; encoding=other: [something]
Aliases: (none)
Value Type: S100_CodeList

Listed Values

Label	Definition	Code	Remarks
Navigating With a Pilot	Carrying a qualified pilot as part of the vessel navigation team. [IHOREG 2844]	1	
Entering Port	Navigating a vessel into a port. [IHOREG 2845]	2	
Leaving Port	Navigating a vessel out of a port. [IHOREG 2846]	3	
Berthing	Attaching a vessel to a wharf or jetty [IHOREG 2858]	4	
Slipping	Detaching a vessel from a wharf or jetty. [IHOREG 2847]	5	
Anchoring	Attaching a vessel to the seabed by means of an anchor and cable. [IHOREG 2848]	6	
Weighing Anchor	Detaching a vessel from the seabed by recovering an anchor and cable. [IHOREG 2849]	7	

Label	Definition	Code	Remarks
Transiting	Navigating a vessel along a route or through a narrow gap, such as under a bridge or through a lock. [IHOREG 2850]	8	
Overtaking	Navigating a vessel past another traveling broadly in the same direction. [IHOREG 2851]	9	
Reporting	Providing details such as the name, location or intentions of a vessel. [IHOREG 2852]	10	
Working Cargo	Loading or unloading cargo. [IHOREG 2853]	11	
Landing	Placing crew or passengers on shore. [IHOREG 2854]	12	
Diving	A signal or message warning of diving activity. [IHOREG 2859]	13	
Fishing	Hunting or catching fish. [IHOREG 2855]	14	
Discharging Overboard	Releasing anything into the sea; often ballast water; or spoil from dredging elsewhere. [IHOREG 2856]	15	
Passing	Navigating a vessel past another travelling broadly in the opposite direction. [IHOREG 2857]	16	

3.130 Category of RxN

Name: Category of RxN [IHOREG 978]
Definition: The principal subject matter of regulations, restrictions, recommendations or nautical information.
Code: categoryOfRxN
Remarks: codeListType=open enumeration; encoding=other: [something]
Aliases: (none)
Value Type: S100_CodeList

Listed Values

Label	Definition	Code	Remarks
Navigation	The process of directing the movement of a craft from one point to another. [IHOREG 2861]	1	
Communication	Transmitting and/or receiving electronic communication signals. [IHOREG 2869]	2	
Environmental Protection	Pertaining to environmental protection. [IHOREG 2862]	3	
Wildlife Protection	Pertaining to wildlife protection. [IHOREG 2863]	4	
Security	Pertaining to security. [IHOREG 2864]	5	
Customs	The agency or establishment for collecting duties, tolls. [IHOREG 2870]	6	
Cargo Operation	Pertaining to cargo operations. [IHOREG 2865]	7	
Refuge	Pertaining to a place of safety or refuge. [IHOREG 2866]	8	
Health	The authority with responsibility for checking the validity of the health declaration of a vessel and for declaring free pratique.	9	

Label	Definition	Code	Remarks
	[IHOREG 2871]		
Natural Resources or Exploitation	Pertaining to natural resources or exploitation. [IHOREG 2867]	10	
Port	Person or corporation, owners of, or entrusted with or invested with the power of managing a port. May be called a Harbour Board, Port Trust, Port Commission, Harbour Commission, Marine Department. [IHOREG 2872]	11	
Finance	An authority with responsibility for the control and movement of money. [IHOREG 2873]	12	
Agriculture	The science, art, or practice of cultivating the soil, producing crops, and raising livestock and in varying degrees the preparation and marketing of the resulting products. [IHOREG 2868]	13	

3.131 Category of Vessel

Name: Category of Vessel [IHOREG 979]
Definition: Classification of vessels by function or use.
Code: categoryOfVessel
Remarks: codeListType=open enumeration; encoding=other: [something]
Aliases: (none)
Value Type: S100_CodeList

Listed Values

Label	Definition	Code	Remarks
General Cargo Vessel	A vessel which is designed for carrying general cargo, e.g. boxes, sacks. [IHOREG 2886]	1	
Container Carrier	a vessel designed to carry ISO containers [IHOREG 2874]	2	
Tanker	A vessel which is designed for carrying liquid goods, for example oil or water. [IHOREG 2887]	3	
Bulk Carrier	A vessel which is designed for carrying bulk goods, e.g. coal, ore or grain. [IHOREG 2888]	4	
Passenger Vessel	A day trip or cabin vessel constructed and equipped to carry more than 12 passengers. [IHOREG 2889]	5	
Roll-On Roll-Off	A vessel designed to allow road vehicles to be driven on and off; often a ferry. [IHOREG 2875]	6	
Refrigerated Cargo Vessel	A vessel designed to carry refrigerated cargo. [IHOREG 2876]	7	
Fishing Vessel	A vessel that is used and equipped for the fishing of living aquatic resources. [IHOREG 2890]	8	
Service	A vessel which provides a service such as a tug, anchor handler, survey or supply vessel. [IHOREG 2877]	9	
Warship	A vessel designed for the conduct of military operations. [IHOREG 2878]	10	
Towed or Pushed Composite Unit	Either a tug and tow, or any combination of a tug providing propulsion to barges or vessels secured ahead or alongside. [IHOREG 2879]	11	

Label	Definition	Code	Remarks
Tug and Tow	A combination of tug(s) and non-powered tow(s). [IHOREG 2880]	12	
Light Recreational	A pleasure boat or watercraft, or an excursion vessel used for short cruises such as whale watching. [IHOREG 2881]	13	
Semi-Submersible Offshore Installation	An installation which is designed to float at all times and which is normally anchored in position when deployed in the offshore gas and oil industry. [IHOREG 2882]	14	
Jack-Up Exploration or Project Installation	An exploration or project installation with legs which can be raised and lowered. The legs are raised when the installation is re-positioned. When stationary the legs are lowered to the sea floor and the working platform is raised clear of the sea surface. [IHOREG 2883]	15	
Livestock Carrier	A vessel designed to carry large quantities of live animals. [IHOREG 2884]	16	
Sport Fishing	A vessel used in fishing for pleasure or competition. [IHOREG 2885]	17	

3.132 Location by Text

Name: Location by Text [IHOREG 545]
Definition: A textual rendering of a geographic location.
Code: locationByText
Remarks:
Aliases: (none)
Value Type: text

4 Complex Attributes

4.1 Bearing Information

Name: Bearing Information [IHOREG 733]
Definition: A bearing is the direction one object is from another object.
Code: `bearingInformation`
Remarks:
Aliases: (none)

Sub-Attributes

Sub-attribute	Type	Mult.	Permitted Values	sequential
cardinalDirection	enumeration	0..1	1: North 2: North Northeast 3: Northeast 4: East Northeast 5: East 6: East Southeast 7: Southeast 8: South Southeast 9: South 10: South Southwest 11: Southwest 12: West Southwest 13: West 14: West Northwest 15: Northwest 16: North Northwest	false
distance	real	0..1		false
sectorBearing	real	0..2		true
information	complex	0..*		false
orientation	complex	0..1		false

4.2 Cargo Services Description

Name: Cargo Services Description [PROPOSED cargoServicesDescription]
Definition: Description of services related to the goods or items carried by vessels.
Code: `cargoServicesDescription`
Remarks:
Aliases: (none)

Sub-Attributes

Sub-attribute	Type	Mult.	Permitted Values	sequential
textContent	complex	1..*		false

4.3 Construction Information

Name: Construction Information [PROPOSED constructionInformation]
Definition: A description of construction or other development in a location where the work will affect vessel operations such as navigation, maneuvering or docking/berthing.

Code: `constructionInformation`
Remarks:
Aliases: (none)

Sub-Attributes

Sub-attribute	Type	Mult.	Permitted Values	sequential
fixedDateRange	complex	0..1		false
condition	enumeration	0..1	1: Under Construction 2: Ruined 3: Under Reclamation 5: Planned Construction	false
locationByText	text	0..1		false
textContent	complex	0..*		false

4.4 Contact address

Name: Contact address [IHOREG 735]
Definition: Direction or superscription of a letter, package, etc., specifying the name of the place to which it is directed, and optionally a contact person or organisation who should receive it.
Code: `contactAddress`
Remarks:
Aliases: (none)

Sub-Attributes

Sub-attribute	Type	Mult.	Permitted Values	sequential
deliveryPoint	text	0..*		false
cityName	text	0..1		false
administrativeDivision	text	0..1		false
countryName	text	0..1		false
postalCode	text	0..1		false

4.5 Depths Description

Name: Depths Description [PROPOSED depthsDescription]
Definition: Textual description of the characteristics and notable matters pertaining to depths in an area.
Code: `depthsDescription`
Remarks:
Aliases: (none)

Sub-Attributes

Sub-attribute	Type	Mult.	Permitted Values	sequential
categoryOfDepthsDescription	enumeration	1..1	1: Shoal 2: General Depth 3: Controlling Depth	false
textContent	complex	1..*		false

4.6 Facilities Layout Description

Name: Facilities Layout Description [PROPOSED facilitiesLayoutDescription]

Definition: Textual description of the layout of port facilities.
Code: `facilitiesLayoutDescription`
Remarks:
Aliases: (none)

Sub-Attributes

Sub-attribute	Type	Mult.	Permitted Values	sequential
textContent	complex	1..*		false

4.7 Feature Name

Name: Feature Name [IHOREG 227]
Definition: Provides the name of an entity, defines the national language of the name, and provides the option to display the name at various system display settings.
Code: `featureName`
Remarks:
Aliases: (none)

Sub-Attributes

Sub-attribute	Type	Mult.	Permitted Values	sequential
displayName	boolean	0..1		false
language	text	0..1		false
name	text	1..1		false

4.8 Fixed date range

Name: Fixed date range [IHOREG 798]
Definition: The complex attribute describes single fixed period, as the date range between its sub-attributes.
Code: `fixedDateRange`
Remarks: the sub-attributes date start and date end must be encoded using 4 digits for the calendar year (YYYY) and, optionally, 2 digits for the month (MM) (e.g. April = 04) and 2 digits for the day (DD). When no specific month and/or day is required/known, the values are replaced with dashes (-).
Aliases: (none)

Sub-Attributes

Sub-attribute	Type	Mult.	Permitted Values	sequential
dateStart	S100_TruncatedDate	0..1		false
dateEnd	S100_TruncatedDate	0..1		false

4.9 Frequency pair

Name: Frequency pair [IHOREG 230]
Definition: A pair of frequencies for transmitting and receiving radio signals. The shore station transmits and receives on the frequencies indicated.
Code: `frequencyPair`
Remarks:
Aliases: (none)

