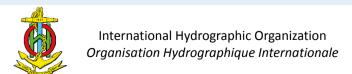
#### Hydrographic Services and Standards Committee

Proposal by the United States (NOAA)

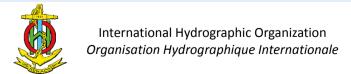
HSSC11-05.1G

Development of a new S-100 Specification for MARPOL



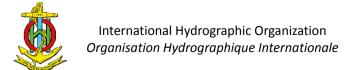
### Introduction

- MARPOL is the International Convention for the Prevention of Pollution from ship and other Environmental Regulations
- Signed in 1973, in force 1983
- MARPOL contains six Annexes:
  - Oil
  - Noxious Liquid Substances in Bulk
  - Harmful Substances in Packaged Form
  - Sewage from Ships
  - Garbage from Ships
  - Air Pollution from Ships



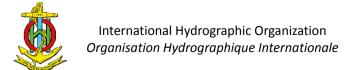
# Analysis/Discussion

- Electronic Navigation Chart covers SOLAS it is missing the capability to encode and display information to meet rules laid out by MARPOL
  - Is also a gap regarding to encode national regulations regarding environmental regulations
- MARPOL is dependent on the nature of the vessel and its operations
  - Relevant in the context of the vessel navigation and the charts that it carries
- Much of MARPOL applies within a number of nautical miles measured from the "baseline" – but does not require the baseline to be published



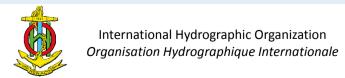
# Analysis/Discussion

- Territorial sea areas serve as the 12NM zone as a proxy to MARPOL
  - Currently are manually measure by reference to the low water line
- Currently 4 fixed Emission Control Areas
  - Baltic Sea
  - North Sea
  - North American ECA
  - US Caribbean ECA
- Currently no protocol for including ECA's (either local or IMO adopted) within an ENC



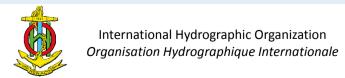
### Conclusions

- Currently, no meaningful way of representing MARPOL within the context of IHO standards
- Mariners have to rely on guesswork or complex paper publications from the IMO to adhere to MARPOL
- Various stakeholders within the United States have requested the inclusion of MARPOL regulations into the ENC's or as a separate product
- 2016 Transas proposed to NIPWG that S-122 be extended to cover MARPOL
  - HSSC opted to defer until a request was made formally by the IMO
- In the interest of safe navigation and the prevention of pollution the IHO should not wait for a formal request from the IMO
- Instead leverage its S-100 Framework to provide a mechanism for Member States to provide MARPOL regulations to the maritime industry



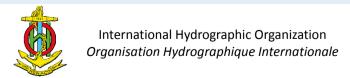
### Recommendations

- Option 1: Extend the S-101 ENC Product Specification to include MARPOL
  - Pro: The data is contained within a single product
  - Con: Time to market will be much longer
- Option 2: Create a new S-100 based product specification that addresses MARPOL
  - Pro: The time to operationalize is quicker
  - Con: Will also need to considered within the S-98 Interoperability Spec.
- Option 3: Extend S-122 Marine Protected Areas
  - Pro: Natural Linkages to S-122
  - Con: S-122 will need to be updated to S-100 4.0.0 to better meet some of the new portrayal mechanisms



### Recommended Option

- Option 2 Create a new S-100 based specification for MARPOL
  - United States (NOAA) is prepared to sponsor this work.



### Action Required of HSSC

- Discuss the development of MARPOL information for use in Electronic Chart Systems
- Consider each of the three options
- Recommend one of the three options and assign it to the appropriate HSSC working group/project team