

17th Meeting of the South West Pacific Hydrographic Commission

National Report by



PUSHIDROSAL - INDONESIA



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South West Pacific Hydrographic Commission





Main achievements during the year

- a. Conducted 47 hydrography-oceanography surveys for $\pm 33.761 \text{ Km}^2$
- b. Updated 78 numbers of paper chart.
- c. Updated 473 cells of ENC.
- d. Made 11 new cells of ENC.
- e. Published 52 Notice to Mariners (weekly).
- f. Published 54 Navigational Warning.
- g. Participated and found CVR Lion Air – JT610 in North Tanjung Karawang (Java Sea).
- h. Completed hydrography survey at Toba Lake.
- i. Hosted EAHC-SC, TRDC-BOD and MSS ENC-SC.
- j. Hosted Maritime Security Information (MSI) Course and MSI Data Base Workshop.



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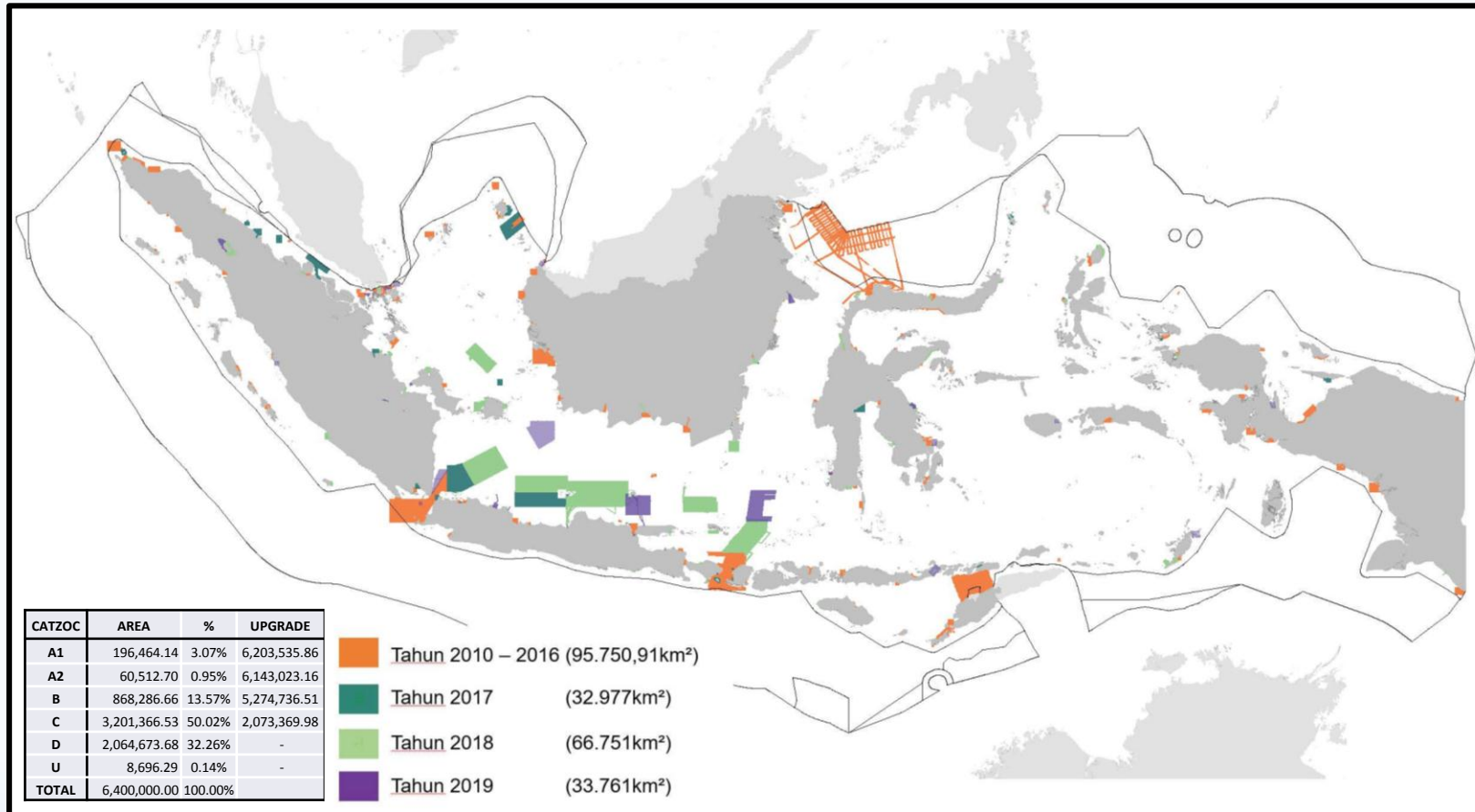
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Main challenges

