

Торіс	H2020 – INFRAIA-2018-2020
Short Title	EurofleetsPlus
Title	An alliance of European marine research infrastructures to meet the evolving requirements of the research and industrial communities
Project Number	824077
Delivery Date	02 October 2023
Deliverable No	D9.15
Lead Beneficiary	MARIS
Dissemination Level	Public

Research and en-Route data collection exploitation and promotion final report





Document information	Document information			
Document Name	Research and en-Route data collection exploitation and promotion final report			
Document ID	EUROFLEETS_WP9_D9-15_02102023			
Revision	V1.0			
Revision Date				
Authors	Dick M.A. Schaap – MARIS; Susana Diez Tagarro – CSIC; Christian Autermann – 52North			
Security	Public			

Approvals			
	Name	Organisation	Date
Coordinator	Aodhán Fitzgerald	Marine Institute	19/10/2023
Activity Coordinator	Dick M.A. Schaap	MARIS	19/10/2023
Work Package Leader	Sandra Sa	EurOcean	19/10/2023

History			
Revision	Date	Modification	Author
V1.0	02 October 2023	First draft	Dick M.A. Schaap, Susana Diez Tagarro, Sissy Iona, Hong Minh, Christian Autermann
V2.0	19/10/2023	Final Version	Dick M.A. Schaap

This document contains information, which is proprietary to the EUROFLEETS+ consortium. Neither this document nor the information contained herein shall be used, duplicated or communicated by any means to any third party, in whole or in parts, except with prior written consent of the EUROFLEETS+ Coordinator.

The information in this document is provided as is and no guarantee or warranty is given that the information is fit for any particular purpose. The user thereof uses the information at its sole risk and liability.







TABLE OF CONTENTS

Contents

1	Introduction	5
2	Summary of Eurofleets+ data management workflow and position of EVIOR	5
3	Maintenance and status of EVIOR components	7
	Dashboard for information from sailing vessels	9
	Eurofleets+ Data Sets Catalogue	. 12

Abbreviation Table

AUV	Autonomous Underwater Vehicle
BSH	Bundesamt für Seeschifffahrt und Hydrographie
CMS	Content Management System
CSIC	Consejo Superior de Investigaciones Científicas
CSR	Cruise Summary Report (SeaDataNet)
СТD	Conductivity, Temperature, Depth (Sensor)
DMP	Data Management Plans
EARS	Eurofleets Automatic Reporting System
EGDI	European Geological Data Infrastructure
EMODnet	European Marine Observation and Data Network
EurOBIS	European Ocean Biodiversity Information System
EVIOR	European Virtual Infrastructure in Ocean Research
GGA	Essential fix data which includes 3D location and accuracy data
GPS	Global Positioning System
HCMR	Hellenic Centre for Marine Research
IFREMER	Institut Français de Recherche pour l'Exploitation de la Mer
NMEA	National Marine Electronics Association







OGS	L'Istituto Nazionale di Oceanografia e di Geofisica Sperimentale		
RBINS	Royal Belgian Institute of Natural Sciences		
RMC	Recommended Minimum Specific GPS/Transit Data		
ROV	Remotely Operated Vehicle		
RV	Research Vessel		
CDI	Common Data Index (SeaDataNet)		
SOS	Sensor Observation Service		
SWE	Sensor Web Enablement		
ТА	Transnational Access		
URL	Uniform Resource Locator		
VM	Virtual Machine		
VPN	Virtual Private Network		
WP	Work Package		
XML	Extensible Markup Language		







Eurofleets+ facilitates open free of charge access to a unique fleet of state-of-the-art research vessels, AUVs and ROVs from European and international partners. This is arranged by competitive transnational access calls which are published at the Eurofleets+ portal. A Data Policy has been adopted which aims at making Eurofleets+ research data to be findable, accessible, interoperable and reusable (FAIR). Therefore, data management is an integral part of the Eurofleets+ workplan, and different aspects can be found in several work packages, in particular WP3, WP4 and WP9. The latter WP has a focus on dissemination and promotion and includes a Task 9.4 - Exploitation and Promotion of the scientific data. This task aims to ensure that the research data collected during the funded cruises, and the en-route data collected by the vessels are made widely available in line with FAIR and Open Research Data principles. The Eurofleets+ **EVIOR - European Virtual Infrastructure in Ocean Research** platform plays an important role in this process by publishing and giving access to information about research vessels (RV), cruises, underway information and data, and resulting research data sets from the TA cruises and as included in European marine data infrastructures.

