

# HELLENIC NAVY HYDROGRAPHIC SERVICE



20<sup>th</sup> Meeting of Mediterranean and Black Seas Hydrographic Commission (MBSHC)

## NATIONAL REPORT OF GREECE

4 - 6 July 2017  
Herceg Novi, Montenegro

## **1. Hydrographic Service:**

### **General**

The Hellenic Navy Hydrographic Service (HNHS) is the governmental body of the Hellenic Republic responsible for conducting hydrographic and oceanographic surveys for the benefit of International and National Navigation as well as for the operational needs of the Hellenic Navy. The primary purpose of conducting hydrographic surveys is to produce and update nautical charts and other nautical publications aiming at the safety of life at sea and the protection of the environment around Greece.

## **2. Surveys**

### **2.1 Coverage of new surveys**

During the period 2015-2016, an extensive systematic program of surveys was conducted. The three hydrographic vessels of the HNHS had been working for 274 days on surveying operations. A total area of 652.21 km<sup>2</sup> has been surveyed, covering national and international waters in the Aegean and Ionian seas. The main 2015-16 operations are depicted in Annex A.

### **2.2 New technologies - Marine GIS**

After the implementation of a pilot project (2009-2011), a Marine GIS has been established for the centralized management of HNHS cartographic data, the automation of production and the synchronization of the products.

## **3. New charts and updates**

During the last two years the cartographic program of HNHS was further continued with the production of new ENC's, updates and national and international paper charts. More specifically the HNHS cartographic production status is the following:

### 3.1 ENC

To date 301 ENC have been released. The ENC are updated on a monthly basis. The present status of the HNHS ENC production program is shown in the following table:

| <b>Scale Category</b> | <b>Released ENC</b> | <b>Target</b> | <b>Coverage %</b> |
|-----------------------|---------------------|---------------|-------------------|
| 1. Overview           | 1                   | 1             | 100.00%           |
| 2. General            | 2                   | 2             | 100.00%           |
| 3. Coastal            | 83                  | 83            | 100.00%           |
| 4. Approach           | 24                  | 32            | 75.00%            |
| 5. Harbour            | 39                  | 45            | 86.67%            |
| 6. Berthing           | 152                 | 169           | 89.94%            |
|                       | <b>301</b>          | <b>332</b>    | <b>90.66%</b>     |

Charts presenting the Usage Bands coverage are attached at Annex B.

#### 3.1.1. ENC distribution method

HNHS distributes its ENC via IC-ENC where is a member.

### 3.3 National and INT paper charts

The following paper charts have been published. The datum in all charts is WGS84.

| MAP#  | CHART# | INT# | TITLE   | AREA                   | SCALE 1: |
|-------|--------|------|---|------------------------|----------|
| 431   | 431    | 3738 | Monemvasia to Souda Bay                           | Aigaio Sea             | 150000   |
| 432   | 432    |      | Kriti I. - Western Part                           | Kriti I.               | 100000   |
| 3132  | 3132   |      | North Evvoikós Gulf<br>Arkítsa Pt to Évripos Pass | North<br>Evvoikos Gulf | 50000    |
|       | 3132A  |      | Soya and Ore Terminals                            |                        | 10000    |
|       | 3132B  |      | Lármes (Lárymna) Bay                              |                        | 5000     |
| 3315  | 3315   |      | Skyros Island                                     | Skyros I.              | 50000    |
|       | 3315A  |      | Kalamitsa Bay                                     |                        | 25000    |
|       | 3315A1 |      | Valaxa Pass                                       |                        | 5000     |
|       | 3315A2 |      | Linaria Harbour                                   |                        | 5000     |
|       | 3315B  |      | Tristomo Bay (Treis<br>Boukes)                    |                        | 15000    |
| 311/3 | 311/3  |      | Port of Thessaloniki                              | Thermaikos<br>Gulf     | 6000     |
| 443/1 | 443/1  | 3788 | Iraklion Harbour                                  | Kriti I.               | 5000     |

A diagram of the new paper charts is attached at Annex C.

## 4. New publications & updates

### 4.1 New publications

Sailing Directions of the Hellenic Coasts (PLOIGOS) vol D, Edition 2015

Sailing Directions of the Hellenic Coasts (PLOIGOS) vol C, Edition 2016

### 4.2 Updated publications

Reprint of List of Lights of the Hellenic Coasts Edition 2015, 2016

All publications are available at HNHS website [www.hnhs.gr](http://www.hnhs.gr), HNHS selling offices or through associated companies/ shops.

## 5. MSI

### 5.1 Existing infrastructure for transmission

HNHS acts as the Hellenic NAVTEX Coordinator for the sea areas covering Greek and adjacent seas (which are coordinated by NAVAREA III) and collects all the relevant Maritime Safety Information (MSI) providing accurate information which ships require for their safe navigation. For this purpose elaborates all the relevant navigational, meteorological and other safety and urgent information, in accordance with the standards, organization and procedures of the JOINT IMO/IHO/WMO MANUAL ON MARITIME SAFETY INFORMATION (MSI) drafting the corresponding NAVTEX bulletins. These bulletins are promulgated, on International and National NAVTEX Service using the English

and Greek Languages, by three Hellenic NAVTEX Stations (IRAKLEIO – KERKYRA – LIMNOS), that were duly established since 1986 in accordance with IMO and IHO rules ,guidelines and principles and since then have been operating successfully broadcasting MSI within their respective NAVTEX Service Areas.

