



# **National report of Montenegro**

**Institute of hydrometeorology and seismology  
of Montenegro**

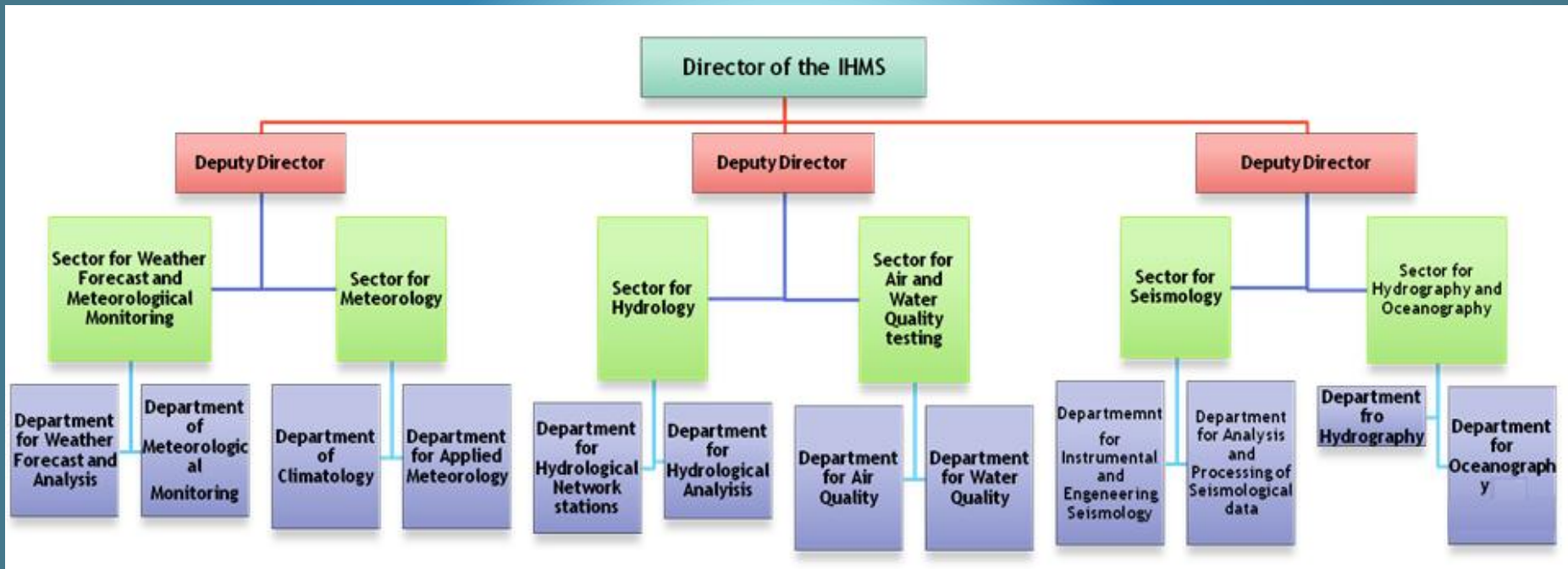
**XXI MBSHC, Cadiz, Spain**

**11 – 13 June 2019.**

# Content

- Institute of hydrometeorology and seismology organizations units
- Sector of Hydrography and Oceanography
- Nautical publications
- Capacity building program
- Goals and plans

# Organization structure of IHMS



# Sector of hydrography and oceanography

## ➤ **Department for Hydrography and nautical cartography**

- Bathymetry
- Side scan sonar surveys
- Magnetometry
- Geodesy
- ENC chart production
- Paper chart production

## ➤ **Department for oceanography**

- Physical oceanography

# Department for hydrography and nautical cartography

## Vessels

### Hydrographic vessel GreatWhite Enterprise



- length: 8.2 m
- draft: 0.8 m
- accommodation capacities:
  - 2 crew members
  - 2 members of survey team



# Department for hydrography and nautical cartography

## Vessels

### Hydrographic vessel ČH-1



- displacement: 6 t
- length: 9.5 m
- draft: 0.5 m
- accommodation capacities:
  - 2 crew members
  - 2 members of survey team

