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1 Executive Summary

This document provides a first evaluation approach for the implementation of the data management procedures developed during the Jerico S3 period. As a final step before applying for the European Jerico Research Infrastructure (RI), a series of best practice management documents were produced, including guidelines for handling data collected from physical and BGW platforms, bio-optical sensors and carbonate systems. However, this report includes the implementation status for Jerico physical and BGC platforms, as it is possible to localize their presence in the main European aggregators, which is the final step for an efficient release to the marine community in compliance with FAIR guidelines. The best management practices for the bio-optical sensors can be considered as Jerico's contribution to the community's efforts to standardize the data flow from primary providers to European services and therefore cannot be evaluated from an implementation point of view. The same applies to the guidelines on carbonate systems, which were published shortly before the end of the project and whose implementation on behalf of the providers cannot be assessed



2 Introduction

The JERICO-S3 project aimed to strengthen the European network of coastal observatories by developing an integrated Research Infrastructure (RI) for observing the complex coastal seas. The main objectives of the project included:

- Providing services to deliver high quality environmental data.
- Access to solutions and facilities for researchers and users.
- Creating product prototypes for the main EU marine services and users.
- Supporting excellence in marine research to better respond to societal and policy needs.

In the course of the JERICO-S3 project, a series of comprehensive documents have been published that provide detailed guidelines for the collection, processing and dissemination of data from European coastal areas. These documents form the backbone of a data management strategy that facilitates the flow of data from the various Pilot Super Sites (PSS) and Integrated Regional Sites (IRS) and ensures FAIR (Findable, Accessible, Interoperable, Reusable) access to the datasets and data products generated within JERICO-S3. Due to the different data collections by the JERICO platforms, specific guidelines have been developed for the following platforms:

- Physical and biogeochemical (BGC) platforms
- Bio-optical sensors
- Carbonate systems

At the end of the JERICO-S3 project, an evaluation was planned to assess the implementation of these guidelines and the compliance of primary data collectors with the recommended best practices. This assessment focused on the availability of the JERICO-RI platforms through major European aggregators such as EMODnet, SeaDataNet and Copernicus, as the final step of an effective management system is the integration of the data into these databases.

The assessment methodology was applied to the Physical and BGC platforms using the information available on the JERICO RI website. However, the data flow from bio-optical sensors is not yet widely standardized and the guidelines for carbonate systems were only published shortly before the end of the project, making it impossible to measure their level of implementation.

3 Assessment of the implementation of data management

Jerico RI observatories collect a variety of data (physical, biogeochemical, biological) along the European coastline which should be released to the marine community in a sustainable way. The Data Management documentation that was produced during Jerico S3 lifetime (D6.1 – Draft Management Plane and D6.12 – Final Management Plan) contain the main principles for an effective handling of the different type of data collected by the Jerico RI coastal platforms. In addition, a number of best practices documents were also released during the project's period containing information for:

- Physical and BGC platforms (Deliverable D6.3)
- Plankton imaging data (Deliverable D6.4)
- Bio-optical sensors (Deliverable D6.5)
- Coastal Carbonate systems (Deliverable D6.8)

This collection of different documents illustrates the variety of procedures required for the efficient handling of data collected by the different platforms, but also gives an indication of how the implementation of these procedures could be evaluated.

The main guidelines that should be applied to the Jerico S3 data streams are listed in the project's Data Management plan (D 6.1/D6.12) and are quoted below:

“Following the path of its predecessors JERICO & JERICO-NEXT, JERICO-S3 should comply with the common principles that collected observation data sets should be shared according to FAIR principles to become available for uptake and redistribution by the European marine infrastructures:

- EuroGOOS ROOS's and CMEMS InSitu TAC for operational oceanography exchange (NRT)
- SeaDataNet for delayed mode and exchange of validated data sets
- EMODnet, whereby data will provide extra input for EMODnet thematic data products
- Blue-Cloud, which is developing a powerful Virtual Research Environment platform that will be promoted by means of five multi-disciplinary Virtual Lab demonstrators. The Blue-Cloud system will work through access and enabling processing of datasets from the main European marine data infrastructures (EMODnet, SeaDataNet, EurOBIS,...), which underpins the need to JERICO related data to be shared via those channels.

