


## The Role of Hellenic Navy Hydrographic Service in Preparing for the Olympic Games



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## Introduction - HNHS Fields of Activities

**Mission**

- Support of National and International Navigation
- Contribute to the safety of life at sea
- Expertise advice at Greek public organizations in relevant fields (Hydro, charting, Ocean, etc)
- Promotion of marine sciences
- National defense support in geospatial and environmental issues.
- Contribute to the National Geographical Policy on issues related to the marine sciences

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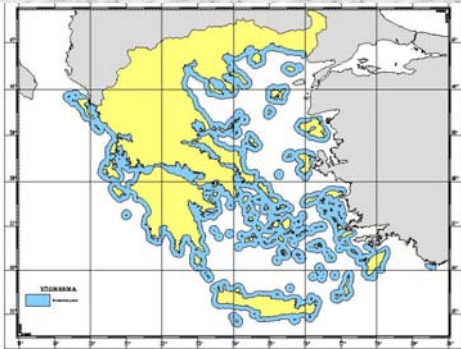
## HNHS Fields of Activities (con't)

- **Work to be done**

Land Area	131.986 km2
Territorial Waters	112.965 km2
EEZ - Continental Shelf	372.077 km2
Coastline development	18.400 km
Islands and Rocks	9.835
Gulfs and Bays	1.354
harbors and Ports	520
Straits and Channels	161

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## Greek Territorial Waters



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## HNHS Fields of Activities (con't)

- **Personnel**

**HNHS**

- Military personnel: 30 persons
- Civilian personnel: 132 persons

**H/S – OS Vessels**

- H/S-OS Nautilus 43 persons
- H/S-OS Pytheas 40 persons
- H/S Stravon 30 persons
- Hydro Launch 5 persons

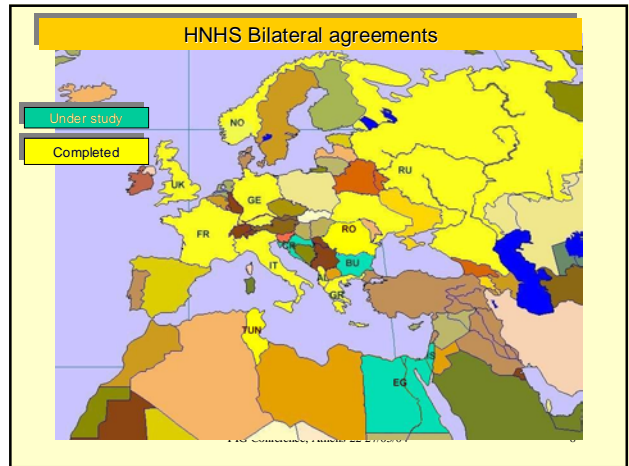
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## HNHS Fields of Activities (con't)

Greek Hydrographic Vessels

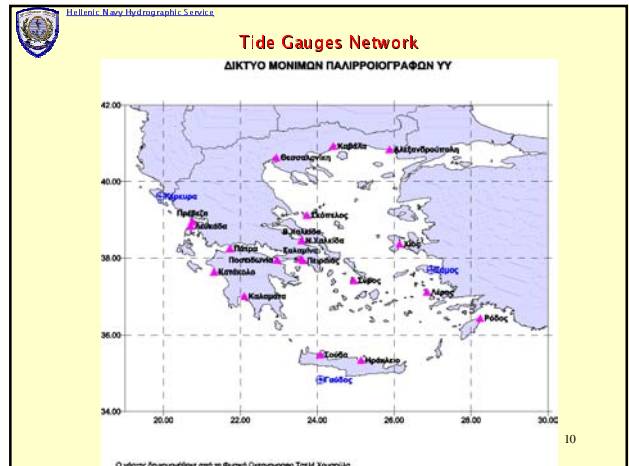
H/S - OS Nautilus  
H/S - OS Pytheas  
H/S Stravon  
Hydro launch 14



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## Fore and Backshore limits Determination

