

## Paper for Consideration by SNPWG18

### NP-1 Traffic Management Updated Test Data Set

<b>Submitted by:</b>	US (NGA)
<b>Executive Summary:</b>	Presentation of updated Traffic Management Test Data Set.
<b>Related Documents:</b>	
<b>Related Projects:</b>	NP-1 Test Data Samples for Navigational Services, Physical Environment, and Radio Services.

#### Introduction/Background

The initial NP-1 test data set for Traffic Management was presented at SNPWG17 in Rostock.

#### Analysis/Discussion

The initial Traffic Management test data set presented at SNPWG17 was divided into four categories (along with appropriate sub-categories), as follows:

1. Traffic Control.
2. Voluntary Ship Reporting Systems.
3. Mandatory Ship Reporting Systems.
4. Traffic Information.

The discussion at SNPWG17 resulted in the following recommended action items to be applied to update the test data set.

1. Creating a **Seasonal Ship Reporting System** category.
2. Developing a *Winter Ice Transit Ship Reporting System* for the **Seasonal Ship Reporting System** category.
3. Moving the *Jussland Right Whale Ship Reporting System* to the **Seasonal Ship Reporting System** category.
4. Transferring Navigational Dangers and Hazards—Discolored Water to the Physical Environment test data set.
5. Ensuring Flag Signals are part of the Traffic Management test data set.

Work continued on the Traffic Management test data set for presentation of an updated paper at SNPWG18. Previous sub-categories were updated and additional categories and sub-categories were developed and populated to ensure accurate and complete coverage of Traffic Management information for future modeling.

New Categories and Sub-categories were developed, as follows:

1. Traffic Control was divided into two new Categories: **Passive Traffic Control** and **Active Traffic Control** (as differentiated from Ship Reporting Systems based on IMO standards and requirements):

**a. Passive Traffic Control** refers to situations where the vessel must follow certain traffic patterns based on geographic situations and routing requirements which do not require any ship/shore based interaction or obtaining permission to act from a shore-based authority prior to transit of an area. In addition, the sub-categories were used to ensure the different geometries that will need to be modeled are contained in the Traffic Management test data set:

- *Firing and Exercise Area*—Sub-category updated to include the geometries of (i) an area bounded by lines joining specified positions, (ii) a sector with a specified radius centered on a specified position between specified bearings, and (iii) an annulus segment.
- *Area to be Avoided (ATBA)*—New sub-category to include the geometry of an area bounded by lines joining specified positions. The boundary of the ATBA was adapted from the original boundary of the *Jussland Right Whale Ship Reporting System*.

- *Mined Areas*—New sub-category to include the geometry of (i) an area bounded by the coast and lines joining specified positions and (ii) a circle with a specified radius centered on a specified position.
- *Traffic Separation Scheme* and *Recommended Route*—New sub-categories to include the geometry of lines joining specified positions.

**b. Interactive Traffic Control** refers to situations which require ship/shore interactions with shore authorities other than a Ship Reporting System. The new sub-category of *Micklefirth Pilotage*, using the information contained in previously-developed Jussland Radio Signals, was added here.

2. **Traffic Control Signals** is a new Category; it is divided into the new sub-categories of *International Port Control Signals* and *Harbor Control Signals*. Both sub-categories contain depictions of light signals and flag signals that will need to be modeled in the Traffic Management test data set.

3. **Seasonal Ship Reporting System** is a new Category; it is divided into the updated sub-category of *Jussland Right Whale Ship Reporting System* (which added an expanded reporting boundary and converted the previous reporting system boundary into an ATBA) and the new sub-category of *Winter Ice Transit Ship Reporting System*.

4. **Regulatory Reporting Requirements** is a new Category; it is divided into six previous sub-categories (*Notice of ETA*, *Notice of ETD*, *Pre-arrival Reporting (Customs)*, *Pre-arrival Reporting (Immigration)*, *Pre-arrival Reporting (Quarantine)*, *Vessels in a Dangerous Condition*, and *ISPS Reporting Requirements*) and one updated sub-category (*Emergency Refuge*).

The **Traffic Information** category has been deleted, with the following items to be noted:

1. The sub-category *Navigational Dangers and Hazards (Discolored Water)* has been forwarded to the Physical Environment test data set.

2. The sub-category *Navigational Dangers and Hazards (Fishing Areas)* has been deleted. Both NGA and UKHO discussed the proper location for this information; it was agreed neither the Traffic Management nor the Physical Environment test data sets are the appropriate location for this information.

3. The sub-category *Directions* has been deleted; however information on Flag Signals has been added to the sub-categories *International Port Control Signals* and *Harbor Control Signals* of the new **Traffic Control Signals** category. Information on Flag Signals and Light Signals has also been added to the sub-category *Jussland Right Whale Ship Reporting System* of the **Seasonal Ship Reporting System** category.

Added Information Services to sub-categories *Piracy—Merchant Navy Voluntary Reporting System* and *Jusslandian Reporting System (JUSSREP)*.

Annex A is an updated schematic diagram for the updated NP-1 Traffic Management test data set.

Annex B is the updated NP-1 Traffic Management test data set.

## Conclusions

Users of navigational safety information from an ECDIS are not concerned if the information came from a sailing directions, pilot book, light list, or radio aids publication. They are only concerned with the currency and accuracy of the information and the display clarity.

## Recommendations

Continue developing navigational safety information test data sets for other categories.

## Justification and Impacts

The work has impacts on the development of product specifications.

## Action Required of SNPWG18

The SNPWG18 is invited to:

1. Note this paper.

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2. Consider any categories and sub-categories in the Traffic Management test data set which may be more suitable to be located in other test data sets, particularly the *Navigational Dangers and Hazards (Fishing Areas)* sub-category.
3. Consider any categories and sub-categories that have not been included in the Traffic Management test data set.