Moreover, JERICO-S3 data sets (both NRT and delayed mode) should also be accessible through the JERICO-RI portal, in order to promote the results of JERICO-S3 activities and progress in establishing a more streamlined data flow”



As outlined in the project's data management plan, once collected and processed, the Jerico S3 data will eventually be published in a large European database. Thus, the availability of the Jerico data by the major European aggregators can be used as an assessment of the successful implementation of the data management procedures, as the data are ultimately findable, accessible and usable by the stakeholders.

In line with the above, the methodology used to assess the implementation of the data management guidelines was through the use of the Jerico RI platform online catalogue and reviewing the extent to which these platforms are available through the major European databases.

3.1 Jerico PSS and IRS platforms

The Pilot Super Sites (PSS) and the Integrated Regional Sites (IRS) are the main observational modules of the Jerico RI and their data availability in large European databases is used as an assessment of the implementation of the data management practices published by the Jerico community. This assessment was conducted using a point-of-user approach, without contact with any Jerico data provider and using only the information provided on the Jerico RI website. The assessment was conducted in the following steps:

- The Jerico RI website (<https://www.jerico-ri.eu>) was used as the primary source of information for the data sources
- The Jerico RI online catalogue (<https://www.jerico-ri.eu/jerico-ri-catalogue/#/map>) was used as the main source of information for the platform names
- The names from this catalogue are used to identify the data availability of each platform in EMODnet, Copernicus Marine and Seadatanet.

The existence of a platform in the above-mentioned European databases is a strong indication that the recommended best practices have been applied, as standardization in the naming of parameters and data format has taken place since publication by these aggregators, thus achieving a higher FAIRness value.

Listed below in separate tables are the platform names and types found for each PSS/IRS in the online catalogue, along with the availability status in EMODnet, Copernicus Marine and Seadatanet (green-> available, red -> not found). However, it should be noted that the name of the platform was the main obstacle to correctly identifying the platform in the European databases. In most cases, the platform name displayed in the online catalogue cannot be found in the aggregator's database: A similar version may exist or it may be completely different and the user has to guess whether it is the same station based on the type and/or geographical location. There have also been cases where a generic name has been used in the

online tool for a number of stations, such as the "Danish tide gage network", which has been used to identify 25 different stations. The incorrect use of the platform name in Jerico RI's online catalogue is very confusing and significantly affects the usability of the online tools offered. In order to identify the most characteristic cases, the platform name found in the Emodent database has been inserted in the table, in addition to the green color that identifies the correct station identifier. Finally, it should be noted that a similar type of evaluation was also carried out for two PSS (Cretan Sea and Gulf of Finland) and one IRS (Iberian Atlantic margin) for the deliverable D6.7 - "Evaluation of FAIRness of data of the PSS and IRS related to the Data Management Policy". The results of this analysis are included in the following tables.

North Sea and English Channel Pilot Supersite				
Station name	Type	Emodnet	CMEMS in-situ	SeaDataNet CDI
COSYNA Stationary FerryBox system FINO3	Ferrybox			
COSYNA Underwater Node Helgoland	Bottom-based obs.			
ZooObs (Zooplankton & Marine snow Observatory)	Coastal profiler			
Wangerooge	HF Radar			
SmartBuoy: Warp	Fixed platform			
SmartBuoy: WestGabbard	Fixed platform			
M/S Norrona (NO)	Ferrybox			
M/S Connector (Rotterdam-Oslo)	Ferrybox			
Borssele Wind Platform	Fixed platform			
Thornton buoy	Fixed platform			
TRIPOD MOW1	Bottom-based obs.			
DUNKERQUE	Fixed platform			
Gravelines	Fixed platform			
CALAIS	Fixed platform			
MAREL-Carnot	Fixed platform			
Boulogne	Fixed platform			
BOULOGNE-SUR-MER	Fixed platform			
Boulogne sur Mer	Fixed platform			
Point C	Fixed platform			
Wimereux	Fixed platform			
Point L	Fixed platform			