This **D9.15** document provides an overview of the results till October 2023 as published through the EVIOR platform. The information gathering for this has been done by partners MARIS, CSIC, RBINS, HCMR, OGS, IFREMER, and EurOcean, in cooperation with research vessel operators, SeaDataNet network of NODCs, 52North, and TA cruise scientific teams.

2 Summary of Eurofleets+ data management workflow and position of EVIOR

A major objective of the Eurofleets+ data management plan is to ensure that metadata and data of TA cruises becomes available for publishing and wide dissemination. For that purpose, the research vessels of the Eurofleets+ fleet have been equipped with a shipboard system (EARS) to gather and transfer metadata and data as acquired during TA cruises. Moreover, there has been interaction with the TA cruise scientific teams about planning and deployment of Data Management Activities for all collected and processed cruise data sets.

Since the Eurofleets+ project start, 4 research vessels have been equipped with EARS V2 and 10 research vessels with EARS V3 as part of the EARS development and testing and consecutively in the framework of deploying Data Management activities for Eurofleets+ TA cruises. The process for installing and configuring the EARS system at research vessels has been led by partners CSIC and RBINS in contact with technical teams of the vessel operators and by training the TA cruise scientific teams.

The EARS system has been instrumental for gathering the full set of cruise data that is acquired during the operations of an Eurofleets+ TA cruise. This comprises metadata and data from:

- En-route (underway) data acquisition by fixed sensors on the platform: location, meteorology, thermosalinometry, FerryBox,
- Human operations: physical measurements such as a CTD profile or water transparency; measurements and observations derived water, sediment or biota samples; occurrence observations
- Long-term timeseries by sensors deployed on frames, ROVs, AUVs or floats







Where the EARS system could not be installed, for technical or policy / safety reasons, TA cruise scientific teams were asked alternatively to keep logs of their observation activities as part of the Data Management Plan. In those cases, no data could be exchanged online during the cruises.

The Data Management follow-up has been done by three NODCs (RBINS, HCMR, and OGS) who are project partners. They worked together with the TA cruise scientific teams to prepare Data Management Plans (DMP). In the next step, they coached the TA cruise scientific teams for deploying those DMPs, aiming at using EARS facilities during the cruises and at retrieving afterwards metadata and data sets for long term stewardship and publishing of the Eurofleets+ cruise results by these NODCs. For wider dissemination of the results also several catalogues of leading European infrastructures such as SeaDataNet, EurOBIS, and EMODnet are populated with metadata and data. The Deliverable D4.12 already reports on these Data Management follow-up activities by the three NODCs for funded Eurofleets+ cruises from the project start till July 2023, while Deliverable D4.15, planned for end October 2023, will provide a synthesis of the data management follow-up reports, lessons learned and recommendations.

The overall Eurofleets+ Data Management workflow is illustrated in the following image from sailing vessel to the EVIOR platform.

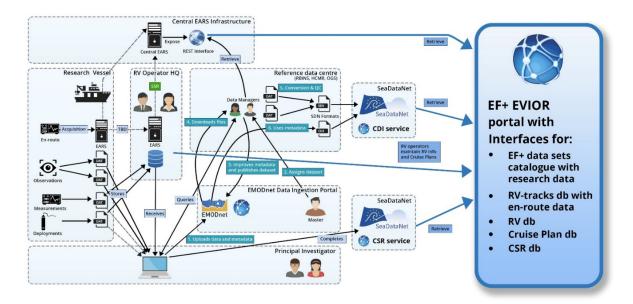


Image 1. Complete Eurofleets+ data management workflow as planned and being applied

En-route metadata and data from the EARS system at research vessels is transferred to a Hub managed by CSIC who ensures publishing of the received information by means of a **Dashboard** at the **EVIOR portal**.

Narratives about all scheduled TA cruises have been gathered from the TA cruise teams for publishing at the Eurofleets+ website and included in the **Eurofleets+ data sets catalogue** at the **EVIOR portal**.

Cruise Summary Reports (CSR) have been prepared by Principal Investigators of cruises with coaching by SeaDataNet NODCs and managed by BSH and IFREMER for publishing through the **SeaDataNet Cruise Summary Report catalogue** and included in the **EVIOR portal** and its **Eurofleets+ data sets catalogue**.