Serving the Safety of Navigation, Hellenic NAVTEX coordinator responds immediately to requests of adjacent NAVTEX Coordinators to promulgate MSI messages via the Hellenic NAVTEX Stations in cases of temporary technical problems.

In the last two years 2016 – 2017 a total of 166 Navigational Warnings (NAVHELLEN'S) were delivered to the NAVAREA III Coordinator for further promulgation.

### 5.1.1 IRAKLEIO NAVTEX STATION [H] – [Q] – [S]

During its operation in 2016 and 2017 a total of 10283 NAVTEX bulletins have been transmitted containing 1363 Navigational Warnings (NAVWARNS), 4364 Meteorological – Forecasts, 903 Meteorological Warnings (GALEWARNS) and 29 Search and Rescue messages (SARWARNS) .

### 5.1.2 KERKYRA NAVTEX STATION [K] – [P]

During its operation in 2016 and 2017 a total of 7051 NAVTEX bulletins have been transmitted containing 458 Navigational Warnings (NAVWARNS) , 3182 Meteorological – Forecasts , 504 Meteorological Warnings (GALEWARNS) and 9 Search and Rescue messages (SARWARNS).

### 5.1.3 LIMNOS NAVTEX STATION [L] – [R]

During its operation in 2016 and 2017 a total of 6787 NAVTEX bulletins have been transmitted containing 594 Navigational Warnings (NAVWARNS) , 3182 Meteorological – Forecasts , 424 Meteorological Warnings (GALEWARNS) and 12 Search and Rescue messages (SARWARNS) .

Annex D depicts the Hellenic NAVTEX Stations Service Area limits.

## 6. C-55

2015 update as follows:

1.1 Status of hydrographic survey of all navigable waters, including internal waters, out to the limits of the EEZ: (Please refer to the guidance given in the introductory text “Analysis of the Status of Surveys”.)

Survey coverage, where:

A = percentage which is adequately surveyed.

B = percentage which requires re-survey at larger scale or to modern standards.

C = percentage which has never been systematically surveyed.

|               | A         | B         | C         |
|---------------|-----------|-----------|-----------|
| Depths < 200m | <b>36</b> | <b>55</b> | <b>9</b>  |
| Depths > 200m | <b>11</b> | <b>60</b> | <b>29</b> |

## 2.1 Status of nautical charting within the limits of the EEZ

Coverage of charts published by your organization, where:

A = percentage covered by INT series, or a paper chart series meeting the standards in M-4.

B = percentage covered by Raster Navigational Charts (RNCs) meeting the standards in S-61.

C = percentage covered by ENC's meeting the standards in S-57.

| Purpose/Scale   | A          | B | C          |
|---|------------|---|------------|
| Offshore passage/Small                                | -          | - | <b>100</b> |
| Landfall and Coastal passage/Medium                   | <b>100</b> | - | <b>100</b> |
| Approaches and Ports/Large                            | <b>95</b>  | - | <b>87</b>  |
| Percentage of Group A showing depths in metres        | <b>100</b> |   |            |
| Percentage of Group A referenced to a satellite datum |            |   |            |

## 7. **Capacity Building**

HNHS's Director joined in November-December 2016 an IHO Technical Visit Team, with the aim to provide Capacity Building services to Montenegro and Albania.

### 7.1 **Domestic training**

HNHS personnel has been trained in various ENC production issues and Quality Control procedures.

### 7.2 **Foreign training**

HNHS personnel attended the following training courses:

- a. CARIS LOTS
- b. Seabat and PDS training (Teledyne)

### 7.3 **Status of national, bilateral, multilateral or regional development projects with hydrographic component**

HNHS has signed bilateral arrangements with the HO's of Bulgaria, Cyprus, Georgia, Romania, Germany, Italy, France, Jordan, Korea, Norway, Russia, Montenegro, Slovenia, Tunisia, UK, Ukraine and USA. Discussions are in progress with Croatia, Egypt, France and Israel.

Since 2014, HNHS has taken part in a consortium consisting of eighteen European HO's, Public Bodies and Institutions to undertake the Coastal Mapping project (MARE/2014/10). The service contract was signed on 26<sup>th</sup> of June 2015, the relevant portal was opened to the public on 23<sup>rd</sup> December 2015 and the Final Report was delivered to EASME on 6<sup>th</sup> of January 2017.

## 8. **Oceanographic Activities**

### 8.1 **General**

The mission of the HNHS in the area of Oceanography includes:

- Conducting oceanographic surveys in the Hellenic seas and the Eastern Mediterranean Sea and embodying the results into relevant studies.

- Supporting the Greek Navy and other national defense bodies by providing the required data and information for the tactical exploitation of the marine environment.
- Supplying oceanographic data and conduction of surveys on behalf of third parties both from the private and public sector.
- Prediction of the wave field in Greek waters.

## **8.2 Activities**

- Oceanographic cruises using the HNHS hydrographic/oceanographic vessels for the assessment of the marine environment including the acquisition of physical and geological data along a network of sampling stations designed for the areas of interest to the Hellenic Navy. All data and information gathered is processed and used in order to support naval operations in relation to anti-submarine, mine and amphibious warfare.
- Continuous measurement of sea level with tide gauges in a network of 22 permanent stations, located at several Greek ports around the coastline of Aegean and Ionian Seas. One station has been upgraded to output the data in digitized form, in order to be able to transmit in real time.
- Prediction of the wave field based on the prevailing wind speeds and directions in a specific area in order to provide the Ministry of Mercantile Marine with information to assess the navigational conditions for specific vessel types in different areas.

