

The potential of Copernicus for future CLC in Azores

Summary

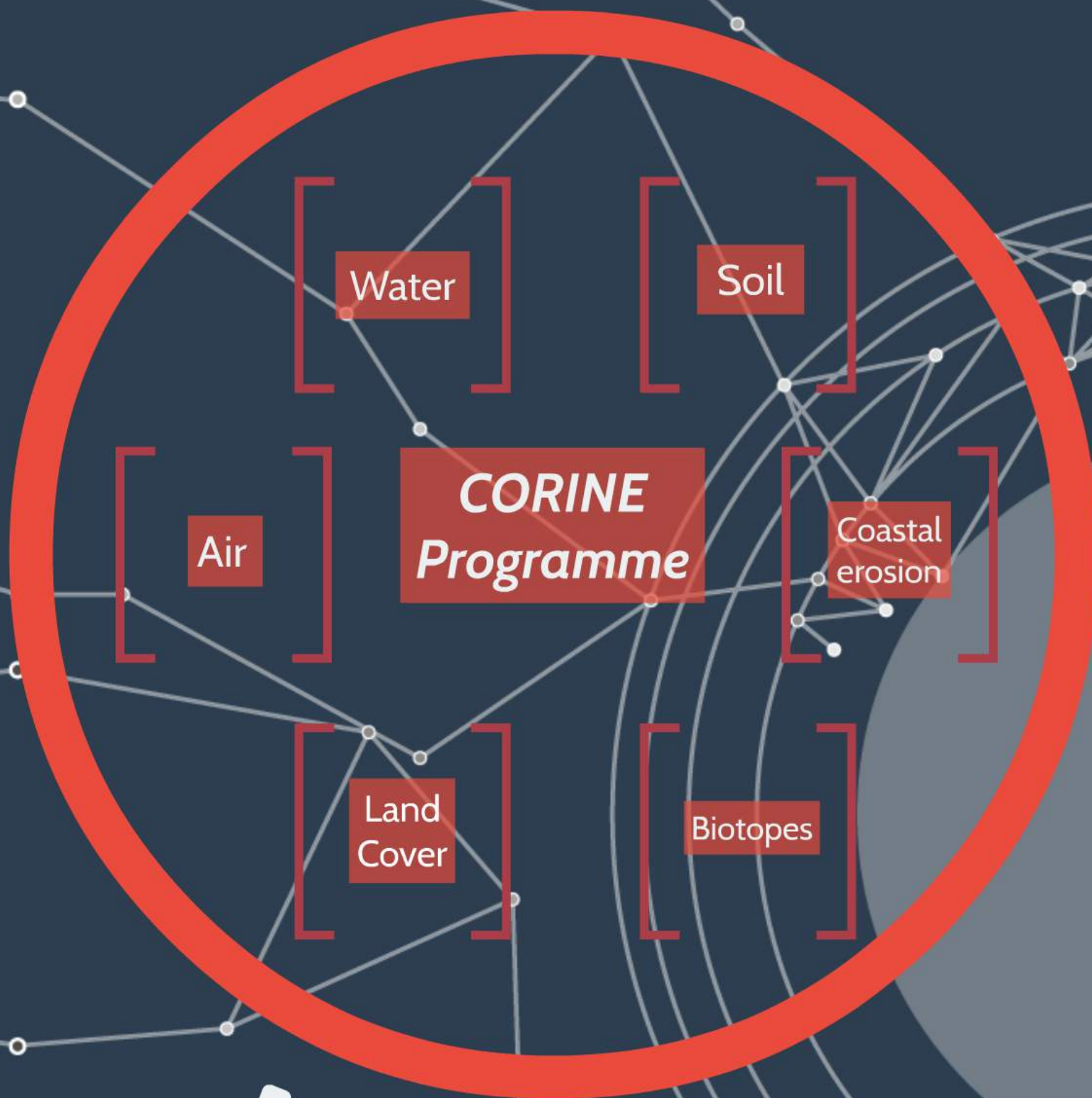
CORINE Programme

- CORINE Land Cover RAA

Copernicus Programme

- Sentinels Missions
- Contributing Missions

Future CORINE Land Cover in Azores



Water

Soil

CORINE
Programme

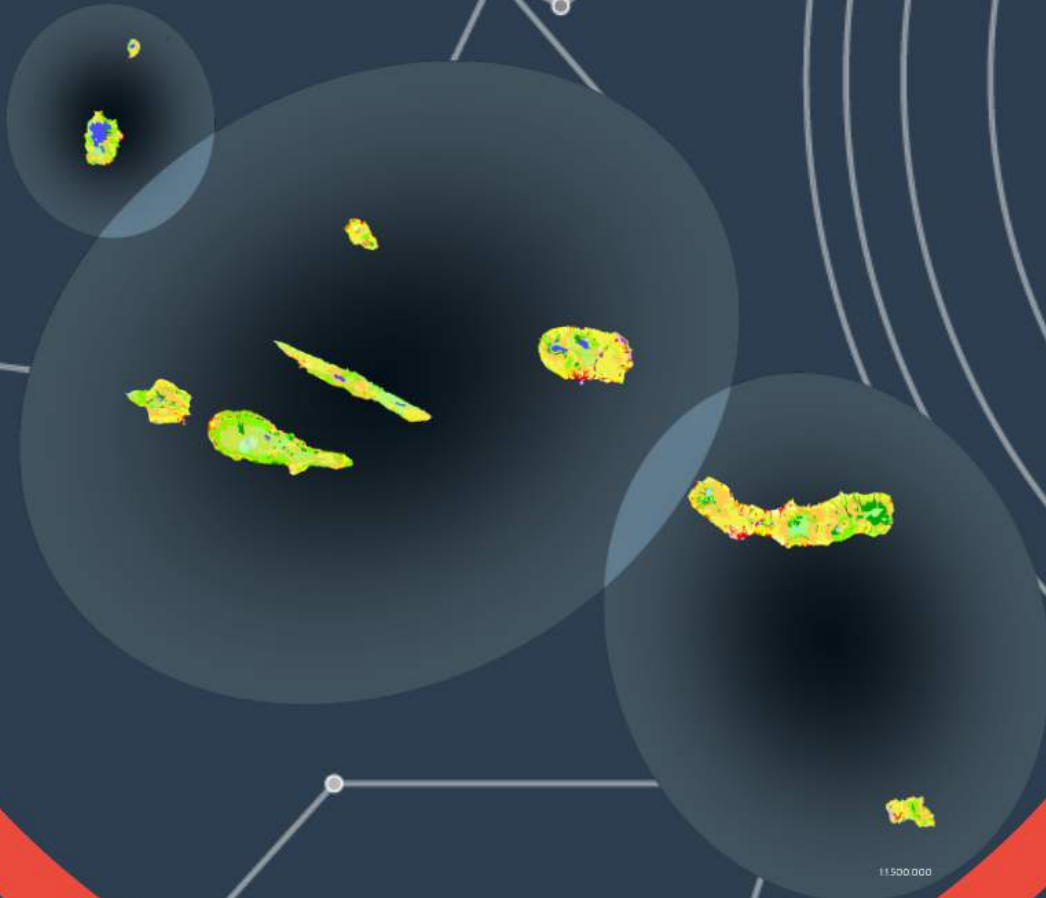
Coastal
erosion

Air

Biotores

Land
Cover

CORINE Land Cover -RAA



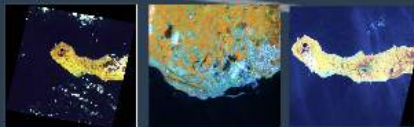
Technical Specifications

- *Scale - 1:100.000*
- *UMC - 25 ha*
- *Nomenclature - 28 classes (of 44)*
- *Production Method - Visual Interpretation*
- *Thematic Accuracy - $\geq 85\%$ (EEA)*
- *Positional Accuracy - $\geq 100\text{m}$*

Data

