

D7.9 – DWH use for 2024

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ABSTRACT

The present document represents the deliverable D7.9 – DWH use for 2024 of CENTAUR project and is produced under the Work Package WP7 - Project Management.

The document aims to illustrate the consortium's use of the ESA DWH in 2024 for the CENTAUR project.



1 INTRODUCTION

1.1 SCOPE OF THE DOCUMENT

Deliverable 7.9 is summarizing the use of EO very high resolution (VHR) data requested from the ESA Data Warehouse (DWH) within the second year of the CENTAUR project.

In more detail, the document specifies:

- Details on the VHR data that were accessed from the DWH
- The use of the VHR data within the project
- The use of non-quota dataset

1.2 DEFINITIONS, ABBREVIATIONS AND ACRONYMS

Table 1: Definitions, Abbreviations and Acronyms

Abbreviation/acronym	Definition
AOI(s)	Area of Interest(s)
CSC	Copernicus Space Component
CSCDA	Copernicus Space Component Data Access
DWH	Data Warehouse
EC	European Commission
EO	Earth Observation
ESA	European Space Agency
EU	European Union
H2020	EU Research and Innovation funding programme 2014-2020
Res	Resolution
SAR	Synthetic Aperture Radar
(V) HR	(Very) High Resolution
UF	Urban Flood

1.3 APPLICABLE AND REFERENCE DOCUMENTS

ID	Document name
[AD1]	CENTAUR - 101082720 – Grant Agreement

2 USE OF ESA DWH DATA

2.1 THE COPERNICUS SPACE COMPONENT

The Copernicus Space Segment (one of the two elements of the Copernicus Space Component (CSC)) represents the geo-spatial resources for the Copernicus programme; it relies on a constellation of dedicated missions - the Sentinels - as well as on a set of EO space missions – the Copernicus Contributing Missions – contributing according to agreed operational scenarios and service levels. ESA is entrusted by the EU to guarantee a harmonised data provision to the Copernicus Space Segment.

All missions of the Space Segment are classified primarily by **sensor type** (SAR or Optical) but also by **resolution** classes defined as per Table 2:

Table 2: Copernicus Space Segment mission classification by sensor type and resolution

Sensor Type	
SAR	
Optical	
Resolution	
VHR1: Very High-Resolution 1	res<= 1 m
VHR2: Very High-Resolution 2	1 m <res<=10 m
HR1: High-Resolution 1	4 m <res<=10 m
HR2: High-Resolution 2	10 m <res<=30 m
MR1: Medium Resolution 1	30 m <res<=100 m
MR2: Medium Resolution 2	100 m <res<=300 m
LR: Low Resolution	res> 300 m

2.2 AVAILABLE DATASETS AND ASSIGNED QUOTA

Table 3 shows the quotas assigned to the CENTAUR project among the available datasets at the CSCDA Data Warehouse

Table 3: Quotas assigned for datasets to CENTAUR project

Dataset	Title	Quota (km ²)	New/Archive
D2_MG2b_CENT_011a	VHR1 Optical	227 km ²	Archive
D2_MG2b_CENT_012a	VHR1 Optical	1017 km ²	Archive
D2_MG2b_CENT_011b	VHR2 Optical	227 km ²	Archive
D2_MG2b_CENT_012b	VHR2 Optical	4251 km ²	New
D2_MG2b_CENT_016b	VHR2 SAR	3200 km ²	New

2.3 QUOTA USED

In this section will be described the use that the consortium made of the quotas assigned in 2024, the orders that have been placed and the images that have been delivered.

The following table shows the quotas that the consortium used in 2024 for the CENTAUR project.

Table 4: Quotas used by the consortium in 2024

Dataset	Title	Quota (km ²)	New/Archive
D2_MG2b_CENT_011a	VHR1 Optical	75 km ²	Archive
D2_MG2b_CENT_012a	VHR1 Optical	0 km ²	Archive
D2_MG2b_CENT_011b	VHR2 Optical	70 km ²	Archive
D2_MG2b_CENT_012b	VHR2 Optical	0 km ²	New
D2_MG2b_CENT_016b	VHR2 SAR	0 km ²	New

2.3.1 ORDER PLACED

The following table shows the orders the consortium placed in 2024 for the CENTAUR project, with details of the datasets selected and how they were used.

Table 5: List of Order placed in 2024

Dataset	Satellite	Day	Area	Use
D2_MG2b_CENT_011a	SkySat	14 april 2018	WG1_EbroBasin_SkySat_20180414.kml	Validation of UF-ID-04, UF-ID-05
D2_MG2b_CENT_011b	SPOT-7	14 april 2018	WG1_EbroBasin_SPOT7_20180414.kml	Validation of UF-ID-04, UF-ID-05
D2_MG2b_CENT_011b	SPOT-6	3 October 2020	EMSR468_AOI_CevaCentre.kmz	Post-event VHR image for urban flood validation UF-ID-05 for Ceva – Italy use case

2.4 NON-QUOTA DATASETS USED

This section describes the use made by the consortium of the open collections made available to the project, with details of the datasets selected and how they were used.

Table 6: Non-Quota Datasets Used

Dataset	Satellite	Day	Area	Use
D2_MG2b_CERM_003a	WorldView-1	19 September 2018	Beira, Mozambique	Potential reference image for urban flood validation
D2_MG2b_CERM_003a	WorldView-3	21 August 2018	Beira, Mozambique	Potential reference image for urban flood validation
D2_MG2b_CERM_003a	Pleiades	24 January 2019	Beira, Mozambique	Potential reference image for urban flood validation





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