PUSHIDROSAL SURVEI ACTIVITY DURING 2010-2019



MUST BE UPDATED = 6.400.000 Km² – 299.240 Km² = 6.170.760 Km² (96.42%)



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Progress on surveys

- **Conducted 47 Hydrography – Oceanography Surveys.**
 - Surveying vessels conducted 7 surveys and covering 9.198,60 Km².
 - Surveying unit conducted 40 surveys and covering 24.562,40 Km².
- **Prorities of Area Surveys.**
 - Channel.
 - Ports.
 - Archipelagis Sea Lanes (ASL).
 - Busiest Water.
 - Straits.



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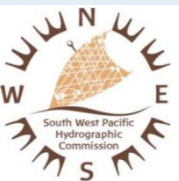
Progress on charting

- Updated 78 paper chart from 578 numbers of Indonesian paper charts.
- Updated 473 and made 11 new ENC cells.
- Updated cartography software.
 - Caris HPD.
 - SevenCs ENC Tools.
 - Caris GIS.
 - D’Kart Inspector.
- Migrating process from S-57 to S-100.



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Progress on MSI

- Supporting Directorate General of Sea Transportation in carrying out MSI responsibilities.
- Published new publications and updates such as Nautical Almanac, Tidal Stream Tables, Tide Tables, Sailing Direction Region II and III, List of Coastal Indonesian Radio Station.
- Published 52 Notices to Mariners and 54 Navigational Warnings.
- Reported Navigational Warning to NAVAREA XI Coordinator (Japan).
- Conducted Capacity Building Program on MSI Course and MSI Data Base Workshop for EAHC and NAVAREA XI members.



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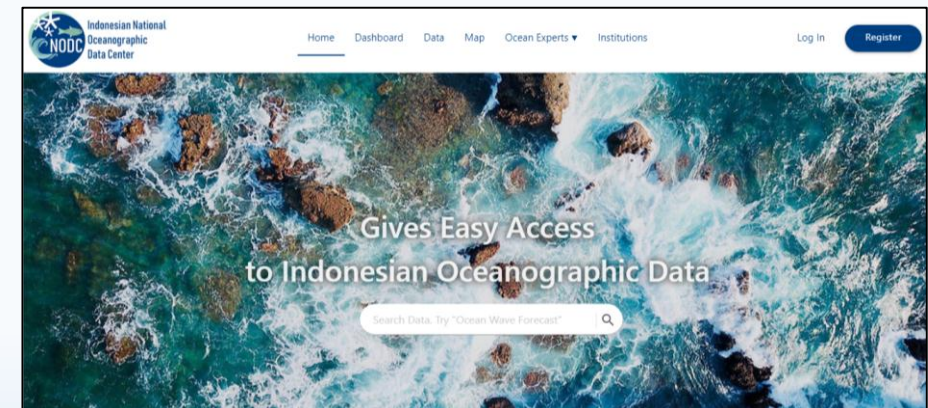
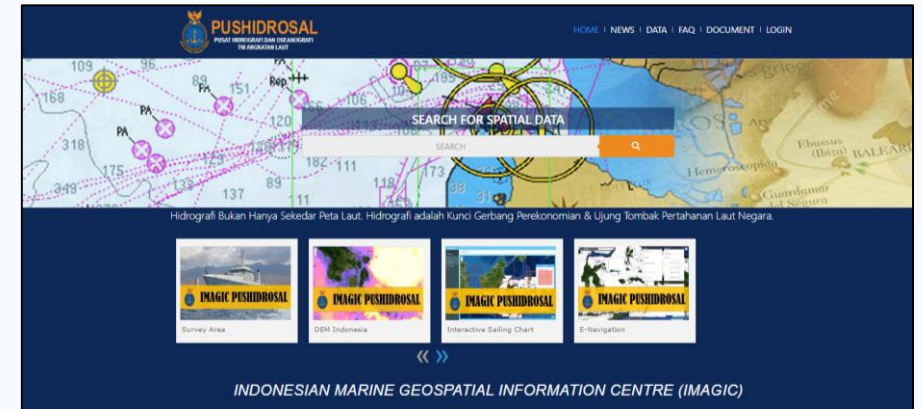
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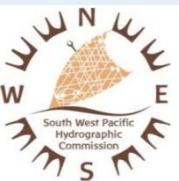
Progress on MSDI