At So	Fixed platform			
DIEPPE	Fixed platform			
SCENES	Fixed platform			
LE_HAVRE	Fixed platform			
Seine	Manual sampling			
Cabourg	Fixed platform			
SMILE	Fixed platform			
Luc-sur-Mer	Fixed platform			
Smile	Fixed platform			
Luc-sur-Mer	Fixed platform			
CHERBOURG	Fixed platform			
Chausey	Fixed platform			
Cézembre	Fixed platform			
Le Buron	Fixed platform			
Bizeux	Fixed platform			
SAINT-MALO	Fixed platform			
Les Hébihens - Arguenon	Fixed platform			
Hébihens	Fixed platform			
Loguivy - Trieux	Fixed platform			
ASTAN	Fixed platform			
Roscoff - Bouée Astan	Fixed platform			
Astan	Fixed platform			
Estacade	Fixed platform			
ROSCOFF	Fixed platform			
Pierre Noire	Fixed platform			
Rivière de Morlaix	Fixed platform			

For the North Sea and English Channel PSS, the online catalogue contains a total of 47 stations, 22 of which were found in the European databases (46% of the total PSS stations).

North-West Mediterranean Pilot Supersite				
Station name	Type	Emodnet	CMEMS in-situ	SeaDataNet CDI
VIAR	HF Radar			

TINO	HF Radar			
PCOR	HF Radar			
PFIN	HF Radar			
Corsica Channel Observatory	Fixed platform			
CENTURI	Fixed platform (tide gauge)			
SOLENZARA	Fixed platform (tide gauge)			
AJACCIO	Fixed platform (tide gauge)			
DYFAMED (cruise)	Fixed platform			
DYFAMED (mooring)	Fixed platform			
MONACO	Fixed platform			
EOL PointB	Fixed platform			
Cap Ferrat	Fixed platform			
DYFAMED-Ligure (Radar)	Fixed platform			
Villefranche	Fixed platform			
Point B	Fixed platform			
NICE	Fixed platform			
LA FIGUEIRETTE	Fixed platform			
ANTARES-IL07 (mooring)	Fixed platform			
TOULON	Fixed platform (tide gauge)			
ANTARES-Toulon (Radar)	Fixed platform			
LACAZE-DUTHIERS - PLANIER (mooring)	Fixed platform			
Marseille	Fixed platform			
Frioul	Fixed platform			
SOLEMIO	Fixed platform			
MARSEILLE	Fixed platform			
MESURHO	Fixed platform			
Rhône	Manual sampling			
FOS SUR MER	Fixed platform			
Sète	Fixed platform	Sete		
SETE	Fixed platform	sete2		
Sète	Fixed platform	sete		
Bouzigues - Lagune de Thau	Fixed platform			

Bouzigues	Fixed platform			
Barcarès	Fixed platform			
Parc Leucate 2	Fixed platform			
POEM	Fixed platform			
Tet	Fixed platform			
PORT VENDRES	Fixed platform			
SOLA	Fixed platform			
Cap Bear	Fixed platform			
Banyuls	Fixed platform			
Sola	Fixed platform			
Mola	Fixed platform			
LACAZE-DUTHIERS - LACAZE (mooring)	Fixed platform			
6100196 (Cabo Begur buoy)	Fixed platform			
LION (mooring)	Fixed platform			
LACAZE-DUTHIERS - LIONCEAU (mooring)	Fixed platform			
Barcelona tide gauge	Fixed platform			
Barcelona-coast-buoy	Fixed platform			
OBSEA - Expandable Seafloor Observatory	Fixed platform			
Tarragona tide gauge	Fixed platform			
Tarragona-coast-buoy	Fixed platform			
Antena Salou	HF Radar			
6100280 (Tarragona buoy)	Fixed platform			
Antena Alfacada	HF Radar			
Antena Vinaroz	HF Radar			
Sagunto tide gauge	Fixed platform			
Valencia tide gauge	Fixed platform			
6100281 (Valencia buoy)	Fixed platform			
6100430 (Dragonera buoy)	Fixed platform			
ANDRATX	Fixed platform			
ESTELLENCES	Fixed platform			
ESPORLES	Fixed platform			
PARC BIT	Fixed platform			
Palma tide gauge	Fixed platform			
BUOY BAHIADEPALMA	Fixed platform			
PLAYA DE PALMA	Fixed platform			

