

ANNEX 1

Respected IHO director Mr. KAMPFER, chair of EAHC Mr. FADZILAH, distinguished guests, ladies and gentlemen, Good morning.

It is our great honor and pleasure to host the 5th EAHC Steering Committee Meeting and the 8th TRDC—BoD Meeting in this beautiful costal city Xiamen, China. I'm delighted to extend my good wishes and sincere congratulations on behalf of China Maritime Safety Administration on the meeting's openness and earnest welcome as well as New Year's blessing to all delegates.

Hydrographic survey is the prerequisite for marine safety. Timely and accurate distribution of Hydrographic survey and mapping through nautical publications is crucial for navigation on sea. Internationalization also requires hydrographic service to be seamless and standardized. Therefore, EAHC has assumed important responsibility as a regional hydrographic organization within the framework of International Hydrographic Organization.

As we all know, East Asia is one of the most dynamic areas in world economy. Promoting regional and even global economic development as well as shipping safety is our common responsibility. Strengthening communication, building consensus, enhancing mutual trust, deepening cooperation and promoting development is our common wish. Therefore, EAHC has established a solid foundation for regional countries. In particular, it has played a significant role in promoting the exchanges among countries, improving the capacity building of global hydrographic survey, enhancing cooperation between countries and providing better services for regional marine economy and shipping safety.

China Maritime Safety Administration has long been committed to the long-term development of hydrographic survey and mapping. We are willing to work together with other member states of EAHC to jointly make efforts on marine safety.

In this meeting, agenda items are critically important for administrative matters of EAHC and balanced development of member states in hydrographic area. I expect that constructive discussions will be made on those issues and the meeting will achieve fruitful results.

ANNEX 1

Xiamen is a beautiful city in southeast of China. It's also one of the beginning ports of "Maritime Silk Road". I hope all East Asia countries can benefit from the initiative of the 21st century Maritime Silk Road and you can have a wonderful time by seeing the beautiful sceneries in this city and experiencing the brilliant Chinese traditional culture.

Finally, I wish this meeting a complete success. Thanks for your attention.

5th EAHC STEERING COMMITTEE MEETING

**OPENING ADDRESS
BY CHAIRMAN (EAHC)**

EAHC Vice Chairman, Dr Arata Sengoku, Head of Delegations, IHO Director, Mr Abri Kamfer, Chief Hydrographers, EAHC member states delegations, observers, ladies & gentlemen, a very good morning to all of you and Selamat Pagi.

First of all, on behalf of all present this morning let me express our sincere thanks to our host, China Maritime Safety Administration (MSA) for organizing this meeting and also for the excellent hospitality and arrangement. I am sure everybody has settle down well in this beautiful resort.

I also would like to take this opportunity to welcome all EAHC member states to the 5th East Asia Hydrographic Commission (EAHC) Steering Committee meeting for the next 3 days. I am sure with this pleasant environment and excellent arrangement, we will have a fruitful meeting.

Before we proceed with the agenda item of this meeting, similar to the last meeting, I would like to request everyone to focus on the technical agenda during our discussion and deliberation on the subject matter. Though I believed that in certain issue there will be an interest to the political agenda. I hope that we could find and come to compromise and general concern in making decision in this meeting.

I also hope that this 3 days meeting will provide us with the opportunity to enhance closer cooperation and interaction, sharing knowledge and experiences and getting to know each other better throughout common goal of enhancing and bringing EAHC to a greater height.

Dear colleagues,

With that note, let me recap the issue brought from the last 4th EAHC Steering Committee meeting last year in Tokyo, Japan and throughout the meetings, we have discussed several important issues which will be further discuss in this meeting.

Admission to EAHC membership. I hope that the Vietnam's full membership could be conclude in this meeting. I also hope that Cambodia and Timor Leste would consider to joint EAHC membership as soon as possible, as this will benefit our region.

South China Sea (SCS) and East Asia (EA) ENCs. I believe that during the previous CHC meeting, we have way forward on this issues towards promoting Safety of Navigation in this region. I hope that we could conclude this issue in this meeting.

Hosting of RECC. Hong Kong has provided us the details on the establishment of RECC. Hopefully we can review it together and subsequently decide upon the matter.

I humbly request all member states to give a maximum cooperation so that this meeting could achieve its objectives. I believe that the spirit of cooperation and comradeship in this meeting will be another fruitful meeting for us.

Last but not least, I would like to thank IHO Director, Mr. Abri Kampfer for his presence with us through the meeting. I trust that he is doing his best in closing the gap between IHO and EAHC. I urge all delegates to take his opportunity to grab him for any advice or opinion needed.

Once again, thank you for coming to the 5th EAHC Steering Committee meeting and let the meeting begins.

Participant List

(Sequenced by registration)

Nationality	Name	Position & Organization	Meeting	
			TRDC-BOD	SC
BRUNEI DARUSSALAM	MR. AREFIN BIN HJ JAYA	Acting Surveyor General, Survey Department	✓	✓
	MR. ABD MALIK BIN HJ ABD HAMID	Survey Department	✓	✓
JAPAN	DR. ARATA SENGOKU	Chief Hydrographe , Japan Hydrographic and Oceanographic Department (JHOD)		✓
	DR. YUKIHIRO KATO	Director of Technology Planning and International Affairs Division, Japan Hydrographic and Oceanographic Department (JHOD)		✓
	MR. SHINICHI TOYAMA	Director, International Affairs Office, Japan Hydrographic and Oceanographic Department (JHOD)	✓	✓
	MR. HIROAKI SAITO	Deputy Director for Coordination of Research Technology, International Affairs Office , Japan Hydrographic and Oceanographic Department (JHOD)		✓
	MR. KAZUFUMI MATSUMOTO	Cartography Officer, Chart and Navigational Information Division, Japan Hydrographic and Oceanographic Department (JHOD)	✓	✓
	MR. MASASHI SUE	Director, Japan Hydrographic Association		MSS

ANNEX 3

	MR. TOMOTAKA ITO	Special Advisor, Japan Hydrographic Association		✓
	MS. SHION OU	Deputy General Manager, Japan Hydrographic Association		MSS
MALAYSIA	MR. FADZILAH BIN MOHD SALLEH	Chief Hydrographer of Malaysia, National Hydrographic Centre	✓	✓
	MR. LUKMAN HANAFIAH BIN AZAMAR OMAR	Head of Hydrographic Division, National Hydrographic Centre	✓	✓
	MR. AHMAD SHAHRIN BIN ABU ZARIN	Cartographic Staff, National Hydrographic Centre	✓	✓
PHILIPPINES	COMMO. JACINTO M CABLAYAN	Director Hydrography Branch, NAMRIA	✓	✓
	LCDR. JOHN M. LABINDALAWA	Commanding officer, Hydrography Branch, NAMRIA	✓	✓
SINGAPORE	DR. PARRY OEI SOE LING	Chief Hydrographer, Maritime and Port Authority of Singapore	✓	✓
	MR. JAMIE CHEN YIN KIAT	Deputy Chief Hydrographer, Maritime and Port Authority of Singapore	✓	✓
	MR. KABEER ISMAIL	Assistant Hydrographer, Maritime and Port Authority of Singapore	✓	✓
INDONESIA	REAR ADMIRAL DR. HARJO SUSMORO	Chief Hydrographer, Indonesian Navy hydrography and Oceanography Center	✓	✓
	MAJ GEN. GATOT TRISWANTO	Assistant Chief of the Indonesian Navy for Maritime Potential	✓	✓
	CAPTAIN. DYAN PRIMANA S	Head of Nautical Division-Pushidrosal	✓	✓

	COMMANDER. ABDUL AZIES	Head of Charting Divison-Pushidrosal	✓	✓
	LT COMMANDER. AHMAD LUFTI IBRAHIM	Officer of Charting Division-Pushidrosal	✓	✓
	MAJOR. CAHYO WIDIKDO	Assistant of Defence Attache - Indonesian Embassy	✓	✓
KOREA	DR. CHAEHO LIM	Director of Nautical Chart Division, Korea Hydrographic and Oceanographic Agency		✓
	MR. HAKYOEL (PETER) YOU	Deputy director of Nautical Chart Division, Korea Hydrographic and Oceanographic Agency	✓	✓
	MR. JUNSHIK LEE	Assistant director of Nautical Chart Division, Korea Hydrographic and Oceanographic Agency	✓	✓
	MR. JAEYON LEE	Head of Nautical Information team Korea Hydrography and Research Association		✓
THAILAND	RADM. PREECHA SOMSUKJAROEN	Director of Navigational Supporting Center, Hydrographic Department, Royal Thai Navy	✓	✓
	COMMANDER. SAMHARN DAIRAIRAM	Head of International Maritime Boundary, Survey Division , Hydrographic Department, Royal Thai Navy	✓	✓
	CAPTAIN. PRASIT CHANTORN	Director of Cartographic Division Hydrographic Department, Royal Thai Navy	✓	✓
	CAPTAIN. NATAPONG PHATTANAJONGRAK	Deputy Chief of Staff Hydrographic Department, Royal Thai Navy	✓	✓
IHO	MR. ABRI KAMPFER	Director, IHO	✓	✓
CAMBODIA	MR. MAK SIDETH	Deputy Director General of General Department of		✓

		Waterway-Maritime Transport and Port		
	MR. ROS SOPHORNA	Director of Waterway Infrastructure and Port Construction Department		✓
CHINA	MR. YANG XINZHAI	Deputy Director General, China Maritime Safety Administration	✓	✓
	MR. XU BINSHENG	Director, China Maritime Safety Administration	✓	✓
	MR. WANG CHANG	Senior Consultant, China Maritime Safety Administration	✓	✓
	MR. YAN HAN	Engineer, China Maritime Safety Administration	✓	✓
	MR. CHEN XINGSEN	Principal Staff Member, Ministry of Transport of China	✓	✓
	MR. HUANG YI	China Navy Hydrographic Office	✓	✓
	MR. YANG YONGPING	China Navigation Publications Press	✓	✓
	MR. STEPHEN, WONG CHUN-KUEN	Deputy Hydrographer, Hydrographic Office, Marine Department, Hong Kong SAR Government, China	✓	✓
	MR. MICHAEL, CHAU CHUN-MING	Hydrographic Office, Marine Department, Hong Kong SAR Government, China	✓	✓
MR. DONALD, CHAN KAI-HONG	EA RECC manager, Hydrographic Office, Marine Department, Hong Kong SAR Government, China		✓	

PROVISIONED AGENDA**5th EAHC STEERING COMMITTEE MEETING****6th – 8th MARCH 2018**

Item	Description	Lead
A1	Welcome Address	Host - China
A2	Opening Address	Chairman (EAHC)
A3	Adoption of Agenda	Chairman (EAHC)
A4	IHO Secretariat Report	IHO SG
A5	EAHC Membership Status	Chairman (EAHC)
A6	CHC Report: i) South China Sea and East Asia (EA) ENC ii) East Asia ENC Administrator	Chairman (CHC)
A7	TRDC-BOD Report	Chairman (TRDC-BOD)
A8	RECC Report	Chairman (RECC)
A9	Strategic Team Advance Roadmap (STAR) Task Group Report	Japan
A10	EAHC-MSDI WG	ROK
A11	Technical Visit Report	Chairman (EAHC)
A12	Report on Important Issues from Meeting Attended by MSs: i) IRCC ii) IHO Council iii) IHO Assembly iv) HSSC	Chairman (EAHC) Chairman (EAHC) Chairman (EAHC) China/Indonesia/ROK/Singapore
A13	Amendment of EAHC Statute: i) Membership ii) Unanimous Decision	Malaysia
A14	Concept of Conference	Malaysia
A15	Hydrographic Survey After Disaster/ Emergency Hydrographic Survey	China
A16	Application of Hydrographic Database	China
A17	Any Other Matters	Chairman (EAHC)
A18	Date and Venue of Next Meeting	Chairman (EAHC)
A19	Adoption of the Minutes of Meeting	Chairman (EAHC)
A20	Close of Meeting	Chairman (EAHC)

5th Steering Committee Meeting of the East Asia Hydrographic Commission (EAHC)

Report by the IHO Secretariat



Entry into force of the Amendments to the IHO Convention and its supporting Basic Documents

- Revised Convention entered into force: 8 November
 - the term International Hydrographic Bureau (IHB) is replaced by the term IHO Secretariat;
 - the Directing Committee, comprising a President and two Directors ceases to lead the IHB (Secretariat of the IHO). Instead, the Secretariat of the IHO is now led by a Secretary-General assisted by two subordinate Directors;
 - the term International Hydrographic Conference is replaced by the term Assembly. The ordinary sessions of the Assembly will be held every three years instead of every five years for the Conference. The first session of the IHO Assembly (A-1) was held in Monaco from 24 to 28 April 2017, at which time an IHO Council was established. The first meeting of the Council (C-1) took place in October 2017 and annually thereafter.



Ratification of Protocol of Amendments on IHO Convention

- The subsidiary organs, including the Committees, of the IHO will report to the Council that will then refer endorsed proposals for adoption either to the Assembly or to the Member States through correspondence;
- The planning cycle for the IHO work programme and budget changes from a five-year to a three-year cycle. The next cycle will run from 2018 to 2020.
- For States wishing to join the IHO that are already Member States of the United Nations there is no requirement to seek the approval of existing Member States of the IHO; and
- In future, decisions will be taken based on a majority of the Member States that cast a vote, rather than the existing arrangements where a majority of all the Member States entitled to vote is required. A minimum number of at least one-third of all Member States eligible to vote must vote positively for a vote to stand.



Regional States not yet MS of the IHO

UN MS eligible to join IHO without
requirement for IHO MS approval:

Cambodia

Timor Leste

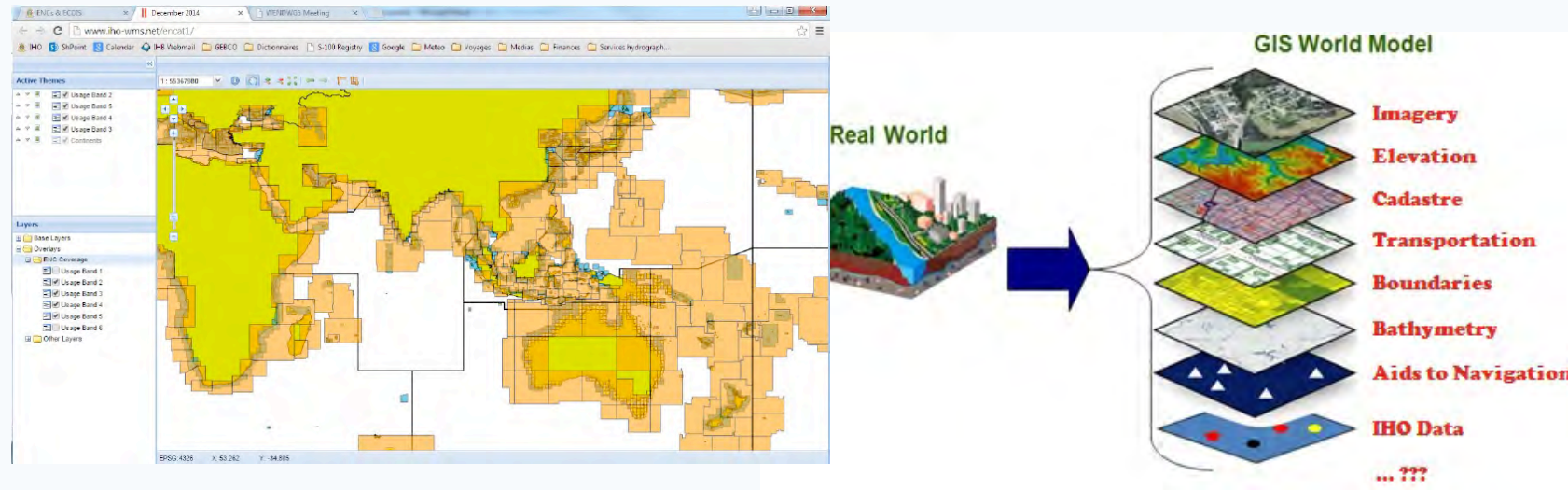


INT Chart and ENC Production Coordination - Region K

- The current web-based version of S-11 Part B for Region K is Edition 3.0.0 dated January 2016. No updates for 2 years
- Note CL11/18 - Adoption of revision 3.1.0 S-11 Part A
- Note CL19/18 – Adoption of new IHO Resolution on the elimination of overlapping ENC data. WENDWG will consider the outcome of this Resolution at 8th mtg scheduled 20 – 22 MARCH 2018.
- EAHC ENC Producers to provide their CATZOC guidelines to the DQWG.



IHO GIS and Databases



- avoid duplication of data and inputs
- enable data visualisation
- enable data fusion and analysis
- provide GIS data layers for RHCs and Member States
- enable publication and website updates (P-5, C-55, etc.)



IHO GIS and data base developments

- Country Information Data base
 - Is your data up to date in the Yearbook / database ?
- “C-55” database
 - Is your data up to date in the C-55 database ?
- ENC catalogue
- INTToGIS database
 - INT chart coverage



IHO Council established by A-1 in 2017. Summary:

- Annual meetings in October
- Seats allocated to a region, but a country - not a region, occupies the allocated seat(s)
- No substitutes or changeovers during the inter-Assembly period
- Most proposals will be considered by the Council before being presented to all Member States for voting
- Council will approve annual budget and work programme



1st Meeting of the IHO Council

- 17 to 19 October 2017 in Monaco
 - Committee/IHO Secretariat reports on WP progress
 - Amendments to IHO Resolutions endorsed
 - New Resolution about the methodology and timetable to deal with financial statements endorsed
 - Revised publications endorsed
 - Proposals for Member States' approval



1st Meeting of the IHO Council (cont.)

