



**Plenary session of the European IHO network (IENWG)
27th February, Official French Representation,
Brussels**

Example of transnational EU projects –
Croatian Hydrographic Institute www.hhi.hr

Vinka Kolić, CHI Director
Željko Bradarić, Assistant Director





Joint Promotion and Increased Level of Safety in Nautical Tourism in Dubrovnik-Neretva County and Montenegrin Coast"- "NauTour"

- The project was launched in January 2011.
- Total value of the project was 451.928,36 €.
- Croatian partners on the project are: Hydrographic Institute of the Republic of Croatia (HHI), as leading partner and University of Dubrovnik (Maritime department).
- Montenegrin partners on the project were Hydrometeorological institute of Montenegro and National tourist organization of Montenegro
- Main objective of the project was to improve the tourism (especially nautical) potential of the Dubrovnik-Neretva County and the Montenegrin coast through its joint promotion as a unique tourist entity with rich cultural and natural heritage.



- The project contributed towards raising the quality of services and increasing the level of safety in nautical tourism through cooperation between:
 - hydrographic institutions,
 - institutions providing different tourist services (marinas and other tourist ports, charter agencies),
 - institutions for maritime safety and safety in general (harbour master's offices, port authorities, maritime border police).



- The outcome of all the projects was establishment of the interlinked cross border cooperation between project partner and associate institutions and stakeholders which didn't exist before (after war period – since 1991).

The output which is the most important to mention was the **establishment of Hydrographic department – hydrographic service in Montenegro** (within the Hydrometeorological Institute of Montenegro) – capacity building.



Outputs of the project – publications for sailors



www.nautour.info



Cross border routes



PREDLOŽENA PREKOGRANIČNA RUTA

MEGAJAHTA - RUTA 4. / 14 DANA



Joint Actions for Sea Pollution Prevention - JASPPer“



- The project was launched in January 2013.
- Total value of the project was 598.339,17 €.
- IPA project from the Component II – Cross-Border Programme Croatia-Montenegro 2007.-2013. within measure 1.1. – Joint measures in the protection of the environment, nature and cultural heritage.
- Croatian partners on the project are: Hydrographic Institute of the Republic of Croatia (HHI), as leading partner and Institute for Marine and Coastal Research in Dubrovnik (IMP).
- Montenegrin partners on the project are: Institute of Hydrometeorology and Seismology of Montenegro (IHMS) and the University of Montenegro – Institute for Marine Biology.



Specific goal and results

The aim of the project was to stimulate the reduction of the pollution in bordering aquatories of two countries and to establish the cooperation between the competent institutions on the topics in the environment protection.

The specific goal of the project was to create the preconditions for the long-term cooperation of the institutions in the bordering area on the topics of wastewater management and monitoring of the seawater quality.

The expected results of the project were: the establishment of the model for the monitoring of the parameters of the sea pollution in the bordering area of Croatia and Montenegro and the strengthening of the capacities of the competent institutions in the bordering area in the monitoring of the seawater quality and the usage of the EU funds.



Activities of the Project "JASPPer" were carried out in two directions:



1. Establishment of cooperation and increase the capacity for joint control and waste water management between relevant institutions from both sides of the border and establishment of a model for the purpose of the monitoring and detection of cross-border pollution parameters;

2. Increase of the level of knowledge and the capacity of regional experts in the field of monitoring of sea and cross border effects of waste water management and raise public awareness of the importance and benefits of joint cross-border approach to the prevention of marine pollution.



