

IHO-ROK Technical Cooperation Project

# INToGIS PROJECT II

Presented by KHOA (Yong BAEK)



# Background (1/2)

---

- **Purpose** of the INToGIS Project

- Support **International Chart 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)

- **Main outcomes** of Project 1(2014~2015)

- S-11 Part B INT chart DB modelling
- S-11 Part B GIS Database
- Tool for Management rules according to S-11
- INT chart Web-service for the catalogue and manager system



# Background (2/2)

---

- **Requirements**

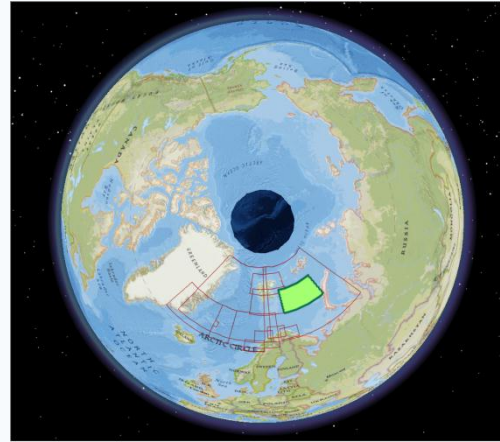
- Base map for **Polar regions** (Arctic & Antarctic)
- **ENC scheme** management procedures (S-11)
- **Additional layers** for 500 world ports and AIS traffic density information
- **Connection** between IHO ENC catalogue and INToGIS systems
- Improve the chart **display functions**
- **User Feedbacks** from HOs, regional coordinator
- And other improvements



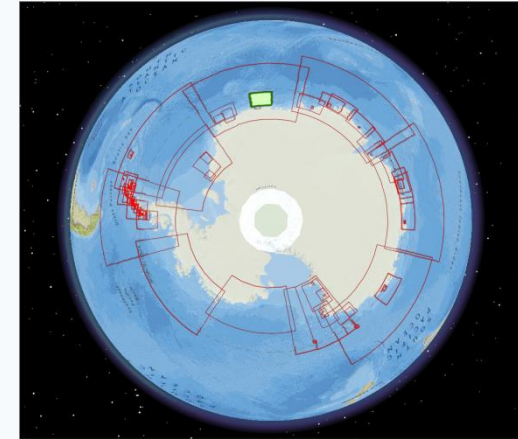
# Improvement (1/8)

## 1. Base map of Polar region

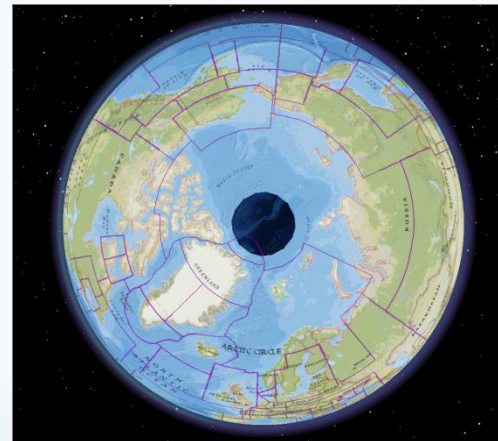
- Both INT Chart and ENC Scheme
- Apply to the management procedures



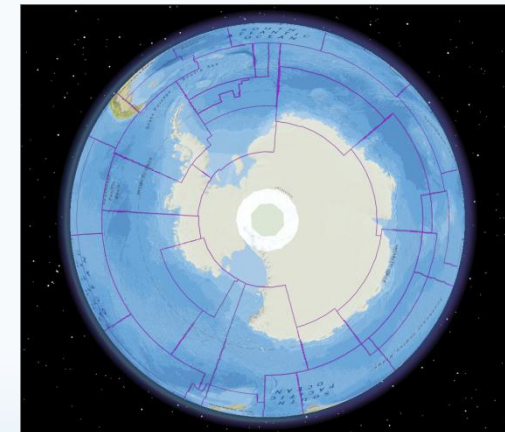
INT Chart Arctic



INT Chart Antarctic



ENC Scheme Arctic



ENC Scheme Antarctic



# Improvement (2/8)

## 2. ENC scheme Management procedure

- Management workflow  
(HO → ICCWG → IHO Sec. → DB)
- Search options / Various Base Maps / Database for ENCs

