



# MARPOL DATA

Proposal to NIPWG2 for S-122 extentsion

Transas, March 2016

# MARPOL CHARTS

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## CONTENT AND DESCRIPTION

- The purpose of MARPOL areas is intended for use in combination with ENC data in a way of drawing areas where special rules for the Prevention of Pollution from Ships (MARPOL) are applied.
- It is designed to be displayed as an overlay on top of the ENC data such that the MARPOL can be toggled on and off. Primary display in BoB app in planning mode, ECDIS to indicate approaching the area, as specified in the voyage plan.
- MARPOL contains only area objects (no point or line objects) with attributes including references to text.
- The MARPOL dataset has five different object classes
  - Oil
  - Noxious liquid substances
  - Sewage
  - Garbage
  - Air pollution

# NEW FEATURE CLASS AND ATTRIBUTES



## OIL AREA

Acronym: oilare

Set **NEW\_Attributes\_A:**

Attribute: ***Category of ship***

Acronym: catshp

Attribute type: L

Expected input:

Attribute: ***Category of Oil***

**Attributes from S-57 ENC Object Catalogue:**

Set Attribute\_A: OBJNAM, STATUS, DATEND, DATSTA, PEREND, PERSTA, STATUS

Set Attribute\_B: INFORM; SCAMIN; SCAMAX; TXTDSC

Geometric primitive: Area

Definition: areas with special regulations for pollution of the sea (marine pollution)

### Category of oil

ID	Meaning
1	Oil or oil mixtures from cargo spaces
2	Oil or oil mixtures from machinery spaces

### Category of ship

ID	Meaning
1	tanker
2	Ship above 400t
3	Ship less 400t

# NEW FEATURE CLASSES AND ATTRIBUTES

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## NOXIOUS LIQUID SUBSTANCE

Area in which there is special rules for the prevention of Noxious liquid substances (NLS) pollution from ships

Acronym: nlsare

### **Attributes from S-57 ENC Object Catalogue:**

Set Attribute\_A: OBJNAM, STATUS, DATEND, DATSTA, PEREND, PERSTA, STATUS

Set Attribute\_B: INFORM; SCAMIN; SCAMAX; TXTDSC

Geometric primitive: Area

Definition: areas with special regulations for pollution of the sea (marine pollution).

These areas apply to chemical tankers only (oil tankers)

# NEW FEATURE CLASSES AND ATTRIBUTES



## SEWAGE (SEWAGE AREA)

Area in which there is special rules for the prevention of Sewage pollution from ships

Acronym: seware

### **Set new\_Attribute\_A:**

Attribute: *Category of sewage*

Acronym: catsew

Attribute type: L

Expected input:

### **Attributes from S-57 ENC Object Catalogue:**

Set Attribute\_A: OBJNAM, STATUS, DATEND, DATSTA, PEREND, PERSTA, STATUS

Set Attribute\_B: INFORM; SCAMIN; SCAMAX; TXTDSC

Geometric primitive: Area

Definition: areas with special regulations for pollution of the sea (marine pollution)

These areas apply to ships engaged in international voyages of 400 gross tonnage and above or which are certified to carry more than 15 persons. Baltic sea applies to passenger ships.

### Category of sewage

ID	Meaning
1	not comminuted and disinfected sewage
2	comminuted and disinfected sewage

# NEW FEATURE CLASSES AND ATTRIBUTES



## GARBAGE (GARBAGE AREA)

Area in which there is special rules for the prevention of Garbage pollution from ships.

Acronym: gabare

**Set new\_Attribute\_A:**

Attribute: *Category of garbage*

Acronym: catgab

Attribute type: L

Expected input:

**Attributes from S-57 ENC Object Catalogue:**

Set Attribute\_A: OBJNAM, STATUS, DATEND, DATSTA, PEREND, PERSTA, STATUS

Set Attribute\_B: INFORM; SCAMIN; SCAMAX; TXTDSC

Geometric primitive: Area

Definition: areas with special regulations for pollution of the sea (marine pollution)

These areas apply to all categories of vessels.

### Category of garbage

ID	Meaning
1	Food wastes comminuted or ground
2	Food wastes Not comminuted or ground
3	Cargo residues not contained in wash water
4	Cargo residues contained in wash water
5	Cleaning agents and additives contained in cargo hold wash water
6	Cleaning agents and additives in deck and external surfaces wash water
7	Carcasses of animals carried on board as cargo and which died during the voyage

# NEW FEATURE CLASSES AND ATTRIBUTES



## AIR POLLUTION (AREA)

Object class: Air pollution area

Area in which there is special rules for the prevention of Air pollution from ships

Acronym: airare

**Set new\_Attribute\_A:**

Attribute: *Category of Air pollution*

Acronym: catair

Attribute type: L

Expected input:

