

**MEDITERRANEAN AND BLACK SEAS HYDROGRAPHIC COMMISSION  
XXI CONFERENCE**

**REPORT BY CROATIA**

**Highlights from the report**

**SPAIN, Cadiz  
11 - 13 June 2019**

# CHI Permanent and Ongoing Activities

## HYDROGRAPHIC SURVEY AND ENC PRODUCTION - PRIORITY PLAN

CHI established 5-years hydrographic survey and charting priority plan aiming to cover the recognized Maritime Shipping Routes (MSRs), Approaches and Ports with high quality charts and publications.

-  ENC - EXISTING ON PRIORITY AREA
-  ENC - PLANNED
-  HYDROGRAPHIC SURVEY - PLANNED

Depth	Adequate survey		Resurvey required		Never been systematically surveyed	
	A1 (<200m)	A2 (>200m)	B1 (<200m)	B2 (>200m)	C1 (<200m)	C2 (>200m)
Percentage (%)	46,27	4,85	36,90	13,04	16,83	82,11
Area (sq. km)	20.602,2	527,2	16.426,0	1.417,9	7.493,4	8.928,4

# NEW HYDROGRAPHIC SURVEY and ENC's

Besides the continuous periodic survey of principal ports and approaches (under priority plan), a significant number of new surveys were performed:

- marinas (39)
- part of port areas (18),
- underwater obstructions and installations (9).