- Pushidrosal develop hydrographic data center and named **Indonesian Marine Geospatial Information Centre (IMAGIC)**, connect to other maritime portal in Indonesia and can be accessed at <http://hdc.pushidrosal.id>. Users can access survey area, interactive sailing chart, e-navigation and the newest information is **Indonesian Digital Elevation Model (DEM)**.
- Indonesia government also develop national maritime portal and named **National Ocean data Center**, can be accessed at <http://nodc.id>



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Participated in IHO WG, RHC and Others

NO.	MEETING	MEMBER/ASOCIATE	REMARKS
1.	Hydrographic Service and Standards Committee (HSSC)	M	
2.	Nautical Cartography Working Group (NCWG)	M	
3.	Data Quality Working Group (DQWG)	M	
4.	Marine Spatial Data Infrastructures Working Group (MSDIWG)	M	
5.	S-100 Working Group (S100WG)	M	
6.	Nautical Information Provision Working Group (NIPWG)	M	
7.	Tides, Water Level And Currents Working Group (TWCWG)	M	
8.	ENC Standards Maintenance Working Group (ENCWG)	M	
9.	Hydrographic Dictionary Working Group (HDWG)	M	
10.	East Asia Hydrographic Commission (EAHC)	M	Vice Chairman
	Training Research and Development Committee-Board of Director (TRDC-BoD)	M	Vice Chairman



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Participated in IHO WG, RHC and Others

NO.	MEETING	MEMBER / ASSOCIATE	REMARKS
11.	South West Pacific Hydrographic Commission (SWPHC)	A	
12.	FIG/IHO/ICA – International Board on Standards of Competence for Hydrographic Surveyor and Nautical Cartographers	M	
13.	Malacca and Singapore Straits (MSS) ENC	M	Coordinator
16.	North Indian Ocean Hydrographic Commission (NIOHC)	M	Vice Chairman
17.	Charting and Hydrographic Committee	M	Vice Chairman
18.	South West Pacific Hydrographic Commission (SWPHC)	A	
19.	United Nations Group of Experts on Geographical Names (UNGEGN)	M	
20.	International Maritime Organization (IMO)	M	Council Member
21.	Inter-Government Oceanographic Commission (IOC)	M	
22.	United Nation Conference on Standardization of Geographical Names (UNCSGN)	M	



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Capacity Building Programs

Participated in International Education and Long Course

1. Attending India CAT-A Hydrographic Course.
2. Attending Bandung Institute of Technology CAT-A Hydrographic Course.
3. Conducting Hydrographic Bachelor Degree Education.
4. Conducting CAT-B Hydrographic Course.
5. Attending Japan CAT-B Hydrographic Course.
6. Attending Republic of Korea CAT-B Hydrographic Course.
7. Attending Australia CAT-B Hydrographic Course.
8. Attending Mississippi USA CAT-B Hydrographic Course.
9. Attending France Brevet Superieure Hydrographique.



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Capacity Building Programs

Participated in International Short Course, Seminar, Workshop, etc.

1. Conducted Maritime Security Information (MSI) Course and MSI Database Workshop in Indonesia.
2. Attending IHO Nippon Seminar in Singapore.
3. Attending Training Workshop on Delimiting Maritime Boundaries in France.
4. Attending and assisting Risk Assessment for Hydrographic Surveys and Charting Management for the Safety Navigation in Brunei Darussalam.
5. Attending Training for Ocean Observation and Hydrographic Survey in Republic of Korea.



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Plans that affect the region

- Conduct multi regional capacity building programs August/ September 2020 to celebrate world hydrographic day and Indonesia diamond jubilee (75 Years).
- Continue offering Nautical Charting Hydrographers and Cartographers Course, IHO Cat B.



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Plans that affect the region

Objective	To increase awareness and understanding of technical design and application of SDI technology to support sharing activities
Why	The need for dissemination and access of hydrographic products especially nautical charts or ENC portrayal in various media using a web browser platform demands Hydrographic Offices readiness to manage and provide this service.
Contents	<ul style="list-style-type: none">▪ SDI and MSDI▪ Charting Production Databases▪ Web Mapping▪ Metadata and online-map Tutorial▪ Geoserver and Databases Publication▪ Datacenter FrameworkWeb-mapping Management and Utilization
Remarks	Approved by EAHC SC & will invite NIOHC and SWPHC

Indonesia Would Like to Host (Inter Regional Seminar/Workshop)

Topic : GIS Web-mapping on Nautical Chart for Regional MSDI initiatives

Tentative time : Agustus - September 2020 in Jakarta
Hosting by Pushidrosal – self funding for accommodation & airfare
Japan will provide the experts/lectures of MSDI seminar





