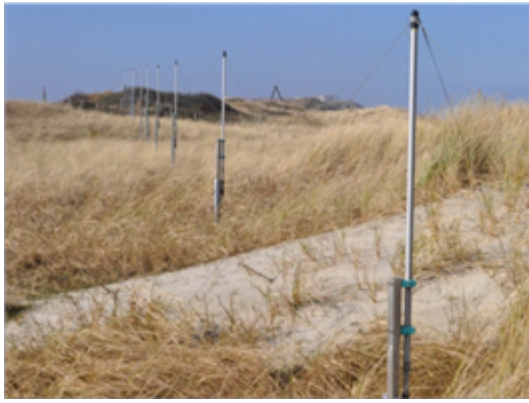




Welcome to the #1 European HF Radar Task Team Newsletter.

The European HF Radar Task Team helps coordinate the activities around the development and use of this coastal technology ([more info here](#))

We are excited to share with you what's on over the horizon.

Sustainability

Ensuring the HF radar network sustainability: maintenance harmonization, data standardization & integration, collaboration and long-term financial investment.

- **Happy stories**

- 😊 [New EuroGOOS HFR Task Team inventory. Visit the map of HFR locations and click here to learn how to update your metadata](#)

(Chapter 1. EU HFR Node - Data entry Web Form) and/or how to integrate your data.

- 😊 The European HFR network is being regularly maintained and growing with new installations foreseen in Portugal (at the Leça da Palmeira Lighthouse), new upgrades in Toulon (in the framework of SICOMAR-plus project) and new allocation of funding in the Iroise.
- 😊 New release of the CMEMS INSITU_UV_NRT product dedicated to ocean current data including HFR totals and radials, available since March 2020.
- 😊 Upcoming CMEMS INSITU_UV_REP product including HFR totals in July 2020!! Would you like to distribute your historical data on CMEMS In Situ TAC and EMODnet Physics? [Contact Us](#)
- 😊 IH-HFR has more than 1000 downloads per month. Congratulations! Share your metrics!
- 😊 In the European framework, the EU HFR Node is now managing data from 12 HFR networks (build of 35 radar sites). Additionally, it has recently integrated data from 5 US networks (build of 173 radar sites). Many thanks to our US colleagues for facilitating the integration and the availability of their data across the pond!
- **Open and forthcoming calls**
 - **PhD FELLOWSHIP** on HF radar topics soon available (June 2020) at the Parthenope University of Napoli, Italy. Stay tuned!
 - **OPEN CALL: COST Action** next collection date: 29/10/2020.
 - **OPEN CALL: MSCA-COFUND-2020**. Deadline: 29/09/2020
- **Job & internship opportunities**
 - **Postdoctoral Researcher**, Next Generation Ocean Modelling, College of Science and Engineering from NUI Galway. Application Deadline: 09/06/2020 14:00 CET
 - **Physicist, mathematician, meteorologist** - Multi-satellite multi-instrument ionosphere probing in the German Aerospace Center (DLR). Application Deadline: 14/07/2020 23:59 CET
 - **Postdocs and PhD positions** to the new Vinnova competence center: 2D-TECH in Chalmers University of Technology. Application Deadline: 15/06/2020 00:00 CET

Make HF radars sustainable, make them a public utility!

Pushing the real implementation of associated HF radar basic and advanced products and services from a user perspective.

- **Basic products**

- Ocean **surface currents** over large coastal areas is the key HFR product. However, **waves and wind** retrieval from HFRs are gaining popularity, being also provided by many observatories. New analysis of wave data in the Atlantic Area will be provided soon by MyCOAST project!

