

**TECNOLOGIAS
EMERGENTES**



ENCONTROS
SAMA₂₀₂₀

16.NOV

14h00-17h00
CALDAS
DA RAINHA

ama AGÊNCIA PARA A
MODERNIZAÇÃO
ADMINISTRATIVA

COMPETE
2020

PORTUGAL
2020

 **UNIÃO EUROPEIA**
Fundo Europeu
de Desenvolvimento Regional

Plataforma Colaborativa de Modelos de Inteligência Artificial para o mar – MARiA (Operação POCI-05-5762-FSE-000400)

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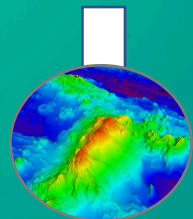
mar.ia

Inteligência Artificial para o Mar



Agenda:

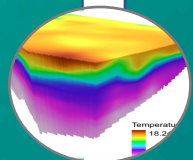
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Dados marinhos no Instituto Hidrográfico



Hidrografia na modelação digital do oceano



Infraestrutura de dados espaciais marinhos



Operação MarIA



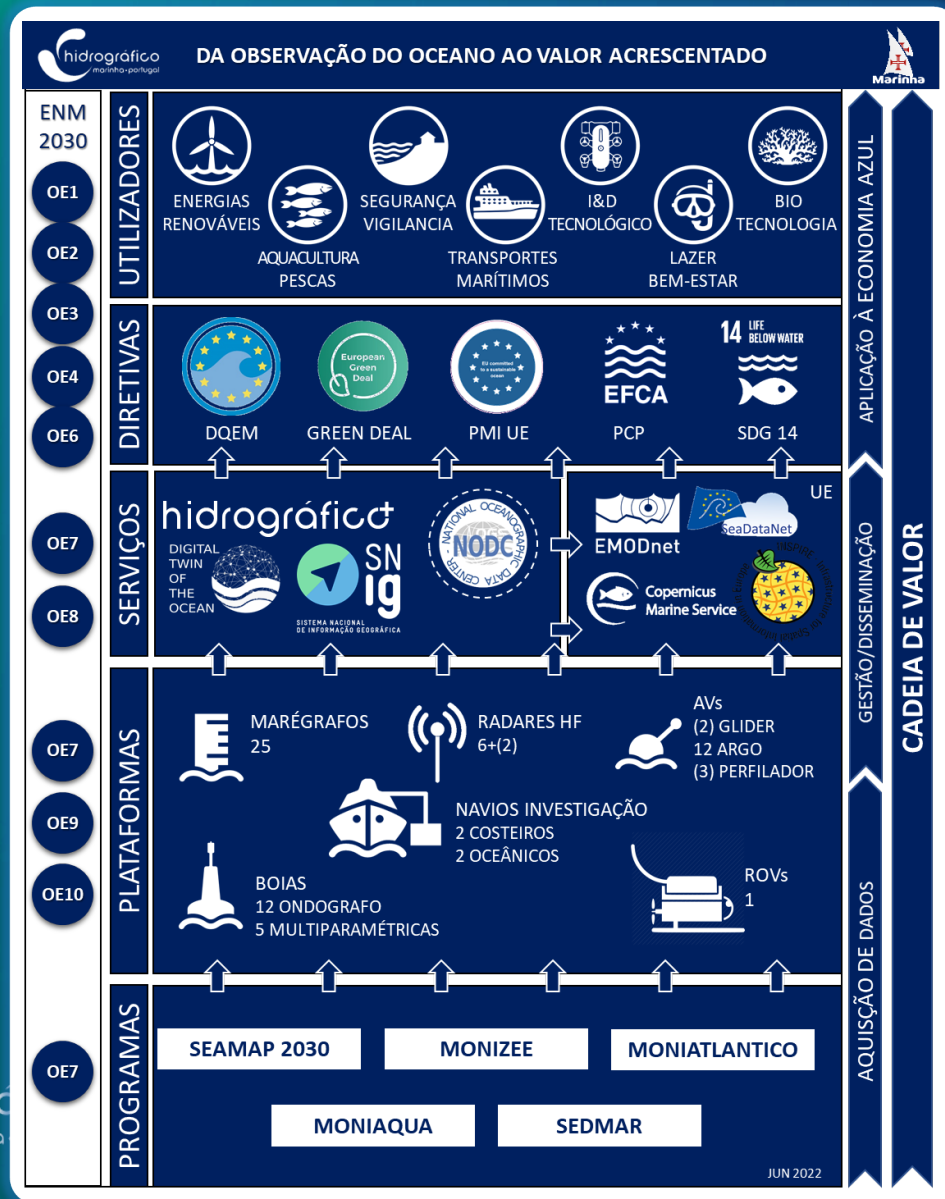
Temas e programas do Instituto Hidrográfico



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Cadeia de valor dos dados marinhos

