

## Ship Type Identification Recommendations

Submitted by Coordinator DFMCG

### SUMMARY

Executive Summary: This document provides information on how to determine what values for the attribute of “vessel type” classification that should be used by crowd-sourced bathymetry submissions to the IHO-DCDB.

Action to be taken: 3

Related documents: None

#### 1. Discussion:

Defining specific values for the different classes of vessel that may submit crowd-sourced bathymetry provides data analysis and analytics utility of the end users of the bathymetry. These values should be general enough in nature, yet specific enough to capture the intended purpose of classifying them together. Correlation with similar vessel classification, such as AIS, would benefit analytics and comparison with bathymetric products. Certain classifications used by AIS (Wing In Ground, high-speed craft, etc) can be assumed unlikely to provide bathymetric data and are therefore omitted from this recommendation. For reference, the vessel codes used by AIS are attached as an appendix.

#### 2. Recommended vessel types:

- Fishing
- Tug
- Sailing Vessel
- Pleasure Craft
- Passenger
- Cargo
- Tanker
- Other

The following questions provide starting points for additional discussion for consideration of vessel classes:

- What traffic patterns might provide unique or valuable trends in bathymetry? (For example, tug traffic in rivers)
- What value may be added by separating vessels of this type from other groups? (For example, would separating scientific vessels from other provide datasets with higher confidence for those vessels?)

- How should this be encoded in the CSB-GeoJSON file?
3. The CSBWG is requested to note the information provide and take whatever action is deemed necessary.

Annex A: Vessel Type Codes and Names in the AIS system

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### Vessel Type Codes

(<http://help.marinetraffic.com/hc/en-us/articles/205579997-What-is-the-significance-of-the-AIS-SHIPTYPE-number->)

A vessel's type can be deducted using the information **contained in the AIS-transmitted messages** that she is emitting. The vessel's crew or the accountable officers are responsible for correctly entering this piece of information to the vessel's **AIS transponder**.

AIS SHIPTYPE usually consists of two digits.

The **first digit** represents the general category of the subject vessel:

- 1 = Reserved
- 2 = Wing In Ground
- 3 = Special Category
- 4 = High-Speed Craft
- 5 = Special Category
- 6 = Passenger
- 7 = Cargo
- 8 = Tanker
- 9 = Other

In certain cases (e.g. Cargo Vessels, Tankers), the **second digit** provides additional information regarding the subject vessel's type of cargo:

- 1 = Major Hazard (Haz A)
- 2 = Hazard (Haz B)
- 3 = Minor Hazard (Haz C)
- 4 = Recognisable Hazard (Haz D)

The following table contains a list of the all the possible responses.

SHIPTYPE	TYPE_NAME	AIS_TYPE_SUMMARY	DETAILED TYPE
10-19	Reserved	Unspecified	
20-28	Wing In Grnd	Wing in Grnd	Wing In Ground Effect Vessel
29	SAR Aircraft	Search and Rescue	
30	Fishing	Fishing	Fishing Vessel Trawler Fishery Protection/Research Fish Carrier Fish Factory Factory Trawler Fish Storage Barge Fishery Research Vessel Fishery Patrol Vessel

			Fishery Support Vessel
31	Tug	Tug	Towing Vessel Tug/Tender Tug/Supply Vessel Tug/Fire Fighting Vessel Tug Tug/Pilot Ship Anchor Handling Salvage Tug Towing/Pushing Tug/Ice Breaker Tractor Tug Tug/Support Articulated Pusher Tug
32	Tug	Tug	
33	Dredger	Special Craft	Suction Hopper Dredger Dredger Drill Ship Grab Hopper Dredger Grab Dredger Sand Suction Dredger Hopper Dredger Cutter Suction Dredger Cutter Suction Hopper Dredger Suction Dredger Bucket Dredger Trailing Suction Hopper Dredge Trailing Suction Dredger Inland Dredger Drilling Jack Up Bucket Ladder Dredger Drill Barge Bucket Hopper Dredger Bucket Dredger Pontoon Bucket Wheel Suction Dredger Dredging Pontoon Backhoe Dredger Suction Dredger Pontoon Water Jet Dredging Pontoon Grab Dredger Pontoon

