
FORCOAST



Earth Observation Services For Wild Fisheries, Oystergrounds
Restoration And Bivalve Mariculture Along European Coasts

PROJECT DELIVERABLE REPORT

Deliverable Number: 3.5

Deliverable Title: DWH request for 2022

Author(s): Daniel Lowe (MI_ES)

Work Package Number: 3

Work Package Title: Service Design

FORCOAST Project Information	
Project full title	Earth Observation Services For Wild Fisheries, Oystergrounds Restoration And Bivalve Mariculture Along European Coasts
Project acronym	FORCOAST
Grant agreement number	870465
Project coordinator	Ghada El Serafy, Deltares
Project start date and duration	1 st November 2019, 30 months
Project website	FORCOAST.eu

Deliverable Information	
Work package number	3
Work package title	Service Design
Deliverable number	3.5
Deliverable title	DWH request for 2022
Description	Using the provided template this deliverable states whether ADDITIONAL data is requested for the following year from the DWH. These ADDITIONAL Datasets provide for example higher resolution products which are necessary for aquaculture operation (task 3.1).
Lead beneficiary	MI_ES
Lead Author(s)	Daniel Lowe
Contributor(s)	Arthur Capet, Ghada El Serafy, Luis Rodriguez Galvez
Revision number	4
Revision Date	30/09/2021
Status (Final (F), Draft (D), Revised Draft (RV))	F
Dissemination level (Public (PU), Restricted to other program participants (PP), Restricted to a group specified by the consortium (RE), Confidential for consortium members only (CO))	CO

Document History			
Revision	Date	Modification	Author
0	27/09/2021	1 st Draft	Daniel Lowe
1	28/09/2021	Review	Arthur Capet
2	28/09/2021	Review	Deltares
3	29/09/2021	Section 4 addition	Daniel Lowe, Arthur Capet
4	30/09/2021	Review and formatting	Luis Rodriguez Galvez

Approvals				
	Name	Organisation	Date	Signature (initials)
Coordinator	Ghada El Serafy	Deltares	30/09/2021	GES
WP Leaders	Arthur Capet	Liège University	30/09/2021	AC



PROPRIETARY RIGHTS STATEMENT

This document contains information, which is proprietary to the FORCOAST consortium. Neither this document, or the information contained within may be duplicated, used or communicated except with the prior written permission of the FORCOAST coordinator.



Executive Summary

This deliverable is an update of deliverable D3.3 “DWH request for 2021”. Its purpose is to list the Earth Observation DWH dataset requests for 2022 by the FORCOAST partners.

The introduction refers the reader back to deliverables D3.3 and D3.4, which showed that the DWH high-resolution datasets, expected to be used during 2021, were finally not used, preferring the partners instead to use other kinds of EO datasets.

The reasons for this lack of use of DWH datasets are outlined in this document.



List of Contents

Executive Summary	5
List of Contents	6
1 Introduction	8
2 Lack of use of DWH datasets	8
3 DWH Additional datasets request template	9
4 Recommendations with respect to DWH for future use	9
5 References	10

Figures

Figure 1: Extract of DWH Additional datasets request template provided by the Commission.	9
--	---

Acronyms and abbreviations

CMEMS: Copernicus Marine Environment Monitoring Service

CSCDA: Copernicus Space Component Data Access

EO: Earth Observation

ESA: European Spatial Agency

HR: High Resolution

VHR: Very High Resolution



1 Introduction

This is the final document in a series of deliverables describing the expected and final use of Earth Observation datasets by FORCOAST partners within the project. These datasets can be divided into two categories: i) widely used EO datasets, such as those available from CMEMS, and ii) Copernicus Data Warehouse (DWH) CSCDA high-resolution datasets FORCOAST members have access to as part of a H2020 EU-funded project, which can be divided into CORE [1.] and ADDITIONAL [2.] datasets.

Deliverable 3.2 “Data Warehouse (DWH) use for 2020” included the results of a survey completed by the project’s partners with information about the different kinds of datasets used by them, such as their processing level or purpose (direct use, model forcing or validation). It also presented a short description of the CORE and ADDITIONAL datasets and how to access them, intended as a guide to facilitate their access by the partners, summarizing the content of the Data Access Portfolio [3.] from CSCDA.

Deliverable 3.3 “DWH request for 2021” focused on the expected use of DWH high-resolution datasets during 2021, also based on the answers given by the partners to a survey on this topic.

Deliverable 3.4 “Data Warehouse (DWH) use for 2021” presents detailed information about the EO datasets finally selected by the partners to be used at each Pilot area. As the project is currently at an advanced stage in its development, it is unlikely this list of datasets will experience further modifications.