- SG established a full-time CB Assistant at the Secretariat by re-arranging other positions
- Key priorities in the IHO 2018 work programme and budget endorsed
- Strategic Plan Review Working Group (SPRWG), France (Chair), Japan (Vice-Chair), Canada (Sec.)
- Next meeting: London, UK (9-11 October 2018)
 - Proposals: 9 July
 - Red Book: 31 July



Publicity and Outreach

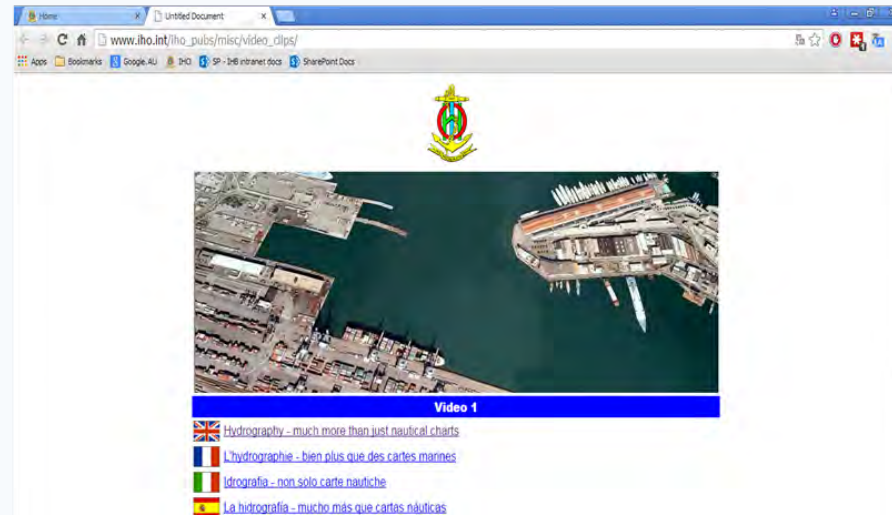
World Hydrography Day 2018:

Bathymetry – the foundation for sustainable seas, oceans and waterways

International Hydrographic Review



Publicity and Outreach



video clips on “what is hydrography ?”

available from the IHO website in English, French, Spanish, Italian, Portuguese, Japanese, Korean, etc.

New video: “... become a hydrographer” (Hydrography as a career)



Actions requested of EAHC:

- To **Note** this report
- Provide report and inputs to the WENDWG, prior to the 8th meeting in March
- Provide CATZOC practices to the DQWG
- Maintenance of ENC Schemes when the INTToGIS Phase II is commissioned



Actions requested of EAHC (cont.):

- Consider investing in the preparation of candidates for the Category "A" hydrography programme
- Consider applying for the Category "B" cartography programme ([CL 04/2018](#) - deadline 30 March 2018)
- Review entries related to IHO C-55 and P-5 (Yearbook) at least annually



Actions requested of EAHC (cont.):

- Consider appropriate arrangements to prepare for the 2nd Meeting of the IHO Council (Proposals and Comments)
- Consider submitting papers for publication in the International Hydrographic Review
- Take any other actions as considered appropriate



IHO Secretariat, here to help you!

www.iho.int

abri.kampfer@iho.int





Report To 5th EAHC Steering Committee on :

7th and 8th TRDC BOD Meetings

Jamie Chen - Chair (TRDC)

Peter You – Vice Chair (TRDC)

Participating Member States

1. China
2. Brunei Darussalam
3. Indonesia
4. Japan
5. Philippines
6. Malaysia
7. Republic of Korea (Vice Chair)
8. Singapore (Chair)
9. Thailand

**8th TRDC BOD – 5 March 2018,
Xiamen, China**

**7th TRDC BOD – 14 to 15 Aug 2017,
Tokyo, Japan**

Key Reports

1. Basic Carto & Hydro Courses (“Cat C”) and TFT Courses
2. Report on 2017 CB Courses
3. Report on 2018 CB Courses
4. Proposed 2019 CB Courses
5. Long Term EAHC CBP Plan
6. Conclusion

1. Report on Basic Carto & Hydro Courses (“Cat C”) and TFT Courses

a. Development of Basic Training Courses for Hydrography and Cartography

- Training for Trainers (Carto) – 2014 and 2015 (Completed)
- Training for Trainers (Hydro) – 2016 and 2017 (Completed)
- Development of course syllabi for Carto and Hydro

b. Nearly all MSs have implemented the course syllabus for in-house training:

- 2017 and 2018 Basic Training Courses

c. Need for regular review, update. Budget constraints.

d. Proposal to report to the IHO CBSC on the Basic Training Course Model – TFT, Cat C Syllabi and course content.

2. Report on 2017 CB Courses

a. Hydrographic Survey for Disaster Relief – Jakarta, 11 to 15 Sep 2107



Recommendations :

1. Sharing of National Plans
2. Regional Table Top Exercise
3. Joint Field Exercise

2. Report on 2017 CB Courses

b. TFT – Hydro, Busan – 4 - 15 Dec 2017

Outcomes :

1. Standardisation of terms and definitions, based on IHO S-32
2. More practical focused content- more operational than physics
3. Development of Assessment Question bank
4. Member states to use train slides or integrate topics into their fundamental training for new surveyors
5. Addition of Practical components to training program



3. Report on 2018 CB Courses

s/n	Course	Host	Dates	Status
1	Lidar and Satellite Derived Bathymetry Workshop (Completed)	Japan	30 Jan. – 1 Feb 2018	 <p>2017 IHO CBF.</p>
2	Use of GNSS for tide correction for Survey	Indonesia	2 to 6 July 2018	2017 IHO CBF
3	Cartographic Production Database Development Workshop	China	3Q 2018 (TBC)	Subject to IHO CB Funding approval in Jun 2018
4	Technical Visit for Timor Leste	Chair EAHC	Nov/Dec 2018	Subject to IHO CB Funding approval in Jun 2018

4. Proposed 2019 CB Courses

(1) Risk Assessment for hydrographic surveys and charting management for the Safety of Navigation Workshop

- Risk Assessment models/tools when deciding on the prioritisation of hydrographic surveys and charting of new ports/ waterways and resurveys programmes.

(2) Management of MSI DB workshop

(3) Integration and management of hydrographic data for MSDI

Tentative findings from questionnaire

- ✓ Multiple domestic organizations handle MSI, and role-demarcation is to be overcome for sharing information
- ✓ Regional tie through regular communication is important
- ✓ Basic understanding is still required.



MSI training course was also requested:

- Basic course of international framework / National Coordinator's responsibilities
- To strengthen regional ties with counterparts

5. Long Term EAHC CBP Plan

Thailand SWOT Analysis Findings and Recommendations

1. Sustainability of capacity building, and knowledge management
 - a. Development of Basic hydrographic and Cartographic courses
 - b. Need to identify other basic courses, eg. tides, ENCs, MSI, seabed classification, etc.
 - c. To extend to Intermediate & Advanced courses, eg. Multibeam, MSDI, Risk Assessment, etc

2. Creating greater awareness and importance of hydrography
To remain relevant and contribute to a sustainable Blue Economy
 - a. Through the use of MSDI applications, GEBCO Seabed 2030
 - b. Integration and cooperation with agencies, stakeholders, users
 - c. Hydrographic data is the basis for marine GIS/ MSDI

3. TRDC BOD to further assess these findings and recommendations

6. Conclusion

The SC is invited to:

- 1) Note the TRDC report.
- 2) Proposal to report to the IHO CBSC on the Basic Training Course Model – TFT, Cat C Syllabi and course content
- 3) To support the 2018 CB Courses:
 - a. Use of GNSS for tide correction for Survey
 - b. Cartographic Production Database Development Workshop
 - c. Technical Visit for Timor Leste
- 4) To consider and approve the following 2019 CB courses for submission to IHO CBSC:
 - a. Risk Assessment for hydrographic surveys and charting management for the Safety of Navigation Workshop
 - b. Management of MSI Database workshop
 - c. Integration and management of hydrographic data for MSDI

Next Meeting

- Agenda- Review of 5 Year Workplan, Future CB Plans based on SWOT Analysis
- Propose 2 day TRDC BOD meeting
- Early 2019
- Inter-sessionally – work through correspondence

Thank you.



Progress Report on the Establishment of EA-RECC

Reported by Hydrographic Office,
Marine Department
Hong Kong, China

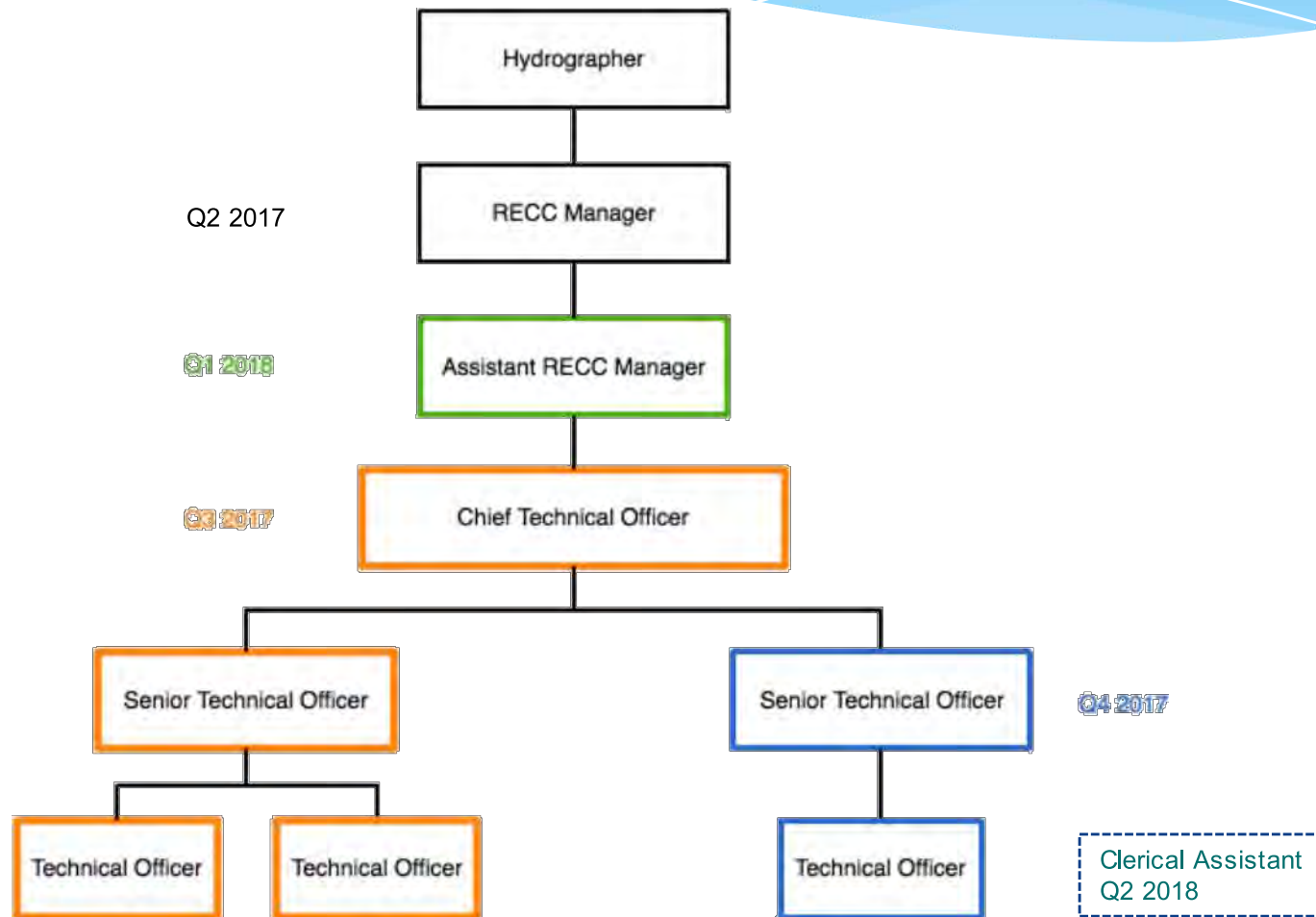
The 5th EAHC Steering Committee Meeting
6th ~ 8th March 2018
Xiamen, China

Establishment of EA-RECC

Background

- Upon the endorsement given in the last SC meeting in Feb 2017, Hong Kong China had subsequently started the preparatory work for the establishment of EA-RECC in March 2017;
- As of March 2018, the key preparatory work included:
 - Staff recruitment and training
 - Setting up of office area
 - Drafting TOR, ROP and Operating Guidelines
 - Contacting with other RENCs

Staff Recruitment



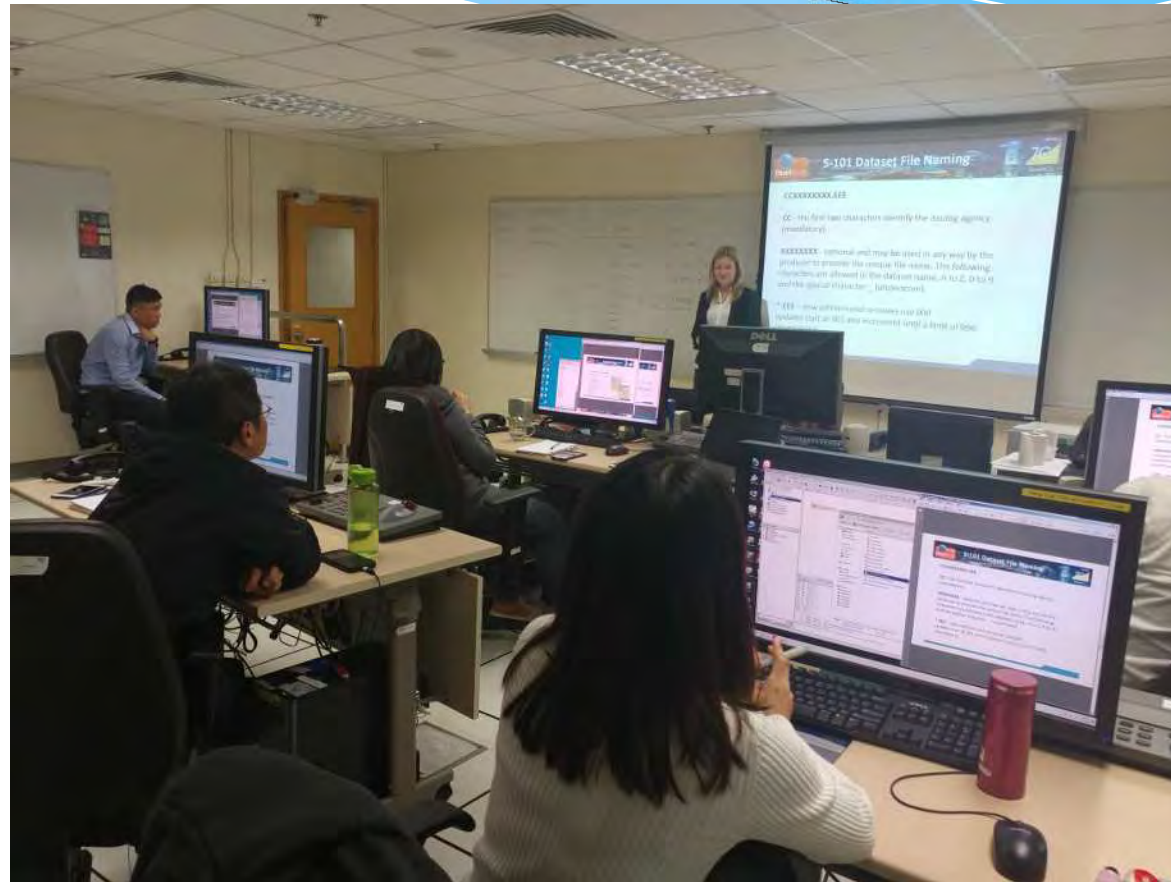
Staff Recruitment



Staff Training

- * **SevenCs ENC Tools Training (Feb 2018)**
 - * IHO Standards (S-57, S-58 and ENC Data Production)
 - * Introduction to ENC Designer
 - * Introduction to ENC Referencer
 - * Introduction to ENC Manager
 - * Introduction to ENC Optimizer
 - * ENC Validation using ENC Analyzer
 - * Source Data Conversion (focus on FME S-57 Writer)
 - * Introduction to S-100 and latest development

Staff Training



Staff Training

- * **EAHC Cat C Charting Training**

- * Conducted by the centre's Chief Geodata Officer who is a qualified trainer;
- * EAHC 1.0 Chart Data Assessment
- * EAHC 1.1 Verification Process and Data Assessment
- * EAHC 2.0 Paper Chart Compilation
- * EAHC 3.0 Basic ENC Production
- * EAHC 3.1 Introduction to ENC
- * EAHC 3.2 ENC Production
- * EAHC 4.0 Preparation of chart updating
- * EAHC 4.1 Notice to Mariners
- * EAHC 4.2 Chart Maintenance

Staff Training



Setting up of office area

- * The EA-RECC is located in the Hydrographic Office of Hong Kong
- * Setting up of office area:
 - * By conversion of an existing conference room and some other ancillary area into office area;
 - * Fitting out works and furnishing;
 - * Procurement of Hardware and Software
 - * The works started in August and completed in December 2017;
 - * Total cost about HKD\$3.5 million (~ USD 450,000)

Setting up of office area

- * Vacated conference room ready for conversion



Setting up of office area



Building Works in Progress

Setting up of office area



Building Works in Progress

Setting up of office area

- * The new office area



Setting up of office area



Setting up of office area



Contact with Other RENCs

IC-ENC

- * Attending (as observer) IC-ENC Technical Conference, TC02, 22 –24 May 2017, Copenhagen, Denmark
- * Key issues observed:
 - * Latest development in IC-ENC
 - * Validation Overview
 - * Errors Database update
 - * ENC Validation Training Overview
 - * Data Management Tools
 - * Quality Assurance Issues
 - * Commercial products presentations

Contact with Other RENCs

IC-ENC

- * Attending (as observer) **IC-ENC Technical Conference, TC02**, 22 –24 May 2017, Copenhagen, Denmark



Contact with Other RENCs

IC-ENC

- * A workshop titled “**Workshop on the Implementation and Operation of a Regional ENC Coordination Centre**” had been conducted in HKHO in July 2017 with guest speaker Mr. James Harper, IC-ENC General Manager;
- * Attended by the key EA-RECC project staff;
- * This workshop provided a two-way flow of information:
 - * The EA-RECC goals, purpose, project plan etc,
 - * The IC-ENC global operating model of four core services (production support, validation, distribution and revenue management), financial model and governance.