The HNHS tide gauge network is depicted in Annex E.

### **Other activities**

#### **9.1 Participation in IHO Working Groups**

HNHS participates in the following IHO Commissions, Committees, Sub-Committees and Working Groups: IRCC, HSSC, MBSHC, HCA, WWNWS, NCWG, LAWG, TSMAD.

#### **9.2 Disaster prevention**

Following the decision of IOC / UNESCO to develop a Regional Tsunami Warning Center (RTWC) at the Northeastern Atlantic, Mediterranean and Connected Seas area, Greece has started working on the creation of a National Tsunami Warning Center (NTWC). A number of National Agencies and Institutions contribute to this effort under the supervision of the Seismological Institute of the National Observatory of Athens.

#### **9.3 Environmental protection**

HNHS in cooperation with other national organizations is responsible for the collection of any new mammal observation data in order to update the existed database.

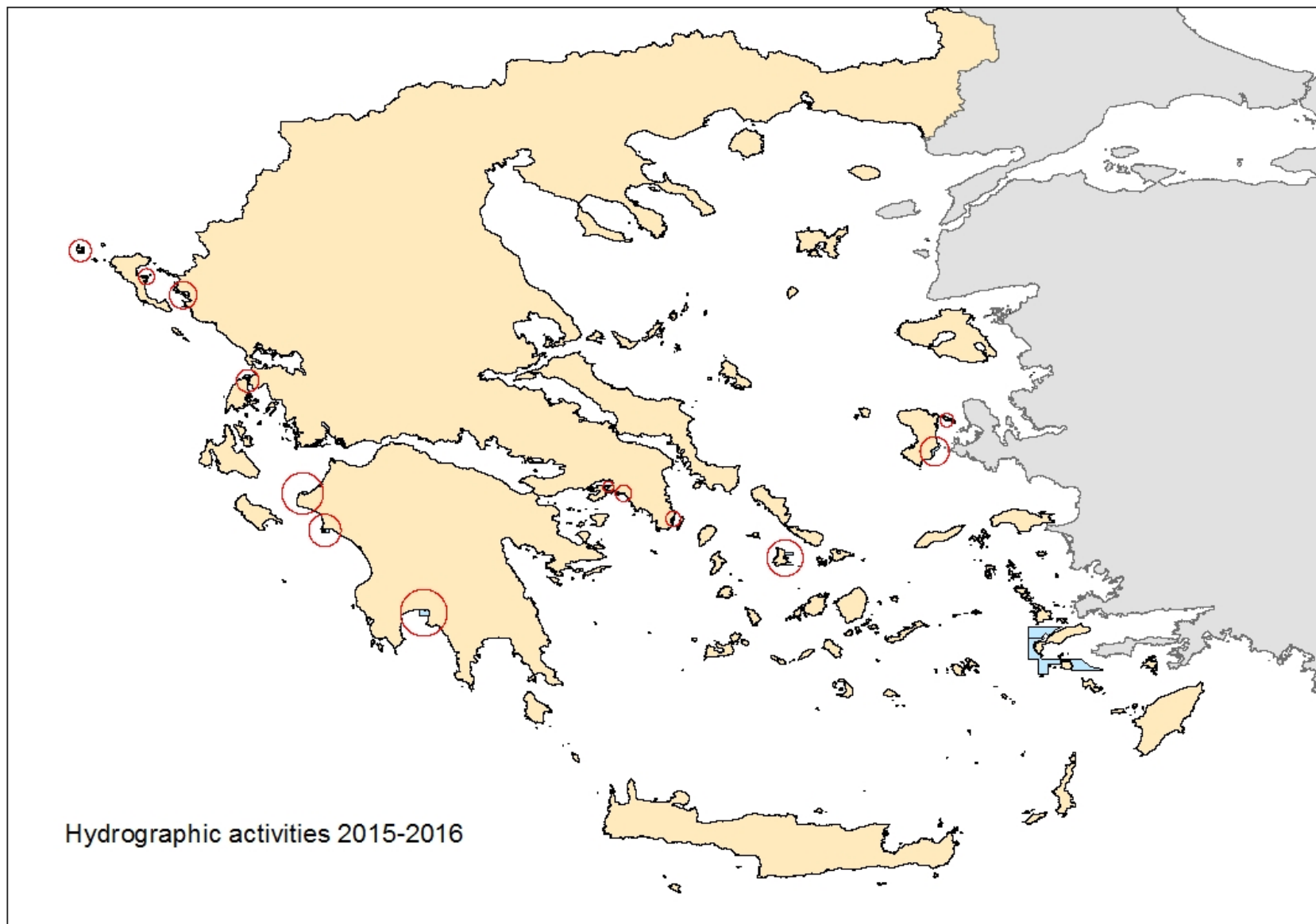
#### **9.4 National SDI**

HNHS participates in the national SDI of Greece, which was established in 2010 under the Environmental Ministry, contributing mainly with bathymetric data.

## **10. Conclusions**

HNHS invests in people and utilizes modern tools to keep its rate of growth steadily ascending for the sake of the safety of Navigation.