**Attributes from S-57 ENC Object Catalogue:**

Set Attribute\_A: OBJNAM, STATUS, DATEND, DATSTA, PEREND, PERSTA, STATUS

Set Attribute\_B: INFORM; SCAMIN; SCAMAX; TXTDSC

Geometric primitive: Area

Definition: areas with special regulations for pollution of the sea (marine pollution)

ID	Meaning
1	NOx
2	SOx

# PORTRAYAL

## OIL/ OIL MIXTURES



1. Category of vessel = tanker
2. Category of Oil = Oil or oil mixtures from cargo spaces

Coverage: Special areas + 50 nm zone from coast

The screenshot displays the TRANSAS software interface. The main map shows the North Atlantic and Baltic Seas regions, with MARPOL Areas overlay highlighted in yellow. A pop-up window titled "Oil/ for an oil tanker" is open, providing detailed regulations for oil discharge. The window includes a description and two numbered sections of regulations.

**Oil/ for an oil tanker**

**Description:**  
OIL TANKERS OF ALL SIZES  
DISCHARGE OF OIL AND OIL MIXTURE FROM THE AREA OF THE CARGO TANK INCLUDING PUMP ROOM

1. Within selected areas (in special areas or outside special areas but within 50 nautical miles (nm) from the nearest land except Antarctic\*) - ANY DISCHARGE IS PROHIBITED with the exception of clean or segregated ballast.  
\* - in respect of the Antarctic area, any discharge into the sea of oil or oily mixture from ships shall be prohibited.
2. Outside special areas but more than 50 nm from the nearest land - any discharge is prohibited, with the exception of clean or segregated ballast, or except when all the following conditions are satisfied:
  1. the tanker is proceeding en route, and
  2. the instantaneous rate of discharge of oil does not exceed 30 litres/nm, and
  3. the total quantity of oil discharged into the sea  
- does not exceed - for tankers delivered on or before 31 December 1979 - 1/15,000 of the total quantity of the particular cargo of which the residue formed a part  
- and - for tankers delivered after 31 December 1979 - 1/30,000 of the total quantity of the particular cargo of which the residue formed a part, and
  4. the tanker has in operation an oil discharge monitoring and control system and a slop tank arrangement as required by regulations 29 and 31, respectively.



# PORTRAYAL

## GARBAGE



Category of Garbage =  
Food waste not  
comminuted or ground

Applicable for all vessels

Coverage: special areas  
+12 nm zone from the  
coast

The screenshot displays the TRANSAS software interface. At the top, there are tabs for 'Routes' and 'Schedules'. Below these are sub-tabs: 'Route Editor', 'Weather Routing', 'Check Route', 'Voyage Plan', 'Checklist Tools', and 'Print and Report'. The main map area shows the North Atlantic, with a 12 nm coastal zone highlighted in light blue. A pop-up window titled 'Food waste not comminuted or ground' is open, providing the following information:

**Information:**  
Areas in which the adoption of special mandatory methods for the prevention of sea pollution by food waste not comminuted or ground is required

**Description:**  
RESTRICTIONS TO THE DISCHARGE OF FOOD WASTES NOT COMMUNUTED OR GROUND INTO THE SEA

1. Within selected areas – any discharge not comminuted or ground food wastes is prohibited
2. Outside selected areas – discharge permitted on en route and as far as practicable
3. For offshore platforms located more than 12 nm from nearest land and ships when alongside or within 500 metres of such platforms - discharge prohibited

**Notes:**

1. When garbage is mixed with or contaminated by other harmful substances prohibited from discharge or having different discharge requirements, the more stringent requirements shall apply.
2. Offshore platforms located 12 nm from nearest land and associated ships include all fixed or floating platforms engaged in exploration or exploitation or associated processing of seabed mineral resources, and all ships alongside or within 500 m of such platforms.

# PROPOSAL FOR S-122



## HOW MARPOL AREAS CAN BE ENCODED IN S-122

- Encoding of Geo-objects
  - MARPOL areas could be encoded as RESARE object class  
New complex attribute “Category of pollutant type” shall be added in accordance with the number of Annexes MARPOL convention. This attribute consists of sub-attributes as category of oil mixtures, category of sewage, category of garbage...
  - Or, New Object classes as specified above could be added to S-124
- Information type objects

In current implementation does not support feature types where restrictions extend on the all waters of world ocean (worldwide).

For example: Annex III of Marpol convention – harmful substances on packaged form. Or type of garbage as *All other garbage including plastics, domestic wastes, cooking oil, incinerator ashes, operational wastes and fishing gear.*

# ACTIONS

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## THE GROUP IS INVITED TO



- Note the report
- Discuss and agree/reject inclusion of MARPOL areas in S-122 MPA PS
- Suggest a way of encoding the MARPOL areas in accordance with S-122