Finally, this deliverable is intended as a summary of the expected use of DWH datasets during 2022 in the eight Pilot areas the FORCOAST project is comprised of. In previous deliverables it was made apparent that these high-resolution L1/L2 datasets are not going to be used by the partners in the remainder of the project. A number of reasons are presented in this document for this lack of use, as well as an extract of the Excel document used to send to the Commission when applying for these datasets.

2 Lack of use of DWH datasets

Two different surveys sent out to the project partners during 2021 on the topic of datasets use provided important information on the use of DWH datasets. The results of the first survey, sent out in the first quarter of 2021, were analysed in D3.3. The main reasons behind the lack of use of DWH datasets were:

- The traditional datasets and their available variables provide enough information to develop the models.
- The large processing power required to process the DWH datasets makes their use unfeasible.

The same reasons can be found in the second survey, together with the following:

- Inability to set a daily-based processing operative chain.
- The available variables do not match some of the partners’ needs.
- Some new high-resolution products offered by CMEMS since May 2021 have enough resolution (300m) for some of the partners’ needs.

- CMEMS products are regularly validated and the quality is reported; this makes them more attractive to use than the DWH datasets, as validation, which is a very time and effort consuming procedure, has already been performed.
- The DWH datasets are not relevant for some of the service modules being developed.

3 DWH Additional datasets request template

The surveys sent to the project’s partners included a section where each Pilot area’s extension is defined, and the different products available for request are specified. (The reader is referred to D3.3, Section 3.1 for details.) This section uses the same structure as that present in a template proposed by the Commission to request DWH datasets. An extract is shown below (Figure 1). This template includes as many single requests as Pilot areas defined in the project.

Archive_standard_Optical_HR1	ADD_009a			0	
Archive_standard_Optical_HR2	ADD_009b			0	
Archive_standard_Optical_VHR1	ADD_011a	1 800	24	43 200	AOI = Adriatic Sea, North (lat,lon) = (44.8 , 12.5) Missions = Pleiades1A/B, SuperView-1, Kompsat-3/3A, PlanetScope, Deimos-2, WorldView-2
Archive_standard_Optical_VHR2	ADD_011b			0	
Archive_standard_SAR_HR1	ADD_013a			0	
Archive_standard_SAR_HR2	ADD_013b			0	
Archive_standard_SAR_VHR1	ADD_015a			0	
Archive_standard_SAR_VHR2	ADD_015b	1 800	24	43 200	
New acquisition_standard_Optical_HR1	ADD_010a			0	
New acquisition_standard_Optical_HR2	ADD_010b			0	
New acquisition_standard_Optical_VHR1	ADD_012a	1 800	24	43 200	AOI = Adriatic Sea, North (lat,lon) = (44.8 , 12.5) Missions = Pleiades1A/B, SuperView-1, Kompsat-3/3A, PlanetScope, Deimos-2, WorldView-2
New acquisition_standard_Optical_VHR2	ADD_012b			0	
New acquisition_standard_SAR_HR1	ADD_014a			0	
New acquisition_standard_SAR_HR2	ADD_014b			0	
New acquisition_standard_SAR_VHR1	ADD_016a			0	
New acquisition_standard_SAR_VHR2	ADD_016b	1 800	24	43 200	

Figure 1: Extract of DWH Additional datasets request template provided by the Commission.

4 Recommendations with respect to DWH for future use

One of the most common reasons among FORCOAST’s partners for not using the DWH datasets was that the datasets they already used, such as those available from CMEMS, were enough for their current needs in the pilot areas. This is because these datasets provide them with all the physical, chemical and biological quantities that they need, whilst the DWH datasets contain reflectance data.

The process these datasets must undergo to transform L2 reflectance high-resolution data into relevant and instantly applicable L3 or L4 data that can be used by the partners in their developed models involves a huge effort and large resources. For this process to happen, it must be considered before the start of the project, both in terms of those members that would be involved in the process as well as with respect to budget allocation.

In case these issues are considered beforehand, a possible approach could be to find among the different partners one or two who are used to dealing with these HR RS datasets, and task them with providing further information about the advantages and possibilities derived from their use to the rest of the partners. Their main mission would be to guide their partners on the path to follow when dealing with them for the first time, both from the administrative point of view (when applying for

their use at the CSCDA portal, considering the available types and limited quota assigned to each partner) and from the processing perspective (expected outputs, results interpretation and usability, and computational requirements to obtain these results).

This approach would allow a project such as FORCOAST to take full advantage of the DWH datasets on offer, it would provide its partners with more options to use relevant data in their models, it would encourage the transfer of knowledge into future projects and it would also benefit the CSCDA, increasing the visibility of their satellite products on offer.

5 References

1. [CSCDA: CORE Datasets](#)
2. [CSCDA: ADDITIONAL Datasets](#)
3. [Copernicus Space Component Data Access Portfolio](#)