### Hydrographic Activities 2015-2016

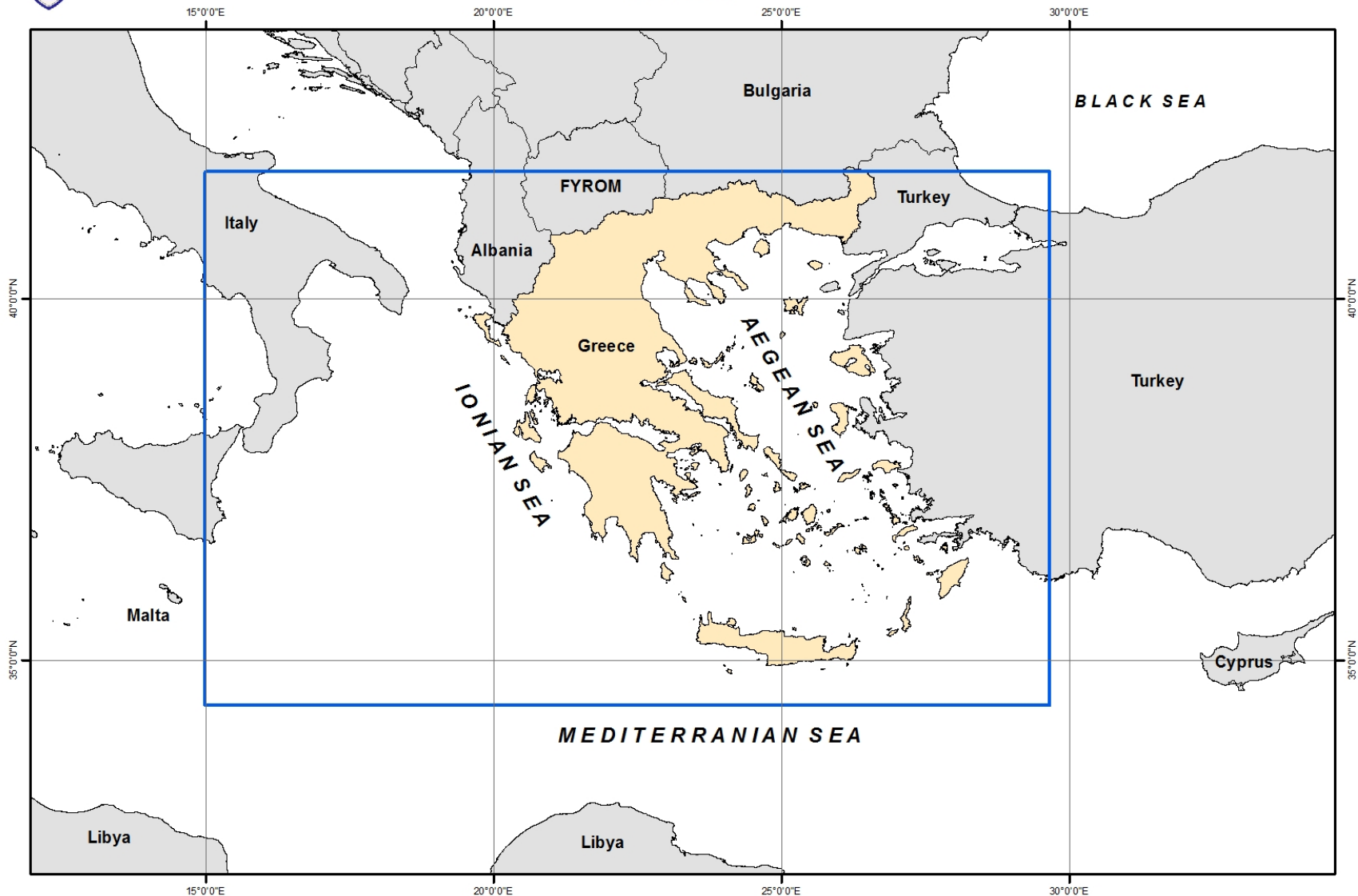






Hellenic Navy Hydrographic Office

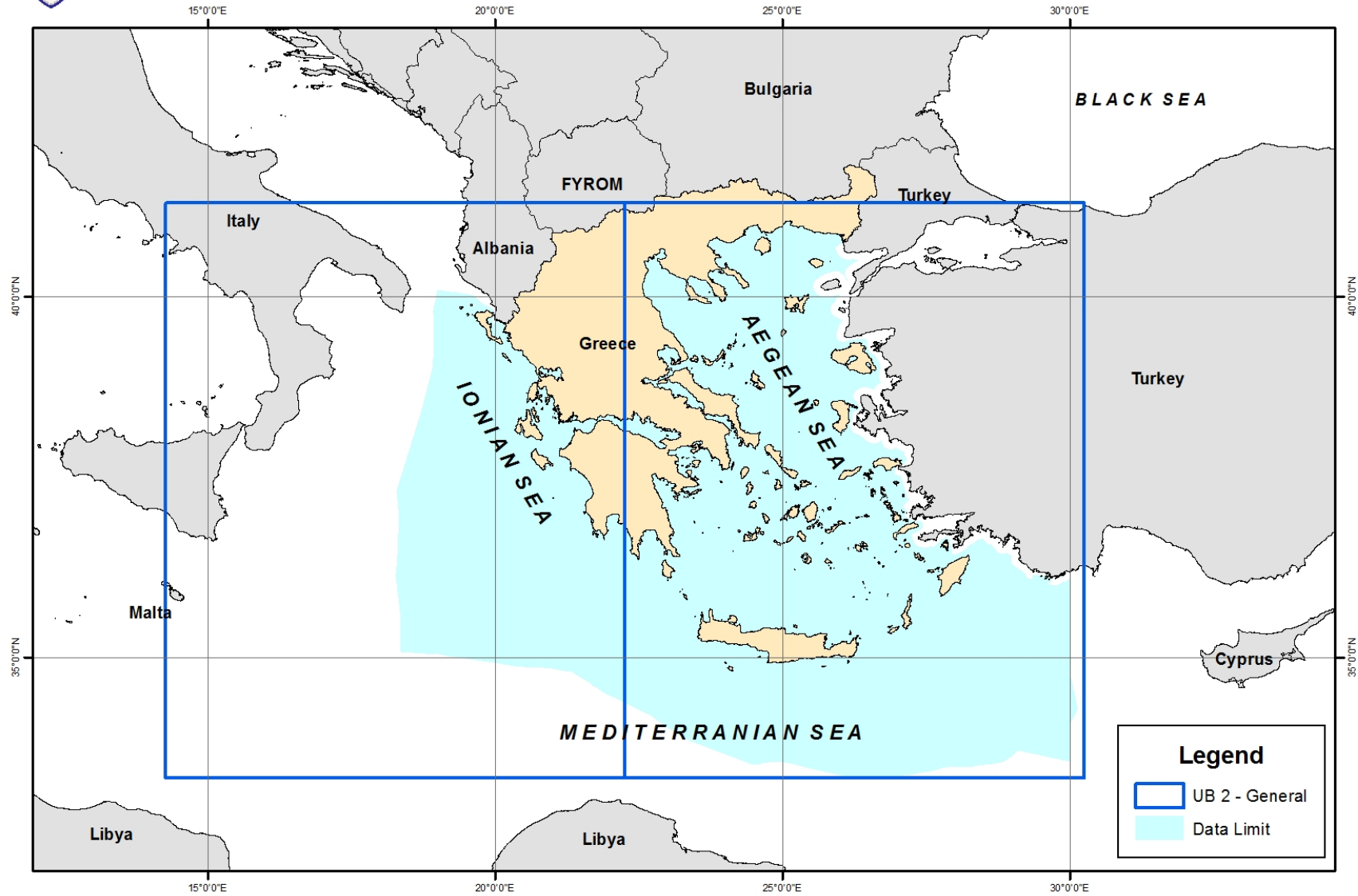