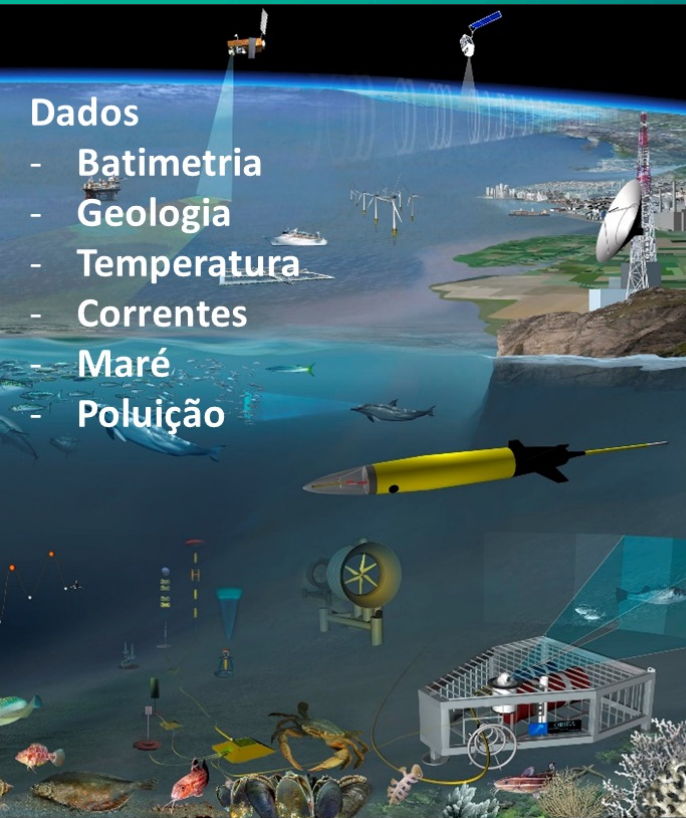


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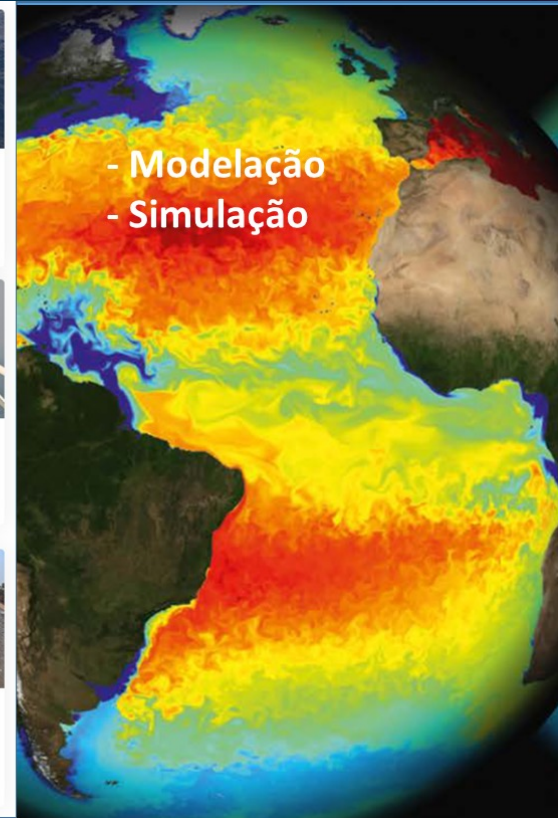
Instituto Hidrográfico – dados, informação e conhecimento

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Informação e Conhecimento

- Bathymetry**
Datasets on bathymetry and ocean seabed elevation.
[Read More](#)
- Biology**
Datasets on marine species and marine habitats.
[Read More](#)
- Marine Chemistry**
Datasets on salinity, temperature, pH and other chemistry parameters.
[Read More](#)
- Marine Geology**
Datasets on sea-floor geology, geological events, and mineral resources.
[Read More](#)
- Seabed Habitats**
[Read More](#)
- Human Activities**
Datasets on marine human activities and uses.
[Read More](#)
- Ocean Physics**
Datasets on waves, currents, sea-level, and other ocean parameters.
[Read More](#)
- Marine Meteorology**
Datasets on weather and associated oceanographic conditions.
[Read More](#)
- Marine Pollution**
Datasets on harmful substances to the marine environments.
[Read More](#)



Modelo digital do oceano : processos no ciclo de vida dos dados

- Organização e digitalização da informação
- Mapeamento e automatização de processos
- Inteligência artificial

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Modelo digital do oceano : Objetivos para a gestão de dados