**Total 500 sq. km surveyed.**

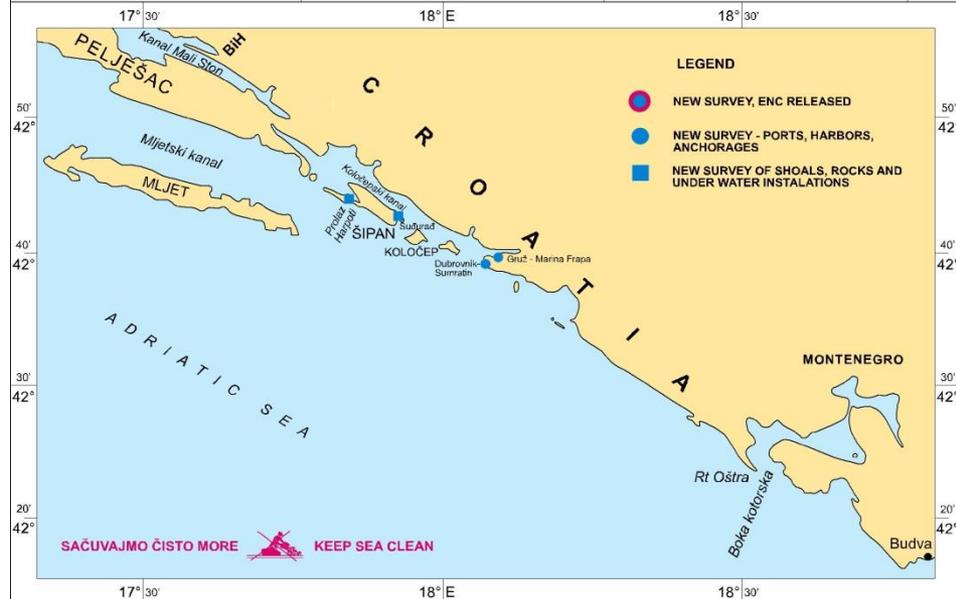
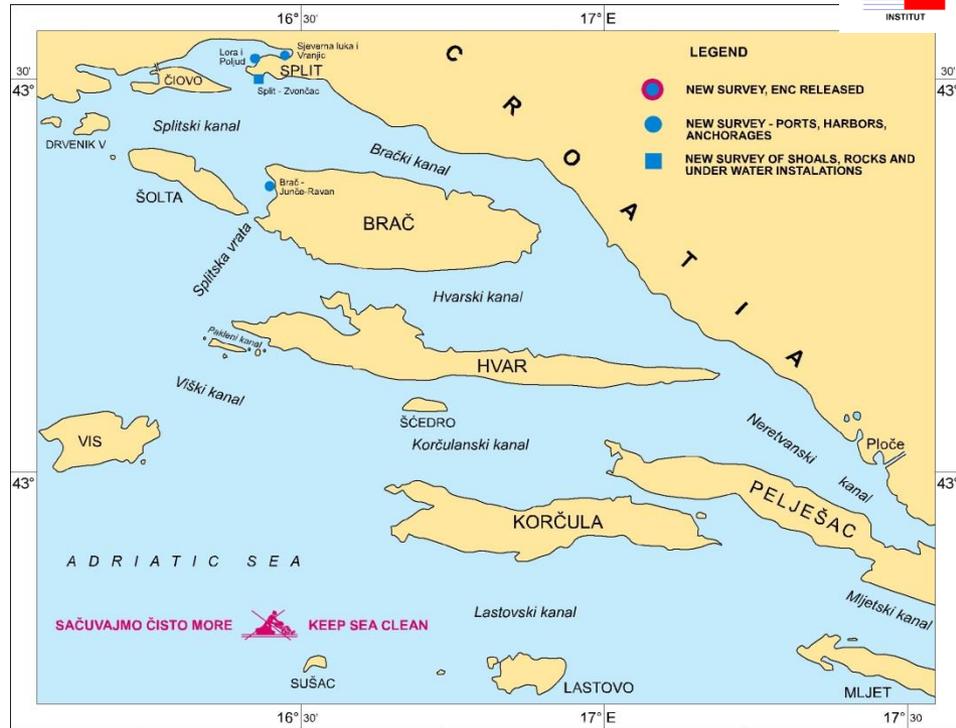
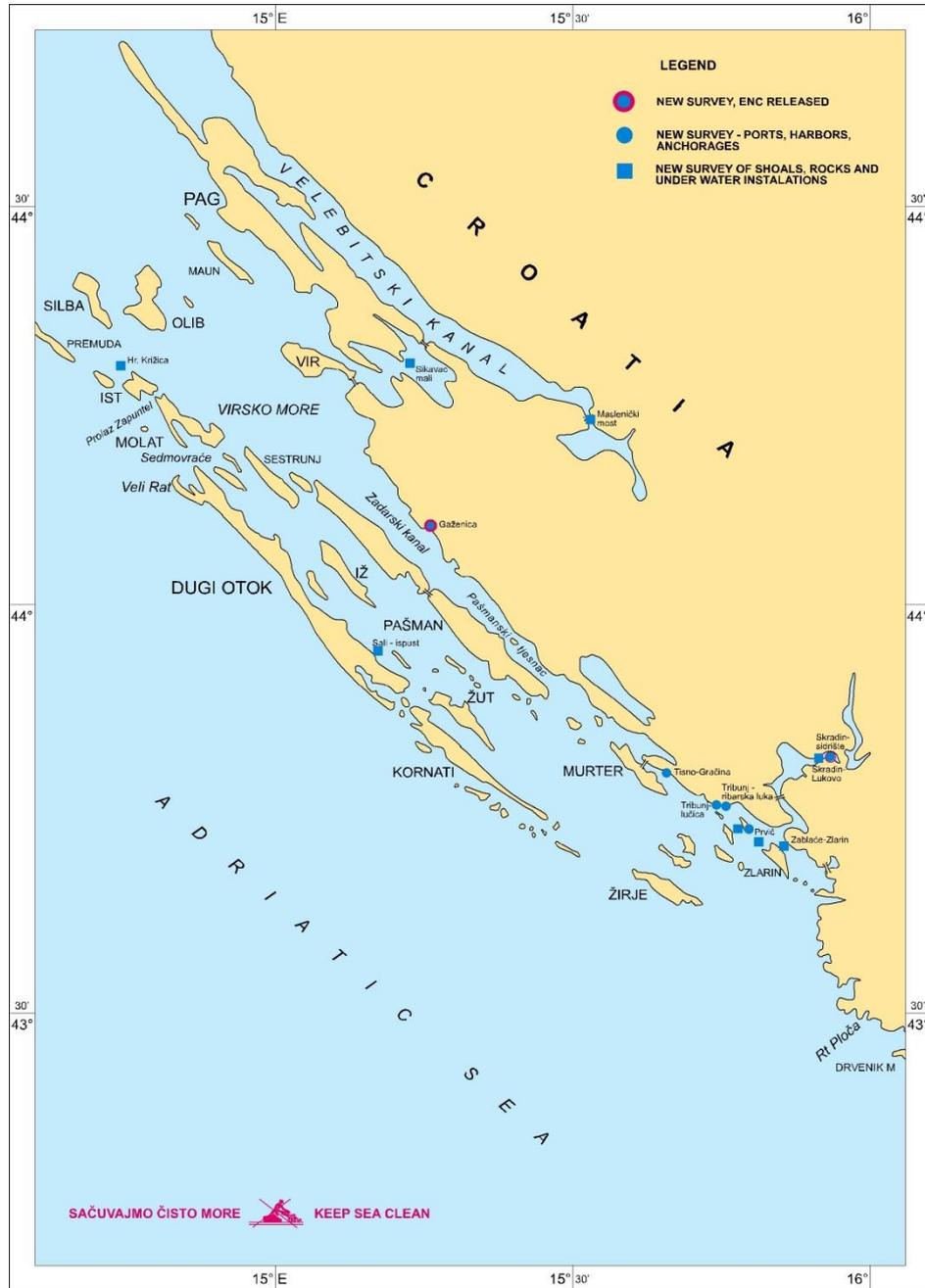
**83 new ENC's were released.**