Equipment procured

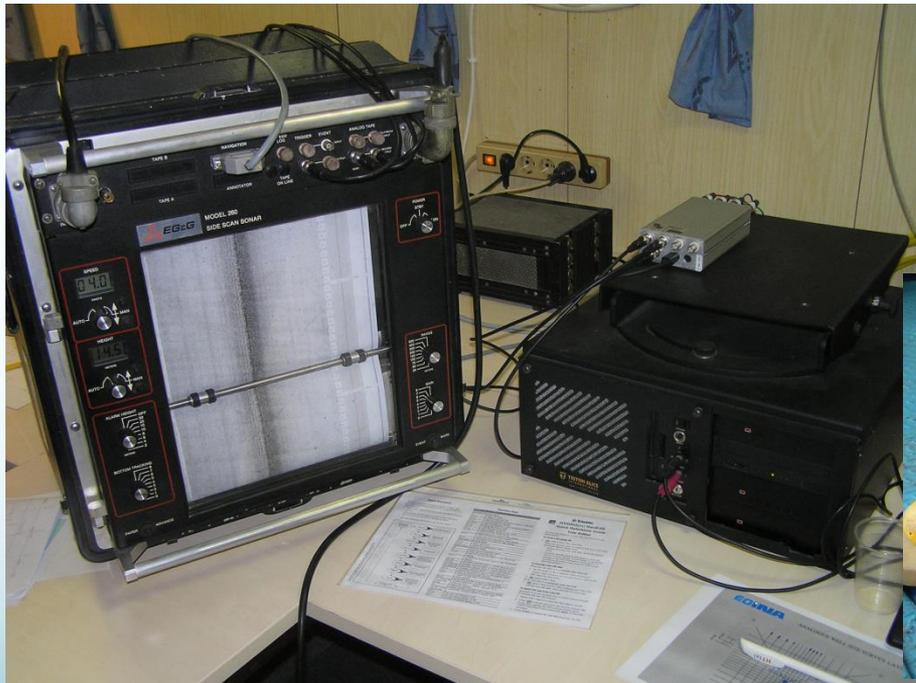


CRO- Remotely operated underwater vehicle (ROV) has been used for the purpose of research of submarine outfalls, acquired from the grant project "Jaspper", whose value is 101,250.00 €.

Capacity building

- **The output which is the most important** to mention is the institutional development of IHMS through establishment of hydrographic and oceanographic activities which is very important for one maritime country regarding safety of the sea and prevention of marine pollution.
- **Institutional strengthening of the IHMS** (education and training of employees of the IHMS during field research and exchange experiences through training of young researchers from partner institutions) has been organized as a contribution to increasing the level of knowledge and the capacity of regional experts in the field of quality control at sea and cross-border effects of waste water management and raising public awareness of the importance and benefits of joint cross-border approach to the prevention of marine pollution.

MNE - Side Scan Sonar



Current measurements in the cross border area



Sustainability

- Memorandum of understanding in the prevention of marine pollution in the border area of Montenegro and the Croatian was signed between municipalities Kotor, Tivat and Konavle and through that implemented activity is ensured sustainability of the project “Jaspper”.
- Awareness of joint protection of the marine pollution in the border area of Dubrovnik Neretva County and Montenegrin coast, as one related destination, is established within project activities (round tables, presentations, promotions, scientific articles and studies, brochure, web site).



Cross border joint research and awareness raising action in detecting environmental conditions. Establishing higher safety and protection measures of Maritime domain parts of Croatia and Montenegro“ - CoRE



- The project started in January 2016.
- The total value of the project for both sides is 536.065,97 eur.
- EU/IPA project under component II, measure 1.1 Joint actions for environment, nature and cultural heritage protection.
- Croatian partners on the project are: Hydrographic Institute of the Republic of Croatia (HHI), as leading partner and Institute for Marine and Coastal Research in Dubrovnik (IMP).
- Montenegrin partners on the project are: Institute of Hydrometeorology and Seismology of Montenegro (IHMS) and Public Enterprise for Coastal Zone Management (JPMD).
- **Overall objective** of this project was to contribute to improvement overall protection and preservation of eastern Adriatic coastline.



Specific objectives were:

- to establish safety protocols and new hydrographical maps (for waterway safety / habitat preservation researches) based on research and gathered data, concerning natural changes of coastline border in Croatia and Montenegro influenced by erosion from mainland and wave power from open sea;
- to increase general knowledge of wide groups of stakeholders on Maritime property (maritime demesne) component coast and its sustainable littoralisation .

Results of the project:

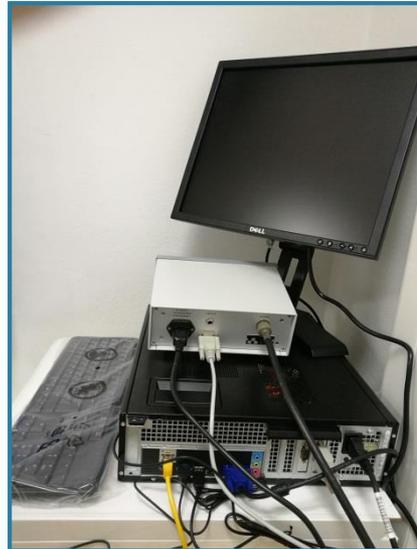
- coastal environmental protection and preservation improved throughout cross-border institutional cooperation and mutual support, capacity building and data exchange
- established „new zero“ state and safety recommendations according to collected data for delicate and changing environment of delta Neretva, (approach to port Ploče, junction of Baćina lakes and sea), delta Bojana and Sutomorska and Mogren beach and Dubrovnik city walls foundation, interpreted in form of hydrographic survey and other scientific findings – field measurements
- wide public informed on basic “rights” of a sea coast, it’s formulation through Maritime domain regulations and Protocol of Integrated Coastal Zone Management

