



GRA Background Report **MonGOOS**



**Vanessa Cardin
&
Working Group Leaders**

*GOOS Regional Forum-11,
8-9 April 2024 Barcelona, Spain*



UNESCO
UNITED NATIONS
EDUCATIONAL
SCIENTIFIC
AND
CULTURAL
ORGANIZATION



IOC



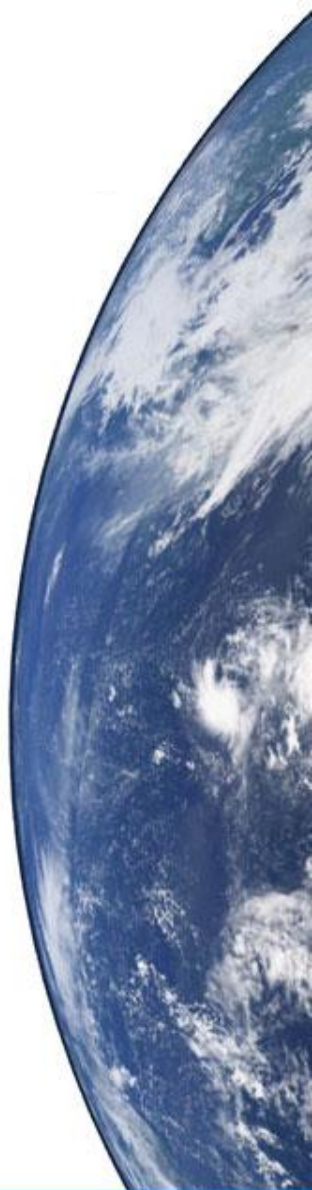
WMO



UNEP



ICSU



Success Stories

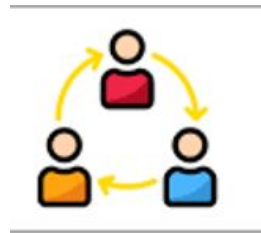
1. Capacity building - Promoting Marine Science

- First meeting in Africa since the founding of MonGOOS
- Workshop in close cooperation with the EU SEAMLESS project for early career researchers
- Establishment of a tuna observatory for the Mediterranean Sea



1. Collaborate & Promote visibility

- Overview of observation capabilities in the Med
- Collaboration Agreement with OceanPrediction DCC for the Mediterranean and Black Sea Regional Team



2. Increased Downstreaming Services

- Support for a large-scale civil protection exercise to combat oil spills in the Apulia region (Italy)
- In line with a maritime decarbonization strategy: release of a new version of VISIR-2
- New operational numerical forecasting system for pollution risk management in the Strait of Bonifacio, the Gulf of Asinara and the port of Olbia



Success Stories: First Meeting in Med-Africa



First meeting in Africa (**Morocco November 14-16 '23**) since the founding of MonGOOS

Joint MonGOOS & OceanPrediction-DCC Mediterranean and Black Sea Regional Team Workshop on **Ocean forecasting and its applications**

Training on data assimilation in marine biogeochemistry for early career students in close cooperation with the **EU SEAMLESS project**

- **24 oral presentations & 12 posters on:**

Present status, identification of gaps and ways forward to improve the Mediterranean Sea forecast capabilities

- **Breakout session on:**
Ways forward for Ocean forecasting in the Mediterranean Sea