# NEW HYDROGRAPHIC SURVEY and ENC's



INSTITUT



		1 July 2008		1 June 2011		1 July 2013		1 May 2017		31 May 2019	
User band	Navigational purpose	No of Cell	Area coverage (%)	No of Cell	Area coverage (%)	No of Cell	Area coverage (%)	No of Cell	Area coverage (%)	No of Cell	Area coverage (%)
1	Overview	1	100%	1	100%	1	100%	1	100%	1	100%
2	General	4	100%	4	100%	4	100%	4	100%	4	100%
3	Coastal	15	100%	15	81%	15	100%	15	100%	18	100%
4	Approach	9	72%	12	84%	13	85%	14	88%	19	91%
5	Harbour	31	77%	37	80%	37	84%	40	88%	44	91%
6	Berthing	20	74%	22	91%	24	85%	50	95%	121	98%
<b>TOTAL</b>		<b>80</b>	<b>87%</b>	<b>91</b>	<b>91%</b>	<b>94</b>	<b>92 %</b>	<b>124</b>	<b>96%</b>	<b>207</b>	<b>97%</b>

1. Some overlaps still exist between HR, IT and GR Overview and General ENC's. The process of consideration of the three current proposals is slow but still underway between IT and HR.
2. A few small thin overlaps on IT/HR border are under consideration and deliberation.
3. An overlap between HR and MNE ENC in UB 3 is under urgent consideration.
4. Some inconsistencies observed between national (HR) paper charts and ENC's are under constant consideration and deliberation. Furthermore, any feedback received from users or the IHO is a matter of urgent examination and solving.



# MARITIME SAFETY INFORMATION (MSI)

Nav. Warning service is available 7/24. NAVTEX broadcasts are transmitted in English and Croatian. MSI are transmitted regularly on VHF channels of coast radio stations. NATIONAL NAVTEX became fully operational on 24 April 2019 at 1250 UTC, when the first broadcast on 490 kHz was transmitted.

NAV. WARNINGS	2017	2018	2019 (Until 31.5.2019)
NAVAREA	1	3	1
COASTAL	94	123	47
LOCAL	304	341	174
<b>TOTAL</b>	<b>399</b>	<b>467</b>	<b>222</b>

Correctness of the promulgation of information is controlled on the NAVTEX receiver and VHF station. There is no failure occurring during ordinary operation.



MSI messages are drafted according to IHO publication S-53.