### Usage Band 1 Coverage Overview





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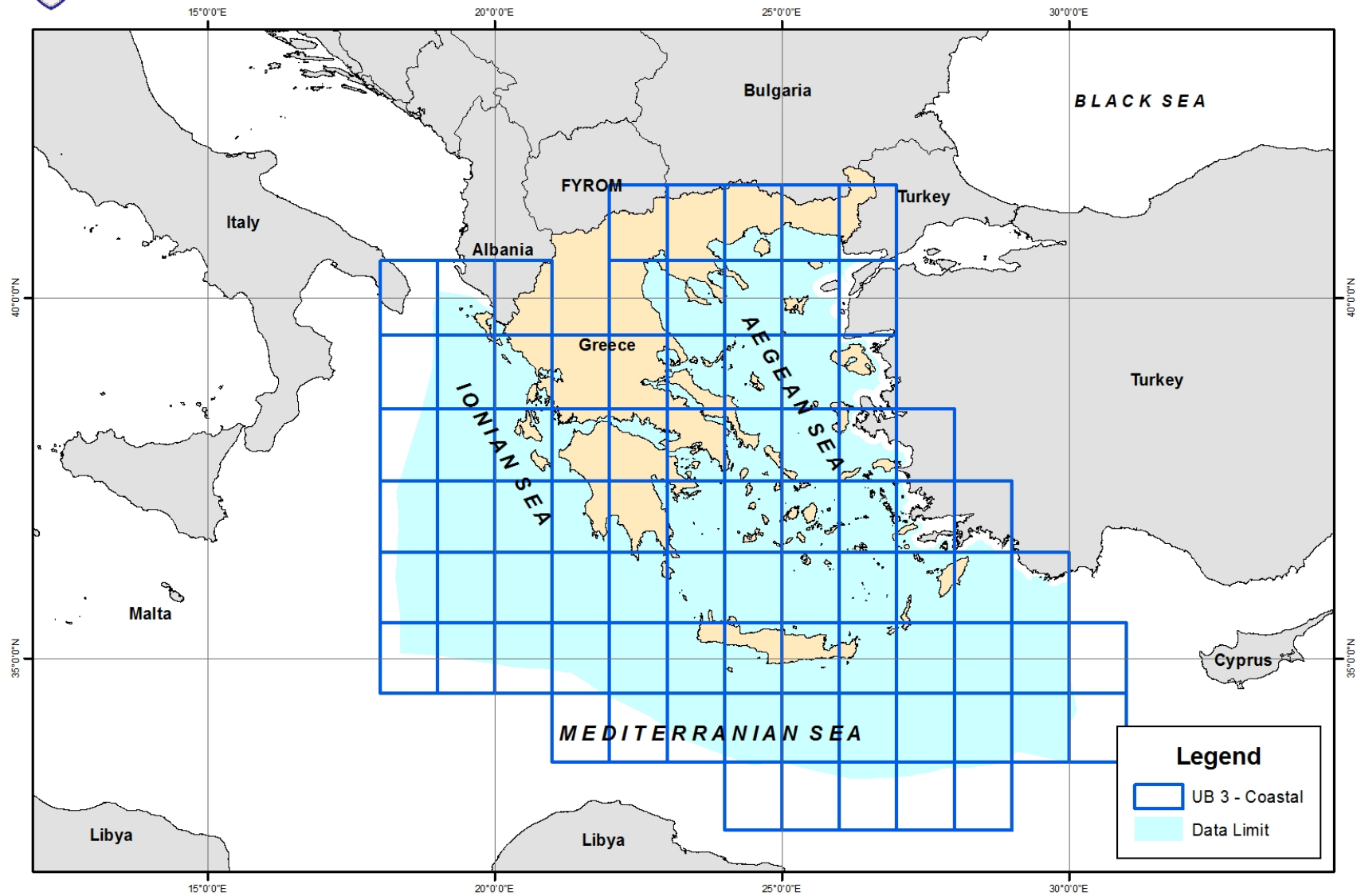
### Usage Band 2 Coverage General