Plans that affect the region

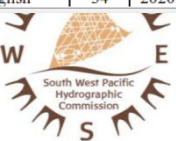
IHO Category B Training Program

- Since 1993 Indonesia Naval Hydrographic and Oceanographic Centre, Conducted **"Nautical Charting Hydrography dan Coastal Zone Management"** Course
- **Recognize as IHO Cat B Program by IHO, FIG and ICA**
- **Reaccreditation on (1993, 1994, 2006, 2013 and 2020 (on Progress))**
- **Since 2012 education followed by Naval Foreign Officer From IHO Member State:**

1. **Malaysia : 8 Officers**
2. **Vietnam : 4 Officers**
3. **Thailand : 3 Officers**
4. **China : 2 Officers**
5. **South Korea : 1 Officers**
6. **Philiphina : 1 Officers**
7. **Srilanka : 1 Officers**



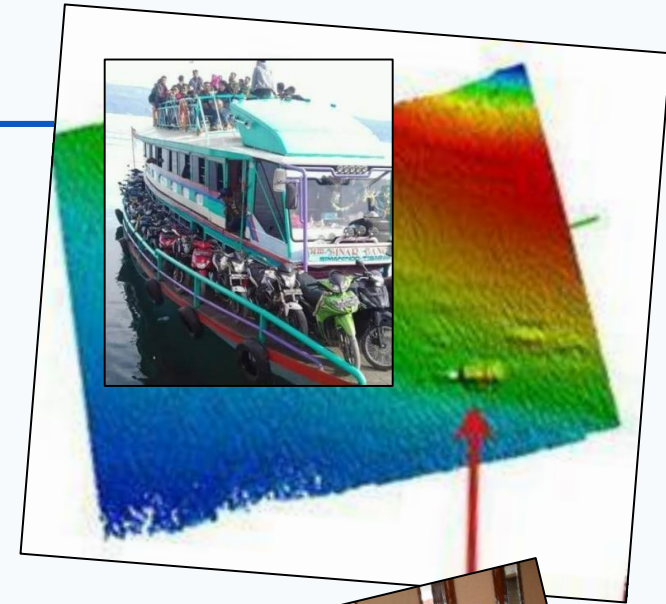
Year	Ed.	Programme	Institution	Country	Cat	Options	Language	Weeks	Next Rec.
2016	1.0.0	Advanced Training Course on Hydrography for Petty Officers	SHOM	France	B	1	French	78	2022
2017	1.0.0	Master of Science in Geomatics / Specialisation in Hydrography	HafenCity University Hamburg (HCU)	Germany	A		English	104	2023
2013	11th	Long Hydrographic Course	National Hydrographic Office	India	A	1,2,3,4	English	34	2019
2013	11th	Basic Hydrographic Course	National Hydrographic Office	India	B	1,2,3,5	English	23	2019
2014	11.0.1	Hydrographic Surveying Programme	IIC Technologies Academy	India	B	1,2	English	26	2020
2013	11th	Course in Hydrography for Naval Officers	Indonesian Navy (SEHIDRAL)	Indonesia	B	1,2	Indonesian	26	2020
2014	11.0.1	Hydrographic Education / Hydrographic Surveyor Profession Education Program	Geodesy and Geomatics Engineering Study Program - Institut Teknologi Bandung (ITB)	Indonesia	A	2,5,7	English	36	2020
2014	11.0.1	Basic Hydrographic Surveying Course	Hydro Geo School	Iran	B	4	English Persian	25	2020
2014	11.0.1	Master in Marine Geomatics and Applied	Italian Navy Hydrographic Institute	Italy	A	1,2,5	English	34	2020





Lessons learned to share

- **Proposed TSS at Sunda and Lombok Straits on NCSR 6.**
- **ENC Recent Positive Result in 2019.**
- **S-32 IHO Indonesia Hydrographic Dictionary.**
- **Hosted Multi Regional Capacity Building Program on MSI Course and MSI Data Base Workshop.**