SA RAPITA	Fixed platform			
SALINES	Fixed platform			
PORTO CRISTO	Fixed platform			
CALA MILLOR	Fixed platform			
COLONIA SANT PERE	Fixed platform			
Alcudia tide gauge	Fixed platform			
POLLENSA	Fixed platform			
CIUTADELLA	Fixed platform			
SON BLANC	Fixed platform			
SON BOU	Fixed platform			
Mahón tide gauge	Fixed platform			
LA MOLA	Fixed platform			
6100197 (Mahón buoy)	Fixed platform			
SANT ANTONI	Fixed platform			
GALFI	Fixed platform			
Ibiza tide gauge	Fixed platform			
BUOY CANALDEIBIZA	Fixed platform			
Gandía tide gauge	Fixed platform			

The North-West Mediterranean PSS consists of 87 stations, 65 of which are available via the European aggregators (74%)

Cretan Sea Pilot Supersite				
Station name	Type	Emodnet	CMEMS in-situ	SeaDataNet CDI
Ferrybox PFB (SAEG01)	Ferrybox			
Fixed platform HCB (Heraklion)	Mooring time series			
Fixed platform E1-M3A (61277)	Mooring time series			
Fixed platform SB (6101001, SARON)	Mooring time series			
Glider PG (SEA015)	Glider			
Argo Floats	Profilers			
Bottle data at HCB (PR_BO_Heraklion)	regular R/V visits			
Bottle data at E1-M3A (PR_BO_E1M3A)	regular R/V visits			
CTD data at HCB (PR_CT_Heraklion)	regular R/V visits			
CTD data at E1-M3A (PR_CT_E1M3A)	regular R/V visits			

Mykonos Buoy (6101005, MYKON)	Mooring time series			
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The Cretan Sea PSS consists of 11 platforms, all of which are also accessible via the European databases. This is a unique situation as this PSS contains platforms that are all managed by one institution (HCMR), which is also a member of the CMEMS Insitu TAC.

Gulf of Finland Pilot Supersite				
Station name	Type	Emodnet	CMEMS in-situ	SeaDataNet CDI
Silja Serenade (SYKE, FMI)	Ferrybox			
Finnmaid (SYKE, IOW)	Ferrybox			
Silja Europa (TALTECH)	Ferrybox			
Keri Observatory (TALTECH)	Fixed platform			
Utö Observatory (FMI, SYKE)	Fixed platform			
Gliders (FMI, TALTECH)	Glider			
Argo floats (FMI)	Float			
Profiling buoys (FMI, TALTECH)	Float			

The Gulf of Finland PSS includes 8 platforms, of which data from 5 platforms are shared with European databases (62.5%). According to the online catalogue, the **total number of PSS stations is 153, of which 103 (67.3%)** have been successfully integrated into the European databases.

IRS-Norwegian Sea				
Station name	Type	Emodnet	CMEMS in-situ	SeaDataNet CDI
M/S Trollfjord (TF)	Ferrybox			
M/S Color Fantasy (FA)	Ferrybox			
NIVA Research Station (NRS)	Ferrybox			
M/S Norrona (NO)	Ferrybox			
M/S Connector (Rotterdam-Oslo)	Ferrybox			
Väderöarna WR	Fixed platform			
IRS-Kattegat-Skagerrak E-N Sea				
Brofjorden WR	Fixed platform			
Danish tide gauge network	Fixed platform	Skagen		

Danish tide gauge network	Fixed platform	Frederiks havn		
Danish tide gauge network	Fixed platform	HirtshalsTG		
Danish tide gauge network	Fixed platform	HanstholmTG		
Danish tide gauge network	Fixed platform	Hobro		
Danish tide gauge network	Fixed platform	Udbyhoej		
Danish tide gauge network	Fixed platform	Randers		
PLOCAN_HFR	HF Radar			
Danish tide gauge network	Fixed platform	Grena		
Form SOCIB radar	HF Radar			
Danish tide gauge network	Fixed platform	Aarhus		
GALF SOCIB radar	HF Radar			
Danish tide gauge network	Fixed platform	Hov		
Moorea - Tiahura - F1	Fixed platform			
Danish tide gauge network	Fixed platform	Ballen		
Moorea - AMP Tiahura - pente externe	Fixed platform			
Danish tide gauge network	Fixed platform	Juelsminde		
Moorea - ATPP Tiahura - barrière	Fixed platform			
Danish tide gauge network	Fixed platform	Fredericia		
Moorea - Tiahura - B1	Fixed platform			
Danish tide gauge network	Fixed platform	EsbjergTG		
Moorea - Tiahura - F2	Fixed platform			
Danish tide gauge network	Fixed platform	Slipshavn		
Moorea - Tiahura - P35	Fixed platform			
Danish tide gauge network	Fixed platform	Korsö		
Moorea - Tiahura - P25	Fixed platform			
Danish tide gauge network	Fixed platform	Sjællands Odde		
Moorea - Tiahura - P3	Fixed platform			
Danish tide gauge network	Fixed platform	Holbaek		
Danish tide gauge network	Fixed platform	Roskilde		
Moorea - Tiahura - P55	Fixed platform			