Processed data sets, including metadata, from the Eurofleets+ TA funded cruises have been retrieved by assigned NODCs (RBINS, HCMR, and OGS) from the Principal Investigators, possibly using **EMODnet Ingestion** as submission service. Where possible, the NODCs have elaborated the received metadata and data to common standards for long term stewardship at their data centres and publishing through the SeaDataNet CDI service and possible other leading European marine data infrastructures, such as EurOBIS, EGDI, depending on data types. These results have been published at the **EVIOR portal** by means of the **Eurofleets+ data sets catalogue.**

3 Maintenance and status of EVIOR components

The EVIOR platform and its components can be found in the Eurofleets+ website as part of the navigation menu option 'Infrastructures' which lists and displays all Eurofleets+ research vessels, AUVs and ROVs and EVIOR: <u>https://www.eurofleets.eu/access/infrastructures/</u> the central management has been moved to IFREMER (France). For this, IFREMER has set up a modern new CSR User Interface at the SeaDataNet portal. Moreover, IFREMER has taken over the maintenance services and facilitates new CSR submissions as XML files and through an CSR online CMS service. Earlier, the EVIOR portal featured a derived CSR interface developed and operated by MARIS, but considering the new CSR user interface and efficiency of publishing, it was decided to include the SeaDataNet CSR User Interface in the current EVIOR portal: <u>https://csr.seadatanet.org/</u>.

The CSR Catalogue is very successful and currently contains **67466 CSRs** from 1873 till 2023. This counts **844** CSR entries for cruises in 2022 and already **429** CSR entries for cruises in 2023. For 2023 this concerns cruises with PIs from the following countries.

Country	No of cruises	Country	No of cruises
Belgium	5	Finland	3
France	97	Germany	61
Iceland	3	Ireland	18
Italy	2	Netherlands	2
Norway	63	Poland	3
Spain	139	Sweden	30
United Kingdom	1	New Zealand	2
Australia	1		
			•
TOTAL	429		

Table 2: Overview of number of CSR entries for cruises since 1 January 2023 per country

The following table gives the status of CSR entries for Eurofleets+ TA funded cruises so far. The aim is to make all CSRs available at EVIOR and SeaDataNet portals. Still missing are the CSRs for the recent ERODOTO and POSEIDON TA cruises.







Vessel	Cruise	CSR cruise name	CSR-code
G.O Sars	BENCHMARK	BENCHMARK	20213165
Tangaroa	FOCUS-AUV	FOCUS-AUV	20213027
SOCIB	GRASSMAP	GRASSMAP	21000608
Dana	GSHARK	GSHARK	20213297
Pelagia	iMAR	EF+SEA01- 007_iMAR	20213136
Aegaeo	MYRTOON	MYRTOON	21000531
TUBITAK Marmara	РНҮСОВ	РНҮСОВ	20213265
Celtic Explorer	PORO-CLIM	CE21008	20213132
Pelagia	CALYPSO	64pe497	20223082
Aranda	CABLE-DOMUSe	CABLE Leg 1	21025640
Aranda	CABLE-DOMUSe	CABLE Leg 2	21027804
Belgica	SEAQUAKE	SEAQUAKE	21025650
Belgica	GRACE	GRACE	21025651
Arni Fridriksson	SENERGY	SYNERGY	21026618
Ramon Margalef	CARBO-ACID	CARBO-ACID	21026663
Belgica	TalPro22-IsoMed	TAIPro-2022	20223094
Sanna	IOPD	IOPD 2022	21026654
Atlantic-Explorer	FIGURE-CARING	FIGURE-CARING	21026645
Sanna	GLICE	GLICE	21026980
Sarmiento de Gamboa	SINES	SINES	21027629
Tangaroa	VISIT	TAN2305	21029902
Tangaroa	Hydee-OBS	HYDEE OBS	21029901
Pelagia	OASIS-UNSEEN	EF+ OASIS	21030269

Table 3: Overview of publishing of CSR entries for EF+ cruises (status end Sept 2023)

Note: The URL to retrieve a CSR detail page is: <u>https://csr.seadatanet.org/report/CSR-code</u>