www.projectcore.info

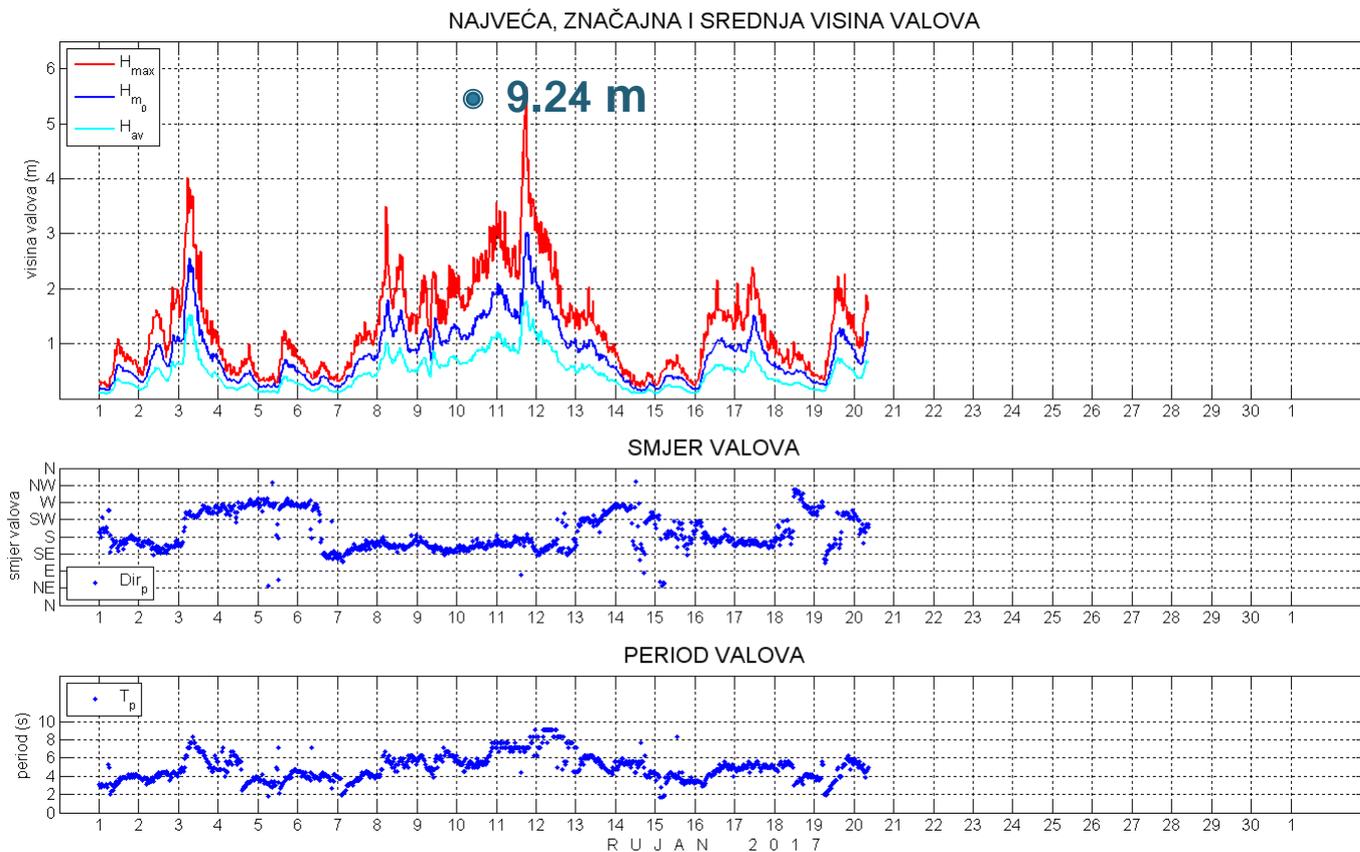
- **CRO - Directional wave rider buoy, Side scan sonar**
- **MNE – Multibeam**