Danish tide gauge network	Fixed platform	Hornbaek		
Moorea - Tiahura - P8	Fixed platform			
Danish tide gauge network	Fixed platform	Vedbaek		
Danish tide gauge network	Fixed platform	Köbenhavn		
Danish tide gauge network	Fixed platform	Dragö NordreRo se		
Danish tide gauge network	Fixed platform	Drogden		
Moorea - Tiahura - C	Fixed platform			
Danish tide gauge network	Fixed platform	Fynshav		
Moorea - Tiahura - B2	Fixed platform			
Danish tide gauge network	Fixed platform			
Sylt	HF Radar	HFR_CO SYNA_SY LT		
Moorea - Tiahura - P14	Fixed platform			
Danish tide gauge network	Fixed platform	Bagenkop		
Büsum	HF Radar			
COSYNA Stationary FerryBox system CUXHAVEN	Ferrybox	Cuxhaven FerryBox		
Wangerooge	HF Radar	HFR_CO SYNA_W ANG		
Ferrybox at m/s Finnmaid	Ferrybox			

The IRS-Norwegian Sea - Kattegat-Skagerrak E-N Sea contains 56 stations, of which 32 (57.1%) were found in European databases.

IRS-Bay of Biscay				
Station name	Type	Emodnet	CMEMS in-situ	SeaDataNet CDI
LE_CONQUET	Fixed platform			
MAREL-Iroise	Fixed platform	Iroise		
MAREL-Iroise	Fixed platform	Iroise Stanne		
Portzic	Fixed platform			
Labo métro Ifremer Brest	Fixed platform			
BREST	Fixed platform			

Brest - Sainte Anne	Fixed platform			
Rade de Brest	Fixed platform			
SMART	Fixed platform			
Camaret	Fixed platform			
Kervel large - Baie de Douarnenez	Fixed platform			
CONCARNEAU	Fixed platform			
PORT TUDY	Fixed platform			
Belle Ile	Fixed platform			
Men er Roué - Quiberon	Fixed platform			
LE_CROUESTY	Fixed platform			
MAREL-Molit	Fixed platform			
Ouest Loscolo	Fixed platform			
SAINT-NAZAIRE	Fixed platform			
Loire	Manual sampling			
LES_SABLES_D_OLONNE	Fixed platform			
L'AIGUILLON SUR MER	Fixed platform			
Arcay	Fixed platform			
LA ROCHELLE	Fixed platform			
La Rochelle - Antioche	Fixed platform			
Antioche	Fixed platform			
Le Cornard - Pertuis Breton	Fixed platform			
ILE D'AIX	Fixed platform			
Boyardville	Fixed platform			
Auger	Fixed platform			
ROYAN	Fixed platform			
pk 86	Fixed platform			
Gironde PK86	Fixed platform			
Arcachon B13	Fixed platform			
Arcachon - Bouée 13	Fixed platform			
Bouée 13	Fixed platform			
ARCACHON-EYRAC	Fixed platform			
Eyrac	Fixed platform	IF000576		
Teychan bis	Fixed platform			
Comprian x2	Fixed platform			
MIMIZAN	Fixed platform			

BOUCAU-BAYONNE	Fixed platform			
Côte Basque	Fixed platform			
D3	Manual sampling			
Donostia Buoy				
SAINT JEAN-DE-LUZ				
L-RF10 - D2	Manual sampling			
L-BI10	Manual sampling			
L-OI20 - D0	Manual sampling			
D1	Manual sampling			
Pasaia Station	Fixed platform			
L-OI10	Manual sampling			
L-UR20	Manual sampling			
L-O10	Manual sampling			
L-O20	Manual sampling			
L-U10	Manual sampling			
L-RF20	Manual sampling			
L-D10	Manual sampling			
L-A10	Manual sampling			
L-L20	Manual sampling			
L-L10	Manual sampling			
L-OK10	Manual sampling			
Matxitxako	HF Radar			
L-B20	Manual sampling			
L-RF30	Manual sampling			
6200024 (Bilbao buoy)	Fixed platform			
L-B10	Manual sampling			
L-N20	Manual sampling			
Bilbao Station	Fixed platform			
L-N10	Manual sampling			
Bilbao tide gauge	Fixed platform			
Bilbao-coast-buoy	Fixed platform			
Santander tide gauge	Fixed platform			
Gijon-coast-buoy	Fixed platform			
Gijón tide gauge	Fixed platform			
6200025 (Cabo de Penas buoy)	Fixed platform			