SeaDataNet						CRUISE SUMMARY	REPORT INVENTORY (CSR
Everywhere Eurofleets	+	44 res	ults	× Reset filters			nii 宁 🛈 export
Q			Name	Country (Collate centre)	Chief scientist	Platform	Period 🗸
	ALL		EF+ OASIS 21030269	Italy	Claudio Lo lacono	Pelagia (64PE)	31.03.2023 > 12.04.2023
YEAR	2023 2 2022 9 2021 7 2020 5 DUNTRY (PLATFORM) Belgium 6		HYDEE OBS 21029901	Germany	Dr. Jörg Bialas	Tangaroa (61TG)	21.03.2023 > 31.03.2023
 2022 2021 2020 			CABLE leg 2 21027804	Estonia	Taavi Liblik	Aranda (34A3)	09.10.2022 > 14.10.2022
COUNTRY (PLATFORM) Belgium Bulgaria			SINES 21027629	Spain	Fontela, Marcos	Sarmiento de Gamboa (29AH)	11.09.2022 > 20.09.2022
Croatia Denmark	2 1		GLICE 21026980	Germany	Dr. Mark Hopwood	Sanna (GLSW)	10.08.2022 ≥ 24.08.2022
PLATFORM Aegaeo (36AE) Akademik (15AK) Aranda (34A3) Atlantic Explorer (33H4)	2 2 1 1		CARBO-ACID 21026663	Spain	Vitor Magalhaes, Emilia Salguerio	Ramon Margalef (29RM)	02.08.2022 > 11.08.2022
				🚭 Legal notice 🛛 🔒 Priv	vacy policy 🛛 🔽 Contact		

Image 4: User Interface for Cruise Summary Reports (CSR) at EVIOR platform

Dashboard for information from sailing vessels

As earlier explained, one challenge has been to install and configure the EARS system at research vessels that are supporting the Eurofleets+ TA funded cruises. This way use could be made of the EARS system for logging information from shipborne instruments and from events such as data observation activities undertaken during the cruise by researchers on board. Moreover, the EARS system has made it possible to share underway information as collected by the shipborne instruments while sailing and to publish this at the EVIOR portal during and after the cruises. For that purpose, CSIC and RBINS have undertaken great efforts to interact with the vessel operators for installing and configuring the latest EARS system.

As mentioned before, since the Eurofleets+ project start, 4 research vessels have been equipped with EARS V2 and 10 research vessels with EARS V3. For that purpose, each of these RVs has been provided with:

- a specific VM including EARS server, the conversion of GPS RMC (or GGA as an alternative but information is missing) NMEA output to EARS format, VPN for remote access and sending data to CSIC datahub dashboard
- Quick Installation Guide
- EARS client manual
- Training and support

The following Research Vessels have been equipped with EARS and this way have reported en-route data during TA cruises: Ramon Margalef, Sarmiento de Gamboa, Hesperides, Pelagia (2 cruises), Dana, Aegaeo (2 cruises), Celtic Explorer, Belgica (2 cruises), and Arni Fridrikkson.

In addition, EARS 3 has been installed on RV Laura Bassi and RV Sarmiento de Gamboa for sea trials, carried out in May 2021.







For the other Research Vessels it has not been possible to install EARS for various reasons, such as technical difficulties, safety or policy reasons.

Transfer of EARS underway information and data to the shore to the EVIOR Dashboard

The SeaDataNet SWE (Sensor Web Enablement) toolkit package as earlier developed by 52North has been adopted and adapted for a near real time (NRT) distribution, and publishing of underway data from the sailing vessels.

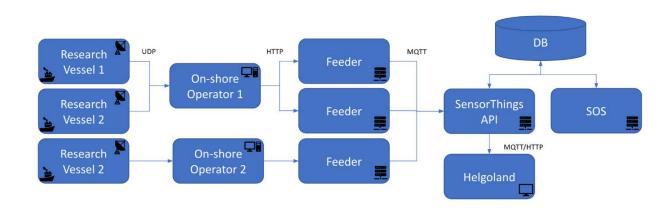


Image 5: Underway Data Flow from vessels to shore to clients, applying adapted SWE toolkit

These SWE developments have been undertaken in synergy with the EMODnet Ingestion project which has a task for promoting uptake of SWE standards in the oceanographic community. This allowed to make use of the services of 52North for adapting the software kit for Eurofleets+ purpose and assisting in its deployment.

The SWE Toolkit has been installed and configured at CSIC (Spain) which runs the Eurofleets+ HUB for receiving underway data sets (navigation, meteo, and salinometer data) from research vessels, equipped with the EARS system and allowing underway data transfer. The received metadata and data have been made available by the HUB by means of SOS services for retrieval and display at the Eurofleets+ EVIOR platform. This is done by means of an online dashboard.