			Kelp Dredger
34	Dive Vessel	Special Craft	Diving Support Vessel
35	Military Ops	Special Craft	Naval/Naval Auxiliary Vessel Naval Auxiliary Tug Logistics Naval Vessel Mine Hunter Minesweeper Combat Vessel Command Vessel Naval Salvage Vessel Torpedo Recovery Vessel Naval Research Vessel Naval Patrol Vessel Troopship Radar Vessel
36	Sailing Vessel	Sailing Vessel	Sailing Vessel
37	Pleasure Craft	Pleasure Craft	Yacht Museum Ship Exhibition Ship Floating Hotel/Restaurant Theatre Vessel
38	Reserved	Unspecified	
39	Reserved	Unspecified	
40-49	High-Speed Craft	High-Speed Craft	Hydrofoil Hovercraft
50	Pilot Vessel	Special Craft	

51	SAR	Search and Rescue	Salvage/Rescue Vessel Offshore Safety Vessel Standby Safety Vessel
52	Tug	Tug	Icebreaker Inland Tug Pusher Tug
53	Port Tender	Special Craft	Tender Crew Boat Pilot Ship Supply Tender
54	Anti-Pollution	Special Craft	Pollution Control Vessel
55	Law Enforce	Special Craft	Patrol Vessel
56	Local Vessel	Special Craft	
57	Local Vessel	Special Craft	
58	Medical Trans	Special Craft	Hospital Ship
59	Special Craft	Special Craft	Multi Purpose Offshore Vessel Barge Carrier Heavy Lift Vessel Special Vessel Maintenance Vessel Pipe Layer Waste Disposal Vessel Supply Vessel Training Ship Floating Storage/Production Radio Ship Research/Survey Vessel Repair Ship

			Support Vessel
			Fire Fighting Tractor Tug
			Landing Craft
			Floating Crane
			Fire Fighting/Supply Vessel
			Whaler
			Multi-Purpose Vessel
			Tank-Cleaning Vessel
			Mining Vessel
			Fire Fighting Vessel
			Paddle Ship
			Anchor Handling Vessel
			Nuclear Fuel Carrier
			Sludge Carrier
			Whale Factory
			Utility Vessel
			Work Vessel
			Platform
			Mission Ship
			Buoy-Laying Vessel
			Well Stimulation Vessel
			Motor Hopper
			Cable Layer
			Anchor Handling/Fire Fighting
			Crane Ship
			Inland Supply Vessel
			Offshore Supply Ship
			Trenching Support Vessel
			Offshore Construction Jack Up
			Pile Driving Vessel
			Replenishment Vessel
			Construction Support Vessel
			Pipelay Crane Vessel
			Crane Barge
			Work Pontoon
			Production Testing Vessel
			Floating Sheerleg
			Mooring Vessel
			Diving Support Platform
			Support Jack Up
			Sealer
			Trans Shipment Vessel
			Floating Linkspan
			Crane Jack Up
			Pumping Platform

