INToGIS PROJECT II

Presented by KHOA (Yong BAEK)

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
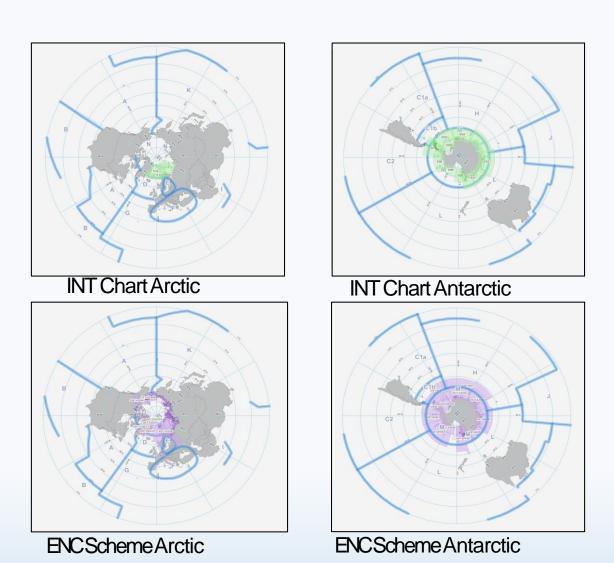
Background (1/2)

- **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
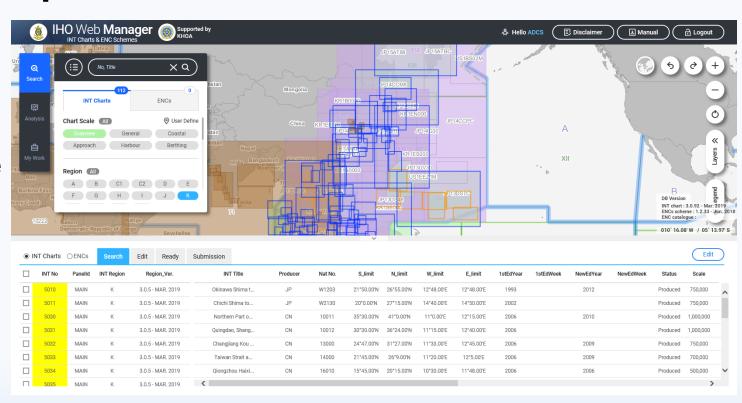
Improvement (1/9)

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)
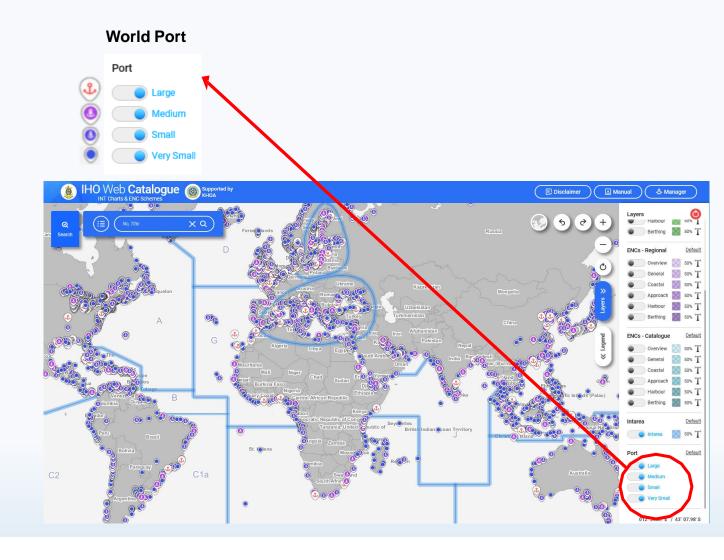
- Search options / Various Base Maps / Database for ENCs

Improvement (3/9)