# Department for hydrography and nautical cartography

## Vessels

### Hydrographic vessel WingCat



- length: 5.5 m
- draft: 0.6 m
- accommodation capacities:
  - 1 crew members
  - 2 members of survey team

# Department for hydrography and nautical cartography

## Equipment

- MBES Norbit 200/400kHz,
- SBES Navisound 215,
- CTD Midas SX2 Valeport,
- SSS Edgetech 4125,
- SSS Klein 3900,
- SSS HDS Marine Sonic 900/1800kHz,
- Magnetometer SeaSpy,
- Edgetech USBL portable system,
- GNSS Leica GS018



# Department for hydrography and nautical cartography



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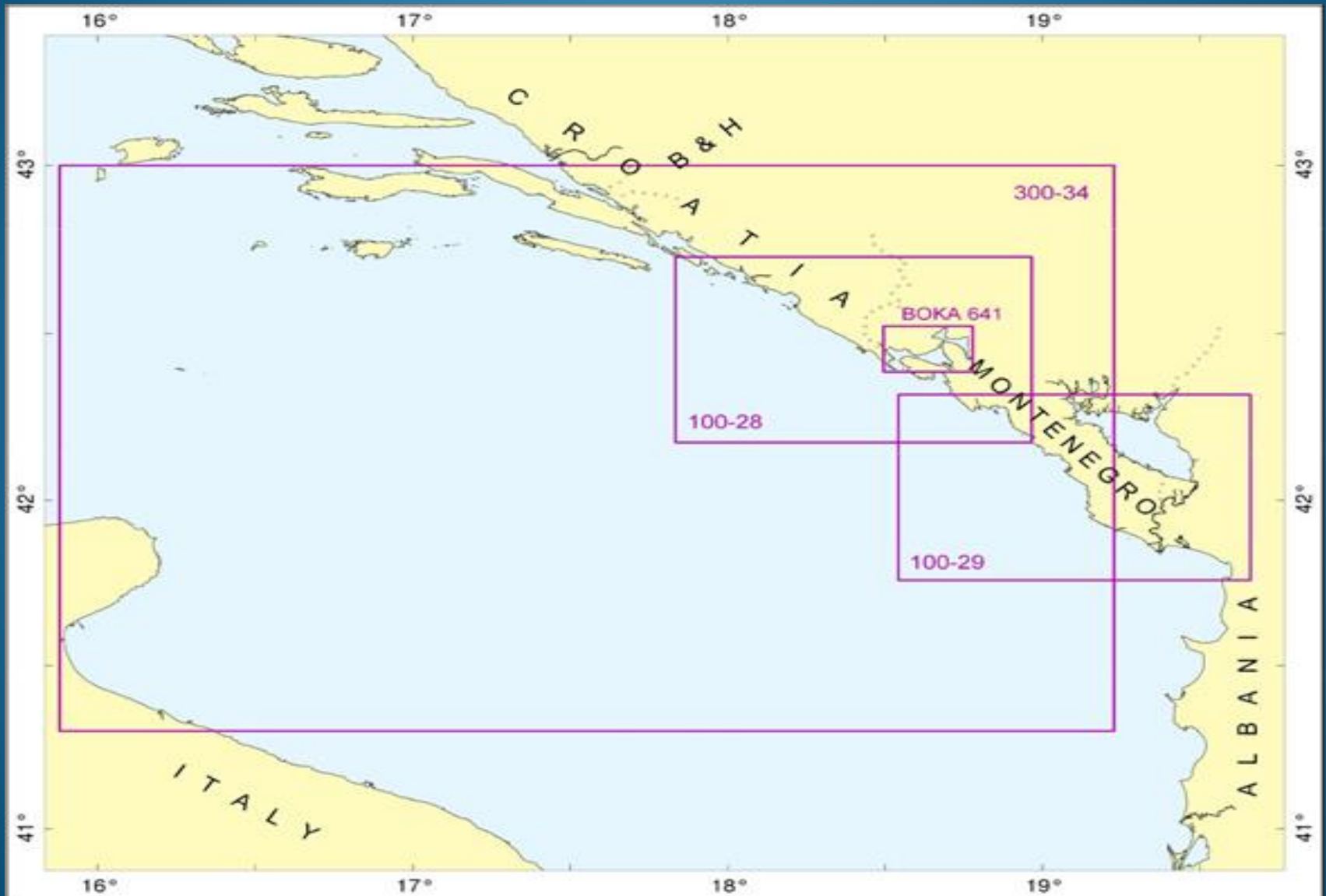


QPS.