Sub-Attributes

Sub-attribute	Type	Mult.	Permitted Values	sequential
frequencyShoreStationTransmits	integer	0..*		true

Sub-attribute	Type	Mult.	Permitted Values	sequential
frequencyShoreStationReceives	integer	0..*		true
contactInstructions	text	0..*		true

4.10 General Harbour Information

Name: General Harbour Information [PROPOSED generalHarbourInformation]
Definition: General information about the port or harbour area.
Code: `generalHarbourInformation`
Remarks:
Aliases: (none)

Sub-Attributes

Sub-attribute	Type	Mult.	Permitted Values	sequential
generalPortDescription	complex	0..1		false
facilitiesLayoutDescription	complex	0..1		false
limitsDescription	complex	0..1		false
constructionInformation	complex	0..1		false
cargoServicesDescription	complex	0..1		false
weatherResource	complex	0..*		false

4.11 General Port Description

Name: General Port Description [PROPOSED generalPortDescription]
Definition: General, introductory information about the port.
Code: `generalPortDescription`
Remarks:
Aliases: (none)

Sub-Attributes

Sub-attribute	Type	Mult.	Permitted Values	sequential
textContent	complex	1..*		false

4.12 Graphic

Name: Graphic [IHOREG 745]
Definition: Pictorial information such as a photograph, sketch or other graphic, optionally accompanied by descriptive information about the graphic and the location relative to its subject from which it was made.
Code: `graphic`
Remarks:
Aliases: (none)

Sub-Attributes

Sub-attribute	Type	Mult.	Permitted Values	sequential
pictorialRepresentation	text	1..*		false
pictureCaption	text	0..1		false
sourceDate	date	0..1		false
pictureInformation	text	0..1		false

Sub-attribute	Type	Mult.	Permitted Values	sequential
bearingInformation	complex	0..1		false

4.13 Horizontal Position Uncertainty

Name: Horizontal Position Uncertainty [IHOREG 233]
Definition: The best estimate of the accuracy of a position.
Code: `horizontalPositionUncertainty`
Remarks: The expected input is the maximum of the two-dimensional error. The error is assumed to be positive and negative.
Aliases: POSACC

Sub-Attributes

Sub-attribute	Type	Mult.	Permitted Values	sequential
uncertaintyFixed	real	1..1		false
uncertaintyVariableFactor	real	0..1		false

4.14 Information

Name: Information [IHOREG 234]
Definition: Textual information about the feature. The information may be provided as a string of text or as a file name of a single external text file that contains the text.
Code: `information`
Remarks: At least one of the sub-attributes file reference or text must be populated.The sub-attribute file reference is generally used for long text strings or those that require formatting, however, there is no restriction on the type of text (except for lexical level) that can be held in files referenced by sub-attribute file reference.
Aliases: (none)

Sub-Attributes

Sub-attribute	Type	Mult.	Permitted Values	sequential
fileLocator	text	0..1		false
fileReference	text	0..1		false
headline	text	0..*		true
language	text	0..1		false
text	text	0..1		false

4.15 Landmark Description

Name: Landmark Description [PROPOSED landmarkDescription]
Definition: Textual description of selected landmarks that have significance in an area.
Code: `landmarkDescription`
Remarks:
Aliases: (none)

Sub-Attributes

Sub-attribute	Type	Mult.	Permitted Values	sequential
textContent	complex	1..*		false

4.16 Limits Description

Name: Limits Description [PROPOSED limitsDescription]
Definition: Description of the area covered by the information specified.
Code: `limitsDescription`
Remarks:
Aliases: (none)

Sub-Attributes

Sub-attribute	Type	Mult.	Permitted Values	sequential
textContent	complex	1..*		false

4.17 Major Light Description

Name: Major Light Description [PROPOSED majorLightDescription]
Definition: A description of navigationally significant lights essential for marking landfalls, offshore dangers, shipping routes, port access channels or protection of the marine environment.
Code: `majorLightDescription`
Remarks:
Aliases: (none)

Sub-Attributes

Sub-attribute	Type	Mult.	Permitted Values	sequential
textContent	complex	1..*		false

4.18 Marked By

Name: Marked By [PROPOSED markedBy]
Definition: Description of the aids to navigation used to mark an area or object.
Code: `markedBy`
Remarks:
Aliases: (none)

Sub-Attributes

Sub-attribute	Type	Mult.	Permitted Values	sequential
textContent	complex	1..*		false

4.19 Online Resource

Name: Online Resource [IHOREG 243]
Definition: Information about online sources from which a resource or data can be obtained.
Code: `onlineResource`
Remarks:
Aliases: (none)

Sub-Attributes

Sub-attribute	Type	Mult.	Permitted Values	sequential
onlineResourceLinkageURL	URL	1..1		false
protocol	text	0..1		false
applicationProfile	text	0..1		false
nameOfResource	text	0..1		false

Sub-attribute	Type	Mult.	Permitted Values	sequential
onlineResourceDescription	text	0..1		false
onlineFunction	enumeration	0..1	1: Download 3: Offline Access 4: Order 5: Search 6: Complete Metadata 7: Browse Graphic 8: Upload 9: Email Service 10: Browsing 11: File Access	false
protocolRequest	text	0..1		false

4.20 Offshore Mark Description

Name: Offshore Mark Description [PROPOSED offshoreMarkDescription]
Definition: Description of aids to navigation or prominent marks located away from the shore.
Code: `offshoreMarkDescription`
Remarks:
Aliases: (none)

Sub-Attributes

Sub-attribute	Type	Mult.	Permitted Values	sequential
textContent	complex	1..*		false

4.21 Orientation

Name: Orientation [IHOREG 225]
Definition: (1) The angular distance measured from true north to the major axis of the feature. (2) In ECDIS, the mode in which information on the ECDIS is being presented. Typical modes include: north-up - as shown on a nautical chart, north is at the top of the display; Ships head-up - based on the actual heading of the ship, (e.g. Ships gyrocompass); course-up display - based on the course or route being taken.
Code: `orientation`
Remarks:
Aliases: (none)

Sub-Attributes

Sub-attribute	Type	Mult.	Permitted Values	sequential
orientationUncertainty	real	0..1		false
orientationValue	real	1..1		false

4.22 Schedule by Day of Week

Name: Schedule by Day of Week [IHOREG 249]
Definition: The nature and timings of a daily schedule by days of the week.
Code: `scheduleByDayOfWeek`
Remarks:
Aliases: (none)

Sub-Attributes

Sub-attribute	Type	Mult.	Permitted Values	sequential
categoryOfSchedule	enumeration	0..1	1: Normal Operation 2: Closure 3: Unmanned Operation	false
timeIntervalsByDayOfWeek	complex	1..*		false

4.23 Periodic Date Range

Name: Periodic Date Range [IHOREG 794]
Definition: The active period of a recurring event or occurrence.
Code: `periodicDateRange`
Remarks: The sub-attributes date start and date end should be encoded using 4 digits for the calendar year (YYYY), 2 digits for the month (MM) (for example April = 04) and 2 digits for the day (DD). When no specific year is required (that is, the feature is removed at the same time each year) the following two cases may be considered: - same day each year: ----MMDD - same month each year: ----MM-- This conforms to ISO 8601:2004.
Aliases: (none)

Sub-Attributes

Sub-attribute	Type	Mult.	Permitted Values	sequential
dateStart	S100_TruncatedDate	1..1		false
dateEnd	S100_TruncatedDate	1..1		false

4.24 RxN Code

Name: RxN Code [IHOREG 765]
Definition: A summary of the impact of the most common types of regulation, restriction, recommendation and nautical information on a vessel.
Code: `rxnCode`
Remarks:
Aliases: (none)

Sub-Attributes

Sub-attribute	Type	Mult.	Permitted Values	sequential
categoryOfRxN	S100_CodeList	0..1	1: Navigation 2: Communication 3: Environmental Protection 4: Wildlife Protection 5: Security 6: Customs 7: Cargo Operation 8: Refuge 9: Health 10: Natural Resources or Exploitation 11: Port 12: Finance 13: Agriculture	false
actionOrActivity	S100_CodeList	0..1	1: Navigating With a Pilot 2: Entering Port 3: Leaving Port 4: Berthing	false

Sub-attribute	Type	Mult.	Permitted Values	sequential
			5: Slipping 6: Anchoring 7: Weighing Anchor 8: Transiting 9: Overtaking 10: Reporting 11: Working Cargo 12: Landing 13: Diving 14: Fishing 15: Discharging Overboard 16: Passing	
headline	text	0..*		false

4.25 Source Indication

Name: Source Indication [IHOREG 289]
Definition: Information about the source document, publication, or reference from which object data or textual material included or referenced in a dataset are derived.
Code: `sourceIndication`
Remarks: This is currently messed up in the registry.
Aliases: SORIND

Sub-Attributes

Sub-attribute	Type	Mult.	Permitted Values	sequential
categoryOfAuthority	enumeration	0..1	2: Border Control 3: Police 4: Port 5: Immigration 6: Health 7: Coast Guard 8: Agricultural 9: Military 10: Private Company 11: Maritime Police 12: Environmental 13: Fishery 14: Finance 15: Maritime 16: Customs	false
countryName	text	0..1		false
reportedDate	S100_TruncatedDate	0..1		false
source	text	0..1		false
sourceType	enumeration	0..1	1: Law or Regulation 2: Official Publication 7: Mariner Report, Confirmed 8: Mariner Report, Not Confirmed 9: Industry Publications and Reports 10: Remotely Sensed	false

Sub-attribute	Type	Mult.	Permitted Values	sequential
			Images 11: Photographs 12: Products Issued by HO Services 13: News Media 14: Traffic Data	
featureName	complex	0..*		true

4.26 Spatial Accuracy

Name: Spatial Accuracy [IHOREG 985]
Definition: Provides an indication of the vertical and horizontal positional uncertainty of bathymetric data, optionally within a specified date range.
Code: `spatialAccuracy`
Remarks:
Aliases: (none)

Sub-Attributes

Sub-attribute	Type	Mult.	Permitted Values	sequential
fixedDateRange	complex	0..1		false
horizontalPositionUncertainty	complex	0..1		false
verticalUncertainty	complex	0..1		false

4.27 Survey Date Range

Name: Survey Date Range [IHOREG 795]
Definition: The complex attribute describes the period of the hydrographic survey, as the time between its sub-attributes.
Code: `surveyDateRange`
Remarks:
Aliases: (none)

Sub-Attributes

Sub-attribute	Type	Mult.	Permitted Values	sequential
dateStart	S100_TruncatedDate	0..1		false
dateEnd	S100_TruncatedDate	1..1		false