Hellenic Navy Hydrographic Office

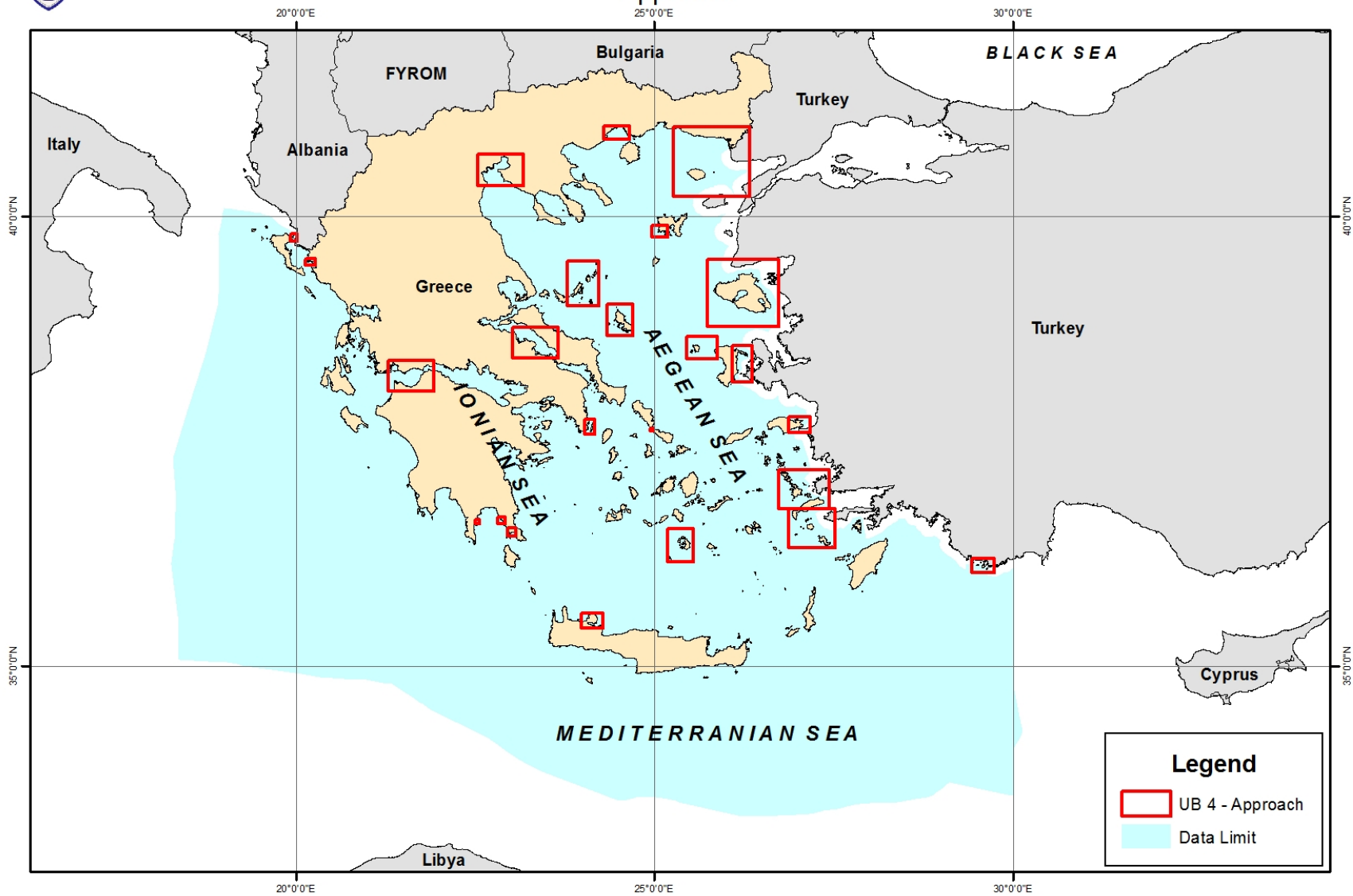
### Usage Band 3 Coverage Coastal





Hellenic Navy Hydrographic Office

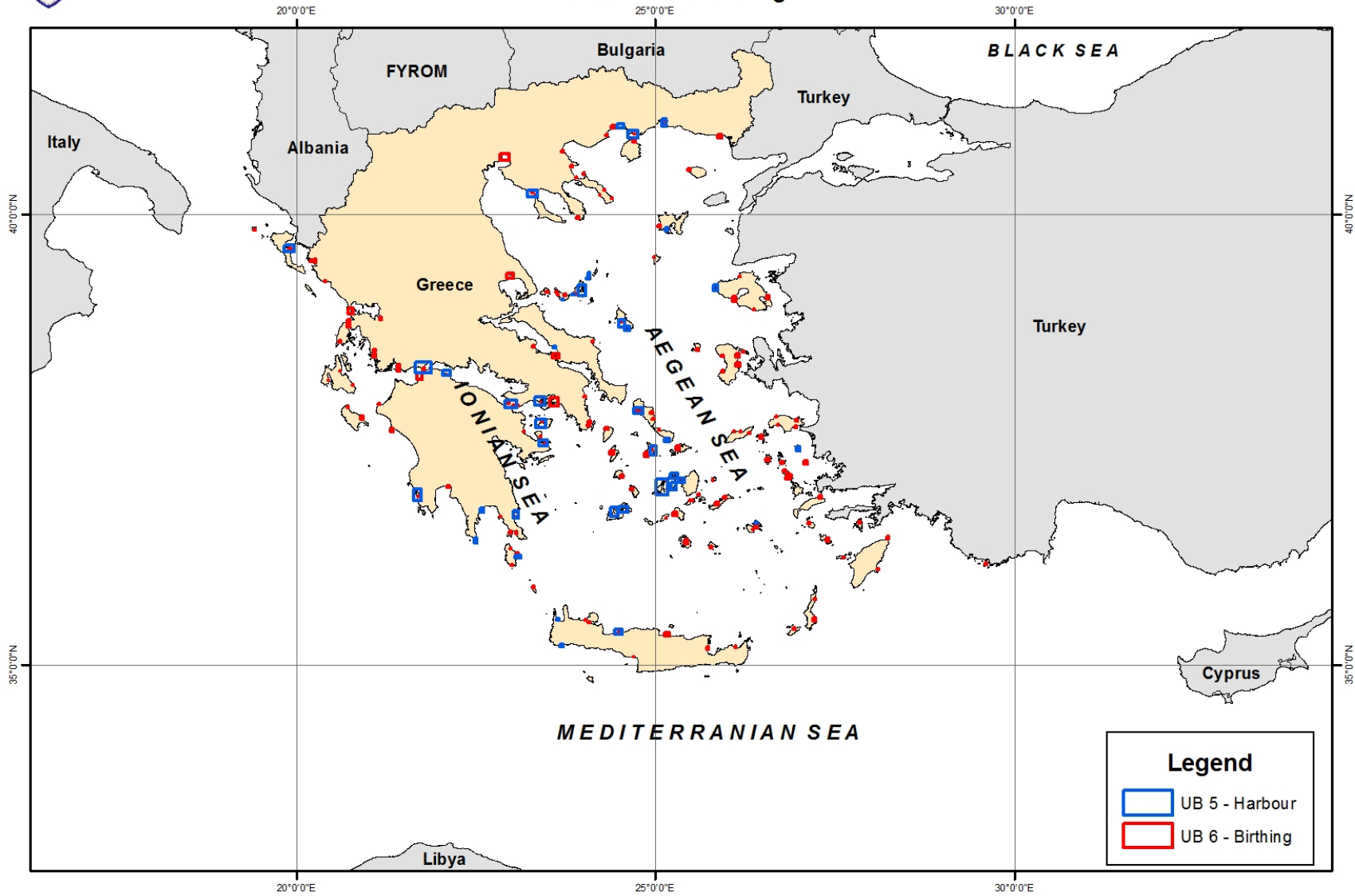