Success Stories: The Mediterranean Tuna

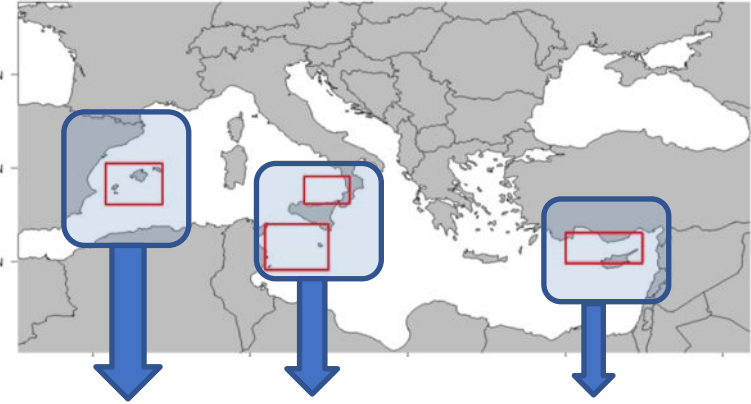
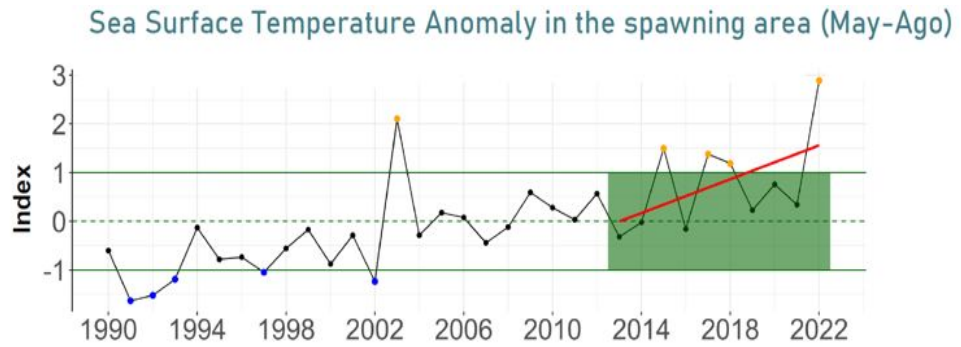
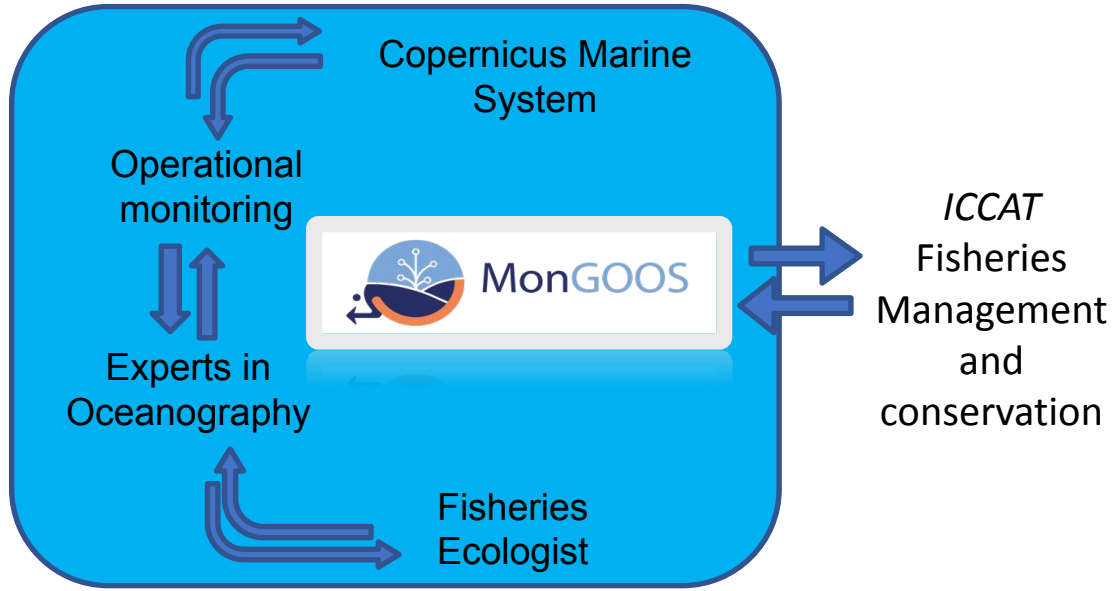


Habitat Observatory

An initiative for advancing towards climate informed tuna assessment and management

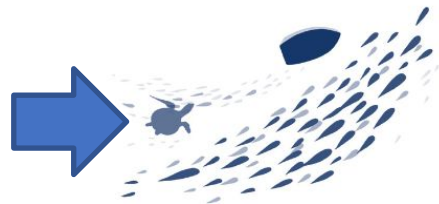
MonGOOS roles:

- 1- Ensure synergies among different communities
- 2- Improve operational products in tuna key ecological areas
- 3- Connect local experts in oceanography and improve indicators of environmental variability



Example of observatory specific outputs

Success Stories: The Mediterranean Tuna Habitat Observatory



TARGET 1.

