INToGIS PROJECT II

Prepared by KHOA (Yong BAEK) for the WENDWG-9 meeting, completed by IHO Secretariat

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Background (1/2)

- **Purpose** of the INToGIS Project
  - Support **International Chart and ENC Scheme** of S-11
  - Provide **systematic management procedures** and functionality
  - **Share the digital data** among the IHO MSs and other parties with common data format such as EXL, SHP and GML (S-128)

- **History**
  - INToGIS Project I (2014 ~ 2015) : INT chart web-service and management via web system
  - Operation started since early 2016
  - INToGIS Project II (2017 ~ 2018) : adding ENC schemes to the system and overlay information, and improve the GUI

Background (2/2)

- **Key features for the Project II**
  - Base map for **Polar regions** (Artic & Antarctic)
  - **ENC scheme** management procedures (S-11 Part 1 Ed. 3.1.0)
  - **Additional layers** for 500 world ports and AIS traffic density
  - Set up **maintaining ENC catalogue** with IHO ENC catalogue data
  - Improve the chart **display functions**
  - **User Feedbacks** from HOs, regional coordinators (experimentation phase; late 2018), thanks to EAtHC&MBSHC (France), ARHC (Norway), BSHC (Finland)
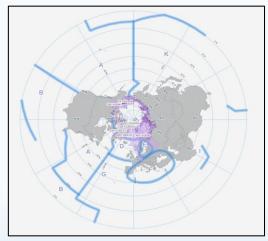 - And other improvements

Improvement (1/9)

1. Base map of Polar region
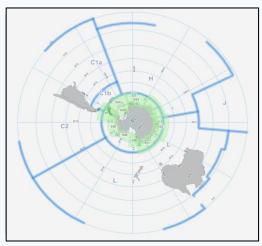
- Both INT Chart and ENC Scheme

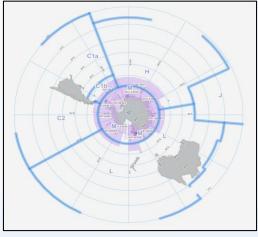- Apply to the management procedures

- Adding regional boundaries (feedback)

INT Chart Arctic

INT Chart Antarctic

ENC Scheme Arctic
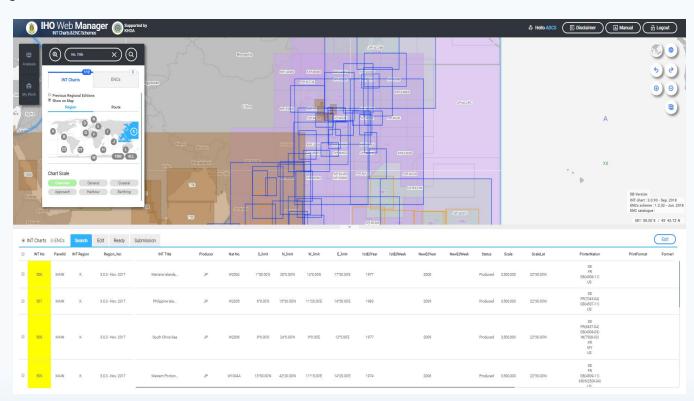
ENC Scheme Antarctic

2. ENC Scheme Management procedure

- Management workflow

  (HO→ICCWG→IHO Sec.→DB)