			<ul style="list-style-type: none"> <li>Air Cushion Vessel</li> <li>Power Station Vessel</li> <li>Supply Jack Up</li> <li>Radar Platform</li> <li>Jacket Launching Pontoon</li> <li>Pipe Layer Platform</li> <li>Pipe Burying Vessel</li> <li>Air Cushion Patrol Vessel</li> <li>Air Cushion Work Vessel</li> <li>Pearl Shells Carrier</li> <li>Steam Supply Pontoon</li> <li>Incinerator</li> <li>Jack Up Barge</li> <li>Desalination Pontoon</li> <li>Grain Elevating Pontoon</li> </ul>
60-69	Passenger	Passenger	<ul style="list-style-type: none"> <li>Passengers Ship</li> <li>Inland Passengers Ship</li> <li>Inland Ferry</li> <li>Floating Hotel</li> <li>Ferry</li> <li>Ro-Ro/Passenger Ship</li> <li>Accommodation Ship</li> <li>Accommodation Barge</li> <li>Accommodation Jack Up</li> <li>Accommodation Vessel</li> <li>Passengers Landing Craft</li> <li>Houseboat</li> <li>Accommodation Platform</li> <li>Air Cushion Passenger Ship</li> <li>Air Cushion Ro-Ro/Passenger Sh</li> </ul>
70	Cargo	Cargo	<ul style="list-style-type: none"> <li>Passenger/Cargo Ship</li> <li>Livestock Carrier</li> <li>Bulk Carrier</li> <li>Ore Carrier</li> <li>General Cargo</li> <li>Wood Chips Carrier</li> <li>Container Ship</li> <li>Ro-Ro Cargo</li> <li>Reefer</li> <li>Heavy Load Carrier</li> <li>Barge</li> </ul>



			Ro-Ro/Container Carrier Inland Cargo Cement Carrier Reefer/Containership Vegetable/Animal Oil Tanker Obo Carrier Vehicles Carrier Inland Ro-Ro Cargo Ship Rail/Vehicles Carrier Pallet Carrier Cargo Barge Hopper Barge Deck Cargo Ship Cargo/Containership Aggregates Carrier Limestone Carrier Ore/Oil Carrier Self Discharging Bulk Carrier Deck Cargo Pontoon Bulk Carrier With Vehicle Deck Pipe Carrier Cement Barge Stone Carrier Bulk Storage Barge Aggregates Barge Timber Carrier Bulker Trans Shipment Barge Powder Carrier Cabu Carrier Vehicle Carrier Cargo
71	Cargo - Hazard A (Major)	Cargo	
72	Cargo - Hazard B	Cargo	
73	Cargo - Hazard C (Minor)	Cargo	
74	Cargo - Hazard D (Recognizable)	Cargo	

75-79	Cargo	Cargo	
80	Tanker	Tanker	Tanker Asphalt/Bitumen Tanker Chemical Tanker Crude Oil Tanker Inland Tanker Fruit Juice Tanker Bunkering Tanker Wine Tanker Oil Products Tanker Oil/Chemical Tanker Water Tanker Tank Barge Edible Oil Tanker Lpg/Chemical Tanker Shuttle Tanker Co2 Tanker
81	Tanker - Hazard A (Major)	Tanker	
82	Tanker - Hazard B	Tanker	
83	Tanker - Hazard C (Minor)	Tanker	
84	Tanker - Hazard D (Recognizable)	Tanker	Lng Tanker Lpg Tanker Gas Carrier
85-89	Tanker	Tanker	
90-99	Other	Other	

For values over 100, we might have:

Default Navaid

100

Reference point	101
RACON	102
Offshore Structure	103
Spare	104
Light, without sectors	105
Light, with sectors	106
Leading Light Front	107
Leading Light Rear	108
Beacon, Cardinal N	109
Beacon, Cardinal E	110
Beacon, Cardinal S	111
Beacon, Cardinal W	112
Beacon, Port hand	113
Beacon, Starboard hand	114
Beacon, Preferred Channel port hand	115
Beacon, Preferred Channel starboard hand	116
Beacon, Isolated danger	117
Beacon, Safe water	118
Beacon, Special mark	119
Cardinal Mark N	120
Cardinal Mark E	121
Cardinal Mark S	122
Cardinal Mark W	123
Port hand Mark	124
Starboard hand Mark	125
Preferred Channel Port hand	126

Preferred Channel Starboard hand	127
Isolated danger	128
Safe Water	129
Manned VTS / Special Mark	130
Light Vessel / LANBY	131