FISHERIES AND ECOSYSTEMS:
HEALTHY SEAS AND PRODUCTIVE FISHERIES



TARGET 2.

COMPLIANCE AND ENFORCEMENT:
A LEVEL PLAYING FIELD TO ERADICATE ILLEGAL,
UNREPORTED AND UNREGULATED FISHING



TARGET 3.

AQUACULTURE:
A SUSTAINABLE AND RESILIENT SECTOR



TARGET 4.

LIVELIHOODS:
DECENT EMPLOYMENT AND ENGAGED FISHERS
TOWARDS PROFITABLE FISHERIES



TARGET 5.

CAPACITY DEVELOPMENT:
TECHNICAL COOPERATION, KNOWLEDGE
SHARING AND EFFICIENT PARTNERSHIPS IN
A SUBREGIONAL PERSPECTIVE

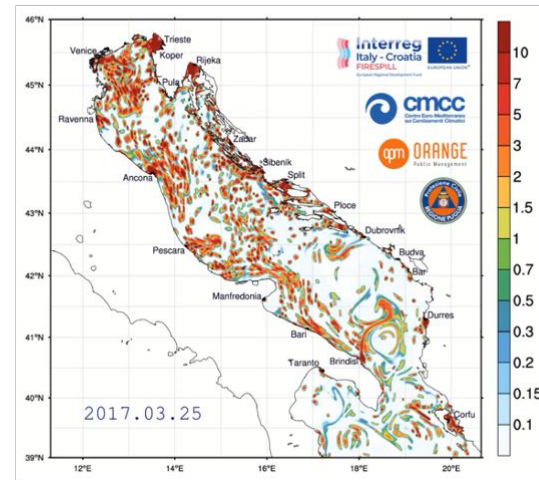
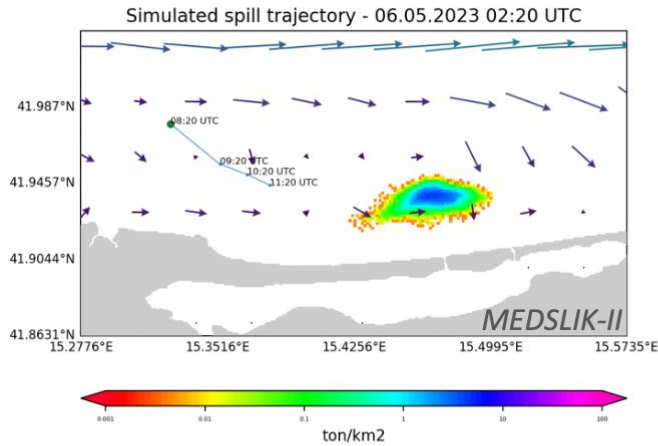
Capacity
building

Coordinated
Ocean data
Collection

advancing on fit
for purpose
operational
oceanography

Integrate
environmental
variability in
assessment

Success Stories: Support of the full-scale Civil Protection exercise in Marina di Lesina (Italy)



A web-based platform WITOIL (Where Is The Oil), was adjusted to meet the needs of civil protection and environmental safety. Being a fully operational downstream application 24/7, WITOIL provides the multi-model oil spill forecasts, visualizes the met-ocean conditions at the spill scene, and disseminates the results in a format compatible with the GIS software.

Success Stories: new version of VISIR-2

System for optimizing nautical routes in any meteo-marine condition. It provides least-time routes, taking into account safety of navigation and reduction of the CO2 emission

Operational services based on VISIR-2

GUTTA-VISIR

<https://www.gutta-visir.eu>



- *ferry routes*
- *CO2 and CII savings*
- *cross-border routes*
- *7,020 routes/day*
- *operational since Oct.2021*

FRAME-VISIR

<https://www.frame-visir.eu>



- *sailboat and flybridge routes*
- *time and CO2 savings*
- *cross-border and cabotage routes*
- *5,280 routes/day*
- *operational since May 2023*

