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SPECIFICATIONS

OSEO: EOX Cloud Free Service Description

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Table of contents:

1	INTRODUCTION.....	3
2	SERVICE OVERVIEW	3
3	SERVICE AND PRODUCT DESCRIPTION	3
4	TERMS AND CONDITIONS FOR THE USE OF THE SERVICE.....	4

1 INTRODUCTION

ESA's EO Open Science is a pillar of ESA's Space 4.0 initiative and aims to stimulate scientific innovation from the exploitation of sustained EO observations (eg Sentinel) by offering state of the art infrastructure for scientific exploitation.

The OSEO call aims to foster scientific and applications uptake of full archives of EO data, by offering Third Party services which exploit state of the art ICT. This document complements the Objectives and Evaluation Criteria of the OSEO Call (available at <https://earth.esa.int/files/OSEO>), by providing an overview of the offered Third Party service "EOX Cloud Free". For other OSEO services, please refer to the documentation available at <https://earth.esa.int/aos/OSEO>.

2 SERVICE OVERVIEW

This service offers the possibility to download a cloud free Sentinel-2 product for 2017 over Europe and Northern Africa (only the bands 2, 3, 4 and 5).

3 SERVICE AND PRODUCT DESCRIPTION

Sentinel-2 data collected during differing weather conditions in Summer 2017 were merged into a homogeneous mosaic, (almost) free from atmospheric impacts. Products offered within this OSEO are shown in the image below.



The mosaic was created using the same pixel selection method as with the global mosaic from 2016 (<https://s2maps.eu/>) which looks at each pixel time series and merges the three best (i.e. most probable cloudless) reflectance values using averaging.

The mosaic is stored in a set of GeoTIFF files which contain merged reflectance values (Band 2 @496.6 nm, Band 3 @560.0 nm, Band 4 @664.5 nm and Band 5 @703.9 nm) in GeoTIFF bands 1 to 4 in the order red, green, blue and vegetation red edge. The GeoTIFF files use 16bit depth and are lossless compressed.

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4 TERMS AND CONDITIONS FOR THE USE OF THE SERVICE

You are free to use Sentinel-2 cloudless for commercial and non-commercial purposes, as long as you provide proper attribution. It shall be displayed legibly and in proximity to the usage and read "Sentinel-2 cloudless - <https://s2maps.eu> processed for ESA by EOX IT Services GmbH (Contains modified Copernicus Sentinel data 2016 & 2017)"