Contact with Other RENCs

IC-ENC



Contact with Other RENCs

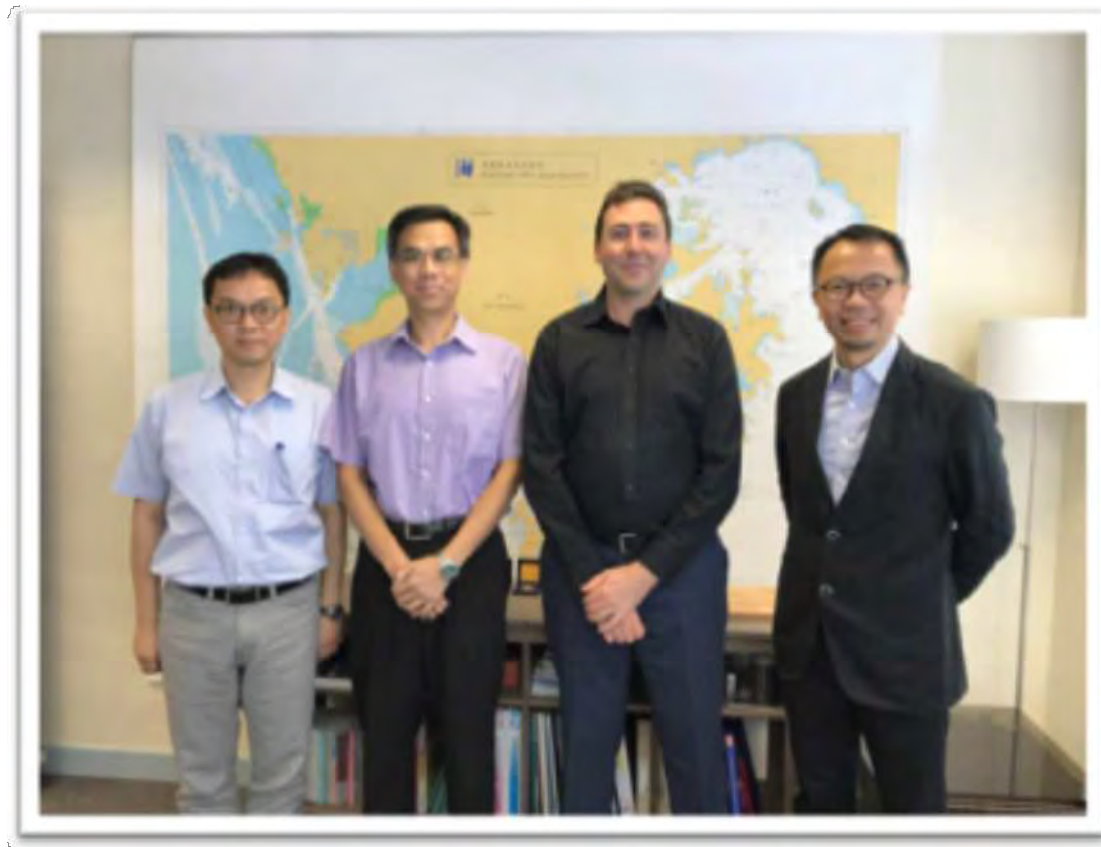
IC-ENC

- * After the workshop, a meeting has been conducted in July 2017 between IC-ENC General Manage and the key HKMD EA RECC project staff.
- * Items discussed including:
 - * In-depth discussion about the operation of the IC-ENC
 - * Staff attachment and training opportunity for the EA RECC technical staff
 - * Attending IC-ENC Technical Conferences / Steering Committee Meetings as observe

Contact with Other RENCs

IC-ENC

- * Meeting with Mr. James Harper, General Manager of IC-ENC



Contact with other RENCs

PRIMAR

- * Attending (as observer) **PRIMAR 15th Technical Expert Working Group Meeting**, 28-29 November 2017, Stavanger, Norway
- * Key issues observed:
 - * Latest development in PRIMAR
 - * RENC-RENC cooperation
 - * Technical issues – S-101, S-102 & S-58
 - * PRIMAR's Errors Database
 - * T&P Notices
 - * Chart Catalogue on WEB
 - * Commercial products presentations

Contact with other RENCs

PRIMAR

- * Visiting PRIMAR office and meeting with their management staff;
- * Key issues discussed:
 - * Organisation, status and operations of PRIMAR as a RENC;
 - * Technology and tools applied in daily operations;
 - * Opportunities for RENC-RENC cooperation

Contact with other RENCs

PRIMAR

- * Visiting PRIMAR office and meeting with Mr. Hans Lauritzens, Director PRIMAR



Drafting TOR, ROP and other documents for EA-RECC

- * TOR and ROP for the Board of Directors of EA-RECC;
- * TOR and ROP for EA-RECC;
- * Administrative procedures;
- * Procedure for handling of data flow and sales records;
- * Staff training plan

Invitation to Join EA-RECC

Hong Kong China would like to invite all MSs of EAHC to join the EA-RECC.

Establishment of EA-RECC



Thank you

★ *Strategic Team Advance Roadmap (STAR)*
Task Group Report

*Hydrographic and Oceanographic Department,
Japan Coast Guard (JHOD)*



- **Current situation of the IHO Strategic Plan**
- **Objectives of STAR project**
- **Path toward the EAHC Strategic Plan**
- **Contributors**
- **Questionnaire**
- **Response to the questionnaire and more**
- **Japan's proposal to the SC**

At the 1st IHO Assembly in April 2017:

- Revision of the IHO strategic plan was proposed by UK on the basis that it has not been updated since 2009 and the situation of the has been changing IHO (ex. amendments of SOLAS Convention related to ENC carriage, strengthening capacity building).
- As a result, it was decided:
 - that the IHO Strategic Plan shall be for a rolling 6-year period, and shall be reviewed at each session of the Assembly. (Decision 1)
 - that the Assembly tasked the Council to conduct a comprehensive review of the Strategic Plan and to provide a draft revised Plan, as appropriate, in time for the consideration of the 2nd ordinary session of the Assembly (A-2). The Council is empowered to establish a working group for this discrete purpose. (Decision 3)



1st IHO Assembly

The 1st IHO Council was held in October 2017 in Monaco and decided the establishment of SPRWG (Strategic Plan Review Working Group) for its consideration of the amendment of IHO Strategic Plan.



IHO CL
20/2018

1. Terms of Reference

- 1.1 Conduct a comprehensive review of the Strategic Plan in two successive phases: scoping and drafting.
- 1.2 In the scoping phase (T0¹ + 6 months): Feb.15, 2018 – Aug.15 , 2018
 - 1.2.1 review and restate the current and future strategic context in which the IHO operates;
 - 1.2.2 propose the definition of success for the IHO in 2026;
 - 1.2.3 identify the deficiencies in terms of content, shape and interrelation to the implementation instruments in the existing Plan;
 - 1.2.4 consider appropriate goals, ways and means that could address any identified deficiencies;
 - 1.2.5 establish the management plan and timetable for developing and drafting any proposed revisions to the existing Plan;
 - 1.2.6 submit a proposal at C-2 for the draft framework of the revised strategic plan.
- 1.3 In the drafting phase (T0 + 18 months): Feb.15, 2018– Aug.15 , 2019
 - 1.3.1 define the criteria for measuring success and propose priorities for the IHO;
 - 1.3.2 consider the interrelation to other management elements such as budget, work plan and performance indicators (Ref. d/);
 - 1.3.3 prepare the draft revised plan in accordance with the management plan and the timetable;
 - 1.3.4 prepare the supporting documents for submission to A-2.

IHO SPRWG Membership list

IHO CL
20/2018

Member State	Point of Contact	Email
Australia	Hilary Thompson	hilary.thompson@defence.gov.au
Brazil	Luis Fernando Palmer Fonseca	palmer@marinha.mil.br
Canada	Doug Brunt (Secretary)	douglas.brunt@dfo-mpo.gc.ca
Chile	Hugo Gorziglia	hgorziglia@shoa.cl and hgorziglia.hydro@gmail.com
<u>China</u>	<i>To be confirmed¹</i>	
Colombia	Herman Leon Rincon	jefcioh@dimar.co , ddavid@dimar.co , ddavidviteri@gmail.com
Croatia	Zeljko Bradaric	zeljko.bradaric@hhi.hr
Denmark	Jens Peter Hartmann	jepha@gst.dk
Ecuador	Humberto Gomez Proano	direccion@inocar.mil.ec
France	Bruno Frachon (Chair)	bruno.frachon@shom.fr
<u>Indonesia</u>	Yanuar Handwiono	handwionoy@gmail.com
I.R. of Iran	Akbar Rostami Saeid Parizi	akrostami@pmo.ir sparizi@pmo.ir
Italy	Marco Grassi	marco.grassi@marina.difesa.it
<u>Japan</u>	Shigeru Nakabayashi (Vice-Chair)	shigeru.nakabayashi@jodc.go.jp ico@jodc.go.jp

<u>Rep. of Korea</u>	Hak Yoel You	infokhoa@korea.kr
Mozambique	Susana Fembe	sut0412@yahoo.com.br
Netherlands	Marc Van Der Donck	MCJ.vd.Donck@mindef.nl
Norway	Evert Flier	evert.flier@kartverket.no
<u>Singapore</u>	Thai Low Ying-Huang	hydrographic@mpa.gov.sg
Spain	José María Bustamante Calabulg	ifmesp@fn.mde.es
Suriname	Michel Amafo LL.M	info@mas.sr or mamafo@mas.sr
United Kingdom	Tim Lowe	tim.lowe@ukho.gov.uk and internationalrelations.ukho@ukho.gov.uk
USA	John Lowell Stan Harvey Jonathan Justi	john.e.lowell@nga.mil stanley.b.harvey@navy.mil jonathan.justi@noaa.gov

Members from EAHC

¹ No response received to IHO CL 66/2017.

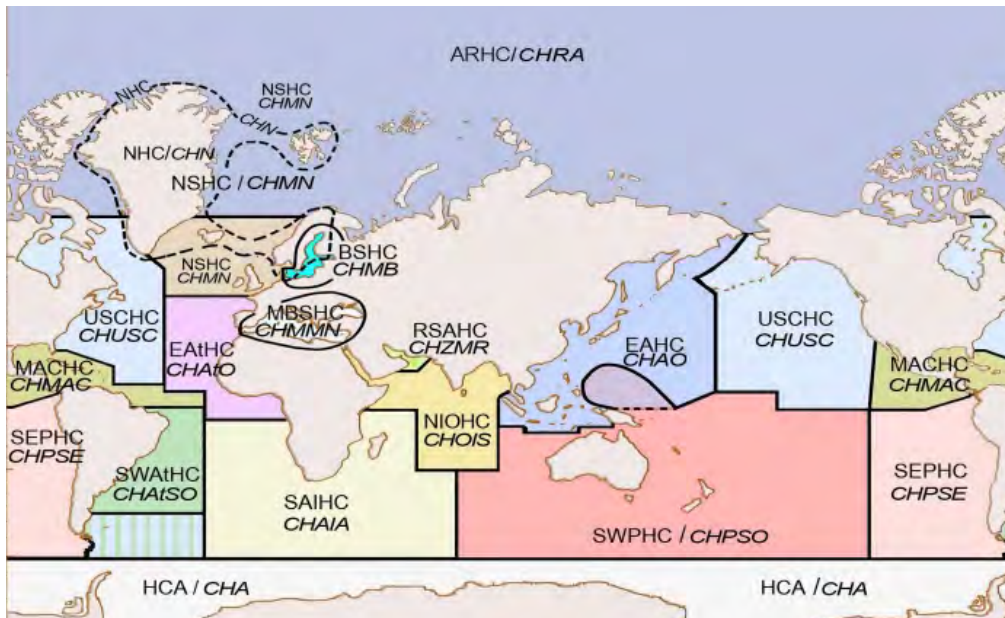
Objectives of STAR project

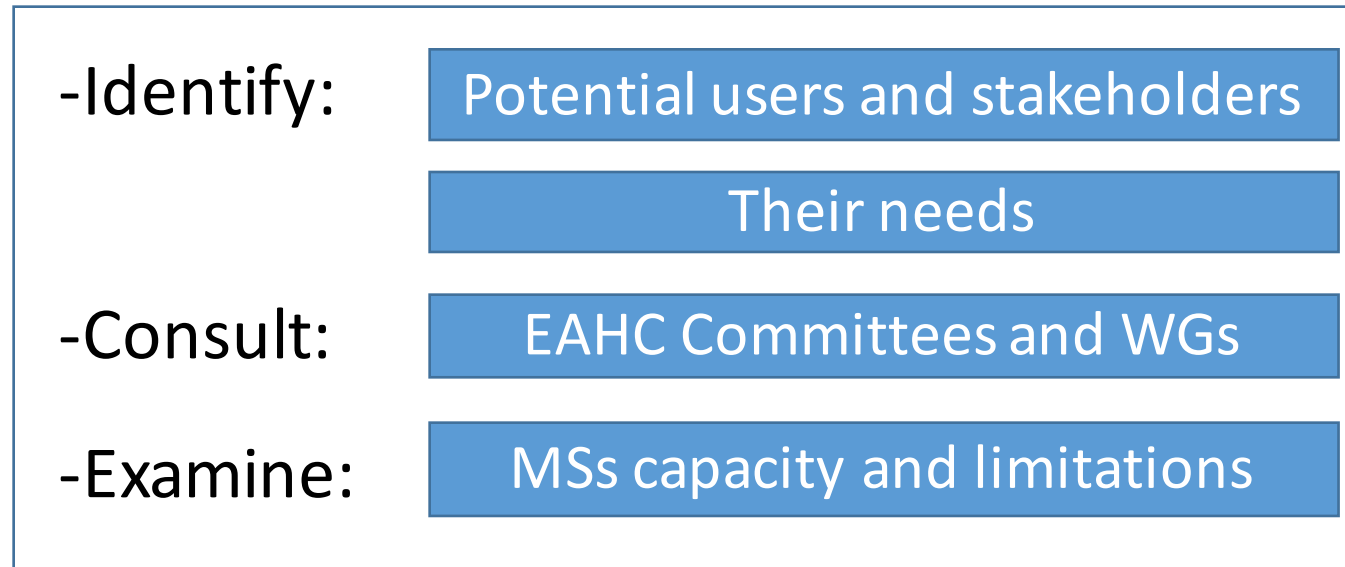


SC4 in Feb 2017 agreed the ToR of the STAR TG to;

a) Identify and propose initiatives that will address the future direction of the EAHC

b) Consider on-going initiatives such as the implementation of e-Navigation, marine activities ..., ... MSDI, and the relevant UN Sustainable Development Goals, and develop a proposed Strategic Plan and associated key objectives for the EAHC to meet future needs.





- Develop an EAHC Strategic Plan and Roadmap
- TG would submit its report to the SC5 for consideration and guidance

Contributors:

Brunei Darussalam	ABDUL MALIK HJ ABDUL HAMID
Japan	Mr. Shinichi TOYAMA
Japan	Mr. Naohiko NAGASAKA
Philippines	CARTER S LUMA-ANG
Philippines	BAI DYANNA G SINSUAT
Republic of Korea	Mr. BAEK Yong
Republic of Korea	Ms. JANG Boram

- 7 contributors from 4 countries
- Participation from other MSs is more than welcome

To understand MSs capacity and limitations, a questionnaire with 13 questions was circulated to MSs on Dec 2017.

Strategic Team Advance Roadmap (STAR)
Action for Continuous Engagement (ACE)

1 Dec. 2017

Questionnaire

Background At the 4th EAHC Steering Committee held in Tokyo, Japan in Feb 2017, the Terms of Reference of Task Group (named STAR) was agreed. The group was tasked to identify potential users and stakeholders (around the EAHC community) and to identify/prioritize their needs for consideration. It was also agreed that the Task Group examines and identifies member States capacity and limitations to meet the present and future challenges. This questionnaire, therefore, will be used to understand the situation and opinions from EAHC Member States, observers and GEBCO.

Name of the organization/country:
Name of Contributor:
Date:
Contact Detail:

Member States are also requested to revise the information on IHO publication C-55 and IHO yearbook for TG's consideration as attached. (If the States allow, the information will be transferred to the IHO Secretariat for updating.)

Questions:

Q1.
In your organization, are there any domestic Strategic Plans concerning to Hydrographic services? Also, are there any domestic Work Programs for your service? (If so and available, the URL or electronic files of the plans will be appreciated.)

Q2.
For your organization/country/EAHC region, which part of the IHO Strategic Plan (revised in Apr 2017 at the 1st Assembly, Monaco) is highly evaluated? Which part is to be improved for your organization/country/EAHC region?