4.28 Telecommunications

Name: Telecommunications [IHOREG 255]
Definition: A means or channel of communicating at a distance by electrical or electromagnetic means such as telegraphy, telephony, or broadcasting.
Code: `telecommunications`
Remarks:
Aliases: (none)

Sub-Attributes

Sub-attribute	Type	Mult.	Permitted Values	sequential
categoryOfCommunicationPreference	enumeration	0..1	1: Preferred Calling 2: Alternate Calling	false

Sub-attribute	Type	Mult.	Permitted Values	sequential
			3: Preferred Working 4: Alternate Working	
telecommunicationIdentifier	text	1..1		false
telcomCarrier	text	0..1		false
contactInstructions	text	0..1		false
telecommunicationService	enumeration	0..*	1: Voice 2: Facsimile 3: SMS 4: Data 5: Streamed Data 6: Telex 7: Telegraph 8: Email	false
scheduleByDayOfWeek	complex	0..1		false

4.29 Text Content

Name: Text Content [IHOREG 768]
Definition: Textual material, or a pointer to a resource providing textual material. May be accompanied by basic information about its source and relationship to the source.
Code: `textContent`
Remarks: Exactly one of sub-attributes onlineResource or information must be completed in one instance of textContent. Product specifications may restrict the use or content of onlineResource for security. For example, a product specification may forbid populating onlineResource. Product specification authors must consider whether applications using the data product may be prevented from accessing off-system resources by security policies.
Aliases: (none)

Sub-Attributes

Sub-attribute	Type	Mult.	Permitted Values	sequential
categoryOfText	enumeration	0..1	1: Abstract or Summary 2: Extract 3: Full Text	false
information	complex	0..*		false
onlineResource	complex	0..1		false
sourceIndication	complex	0..1		false

4.30 Time Intervals by Day of Week

Name: Time Intervals by Day of Week [IHOREG 248]
Definition: The regular weekly operation times of a service or schedule.
Code: `timeIntervalsByDayOfWeek`
Remarks:
Aliases: (none)

Sub-Attributes

Sub-attribute	Type	Mult.	Permitted Values	sequential
dayOfWeek	enumeration	0..7	1: Sunday 2: Monday 3: Tuesday	true

Sub-attribute	Type	Mult.	Permitted Values	sequential
			4: Wednesday 5: Thursday 6: Friday 7: Saturday	
dayOfWeekIsRange	boolean	0..1		false
timeOfDayStart	time	0..*		true
timeOfDayEnd	time	0..*		true

4.31 Useful Mark Description

Name: Useful Mark Description [PROPOSED usefulMarkDescription]
Definition: Description of Aids to Navigation or prominent marks which are usually clearly visible and identifiable enough to be used in determining location or direction.
Code: `usefulMarkDescription`
Remarks:
Aliases: (none)

Sub-Attributes

Sub-attribute	Type	Mult.	Permitted Values	sequential
textContent	complex	1..*		false

4.32 Vessels Measurements

Name: Vessels Measurements [IHOREG 772]
Definition: Values, discovered by measuring, that correspond to vessels characteristics.
Code: `vesselsMeasurements`
Remarks:
Aliases: (none)

Sub-Attributes

Sub-attribute	Type	Mult.	Permitted Values	sequential
comparisonOperator	enumeration	1..1	1: Greater Than 2: Greater Than or Equal To 3: Less Than 4: Less Than or Equal To 5: Equal To 6: Not Equal To	false
vesselsCharacteristics	enumeration	1..1	1: Length Overall 2: Length at Waterline 3: Breadth 4: Draught 6: Displacement Tonnage 7: Displacement Tonnage, Light 8: Displacement Tonnage, Loaded 9: Deadweight Tonnage 10: Gross Tonnage 11: Net Tonnage 12: Panama Canal/Universal Measurement System Net Tonnage	false

Sub-attribute	Type	Mult.	Permitted Values	sequential
			13: Suez Canal Net Tonnage	
vesselsCharacteristicsValue	real	1..1		false
vesselsCharacteristicsUnit	enumeration	1..1	3: Metric Ton 4: Ton 5: Short Ton 6: Gross Ton 7: Net Ton 9: Suez Canal Net Tonnage	false

4.33 Weather Resource

Name: Weather Resource [PROPOSED weatherResource]
Definition: Links for relevant weather related information.
Code: `weatherResource`
Remarks:
Aliases: (none)

Sub-Attributes

Sub-attribute	Type	Mult.	Permitted Values	sequential
onlineResource	complex	0..1		false
dynamicResource	enumeration	0..1	1: Static 2: Mandatory External Dynamic 3: Optional External Dynamic 4: Onboard Dynamic	false
textContent	complex	0..1		false

4.34 Vertical Uncertainty

Name: Vertical Uncertainty [IHOREG 261]
Definition: The best estimate of the vertical accuracy of depths, heights, vertical distances and vertical clearances.
Code: `verticalUncertainty`
Remarks: Encodes the vertical uncertainty associated with any vertical measurement.
Aliases: VERACC

Sub-Attributes

Sub-attribute	Type	Mult.	Permitted Values	sequential
uncertaintyFixed	real	1..1		false
uncertaintyVariableFactor	real	0..1		false

5 Roles

5.1 Component of

Name: Component of
Definition: A pointer to the aggregate in a whole-part relationship.
Code: `componentOf`
Remarks:
Aliases: (none)

5.2 Constitute

Name: Constitute
Definition: Reference to a whole of the same type as the part feature in the relationship.
Code: `constitute`
Remarks:
Aliases: (none)

5.3 The applicable RxN

Name: The applicable RxN
Definition: The applicable regulation, restriction, recommendation or nautical information
Code: `theApplicableRxN`
Remarks:
Aliases: (none)

5.4 Applies in location

Name: Applies in location
Definition: The location in which the information item applies
Code: `appliesInLocation`
Remarks:
Aliases: (none)

5.5 Authority (reference)

Name: Authority (reference)
Definition: A pointer to an Authority object
Code: `theAuthority`
Remarks:
Aliases: (none)

5.6 Authority service hours

Name: Authority service hours
Definition: The authority for which service hours are given
Code: `theAuthority_srvHrs`
Remarks:
Aliases: (none)

5.7 Contact details (reference)

Name: Contact details (reference)
Definition: A pointer to an Contact Details object
Code: `theContactDetails`
Remarks:
Aliases: (none)

5.8 Auxiliary Facility

Name: Auxiliary Facility
Definition: A refernce to a feature that supplements or supports the use of the primary feature in an AuxiliaryFacility relationship.
Code: `auxiliaryFacility`
Remarks:
Aliases: (none)

5.9 Control authority

Name: Control authority
Definition: The controlling organization or authority for a geographically located service
Code: `controlAuthority`
Remarks:
Aliases: (none)

5.10 Controlled service

Name: Controlled service
Definition: The service controlled by an organisation or authority
Code: `controlledService`
Remarks:
Aliases: (none)

5.11 Defined for

Name: Defined for
Definition: A pointer to a specific spatial type(s).
Code: `definedFor`
Remarks:
Aliases: (none)

5.12 Defines

Name: Defines
Definition: A pointer to an information type providing spatial quality information.
Code: `defines`
Remarks:
Aliases: (none)

5.13 Demarcated Feature

Name: Demarcated Feature
Definition: Reference to the feature within which locations are demarcated.
Code: `demarcatedFeature`
Remarks:
Aliases: (none)

5.14 Demarcation Indicator

Name: Demarcation Indicator
Definition: Reference to a feature demarcating a location within another feature.
Code: `demarcationIndicator`
Remarks:
Aliases: (none)

5.15 Entrance Reference

Name: Entrance Reference
Definition: Reference to an information type describing the entrance to a limit area.
Code: `entranceReference`
Remarks:
Aliases: (none)

5.16 Entrance To

Name: Entrance To
Definition: A reference to the feature to which entrance information pertains.
Code: `entranceTo`
Remarks:
Aliases: (none)

5.17 Has Infrastructure

Name: Has Infrastructure
Definition: Reference to the feature describing a particular instance of physical infrastructure.
Code: `hasInfrastructure`
Remarks:
Aliases: (none)

5.18 Identifies

Name: Identifies
Definition: A pointer to a specific feature(s).
Code: `identifies`
Remarks:
Aliases: (none)

5.19 Infrastructure Location

Name: Infrastructure Location
Definition: Reference to the feature within which the infrastructure is located.
Code: `infrastructureLocation`
Remarks:
Aliases: (none)

5.20 Information provided for

Name: Information provided for
Definition: A pointer to a specific feature(s) for which further information is required.
Code: `informationProvidedFor`
Remarks:
Aliases: (none)

5.21 Is applicable to

Name: Is applicable to
Definition: The object or class of objects to which the regulation, restriction, recommendation, or nautical information applies
Code: `isApplicableTo`
Remarks:
Aliases: (none)

5.22 Limit Extent

Name: Limit Extent
Definition: Reference to a feature demarcating the extent to which a coastal State claims or may claim a specific jurisdiction.
Code: `limitExtent`
Remarks:
Aliases: (none)

5.23 Limit Reference

Name: Limit Reference
Definition: Reference to the feature for which a coastal State claims a specific jurisdiction different from the feature's geographic boundary.