The screenshot displays the 'INT Chart Web Manager' interface. At the top, there are logos for IHO and KHQA, along with 'Disclaimer' and 'Manual' buttons. A search bar contains the text 'Indian'. Below the search bar, there are tabs for 'INT Paper', 'INT ENC', 'IHO Event', and 'IHO Member'. A world map shows the selected region. The main map area shows a detailed view of the Indian Ocean with various ENC boundaries and labels (A, B, K). Below the map is a table with columns for INT No., PanelID, INT Region, INT Title, Producer, Nat. No., S\_limit, N\_limit, W\_limit, E\_limit, 1stEdYear, 1stEdWeek, NewEdYear, NewEdWeek, Status, Scale, Scale Lat, Printer Nation, Print format, Action, Reviewer, and Process.

INT No.	PanelID	INT Region	INT Title	Producer	Nat. No.	S_limit	N_limit	W_limit	E_limit	1stEdYear	1stEdWeek	NewEdYear	NewEdWeek	Status	Scale	Scale Lat	Printer Nation	Print format	Action	Reviewer	Process
7453	MAIN	J	Payra Harbour	BD	3002	21°48.70'N	22°05.55'N	90°25.70'E	91°14.40'E	2017				Produced	30,000	21°30.00'N		65x98	Modify	ADCS	ADCS Ready
7581	MAIN	H	Baia de Maputo	GB, MZ, PT	GB 644	26°16.50'S	25°33.50'S	032°33.00'E	033°05.00'E	2012		2017		Produced	75,000	25°55.00'S		A0	Modify	ADCS	ADCS Ready
3812	MAIN	F	Coasts of Crime...	RU, UA	RU/32172, UA/3228	43°42.00'N	45°32.00'N	035°10.00'E	038°40.00'E	2004		2017	15	Produced	300,000	44°00.00'N		A0	Modify	ADCS	ADCS Ready
1021	MAIN	E	Southern Part	FL	500	53°24.00'N	57°07.00'N	012°50.00'E	021°40.00'E	1994		2017		Produced	500,000	60°00.00'N			Modify	ADCS	ADCS Ready
1218	MAIN	E	Leba to Klapeda	FL	241	54°20.00'N	55°47.70'N	017°30.00'E	021°19.70'E	1991		2017		Produced	250,000	55°00.00'N			Modify	ADCS	ADCS Ready
1295	MAIN	E	Pomeranian Bay ...	PL	74	53°54.00'N	54°26.00'N	013°55.00'E	015°04.00'E	1998		2017		Produced	75,000	54°00.00'N	GB(128-13) GB(128-13)		Modify	ADCS	ADCS Ready
1478	PART-A	D	Part A - Baalho...	BE	106	53°54.00'N	51°25.61'N	004°05.70'E	004°26.49'E	1998		2017	37	Produced	30,000	51°20.00'N	GB(128-13) GB(128-13)		Modify	ADCS	ADCS Ready
1477	PART-B	D	Part B - Antwer...	BE	106	51°13.67'N	51°14.64'N	004°19.26'E	004°24.34'E	1998		2017	37	Produced	15,000	51°20.00'N	GB(128-13) GB(128-13)		Modify	ADCS	ADCS Ready