Q3.
Some key-words in the IHO Strategic Plan are extracted as follows. Please put "x" marks to the topics which might be important for TG's consideration of EAHC Strategic Plan.
<VISION, MISSION AND OBJECT> (up to 3 marks)
() maritime safety () efficiency

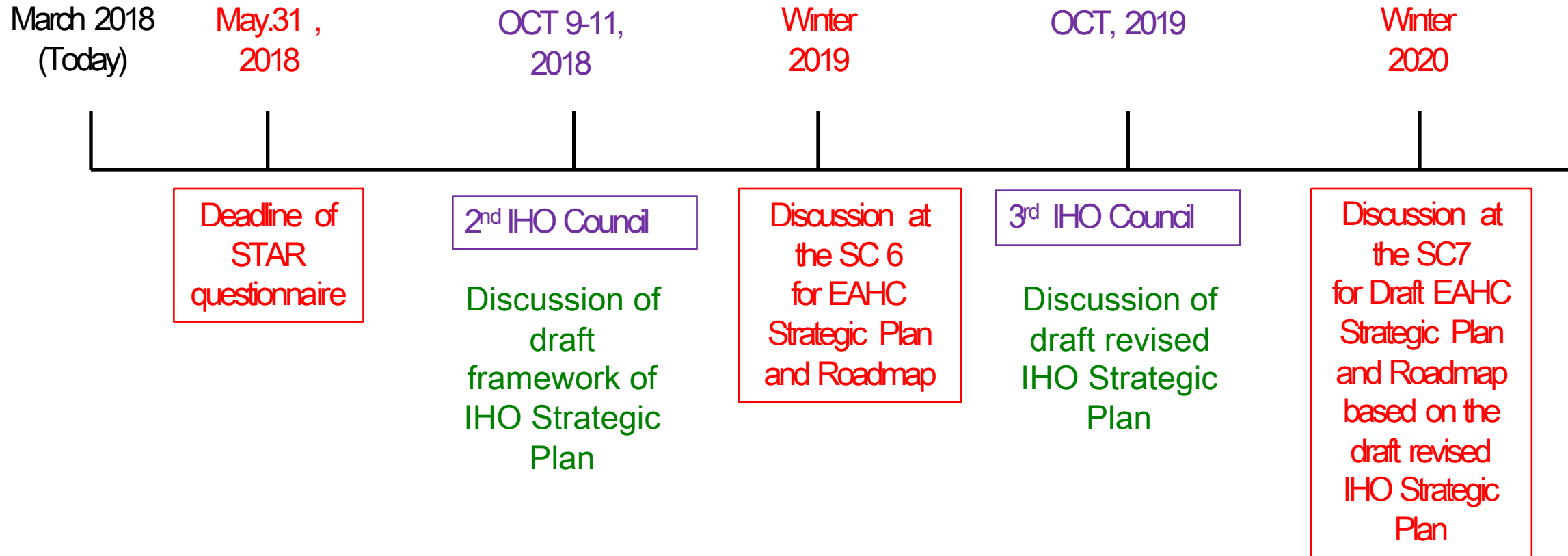
- Domestic Strategic Plan in organization
- The IHO Strategic Plan
- Current services in organization
- Future of regional cooperation
- Capabilities/Limitations
 - Autonomous Vehicles
 - MSDI system
 - SDB technology
- Training (CB) system in organization
- Potential users and stakeholders

So far, only Indonesia, Singapore and Japan replied to the questionnaires...
Still more responses would be necessary for consideration...

The SC5 is asked:

- To encourage MSs to reply the questionnaires for appropriate consideration.
- To amend the present ToRs of STAR TG along with the discussion of IHO Strategic Plans. More specifically,
 - The discussion of STAR TG should be align with that of SPRWG.
 - TG should regularly observe and consider the discussion in IHO SPRWG to avoid the duplication of argument.

Draft new timeline of STAR TG



**Thank you
for your kind attention!**

Activities of EAHC-MSDIWG

Republic of Korea

EAHC SC5
Xiamen, China
6-8 March 2018



I . Introduction

- (2015) During the 12th EAHC Conference, it was proposed to establish the East Asia Marine Spatial Data Infrastructure Working Group (EAHC-MSDIWG).
- (2016) EAHC SC3 agreed that ROK will lead the WG.
- (2017) ROK presented a draft TOR of the WG to SC4 last year which was adopted accordingly.



I . Introduction

- (2017) ROK organized the 2017 EAHC MSDI Symposium as a preparation of the WG in Seoul and the outcome was reported to EAHC MSs through a circular letter (CL13/2017).
- (2018) ROK participated in IHO MSDIWG9 in February 2018 in Brazil and reported the status and activities of the EAHC-MSDIWG.
- The IHO MSDIWG requested ROK to report EAHC activities at every meeting.



II. Status of the MSDIWG

ANNEX 1. Members of EAHC-MSDIWG

Nation	Position	Name
Republic of Korea	Chair	Mr. Jung Hyun KIM
Japan	Vice Chair	-
Republic of Korea	Member	Mr. Jun Shik LEE
Philippines	Member	Lt. Romel Correa
Indonesia	Member	Cdr. Qisthi Amarona
	Member	Lt. Andry Novianto
Japan	Member	Mr. Takeharu Miyake
Thailand	Member	Cdr. Rachot Osiri
China	Member	Mr. Dongli Sun
Brunei	Member	Mr. Abdul Malik Hj Abdul Hamid
Malaysia		-
Singapore		-
DPRK		-
Vietnam		-



II. Status of the MSDIWG

ANNEX 2. TERMS OF REFERENCE

1. Objective

- Support activities of the MSDI and Marine Spatial Data Center of the EAHC and its Member States.

2. Authority

- This Working Group is a subsidiary of the EAHC. Its work is subject to EAHC's approval.



II. Status of the MSDIWG

ANNEX 2. TERMS OF REFERENCE

3. Procedures

- The WG should:
 - a) **Monitor regional MSDI and Data Center activities and present information** on those activities to the WG members by correspondence and **at the annual meeting.**
 - b) **Promote the use of IHO standards** and Member States' marine data in SDI and Data Center activities.



II. Status of the MSDIWG

ANNEX 2. TERMS OF REFERENCE

- c) **Liaise**, as appropriate, **with IHO and EAHC Member States**, to increase the visibility and joint availability of marine spatial data.
- d) **Propose any Technical and/or Administrative Resolutions** that may be required to reflect WG's involvement in support of **MSDI**.
- e) **Identify actions and procedures** that the WG might take to contribute to the development **of MSDI** and **Data Center** in support of its members.



II. Status of the MSDIWG

ANNEX 2. TERMS OF REFERENCE

- f) **Consider MSDI policies** within the related international projects (e.g. e-navigation, S-100, marine spatial planning and Marine Strategy Framework).
- g) Identify any **EAHC capacity building requirements** on MSDI.



II. Status of the MSDIWG

ANNEX 2. TERMS OF REFERENCE

- h) **Work by correspondence** and **use meetings** or workshops only if required. When meetings are scheduled, and in order to allow any WG submissions and reports to be submitted to the EAHC Steering Committee on time, WG meetings should not normally occur later than five weeks before a meeting of the EAHC.
- i) **Submit a report annually** to the **EAHC Steering Committee** or EAHC Conference.



III. MSDI WG Activities

EAHC MSDI Symposium

When: 22 November 2017

Where: Seoul, Republic of Korea

Who: 40 participants

EAHC Chair, IHO MSDI WG Vice Chair,
ROK, Japan, Thailand, Malaysia



Agenda:

- MSDI, UN-GGIM, S-100, ARMSDIWG
- [MSDI Video Clip](#)
- 1st EAHC-MSDIWG Meeting



III. MSDIWG Activities

IHO MSDIWG9 meeting

When: 30 Jan – 1 Feb 2018

Where: Brazil

Who: 30 participants

MSs(Malaysia, Indonesia)
Expert contributors



Agenda:

- National MSDI reports of 11 countries
- ARMSDIWG activities
- e-learning
- Upload C-17 on Wikipedia



III . Plans

2018

1st EAHC-MSDIWG Meeting
in conjunction with CHC7

When: October

Where: Thailand

EAHC –

MSDI (Marine Spatial Data Infrastructure)

CHC (Charting and Hydrography Committee)

2019

IHO MSDIWG10

When: March 2019

Where: Busan, Korea

MSDIWG meeting, MSDI Open Forum

OGC (Open Geospatial Consortium) Forum



IV . Actions Required

MSs are invited to

- Update the EAHC-MSDIWG Membership list: email me at ljs7979@korea.kr
- Prepare national MSDI reports and propose agenda items for the 1st WG meeting.
- Give comments on the MSDI video clip if any.



Thank you

Jun Shik LEE

ljs7979@korea.kr

+82 51 400 4312



TECHNICAL VISIT TO CAMBODIA

3rd – 5th APRIL 2017

TECHNICAL VISIT DELEGATION

2

- Rear Admiral Dato' Fadzilah Mohd Salleh - EAHC Chairman
- Dr. Arata Sengoku - EAHC Vice Chairman
- Mr. Kenichi Noguchi - Deputy Director of Charting Division, JHOD
- Lt Cdr Ahmad Rizuan - Head of Hydrographic Division, NHC Malaysia
- Lt Fedzrin Iswandi - Hydrographic Staff, NHC Malaysia

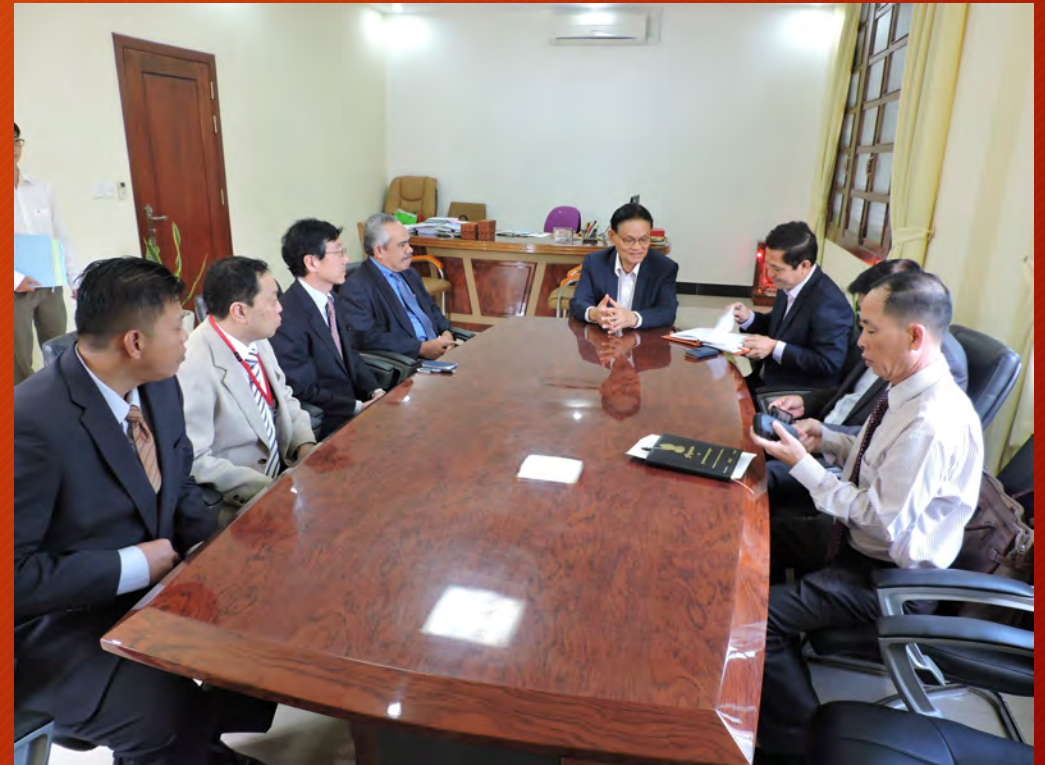
TECHNICAL VISIT PROGRAMME

3

- Meeting with Director General of Waterway Department, Ministry of Public Works and Transport
- Meeting with Phnom Penh Autonomous Port Management and site visit to wharf area
- Courtesy Call on Secretary of State, Ministry of Public Works and Transport

MINISTRY OF WORKS & TRANSPORT

4



PHNOM PENH AUTONOMOUS PORT

5



TECHNICAL VISIT SUMMARY

6

- Cambodia has 3 main international ports
- Producing 5 cells of ENC and 1 paper chart under JICA assistance
- No recognised Maritime Safety Information (MSI) infrastructure
- Cambodia has started to enhance hydrographic capabilities
 - 1 Survey Team under Waterways Department
 - 1 Survey Team under The Phnom Penh Autonomous Port

TECHNICAL VISIT SUMMARY

7

SERIAL	ACTIVITIES	REMARKS
1.	Arrival of EAHC Technical Visit Delegation from Narita and Kuala Lumpur	3 rd April 2017
2.	Meeting with Director General of Inland Waterway-Maritime Transport and Port.	4 th April 2017
3.	Visit to Phnom Penh Autonomous Port (PPAP)	
4.	Meeting with PPAP Management	
5.	Courtesy Call on Secretary of State, Ministry Public Work and Transport	5 th Apr 2017
6.	General discussion and closing remarks with Director of Waterways, Infrastructure and Port Construction Department	
7.	Departure of delegation to Narita and Kuala Lumpur	

TECHNICAL VISIT RECOMMENDATIONS

8

- Form up a National Hydrographic Authority, to be responsible for coordination and ensuring the provision of appropriate nautical charting services for Cambodia in accordance with the requirements of the International Convention on the Safety of Life at Sea (SOLAS) and in accordance with the principles established by the IHO
- Set up a Maritime Safety Information (MSI) Coordinator position is established as soon as possible to fulfil Cambodia's treaty obligations under SOLAS V/4 - *navigational warnings*
- Collaboration within government agencies, regional and international organisation and private sector to improve and strengthen hydrographic surveying and charting capabilities

THANK YOU

9



AMENDMENT OF EAHC STATUE



5th EAHC STEERING COMMITTEE MEETING
XIAMEN, CHINA

BACKGROUND

2

- The Statues of EAHC has been published in Tokyo, 12 April 1971 and were signed by China, Indonesia, Japan, Republic of Korea (ROK), Philippines and Thailand
- A few amendments have taken place and the last amendment was during the 3rd Conference at Seoul, 5 September 1980
- There was no amendment for the past 37 years

EAHC STATUTE

3

ARTICLE I NATURE AND PURPOSE

1. The East Asia Hydrographic Commission (hereinafter referred to as "the Commission") shall be placed within the framework of the International Hydrographic Organization (hereinafter referred to as "the IHO"), and shall be a regional hydrographic commission which shall be composed of the Hydrographers of the countries bordering the Northwest Pacific Ocean, Japan Sea, Yellow Sea, Eastern China Sea, South China Sea, Philippine Sea, Malacca Strait, Northeastern Indian Ocean and adjacent waters (hereinafter referred to as "the region") in conformity with the Resolution S9 of the Ninth International Hydrographic Conference.
2. The Commission shall not endeavour to become a separate group within, or duplicate the work of, the IHO.

ARTICLE II MEMBERSHIP

1. The Commission shall be composed of the Hydrographers of the Member States of the IHO in the region and who accept these Statutes (hereinafter referred to as "the Members").
2. Membership of the Commission shall be open for accession by all other Hydrographers who fulfill the requirements mentioned in paragraph 1 of this Article. The admission of the new Members to the Commission shall be decided unanimously by the members.

ARTICLE VII VOTING

1. Conclusions shall be arrived at by unanimous agreement of the Conference. Such conclusions, unanimously agreed, shall be part of the Record of the Conference.
2. Only the Members or their representatives shall be allowed to vote. Each shall have one vote.

1

NEW MECHANISM FOR
ADMISSION

2

IMPROVE VOTING
METHOD

PROPOSAL 1 -MEMBERSHIP

4

Option 1: Automatic Admission

Since, EAHC is a part of Regional Hydrographic Commission, this option suggest a new members in this region will automatically accepted as EAHC member states once approved to join the IHO

Option 2 - Admission by Majority

This option suggest the new admission of the new members shall be decided by members vote. In order to determine the majority, the majority shall be interpreted as meaning two-thirds of the MSs.

PROPOSAL 2 -VOTING

5

The IHO implement two-thirds majority voting procedures as mentioned in the Convention, therefore, this proposal suggest the MSs shall practice the majority vote instead of unanimously agreed. The majority shall be interpreted as meaning two-thirds of the MSs. In case of absence, the vote shall apply through correspondence vote

ARTICLE VII VOTING

1. Conclusions shall be arrived at by unanimous agreement of the Conference. Such conclusions, unanimously agreed, shall be part of the Record of the Conference.
2. Only the Members or their representatives shall be allowed to vote. Each shall have one vote.



THANK YOU

CONCEPT OF CONFERENCE

National Hydrographic Centre
Malaysia

CONCEPT OF CONFERENCE

2

- According to paragraph 2 in Article III (Conference) of EAHC Statues:

'The time of the Conference shall be decided upon by the Chairman after consultation with the Members. The Conference shall be held in the country to which the Chairman belongs.'

- Normal practices, same presentation/report presented during the conference and become redundancy.

RECOMMENDATIONS

3

- Paper presentations from the MSs during EAHC Conference.
- Presentation to hydrographic community.
- Hydrographic South East Asia (HydroSEA) Conference and Exhibition 2018 will be arranged in conjunction with For 13th EAHC Conference in Putrajaya to gather more hydrographic community.

13th EAHC CONFERENCE

4

- Date: 18-20 September 2018
- Venue: Marina Putrajaya
- Hydrographic South East Asia (HydroSEA) Conference & Exhibition 2018
- Collaboration between Malaysia NHC and Malaysia Hydrographic Society (MyHS)



13th EAHC CONFERENCE

5

Date	Activities	Remarks
17 Sep	Arrival of Delegations	Kuala Lumpur International Airport
18 Sep	13 th EAHC Conference	Putrajaya
19 Sep	<ul style="list-style-type: none">• 13th EAHC Conference• Hydrographic South East Asia (HydroSEA) Conference & Exhibition 2018	Putrajaya
20 Sep	<ul style="list-style-type: none">• 13th EAHC Conference• Hydrographic South East Asia (HydroSEA) Conference & Exhibition 2018• EAHC Chairman Handing Over Ceremony	Putrajaya
21 Sep	Departure of Delegations	Kuala Lumpur International Airport

THANK YOU

6





5TH EAHC STEERING COMMITTEE MEETING(EAHC-SC)

Emergency Hydrographic Survey After Disaster in China

Zhu Chao

**MSA of Ministry of Transport of China
6-8 March, 2018**



Contents

- **Emergency Hydrographic Survey**
- **Cases of Emergency Survey**
- **Summary of Experience**
- **Recommendations**



Emergency Hydrographic Survey

- Emergency hydrographic survey occurs mainly because of natural disaster and some maritime safety accidents.
- Emergency hydrographic survey has its own characteristics of complexity, diversity and regionality.
- Demand the most effective technical means for obtaining channel depth, the location, attitude, and most shallow depth of obstacles, and some other information in the shortest time.





Cases of Emergency Survey

- Caused by Natural Disaster, e.g. emergency survey for shipwrecks after typhoon, survey for deepwater channel due to waterdepth sudden drawdown ...
- Caused by Maritime Safety Accidents, e.g. search for wreckage airplane, survey for fallen containers, survey for ship collision ...