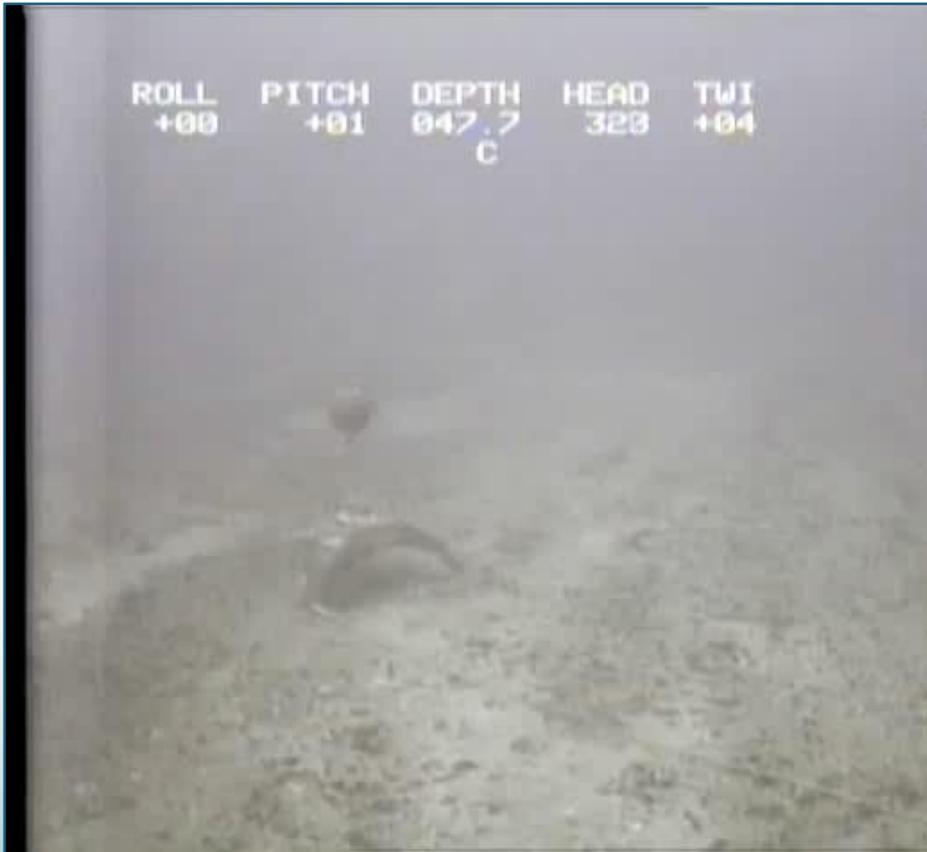
Monitoring of the waves – St. Andrija



Results - Monitoring of the waves – Sv. Andrija



Current measurements - Ploče



Results- Side scan sonar - Ploče, Dubrovnik



LEGEND

NAVIGATION SYSTEM
 SEALEVEL 000.0P
 AYC FOR DEMOGRAPHY VS 110
 OYAG
 AYC FOR DEMOGRAPHY VS 110
 ACQUISITION SYSTEMS
 -CMS SIDE SCAN SONAR

**CROSS BORDER JOINT RESEARCH AND AWARENESS
 RAISING IN DETECTING ENVIRONMENTAL CONDITIONS,
 ESTABLISHING HIGHER SAFETY AND PROTECTION
 MEASURES OF MARITIME DOMAIN PARTS OF
 CROATIA AND MONTENEGRO - CORE**

DUBROVNIK

SEABED FEATURES CHART



SPHEROID: WGS 84
 PROJECTION: UTM
 FALSE EASTING: 500 000
 FALSE NORTH: 0
 ZONE: 34 NORTH
 CENTRAL MERIDIAN: 18 E
 SCALE ON C: 50 0996