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

4. ENC scheme : Gap finder

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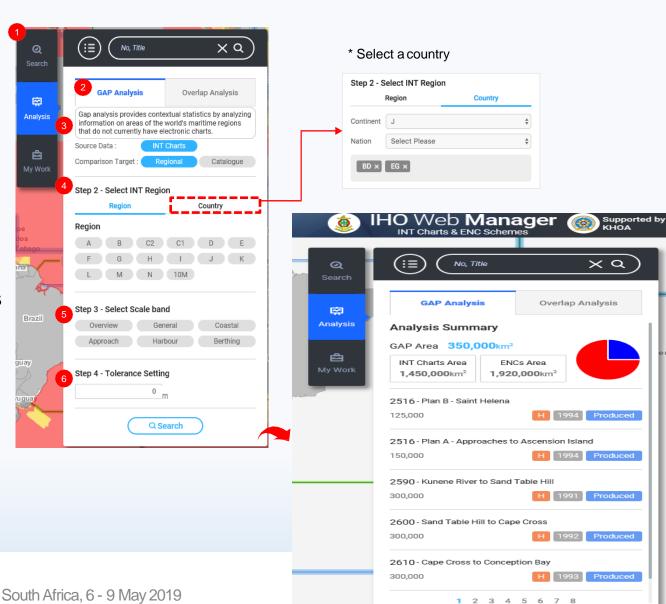
Analysis button: Show analysis window
Gap Analysis Menu: Show detailed conditions for gap analysis
Step 1: Select an INT chart and ENC to be analyzed
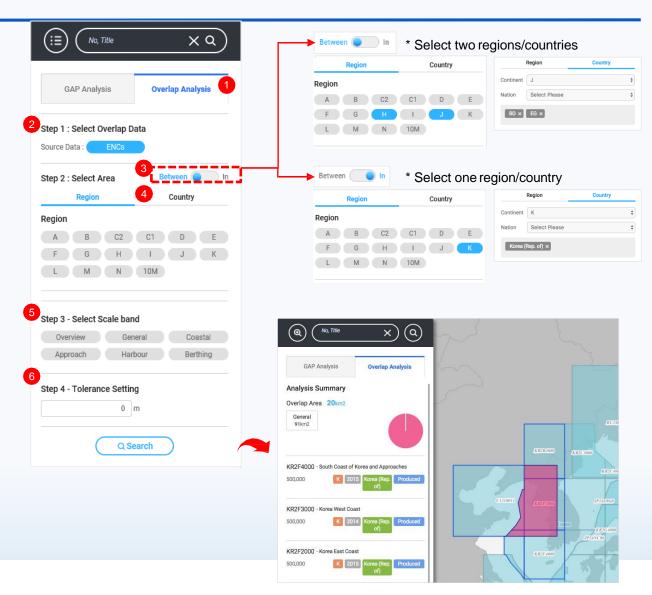Step 2: Select INT Region or country
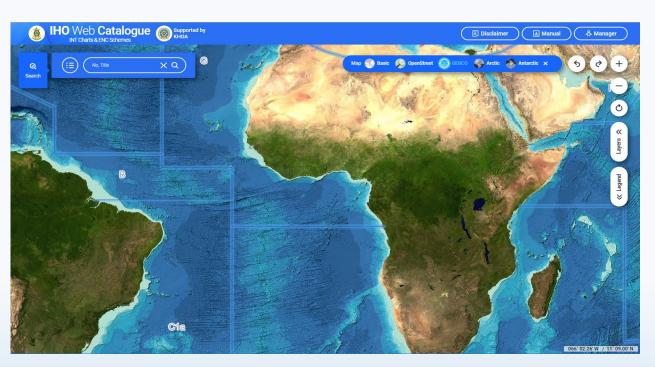Step 3: Select a scale
Step 4: Set tolerance (+ / -)

* Select a country

5. ENC scheme :

Overlapping checker (inc. with adjacent charting regions)

