



NATIONAL GEOSPATIAL-INTELLIGENCE AGENCY
Know the Earth... Show the Way... Understand the World

NGA World Port Index (WPI) – S-131 Harbour Infrastructure Comparison NIPWG 8

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WPI / S-131 Comparison Purpose

Draw attention to differences for possible improvements and enhancements to S-131 during its development. Comparison is organized into the nine WPI categories:

- Name and Location
- Depths
- Maximum Vessel Size
- Physical Environment
- Approach
- Pilots, Tugs, Communications
- Facilities
- Cranes
- Services and Supplies



Name and Location

Different WPI fields compared to S-131:

- Region Name
- Alternate Name
- IHO S-23 Water Body
- IHO S-121 Water Body
- Sailing Directions or Publication
- Standard Nautical Chart
- IHO S-57 Electronic Navigational Chart
- IHO S-101 Electronic Navigational Chart

Analysis and Discussion

- Port Area, Harbour Area, and Named Place feature types are in the S-131 model currently. Include more name and location context? Water body covered by S-127 or S-121?



Depths

Different WPI fields compared to S-131:

- Tidal Range

Analysis and Discussion

- Limiting Conditions (information type) includes limitingDepth, wind, waves, and visibility.
- Add tidal range information?
- Could attributes such as Horizontal and Vertical clearances be added to limitingDepth?
- Limiting Conditions should be broken down for each section of the port as regulations can be different (i.e. fairway). WPI gives maximum draft that can be accommodated for each section.



Maximum Vessel Size

Different WPI fields compared to S-131:

- Offshore Maximum Vessel Length
- Offshore Maximum Vessel Beam
- Offshore Maximum Vessel Draft

Analysis and Discussion

- Add offshore if not covered already by the vesselMeasurements complex attribute or elsewhere?



Physical Environment

Different WPI fields compared to S-131:

- Shelter Afforded
- Entrance Restriction
- Good Holding Ground

Analysis and Discussion

- Shelter afforded from wind, sea, and swell refers to the area where normal port operations are conducted and may also apply to anchorage areas. Given as values from excellent to poor in the WPI. Add Shelter Afforded?
- Natural factors restricting the entrance of vessels, WPI uses 4 different fields (tide, heavy swell, ice, and other). Add Entrance Restriction?
- Good Holding Ground is indicated only where actual anchorage conditions have been reported and uses yes, no, and unknown for the values. Add Good Holding Ground?



Approach

Different WPI fields compared to S-131:

- First Port of Entry
- Diplomatic Representative
- TSS

Analysis and Discussion

- First Port of Entry may be the first place where pratique occurs and/or other paperwork is exchanged with local port and Customs authorities.
- Add Diplomatic Representative? Attributes could be Embassy, Consulate, or None.
- WPI indicates that a TSS is established in the approach by yes, no, and unknown values.



Pilots, Tugs, Communications

Different WPI fields compared to S-131:

- Tugs – Salvage and Available
- Pilotage (Feature)
- NAVAREA

Analysis and Discussion

- Tugs (feature) WPI values are yes, no, and unknown for salvage and docking/anchoring tug assistance.
- Attributes for Pilotage (Feature) in the WPI are Compulsory, Available (if pilot comes from a distance), Advisable (if not mandatory), and Local Assistance (if no official pilotage of any type is available).
- WPI provides the NAVAREA number for the area around the port.



Facilities

Different WPI fields compared to S-131:

- Facilities - Wharves
- Facilities - Anchorage
- Facilities - Dangerous Cargo Anchorage
- Facilities - Med Mooring
- Facilities - Beach Mooring
- Facilities - Ice Mooring
- Facilities - Solid Bulk
- Facilities - Liquid Bulk
- Facilities - Breakbulk
- Facilities - Oil Terminal
- Facilities - LNG Terminal
- Facilities - Other

Analysis and Discussion

- Should category of HarbourFacility be as detailed as WPI?



Cranes

Different WPI fields compared to S-131:

- Cranes – Fixed
- Cranes – Mobile
- Cranes – Floating
- (Gantry) Cranes – Container
- Lifts – 100+ Tons
- Lifts – 50-100 Tons
- Lifts – 25-49 Tons
- Lifts – 0-24 Tons

Analysis and Discussion

- Fields show crane availability and lifting power in tons. WPI values are yes, no, and unknown. Based on comments provided by working group members already the consensus appears to be for adding cranes but what attributes should be used?



Services and Supplies

Different WPI fields compared to S-131:

- Airports
- Provisions

Analysis and Discussion

- Add airports? Could be with two attributes (International and Regional), to include the distance from the port and could be a Complex Attribute.
- Provisions (ship chandlery)? Attributes could be meat, dairy, produce, fresh/frozen, etc.



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