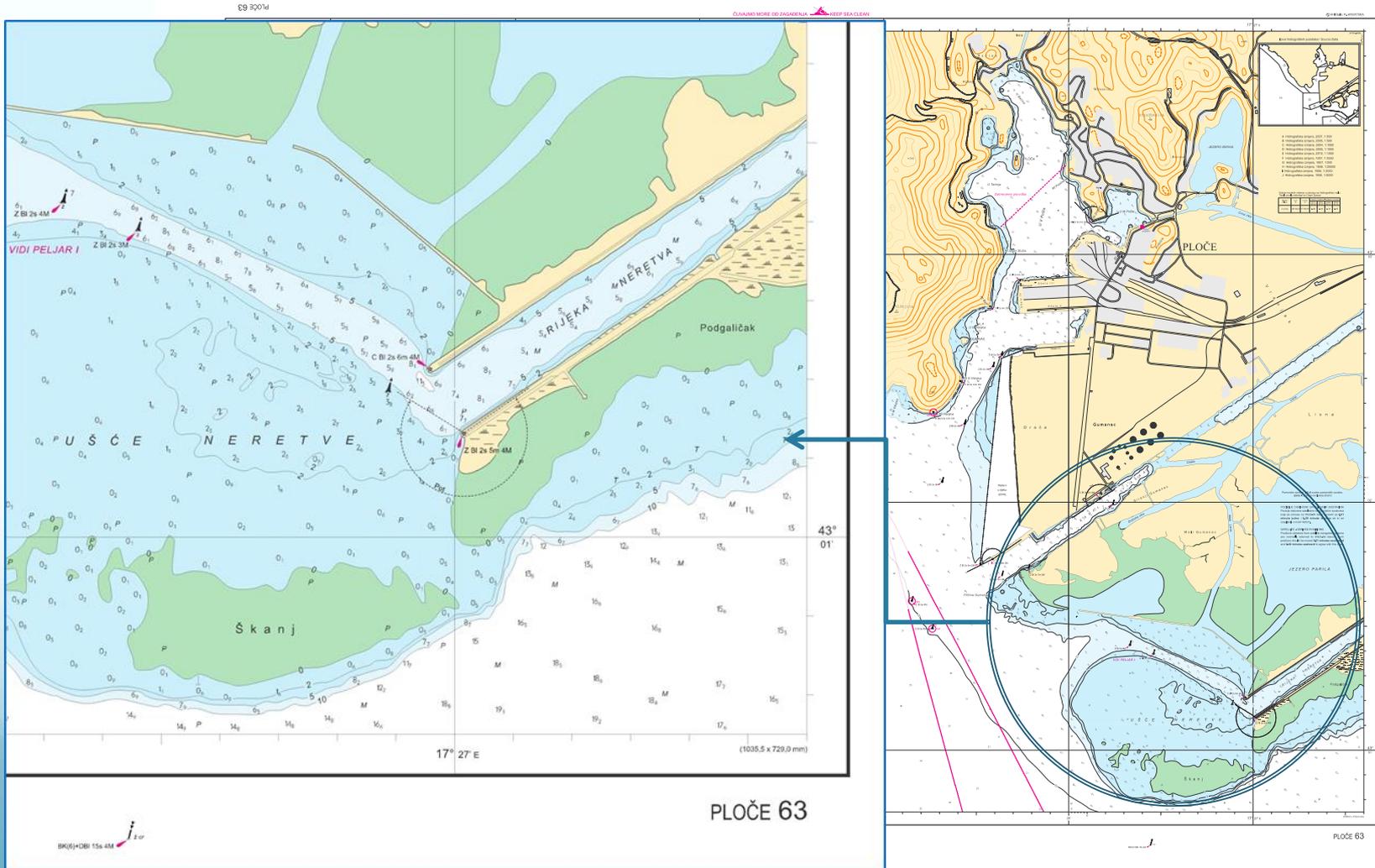
INTERPRETED	
DRAWN	
CHECKED	
APPROVED	
DATE	SV/IBRA
MARCH, 2017.	ENCLOSURE
	2/2

SCALE 1 : 1 000



HYDROGRAPHIC INSTITUTE OF THE REPUBLIC OF CROATIA
 Tel: + 385 (21) 39 88 00, Fax: + 385 (21) 347 242
 Zrinsko Frankopanska 161, HR 21000 SPLIT, CROATIA

Nautical chart – port of the Ploče



Other programmes

- Project application in preparation for the new call for the Interreg IPA CBC Croatia- Bosnia and Herzegovina and Montenegro
- Project in the evaluation process – programme Interreg Italy – Croatia
- Projects from the Operational programmes – EU Structural Funds and Cohesion Funds (improvement of the hydrographic service in CRO)



EMODnet – HRBData – phase III

Croatian contribution

HR / HHI recognized EMODnet project.

The Subcontract signed (2017) was reviewed:

- The **conflict** was discovered between the **national regulation** and the **contract provisions**
- Problem with **intellectually property** provisions
- Problem with **data resolution** required to deliverables / results