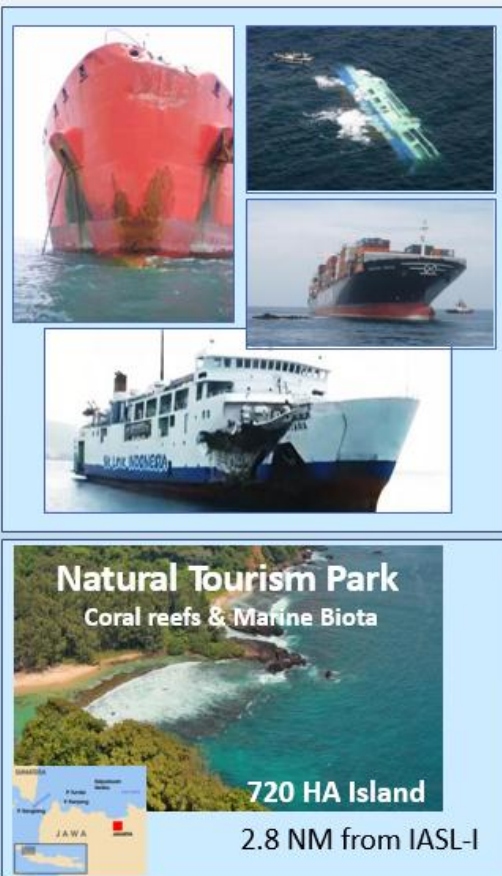
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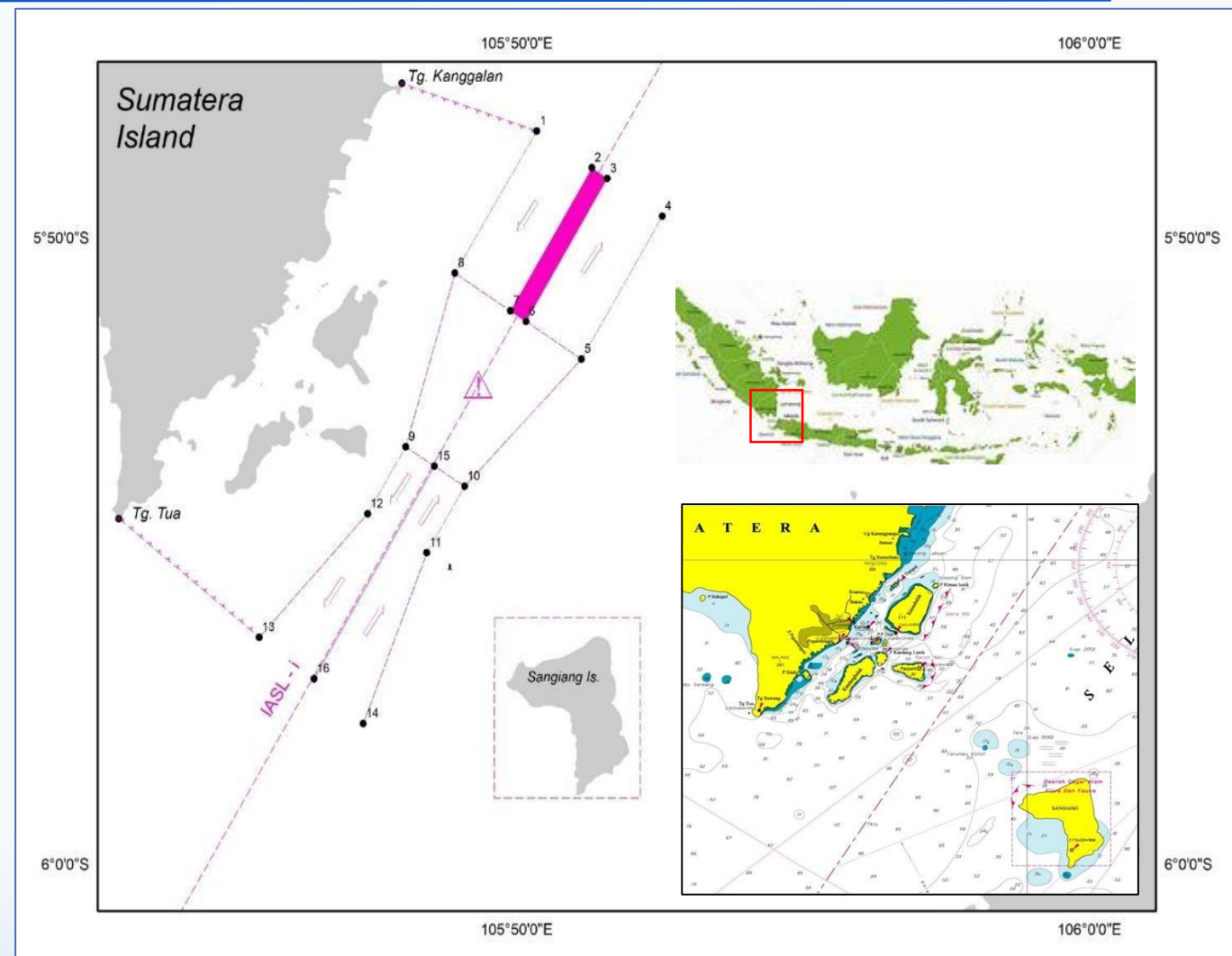
Lessons learned to share