- **Advanced products**

- RAIA Observatory: is being developed **diverse added-value products** to improve the sea state description and the identification of relevant accumulation areas for the marine ecosystems management (among many others, Lagrangian Coherent Structure - LCS-, Finite-Time Lyapunov Exponents -FTLE-, residence times, nowcasting wind model, etc)
- A comprehensive set of **gap-filling methodologies** (Optimal Interpolation, Open Model Analysis, Neural networks, ARMA models) will be applied, validated and compared for the CALYPSO CODAR SeaSonde HF radar data.
- Operational **Short Time Prediction System** (STPS) for surface currents will be developed with a forecasting window of 12h, based on a very short time history of HF radar observations, OMA-fitted surface current coefficients, in the context of CALYPSO SOUTH.
- The new CODAR SeaSonde HFR stations deployed as part of CALYPSO SOUTH are equipped with CODAR **Auto-APM Technology**.
- Quality checked real-time HF radar data for **Hazard Management** and other time sensitive Applications.

- **Data downstream services**

- **KAPTAN** Web and Mobile App: provides information on the present and predicted sea conditions in the Malta-Sicily Channel.
- **PORTO** Mobile App: will integrate met-ocean information to aid port operators for safer activities in proximity to ports of the Maltese Islands and south of Sicily.
- **NARVAL tool**: uses quality controlled estimations of HFR currents and waves to assess the skill of operational hydrodynamic (Sotillo et al., 2015) and wave (Lorente et al., 2018) forecasting systems in the frame of CMEMS.
- **IBISAR** coastal downstream service ocean model assessment in the IBI area for emergency responders and SAR operators, including HF radars and satellite-tracked surface drifters as benchmark datasets.

Ongoing Research and Opportunities

Boosting scientific research-driven data collection for enhancing coastal ocean knowledge and progressing innovation in HF radar technology.

- **HFR recent/new publications**

- **Bagaglini, L., et al., 2020.** Eddy Detection in HF Radar-Derived Surface Currents in the Gulf of Naples. *Remote Sensing*, 12(1), 97. <https://doi.org/10.3390/rs12010097>
- **Basañez, A., et al., 2020.** Quality Assessment and Practical Interpretation of the Wave Parameters Estimated by HF Radars in NW Spain". *Remote Sens*, 12(4), 598; <https://doi.org/10.3390/rs12040598>
- **De Leo, F., et al., 2020.** Evaluation of HF-radar wave measures in the Gulf of Naples. 2019 IMEKO TC19 International Workshop on Metrology for the Sea: Learning to Measure Sea Health Parameters, MetroSea 2019, 276.
- **Dumas, D. & Guérin, C.-A., 2020.** Self-calibration and antenna grouping for bistatic oceanographic High-Frequency Radars. (2020). <https://arxiv.org/abs/2005.10528>
- **Guérin, C., et al., 2019.** The multistatic oceanographic HF radar network in Toulon. 2019 International Radar Conference (RADAR), TOULON, France, 2019, pp. 1-5. <http://doi.org/10.1109/RADAR41533.2019.171401>.
- **Manso-Narvarte, I., et al., 2020.** 3D reconstruction of ocean velocity from high-frequency radar and acoustic Doppler current profiler: a model-based assessment study. *Ocean Sci.* 16, 575-59. <https://doi.org/10.5194/os-16-575-2020> .
- **Mantovani, C., et al., 2020.** Best Practices on High Frequency Radar Deployment and Operation for Ocean Current Measurement. *Front. Mar. Sci.* <https://doi.org/10.3389/fmars.2020.00210>
- **Saviano, S., et al., 2019.** A year-long assessment of wave measurements retrieved from an HF radar network in the Gulf of Naples (Tyrrhenian Sea, Western Mediterranean Sea). *Journal of Operational Oceanography*, 12(1), 1-15. <http://doi.org/10.1080/1755876X.2019.1565853>