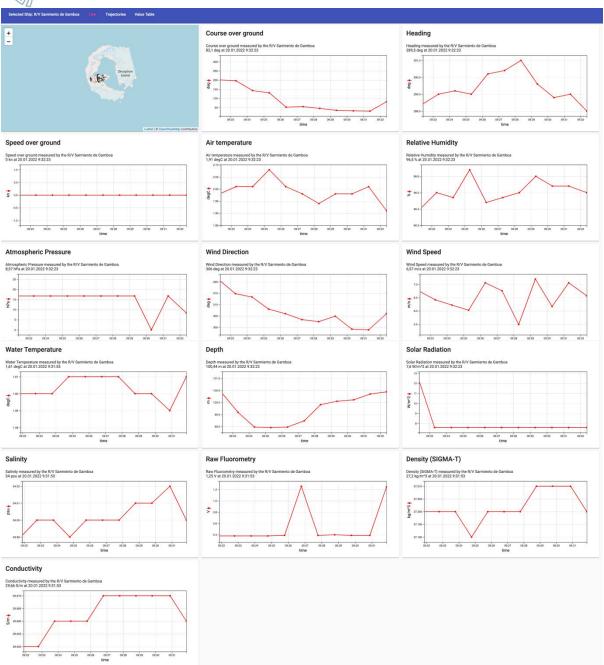


Image 6: Live Dashboard at CSIC and EVIOR platform for presenting Underway Data from research vessels, while sailing and in the port.







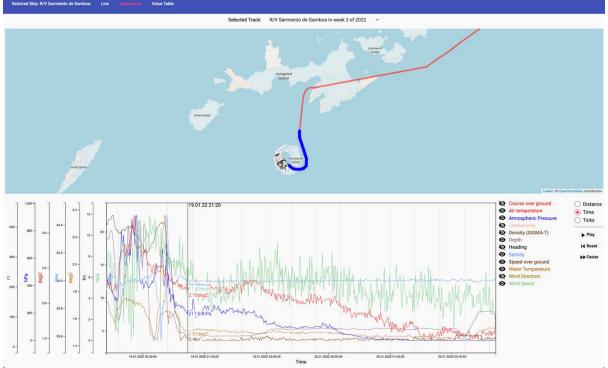


Image 7: Trajectory Dashboard at CSIC and EVIOR platform for presenting Underway Data from research vessels, while sailing and in the port

Several vessels, in particular the Spanish research vessels have continued sailing with the EARS system, and sending underway data to the HUB at CSIC. As a result, a substantial volume of underway data has been sent which recently has caused major issues with the online Dashboard. To solve the situation, work is ongoing by CSIC and 52North for upgrading the Virtual Machine and enlarging storage at the Hub and for reorganizing the database, so that it again becomes accessible with a reasonable performance. As a result, currently it is only possible to retrieve and visualise the live feeds from the 3 Spanish Research Vessels, while retrieving historic underway data from the TA cruises is not possible at the moment.

See: http://eurofleets.utm.csic.es/dashboard

Eurofleets+ Data Sets Catalogue

MARIS has developed and deployed a new component of EVIOR, namely the **Eurofleets+ Data Sets Catalogue.** This Catalogue gives a dynamic and up-to-date overview table of each of Eurofleets+ TA cruises, together with information links, following the Data Management approach. The following table gives a draft overview of the information attributes.

Attribute	Links
Eurofleets+ TA Cruise ID	Unique ID per Eurofleets+ TA cruise
Cruise ID Cruise Information	Dedicated link to retrieve a narrative about the scheduled TA
	cruises
Research Vessel	Dedicated link to retrieve details from EF+ Research Vessel
	database
Date start	Start date of the TA cruise







Attribute	Links
Date end	End date of the TA cruise
Cruise Summary	Dedicated link to retrieve details from EF+ Cruise Summary
Report	Reports database
En-route data	Dedicated link to retrieve details from EF+ Dynamic underway
	dashboard
Original Research	Dedicated link(s) to retrieve details from metadata and data sets as
data in EMODnet	submitted by TA Cruise Teams in the EMODnet Ingestion service
Ingestion	
Original Research	Dedicated link(s) to retrieve details from metadata and data sets as
data in SeaDataNet	submitted by TA Cruise Teams in the SeaDataNet SEANOE Data
SEANOE	Publishing service
Elaborated	Dedicated link(s) to retrieve details from SeaDataNet CDI data
Research data in	discovery and access service (shortlist of CDI entries with data
SeaDataNet CDI	access), where metadata and data have been standardised
service	
Elaborated	Dedicated link(s) to retrieve details from EMODnet - SeaDataNet
Research data in	CDI data discovery and access service (shortlist of CDI entries
EMODnet service	with data access), where metadata and data have been
	standardised