TSS at Sunda Strait



**Proposed on
NCSR 6**



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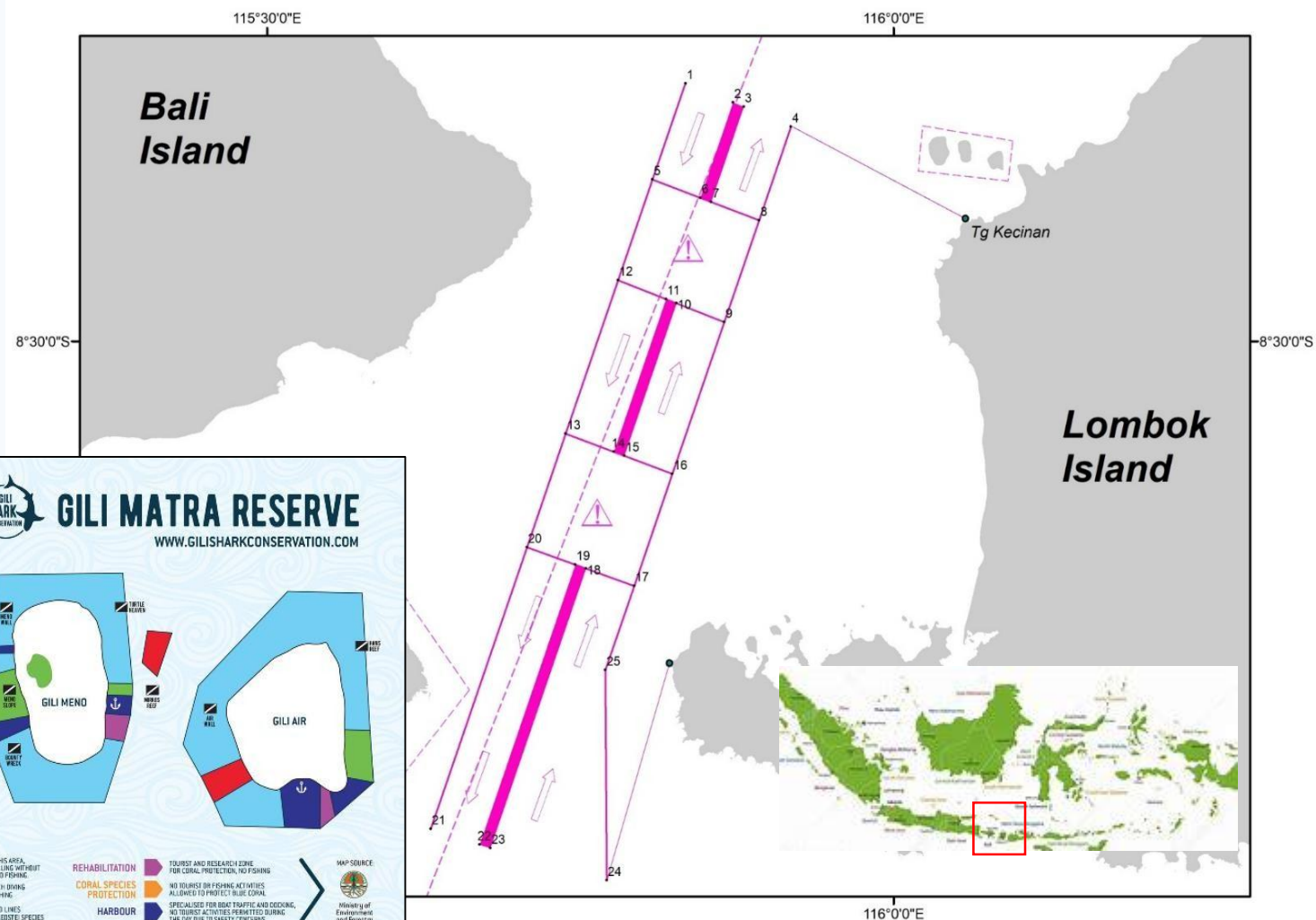




Lessons learned to share



TSS at Lombok Strait Proposed on NCSR 6



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Lessons learned to share

ENC RECENT POSITIVE RESULT IN 2019



Visiting of Sun Princess Cruise ship for the first time at Gilimas port, Lombok in November 5, 2019 (1988 travelers and 862 crews).



Visiting of Carnival Splendor Cruise ship at Benoa port, Bali in November 29, 2019 (2200 travelers and 1150 crews).



Lessons learned to share

S -32 IHO Indonesia Hydrographic Dictionary



S-32 IHO Hydrographic Dictionary

Login

Introduction

The International Hydrographic Dictionary(S-32) is a multi-language dictionary that is the authoritative reference for hydrographic related terms and definitions used in IHO standards, specifications and other informative publications.