QGIS



# Department for hydrography and nautical cartography





# Department for hydrography and nautical cartography

MONTENEGRO 100-1

BOKA 25-1

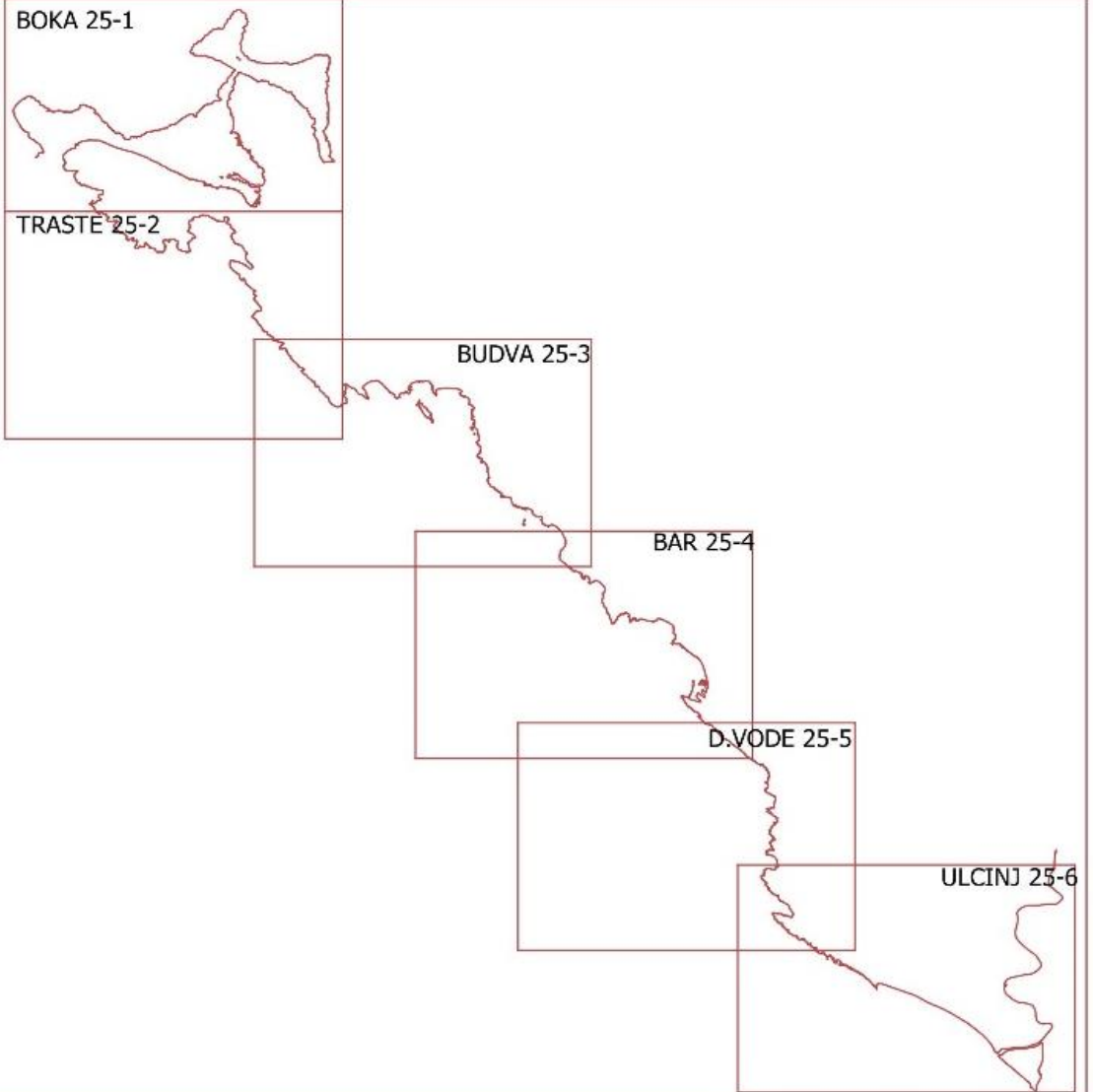
TRASTE 25-2

BUDVA 25-3

BAR 25-4

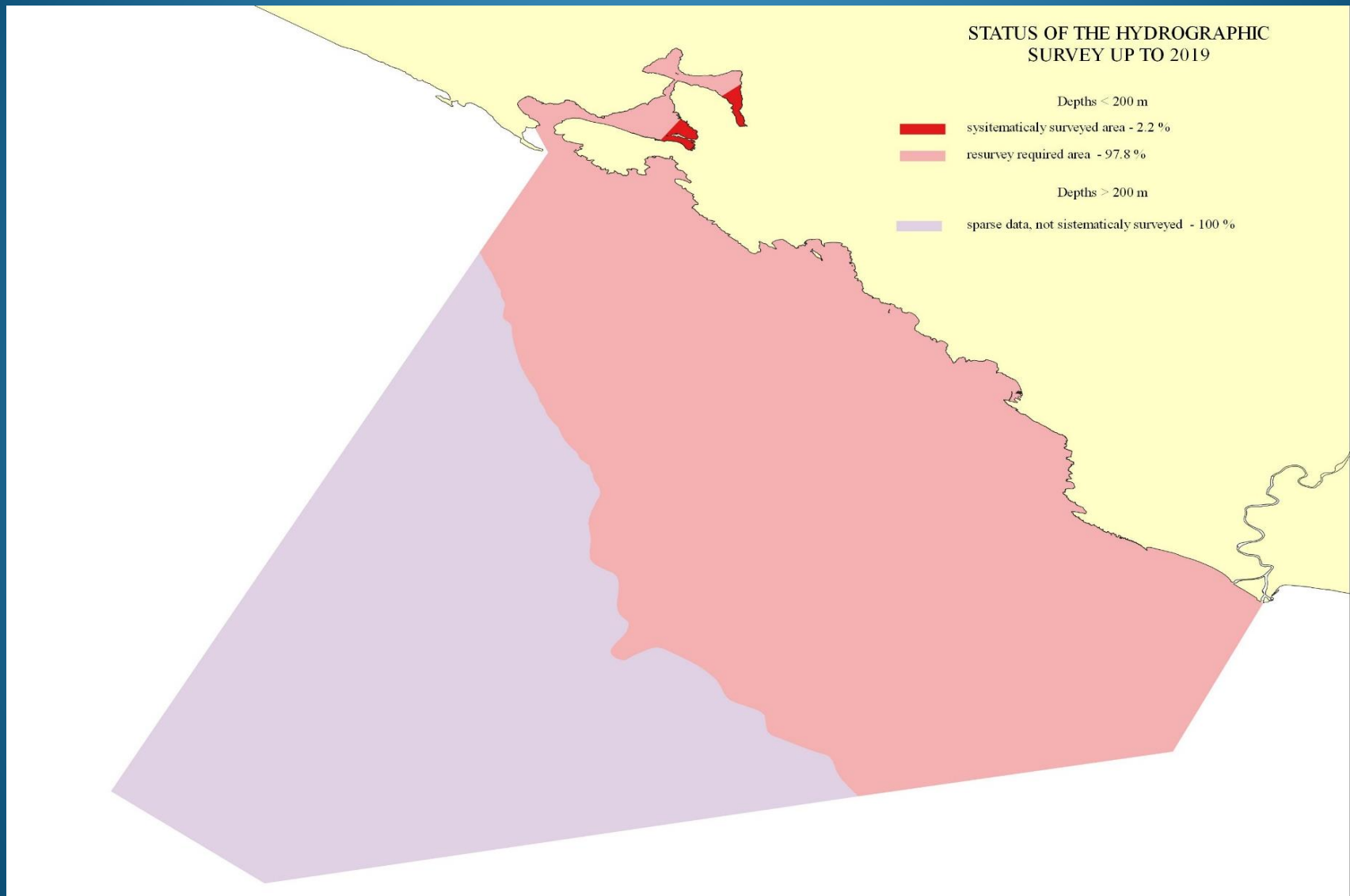