- **Saviano, S., et al., 2020.** Multiple year characterization of the wave field in the Gulf of Naples by multi-platform measurements. 2019 IMEKO TC19 International Workshop on Metrology for the Sea: Learning to Measure Sea Health Parameters, MetroSea 2019, 280.
- **Saviano, S., et al (2020).** An Integrated Reconstruction of the Multiannual Wave Pattern in the Gulf of Naples (South-Eastern Tyrrhenian Sea, Western Mediterranean Sea). Journal of Marine Science and Engineering 8, 372. <https://doi.org/10.3390/jmse8050372>
- **Viqueira, J.R.R., et al., 2020.** Smart Environmental Data Infrastructures: Bridging the Gap between Earth Sciences and Citizens. Appl. Sci. 10(3), 856; <https://doi.org/10.3390/app10030856>
- **Ongoing/new projects**
 - **Jerico S3:** aiming to build a pan European sustainable Research Infrastructure: the JERICO-RI, addressing the harmonization of a complex host of fit-for-purpose observing platforms, including HFRs, for interrelated scientific issues regarding the marine coastal and shelf dynamics and environment.
 - **EuroSea:** aiming to better combine existing capacities in the European marine observing system, contributing in the support of EuroGOOS HFR Task teams activities (WP3), and to fill existing gaps to make the resulting data and information available to users more easily.
 - **RADAR-ON-RAIA:** aiming to develop and reinforce the cross-border ocean observation infrastructure (which includes 3-4 HFR stations) of the north-west of the Iberian Peninsula
 - **CALYPSO South:** plans to extend the HFR network with particular emphasis on enhancing data quality and availability to support added value services. International team with 4 Sicilian and 2 Maltese partners.
 - **MyCOAST:** is contributing to fill the gap between the output of large scale European programmes and the end-users through the transnational coordination of coastal observatories, with an important focus on the use of the HFR systems.
 - **SICOMAR plus:** Cross-border system for marine safety against the risks of navigation and for the preservation of the marine environment. It provides investments to improve the coverage of monitoring networks, such as HFR, among others.
 - **ShareMed:** aims to share and enhance capabilities to address environmental threats in Mediterranean Sea. Its **HFR group** targets to valorise the role of national observing systems in the regional context, and to seek their long term sustainability within consolidated frameworks of funding and support

- **Upcoming events & opportunities**

- **POSTPONED:** The HFR and Ferryboxes joint workshop in Gothenburg, originally scheduled November will be postponed to spring 2021. In order to strengthen the connection of the European roadmap and the global community, the invitation to global actors and a side GEO Global network event are being considered.
- **POSTPONED:** The HF radar SICOMAR-plus Summer school initially scheduled for May in Toulon will be postponed to spring 2021.
- **UPCOMING TRAINING ANNOUNCEMENT:** A cross-border training course integrated with Campus del Mar will take place in 2021 for researchers and other users. Stay tuned!
- **SPECIAL ISSUE** in Journal of Marine Science and Engineering: "New Trends in the Observation of Coastal Areas by Means of High Frequency Radars". Deadline: 10/12/2020
- **SPECIAL ISSUE** in Remote Sensing: "Sea Surface Kinematics from Radar Measurements". Deadline: 31/01/2021
- **SPECIAL ISSUE** in Ocean Science: "Advances in interdisciplinary studies at multiple scales in the Mediterranean Sea". Deadline: 31/07/2021
- **SPECIAL ISSUE** in Remote Sensing: "Observing the Flow of Ocean Currents and Circulation Using Remote Sensing". Deadline: 30/06/2021

Let's explore the ocean fine scale dynamics!





Snapshot stories

Hello HFR community!

It's truly motivating to continue to hear that the HF Radar community is often considered as a model of good practices in Europe for its huge effort in data standardization, dissemination and networking. Congrats to all!

Many thanks to all institutions and experts involved in HF radar harmonization in the context of several projects (e.g. [SeaDataCloud](#), [CMEMS SE INCREASE](#), [JERICO-Next](#)) and to many initiatives aiming at building an operational pan-European HFR network based on a coordinated data management (EuroGOOS HFR TT, EMODnet-Physics, CMEMS In Situ TAC), always counting on the support of scientists from US IOOS and the Australian ACORN networks.

My personal pledge is to pursue these efforts and to continue striving to improve the collaboration and to keep everyone informed and on board seeking to achieve the same goals: ensuring the HFR network sustainability, pushing the fit-for-purpose implementation of associated HFR products and services and boosting scientific research-driven data collection for enhancing coastal ocean knowledge.

Thank you very much for your many contributions and welcome onboard!

Julien Mader (chair of EuroGOOS HFR Task Team)

Welcome onboard everyone!



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