

Paper for Consideration by HSSC11

Proposal for developing a new S-100 Specification covering MARPOL areas

Submitted by:	United States (NOAA)
Executive Summary:	The United States proposes that the IHO add to the HSSC work programme a new product specification that covers aspects of MARPOL – International Convention for the Prevention of Pollution from ship and other environmental regulations
Related Documents:	NIPWG2-20.6 Proposal for S-122 Extension MARPOL SWPHC16-16.1 Presentation from Carnival Australia (Slide 23)
Related Projects:	S-100, S-122

Introduction / Background

The International Convention for the Prevention of Pollution from ship and other Environmental Regulations (MARPOL) was first signed in 1973, but came into force in 1983. This important regulation covers marine environmental conventions and is an effort to preserve the marine environment by minimizing the pollution of the oceans, including dumping, fuel, oil and air pollution.

Analysis/Discussion

While the Electronic Navigational Chart contains all the information needed for a ship to navigate safely, it is missing the capability to encode and display fundamental information that many ships require to meet rules laid out by MARPOL. The MARPOL convention is structured into a series of Annexes and sets out a series of restrictions and areas in which those restrictions are applied. Restrictions apply dependent on the nature of the vessel and the pollutant but there is fundamentally a strong association with the location of the vessel and its operations which makes MARPOL highly relevant in the context of vessel navigation and the charts it carries.

The majority of rules under MARPOL apply within a number of nautical miles measured from “the baseline”. Baselines are defined under UNCLOS rules by member states and are the same baselines from which charted territorial sea, contiguous zone and EEZ are measured. MARPOL does not require the baseline to be published but the extents of the various zones should be available to the mariner for passage planning and monitoring purposes. Currently few MARPOL zones are published and although territorial sea areas can serve as a 12NM zone the full extent of MARPOL regulations currently has to be manually measured by reference to the low water line which risks vessels breaching MARPOL regulations unknowingly due to the approximate nature of such calculations.

Under Annex 6 of MARPOL there are currently, there are four fixed Emission Control Areas designated by MARPOL – the Baltic Sea, the North Sea, the North American ECA and the US Caribbean ECA. These control areas cannot be defined by leveraging a charted territorial sea area or contiguous zone, and there is currently no protocol for including them nor MARPOLs other restriction zones within the ENC. Some member states enact local ECAs in addition to IMO approved ones.

Conclusions

By not addressing the MARPOL regulations within a standardized framework, IHO member states do not have a meaningful way of representing this important convention’s restrictions leaving mariners to rely on guesswork or complex paper publications from the IMO directly. The IHO community, via HSSC, is missing an opportunity to address this information gap.

Various stakeholders within the maritime industry have requested the inclusion of MARPOL regulations into ENCs or as separate products. In 2016, Transas proposed to NIPWG to extend S-122 – Marine Protected Areas

to include the various items covered under MARPOL, however that decision was deferred to HSSC, which opted to wait until a request came from the International Maritime Organization.

The United States (NOAA) believes, that in the interests of safe navigation, prevention of pollution and the UN's sustainable development goal SDG14, the IHO should not wait for a request from the IMO, but rather unilaterally provide the mechanism to its Member States to enable the maritime industry to comply with MARPOL regulations.

Recommendations

There are several paths that the IHO can utilize enable Member States to provide MARPOL information to their users:

Option 1: Extend the S-101 ENC Product Specification to include MARPOL features

Pro: The data is all contained within a single product

Con: Time to market will be much longer as S-101 is not scheduled to be operational until 2022-2023

Option 2: The IHO HSSC assign a new work item to either S-100WG or NIPWG to create a new product specification that covers MARPOL

Pro: The time to operationalize is much quicker as it is a standalone product

Con: Will also need to be included as a separate product to be considered within the S-98 Interoperability Specifications

Option 3: Extend S-122 – Marine Protected Areas to cover MARPOL. MARPOL is considered a type of marine protection and there is a natural fit.

Pro: Included in a smaller product specification where there are natural linkages and S-122 is already part of the consideration for S-98 Interoperability

Con: S-122 will need to be updated to edition 4.0.0 of S-100 to better meet some of the new portrayal mechanisms and it might be simpler to handle MARPOL as a separate product specification.

Action Required of HSSC

The HSSC is invited to:

- a. discuss the development of MARPOL information for use in Electronic Chart Systems
- b. consider each of the three options
- c. recommend one of the three options and assign it to the appropriate HSSC Working Group/Project Team