Case 1: Emergency survey for shipwreck after the super strong typhoon saomai in Shacheng port of Fujian in 2006

Huge disaster happened: hundreds of ships sunk, blockade the port.

◆ Numerous

◆ Variety types



Kinds of survey equipment

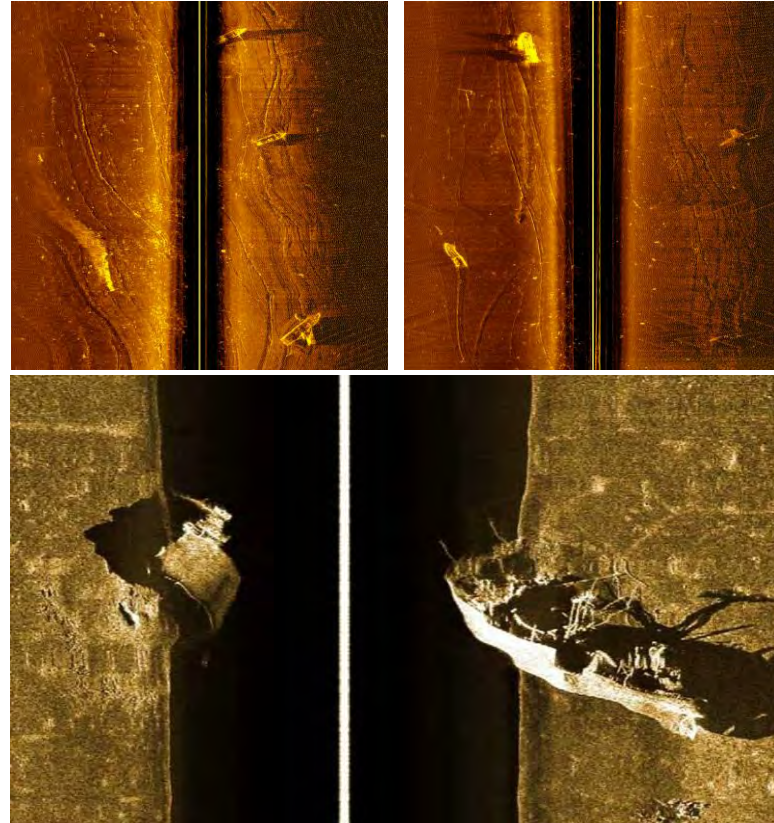
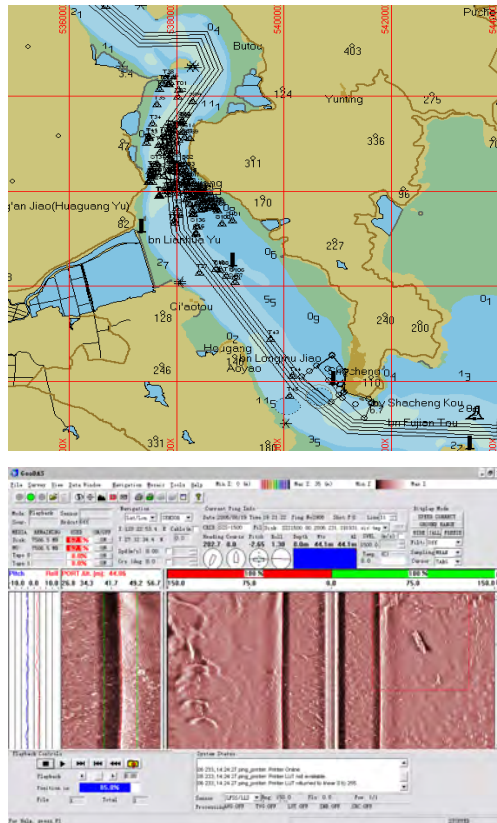


Cases of Emergency Survey



Case 1: Emergency survey for shipwreck after the super strong typhoon saomai in Shacheng port of Fujian in 2006

Use a variety of technical means to complete shipwreck survey





Case 2: Depth monitoring of Deepwater Channel which sudden silting caused by typhoon/ strong wind weather

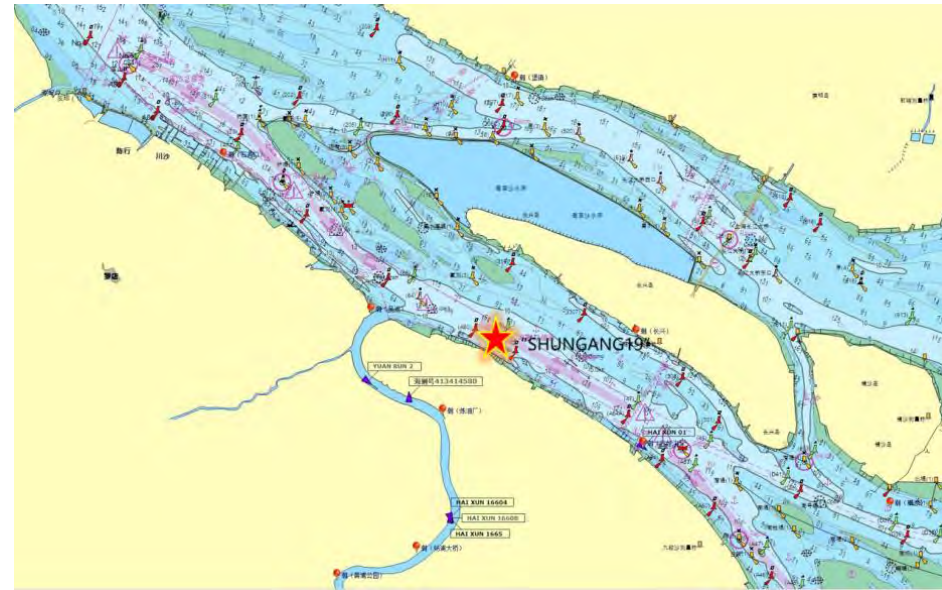
Ensure the safety of navigation in important channel.





Case 3: Containers search for “SHUNGANG19” in 2017

A ship “SHUNGANG19” encountered an accident and about 30 containers fell into the channel.





Case 3: Container search for “SHUNGANG19” in 2017

Judgment of container dynamics and search them rapidly

- Information about the container
- Wind direction
- Tidal current during that time

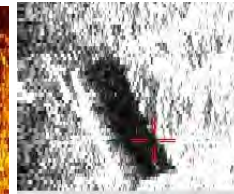
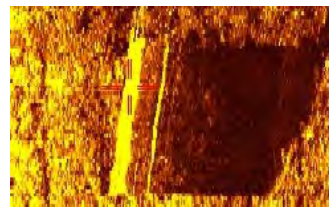
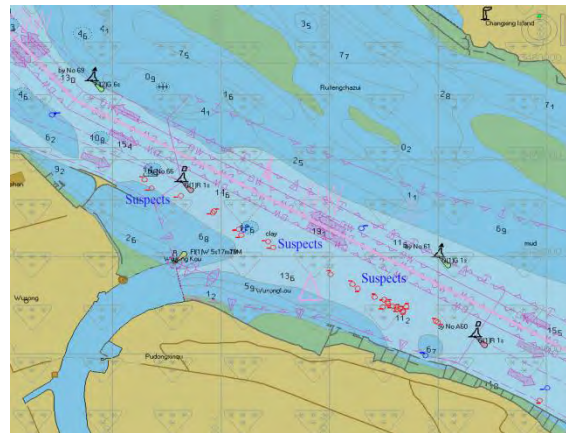
Main channel



Auxiliary channel



The anchorage



During the 29 containers that have been salvaged , there were 26 containers in the vicinity of our survey results .



Case 4: Emergency survey of “Sanchi” oil tanker in 2018

Use Multi-beam Sounding system to survey

- ◆ Deep water multi-beam sounding system
EM302
- ◆ Shallow water multi-beam sounding system
EM2040
- ◆ Side scan sonar (Klein 5000 v2)



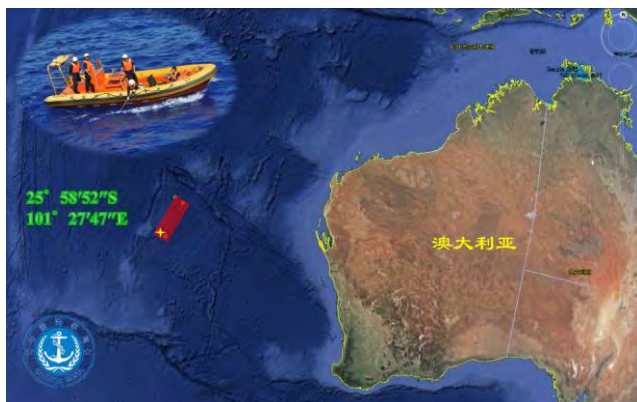


Case 4: Emergency survey of “Sanchi” oil tanker in 2018





Case 5: “MH370” search in 2014

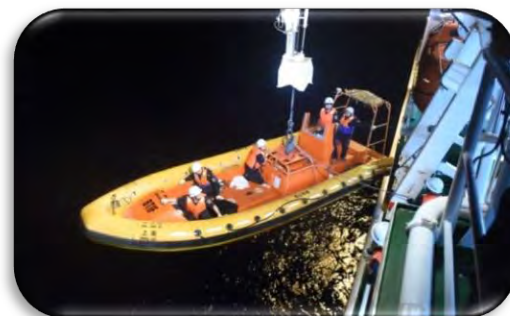


■ Across 66 latitude

■ 157 days

■ Nearly 15, 000 nautical miles

■ Search 245, 000 square kilometers



Summary of Experience



1. Emergency survey need timely respond.

- ◆ Organization
- ◆ Professional hydrographic teams
- ◆ Emergency Plan





2. Emergency survey need equipment and technology.

◆ Equipment



✓ Professional Survey Ship



The largest survey ship “HAIXUN 166”

Summary of Experience



2. Emergency survey need equipment and technology.

◆ Equipment



Side Scan Sonar
(L-3 Klein 5000 V2)



EdgeTech Stainless Steel Towfish

Side Scan Sonar
(EdgeTech 4200-MP)



Positioning equipment
(Trimble SPS852)



Fixed-point Scanning Sonar
(Kongsberg MS1000)



Dual frequency Recognition Sonar
(DIDSON)



Black Box search Instrument
(Benthos DPL-275XS Pinger)



ROV
(Argus Rover MkII)



Unmanned survey ship



2. Emergency survey need equipment and technology.

◆ Technology

First , Collect relevant information

- Navigation track in AIS
- The chart
- Wind speed
- The velocity and direction of flow
- The attributes of the sunken ship,etc



2. Emergency survey need equipment and technology.

◆ Technology

- To survey the silt after strong wind : use the **double-frequency sounder**
- To find the obstructing object or sunken dangerous goods:
use side scan sonar
- To obtain the shallowest water depth: **use full covered multi-beam survey**
- To search the crashed aircraft : **use Black Box search Instrument**



3. Targeted plans for different tasks.

4. Emergency survey should be coordinated by different departments (organizations) .

- **Domestic departments (Organizations)**
- **International /Regional organizations**



Recommendations

- ◆ **Focus on summary of Emergency Survey experience for the diversity of disasters and accidents.**
- ◆ **Technical Communication & Cooperation among members should be strengthened under the frame of IHO/EAHC.**



THANK YOU!





Application Of Hydrographic Database In China MSA

**Maritime Safety Administration of Ministry of Transport
China**

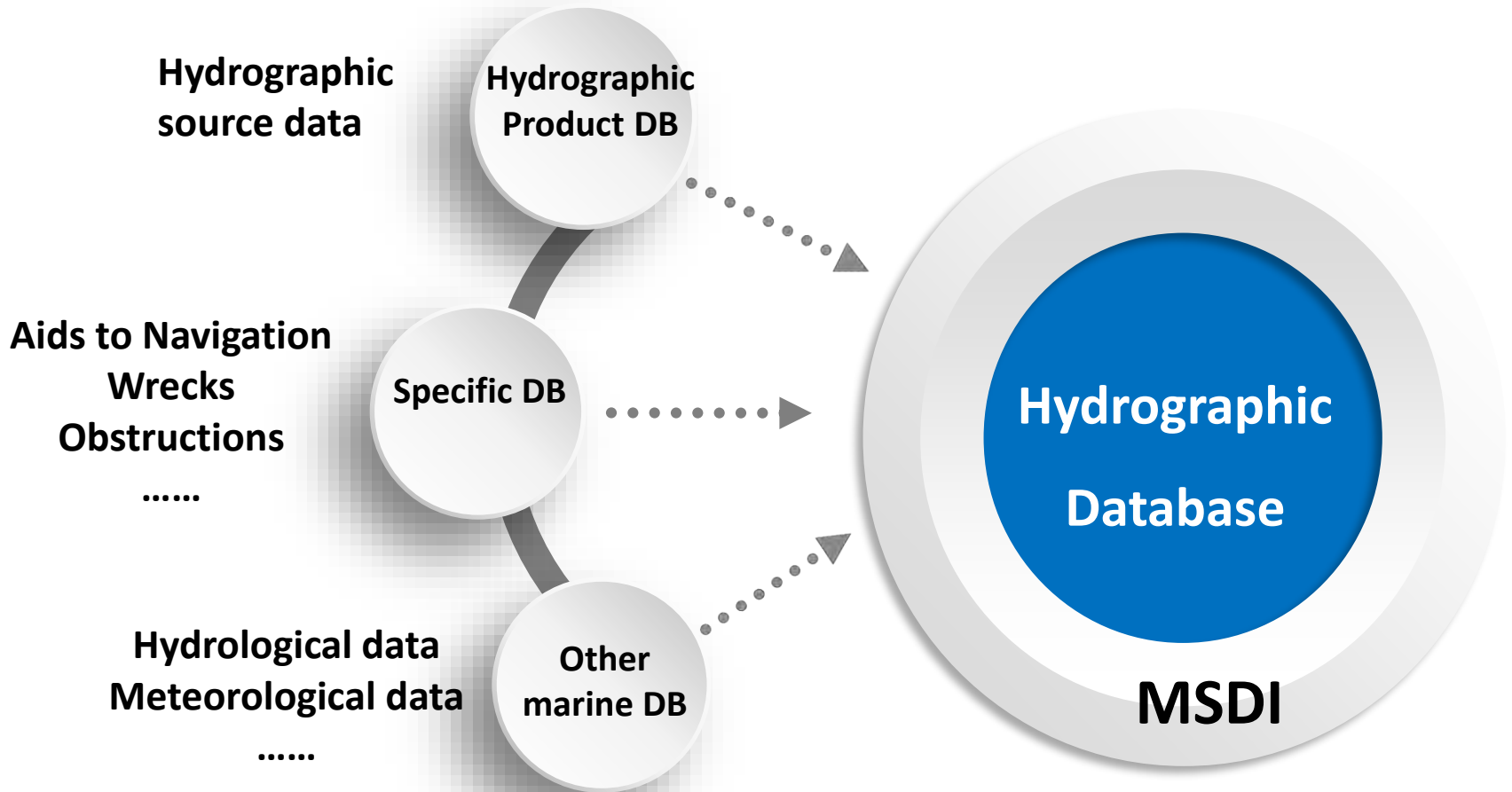


Outline

- ◆ Multi-source Database
- ◆ Application of Database
- ◆ Research situation of s-100 series standard
- ◆ Recommendation



Multi-source Databases





Hydrographic Product Database

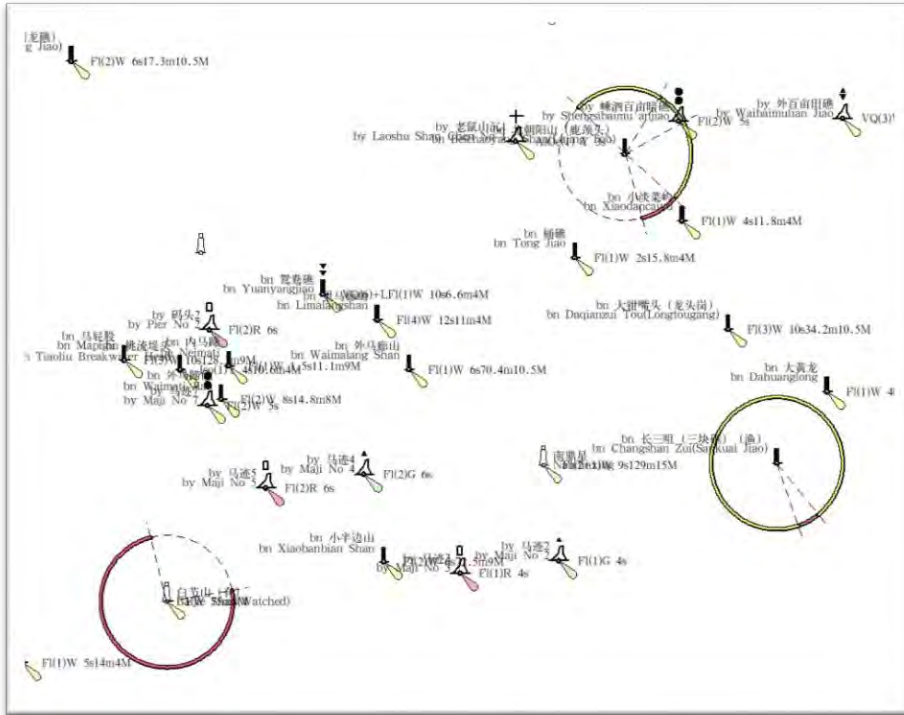
- » Hydrographic source data covering the waters surrounding China
- » feature has multiple representations on different usages