This online dictionary database includes harmonised terms and definitions for the following languages: **English; French; Spanish; Chinese and Indonesian**. The dictionary is maintained by the Hydrographic Dictionary Working Group (HDWG), which is a subsidiary body of the Hydrographic Services and Standards Committee (HSSC) of the IHO. Any proposals for the additions, amendments or correction to the dictionary should be forwarded to the IHO Secretariat at (info@iho.int).

English

English

Hydrography - Hydrography is the branch of applied sciences which deals with the measurement and description of the physical features of oceans, seas, coastal areas, lakes and rivers, as well as with the prediction of their change over time, for the primary purpose of safety of navigation and in support of all other marine activities, including economic development, security and defence, scientific research, and environmental protection.

Français

Français

Hydrographie - L'hydrographie est la branche des sciences appliquées traitant du mesurage et de la description des éléments physiques des océans, des mers, des zones côtières, des lacs et des fleuves, ainsi que de la prédiction de leur changement dans le temps, essentiellement dans l'intérêt de la sécurité de la navigation et à l'appui de toutes les autres activités maritimes, incluant le développement économique, la sécurité et la défense, la recherche scientifique et la protection de l'environnement.

Español

Español

Hidrografía - La hidrografía es la rama de la ciencia aplicada que trata sobre la medición y la descripción de las características físicas de los océanos, los mares, las zonas costeras, los lagos y los ríos, y también sobre la predicción de sus cambios en el tiempo, teniendo como objetivo principal la seguridad de la navegación y en apoyo de todas las otras actividades marítimas, incluyendo el desarrollo económico, la seguridad y la defensa, la investigación científica y la protección ambiental.

Chinese

Chinese 中文

海道测量学 - 海道测量学是应用科学的分支, 是测量和描述海洋、海域、沿岸区域、湖泊和河流的物理特征, 以及预测它们随时间变化的学科, 其主要目的是保障安全航行, 支持所有其它的海上活动, 包括经济发展、安全和防卫、科学研究和环境保护。

Español - Inglés

Indonesian

bahasa Indonesia

Hidrologi - Cabang sains terapan yang mengatur pengukuran dan penjelasan fitur fisik bagian permukaan BUMI yang bisa dinavigasi dan wilayah pantai, dengan referensi khusus untuk tujuan NAVIGASI

bahasa Indonesia-Ingris

英語 -中文



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Lessons learned to share

Hosted MSI Course and MSI Data Base Workshop

- Conducted on September 9-13, 2019, at Ancol, North Jakarta, Indonesia.
- Attended 21 participants from 12 countries and multi IHO regions (EAHC, NAVAREA XI, Palau and Marshal Island).
- Instructors from NGA, JHOD and Pushidrosal.
- Supported by IHO CBP and self funded.
- MSI Course and MSI Data Base Workshop proved to IHO that multi regional capacity building programs can be conducted successfully.