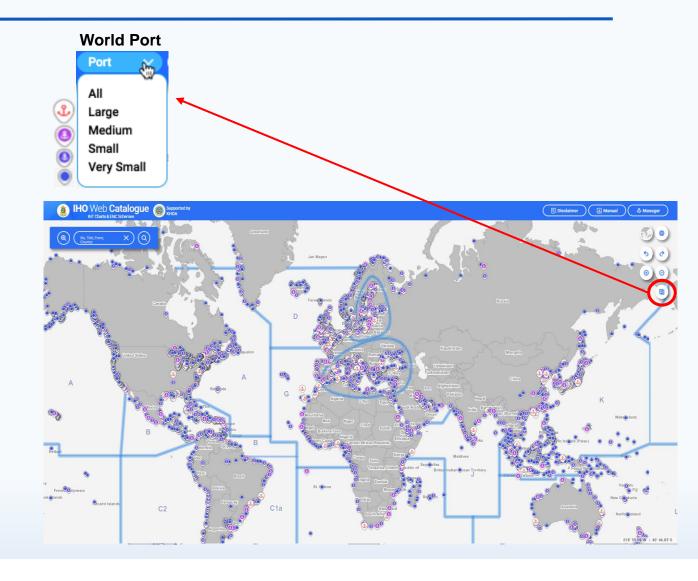- Search options / Various Base

  Maps / Database for ENCs

3. World Port layer

Size Code	Count	Harbor Size
L	159	Large
M	362	Medium
S	992	Small
V	2166	Very Small

Source from NGA

World Port

Improvement (4/9)

4. ENC scheme : Gap finder

- Comparison between ENC and INT Chart coverage as reference
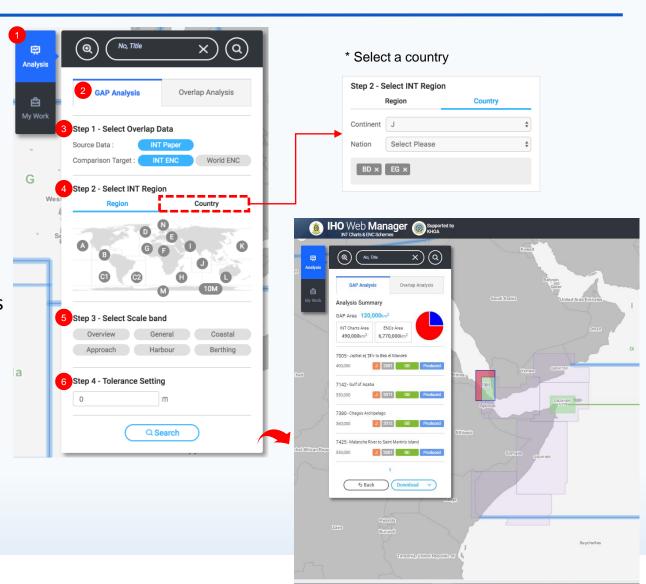
Analysis button: Show analysis window
Gap Analysis Menu: Show detailed conditions for gap analysis
Step 1: Select an INT chart and ENC to be analyzed
Step 2: Select INT Region or country
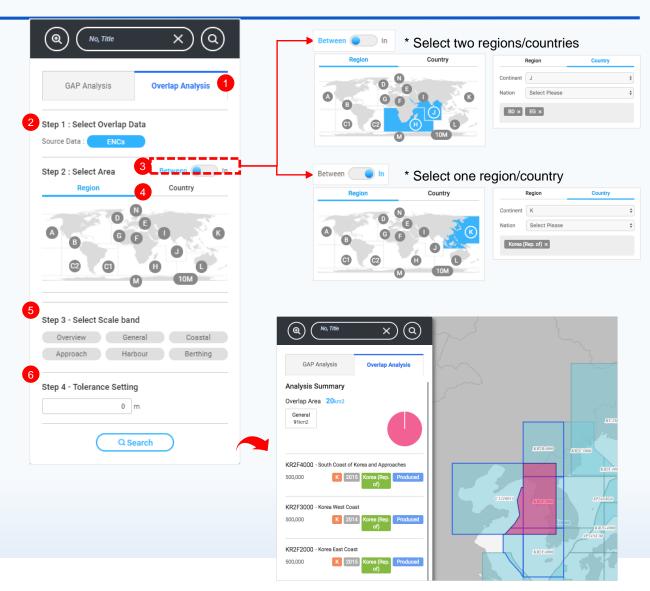Step 3: Select a scale
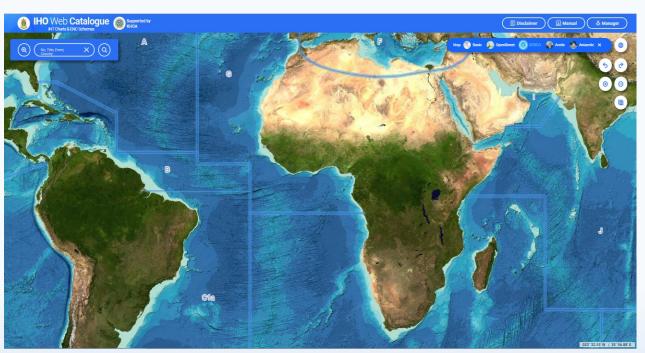Step 4: Set tolerance (+ / -)