6. Other improvements

1) GEBCO Base Map

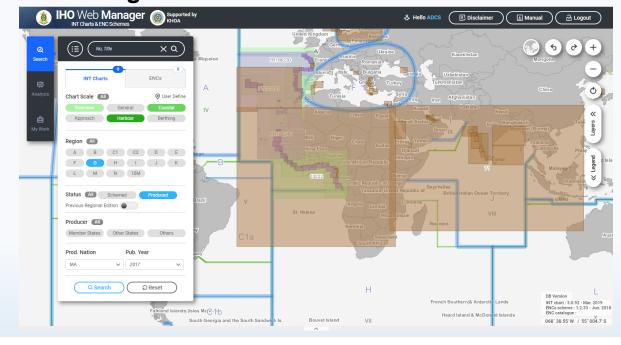### 2) 3D Globe (removed)

6. Other improvements

3) Renewal of INToGIS interface

Web Catalogue

Web Manager

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

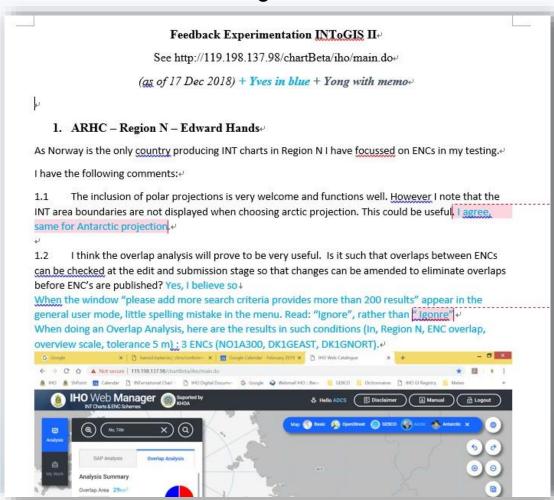- S-128 applied

- Update contents …

Improvement (8/9)

7. User feedbacks

- **Total comments : 63**
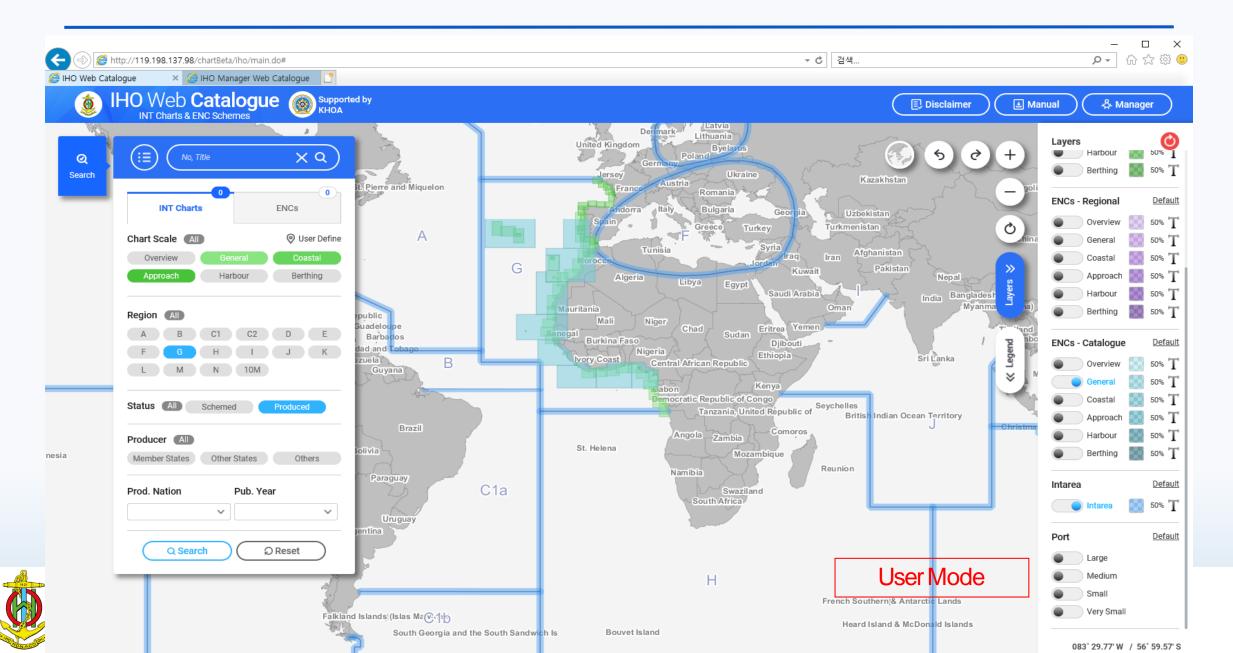- **Completed by April 2019**