D.VODE 25-5

ULCINJ 25-6





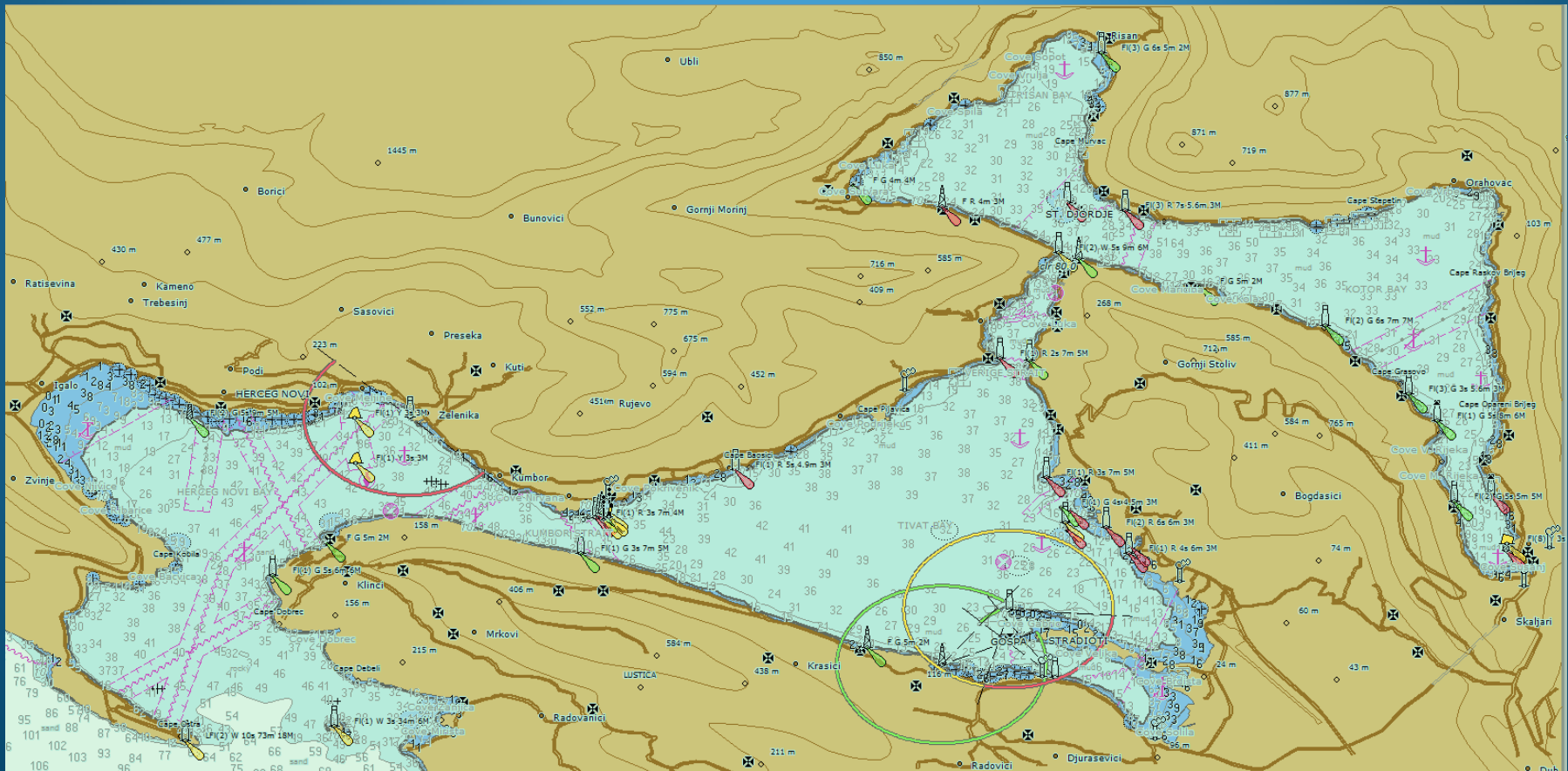
# Department for hydrography and nautical cartography