Code: `limitReference`
Remarks:
Aliases: (none)

5.24 Location service hours

Name: Location service hours
Definition: Reference to the location for which service hours are given.
Code: `location_srvHrs`
Remarks:
Aliases: (none)

5.25 Layout Unit

Name: Layout Unit
Definition: A reference to the diverse units comprising a feature of a different type.
Code: `layoutUnit`
Remarks:
Aliases: (none)

5.26 Location Served

Name: Location Served
Definition: Reference to the location (feature) where specified services are available.
Code: `locationServed`
Remarks:
Aliases: (none)

5.27 Facility Operating Hours

Name: Facility Operating Hours
Definition: Reference to information about the days and times during which a facility operates or may be used.
Code: `facilityOperatingHours`
Remarks:
Aliases: (none)

5.28 Partial working day

Name: Partial working day
Definition: The work hours for a non-standard workday
Code: `partialWorkingDay`
Remarks:
Aliases: (none)

5.29 Permission

Name: Permission
Definition: The permissions for a location
Code: `permission`
Remarks:
Aliases: (none)

5.30 Positions

Name: Positions
Definition: A pointer to a specific cartographically positioned location for text.
Code: `positions`
Remarks:
Aliases: (none)

5.31 Primary Facility

Name: Primary Facility
Definition: A reference to the primary feature in an Auxiliaryfacility relationship.
Code: `primaryFacility`
Remarks:
Aliases: (none)

5.32 Provides information

Name: Provides information
Definition: A pointer to an object that provides more information about the referencing feature or information type.
Code: `providesInformation`
Remarks:
Aliases: (none)

5.33 Service Description Reference

Name: Service Description Reference
Definition: Reference to an information object describing services.
Code: `serviceDescriptionReference`
Remarks:
Aliases: (none)

5.34 The information

Name: The information
Definition: Information related to an organisation
Code: `theInformation`
Remarks:
Aliases: (none)

5.35 The organisation

Name: The organisation
Definition: The organisation to which information relates
Code: `theOrganisation`
Remarks:
Aliases: (none)

5.36 The RxN

Name: The RxN
Definition: The regulation, restriction, recommendation, or nautical information
Code: `theRxN`
Remarks:
Aliases: (none)

5.37 Service Hours (reference)

Name: Service Hours (reference)
Definition: Service hours for an authority or service provider
Code: `theServiceHours`
Remarks:
Aliases: (none)

5.38 The service hours for a non-standard workday

Name: The service hours for a non-standard workday
Definition: The usual service hours to which an exception applies
Code: `theServiceHours_nsdy`
Remarks:
Aliases: (none)

5.39 Service place

Name: Service place
Definition: Pointer to service or facility
Code: `servicePlace`
Remarks: Distinction: serviceArea (area served by a provider)
Aliases: (none)

5.40 Sub-Unit

Name: Sub-Unit
Definition: Reference to a part of the same type as the whole feature in the relationship.
Code: `subUnit`
Remarks:
Aliases: (none)

5.41 Vessel location

Name: Vessel location
Definition: The location to which the permission statement applies
Code: `vslLocation`
Remarks: Implementations must use between Applicability and PermissionType objects, not to feature instance. The PermissionType->feature link is via a generic inverse association
Aliases: (none)

6 Information Associations

6.1 Additional Information

Name: Additional Information
Definition: A feature association for the binding between at least one instance of a geo feature and an instance of an information type.
Code: `AdditionalInformation`
Remarks: Role informationProvidedFor encodable only as a generic inverse association in feature objects in 3.0.0 datasets
Aliases: (none)

Attribute Bindings

(No local attribute bindings)

Role: providesInformation informationProvidedFor

6.2 Authority Contact

Name: Authority Contact
Definition: Contact information for an authority
Code: `AuthorityContact`
Remarks:
Aliases: (none)

Attribute Bindings

(No local attribute bindings)

Role: theAuthority theContactDetails

6.3 Authority Hours

Name: Authority Hours
Definition: Service hours for an authority
Code: `AuthorityHours`
Remarks:
Aliases: (none)

Attribute Bindings

(No local attribute bindings)

Role: theAuthority_srvHrs theServiceHours

6.4 Associated RxN

Name: Associated RxN
Definition: Association between a geographic location and a regulation, restriction, recommendation, or nautical information
Code: `AssociatedRxN`
Remarks: Role appliesInLocation encodable only as a generic inverse association in 3.0.0 datasets as it is an information->feature link
Aliases: (none)

Attribute Bindings

(No local attribute bindings)

Role: appliesInLocation theRxN

6.5 Exceptional Workday

Name: Exceptional Workday
Definition: Exception to the usual working day
Code: `ExceptionalWorkday`
Remarks:
Aliases: (none)

Attribute Bindings

(No local attribute bindings)

Role: theServiceHours_nsdy partialWorkingDay

6.6 Inclusion Type

Name: Inclusion Type
Definition: Association class specifying the relationship between the subset of vessels described by an APPLIC data object and a regulation (restriction, recommendation, or nautical information).
Code: `InclusionType`
Remarks:
Aliases: (none)

Attribute Bindings

Attribute	Type	Mult.	Permitted Values	Sequential
membership	enumeration	1..1	1 : Included 2 : Excluded	false

Role: theApplicableRxN isApplicableTo

6.7 Limit Entrance

Name: Limit Entrance
Definition: Association between a limit feature and the entrance for the limit.
Code: `LimitEntrance`
Remarks:
Aliases: (none)

Attribute Bindings

(No local attribute bindings)

Role: entranceTo entranceReference

6.8 Permission Type

Name: Permission Type
Definition: Association class for associations describing whether the subsets of vessels determined by the ship characteristics specified in APPLIC may (or must, etc.) transit, enter, or use a feature.
Code: `PermissionType`
Remarks:
Aliases: (none)

Attribute Bindings

Attribute	Type	Mult.	Permitted Values	Sequential
categoryOfRelationship	enumeration	1..1	1 : Prohibited 2 : Not Recommended 3 : Permitted 4 : Recommended 5 : Required 6 : Not Required	false

Role: vslLocation permission

6.9 Related organisation

Name: Related organisation
Definition: Related Organisation

Code: `RelatedOrganisation`
Remarks:
Aliases: (none)

Attribute Bindings

(No local attribute bindings)

Role: theInformation theOrganisation

6.10 Service Contact

Name: Service Contact
Definition: Contact details for a service or facility
Code: `ServiceContact`
Remarks:
Aliases: (none)

Attribute Bindings

(No local attribute bindings)

Role: servicePlace theContactDetails

6.11 Service Control

Name: Service Control
Definition: Association between a geographically located service and the organisation that controls it
Code: `ServiceControl`
Remarks: This is an information association linking a location where a service is provided with an information type describing the provider. Contrast to serviceProvisionArea, which is a feature association linking the area served with another feature describing the provider. Role controlledService encodable only as a generic inverse association in 3.0.0 datasets as it is an information->feature link
Aliases: (none)

Attribute Bindings

(No local attribute bindings)

Role: controlledService controlAuthority

6.12 Spatial Association

Name: Spatial Association [IHOREG 8000019]
Definition: Association for linking spatial quality to spatial objects.
Code: `SpatialAssociation`
Remarks:
Aliases: (none)

Association is not referenced in any information binding

Attribute Bindings

(No local attribute bindings)

Role: defines definedFor

6.13 Location Hours

Name: Location Hours
Definition: Working hours for a service or facility described by a geographic location.
Code: `LocationHours`
Remarks: This association links a geo feature to a Service Hours object. Distinction: authyHours, which links an information type (Authority) to a Service Hours object.
Aliases: (none)

Attribute Bindings

(No local attribute bindings)

Role: location_srvHrs facilityOperatingHours

6.14 Service Availability

Name: Service Availability
Definition: The services available within a location.
Code: `ServiceAvailability`
Remarks:
Aliases: (none)

Attribute Bindings

(No local attribute bindings)

Role: locationServed serviceDescriptionReference

7 Feature Associations

7.1 Subsection

Name: Subsection
Definition: A division of a feature into parts of the same type as the whole.
Code: `Subsection`
Remarks:
Aliases: (none)

Attribute Bindings

(No local attribute bindings)

Role(s): subUnit constitute

7.2 Infrastructure

Name: Infrastructure
Definition: The infrastructure facilities in an area.
Code: `Infrastructure`
Remarks:
Aliases: (none)

Attribute Bindings

(No local attribute bindings)

Role(s): infrastructureLocation hasInfrastructure

7.3 Primary/Auxiliary Facility

Name: Primary/Auxiliary Facility
Definition: Describes the relationship between a primary feature and a feature that plays a supporting role in the use of the primary facility by a vessel.
Code: `PrimaryAuxiliaryFacility`
Remarks:
Aliases: (none)

Attribute Bindings

(No local attribute bindings)

Role(s): primaryFacility auxiliaryFacility

7.4 Demarcation

Name: Demarcation
Definition: Demarcation of location(s) within a feature by relation to another feature or features
Code: `Demarcation`
Remarks:
Aliases: (none)

Attribute Bindings

(No local attribute bindings)

Role(s): demarcationIndicator demarcatedFeature

7.5 Jurisdictional Limit

Name: Jurisdictional Limit
Definition: The limit(s) of a jurisdiction claimed by a coastal State.
Code: `JurisdictionalLimit`
Remarks:

Aliases: (none)

Attribute Bindings

(No local attribute bindings)

Role(s): limitReference limitExtent

7.6 Layout Division

Name: Layout Division
Definition: A division of a feature into parts of type(s) different from the type of the whole.
Code: `LayoutDivision`
Remarks:
Aliases: (none)

Attribute Bindings

(No local attribute bindings)

Role(s): layoutUnit componentOf

7.7 Text Association

Name: Text Association [IHOREG 9000014]
Definition: A feature association for the binding between a geo feature and the cartographically positioned location for text.
Code: `TextAssociation`
Remarks:
Aliases: (none) [IHOREG 9000014]

Attribute Bindings

(No local attribute bindings)

Role(s): identifies positions

8 Information Types

8.1 Information Type

Name: Information Type Abstract type: true [IHOREG 42]
Definition: Generalized information type which carries all the common attributes
Code: `InformationType`
Remarks:
Aliases: (none)

Attribute Bindings

Attribute	Type	Mult.	Permitted Values	Sequential
featureName	complex	0..*		false
fixedDateRange	complex	0..1		false
periodicDateRange	complex	0..*		false
graphic	complex	0..*		false
sourceIndication	complex	0..*		false

Information bindings

Assoc. Type	Code of association	Code of associated class	Role	Mult.
association	AdditionalInformation	NauticalInformation	providesInformation	0..*

8.2 AbstractRxN

Name: AbstractRxN Abstract type: true [IHOREG 33]
Definition: An abstract superclass for information types that encode rules, recommendations, and general information in text or graphic form.
Code: `AbstractRxN`
Remarks:
Aliases: (none) Supertype: InformationType

Attribute Bindings
See InformationType for inherited attributes

Attribute	Type	Mult.	Permitted Values	Sequential
categoryOfAuthority	enumeration	0..1	2 : Border Control 3 : Police 4 : Port 5 : Immigration 6 : Health 7 : Coast Guard 8 : Agricultural 9 : Military 10 : Private Company 11 : Maritime Police 12 : Environmental 13 : Fishery 14 : Finance 15 : Maritime 16 : Customs	false
rxnCode	complex	0..*		false
textContent	complex	0..*		false

Information bindings
See InformationType for inherited bindings

Assoc. Type	Code of association	Code of associated class	Role	Mult.
association	InclusionType	Applicability	isApplicableTo	0..*
association	RelatedOrganisation	AbstractRxN	theOrganisation	0..*

8.3 Available Port Services

Name: Available Port Services [PROPOSED AvailablePortServices]
Definition: Services that are available for a given port.
Code: `AvailablePortServices`
Remarks:
Aliases: (none) Supertype: InformationType