### Usage Band 4 Coverage Approach



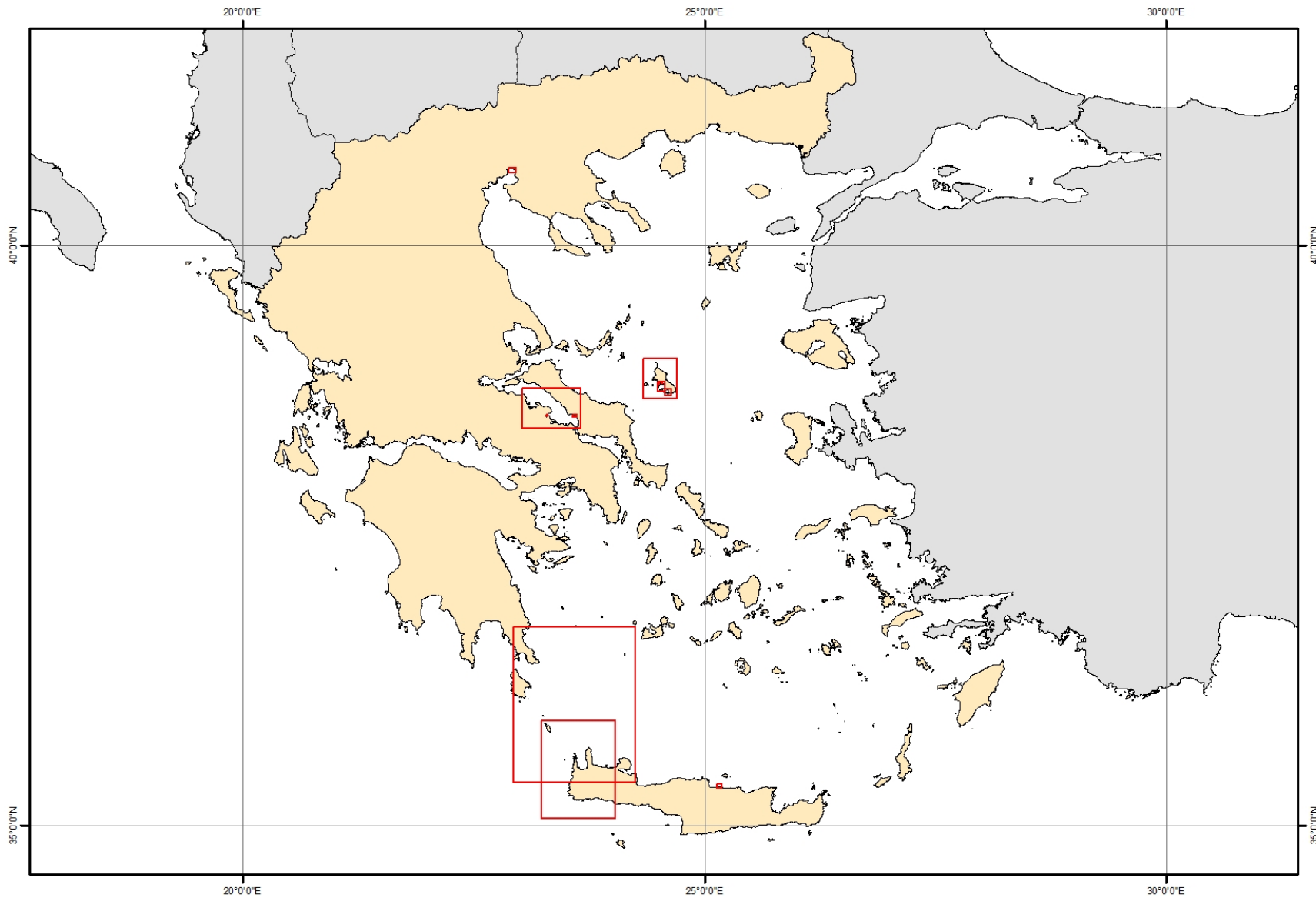


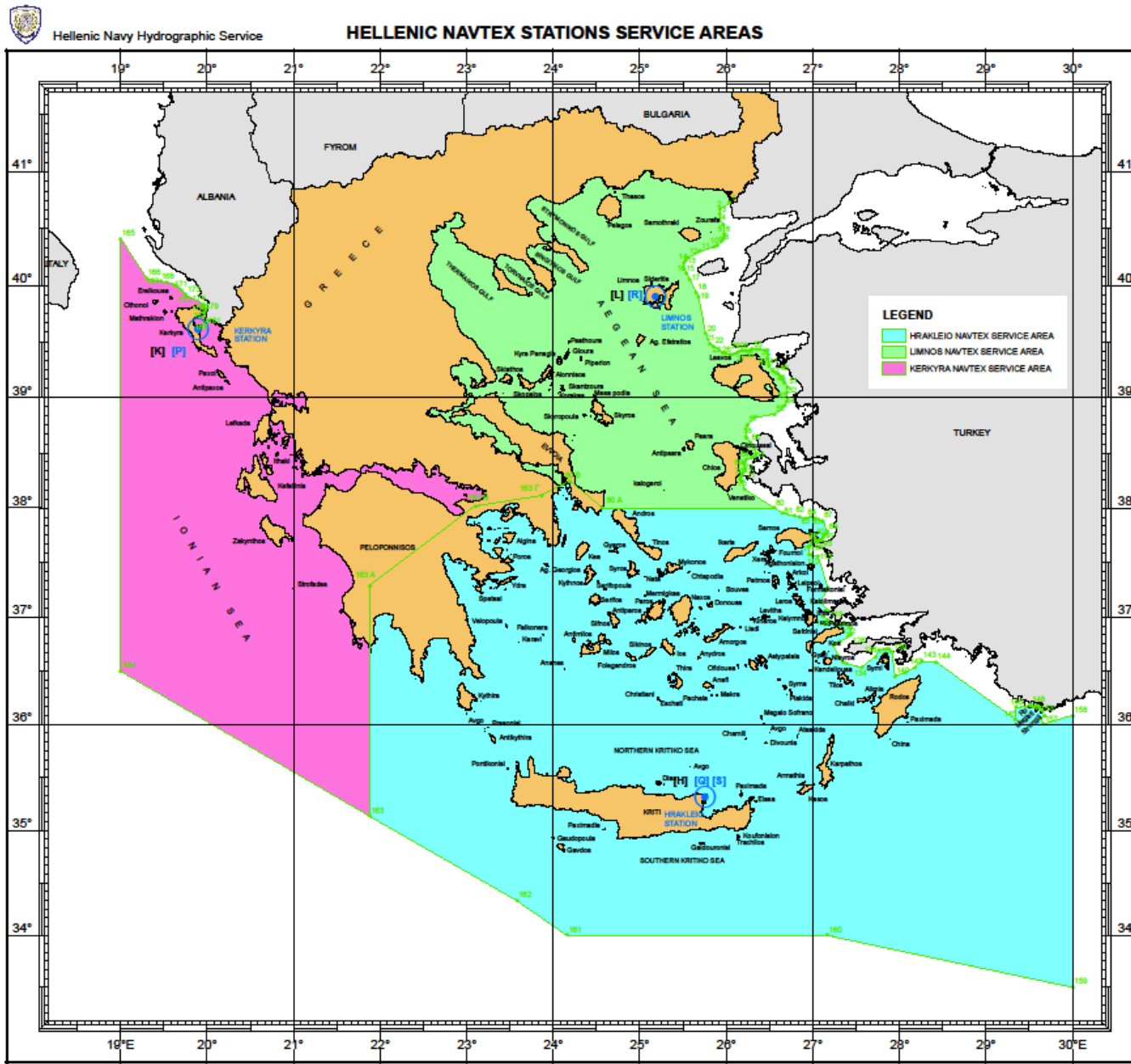
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### Usage Bands 5, 6 Coverage Harbour - Birthing



### National Paper Charts







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# Analogue and Digital Gauges