5. ENC scheme :

Overlapping checker (inc. with adjacent charting regions)

6. Other improvements
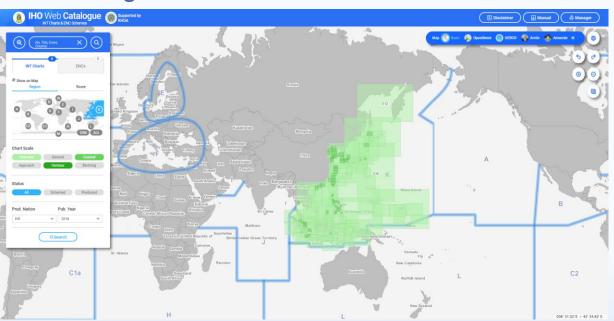
1) GEBCO Base Map

2) 3D Globe (will be removed)

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TCB-1, Brest, France, 26 - 28 February 2019

Improvement (7/9)

6. Other improvements

3) Renewal of INToGIS interface

Web Catalogue

Web Manager

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TCB-1, Brest, France, 26 - 28 February 2019

Improvement (8/9)

6. Other improvements

4) Additional layers

- AIS traffic density layer (on going)

- IHO meeting & event layer (removed)

- IHO member states layer (removed)

- CATZOC layer (improved with

  distinguishable colors)

d. Functions

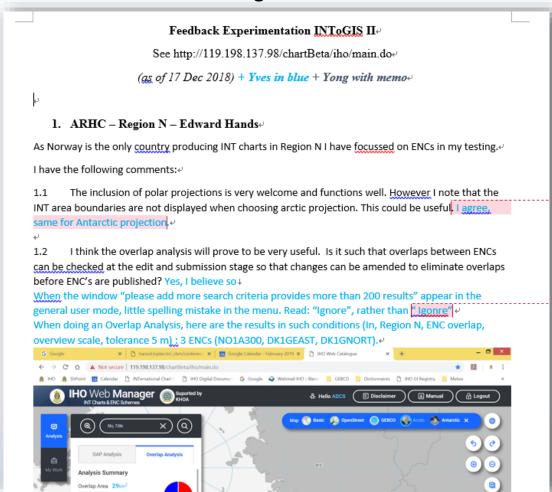- Email notification

- S-128 applied

- Update contents …

7. User feedbacks

- **Total comments : 63**
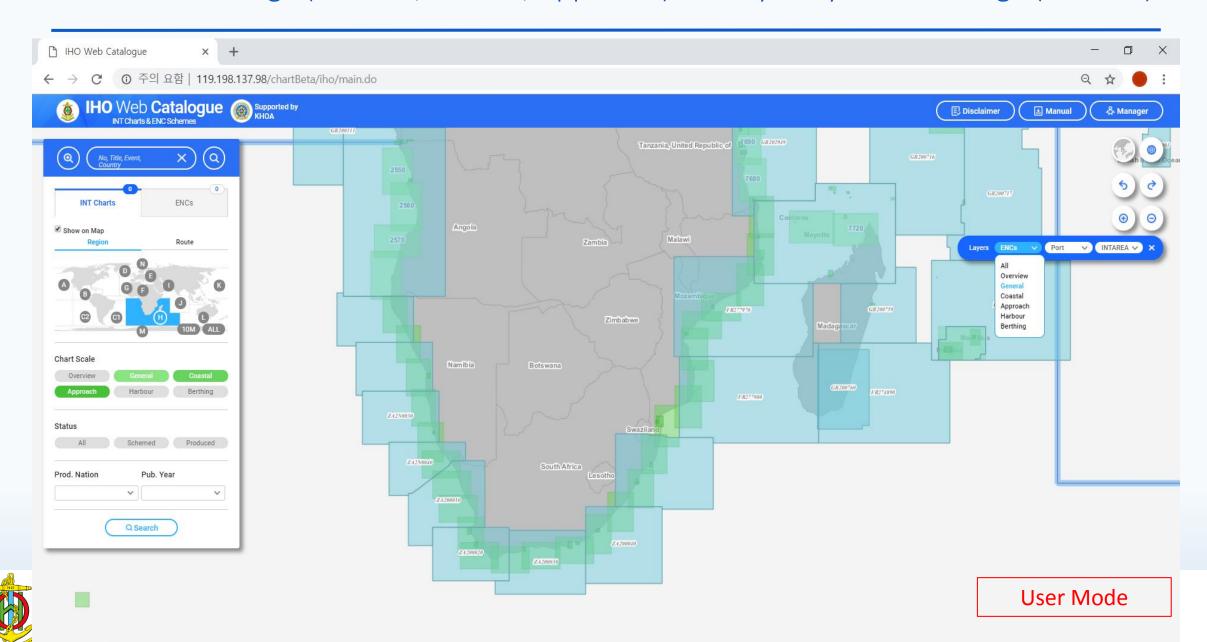- **Completed by Jan.2019 : 37**
- **Remaining items (26) : by April 2019**