<https://doi.org/10.5194/egusphere-2023-2060>
Preprint. Discussion started: 16 November 2023
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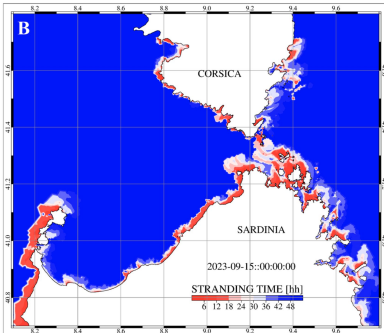
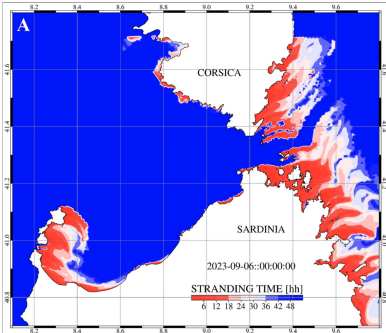
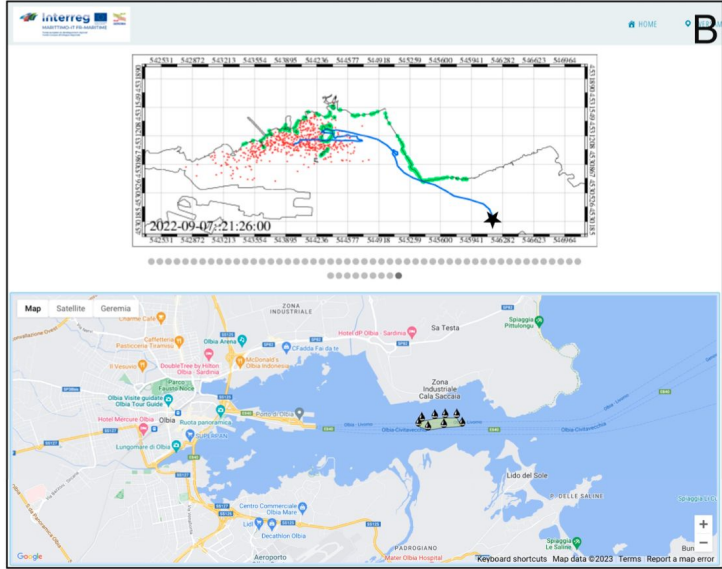
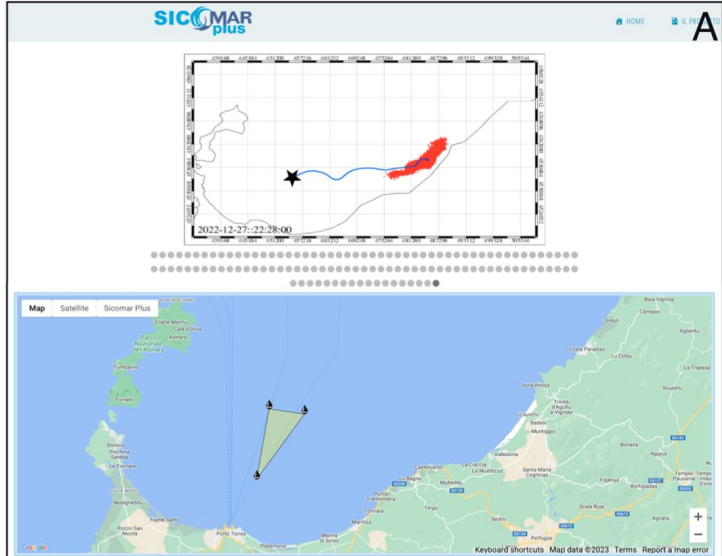
VISIR-2: ship weather routing in Python

Gianandrea Mannarini¹, Mario Leonardo Salinas¹, Lorenzo Carelli¹, Nicola Petacco², and Josip Orović³
¹Ocean Predictions and Applications Division, CMCC, via Marco Biagi 5, 73100 Lecce, Italy
²DITEN, Università degli Studi di Genova, via Montallegro 1, 16145 Genova, Italy
³Maritime Department, University of Zadar, Ul. Mihaljeva Pavlinovića, 23000 Zadar, Croatia
Correspondence: Gianandrea Mannarini (gianandrea.mannarini@cmcc.it)