Excellent cooperation with relevant subjects in HR maritime domain and NAVAREA III Coord. as well as neighbouring countries

# TRAINING



Ocean Policy Making and Management training participants (KHOA premises)



Participants in the hydrographic DBM training (CHI premises)



Participants in dKart Publisher training (CHI premises)



Participants in Cartography Cat B training (UKHO premises)

# CONCLUSIONS

1. Under the circumstances of limited overall resources (human, material and financial), it can be concluded that the status of hydrographic-navigational element of the navigational safety is at respectable level.
2. Entire area of charting responsibility has been covered by relevant official editions of navigational charts and publications – paper and digital ones. This particularly applies to navigation areas of SOLAS ships.
3. CHI continues the trend of increasing the number of ENC's by publishing ENC's of marinas and small harbours based on the new hydrographic survey.
4. Entire ENC folio has been made available to mariners and to maritime administration worldwide through PRIMAR RENC.
5. ENC's have been made (2016) available on the Croatian Navy vessels through the Navy Agreement.
6. Agreements have also been concluded with the maritime administrations and Croatian Navy on ENC usage for administrative-office purposes (WMS for ENC's).
7. Over the past period, CHI highlights excellent cooperation with Italy and Montenegro on finding solutions for ENC overlapping issues.
8. Navigational warning service is in good working order, efficiently cooperating with all navigational safety entities in Croatia, its neighbouring countries and the NAVAREA III coordinator.

# CONCLUSIONS

9. Paper editions of official navigational charts are updated through monthly editions of Notices to Mariners, and ENC's through weekly updates.
10. CHI has maintained a high level of technical and technological equipment by acquisition of several important systems, devices and equipment through EU funded projects. Existing software of the basic production line is regularly updated and training for staff is provided.
11. Recognizing a wider use of hydrographic data, CHI maintains and constantly improves established licensing model keeping in mind obligations arising from the public service information regulations.
12. CHI continuously participates in multiple projects designated by the competent administrations, providing high quality support.
13. CHI participate in several project financed by EU: EMODnet, CBC programme Croatia- Montenegro, INTERREG CRO-MNE-BiH, PANORAMED.
14. By participation in several bodies and WGs of the IHO and PRIMAR RENC, the CHI maintains its proactive role and contributes on realisation of established objectives of those organizations
15. The CHI personnel have participated in several international scientific and technical conferences presenting hydrographic and oceanographic papers.
16. Despite under capacity, CHI retained a proactive approach and contribution to the parent organization (IHO).

## CHI future expectations and prospective

- Achievement of main strategic and programme objectives in the current and next planned periods will be challenging in every respect, because it is expected to proceed in very restrictive conditions with additional requirements and tasks.
- Therefore, an approach to the achievement of objectives will be based on prioritization, well organized business processes and cooperation between employees, as well as good cooperation with the Directing Board and competent ministry.
- Main challenges in the forthcoming period will be in connection with the introduction of a new digital production line and internal organizational restructuring in order to establish a new business model in accordance with ISO QMS, which will ensure a modern and high quality hydrographic service.

# Topics for discussion and exchange of views and experiences during the Conference

- Smooth technological transition – HO organizational structure
- Legal framework for hydrographic service – national prospective, strategic and planning docs
- Data centric approach – challenges of introducing and implementations
- ISO QMS design, implementation and improving
- Dual fuel ENC service operating – S-57 and S-101, ...
- National ENC distribution options and challenges
- ENC S-101 test data development - expectations
- ENCs overlap in region – applications of the WEND principles (Technical Agreement)
- Data licensing policy
- Commercial hydrographic survey – legal aspect and implications
- LIDAR experience and praxis (coast line and shallow waters)
- Satellite bathymetric data (accessibility and applications)
- Crowdsourced bathymetry – position and national regulation (restrictions)
- Science approach for HO
- Non-SOLAS ENCs and market options for leisure community/users – National regulations
- Regional cooperation with neighbouring countries
- Regional Hydrographic Commission operation (capacity building)
- e-Office – administrative arrangement and daily management