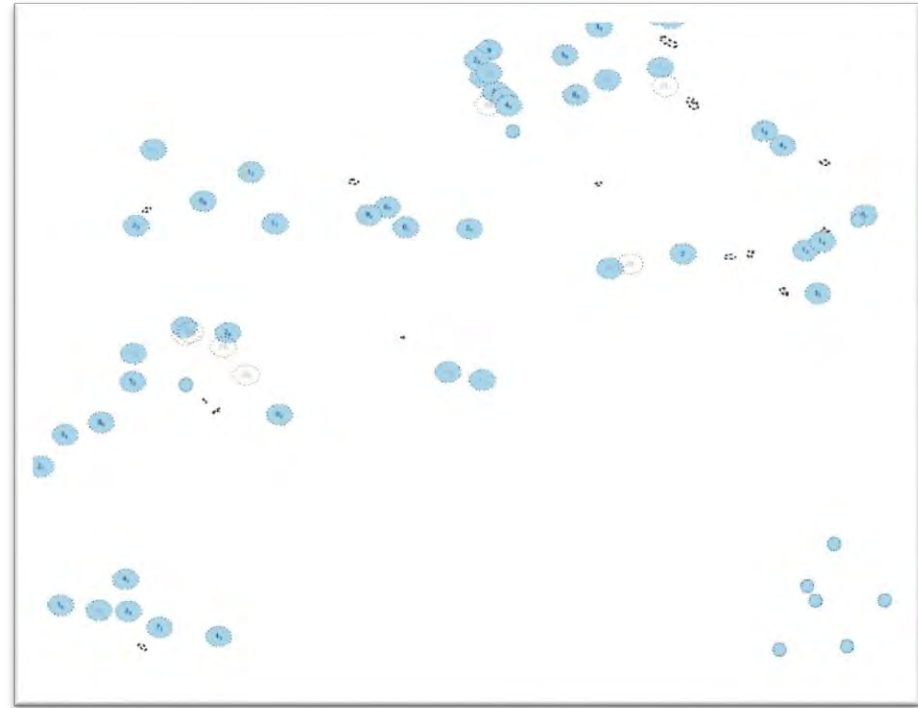
Usage Name	Scale Band
CN Harbour1	1~1:7,999
CN Harbour2	1:8,000~1:21,999
CN Approach1	1:22,000~1:44,999
CN Approach2	1:45,000~1:89,999
CN Coastal1	1:90,000~1: 199,999
CN Coastal2	1:200,000~1:499,999
CN General1	1:500,000~1:999,999
CN General2	1:1,000,000~1:2,999,999
CN Overview1	1:3,000,000~1:6,999,999
CN Overview2	1:7,000,000~1:100,000,000



Specific Database



Aids of Lights



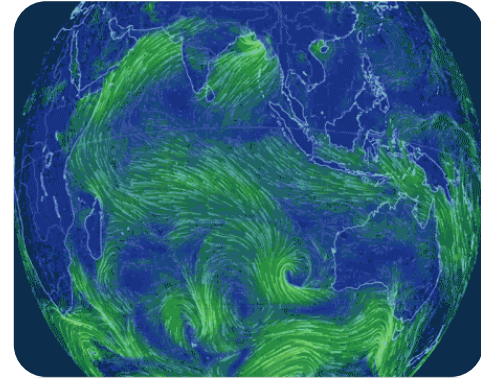
Obstructions



Other Marine Databases



Oceanographic data



Current



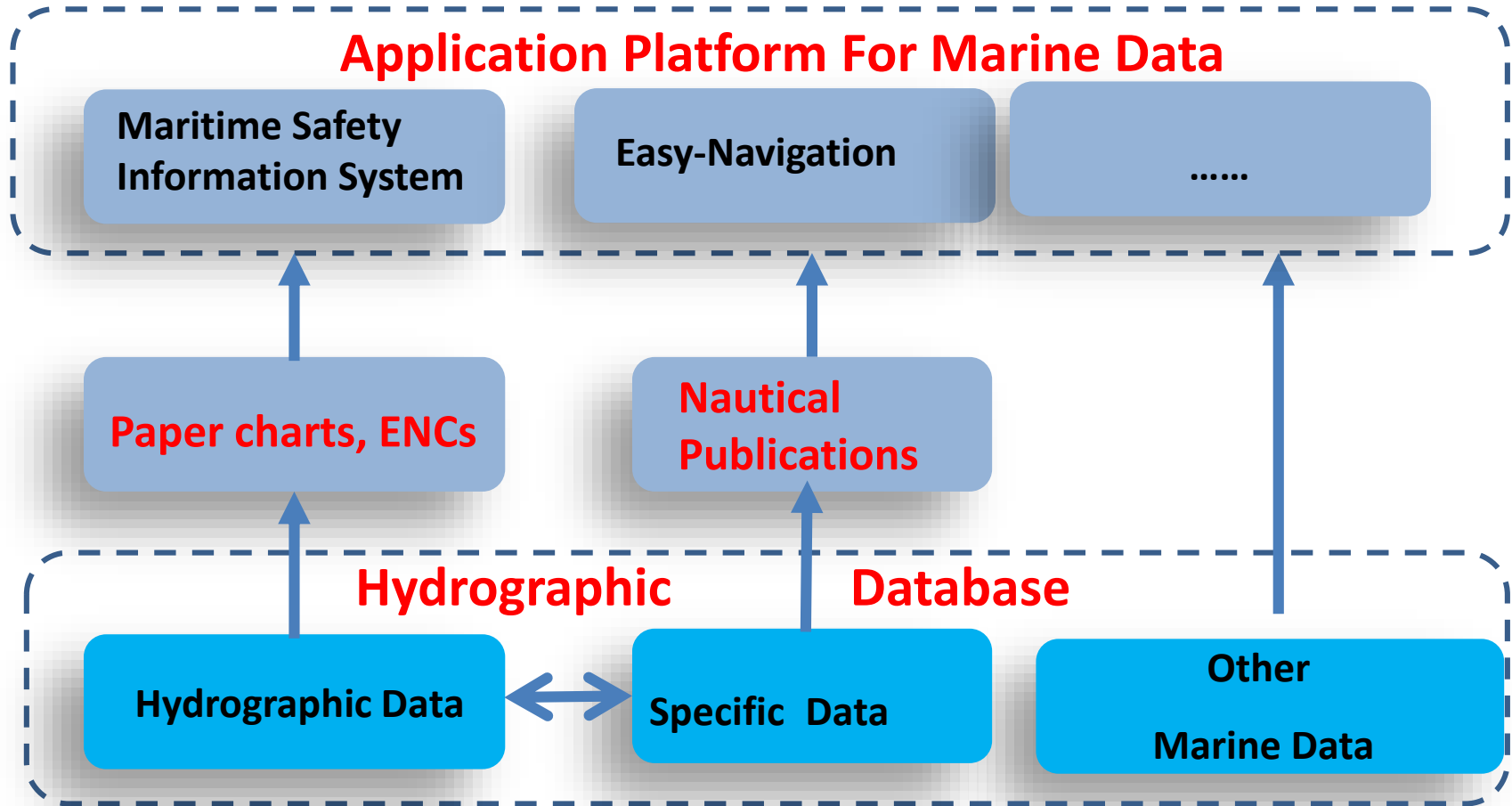
Fishing area



AIS



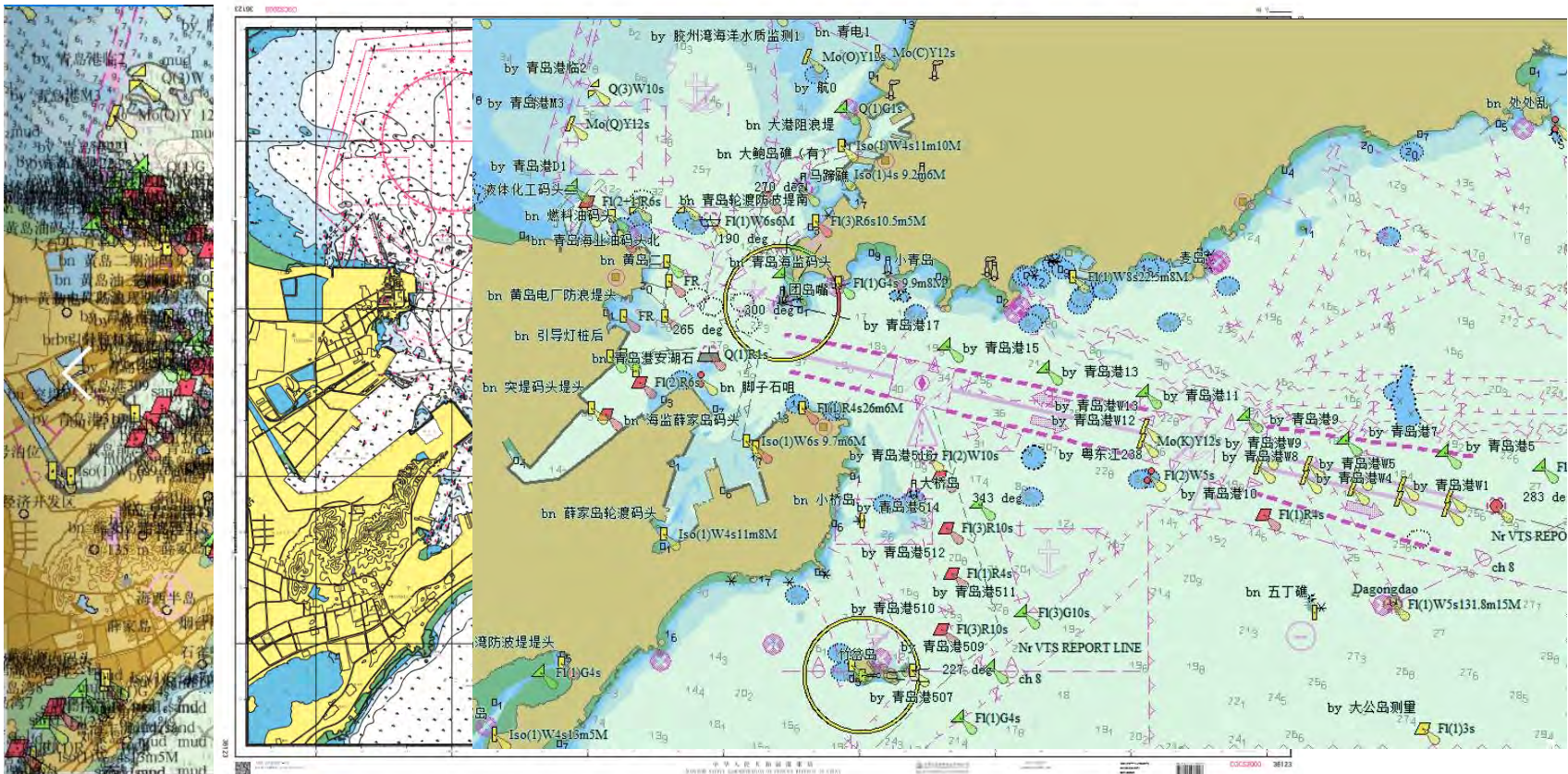
Application





Production of Paper Charts and ENCs homologously and synchronously

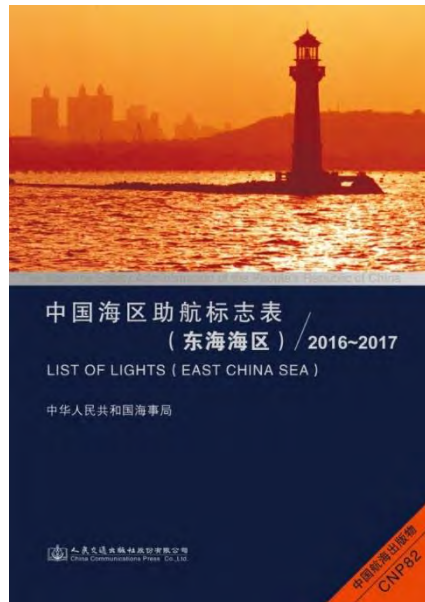
- » improve the efficiency and enhance the consistency
- » produce about 300 paper charts and ENCs annually

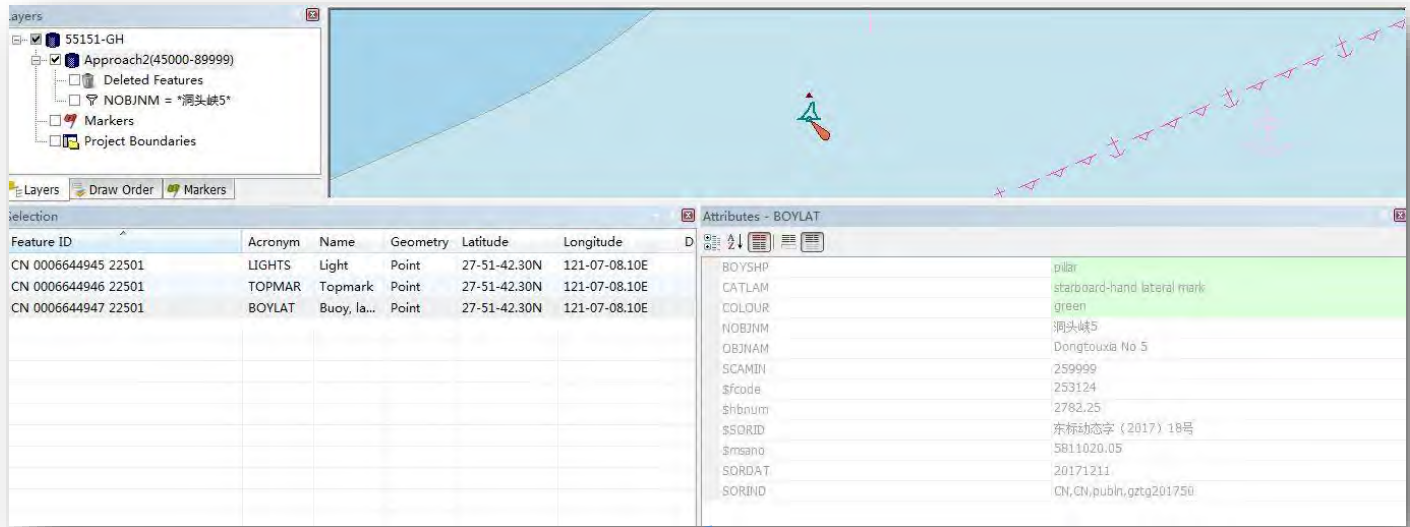




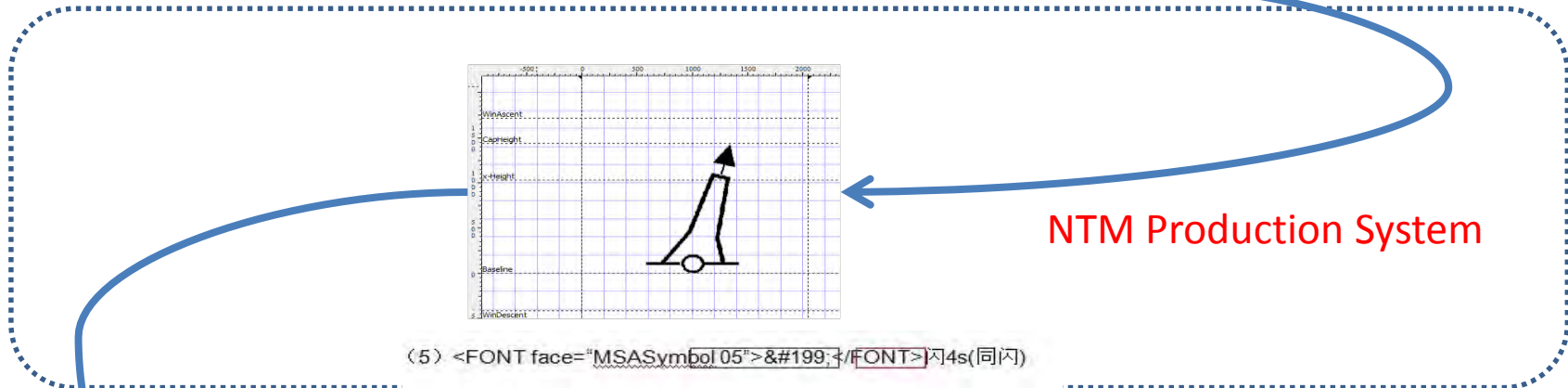
Production of Nautical Publications Automatically

- » Notice To Mariners
- » List of lights
- » List of Wrecks and Obstructions
- »






Date in HPD



NTM Production System

(5) Ç闪4s(同闪)

2) Insert the aids in the following position:

Name	Position	Characteristic	Correction Item
(22)洞头峡5号灯浮标	27°51'42".3N,121°07'08".1E	(5)  闪绿4s(同闪)	