Attribute Bindings
See InformationType for inherited attributes

Attribute	Type	Mult.	Permitted Values	Sequential
firefightingService	enumeration	0..*	1 : Shore-Based Firefighting 2 : Onboard Firefighting 3 : Firefighting Boat	false
medicalService	enumeration	0..*	1 : Ambulance 2 : Fumigation 3 : Doctor 4 : Quarantine 5 : Vaccination Centre	false
repairService	enumeration	0..*	1 : Compensation of Magnetic Compass 2 : Diver Service 3 : Bridge Equipment Repair 4 : Engine Repair 5 : Electronic Equipment Repair 6 : Hull Repair 7 : Navigational Equipment Repair 8 : Propeller Repair 9 : Salvage Gear Repair 10 : Shaft Repair	false
technicalPortService	enumeration	0..*	1 : Compensation of Magnetic Compass 2 : Degaussing 3 : Cargo Surveying 4 : Vetting	false
shipSanitationControl	enumeration	0..*	1 : Sanitation Measures Only 2 : Issue SSCC 3 : Issue SSCEC	false
transportConnection	enumeration	0..*	1 : Airport/Airfield 2 : Heliport 3 : Helipad 4 : Hired Boat 5 : Bus Station 6 : Ferry 7 : Road 8 : Motorway 9 : Launch	false

Attribute	Type	Mult.	Permitted Values	Sequential
			10 : Railway 11 : Inland Waterway Transport 12 : Short Sea Transportation 13 : Marine Highway	
berthingAssistance	enumeration	0..*	1 : Berthing Information 2 : Line Personnel 3 : Mooring Boat 4 : Mule 5 : Tugboat 6 : Icebreaking Ship	false
cargoService	enumeration	0..*	1 : Stevedoring 2 : Cargo Surveying 3 : Cargo Lashing 4 : Draught Survey	false
securitySafetyEmergencyService	enumeration	0..*	1 : Coast Guard 2 : Customs 3 : Environmental Emergency Information Centre 4 : Emergency Coordination Centre 5 : Guard and/or Security Service 6 : Immigration 7 : Police 8 : Sea Rescue Control 9 : Rescue Station	false
wasteDisposalService	enumeration	0..*	1 : MARPOL Annex I Oily Bilge Water 2 : MARPOL Annex I Oily Residues 3 : MARPOL Annex I Oily Tank Washings 4 : MARPOL Annex I Dirty Ballast Water 5 : MARPOL Annex I Scale and Sludge from Tank Cleaning 6 : MARPOL Annex I Other Oily Waste 7 : MARPOL Annex II Category X 8 : MARPOL Annex II Category Y 9 : MARPOL Annex II Category Z 10 : MARPOL Annex II Category OS 11 : MARPOL Annex IV Sewage 12 : MARPOL Annex V Plastics 13 : MARPOL Annex V Food Wastes 14 : MARPOL Annex V Domestic Wastes 15 : MARPOL Annex V Cooking Oil 16 : MARPOL Annex V Incinerator Ashes 17 : MARPOL Annex V Operational Wastes 18 : MARPOL Annex V Animal Carcasses 19 : MARPOL Annex V Fishing Gear 20 : MARPOL Annex V E-Waste 21 : MARPOL Annex V Cargo Residues - non-HME 22 : MARPOL Annex V Cargo Residues - HME 23 : MARPOL Annex VI Ozone-Depleting Substances 24 : MARPOL Annex VI Exhaust Gas-Cleaning Residues	false
supplyService	enumeration	0..*	1 : Shore Power 2 : Fuel Oil Bunkering 3 : LNG Bunkering 4 : Lubricants 5 : Steam	false

Attribute	Type	Mult.	Permitted Values	Sequential
			6 : Potable Water 7 : International Shore Connection 8 : Provisions 9 : Chandler 10 : Mechanics Workshop	
tugInformation	text	0..1		false
textContent	complex	0..*		false

Information bindings
See InformationType for inherited bindings
(No local bindings, but may inherit bindings from super-types, if any)

8.4 Applicability

Name: Applicability [IHOREG 35]
Definition: Describes the relationship between vessel characteristics and: (i) the applicability of an associated information object or feature to the vessel; or, (ii) the use of a facility, place, or service by the vessel; or, (iii) passage of the vessel through an area.
Code: `Applicability`
Remarks:
Aliases: (none) Supertype: InformationType

Attribute Bindings
See InformationType for inherited attributes

Attribute	Type	Mult.	Permitted Values	Sequential
inBallast	boolean	0..1		false
categoryOfCargo	enumeration	0..*	2 : Container 5 : Passenger 6 : Livestock 7 : Dangerous or Hazardous 8 : Heavy Lift 10 : Dry Bulk Cargo 11 : Liquid Bulk Cargo 12 : Reefer Container Cargo 13 : Ro-Ro Cargo 14 : Project Cargo 15 : Break Bulk Cargo	false
categoryOfDangerousOrHazardousCargo	enumeration	0..*	1 : IMDG Code Class 1 Div. 1.1 2 : IMDG Code Class 1 Div. 1.2 3 : IMDG Code Class 1 Div. 1.3 4 : IMDG Code Class 1 Div. 1.4 5 : IMDG Code Class 1 Div. 1.5 6 : IMDG Code Class 1 Div. 1.6 7 : IMDG Code Class 2 Div. 2.1 8 : IMDG Code Class 2 Div. 2.2 9 : IMDG Code Class 2 Div. 2.3 10 : IMDG Code Class 3 11 : IMDG Code Class 4 Div. 4.1 12 : IMDG Code Class 4 Div. 4.2 13 : IMDG Code Class 4 Div. 4.3 14 : IMDG Code Class 5 Div. 5.1 15 : IMDG Code Class 5 Div. 5.2 16 : IMDG Code Class 6 Div. 6.1	false

Attribute	Type	Mult.	Permitted Values	Sequential
			17 : IMDG Code Class 6 Div. 6.2 18 : IMDG Code Class 7 19 : IMDG Code Class 8 20 : IMDG Code Class 9 21 : Harmful Substances in Packaged Form	
categoryOfVessel	S100_CodeList	0..1	1 : General Cargo Vessel 2 : Container Carrier 3 : Tanker 4 : Bulk Carrier 5 : Passenger Vessel 6 : Roll-On Roll-Off 7 : Refrigerated Cargo Vessel 8 : Fishing Vessel 9 : Service 10 : Warship 11 : Towed or Pushed Composite Unit 12 : Tug and Tow 13 : Light Recreational 14 : Semi-Submersible Offshore Installation 15 : Jack-Up Exploration or Project Installation 16 : Livestock Carrier 17 : Sport Fishing	false
categoryOfVesselRegistry	enumeration	0..1	1 : Domestic 2 : Foreign	false
logicalConnectives	enumeration	0..1	1 : Logical Conjunction 2 : Logical Disjunction	false
thicknessOfIceCapability	integer	0..1		false
vesselPerformance	text	0..1		false
information	complex	0..*		false
vesselsMeasurements	complex	0..*		false

Information bindings
See InformationType for inherited bindings

Assoc. Type	Code of association	Code of associated class	Role	Mult.
association	InclusionType	AbstractRxN	theApplicableRxN	0..*
association	PermissionType	InformationType	vslLocation	0..*

8.5 Authority

Name: Authority [IHOREG 36]
Definition: A person or organisation having political or administrative power and control.
Code: `Authority`
Remarks:
Aliases: (none) Supertype: InformationType

Attribute Bindings
See InformationType for inherited attributes

Attribute	Type	Mult.	Permitted Values	Sequential
categoryOfAuthority	enumeration	1..1	2 : Border Control 3 : Police	false

Attribute	Type	Mult.	Permitted Values	Sequential
			4 : Port 5 : Immigration 6 : Health 7 : Coast Guard 8 : Agricultural 9 : Military 10 : Private Company 11 : Maritime Police 12 : Environmental 13 : Fishery 14 : Finance 15 : Maritime 16 : Customs	
textContent	complex	0..1		false

Information bindings
See InformationType for inherited bindings

Assoc. Type	Code of association	Code of associated class	Role	Mult.
association	AuthorityContact	ContactDetails	theContactDetails	0..*
association	RelatedOrganisation	AbstractRxN	theInformation	0..*
association	AuthorityHours	ServiceHours	theServiceHours	0..*

8.6 Contact details

Name: Contact details [IHOREG 27]
Definition: information on how to reach a person or organisation by postal, internet, telephone, telex and radio systems
Code: `ContactDetails`
Remarks:
Aliases: (none) Supertype: InformationType

Attribute Bindings
See InformationType for inherited attributes

Attribute	Type	Mult.	Permitted Values	Sequential
callName	text	0..1		false
callSign	text	0..1		false
categoryOfCommunicationPreference	enumeration	0..1	1 : Preferred Calling 2 : Alternate Calling 3 : Preferred Working 4 : Alternate Working	false
communicationChannel	text	0..*		false
contactAddress	complex	0..*		false
contactInstructions	text	0..1		false
signalFrequency	integer	0..*		false
frequencyPair	complex	0..*		false
information	complex	0..*		false
mMSICode	text	0..1		false
onlineResource	complex	0..*		false
telecommunications	complex	0..*		false

Information bindings
See InformationType for inherited bindings

Assoc. Type	Code of association	Code of associated class	Role	Mult.
association	AuthorityContact	Authority	theAuthority	0..*

8.7 Entrance

Name: Entrance [PROPOSED entrance]
Definition: The seaward end of a channel, harbour, dock, etc.
Code: `Entrance`
Remarks:
Aliases: (none) Supertype: InformationType

Attribute Bindings
See InformationType for inherited attributes

Attribute	Type	Mult.	Permitted Values	Sequential
entranceDescription	text	0..1		false
associatedFeatureName	text	0..*		false
localKnowledgeDescription	text	0..1		false
approachDescription	text	0..1		false
markedBy	complex	0..*		false
landmarkDescription	complex	0..*		false
offshoreMarkDescription	complex	0..*		false
majorLightDescription	complex	0..*		false
usefulMarkDescription	complex	0..*		false
textContent	complex	0..*		false

Information bindings
See InformationType for inherited bindings
(No local bindings, but may inherit bindings from super-types, if any)

8.8 Nautical Information

Name: Nautical Information [IHOREG 30]
Definition: Nautical information about a related area or facility.
Code: `NauticalInformation`
Remarks:
Aliases: (none) Supertype: AbstractRxN

Attribute Bindings
See AbstractRxN for inherited attributes

(No local attribute bindings)

Information bindings
See AbstractRxN for inherited bindings

Assoc. Type	Code of association	Code of associated class	Role	Mult.