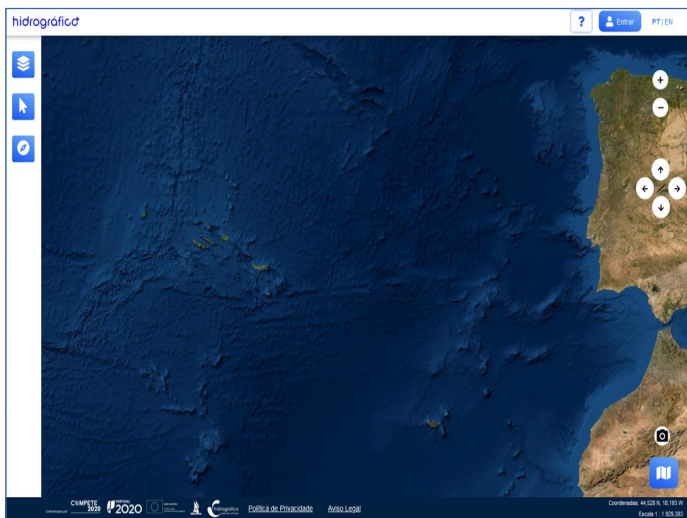
Infraestrutura de dados espaciais marinhos

hidrográfico

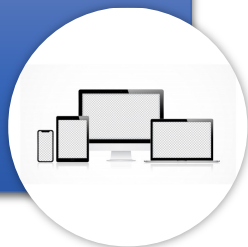
Cofinanciado por:



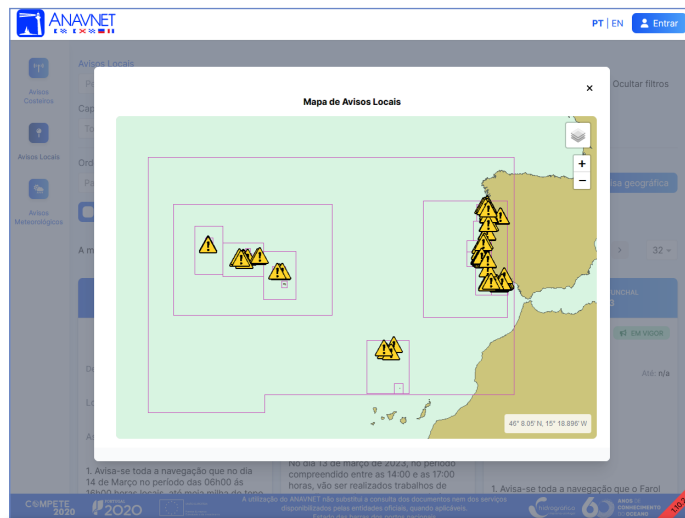
UNIÃO EUROPEIA
Fundo Europeu
de Desenvolvimento Regional



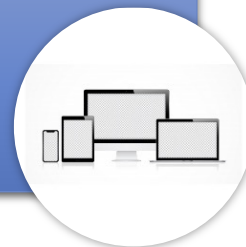
GeoPortal H+
Downloads
Serviços Web (OGC)
API



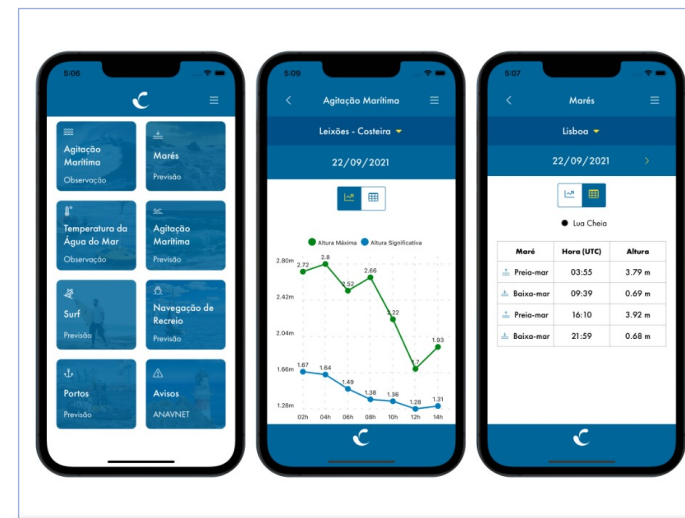
<https://geomar.hidrografico.pt>



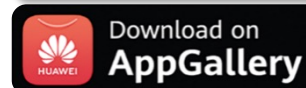
AnavNet
Avisos aos Navegantes
Avisos à Navegação
Avisos Meteorológicos