Require to Improve the GUI for the remain
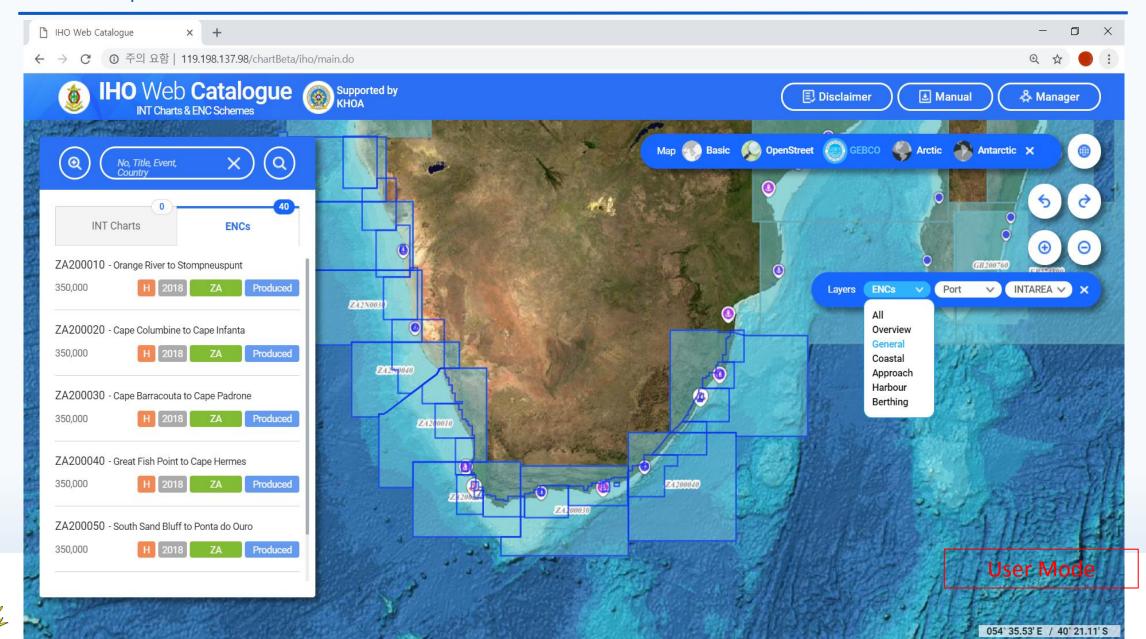
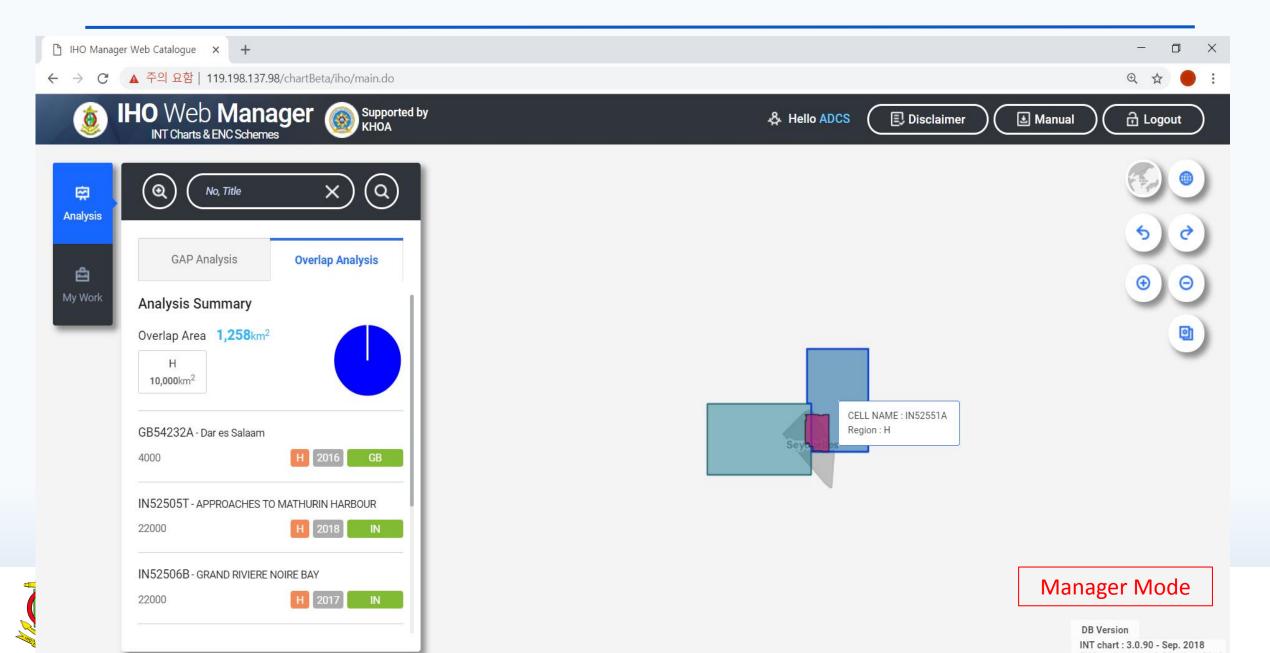Feedbacks from some Regional coordinators and HOs