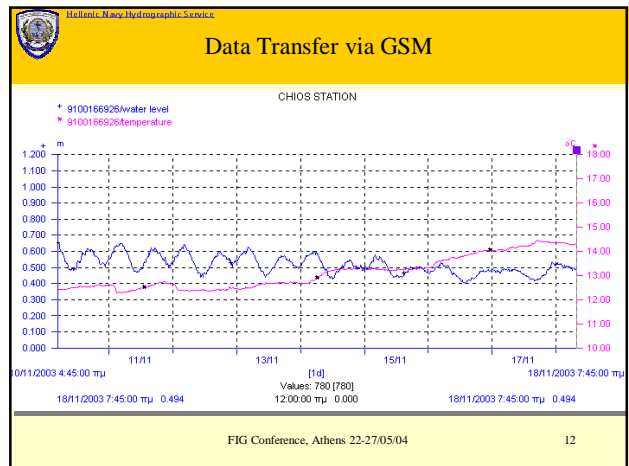
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## Tide Gauge Upgrading

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### Reasons required HNHS involvement in Olympic Games Athens 2004

- Depiction of the new shape of the coastline due to new Olympic works
  - Decisions and plans concerning the Management of Olympic Coastal Complexes
  - Depict on nautical charts the new coastal zone activities
- Hydrographic surveys on new Olympic marinas, resurvey of Piraeus port and main part of Saronic bay.
  - Production of new paper charts
  - Production of ENC's (IHO-S57)
  - New Seabed Investigation (SSS imagery) at specific areas
  - Support the sea zone management and traffic control of Saronic bay area.

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### Reasons required HNHS involvement in Olympic Games Athens 2004

- Need for positioning new lights, buoys, other conspicuous points.
- Determination of maritime sailing areas limits
- Re-determination of fore and back shore limits in order to define the new public coastal zone.
- Ocean surveys in Saronic bay area to support marine engineering works/structures.

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### Requirements

- Establishing and manning a new office within HNHS focused on the coordination of activities for supporting the Olympic games Athens 2004.
- Weekly and Monthly participation in various meetings - forums related to the preparation and coordination of the Olympic Games for given consultation in disciplines concerning hydrography and charting.
- Exchange of thousands of letters/faxes/e-mails/telephone calls for giving technical advice and proposals to other involving Ministries and Organizations.

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### Requirements (con't)

- Hydrographic, geodetic and topographic surveying using new techniques required intergraded systems at the coastal areas of new works
- Chart production and updating in a very short notice.
- Electronic Chart Production for securing the safety of navigation of all the expected vessels.
- Support of Vessel Traffic Systems of the areas of interest for better maritime monitoring and control ensuring the safety of life at sea.
- Geospatial and hydrographic support of exercises done or other operations related to the security of Olympic Games

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### Surveys undertaken

- Agios Kosmas New Olympic Sailing Centre
- Coastal reformation for the development of the appropriate site for beach volley and Flisvos marina master plan facilities.
- Coastal recreation at area.
- New Peace and Friendship stadium marina
- New marina at Delta Falirou area.
- Topographic and geodetic surveys from Piraeus up to Sounio Cape for determination of the most up to date coastline and main maritime facilities on this.

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### Surveys undertaken (con't)

SVP Measurements

S.S.S-SBP

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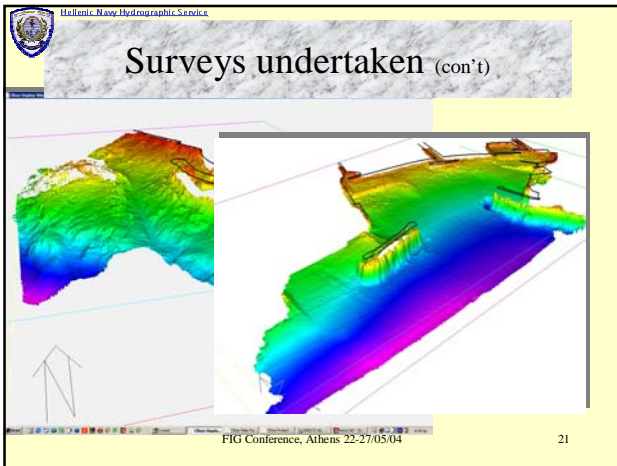


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### Surveys undertaken (con't)

- Re-obtaining Side Scan Sonar imagery from existing wrecks in Saronic Bay to check their condition, minimum depth above them, confirm their positioning.
- Resurveying of Trokadero Marina
- Resurveying of 70% of Piraeus Port for updating and confirm depths of existing chart.
- Surveying at Glyfada marina and its approaches (offshore area).
- Re- Positioning of shallows at Agios Kosmas Olympic Sailing Center offshore area and other dangerous sea areas at main navigational lanes