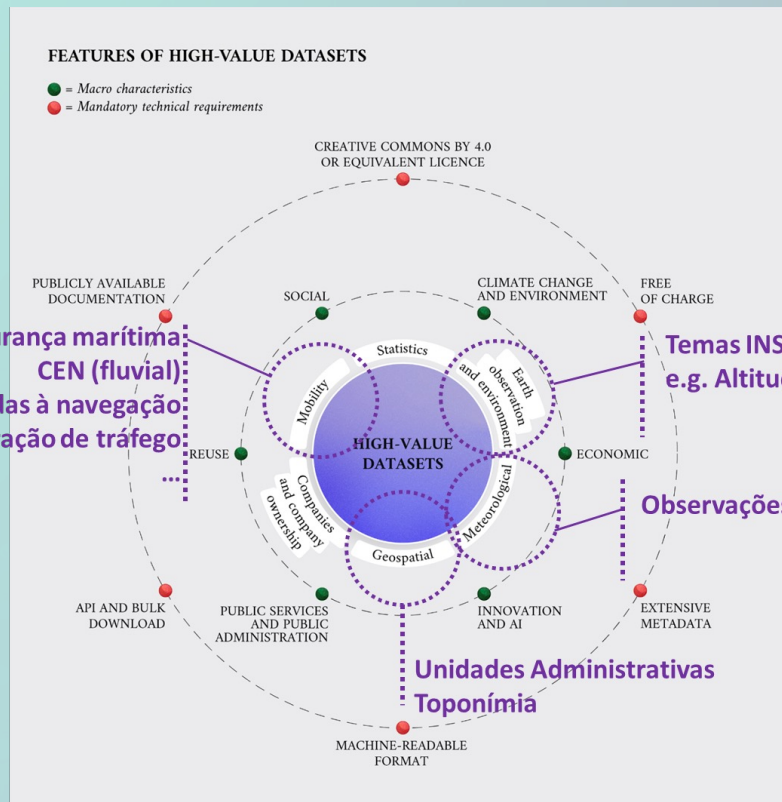
<https://geoanavnet.hidrografico.pt>



App H+
Maré
Temperatura
Estado do mar



Desafios para o futuro: Diretiva europeia de dados abertos



Informação de segurança marítima
CEN (fluvial)
Ajudas à navegação
Esquemas de separação de tráfego

Temas INSPIRE:
e.g. Altitude, características oceanográficas, ...