INT Chart Coverage (General, Coastal, Approach) overlayed by ENC Coverage (General)

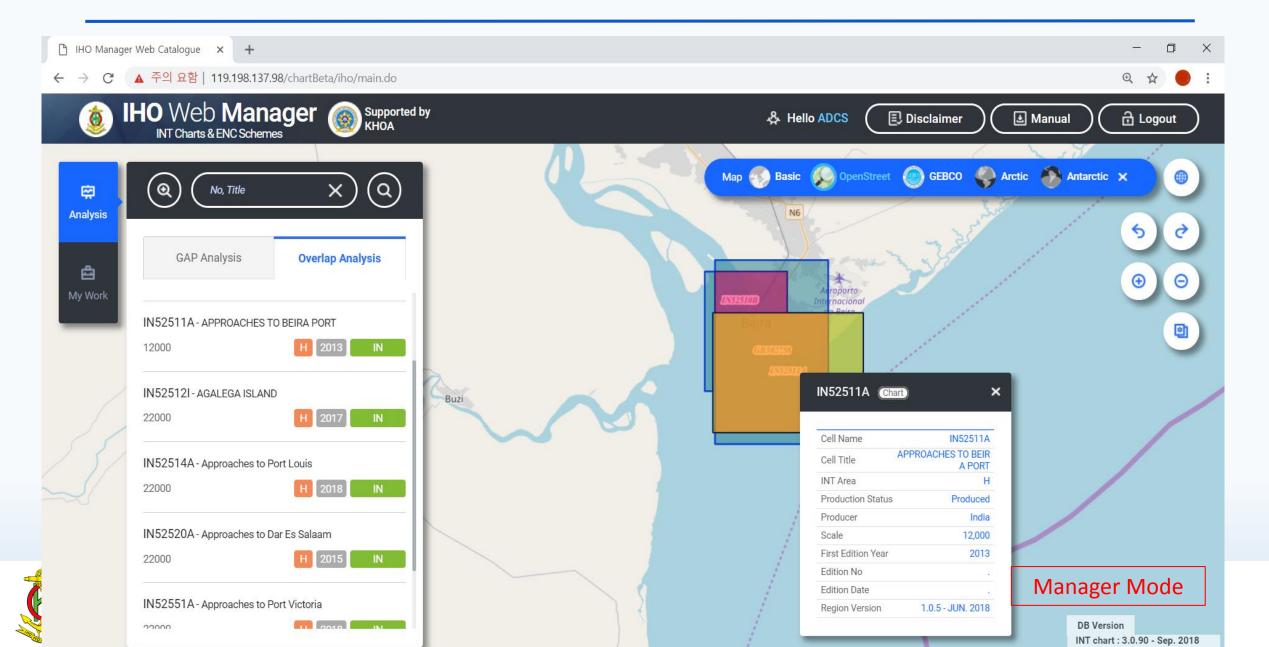User Mode

ENC Search Results (Harbour) overlayed by