Assoc. Type	Code of association	Code of associated class	Role	Mult.
association	AdditionalInformation	InformationType	informationProvidedFor	0..*

8.9 Non-Standard Working Day

Name: Non-Standard Working Day [IHOREG 29]
Definition: Days when many services are not available. Often days of festivity or recreation or public holidays when normal working hours are limited, especially a national or religious festival, etc.
Code: `NonStandardWorkingDay`
Remarks:
Aliases: (none) Supertype: InformationType

Attribute Bindings
See InformationType for inherited attributes

Attribute	Type	Mult.	Permitted Values	Sequential
dateFixed	S100_TruncatedDate	0..*		false
dateVariable	text	0..*		false
information	complex	0..*		false

Information bindings
See InformationType for inherited bindings
(No local bindings, but may inherit bindings from super-types, if any)

8.10 Service Hours

Name: Service Hours [IHOREG 28]
Definition: The time when a service is available and known exceptions.
Code: `ServiceHours`
Remarks:
Aliases: (none) Supertype: InformationType

Attribute Bindings
See InformationType for inherited attributes

Attribute	Type	Mult.	Permitted Values	Sequential
scheduleByDayOfWeek	complex	1..*		false
information	complex	0..*		false

Information bindings
See InformationType for inherited bindings

Assoc. Type	Code of association	Code of associated class	Role	Mult.
association	ExceptionalWorkday	NonStandardWorkingDay	partialWorkingDay	0..*
association	AuthorityHours	Authority	theAuthority_srvHrs	0..*

8.11 Recommendations

Name: Recommendations [IHOREG 44]
Definition: Recommendations for a related area or facility.
Code: `Recommendations`
Remarks:

Aliases: (none) Supertype: AbstractRxN

Attribute Bindings
See AbstractRxN for inherited attributes

(No local attribute bindings)

Information bindings
See AbstractRxN for inherited bindings
(No local bindings, but may inherit bindings from super-types, if any)

8.12 Regulations

Name: Regulations [IHOREG 45]
Definition: Regulations for a related area or facility.
Code: `Regulations`
Remarks:
Aliases: (none) Supertype: AbstractRxN

Attribute Bindings
See AbstractRxN for inherited attributes

(No local attribute bindings)

Information bindings
See AbstractRxN for inherited bindings
(No local bindings, but may inherit bindings from super-types, if any)

8.13 Restrictions

Name: Restrictions [IHOREG 47]
Definition: Restrictions for a related area or facility.
Code: `Restrictions`
Remarks:
Aliases: (none) Supertype: AbstractRxN

Attribute Bindings
See AbstractRxN for inherited attributes

(No local attribute bindings)

Information bindings
See AbstractRxN for inherited bindings
(No local bindings, but may inherit bindings from super-types, if any)

8.14 Spatial Quality

Name: Spatial Quality [IHOREG 31]
Definition: The indication of the quality of the locational information for features in a dataset.
Code: `SpatialQuality`
Remarks:
Aliases: (none)

Attribute Bindings

Attribute	Type	Mult.	Permitted Values	Sequential
qualityOfHorizontalMeasurement	enumeration	0..1	1 : Surveyed 2 : Unsurveyed 3 : Inadequately Surveyed	false

Attribute	Type	Mult.	Permitted Values	Sequential
			4 : Approximate 5 : Position Doubtful 6 : Unreliable 7 : Reported (Not Surveyed) 8 : Reported (Not Confirmed) 9 : Estimated 10 : Precisely Known 11 : Calculated	
spatialAccuracy	complex	0..*		false

Information bindings

(No local bindings, but may inherit bindings from super-types, if any)

9 Feature Types

9.1 Feature Type

Name: Feature Type Abstract type: true [IHOREG 422]
Definition: Generalized feature type which carries all the common attributes
Code: `FeatureType`
Remarks:
Aliases: (none)
Feature use type: geographic
Permitted primitives: noGeometry

Attribute Bindings

Attribute	Type	Mult.	Permitted Values	Sequential
locationMRN	URN	0..1		false
globalLocationNumber	text	0..1		false
featureName	complex	0..*		false
fixedDateRange	complex	0..1		false
periodicDateRange	complex	0..*		false
rxnCode	complex	0..*		false
graphic	complex	0..*		false
textContent	complex	0..1		false

Information bindings

Assoc. Type	Code of association	Code of associated class	Role	Mult.
association	PermissionType	Applicability	permission	0..*
association	AssociatedRxN	AbstractRxN	theRxN	0..*
association	AdditionalInformation	NauticalInformation	providesInformation	0..*

Feature bindings

Assoc. Type	Code of association	Code of associated class	Role	Mult.
association	TextAssociation	TextPlacement	positions	0..1

9.2 Organization Contact Area

Name: Organization Contact Area Abstract type: true [IHOREG 481]
Definition: A feature often associated with contact information for an organization that exercises a management role or offers a service in the location.
Code: `OrganizationContactArea`
Remarks: It is not a requirement that every instance of the feature be associated with a management, reporting, or service organization.
Aliases: (none) Supertype: FeatureType
Feature use type: geographic
Permitted primitives: noGeometry

Attribute Bindings
See FeatureType for inherited attributes

(No local attribute bindings)

Information bindings
See FeatureType for inherited bindings

Assoc. Type	Code of association	Code of associated class	Role	Mult.
association	ServiceContact	ContactDetails	theContactDetails	0..*

Feature bindings
See FeatureType for inherited bindings.
(No local bindings, but may inherit bindings from super-types, if any)

9.3 Supervised Area

Name: Supervised Area Abstract type: true [IHOREG 519]
Definition: A location which may be supervised by a responsible or controlling authority.
Code: `SupervisedArea`
Remarks: It is not a requirement that every feature instance be associated with an authority. Note that having AbstractService as well as SupervisedArea allows the subclasses to link to CONDET both directly and via AUTORI, which may not be desirable because it gives encoders two ways to reach almost the same result.
Aliases: (none) Supertype: OrganizationContactArea
Feature use type: geographic
Permitted primitives: noGeometry

Attribute Bindings
See OrganizationContactArea for inherited attributes

(No local attribute bindings)

Information bindings
See OrganizationContactArea for inherited bindings

Assoc. Type	Code of association	Code of associated class	Role	Mult.
association	ServiceControl	Authority	controlAuthority	0..1

Feature bindings
See OrganizationContactArea for inherited bindings.
(No local bindings, but may inherit bindings from super-types, if any)

9.4 Harbour Physical Infrastructure

Name: Harbour Physical Infrastructure Abstract type: true [PROPOSED harbourPhysicalInfrastructure]
Definition: The physical installations and facilities that support operations in a port or harbour.
Code: `HarbourPhysicalInfrastructure`
Remarks:
Aliases: (none) Supertype: SupervisedArea
Feature use type: geographic
Permitted primitives: point surface

Attribute Bindings

See SupervisedArea for inherited attributes

Attribute	Type	Mult.	Permitted Values	Sequential
verticalClearanceValue	real	0..1		false

Information bindings
See SupervisedArea for inherited bindings
(No local bindings, but may inherit bindings from super-types, if any)

Feature bindings
See SupervisedArea for inherited bindings.

Assoc. Type	Code of association	Code of associated class	Role	Mult.
association	Infrastructure	HarbourAreaSection, Terminal	infrastructureLocation	0..1

9.5 Layout

Name: Layout Abstract type: true [PROPOSED Layout]
Definition: The spatial arrangement of areas and other types of locations that are designated for specified purposes or otherwise distinguished from other areas and locations.
Code: `Layout`
Remarks:
Aliases: (none) Supertype: SupervisedArea
Feature use type: geographic
Permitted primitives: noGeometry

Attribute Bindings
See SupervisedArea for inherited attributes

(No local attribute bindings)

Information bindings
See SupervisedArea for inherited bindings
(No local bindings, but may inherit bindings from super-types, if any)

Feature bindings
See SupervisedArea for inherited bindings.
(No local bindings, but may inherit bindings from super-types, if any)

9.6 Anchor Berth

Name: Anchor Berth [IHOREG 308]
Definition: A designated area of water where a vessel, sea plane, etc., may anchor.
Code: `AnchorBerth`
Remarks: In general the anchor berth is defined by the centre point and a swinging circle radius.
Aliases: ACHBRT Supertype: Layout
Feature use type: geographic
Permitted primitives: point surface

Attribute Bindings

See Layout for inherited attributes

(No local attribute bindings)

Information bindings
See Layout for inherited bindings

Assoc. Type	Code of association	Code of associated class	Role	Mult.
association	ServiceAvailability	AvailablePortServices	serviceDescriptionReference	0..1
association	LocationHours	ServiceHours	location_srvHrs	0..1

Feature bindings
See Layout for inherited bindings.

Assoc. Type	Code of association	Code of associated class	Role	Mult.
association	PrimaryAuxiliaryFacility	MooringWarpingFacility	auxiliaryFacility	0..*

9.7 Berth

Name: Berth [IHOREG 243]
Definition: Place in which a ship is moored at wharf.
Code: `Berth`
Remarks:
Aliases: BERTHS Supertype: Layout
Feature use type: geographic
Permitted primitives: point curve surface

Attribute Bindings
See Layout for inherited attributes

Attribute	Type	Mult.	Permitted Values	Sequential
availableBerthingLength	real	0..1		false
bollardDescription	text	0..1		false
bollardPull	real	0..1		false
minimumBerthDepth	real	0..1		false
elevation	real	0..1		false
cathodicProtectionSystem	boolean	0..1		false
categoryOfBerthLocation	enumeration	0..1	1 : Wharf Reference Metre Mark 2 : Wharf Reference Position 3 : Pier (Jetty) 4 : Conventional Mooring	false
portFacilityNumber	text	0..1		false
bollardNumber	text	0..2		true
gLNExtension	text	0..1		false
metreMarkNumber	text	0..2		true
manifoldNumber	text	0..2		true
rampNumber	text	0..1		false
locationByText	text	0..1		false
methodOfSecuring	enumeration	0..1	1 : Bow to Seaward 2 : Stern to Seaward	false

Attribute	Type	Mult.	Permitted Values	Sequential
			3 : Mediterranean Mooring 4 : Baltic Mooring 5 : Running Mooring 6 : Standing Mooring 7 : Single Point Mooring 8 : Conventional Mooring 9 : Ship-to-Ship Mooring 10 : Spider Buoy Mooring	
uNLocationCode	text	1..1		false
terminalIdentifier	text	0..1		false

Information bindings
See Layout for inherited bindings

Assoc. Type	Code of association	Code of associated class	Role	Mult.
association	ServiceAvailability	AvailablePortServices	serviceDescriptionReference	0..1
association	LocationHours	ServiceHours	location_srvHrs	0..1

Feature bindings
See Layout for inherited bindings.