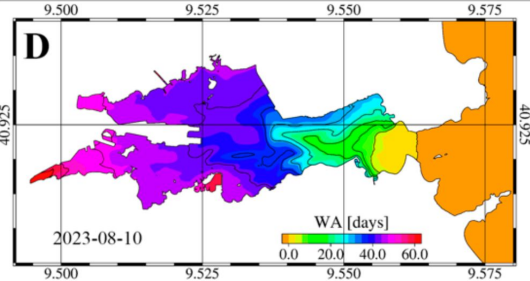
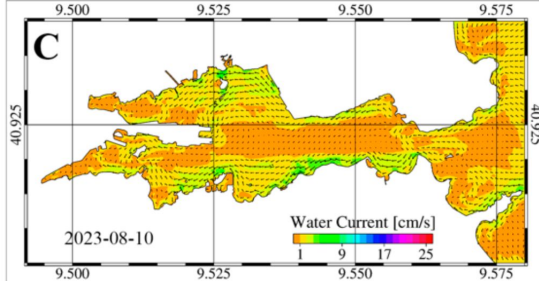
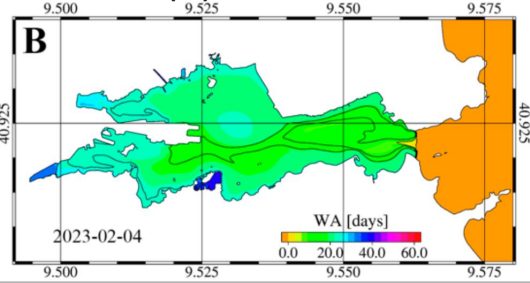
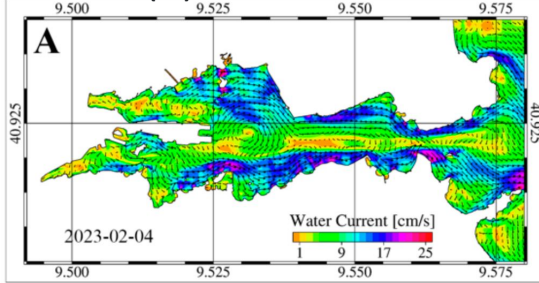
Success Stories: New web-based applications for pollution risk assessment



New products to be delivered: Stranding Time and Water Age



Stranding time during an intense windstorm from NE (A) and moderate wind from NW (B)



SICOMAR (A) and GEREMIA (B) web interfaces

Sea currents and water age distribution in the Olbia harbour during an intense mistral windstorm in winter 2023 (A,B) and in summer 2023 in the absence of intense wind (C,D) (Cucco et al., 2024)

Priorities - Short term (many!)



- Update the MonGOOS Strategy Plan
- Link MONGOOS strategies and objectives with Mediterranean Fisheries Management Organizations
 - ICCAT and FAO connections for Climate change and fisheries (i.e. MedTunaHabitatObs)
 - FAO connection: Participation in the GFCM network of experts on climate change
- Providing linkages to existing EU projects and programmes
 - Sustainable Observation: Existing networks mainly rely on national and short term funding
- Expanding BGC Measurements - Dashboard update
- Improve best practices (data sharing, interoperability, etc.) which is essential for model purpose
- Finalize the ATLAS Survey on the forecasting modeling systems in the Mediterranean Sea
- Write a white paper on the forecasting modeling capabilities in the Mediterranean Sea
- Election of new chairs!

Priorities - Long term (5+ years)



- Report on the value chains in public marine data for the Mediterranean Sea with the involvement of all partners representing Mediterranean countries
- Close connection with Black Sea GOOS
- Continuously advance the scientific understanding and technological systems upon which the operational oceanographic Services are based
- Promote the visibility and recognition of the Services with governmental agencies and private companies, encourage their exploitation and integration at national, regional, European and global levels.
- Enhance the usability of the Services and their usefulness for policy implementation, societal needs, blue jobs and science.
- Support the planning and implementation of international initiatives involving operational oceanography and promote the participation of non-EU Mediterranean countries

What support do you need from GOOS? MonGOOS

- From GOOS structures

More coordination between GRAs, National Focal points and other GOOS structures

Improving the linkage between GOOS Observation Coordination Group (OCG) and the GRAs

Support ocean observations in coastal States EEZs

- From other GRAs

Strength link with neighbouring GOOS Regions: Black Sea GOOS and GOOS Africa, sharing activities information

- From the GRA Forum?