6200082 (Estaca de Bares buoy)	Fixed platform			
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The IRS-Bay of Biscay includes 78 stations, of which 34 (43.5%) are available via Emodnet and Copernicus.

IRS-Adriatic Sea				
Station name	Type	Emodnet	CMEMS in-situ	SeaDataNet CDI
MAMBO_C1	Fixed platform			
GoT-HF Radar	HF Radar			
Isonzo River	Fixed platform			
MAMBO_3	Fixed platform			
DWRG3	Fixed platform			
PALOMA	Fixed platform			
MAMBO_4	Fixed platform			
DWRG1	Fixed platform			
DWRG2	Fixed platform			
MAMBO_2	Fixed platform			
Tagliamento River	Fixed platform			
Acqua Alta Oceanographic Tower	Fixed platform			
RV001	Fixed platform			
SJ107	Manual sampling			
SJ105	Manual sampling			
SJ103	Manual sampling			
SJ101	Manual sampling			
SJ108	Manual sampling			
Meteoceanographic site S1-GB	Fixed platform			

The IRS-Adriatic comprises 19 stations, of which 9 (47.3%) can be found in Emodnet and Copernicus.

IRS - Iberian Atlantic Margin

Station name	Type	Emodnet Physics	CMEMS in-situ	SeaDataNet CDI
Alfredo Magalhaes Ramalho multiparametric buoy (RAIA01, 6200191)	Moored surface buoy			
Offshore multiparametric buoy of Nazare (MONICAN1, 6200192)	Moored surface buoy			
Coastal multiparametric buoy of Nazare (MONICAN2, 6200199)	Moored surface buoy			
SINES offshore multiparametric buoy (6201081)	Moored surface buoy			
Offshore multiparametric buoy of Faro (Faro, 6200200)	Moored surface buoy			
Coastal buoy of Leixoes (6201077)	Moored surface buoy			
Coastal buoy of Sines (6201078)	Moored surface buoy			
Coastal buoy of Faro (6201079)	Moored surface buoy			
High-Frequency radar from Vila Real Santo Antonio	Coastal structure			
High-Frequency radar from Alfanzina	Coastal structure			
High-Frequency radar from Sagres	Coastal structure			
High-Frequency radar from Cabo Espichel	Coastal structure			
High-Frequency radar from Sao Juliao	Coastal structure			
High-Frequency radar from Leca Palmeira	Coastal structure			
Viana Tide Gauge	Coastal structure			
Leixoes Tide Gauge	Coastal structure			
Aveiro Tide Gauge	Coastal structure			
Figueira da Foz Tide Gauge	Coastal structure			
Nazare Tide Gauge	Coastal structure			
Peniche Tide Gauge	Coastal structure			
Lisboa Tide Gauge	Coastal structure			
Sesimbra Tide Gauge	Coastal structure			
Troia Tide Gauge	Coastal structure			
Sines Tide Gauge	Coastal structure			
Faro Tide Gauge	Coastal structure			
Vila Real S. Antonio Tide Gauge	Coastal structure			
Antena Faro de Cabo Silleiro	HF radar			
Antena Faro de Finisterre	HF radar			
Antena Mazagón	HF radar			