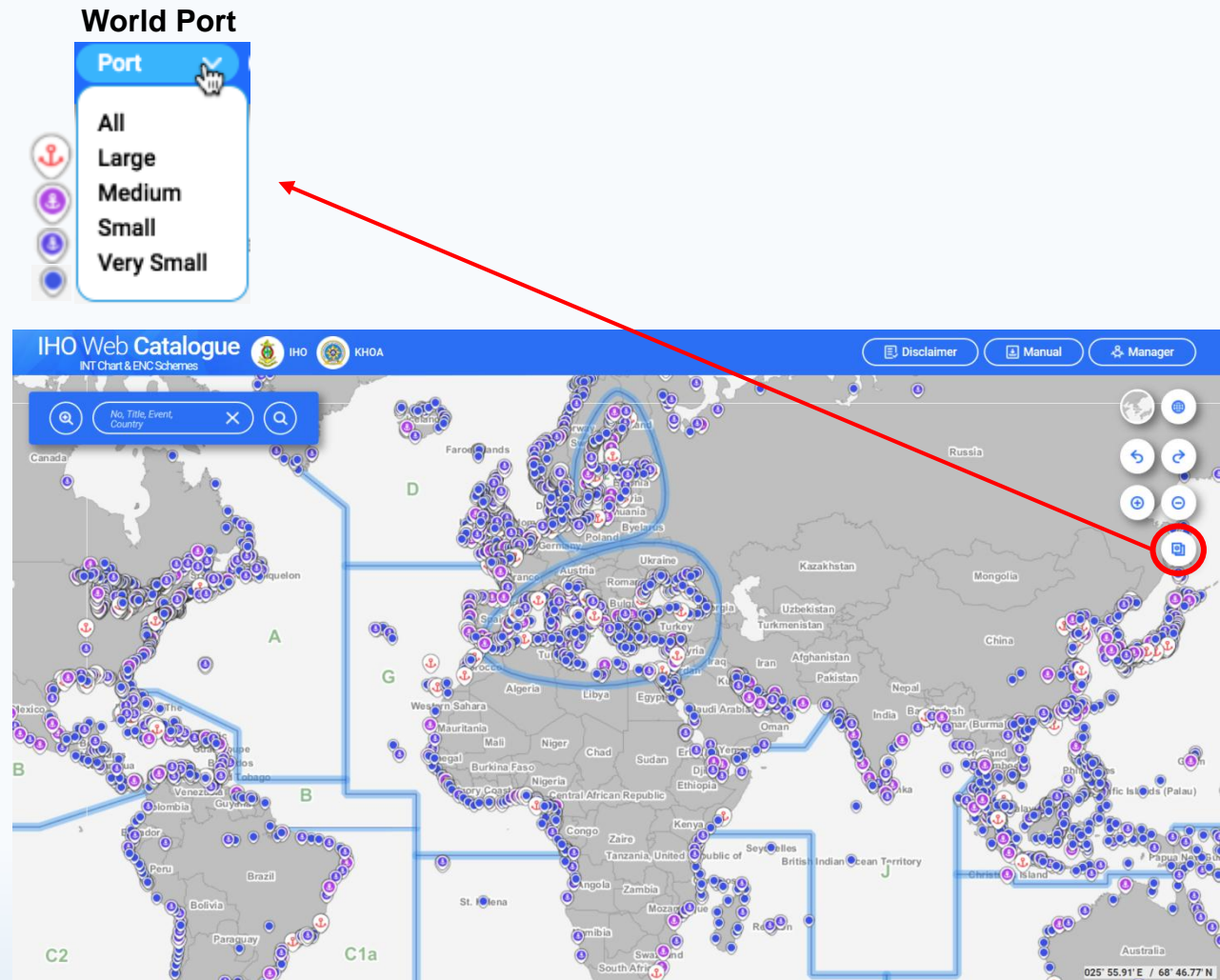


# Improvement (3/8)

## 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



# Improvement (4/8)

## 4. ENC scheme : Gap finder

- Comparison between INT Chart and ENC

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

Step 2 - Select INT Region

Region Country

Continent J

Nation Select Please

BD x EG x

INT Chart Web Manager IHO KHQA Hello ADCS

Analysis Summary

GAP Area 29km<sup>2</sup>

INT Paper Area 72km<sup>2</sup> World ENC Area 43km<sup>2</sup>

7100 - App. to Kismaayo  
300,000 P J 1989 GB Schemed

7105 - Outer App. to Muqdisho and Marka Anch  
300,000 P J 1990 GB Schemed

7112 - Outer App. to Berbera  
200,000 P J GB Schemed

7114 - Bab El Mandeb et Golfe de Tadjoura  
200,482 P J 2000 FR Produced

7116 - Jazīrat Jabal Zuqar to Muhabbaka Islands  
100,000 P J 1985 GB Produced

1 2 3 4 5 6

Back Download



# Improvement (5/8)

## 5. ENC scheme : Overlapping checker

**1** Overlap Analysis

**2** Step 1 : Select Overlap Data  
Source Data : World ENC

**3** Step 2 : Select Area  
Between  Region  Country

**4** Step 2 : Select Area  
Between  Region  Country

**5** Step 3 - Select Scale band  
Overview General Coastal  
Approach Harbour Berthing

**6** Step 4 - Tolerance Setting  
0 Km

**3** Between  Region  Country \* Select two regions/countries

**4** Between  Region  Country \* Select one region/country

**Analysis Summary**  
Overlap Area 20km<sup>2</sup>

General	91km <sup>2</sup>
KR2F4000 - South Coast of Korea and Approaches	500,000 <input checked="" type="checkbox"/> 2015 Korea (Rep. of) <input checked="" type="checkbox"/> Produced
KR2F3000 - Korea West Coast	500,000 <input checked="" type="checkbox"/> 2014 Korea (Rep. of) <input checked="" type="checkbox"/> Produced
KR2F2000 - Korea East Coast	500,000 <input checked="" type="checkbox"/> 2015 Korea (Rep. of) <input checked="" type="checkbox"/> Produced