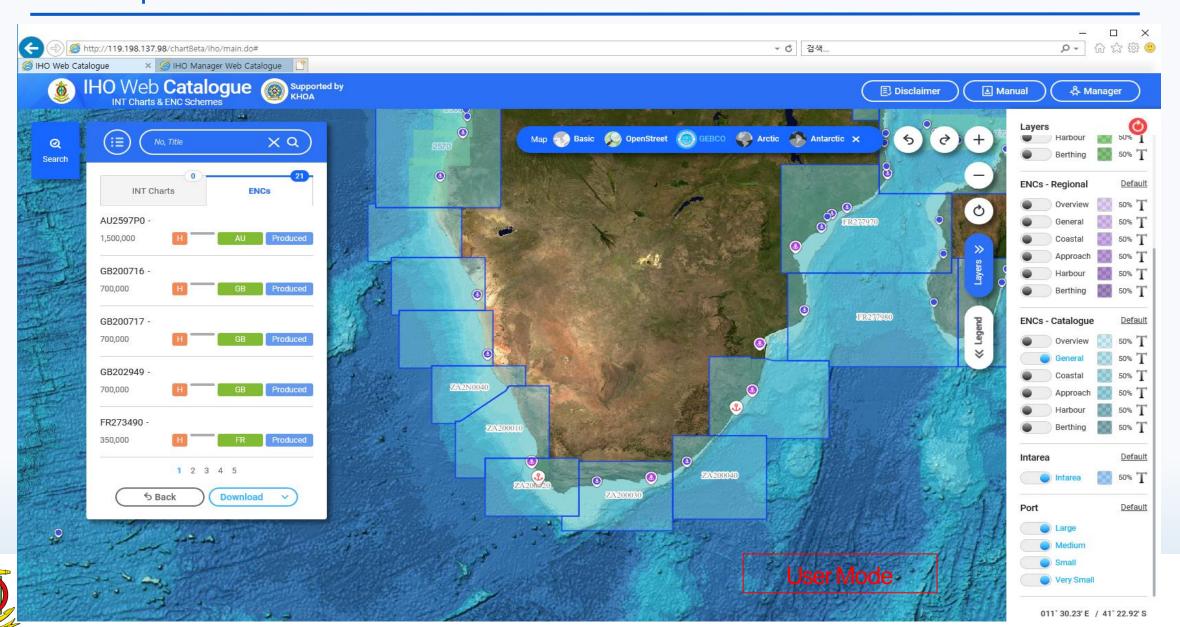Require to Improve the GUI for the remain
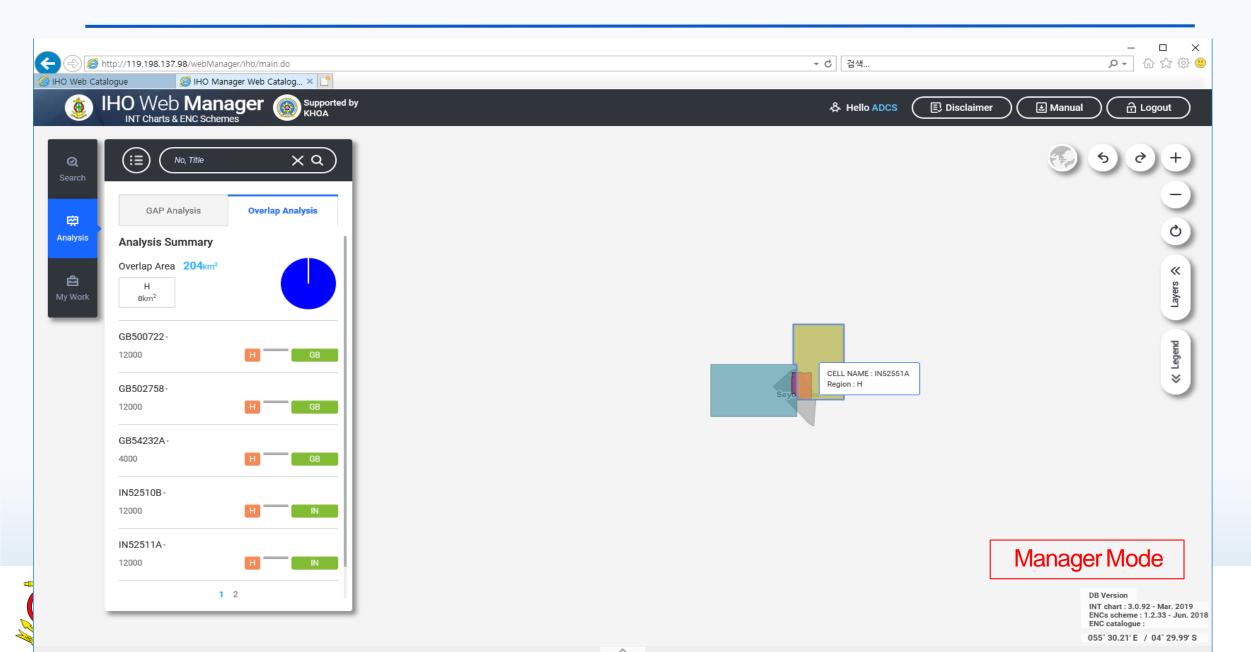
Feedbacks from some Regional coordinators and HOs