Antena Faro de Punta Carnero	HF radar			
Antena Puerto de Ceuta	HF radar			
Antena Tarifa	HF radar			
Antena Camarinal	HF radar			
Algeciras	Tide Gauge			
Almería	Tide Gauge			
Arrecife	Tide Gauge			
Bonanza	Tide Gauge			
Coruña	Tide Gauge			
Ferrol1	Tide Gauge			
Ferrol2	Tide Gauge			
Fuerteventura	Tide Gauge			
Gomera	Tide Gauge			
Hierro	Tide Gauge			
Huelva	Tide Gauge			
La Palma	Tide Gauge			
Langosteira	Tide Gauge			
Las Palmas	Tide Gauge			
Málaga	Tide Gauge			
Marín	Tide Gauge			
Motril	Tide Gauge			
Sevilla2	Tide Gauge			
Tarifa	Tide Gauge			
Tenerife	Tide Gauge			
Vigo	Tide Gauge			
Vilagarcía	Tide Gauge			
SPAIN PLOCAN NO PLOCAN_HFR	HF radar Station			

The IRS – Atlantic Margin comprises 56 stations, of which 46 (81%) can be shared via Emodnet and Copernicus. All the IRS comprise 209 stations, of which 121 (57%) are accessible via Emodnet and Copernicus.

A total of **362 stations** are available in the Jerico RI PSS and IRS modules, **while 224 of them (61%)** are also released via the European databases.

3.2 Bio-optical & Carbonate data

As mentioned in the introduction of this document, in addition to the best practices for physical and BGC data (D6.3), a number of other best practices were issued for the Plankton imaging data (D6.4), the Bio-optical sensors (D6.5) and the Coastal Carbonate systems (D6.8). There was no assessment for the implementation of data management, as the bio-optical data flow is not yet widely standardized and Jerico's best practices contribute to the international efforts to build a sustainable data flow for these innovative data. Regarding the carbonate data, the best practice document was published very late, leaving no time for the project partners to implement it.

4 Conclusions

This document assessed the implementation of data management best practices for the physical and BGC data collected by Jerico RI's PSS and IRS platforms. An assessment for the other data types collected by RI was not possible as there is no generally accepted standardization or the best practices were published relatively late in the project.

The assessment was conducted using the information about the platforms available on the Jerico RI website and without contacting the Jerico data providers. The summary of the results are:

- **Of the total 362 stations included in the Jerico RI PSS and IRS modules, 224 (61%) are in the European databases (Emodnet, Copernicus, Seadatanet)**
- The percentage of stations successfully delivered to the European aggregators is **67.3% (103 out of 154 stations) for the PSS** and **57% (121 out of 209 stations) for the IRS.**
- The data availability of the Jerico RI was checked at Emodnet, Copernicus Marine and Seadatanet. As the vast majority of PSS and IRS stations are autonomous platforms that collect sensor-based data, these are the relevant databases into which this data should be integrated.
- The percentage of Jerico's RI data that eventually reached the European aggregators mentioned above is considerable. However, it should be noted that almost 35-40% of the RI data collected is not accessible through the main European databases. This figure is really high considering that the data flow to these aggregators has been established for over a decade and was among the first recommendations made to the providers already in the first Jerico project. It is clear that a future European Jerico RI should introduce more efficient overall data management to ensure that the vast majority of data is available in the central European data repositories.
- All of Jerico's RI data were identified in the Emodnet Physics and Copernicus Marine databases. This is to be expected as these two databases are the



recommended final destination specified in the best practices for data management of sensor-based data. It is worth noting that very little (a small amount) of Jerico's RI data was found in Seadatanet. This could be due to the fact that this database is recommended for delayed mode and validated data, which means that there is no connection of this database with the near real time data streams. Furthermore, the updating of the Seadatanet database cannot be done by the data providers, but is usually done at a later stage by the NODC, a national level organization that collects the data from the primary providers.

- The name of the platform, as indicated in the Jerico RI online catalogue, was the main obstacle to the correct identification of the platform in the European databases. A mismatch between the name of the catalogue and the name by which a station is referenced in the European databases is very common, which can be very confusing for the user and leads to a guessing process based on additional information such as platform type and/or geographical location. The incorrect use of the platform name in the Jerico RI online catalogue is a significant obstacle to the correct identification of Jerico RI stations in the European databases.



APPENDIX: ABBREVIATIONS

BGC: Biogeochemical

CDI: Common Data Index

CMEMS: Copernicus Marine Environment Monitoring Service

EMODNet: European Marine Observation and Data Network

FAIR: Findable Accessible Interoperable Reusable

IRS: Integrated Regional Site

JERICO-RI: Jerico Research Infrastructure

NODC: National Oceanographic Data Center

NRT: Near Real Time

PSS: Pilot Super Site

SDN: SeaDataNet