Maritime Safety Information System

- **Overview**

A web GIS platform

- **Background**

Server for government management and decision-making

- **Technology**

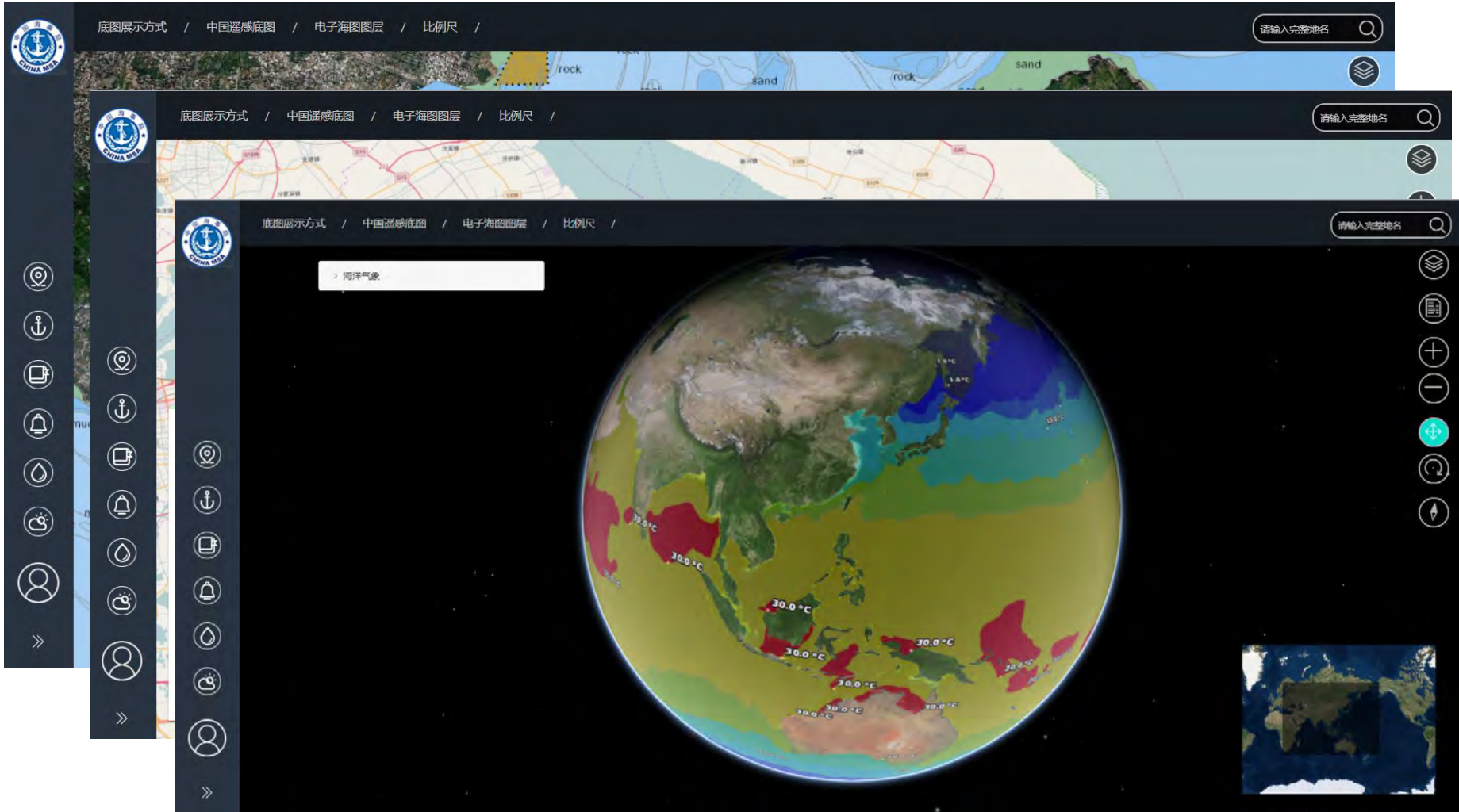
Marine big data

- » distributed storage and management
- » data mining,
- » rapid visualization
- »



• Functions

Overlapping Display



Search of Guideline to Navigation

The screenshot displays a maritime navigation application interface. At the top, there is a search bar with the placeholder text "请输入完整地名" (Please enter the full name). Below the search bar, a satellite map of the East China Sea is visible. A search result window is open, displaying the following content:

中国沿海航行指南（东海海区）

1. 航路概况

1.1 总图（海事局海图：2307/2308/2308/2309/2311/2312）

1.1.1 航路区域：北起江苏连云港南至福建东山的南黄海
需要特别说明的是，台湾作为中国的一个省，由于历史原因，目前台湾水域实际由台湾各行政主管部门主要负责，其航行规则需及时按照台湾相关部门的公告做及时更新，在此我们仅作简要介绍。

1.1.2 海事局海图（见附表）

1.1.3 海图水深基准面

The interface also includes a sidebar with various navigation icons and a top navigation bar with menu options: "底图展示方式" (Map display mode), "中国遥感底图" (China remote sensing map), "电子海图图层" (Electronic chart layer), and "比例尺" (Scale).

Enquiry of Weather Information

底图展示方式 / 中国遥感底图 / 电子海图图层 / 比例尺 /

请输入完整地名

近海海区——东海

近海海区天气预报8时

来源：交通运输部 沿海气象预警 2017-08-03

近海海区	预报时效(小时)	天气现象	风向	风力(级)	浪高(m)	能见度(km)
东海北部	00-12	小雨	东北	5-6	3.5	10
	12-24	小雨	东北	6-7	5.3	10
	24-36	多云	东北	8-9	8.3	15
	36-48	小雨	东北	13-14	13.0	10
	48-60	多云	旋转风	13-14	13.3	15
	60-72	暴雨	旋转风	13-14	14.4	3
东海南部	00-12	小雨	北	4-5	2.3	10
	12-24	小雨	西北	5-6	2.7	10
	24-36	小雨	西北	7-8	5.4	10
	36-48	阴	西	9-10	10.9	12

缩放至

- Applied areas
 - » Water security
 - » Emergency relief
 - »





Easy-Navigation

- **Overview**

An ENC application App used on mobile terminal

- **Background**

Server for safe navigation of small vessels

- **Technology**

- » process of big data

- » Cloud computing

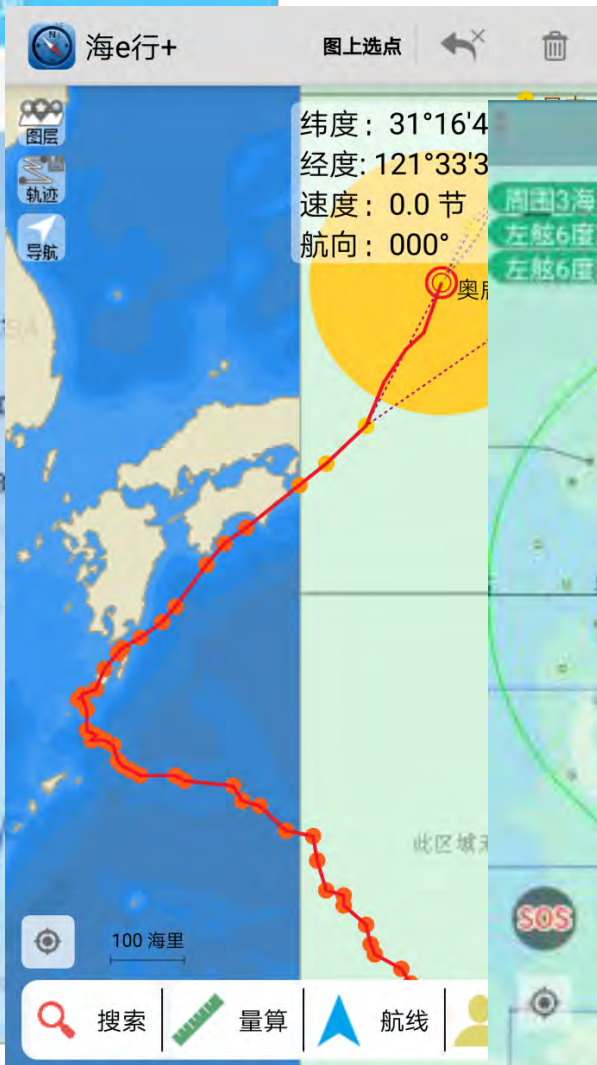
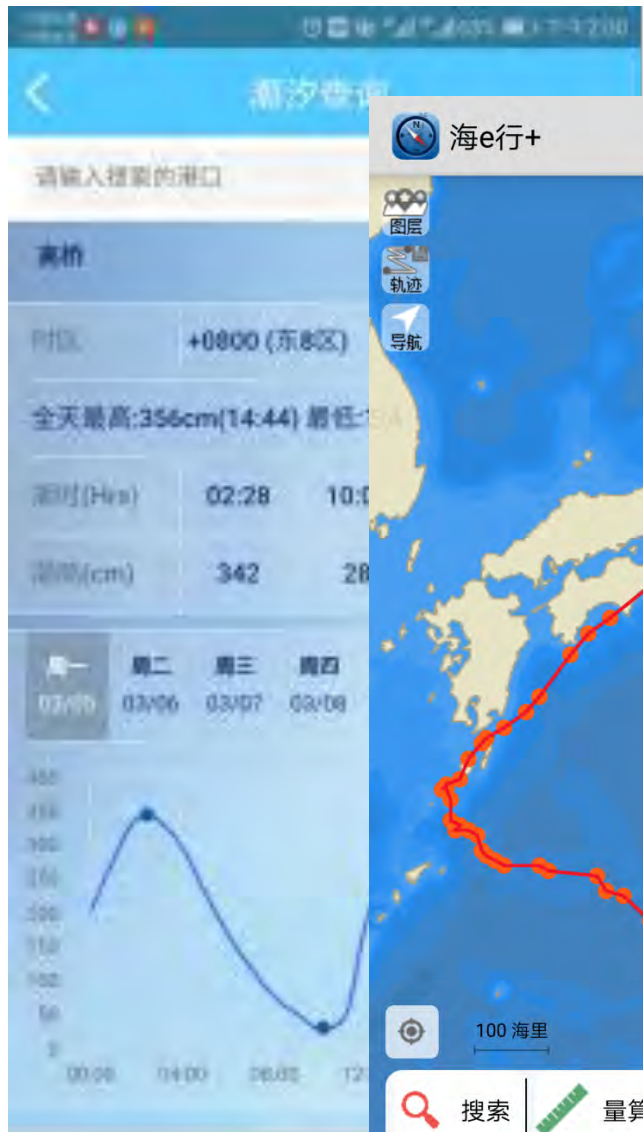


- **Functions**

- » Use ENC's online or offline



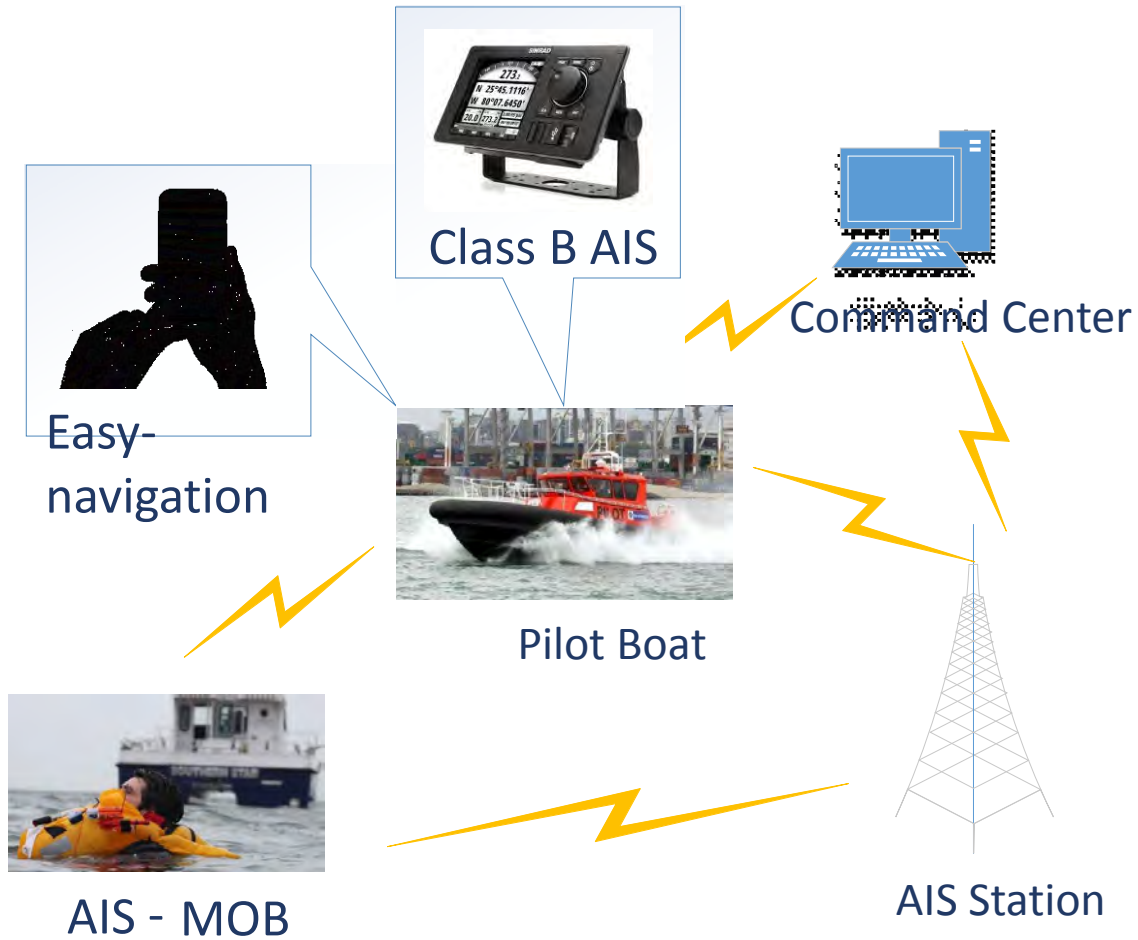
Offline package tool



- Applied areas
 - » Ship navigation
 - » Maritime law enforcement
 - » Rescue work



Easy- Navigation + AIS-MOB

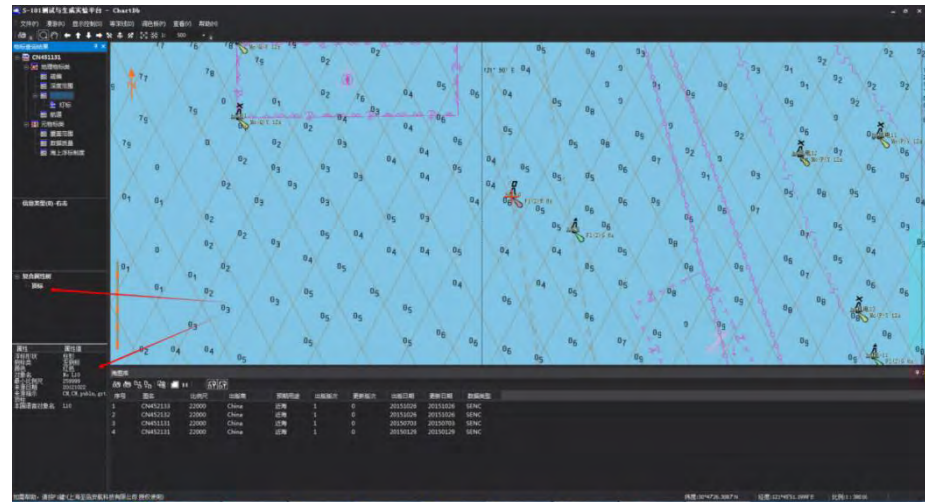


Man overboard rescue



Research situation of s-100 series standard

- Research contents
 - » basic tracking and research of the s-100 series
 - » S-101 ENC production and test platform
 - » research of the S-100 Interoperability
 - » And so on



Data converter from S-57 To S-100



Recommendation

- To enhance the communication and cooperation between member states



THANK YOU!

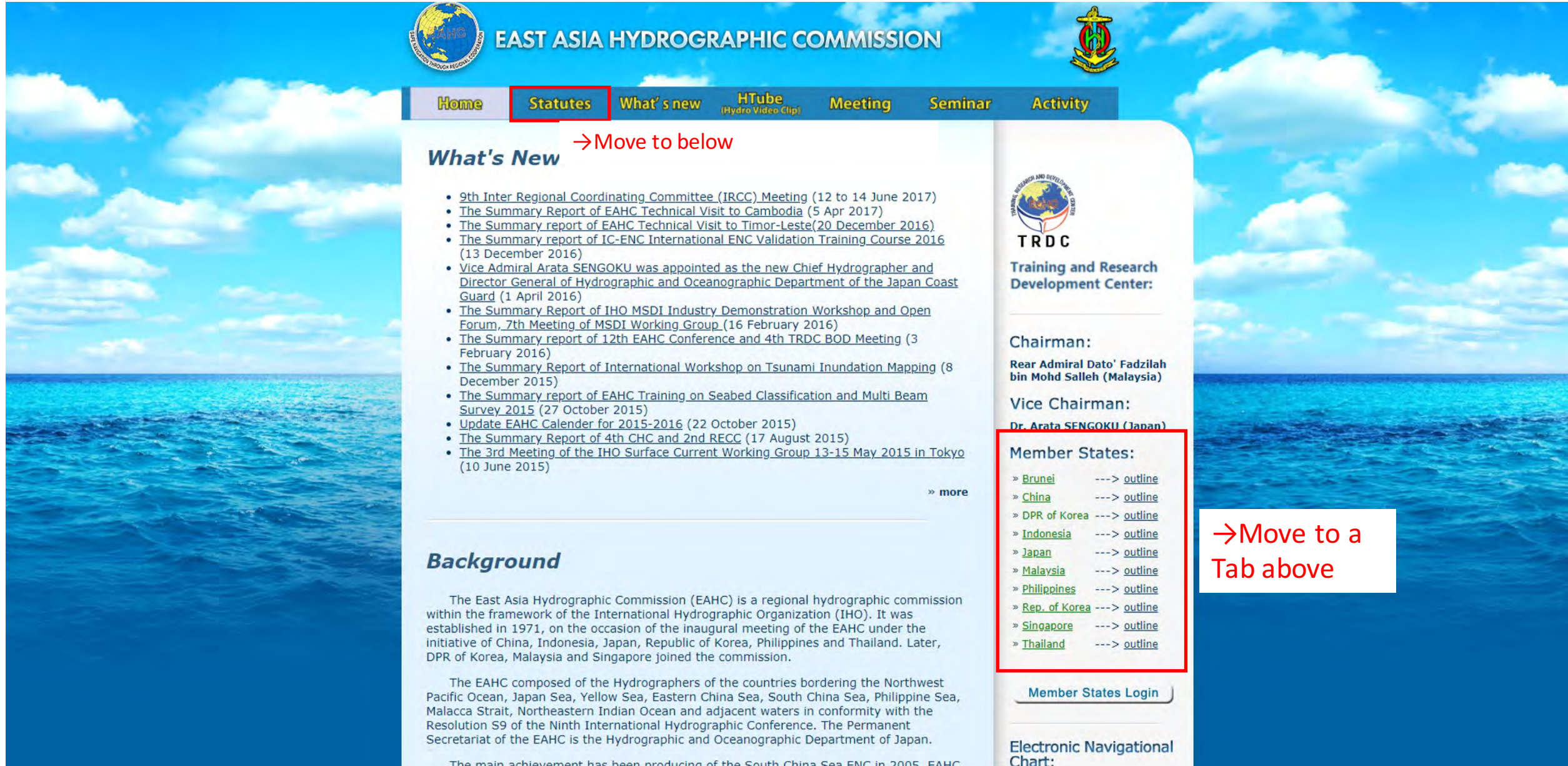


Draft webpage for EAHC member states information

EAHC-SC5 (March 2018, China)

Permanent Secretariat, JHOD

Present EAHC webpage –top page-



[Home](#)

[Statutes](#)

[What's new](#)

[HTube](#)
(Hydro Video Clip)

[Meeting](#)

[Seminar](#)

[Activity](#)

What's New

→ Move to below

- [9th Inter Regional Coordinating Committee \(IRCC\) Meeting](#) (12 to 14 June 2017)
- [The Summary Report of EAHC Technical Visit to Cambodia](#) (5 Apr 2017)
- [The Summary report of EAHC Technical Visit to Timor-Leste](#)(20 December 2016)
- [The Summary report of IC-ENC International ENC Validation Training Course 2016](#) (13 December 2016)
- [Vice Admiral Arata SENGOKU was appointed as the new Chief Hydrographer and Director General of Hydrographic and Oceanographic Department of the Japan Coast Guard](#) (1 April 2016)
- [The Summary Report of IHO MSDI Industry Demonstration Workshop and Open Forum, 7th Meeting of MSDI Working Group](#) (16 February 2016)
- [The Summary report of 12th EAHC Conference and 4th TRDC BOD Meeting](#) (3 February 2016)
- [The Summary Report of International Workshop on Tsunami Inundation Mapping](#) (8 December 2015)
- [The Summary report of EAHC Training on Seabed Classification and Multi Beam Survey 2015](#) (27 October 2015)
- [Update EAHC Calender for 2015-2016](#) (22 October 2015)
- [The Summary Report of 4th CHC and 2nd RECC](#) (17 August 2015)
- [The 3rd Meeting of the IHO Surface Current Working Group 13-15 May 2015 in Tokyo](#) (10 June 2015)

» more

Background

The East Asia Hydrographic Commission (EAHC) is a regional hydrographic commission within the framework of the International Hydrographic Organization (IHO). It was established in 1971, on the occasion of the inaugural meeting of the EAHC under the initiative of China, Indonesia, Japan, Republic of Korea, Philippines and Thailand. Later, DPR of Korea, Malaysia and Singapore joined the commission.