INT Chart Coverage (General, Coastal, Approach) overlayed by ENC Coverage (General)
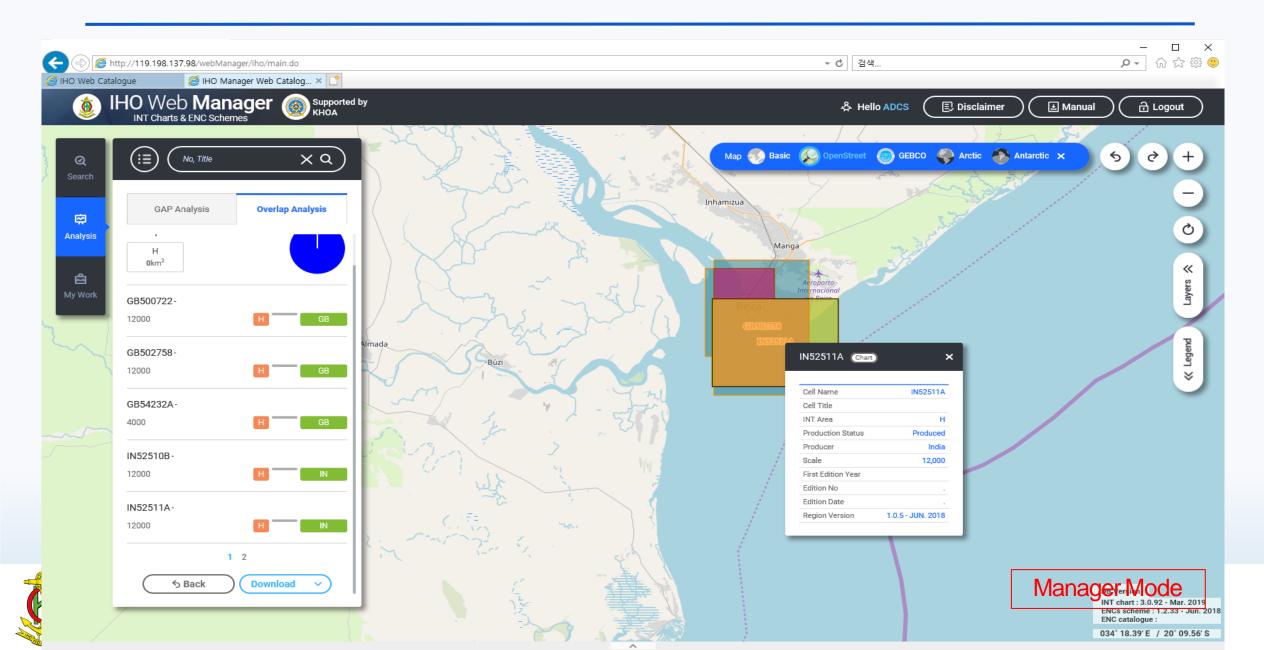