Solutions

1. Leave the Contract
or

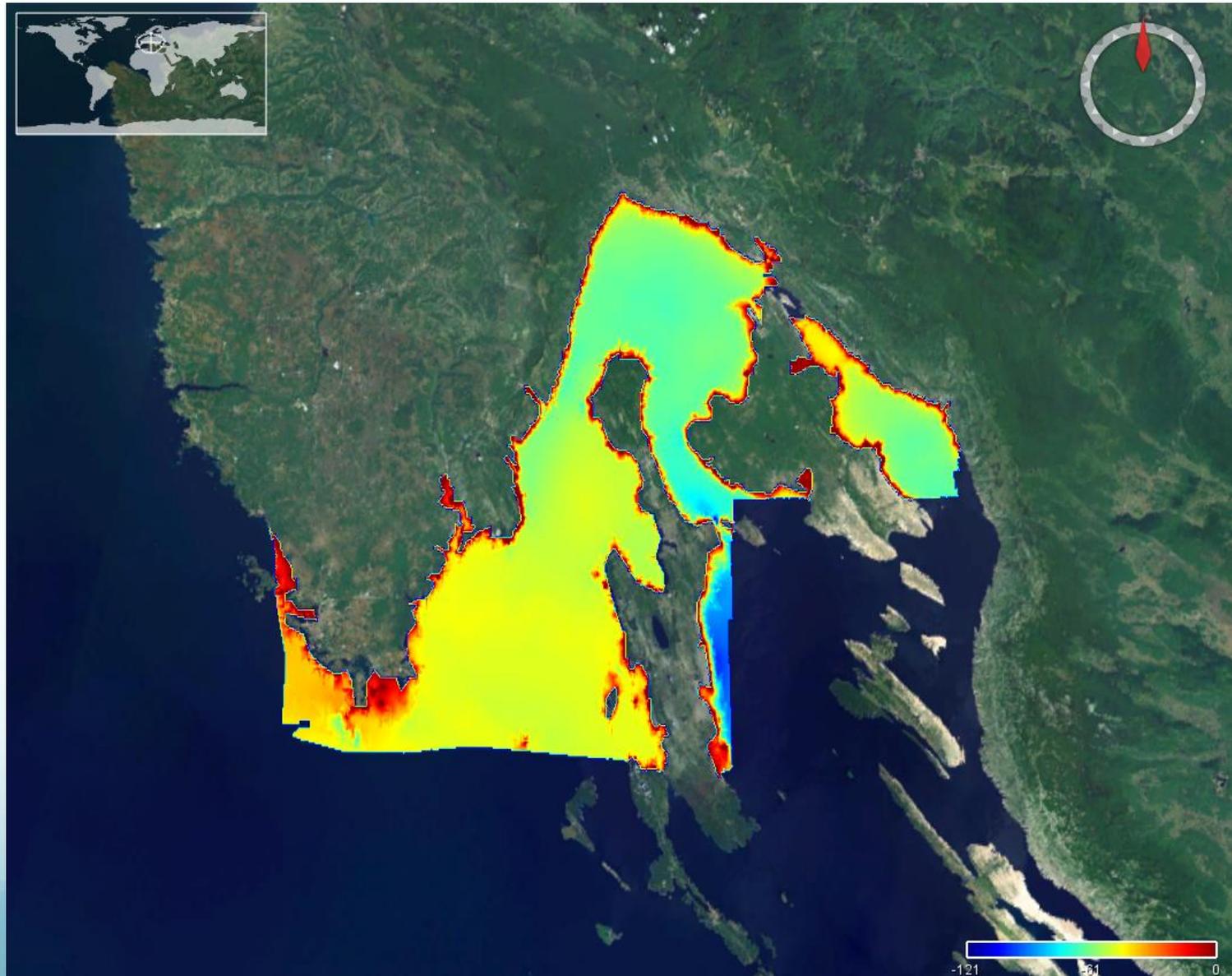
2. Try to find a compromise solution

A Statement was signed (Dec. 2017) in order to deliver the Results

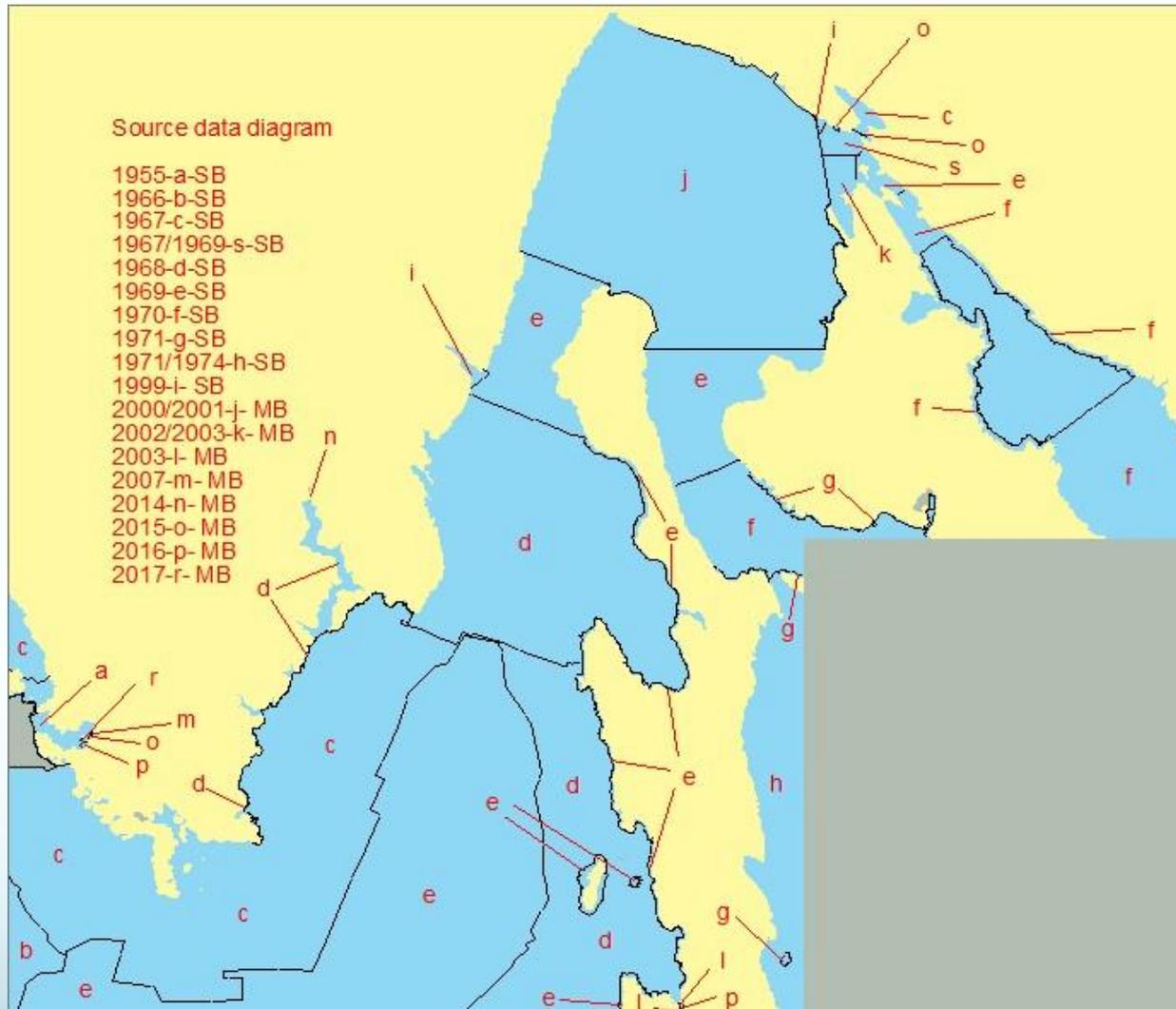
- **DTM** – created using chart data scale 1:50 000 (Res. 230m)
- **Coastline** – created using chart data 1:100 000
- **Metadata** – under preparation – expected to deliver (March 2018)