Assoc. Type	Code of association	Code of associated class	Role	Mult.
association	Demarcation	BerthPosition	demarcationIndicator	0..*
aggregation	LayoutDivision	HarbourAreaSection, Terminal	componentOf	1..1

9.8 Berth Position

Name: Berth Position [PROPOSED berthPosition]
Definition: A specific position within a berth where a vessel may be moored or anchored.
Code: `BerthPosition`
Remarks:
Aliases: (none) Supertype: Layout
Feature use type: geographic
Permitted primitives: point

Attribute Bindings
See Layout for inherited attributes

Attribute	Type	Mult.	Permitted Values	Sequential
availableBerthingLength	real	0..1		false
bollardDescription	text	0..1		false
bollardPull	real	0..1		false
bollardNumber	text	0..2		true
gLNExtension	text	0..1		false
metreMarkNumber	text	0..2		false
manifoldNumber	text	0..2		true
rampNumber	text	0..1		false

Attribute	Type	Mult.	Permitted Values	Sequential
locationByText	text	0..1		false

Information bindings
See Layout for inherited bindings
(No local bindings, but may inherit bindings from super-types, if any)

Feature bindings
See Layout for inherited bindings.

Assoc. Type	Code of association	Code of associated class	Role	Mult.
composition	Demarcation	Berth	demarcatedFeature	1..1
association	PrimaryAuxiliaryFacility	MooringWarpingFacility	auxiliaryFacility	0..*

9.9 Dry Dock

Name: Dry Dock [IHOREG 245]
Definition: An artificial basin fitted with a gate or caisson, into which vessels can be floated and the water pumped out to expose the vessel's bottom. Also called graving dock.
Code: `DryDock`
Remarks:
Aliases: DRYDOC; Graving Dock Supertype: HarbourPhysicalInfrastructure
Feature use type: geographic
Permitted primitives: point surface

Attribute Bindings
See HarbourPhysicalInfrastructure for inherited attributes

Attribute	Type	Mult.	Permitted Values	Sequential
sillDepth	real	0..1		false

Information bindings
See HarbourPhysicalInfrastructure for inherited bindings

Assoc. Type	Code of association	Code of associated class	Role	Mult.
association	LocationHours	ServiceHours	location_srvHrs	0..1

Feature bindings
See HarbourPhysicalInfrastructure for inherited bindings.
(No local bindings, but may inherit bindings from super-types, if any)

9.10 Floating Dock

Name: Floating Dock [IHOREG 246]
Definition: A form of dry dock consisting of a floating structure of one or more sections which can be partly submerged by controlled

flooding to receive a vessel, then raised by pumping out the water so that the vessel's bottom can be exposed.
Code: `FloatingDock`
Remarks:
Aliases: FLODOC Supertype: HarbourPhysicalInfrastructure
Feature use type: geographic
Permitted primitives: point surface

Attribute Bindings
See HarbourPhysicalInfrastructure for inherited attributes

Attribute	Type	Mult.	Permitted Values	Sequential
sillDepth	real	0..1		false

Information bindings
See HarbourPhysicalInfrastructure for inherited bindings

Assoc. Type	Code of association	Code of associated class	Role	Mult.
association	LocationHours	ServiceHours	location_srvHrs	0..1

Feature bindings
See HarbourPhysicalInfrastructure for inherited bindings.
(No local bindings, but may inherit bindings from super-types, if any)

9.11 Gridiron

Name: Gridiron [IHOREG 249]
Definition: A structure in the intertidal zone serving as a support for vessels at low stages of the tide to permit work on the exposed portion of the vessel's hull.
Code: `Gridiron`
Remarks:
Aliases: GRIDRN; Careening Grid Supertype: HarbourPhysicalInfrastructure
Feature use type: geographic
Permitted primitives: point surface

Attribute Bindings
See HarbourPhysicalInfrastructure for inherited attributes

Attribute	Type	Mult.	Permitted Values	Sequential
sillDepth	real	0..1		false

Information bindings
See HarbourPhysicalInfrastructure for inherited bindings

Assoc. Type	Code of association	Code of associated class	Role	Mult.
association	LocationHours	ServiceHours	location_srvHrs	0..1

Feature bindings
See HarbourPhysicalInfrastructure for inherited bindings.
(No local bindings, but may inherit bindings from super-types, if any)

9.12 Harbour Area (Administrative)

Name: Harbour Area (Administrative) [IHOREG 323]
Definition: The area over which a harbour authority has jurisdiction.
Code: `HarbourAreaAdministrative`
Remarks:
Aliases: HRBARE Supertype: Layout
Feature use type: geographic
Permitted primitives: point surface

Attribute Bindings
See Layout for inherited attributes

Attribute	Type	Mult.	Permitted Values	Sequential
uNLocationCode	text	0..1		false
nationality	text	0..1		false
applicableLoadLineZone	text	0..1		false
iSPSLevel	enumeration	0..1	1 : ISPS Level 1 2 : ISPS Level 2 3 : ISPS Level 3	false
categoryOfHarbourFacility	enumeration	0..*	1 : RoRo Terminal 3 : Ferry Terminal 4 : Fishing Harbour 5 : Yacht Harbour/Marina 6 : Naval Base 7 : Tanker Terminal 8 : Passenger Terminal 9 : Shipyard 10 : Container Terminal 11 : Bulk Terminal 12 : Ship Lift 13 : Straddle Carrier 14 : Service Harbour 15 : Pilotage Service	false
generalHarbourInformation	complex	0..1		false

Information bindings
See Layout for inherited bindings

Assoc. Type	Code of association	Code of associated class	Role	Mult.
association	ServiceAvailability	AvailablePortServices	serviceDescriptionReference	0..1
association	LocationHours	ServiceHours	location_srvHrs	0..1

Feature bindings
See Layout for inherited bindings.

Assoc. Type	Code of association	Code of associated class	Role	Mult.
association	JurisdictionalLimit	OuterLimit	limitExtent	0..1
association	LayoutDivision	HarbourAreaSection	layoutUnit	0..*

9.13 Harbour Area Section

Name: Harbour Area Section [PROPOSED HarbourAreaSection]
Definition: A distinguishable portion of the area over which a harbour authority has jurisdiction.
Code: `HarbourAreaSection`
Remarks:
Aliases: (none) Supertype: Layout
Feature use type: geographic
Permitted primitives: point surface

Attribute Bindings
See Layout for inherited attributes

Attribute	Type	Mult.	Permitted Values	Sequential
categoryOfPortSection	enumeration	0..1	1 : Port Fairway 2 : Harbour Basin 3 : Berth Pocket 4 : Pilot Boarding Place 5 : Anchorage Area 6 : Dock Area 7 : Seaplane Landing Area 8 : Seaplane Anchorage 9 : Dredged Basin 10 : Dumping Ground 11 : Port Safety Zone 12 : Lay-by Berth	false
categoryOfHarbourFacility	enumeration	0..*	4 : Fishing Harbour 5 : Yacht Harbour/Marina 6 : Naval Base 9 : Shipyard 12 : Ship Lift 13 : Straddle Carrier 14 : Service Harbour 15 : Pilotage Service 16 : Service and Repair 17 : Quarantine Station	false
iSPSLevel	enumeration	0..1	1 : ISPS Level 1 2 : ISPS Level 2 3 : ISPS Level 3	false
facilitiesLayoutDescription	complex	0..1		false

Information bindings
See Layout for inherited bindings

Assoc. Type	Code of association	Code of associated class	Role	Mult.
association	LocationHours	ServiceHours	location_srvHrs	0..1

Feature bindings
See Layout for inherited bindings.

Assoc. Type	Code of association	Code of associated class	Role	Mult.

Assoc. Type	Code of association	Code of associated class	Role	Mult.
aggregation	LayoutDivision	HarbourAreaAdministrative	componentOf	0..1
aggregation	Subsection	HarbourAreaSection	constitute	0..1
association	Subsection	HarbourAreaSection	subUnit	0..*
association	Infrastructure	HarbourPhysicalInfrastructure	hasInfrastructure	0..*
association	LayoutDivision	Berth, Terminal, WaterwayArea	layoutUnit	0..*

9.14 Mooring/Warping Facility

Name: Mooring/Warping Facility [IHOREG 244]
Definition: The equipment or structure used to secure a vessel.
Code: `MooringWarpingFacility`
Remarks: heavingLinesFromShore added as a boolean attribute instead of a listed value in categoryOfMooringWarpingFacility
Aliases: MORFAC Supertype: SupervisedArea
Feature use type: geographic
Permitted primitives: point

Attribute Bindings
See SupervisedArea for inherited attributes

Attribute	Type	Mult.	Permitted Values	Sequential
categoryOfMooringWarpingFacility	enumeration	1..1	1 : Dolphin 2 : Deviation Dolphin 3 : Bollard 4 : Tie-Up Wall 5 : Post or Pile 6 : Mooring Cable 7 : Mooring Buoy	false
iDCode	text	1..1		false
bollardDescription	text	0..1		false
bollardPull	real	0..1		false
heavingLinesFromShore	boolean	0..1		false

Information bindings
See SupervisedArea for inherited bindings

Assoc. Type	Code of association	Code of associated class	Role	Mult.
association	ServiceAvailability	AvailablePortServices	serviceDescriptionReference	0..1
association	LocationHours	ServiceHours	location_srvHrs	0..1

Feature bindings
See SupervisedArea for inherited bindings.

Assoc. Type	Code of association	Code of associated class	Role	Mult.
association	PrimaryAuxiliaryFacility	AnchorBerth, BerthPosition	primaryFacility	0..1

9.15 Outer Limit

Name: Outer Limit [IHOCONREG outerLimit]
Definition: The extent to which a coastal State claims or may claim a specific jurisdiction in accordance with the provisions of International Law.
Code: `OuterLimit`
Remarks:
Aliases: (none) Supertype: SupervisedArea
Feature use type: geographic
Permitted primitives: curve surface

Attribute Bindings
See SupervisedArea for inherited attributes

Attribute	Type	Mult.	Permitted Values	Sequential
limitsDescription	complex	0..1		false
markedBy	complex	0..*		false
landmarkDescription	complex	0..*		false
offshoreMarkDescription	complex	0..*		false
majorLightDescription	complex	0..*		false
usefulMarkDescription	complex	0..*		false

Information bindings
See SupervisedArea for inherited bindings

Assoc. Type	Code of association	Code of associated class	Role	Mult.
association	LimitEntrance	Entrance	entranceReference	0..1

Feature bindings
See SupervisedArea for inherited bindings.