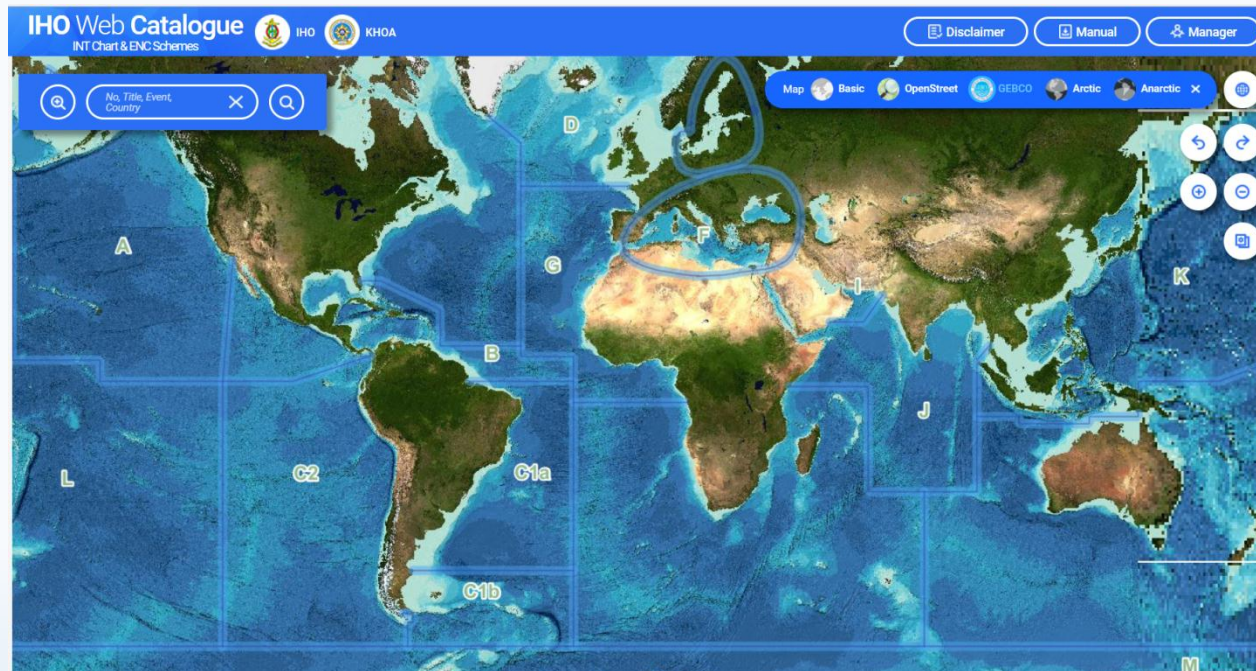




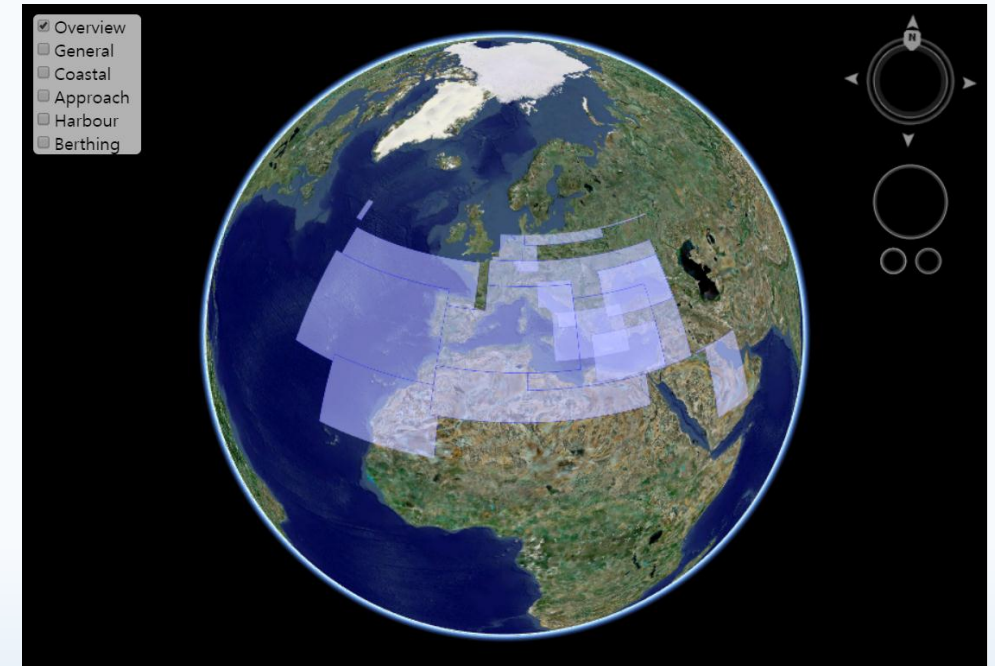
# Improvement (6/8)