Table 5: Draft table of attributes of the Eurofleets+ data sets catalogue



Eurofleets+ Cruise Data Sets Catalogue

RETURN TO EVIOR HOME

		0		
Cruise ID	Research Vessel	Date Start	Date End	More Details
IMAR	Pelagia	2021-05-18	2021-06-02	S
Benchmark	G.O. Sars	2021-08-01	2021-08-10	S
FOCUS-AUV	Tangaroa	2020-09-30	2020-10-28	S
GRASSMAP	SOCIB	2021-09-14	2021-09-20	S
GSHARK	Dana	2021-07-21	2021-08-12	S
MYRTOON	Aegaeo	2021-09-30	2021-10-09	S
РНҮСОВ	TUBITAK Marmara	2021-09-11	2021-09-17	S
PORO-CLIM	Celtic Explorer	2021-05-05	2021-05-30	S
CALYPSO	Pelagia	2022-02-20	2022-03-12	S
CABLE-DOMUSe	Aranda	2022-04-04	2022-04-09	S
SEAQUAKE-GRACE	Belgica	2022-04-28	2022-05-11	S
SENERGY	Arni Fridriksson	2022-06-18	2022-06-25	S





RETURN TO EVIOR HOME | BACK



Image 8: Overview page of the Eurofleets+ Data Sets Catalogue

The following images give an example of a TA Cruise which has links to most of the components.



Eurofleets+ Cruise Data Sets Catalogue

Previous		Next
Record No.	18	
Cruise ID	SINES	
Cruise Information	Cruise Narrative	
Research Vessel	Sarmiento de Gamboa	
Date start	2022-09-11	
Date end	2022-09-20	
Cruise Summary Report	Cruise Summary Report	
En-route Data	En-route Data	
Original Research data in EMODnet Ingestion	3	
Original Research data in SeaDataNet SEANOE	3	
Elaborated Research data in SeaDataNet CDI service	•	
Elaborated Research data in EMODnet service	(9)	

Image 9: Detail page per TA Cruise in the Eurofleets+ Data Sets Catalogue









Image 10: Link to the detail page of the Cruise Narrative

	< Back to Eurofleets			of European Research Fleets	se		
		< Back to Search	Sarmiento de Gar	nboa		Print PDF	
			Contact Informat	ion			
			Owner	CSIC - Spanish National Research Council			
	January 1991	14	Operator	UTM-CSIC / Marine Technology Unit			
	ma	The second second	Contact person	Miguel Ángel Ojeda			
		Contraction of the local division of the loc	Address	Paseo Marítimo de la Barceloneta, 37-49 08003 Barcelona Spain			
			Telephone	+34 93 230 95 00			
			Fax	+34 93 230 95 55			
	Status Main activity Operating area	Operating Multiple activities All oceans	Website	http://www.utm.csic.es/en/instalaciones/sdc	3		
	Country ICES code	Spain 29AH	Email	info@utm.csic.es			
	NODC code Call sign	29AH	Observations	<u></u>			
	Year built Homeport Length	2007 Vigo 70,50 m	Technical Details				
	Avail. for charter Last update	Yes 26.07.2018	Main Dimensions				
			Length		70.50	5	
This directory is a se European reseach ve		Freeboard to Work	Deck (m)	2.5			
		ne or by contacting the	Draft (m)		4.6		
			Main Vessel Activity				
	© Powered by		Main Activity		Multiple activities		
	eur@)cean	Operating area		All oceans		
			Capacities and Working Spaces				
			Gross Tons		2.979		