Assoc. Type	Code of association	Code of associated class	Role	Mult.
association	JurisdictionalLimit	HarbourAreaAdministrative	limitReference	1..1

9.16 Ship Lift

Name: Ship Lift [PROPOSED ShipLift]
Definition: A platform powered by synchronous electric motors (for example syncrolift) used to lift vessels (larger than boats) in and out of the water.
Code: `ShipLift`
Remarks:
Aliases: (none) Supertype: HarbourPhysicalInfrastructure
Feature use type: geographic
Permitted primitives: point surface

Attribute Bindings
See HarbourPhysicalInfrastructure for inherited attributes

(No local attribute bindings)

Information bindings
See HarbourPhysicalInfrastructure for inherited bindings

Assoc. Type	Code of association	Code of associated class	Role	Mult.
association	LocationHours	ServiceHours	location_srvHrs	0..1

Feature bindings
See HarbourPhysicalInfrastructure for inherited bindings.
(No local bindings, but may inherit bindings from super-types, if any)

9.17 Straddle Carrier

Name: Straddle Carrier [PROPOSED StraddleCarrier]
Definition: A wheeled vehicle designed to lift and carry containers or vessels within its own framework. It is used for moving, and sometimes stacking, shipping containers and vessels.
Code: `StraddleCarrier`
Remarks:
Aliases: (none) Supertype: HarbourPhysicalInfrastructure
Feature use type: geographic
Permitted primitives: point surface

Attribute Bindings
See HarbourPhysicalInfrastructure for inherited attributes

(No local attribute bindings)

Information bindings
See HarbourPhysicalInfrastructure for inherited bindings

Assoc. Type	Code of association	Code of associated class	Role	Mult.
association	LocationHours	ServiceHours	location_srvHrs	0..1

Feature bindings
See HarbourPhysicalInfrastructure for inherited bindings.
(No local bindings, but may inherit bindings from super-types, if any)

9.18 Terminal

Name: Terminal [IHOREG 388]
Definition: A terminal covers that area on shore which provides buildings and constructions for the transfer of cargo or passengers from and to ships.
Code: `Terminal`
Remarks:
Aliases: (none) Supertype: SupervisedArea
Feature use type: geographic
Permitted primitives: point surface

Attribute Bindings
See SupervisedArea for inherited attributes

Attribute	Type	Mult.	Permitted Values	Sequential
portFacilityNumber	text	0..1		false

Attribute	Type	Mult.	Permitted Values	Sequential
categoryOfHarbourFacility	enumeration	0..1	1 : RoRo Terminal 3 : Ferry Terminal 5 : Yacht Harbour/Marina 7 : Tanker Terminal 8 : Passenger Terminal 10 : Container Terminal 11 : Bulk Terminal	false
categoryOfCargo	enumeration	0..*	2 : Container 5 : Passenger 6 : Livestock 7 : Dangerous or Hazardous 8 : Heavy Lift 10 : Dry Bulk Cargo 11 : Liquid Bulk Cargo 12 : Reefer Container Cargo 13 : Ro-Ro Cargo 14 : Project Cargo 15 : Break Bulk Cargo	false
product	enumeration	0..*	1 : Oil 2 : Gas 4 : Stone 5 : Coal 6 : Ore 7 : Chemicals 9 : Milk 10 : Bauxite 11 : Coke 12 : Iron Ingots 13 : Salt 14 : Sand 15 : Timber 16 : Sawdust/Wood Chips 17 : Scrap Metal 18 : Liquefied Natural Gas 19 : Liquefied Petroleum Gas 20 : Wine 21 : Cement 22 : Grain	false
terminalIdentifier	text	0..1		false
sMDGTerminalCode	text	0..1		false
uNLocationCode	text	0..1		false

Information bindings
See SupervisedArea for inherited bindings

Assoc. Type	Code of association	Code of associated class	Role	Mult.
association	ServiceAvailability	AvailablePortServices	serviceDescriptionReference	0..1
association	LocationHours	ServiceHours	location_srvHrs	0..1

Feature bindings
See SupervisedArea for inherited bindings.

Assoc. Type	Code of association	Code of associated class	Role	Mult.
aggregation	LayoutDivision	HarbourAreaSection	componentOf	1..1
association	LayoutDivision	Berth	layoutUnit	0..*
association	Infrastructure	HarbourPhysicalInfrastructure	hasInfrastructure	0..*

9.19 Waterway Area

Name: Waterway Area [IHOREG 391]
Definition: An area in which uniform general information of the waterway exists.
Code: `WaterwayArea`
Remarks:
Aliases: (none) Supertype: SupervisedArea
Feature use type: geographic
Permitted primitives: surface

Attribute Bindings
See SupervisedArea for inherited attributes

Attribute	Type	Mult.	Permitted Values	Sequential
categoryOfPortSection	enumeration	1..1	1 : Port Fairway 2 : Harbour Basin 3 : Berth Pocket 4 : Pilot Boarding Place 5 : Anchorage Area 6 : Dock Area 7 : Seaplane Landing Area 8 : Seaplane Anchorage 9 : Dredged Basin 10 : Dumping Ground 11 : Port Safety Zone 12 : Lay-by Berth	false
depthsDescription	complex	0..1		false
locationByText	text	0..1		false
markedBy	complex	0..1		false

Information bindings
See SupervisedArea for inherited bindings

Assoc. Type	Code of association	Code of associated class	Role	Mult.
association	LocationHours	ServiceHours	location_srvHrs	0..1

Feature bindings
See SupervisedArea for inherited bindings.

Assoc. Type	Code of association	Code of associated class	Role	Mult.
aggregation	LayoutDivision	HarbourAreaSection	componentOf	1..1

9.20 Data Coverage

Name: Data Coverage [IHOREG 187]
Definition: A geographical area that describes the coverage and extent of spatial objects.
Code: `DataCoverage`
Remarks:
Aliases: M_COVR
Feature use type: meta
Permitted primitives: surface

Attribute Bindings

Attribute	Type	Mult.	Permitted Values	Sequential
maximumDisplayScale	integer	1..1		false
minimumDisplayScale	integer	1..1		false

Information bindings
(No local bindings, but may inherit bindings from super-types, if any)

Feature bindings
(No local bindings, but may inherit bindings from super-types, if any)

9.21 Quality of Non-Bathymetric Data

Name: Quality of Non-Bathymetric Data [IHOREG 186]
Definition: An area within which a uniform assessment of the quality of the non-bathymetric data exists.
Code: `QualityOfNonBathymetricData`
Remarks:
Aliases: M_ACCY
Feature use type: meta
Permitted primitives: surface

Attribute Bindings

Attribute	Type	Mult.	Permitted Values	Sequential
categoryOfTemporalVariation	enumeration	0..1	1 : Extreme Event 2 : Likely to Change and Significant Shoaling Expected 3 : Likely to Change But Significant Shoaling Not Expected 4 : Likely to Change 5 : Unlikely to Change 6 : Unassessed	false
horizontalDistanceUncertainty	real	0..1		false
horizontalPositionUncertainty	complex	1..1		false
orientationUncertainty	real	0..1		false
surveyDateRange	complex	0..1		false
verticalUncertainty	complex	0..1		false
information	complex	0..*		false

Information bindings
(No local bindings, but may inherit bindings from super-types, if any)

Feature bindings
(No local bindings, but may inherit bindings from super-types, if any)

9.22 Sounding Datum

Name: Sounding Datum [IHOREG 191]
Definition: The horizontal plane or tidal datum to which soundings have been reduced. Also called datum for sounding reduction.
Code: `SoundingDatum`
Remarks:
Aliases: M_SDAT
Feature use type: meta
Permitted primitives: surface

Attribute Bindings

Attribute	Type	Mult.	Permitted Values	Sequential
verticalDatum	enumeration	1..1	1 : Mean Low Water Springs 2 : Mean Lower Low Water Springs 3 : Mean Sea Level 4 : Lowest Low Water 5 : Mean Low Water 6 : Lowest Low Water Springs 7 : Approximate Mean Low Water Springs 8 : Indian Spring Low Water 9 : Low Water Springs 10 : Approximate Lowest Astronomical Tide 11 : Nearly Lowest Low Water 12 : Mean Lower Low Water 13 : Low Water 14 : Approximate Mean Low Water 15 : Approximate Mean Lower Low Water 19 : Approximate Mean Sea Level 22 : Equinoctial Spring Low Water 23 : Lowest Astronomical Tide 24 : Local Datum 25 : International Great Lakes Datum 1985 26 : Mean Water Level 27 : Lower Low Water Large Tide 44 : Baltic Sea Chart Datum 2000	false
information	complex	0..*		false

Information bindings
(No local bindings, but may inherit bindings from super-types, if any)

Feature bindings
(No local bindings, but may inherit bindings from super-types, if any)

9.23 Vertical Datum of Data

Name: Vertical Datum of Data [IHOREG 598]
Definition: Any level surface (for example Mean Sea Level) taken as a surface of reference to which the elevations within a data set are reduced. Also called datum level, reference level, reference plane, levelling datum, datum for heights.
Code: `VerticalDatumOfData`
Remarks:
Aliases: M_VDAT
Feature use type: meta
Permitted primitives: surface

Attribute Bindings

Attribute	Type	Mult.	Permitted Values	Sequential
verticalDatum	enumeration	1..1	3 : Mean Sea Level 16 : Mean High Water 17 : Mean High Water Springs 18 : High Water 19 : Approximate Mean Sea Level 20 : High Water Springs 21 : Mean Higher High Water 24 : Local Datum 25 : International Great Lakes Datum 1985 26 : Mean Water Level 28 : Higher High Water Large Tide 29 : Nearly Highest High Water 30 : Highest Astronomical Tide 44 : Baltic Sea Chart Datum 2000	false
information	complex	0..*		false

Information bindings
(No local bindings, but may inherit bindings from super-types, if any)

Feature bindings
(No local bindings, but may inherit bindings from super-types, if any)

9.24 Text Placement

Name: Text Placement [IHOREG 606]
Definition: The Text Placement feature is used in association with the Feature Name attribute or a light description to optimize text positioning in ECDIS.
Code: `TextPlacement`
Remarks:
Aliases: (none)
Feature use type: cartographic
Permitted primitives: point

Attribute Bindings

Attribute	Type	Mult.	Permitted Values	Sequential
orientationValue	real	1..1		false

Attribute	Type	Mult.	Permitted Values	Sequential
text	text	0..1		false
textJustification	enumeration	1..1	1 : Left 2 : Centred 3 : Right	false
textOffsetMm	integer	1..1		false
textType	enumeration	0..1	1 : Name	false
scaleMinimum	integer	0..1		false

Information bindings
(No local bindings, but may inherit bindings from super-types, if any)

Feature bindings

Assoc. Type	Code of association	Code of associated class	Role	Mult.
association	TextAssociation	FeatureType	identifies	0..*