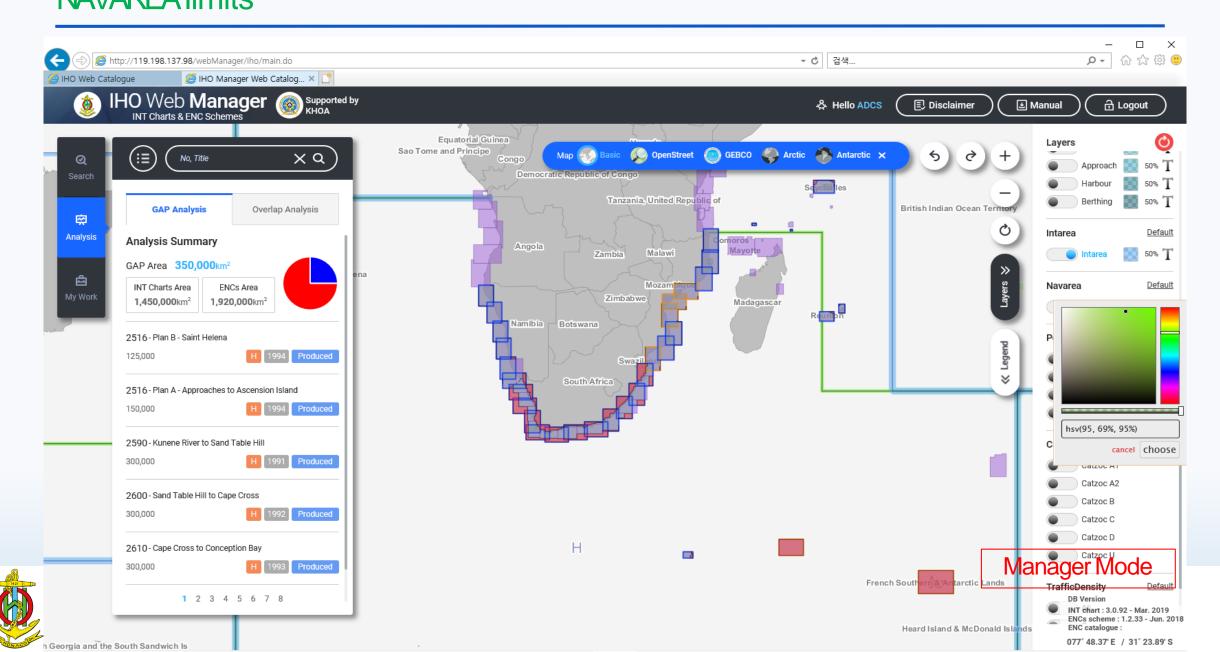# ENC Search Results (Harbour) overlayed by ENC Coverage (General) and Ports, GEBCO Base Map