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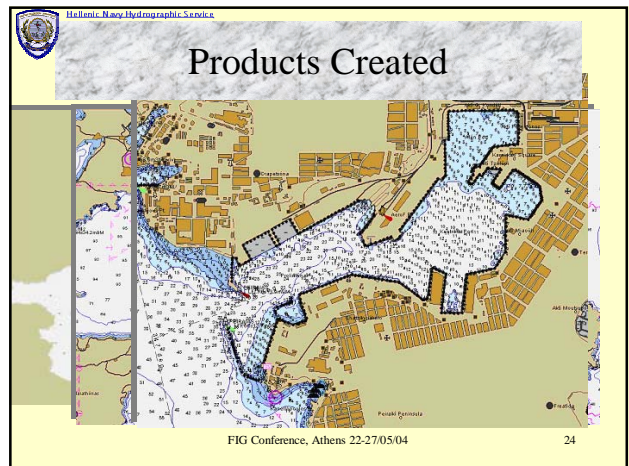
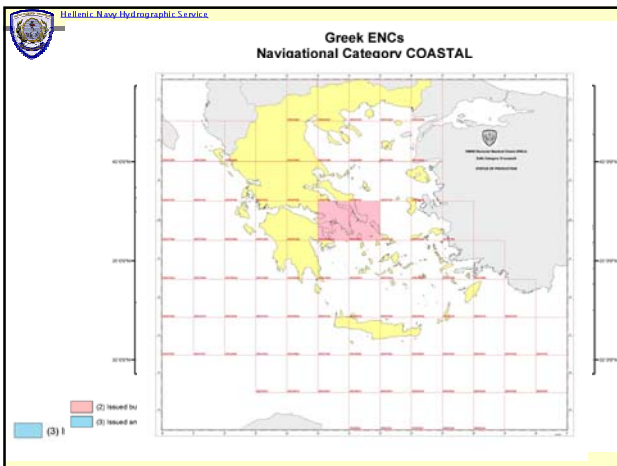


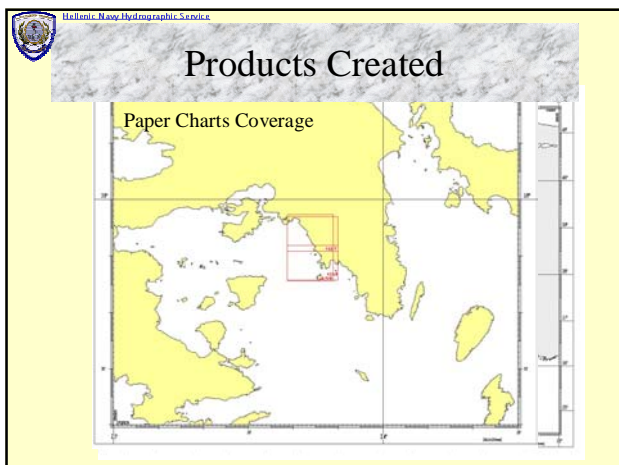
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### Products Created

- Publication of 3 Nautical charts (2 of scale 1:15000 & 1 of scale 1:20000).
- Production of 2 ENC's of Coastal and Approach category (usage band) of Saronic Bay
- Oceanographic studies concerning the tide monitoring/forecasting and currents behavior at Olympic Rowing Centre in Marathon area.
- Several special nautical charts and fair sheets supporting security exercises and operations of Olympic games in Athens 2004.

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## Conclusions-Lessons Learnt

- Reconfirmed once more the paramount importance of hydrography and surveying from all the involving organizations/agencies in the Olympic Games.
- Very short notice and strict work plans is needed because it should wait first to finish the maritime/coastal works and afterwards to undertake the appropriate surveys.
- Deployment of new techniques (multibeam, digital SSS, LRK/RTK/EGNOS positioning) speeds up and provides accuracy in real world measurements

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## Conclusions-Lessons Learnt (con't)

- Maximum degree of management and coordination is crucial
- Significant experience and knowledge gained from the personnel involved.
- Appropriate personnel availability it's a must, in order to avoid delays.
- Swath systems data post-processing and data seamlessness is still an issue for further study.
- Unexpected vessel malfunctions and systems troubleshooting requires experienced personnel, double systems, euros, and if possible ... time!!!

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## Thank you very much for your attention

HS-OS Naftilos is sailing at 10:00 a.m, 26.05.04

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