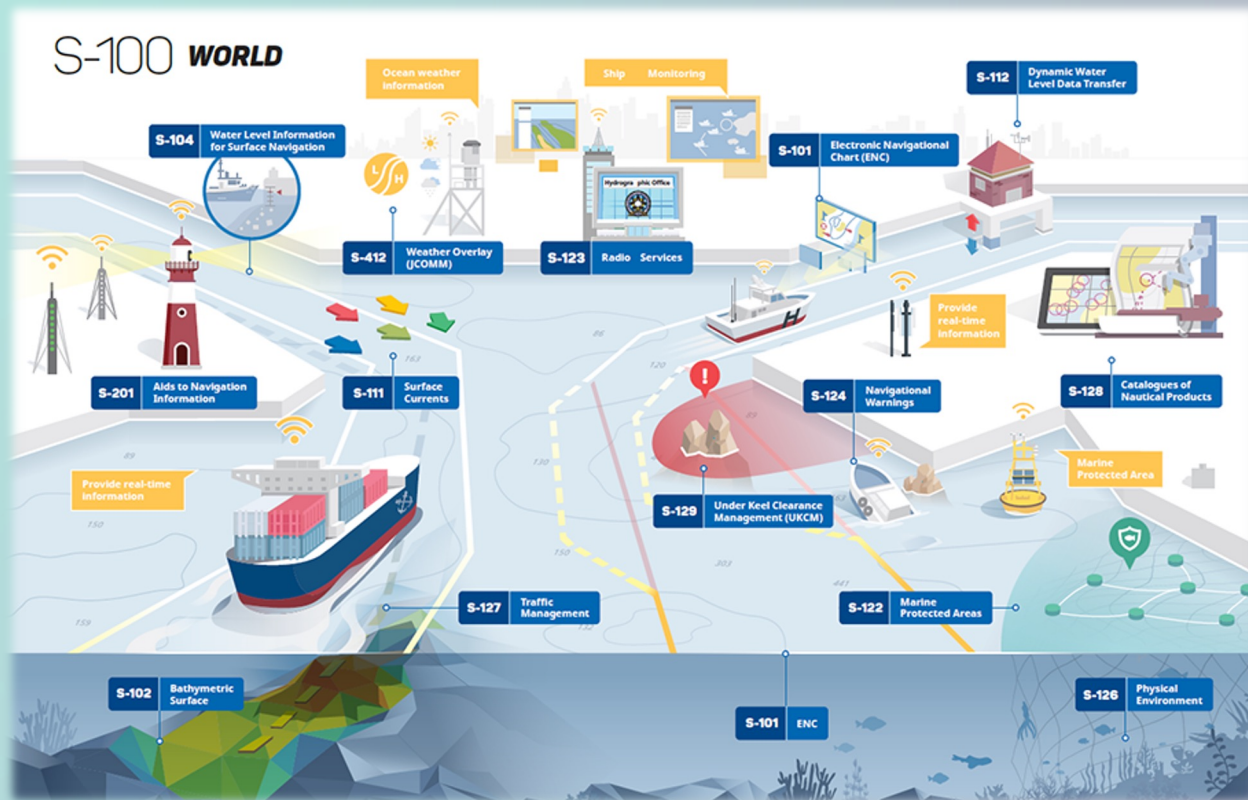
Observações meteorológicas nas boias

Unidades Administrativas
Toponímia

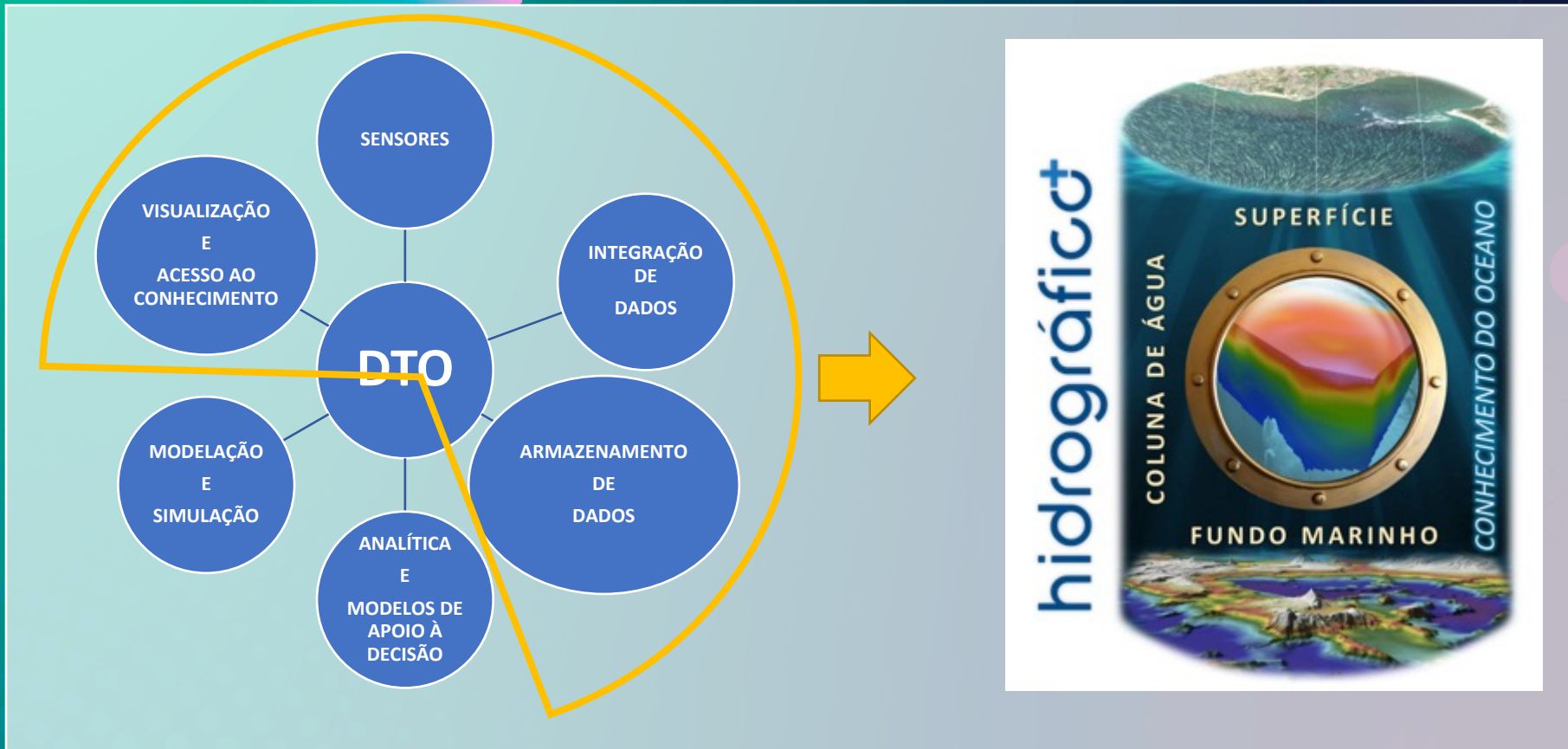


Desafios para o futuro: Modelo S-100

ENCONTROS SAMA²⁰²⁰



Desafios para o futuro: Gémeos Digitais do Oceano



Evolução da Infraestruturas de dados

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SAMA 2020

hidrográfico



Oceanogramas

Campanhas Oceanográficas Internacionais

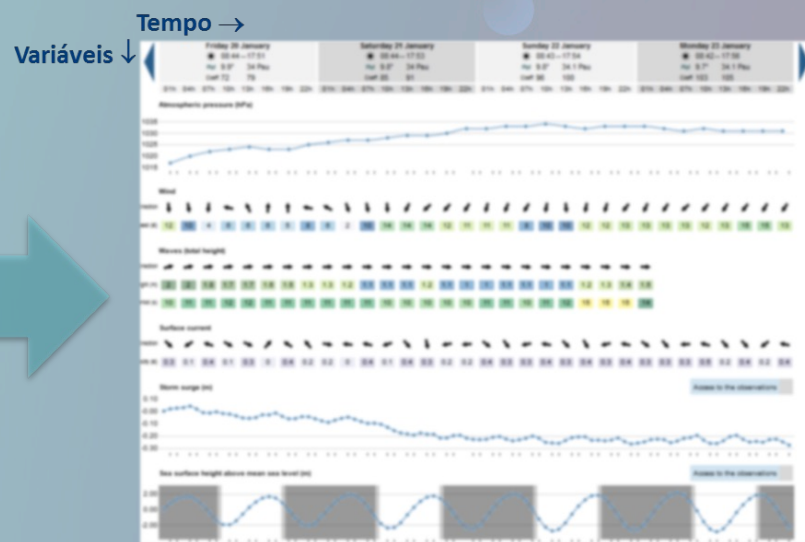
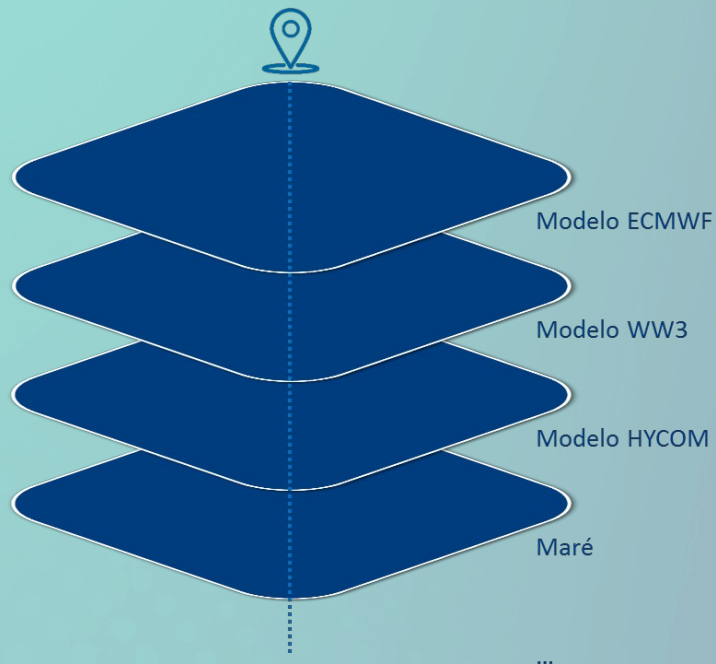
Roteiros digitais

Modelo S-124



Oceanogramas

→ Serviços baseados na localização



Oceanogramas

➔ Selecionar:

- Posição;
- Variáveis;
- Intervalo.

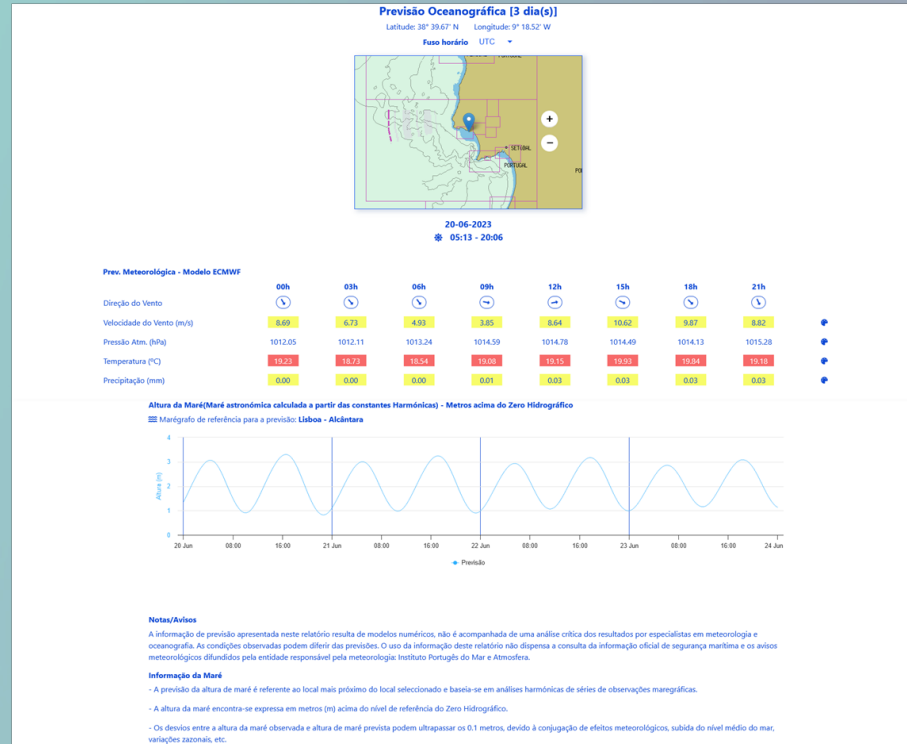
The screenshot shows the 'hidrográfico' web application interface. The main heading is 'Oceanogramas'. Below it, there are input fields for 'Longitude *' (-9,553299) and 'Latitude *' (38,474556), with a 'ON' button. A 'Variáveis' section contains a list of 13 variables, all of which are checked: 'Altura significativa', 'Direção da corrente', 'Direção do pico', 'Direção do vento a 10 metros', 'Intensidade da corrente', 'Intensidade do vento a 10 metros', 'Período do pico', 'Precipitação', 'Pressão Atm.', 'Salinidade', 'Temperatura a 2 metros', and 'Temperatura da Superfície do Mar'. Below this is an 'Intervalo de Tempo' dropdown set to '1 Dia' and a 'Gerar Oceanograma' button. At the bottom, there is a 'Subscrições' section with a '+ Nova Subscrição' link. The interface also includes a satellite map of the coastal region, navigation controls, and a footer with logos for COMPETE 2020, PORTUGAL 2020, and the hidrográfico logo.