Image 11: Link to the detail page of the Research Vessel





Eurofleets ⁺		Deliverable No. 9.15		
PAN-EUROPEAN INFRASTRU SeaDataNet		CRUISE SUMMARY REPORT INVENTORY (CSR)		
CSR REF-NO : 21027629 Download X	ML COCDI			
GENERAL INFORMATION		Usephi 10 m		
DOI	Platform/Ship	+		
https://doi.org/10.20351/29sg20220911	Sarmiento de Gamboa			
Cruise begin	Cruise end	a		
11.09.2022	20.09.2022			
Port of Departure	Port of Return	amount Setubal Com		
Lisbon, Portugal	Lisbon, Portugal	Tagus		
		Basin		
Chief Scientist(s)		5226		
Fontela, Marcos - University of Algarve, Marine Science	es Centre			
Responsible(s) Laboratory		Tomonde Seamount		
CSIC, Marine Technology Unit		50 km campunt guide 10 million -		
University of Alganve, Marine Sciences Centre		50 m Unavailable Garrind [®] Leaflet World Ocean Base Tries © Exi		
DESCRIPTION				
The overall objective of this study is to identify the ch	anges and risks for marine ecosystem functioning and its biodiv	rersity deriving from the potential impact of climate change on Iberian Upwelling fronts.		

Image 12: Link to the detail page of the Cruise Summary Report

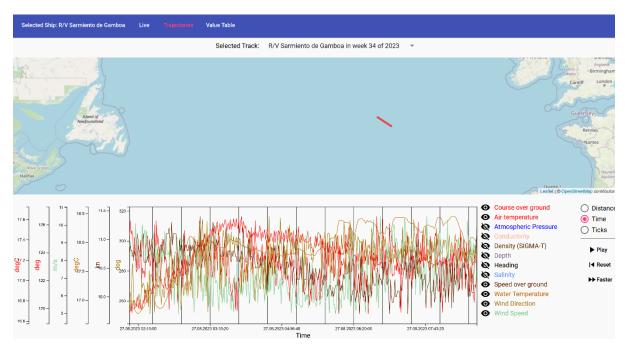


Image 13: Link to the detail page of the RV in the En-Route Data service







Home / Submissions

Details of Hydrographic dataset from the Eurofleets+ SINES 2022 research cruise in the Iberian Upwelling System

Title of dataset	Hydrographic dataset from the Eurofleets+ SINES 2022 research cruise in the Iberian Upwelling System	Portugal
Narrative summary of dataset	This dataset contains the hydrographic data for all the stations conducted during the EUROFLEETS+ SINES cruise that took place aboard the R/V Sarmiento de Gamboa between 11-20th of September 2022. The project "Climate change impact on ocean fronts ecosystems: The case of the Iberian Upwelling System (SINES)" was planned to be a proof of concept cruise of multidisciplinary research: integrating satellite data to past sediment records within classical methods in oceanography research and automated underwater vehicles to tackle the characterization of the Iberian Margin Upwelling System. The overall objective of this study is to identify the changes and risks for marine ecosystem services deriving from the potential impact of climate change on upwelling fronts. This research cruise was funded by the Eurofleets+ SEA Programme Call "REGIONAL" in 2019/2020 and was led by the Centre of Marine Sciences of Algarve (CCMAR, Portugal). The proposed multidisciplinary expedition was carried out between 11-19th September 2022, Full depth water column CTD profiles were collected at all the stations, 19 CTD casts, i.e., four stations with double cast -shallow and deep-). In 12 stations, a vertical multinet haul was also collected. The depth of the multinet samples (100 µm mesh) range between 700 m and surface. A deployment of a Light Autonomous Underwater Vehicle (LAUV Explore-4) was done on 17-18th of September.	Lisboa Svuila ^o Andolucio AMáio Gibriatar

Image 14: Link to the detail page of the data submission in EMODnet Ingestion



Image 15: Link to the detail page of the data submission in the SEANOE service with DOI



This project has received funding from the EU H2020 research and innovation programme under Grant Agreement No 824077