# Department for hydrography and nautical cartography

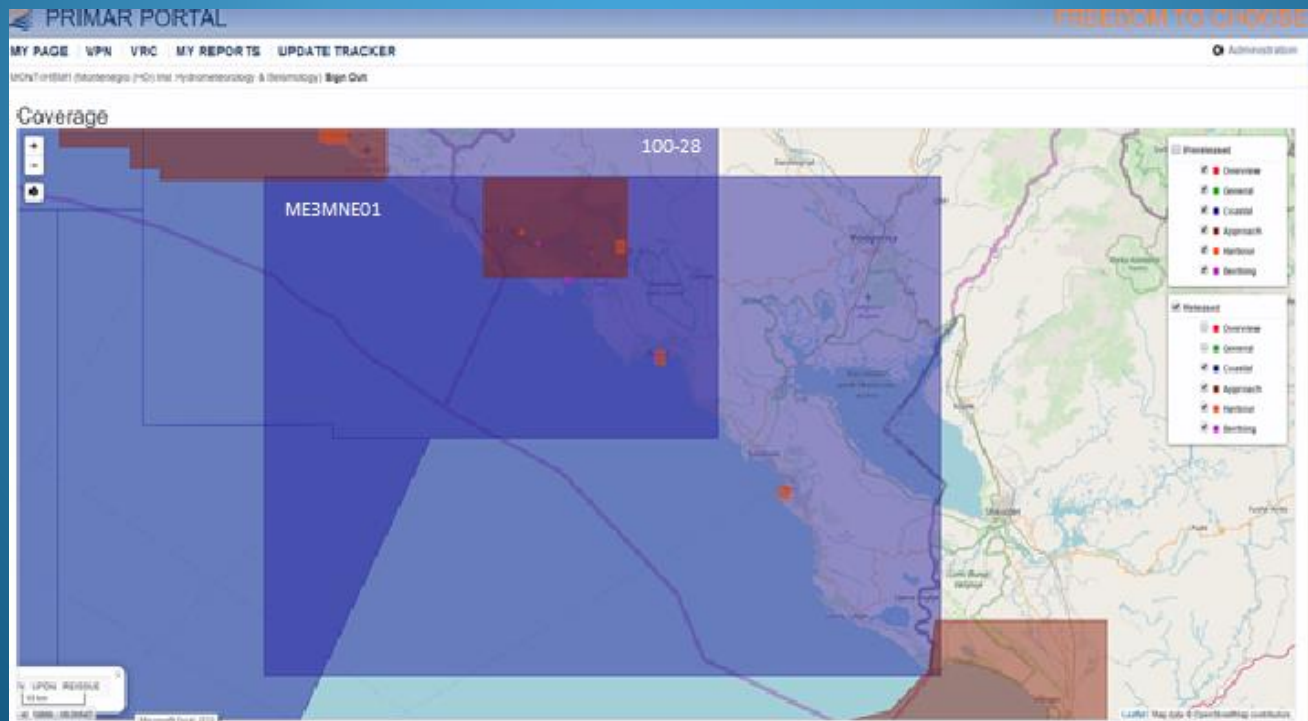
## ENC cells

- ✓ 1 coastal (ME3MNE01);
- ✓ 1 approach (ME4BOK01);
- ✓ 4 harbour (ME5KOT01, ME5BAR01, ME5ZEL01, ME5BUD01);
- ✓ 5 berthing (ME6BON01, ME6PON01, ME6MOG01, ME6LUS01, ME6HNV01)



