

A SMARTPHONE APPLICATION DELIVERING METEO-MARINE DATA TO THE PUBLIC

Seafarers in the Malta-Sicily Channel are just a few clicks away from access to meteo and sea conditions for marine navigation and more.

The challenge

Mariners, fishermen and leisure craft owners are always in search of the most accurate and updated information on weather and marine conditions ahead of starting their voyages at sea. Seafarers navigating across the stretch of sea between Malta and Sicily, now have an aid for planning their journeys and safer trips. KAPTAN, the Maltese word for "Captain", is supplying this data on personal smartphones, making access to data easier and more direct, based on marine and weather prediction services, with higher resolution and local data. Just a few clicks on a phone app leads users to a suite of sea and weather data in the form of interactive spatial maps providing instantaneous user friendly and user defined access to prevailing conditions at sea as well as short term past and forecast information. KAPTAN is really an on board assistant, a phone app created to serve local mariners.

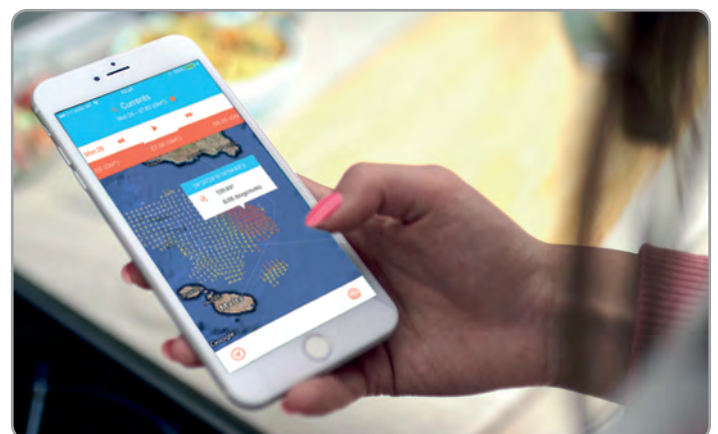
The space based solution

KAPTAN was developed within the CALYPSO project, an Italy-Malta cross-border cooperation initiative led by the Physical Oceanography Research Group (PO.Res.Grp) within the Dept. of Geosciences at the University of Malta. The service integrates real time observations with satellite data and numerical model forecasts. Sea surface current maps are provided every hour at a spatial resolution of 3 km x 3 km by the CALYPSO HF radar network consisting of four CODAR SeaSonde installations at selected sites on the northern Maltese and southern Sicilian shores. Sea surface temperature satellite observations from the COPERNICUS Marine Environment Monitoring Service (CMEMS) are added to high resolution 3-hourly maps from weather and marine numerical models specific to the Malta-Sicily Channel, providing a full suite of local scale meteo-

marine reports, and complementing other weather forecasts. The big difference is that KAPTAN provides maps and point data showing how the dynamical structures of the atmosphere and the variability of sea surface currents, temperature and waves evolve in space and with time, allowing the user to zoom and to interact with a selection of specific waypoints as well as to select the viewing of sea current conditions along a user defined journey track. Most importantly the users can get the specific data they need when they need it and at no cost.

Benefits to Citizens

KAPTAN is delivered by making use of and integrating data from CMEMS to local marine observations and the high-resolution sub-regional and coastal scale operational forecasting activities of the PO.Res.Grp in Malta. It is an example of how the merging of national datasets to marine core data supplied from CMEMS is leading to a proliferation of dedicated services with downscaling to the geographical detail in demand by local communities, coastal users and national responsible entities. KAPTAN is showcasing the benefits of and need for sustained marine observations in the coastal seas to complement the data acquired at regional level.



KAPTAN is a smartphone application available on both Android and iOS platforms.

Thematic Area



TRANSPORTS,
CIVIL
INFRASTRUCTURE
AND SAFETY

Region of Application



MALTA
SICILY

Sentinel mission used



Copernicus Service used



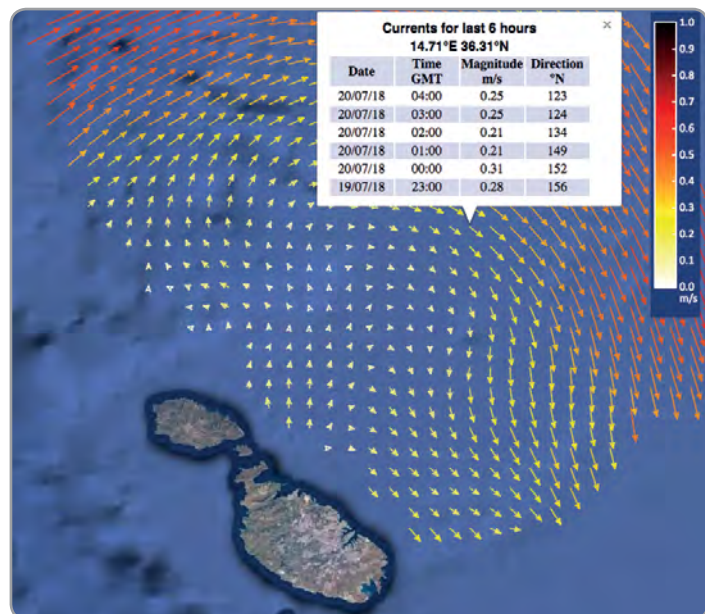
CMEMS

Usage Maturity Level



5

Marine data and information services delivered by operational oceanography are triggering an unprecedented leap in the economic value of met-ocean data, becoming essential for managing marine resources efficiently, and feeding benefits to the marine-related industry and the services sectors. The sharing and access to data, as a public good, is the basis for the use and re-use of data to generate a multiplier effect, and for value addition by a wide range of users, leading to the generation of knowledge, supporting service provision and economic activity.



Screenshot of sea surface currents on the KAPTAN online version.

“Great app! Easy to navigate and excellent visuals!”

Kristie Lormand, Android app user

Outlook to the future

Besides fishermen and sailing enthusiasts, KAPTAN also appeals to divers, surfers, beach tourists and coastal users in general. The service is secured in the long term by the PO.Res.Grp. Data is only worth by how much it is used. Produce data once, to be used by many. This is a key added value of KAPTAN by making data easily and freely available not only to researchers, public authorities and environmental agencies, but also to the public for general consumption as a service to improve the quality of life. KAPTAN is a perfect example of such an approach, and exploits easily accessible and popular media to maximise the use of data and information about the sea and atmosphere. The phone app can be downloaded for free for both Android and iOS devices (Google Play and App Store on iTunes respectively). KAPTAN exploits the good SatCom reception in the region besides the 3G or 4G coverage up to 13 nautical miles from the coast.

Acknowledgements

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ABOUT COPERNICUS4REGIONS

This Copernicus User Story is extracted from the publication “**The Ever Growing use of Copernicus across Europe’s Regions: a selection of 99 user stories by local and regional authorities**”, 2018, Edited by NEREUS, the European Space Agency and the European Commission.

The model cases focus on local and regional authorities who successfully applied Copernicus data in 8 major public policy domains. The views expressed in the Copernicus User Stories are those of the Authors and can in no way be taken to reflect the official opinion of the European Space Agency or of the European Commission.

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