BACK



NEW SEARCH REFINE SEARCH	I SEA	RCH RE	SULTS			SUMMARY TIMESERIES	An Coi		
Filter search		100 1000 10000			Found 33 Show (1 - 33) First Prev Next Last		40° 00' 00" N		
You searched for: R Cruise Summary Report (CSR): SINES - Sarmiento de Gamboa(29AH)	eset all	•	Dataset name	Country originator	Start date	Instrument / gear type	Reniche Santarér		
EXPORT RESULT SAVE QUERY	Ł		EUROFLEETS+ CTD SINES cruise 2022 (station: ST01)	Portugal, Spain	20220911	CTD	39100 00'N Samara Correl Lisboa		
INPUT FIELDS			EUROFLEETS+ CTD SINES cruise 2022 (station: ST02)	Portugal, Spain	20220911	CTD	(fibor)		
ree search 😧			EUROFLEETS+ CTD SINES cruise 2022 (station: CCMAR)	Portugal, Spain	20220912	CTD	38° 00' 00" N		
Date search 📀			EUROFLEETS+ CTD SINES cruise 2022 (station: FARO1)	Portugal, Spain	20220913	CTD	Porti		
eographic search 🔗 North West East South	0		EUROFLEETS+ CTD SINES cruise 2022 (station: FARO2)	Portugal, Spain	20220913	CTD	37' 07' 00' N		
Search within bounding box SEARCH RESET			EUROFLEETS+ CTD SINES cruise 2022 (station: FARO3)	Portugal, Spain	20220913	CTD	367.00°.00°.N		
SEARCH RESEI			EUROFLEETS+ CTD SINES cruise 2022 (station: FARO4)	Portugal, Spain	20220913	СТD			
orth Atlantic Ocean tlantic Ocean	(33) (33)		EUROFLEETS+ CTD SINES cruise 2022 (station: ST03)	Portugal, Spain	20220914	CTD	35°.00'.00" N		
ortheast Atlantic Ocean (40W)	(33)		EUROFLEETS+ CTD SINES cruise 2022 (station: ST03)	Portugal, Spain	20220914	СТД			
DISCIPLINE (P08)	0		EUROFLEETS+ CTD SINES cruise 2022	Portugal, Spain	20220915	CTD	C OpenStreetMap co		

Image 16: Link to the detail page of the elaborated metadata and data in the SeaDataNet CDI service

NEW SEARCH REFINE SEARCH RESULTS SUMMARY TIMESERIES							Pomba
-ilter search	100	1000 10000		Found 31 Sh	ow (1 - 31) First Prev Next Last		Leiria
You searched for: Re Cruise Summary Report (CSR): STINES - Sarmiento de Gamboa(29AH)	eset all	Dataset name	Country originator	Start date	Instrument / gear type	3≪ 007N	Peniche Santarén Samgra Correia
EXPORT RESULT SAVE QUERY		EUROFLEETS+ CTD SINES cruise 2022 (station: ST01)	Portugal, Spain	20220911	CTD		Lisbon
INPUT FIELDS		EUROFLEETS+ CTD SINES cruise 2022 (station: ST02)	Portugal, Spain	20220911	CTD	38°00'00"N	Sines
ree search 🚱		EUROFLEETS+ CTD SINES cruise 2022 (station: CCMAR)	Portugal, Spain	20220912	CTD		
ate search 🤣 rom yyyymmdd To yyyymmdd		EUROFLEETS+ CTD SINES cruise 2022 (station: FARO1)	Portugal, Spain	20220913	CTD	37° 00' 00'' N	Portimão
eographic search 🕢 North West East South		EUROFLEETS+ CTD SINES cruise 2022 (station: FARO2)	Portugal, Spain	20220913	CTD		
] Search within bounding box		EUROFLEETS+ CTD SINES cruise 2022 (station: FARO3)	Portugal, Spain	20220913	CTD	36° 00' 00" N	
SEARCH RESET		EUROFLEETS+ CTD SINES cruise 2022 (station: FARO4)	Portugal, Spain	20220913	CTD		
orth Atlantic Ocean Iantic Ocean	(31)	EUROFLEETS+ CTD SINES cruise 2022 (station: ST03)	Portugal, Spain	20220914	CTD	35° 00' 00" N	
ortheast Atlantic Ocean (40W)	(31)	EUROFLEETS+ CTD SINES cruise 2022 (station: ST03)	Portugal, Spain	20220914	CTD		
MATRIX CATEGORIES		EUROFLEETS+ CTD SINES cruise 2022	Portugal, Spain	20220915	CTD	34° 00' 00' N	© OpenStreetMap contrib 0'00" W 9'00'00" W 8'

Image 17: Link to the detail page of the elaborated metadata and data in the SeaDataNet CDI service

See: https://evior.eurofleets.eu/cds/search

This way, users have a direct overview of Eurofleets+ TA cruises and options for retrieving further details and for getting access to the metadata and data sets as resulting from the TA Cruises.

Browsing through the **Eurofleets+ Data Sets Catalogue** one can see that good progress is being made with the follow-up of the Eurofleets+ Data Management approach, which strives to make the Cruise data sets findable and accessible.







More details about the follow-up and achieved results per TA Cruise will be reported in Deliverable D4.15, planned for end October 2023. This will also provide a synthesis of the lessons learned and recommendations for future projects.