ENC Coverage (General) and Ports, GEBCO Base Map
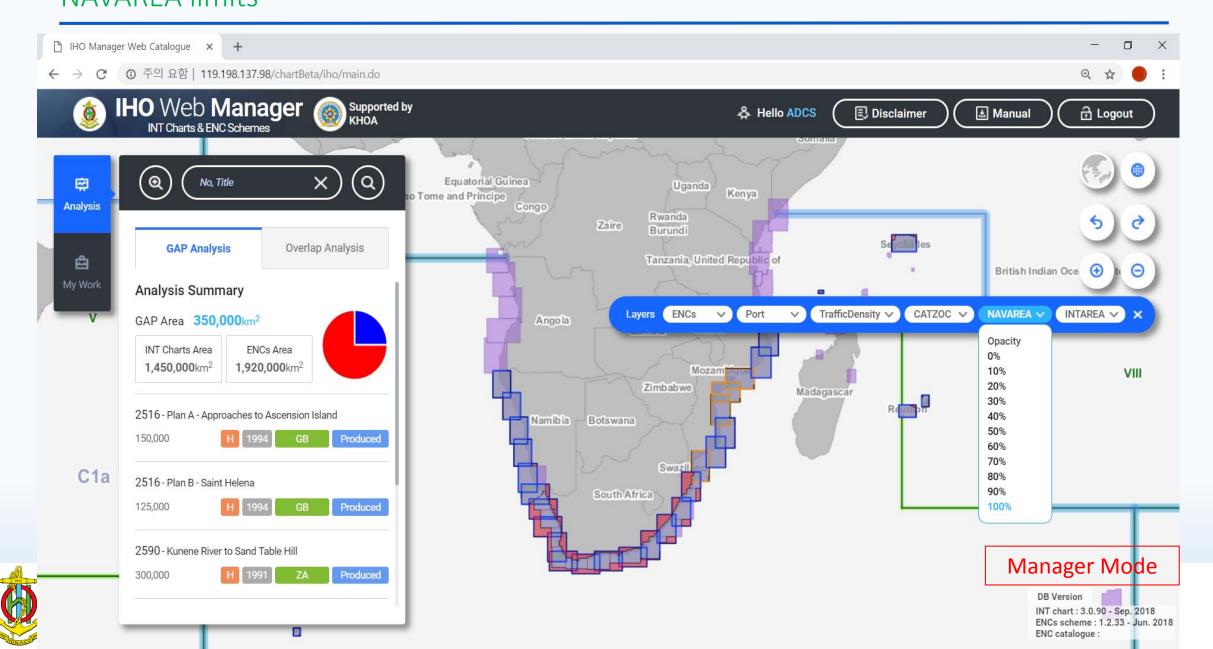
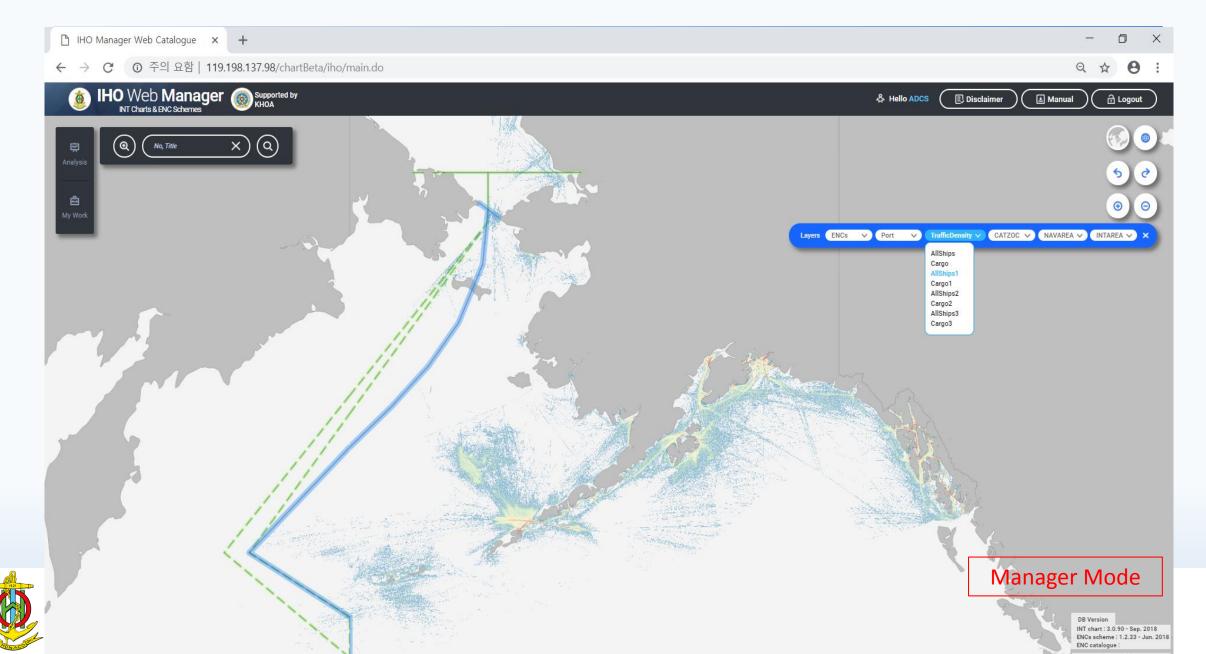# ENC Overlap Analysis: Port Victoria (Harbour)