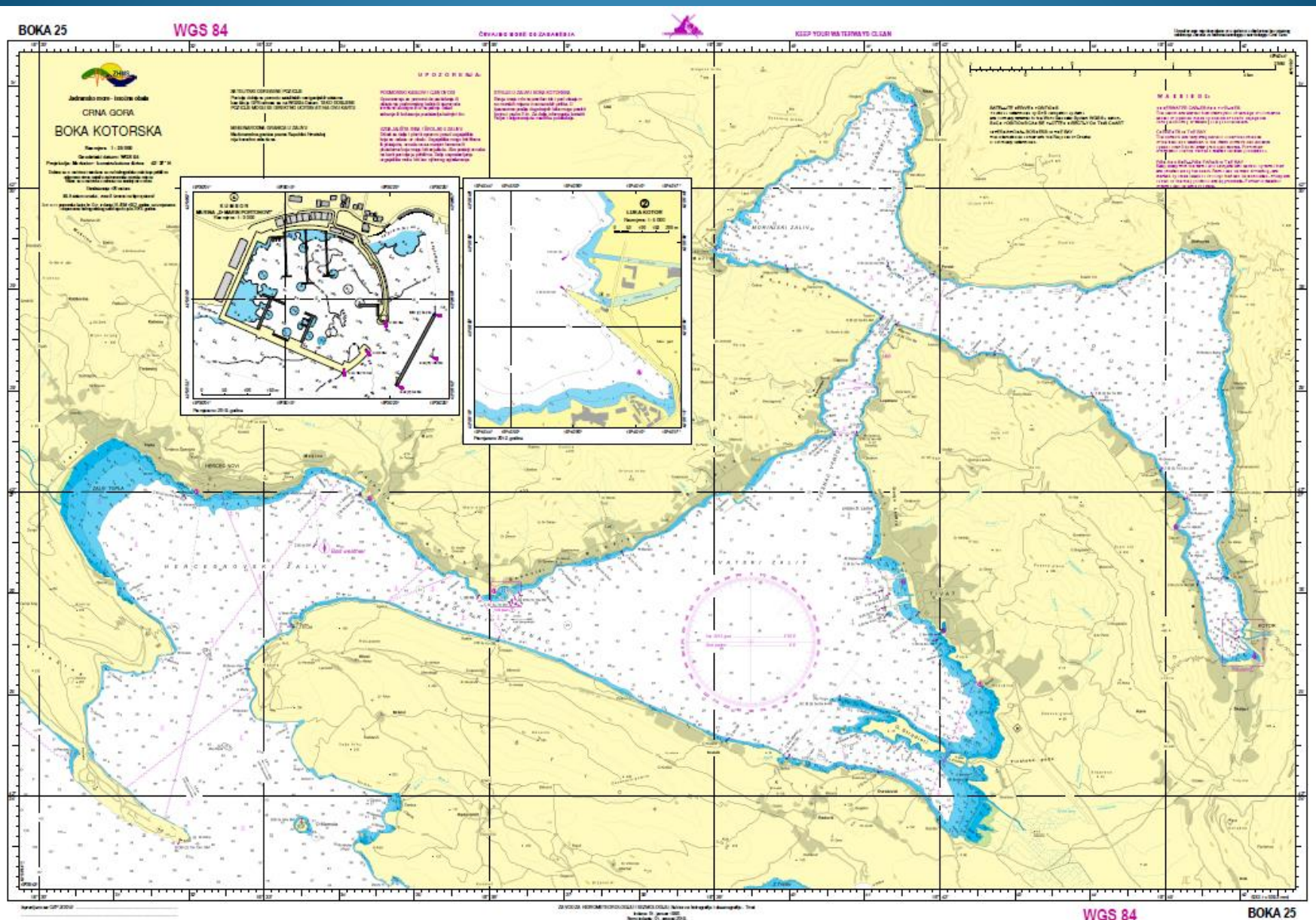
# Department for hydrography and nautical cartography