## 6. Other improvements

### 1) GEBCO Base Map



### 2) 3D Globe

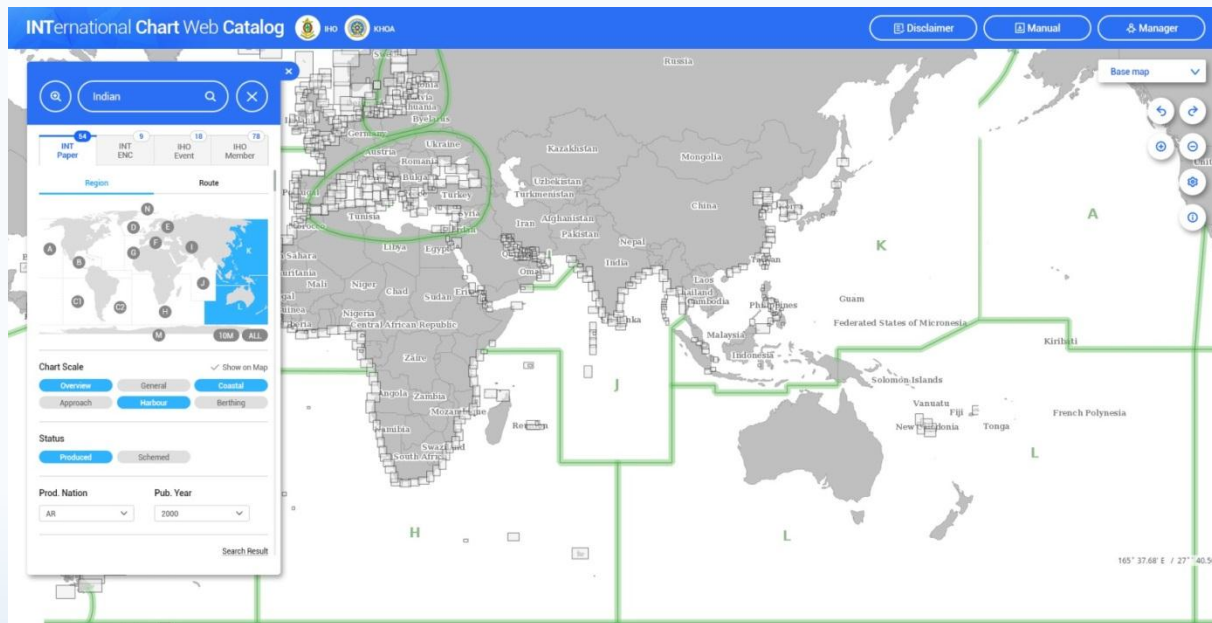


# Improvement (7/8)

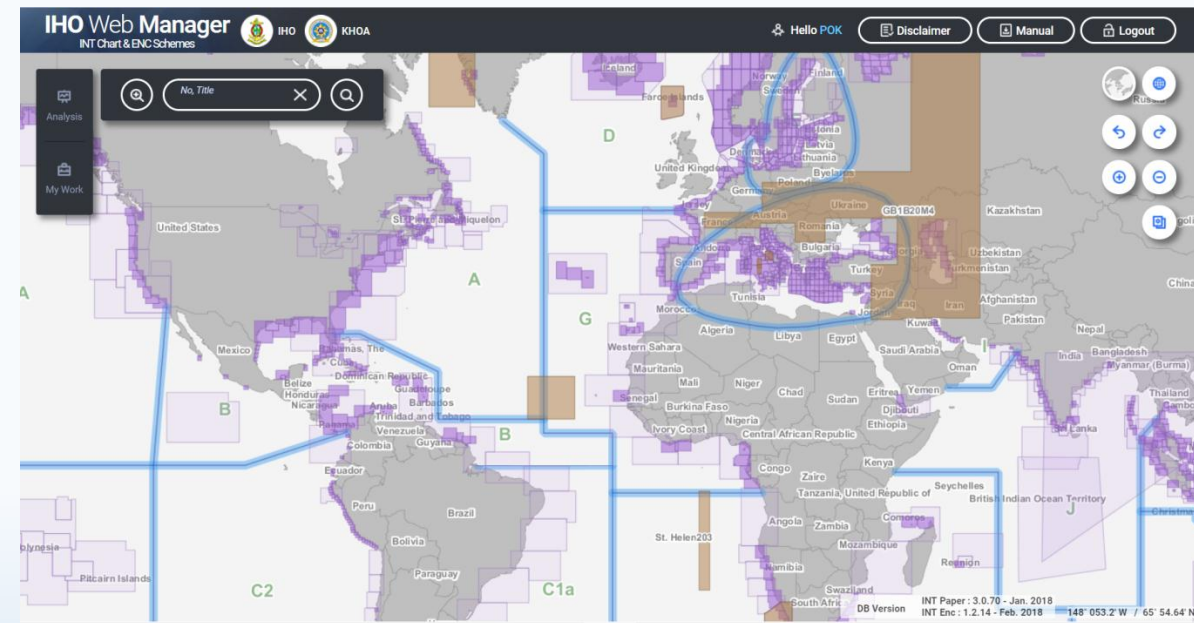
## 6. Other improvements

### 3) Renewal of INTOGIS interface

#### Web Catalogue



#### Web Manager



# Improvement (8/8)

---

## 6. Other improvements

### 4) Additional layers

- AIS traffic density layer
- IHO meeting & event layer
- IHO member states layer
- CATZOC layer

### d. Functions

- Email notification
- Update contents ...



# Development Status

---

- Design and develop DB (Oct. 2017)
- Develop the new interface and functions (Nov. 2017)
- Create additional layers (Nov. 2017)
- Test operation (Nov. 2017 ~ early 2018)
- Run the New INTToGIS system (TBD)



---

# Thank you