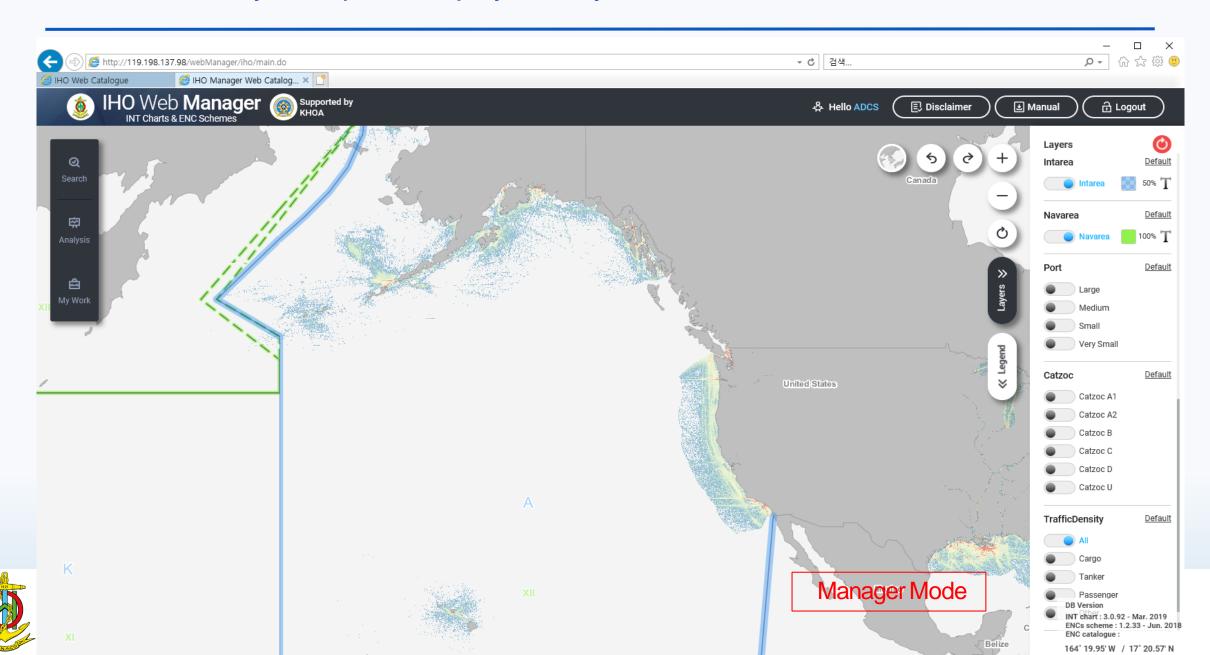# ENC Overlap Analysis: Port Victoria (Harbour)