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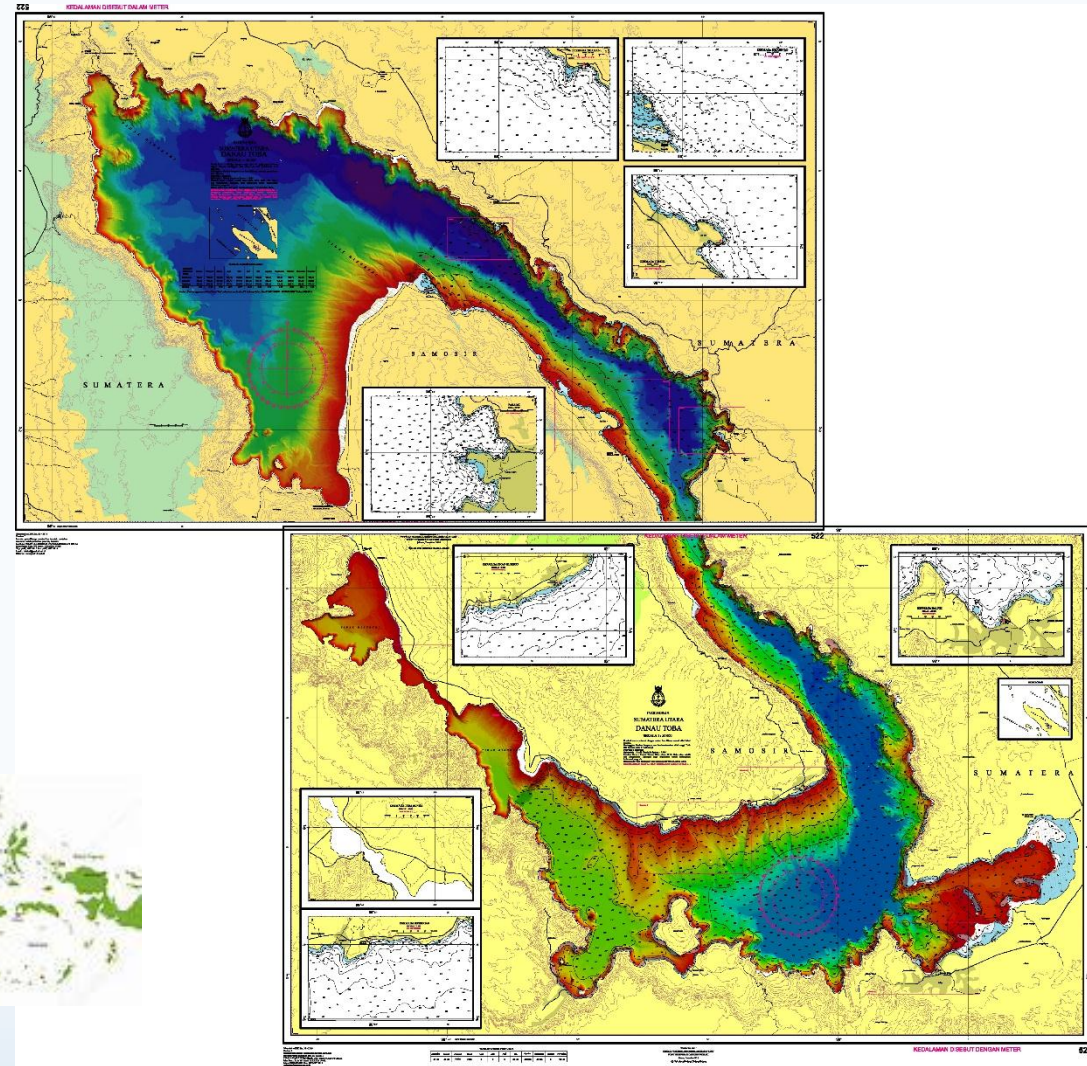
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Success stories to share

- B-350.4, navigable rivers, lakes and canals should be shown as completely as possible on the larger scales.
- B-353, land drainage, rivers, lakes, glaciers.
- Safety navigation purposes provide inland waterways charts in **Toba Lake** (903 meter from MSL).
- 9 local ports.
- Completed in 2019.



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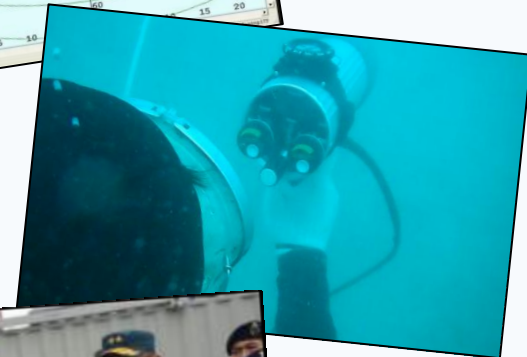
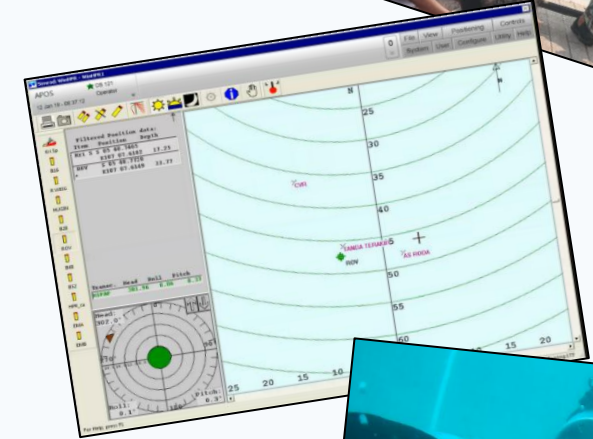




Success stories to share

Found CVR Lion Air JT-610 at Karawang-Java Sea

- While airplane crashed, Pushidrosal sent KRI RIGEL-933 collaborated with other responsible institutions to search and rescue all victims also try to find JT-610 Black Box. Several days later, Black Box signal was recognized by KRI RIGEL-933.
- November 1, 2018, Flight Data Recorder (FDR) can be found.
- MVP. Everest was tasked to find Cockpit Voice Recorder (CVR) but did not get satisfied results.
- January 8, 2019, Pushidrosal was tasked by Government to find CVR and ordered KRI SPICA-934 to do those task.
- January 14, 2019, KRI SPICA-934 successfully found CVR Lion Air JT-610.



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THANK YOU



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