| MY PAGE  | VPN            | VRC           | MY REPORTS       | UPDATE TRACKER | Administration |
|--|----------------|---------------|------------------|----------------|----------------|
| MONT-IHSM1 (Montenegro (HO) Inst Hydrometeorology & Seismology) Sign Out |                |               |                  |                |                |
| Update Tracker   |                |               |                  |                | Show Map       |
| Cells  |                |               |                  |                |                |
| Cell   | Edition Number | Update Number | Title            |                |                |
| ME5KOT01   | 2              | 1             | Port of Kotor    |                |                |
| ME3MNE01   | 1              | 0             | Montenegro coast |                |                |
| ME5BAR01   | 1              | 0             | Port Bar         |                |                |
| ME5ZEL01   | 1              | 1             | Port Zelenika    |                |                |
| ME5BUD01   | 1              | 0             | PORT OF BUDVA    |                |                |
| ME6BON01   | 2              | 0             | BONICI           |                |                |
| ME6PNV01   | 1              | 0             | PORTONOVİ MARINA |                |                |
| ME4BOK01   | 2              | 0             | Boka bay         |                |                |
| ME6HNV01   | 2              | 0             | Herceg Novi      |                |                |
| ME6MOG01   | 1              | 0             | MOGREN COVE      |                |                |
| ME6LUS01   | 1              | 0             | LUŠTICA BAY      |                |                |





# Department for hydrography and nautical cartography





## Equipment

- Two permanent tide stations
  - Port of Kotor
  - Port of Bar
- One mobile tide station
- RDC 600 currentmeter
- Midas CTD probe

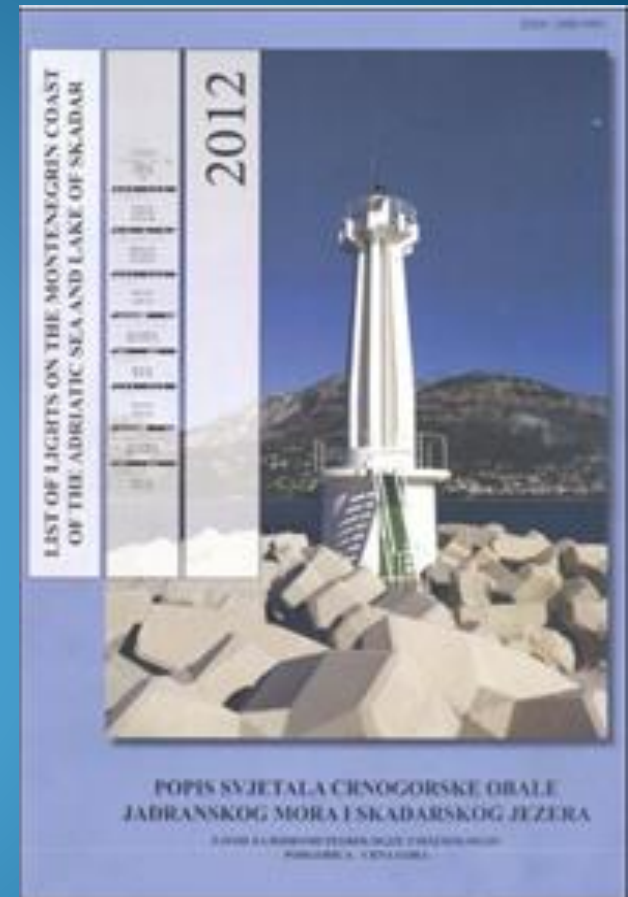
# Nautical publications

## ➤ Nautical publications

- ❖ Notices to Mariners
- ❖ Sailing Directions
- ❖ Pilot: 2013
- ❖ Lists of Lights: 2012

## ➤ Maritime Safety Information (MSI)

- Maritime safety department of Montenegro



# Capacity building program

## **Nautical cartography capacity building program**

- ✓ *Category B course (IHO/FIG/ICA Standards of Competence for Nautical Cartographers)*
- ✓ *Training for Ocean Observation and Hydrographic Surveying (ENC Application)*

# Goals and plans

- Improvement of oceanographic department
- Procurement of the new survey vessel
- Creation of two new approach cells and corresponding paper charts
- Training courses for new professional stuff





**THANK YOU**

**For Your Attention**