Oceanogramas

ENCONTROS SAMA 2020

➔ Relatório:



Roteiros Digitais

ENCONTROS SAMA 2020

ROTEIRO DA COSTA DE PORTUGAL PORTUGAL CONTINENTAL

DO CABO CARVOEIRO AO CABO DE SÃO VICENTE

Porto de Lisboa
CNO 26303 26304 26305 26306 26307 - CENO PT 52603 52604 52605 52606

1. LOCALIZAÇÃO
O porto de Lisboa situa-se na margem direita do rio Tejo, junto à baía de Lisboa, servindo essencialmente o comércio de exportação e importação de mercadorias do Estado do governo.

2. INDICATIVO DE CHAMADA
LISBOA PORT CONTIN.

3. FREQUÊNCIAS VHF
Canal de comunicação Canal de trânsito

4. LOCALIZAÇÃO
Lisboa, cidade capital de Portugal, localizada na margem direita do rio Tejo, junto à baía de Lisboa, servindo essencialmente o comércio de exportação e importação de mercadorias do Estado do governo.

hidrográfico

Procurar Porto:

Selecionar Porto [harbour]:
Viana do Castelo
Lisboa [harbourdesig_pt]

Área do Porto [harbourgeom]
Aproximações [approachinggeom]
Aterragem [landinggeom]
Entrada [entrygeom]
Pilotaagem [pilotinggeom]
Fundeadouros [anchoragegeom]
Cais [dockgeom]
Pontos de Amarração [mooringgeom]
Marinas [marinageom]
Ajudas à navegação

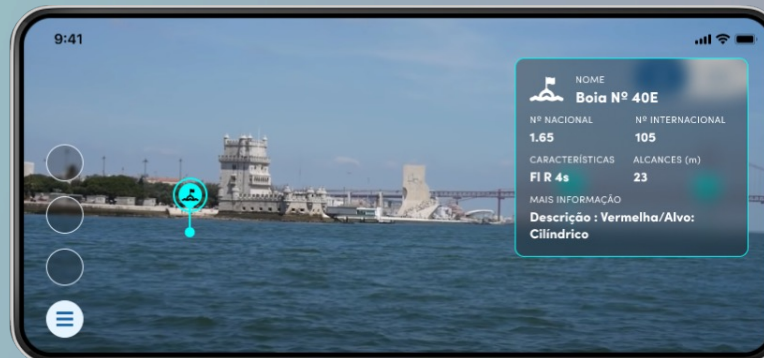


Map/AR	ANAVNET	Conhecenças	Meteorologia	Maré	Marinas	Fundeadouros	Navegação	Ajudas à Navegação	Ajuda
Satélite	Avisos Locais	Marcas em terra	Observações meteorológicas	Marégrafos			Enfiamentos	Faróis, Farolins, balizas, boias	Ajuda
ENC	Avisos Costeiros	Pontes		Maré			Canais de navegação		Contactos
Terreno							Isobatimétricas		Políticas e privacidade



Roteiros Digitais

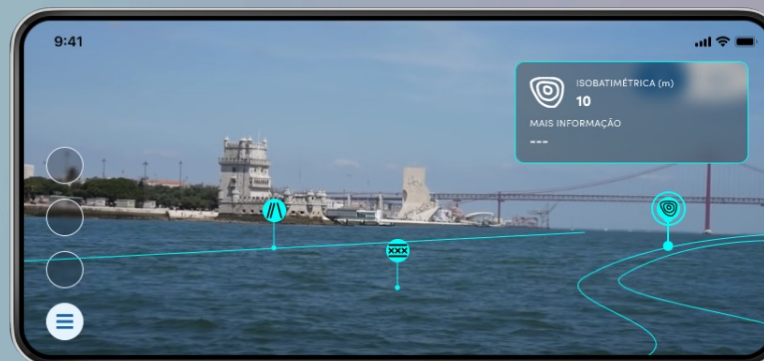
ENCONTROS SAMA²⁰²⁰



Ajudas à navegação



Avisos à Navegação



Enfiamentos, canais de navegação, isóbatas



Implementação do modelo S-124 (Informação de Segurança Marítima)

ENCONTROS SAMA 2020



S-124 (Navigational Warnings)