Manager Mode

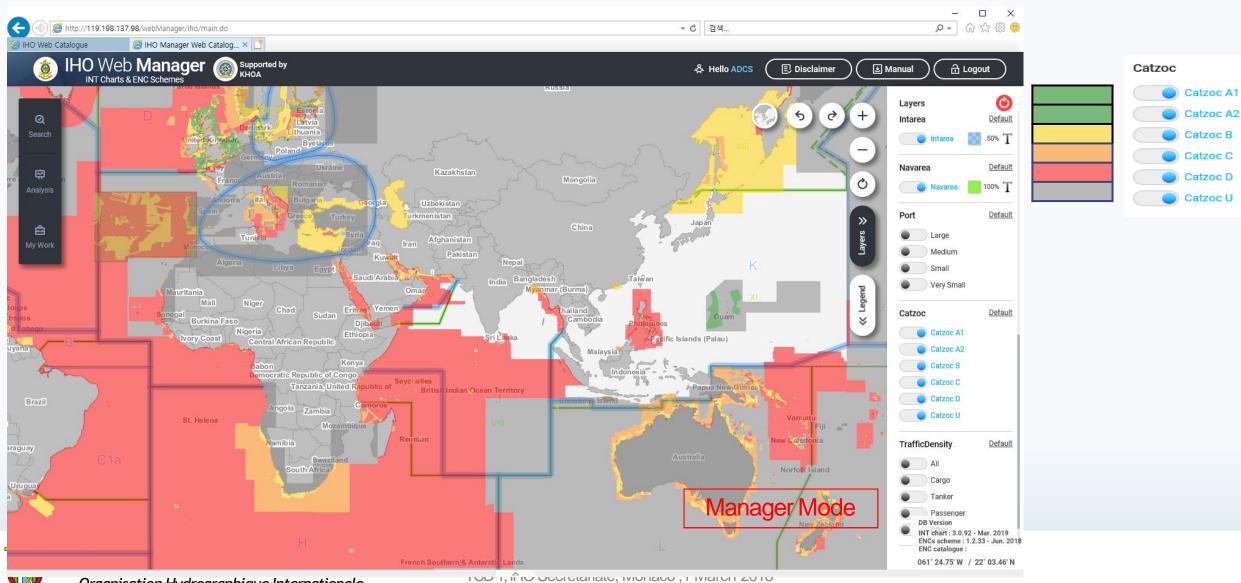# ENCOverlap Analysis: Porto da Beira (Harbour)

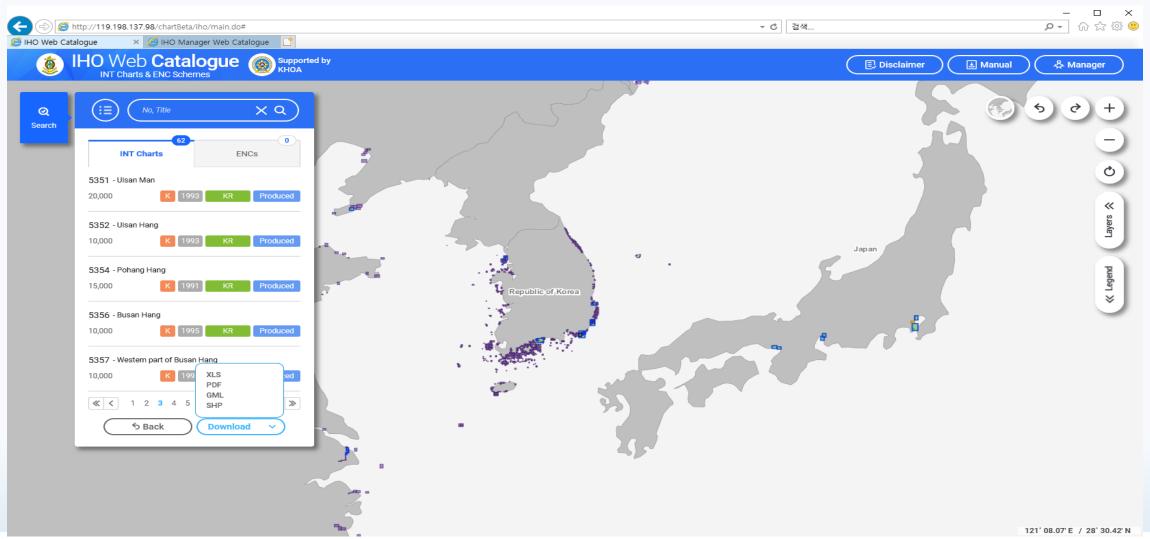# ENCCoverage Gap Analysis: Region H (coastal) , reference is INT chart coverage, plus NAVAREA limits

AIS traffic density: Sample to display density data

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, and 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*

International Hydrographic Organization
Organisation Hydrographique Internationale

Cape Town, South Africa, 6 - 9 May 2019

Thank you