The EAHC composed of the Hydrographers of the countries bordering the Northwest Pacific Ocean, Japan Sea, Yellow Sea, Eastern China Sea, South China Sea, Philippine Sea, Malacca Strait, Northeastern Indian Ocean and adjacent waters in conformity with the Resolution S9 of the Ninth International Hydrographic Conference. The Permanent Secretariat of the EAHC is the Hydrographic and Oceanographic Department of Japan.

The main achievement has been producing of the South China Sea ENC in 2005. EAHC



TRDC

Training and Research
Development Center:

Chairman:

Rear Admiral Dato' Fadzilah
bin Mohd Salleh (Malaysia)

Vice Chairman:

Dr. Arata SENGOKU (Japan)

Member States:

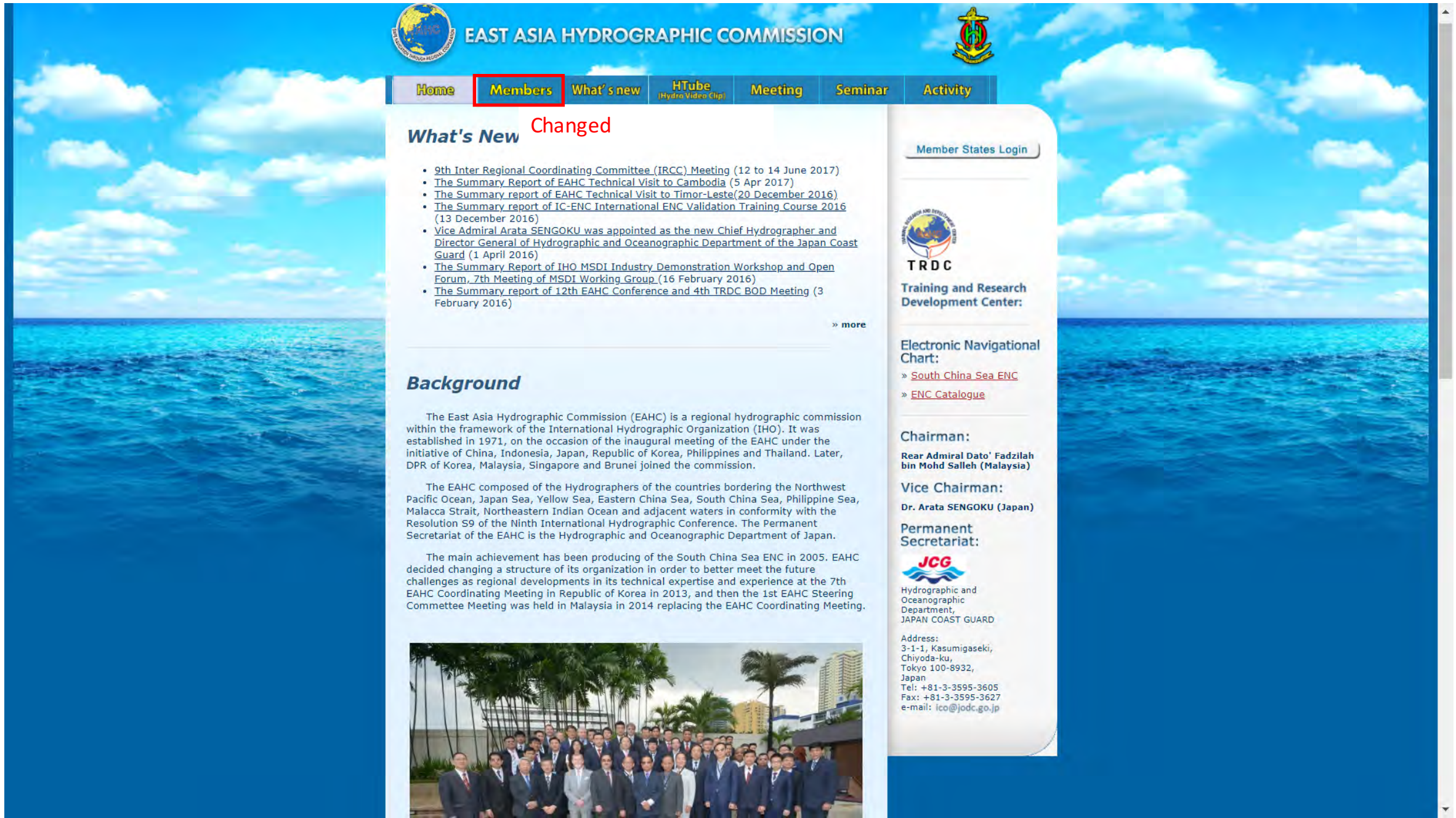
- » [Brunei](#) ---> [outline](#)
- » [China](#) ---> [outline](#)
- » [DPR of Korea](#) ---> [outline](#)
- » [Indonesia](#) ---> [outline](#)
- » [Japan](#) ---> [outline](#)
- » [Malaysia](#) ---> [outline](#)
- » [Philippines](#) ---> [outline](#)
- » [Rep. of Korea](#) ---> [outline](#)
- » [Singapore](#) ---> [outline](#)
- » [Thailand](#) ---> [outline](#)

[Member States Login](#)

Electronic Navigational
Chart:

→ Move to a
Tab above

Draft new EAHC webpage -top page-



The image shows a draft of the East Asia Hydrographic Commission (EAHC) website. The background is a blue sky with white clouds and a blue ocean. The website header features the EAHC logo on the left, the text "EAST ASIA HYDROGRAPHIC COMMISSION" in the center, and a crest on the right. A navigation menu includes "Home", "Members" (highlighted with a red box), "What's new", "HTube (Hydro Video Clip)", "Meeting", "Seminar", and "Activity". The main content area is titled "What's New Changed" and lists several recent events. A "Background" section provides information about the commission's history and structure. A group photo of the commission members is shown at the bottom. On the right side, there is a "Member States Login" button, the TRDC logo, and contact information for the Training and Research Development Center, including the Chairman, Vice Chairman, and Permanent Secretariat.

EAST ASIA HYDROGRAPHIC COMMISSION

[Home](#) [Members](#) [What's new](#) [HTube \(Hydro Video Clip\)](#) [Meeting](#) [Seminar](#) [Activity](#)

What's New Changed

- [9th Inter Regional Coordinating Committee \(IRCC\) Meeting](#) (12 to 14 June 2017)
- [The Summary Report of EAHC Technical Visit to Cambodia](#) (5 Apr 2017)
- [The Summary report of EAHC Technical Visit to Timor-Leste\(20 December 2016\)](#)
- [The Summary report of IC-ENC International ENC Validation Training Course 2016](#) (13 December 2016)
- [Vice Admiral Arata SENGOKU was appointed as the new Chief Hydrographer and Director General of Hydrographic and Oceanographic Department of the Japan Coast Guard](#) (1 April 2016)
- [The Summary Report of IHO MSDI Industry Demonstration Workshop and Open Forum, 7th Meeting of MSDI Working Group](#) (16 February 2016)
- [The Summary report of 12th EAHC Conference and 4th TRDC BOD Meeting](#) (3 February 2016)


» more

Background


The East Asia Hydrographic Commission (EAHC) is a regional hydrographic commission within the framework of the International Hydrographic Organization (IHO). It was established in 1971, on the occasion of the inaugural meeting of the EAHC under the initiative of China, Indonesia, Japan, Republic of Korea, Philippines and Thailand. Later, DPR of Korea, Malaysia, Singapore and Brunei joined the commission.

The EAHC composed of the Hydrographers of the countries bordering the Northwest Pacific Ocean, Japan Sea, Yellow Sea, Eastern China Sea, South China Sea, Philippine Sea, Malacca Strait, Northeastern Indian Ocean and adjacent waters in conformity with the Resolution S9 of the Ninth International Hydrographic Conference. The Permanent Secretariat of the EAHC is the Hydrographic and Oceanographic Department of Japan.

The main achievement has been producing of the South China Sea ENC in 2005. EAHC decided changing a structure of its organization in order to better meet the future challenges as regional developments in its technical expertise and experience at the 7th EAHC Coordinating Meeting in Republic of Korea in 2013, and then the 1st EAHC Steering Committee Meeting was held in Malaysia in 2014 replacing the EAHC Coordinating Meeting.



Member States Login



TRDC
Training and Research
Development Center:


Electronic Navigational Chart:

- » [South China Sea ENC](#)
- » [ENC Catalogue](#)

Chairman:
Rear Admiral Dato' Fadzilah bin Mohd Salleh (Malaysia)

Vice Chairman:
Dr. Arata SENGOKU (Japan)

Permanent Secretariat:



Hydrographic and
Oceanographic
Department,
JAPAN COAST GUARD

Address:
3-1-1, Kasumigaseki,
Chiyoda-ku,
Tokyo 100-8932,
Japan
Tel: +81-3-3595-3605
Fax: +81-3-3595-3627
e-mail: ico@jodc.go.jp

Draft new EAHC webpage -top page-



Purpose

The purpose of the EAHC are:

- To coordinate the activities of national hydrographic offices in the region without influencing the internal affairs of the respective hydrographic offices or diminishing their national responsibilities.
- To facilitate the mutual exchange of information regarding surveys, research, new developments and technical details related to hydrography.
- To encourage mutual assistance for the development of techniques in hydrographic work.
- To work out regional cooperative programmes in hydrographic work. Such regional cooperative programmes shall be subject to approval of the Government of the member concerned.

EAHC Statutes

- [Active Statutes \(Last Amendment: September 1980\)](#)
- [Original Statutes \(April 1971\)](#)

EAHC Statutes was moved to here

Organizational Structure

The present structure of the EAHC organization which decided changing at the 7th EAHC Coordinating Meeting in 2013 is shown below. All EAHC Member States meet together to hold the Conference/Meeting on a regular basis.

Draft new EAHC webpage -Member States page- 1 of 4



 **EAST ASIA HYDROGRAPHIC COMMISSION** 

[Home](#) [Members](#) [What's new](#) [HTube](#) [Meeting](#) [Seminar](#) [Activity](#)
(Hydro Video Clip)

EAHC Member States

 **Brunei Darussalam**

Organization: SURVEY DEPARTMENT
Postal Address: Ministry of Development- Jalan Pembangunan, BANDAR SERI BEGAWAN, BB3510, Brunei Darussalam
Contact: Tel: + 673 2382171
Fax: + 673 2382900
E-mail: alibakar.kassim@survey.gov.bn and info@survey.gov.bn
Web: <https://survey.gov.bn>

 **China**

Organization: MARITIME SAFETY ADMINISTRATION (MSA)
Postal Address: 11 Jianguomennei Avenue, BEIJING, 100736, China
Contact: Tel: + 86 10 65292892
Fax: + 86 10 65292893
E-mail: hydro@msa.gov.cn
Web: <http://www.hydro.gov.cn>

Organization: CHINA NAVY HYDROGRAPHIC OFFICE (CNHO)
Postal Address: 19 Xisanhuan Middle road -PO Box 91 - Haidian District, Beijing, 100841, China
Contact: Tel: + 86 22 84654915
Fax: + 86 22 23305365
E-mail: cnho@ngd.gov.cn
Web: <http://www.ngd.gov.cn>

Organization: HYDROGRAPHIC OFFICE OF MARINE DEPARTMENT THE GOVERNMENT

Draft new EAHC webpage -Member States page- 2 of 4

Organization: HYDROGRAPHIC OFFICE OF MARINE DEPARTMENT THE GOVERNMENT
OF THE HONG KONG SPECIAL ADMINISTRATIVE REGION
Postal Address: 2/F. Hydro Building Government Dockyard, KOWLOON, China
Contact: Tel: + 852 2504 0723
Fax: + 852 2504 4527
E-mail: hydro@mardep.gov.hk or michaelchau@mardep.gov.hk
Web: <http://www.hydro.gov.hk>



Democratic People's Republic of Korea

Organization: DEMOCRATIC PEOPLE'S REPUBLIC OF KOREA - HYDROGRAPHIC DEPARTMENT
Postal Address: Sopo 2-Dong Hyongjesan District, PYONGYANG, Democratic People's Republic of Korea
Contact: Tel: + 850 2 381 8888
Fax: + 850 2 381 4692
E-mail: busong@star-co.net.kp, busong@co.chesin.com
Web: -



Indonesia

Organization: HYDROGRAPHY AND OCEANOGRAPHY CENTRE, INDONESIA NAVY (Pushidrosal)
Postal Address: Jalan Pantai Kuta V/1, Ancol Timur, JAKARTA, 14430, Indonesia
Contact: Tel: + 62 21 64 71 48 09
Fax: + 62 21 64 71 48 19
E-mail: infohid@dishidros.go.id
Web: <http://dishidros.go.id/>



Japan

Organization: HYDROGRAPHIC AND OCEANOGRAPHIC DEPARTMENT (JHOD)
Postal Address: 3-1-1 Kasumigaseki, Chiyoda-ku, TOKYO, 100-8932, Japan
Contact: Tel: + 81 (3) 3595 3605
Fax: + 81 (3) 3595 3627
E-mail: ico@jodc.go.jp

Draft new EAHC webpage -Member States page- 3 of 4

Organization: HYDROGRAPHIC AND OCEANOGRAPHIC DEPARTMENT (JHOD)
Postal Address: 3-1-1 Kasumigaseki, Chiyoda-ku, TOKYO, 100-8932, Japan
Contact: Tel: + 81 (3) 3595 3605
Fax: + 81 (3) 3595 3627
E-mail: ico@jodc.go.jp
Web: <http://www1.kaiho.mlit.go.jp/jhd-E.html>

 **Malaysia**

Organization: NATIONAL HYDROGRAPHIC CENTRE (NHC)
Postal Address: Bandar Armada Putra, Pulau Indah, PORT KLANG, Selangor, 42009, Malaysia
Contact: Tel: + 603 3169 4400
Fax: + 603 3101 3111
E-mail: nhc@hydro.gov.my
Web: <http://www.hydro.gov.my>

 **Philippines**

Organization: NATIONAL MAPPING AND RESOURCE INFORMATION AUTHORITY (NAMRIA)
Postal Address: 421 Barraca Street, San Nicolas, MANILA, 1010, Philippines
Contact: Tel: +632 242 2955
Fax: +632 242 2090
E-mail: jmcablayan@namria.gov.ph
Web: <http://www.namria.gov.ph>

 **Republic of Korea**

Organization: KOREA HYDROGRAPHIC AND OCEANOGRAPHIC AGENCY (KHOA)
Postal Address: 351 Haeyang-ro Yeongdo-gu, BUSAN, 49111, Republic of Korea
Contact: Tel: +82 51 400 4341
Fax: +82 51 400 4349
E-mail: infokhoa@korea.kr
Web: <http://eng.khoa.go.kr>

Draft new EAHC webpage -Member States page- 4 of 4

Organization: KOREA HYDROGRAPHIC AND OCEANOGRAPHIC AGENCY (KHOA)
Postal Address: 351 Haeyang-ro Yeongdo-gu, BUSAN, 491111,
Republic of Korea
Contact: Tel: +82 51 400 4341
Fax: +82 51 400 4349
E-mail: infokhoa@korea.kr
Web: <http://eng.khoa.go.kr>



Singapore

Organization: Maritime and Port Authority of Singapore (MPA)
Postal Address: 7B Keppel Road, #20-00 Tanjong Pagar Complex, SINGAPORE, 089055, Singapore
Contact: Tel: +65 63252027
Fax: +65 62261076
E-mail: hydrographic@mpa.gov.sg
Web: <http://www.mpa.gov.sg>



Thailand

Organization: HYDROGRAPHIC DEPARTMENT ROYAL THAI NAVY
Postal Address: 222 Rimtangrodfaikao, Bangna, BANGKOK, 10260, Thailand
Contact: Tel: + 66 2361 4822
Fax: + 66 2173 6570
E-mail: hydrotech@navy.mi.th
Web: <http://www.hydro.navy.mi.th>

Link to P-5 Yearbook
for further information

For more information: [IHO publication](#) (P-5 Yearbook)

⚓ Top

Thank you