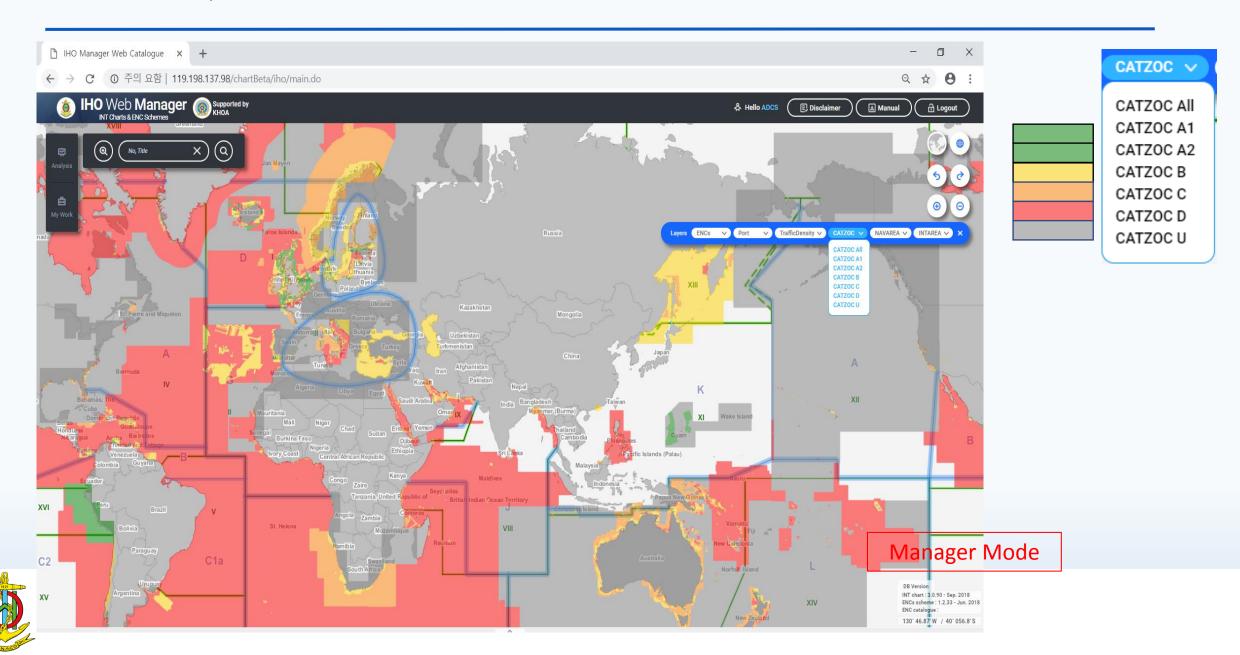Manager Mode

ENC Overlap Analysis: Porto da Beira (Harbour)

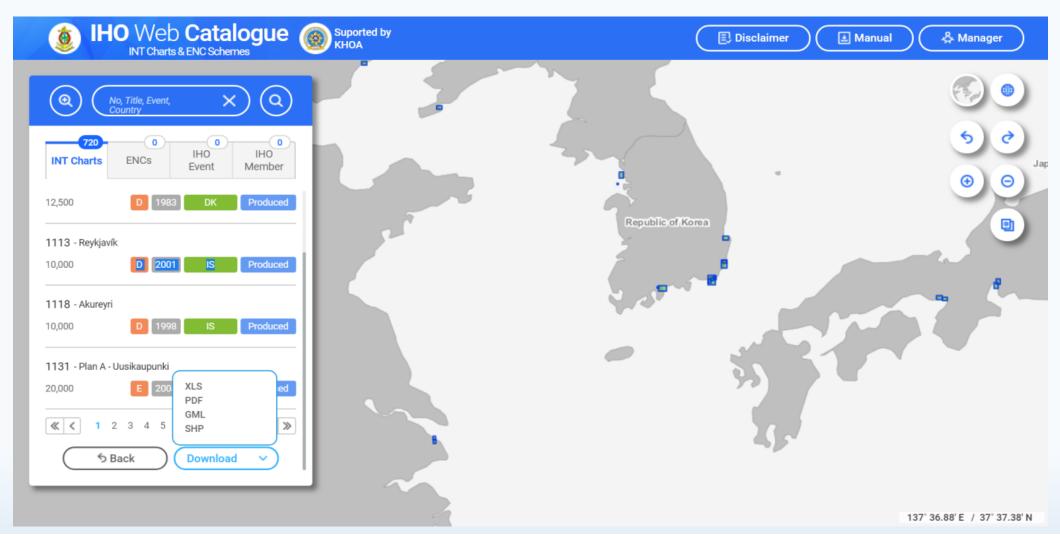# ENC Coverage Gap Analysis: Region H (coastal) , reference is INT chart coverage, plus NAVAREA limits

AIS traffic density: Sample to display density data

Manager Mode

Additional layer : CATZOC with colors

S-128 application

Status of INToGIS II Project

- Design and develop DB (Oct. 2017) , Develop the new interface and functions (Nov. 2017)

- Create additional layers (2018), Test operation (late 2018), Project Management Meeting (January 2019)

- Fixing anomalies and implementing improvements suggested by Charting Regions Coordinators (April 2019)

- Demo at WENDWG-9, possibly at HSSC-11

- Commissioning of INToGIS **II** (mid-2019, tbc), workshop back-to-back with NCWG-5 (tbc)

- Pending Questions for the Future: Need to update the current (20017) experimental CATZOC database (every quarter?) AIS data/categories ? Towards INToGIS **III** for Management and Coverage of S-100 based products? → *To be discussed*

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Thank you

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