Avisos aos Navegantes

Avisos Costeiros

Avisos Locais

Avisos Meteorológicos

Contributo da operação MarIA para a economia azul

ENCONTROS SAMA²⁰²⁰

SEAL OF EXCELLENCE

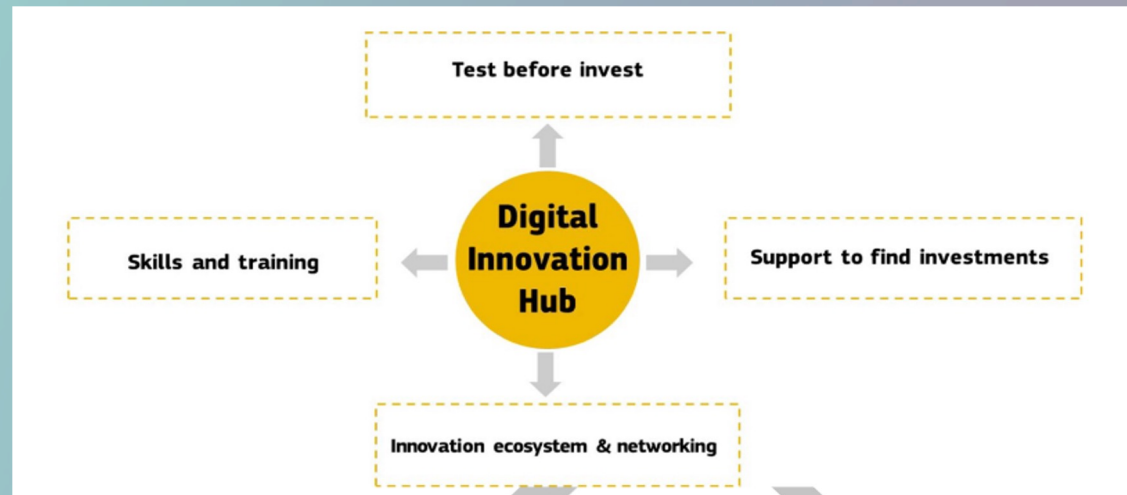
European Commission
Digital Europe Programme

The project proposal
101120729 — PBDH
"Portugal Blue Digital Hub"

submitted under the Digital Europe Programme call
DIGITAL-2022-EDIH-03-INITIAL — Initial Network of European Digital Innovation Hubs
by
FORUM OCEANO - ASSOCIACAO DA ECONOMIA DO MAR and other participants

following evaluation by an international panel of independent experts
was recognised as a high-quality project proposal
in a highly competitive evaluation process
but could not receive funding due to budgetary constraints and is therefore
recommended by the European Commission for funding by other sources.

Brussels 02/2023



Contributo da operação MarIA para os ODS da Ocean Decade (NODC)

ENCONTROS SAMA²⁰²⁰

The screenshot shows the Ocean Decade Network website interface. The top navigation bar includes 'ABOUT US', 'LATEST', 'TAKE ACTION', and 'COMMUNITY'. Below the navigation, there are six featured project cards with images and titles: 'Acoustics to Assess the Health Status of Reefs', 'Marine Carbon Sinks in Decarbonisation Pathways', 'Global Plastic Ingestion Bioindicators', 'Portuguese National Oceanographic Data Centre', 'High Resolution Seafloor Habitat Mapping - WIO', and 'PH Ocean Observing and Coastal Resource Management'. A 'NEXT' button is visible at the bottom of the grid.

INTERGOVERNMENTAL OCEANOGRAPHIC COMMISSION
COMMISSION Océanographique Intergouvernementale
COMISIÓN OCEANOGRÁFICA INTERGUBERNAMENTAL
МЕЖПРАВИТЕЛЬСТВЕННАЯ ОКЕАНОГРАФИЧЕСКАЯ КОМИССИЯ
اللجنة الدولية للحكومية لعلوم المحيطات
政府间海洋学委员会

UNESCO - 7 Place de Fontenoy - 75352 Paris Cedex 07 SP, France
<http://ioc.unesco.org> - contact phone: +33 (0)1 45 68 03 18
E-mail: v.yabinin@unesco.org

Ref. : IOC/VR/23.289/JB/AC/mb 8 June 2023

Dear Mr Nunes,

It is with great pleasure that I am writing to inform you of the endorsement of your Decade Action entitled "No.63.4. Portuguese National Oceanographic Data Centre" as a project forming part of the UN Decade of Ocean Science for Sustainable Development 2021-2030. Please accept my sincere congratulations for this achievement. Let me also thank you for your engagement and commitment to the Ocean Decade vision of the science we need for the ocean we want.

Within the structure set out in the Ocean Decade Implementation Plan, individual projects are typically attached to endorsed Decade programmes. We are pleased to inform you that your project will be attached to "No. UN25. An Ocean Data and Information System supporting the UN Decade of Ocean Science for Sustainable Development". The attached Charter for Endorsed Projects provides more information on the respective roles and responsibilities of Decade programmes and projects. The contact person at your relevant Decade programme is Peter Pissierssens (p.pissierssens@unesco.org) and we encourage you to reach out to them to commence exchanges and discussions.

As you further develop and start implementing your project, we would like to remind you of the Ocean Decade endorsement criteria, including those related to co-design, engagement of users all along the ocean science value chain and decision and policy makers, and those related to open and accessible data management. As an endorsed Decade Action, we expect you to adopt these principles and approaches in your Decade project and to engage via the Communities of Practice that are described below to share experiences and access information and tools on these approaches. We have also attached [here](#) a publication from the Ocean Decade on co-design approaches that may prove useful in this regard.

.../...





ENCONTROS SAMA²⁰₂₀