area

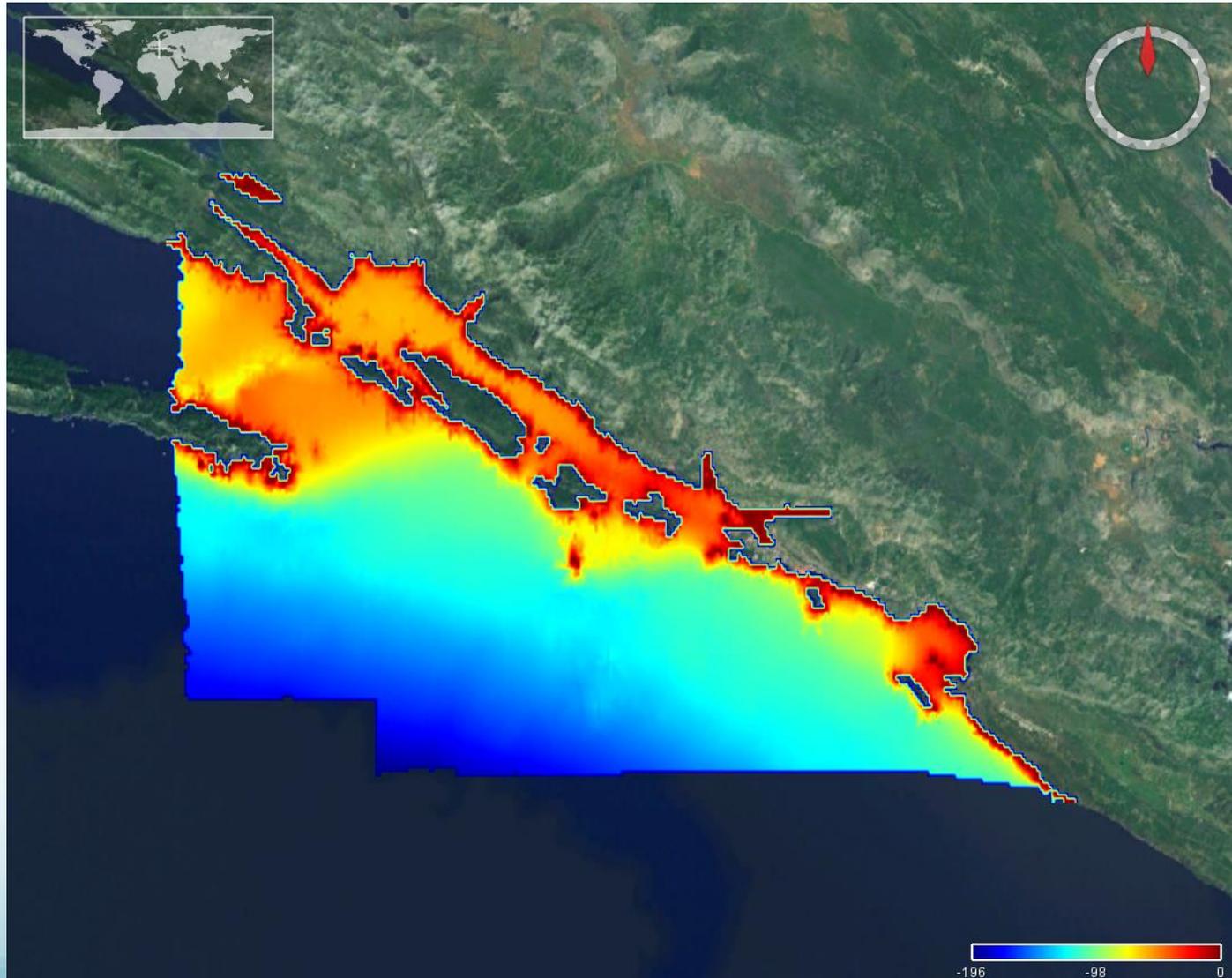


Metadata presenting

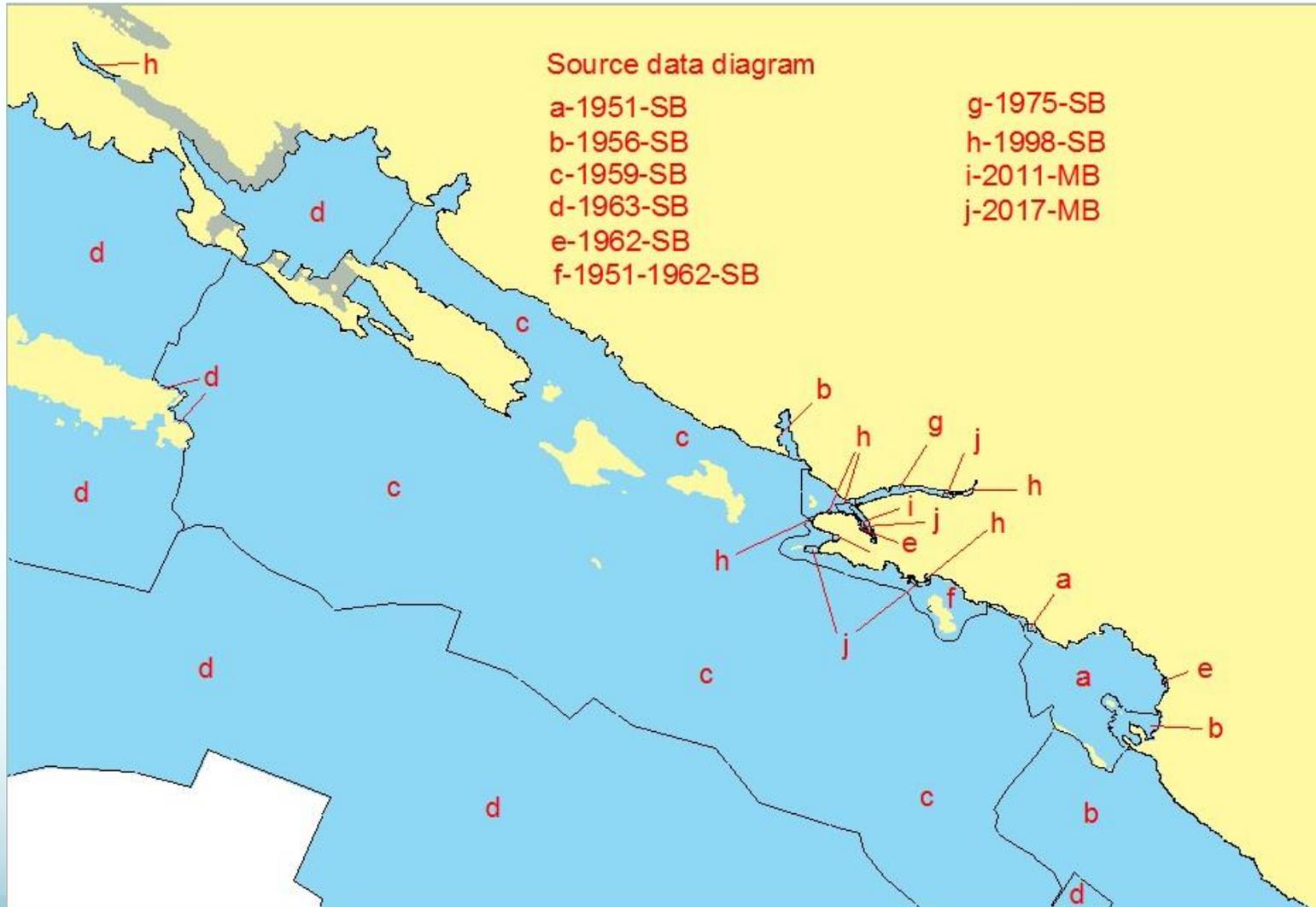


Problem – not complaint with MIKADO metadata SW – Sexstant SW solution

DTM – Solution – Dubrovnik area



Metadata presenting



Problem – not complaint with MIKADO metadata SW – Sextant SW solution