Base Data

Year	Satellite	Spatial Resolution	Image source
2006	SPOT-4	20m	Image2006
	LANDSAT-5 TM	30m	USGS
	LANDSAT-7 ETM+	30m	DGT
2000	LANDSAT-7 ETM+	30m	Image2006
			USGS
			DGT
1990	LANDSAT-5 TM	30m	DGT
	Georeferenced panchromatic aerial photos	-	SRTT

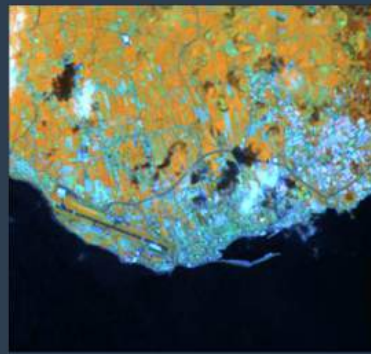
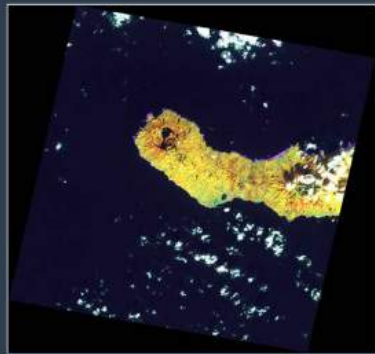


Auxilliary Data

- Land Cover Map of Azores (COSAçores)
- Vectorial cartography (1:5.000)
- Forest Inventory of Azores
- GMES Urban Atlas
- Georeferenced aerial photos

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Technical Difficulties

- Geographical Dispersion
- Clouds in the images
- Biophysical characteristics

Copernicus Programme

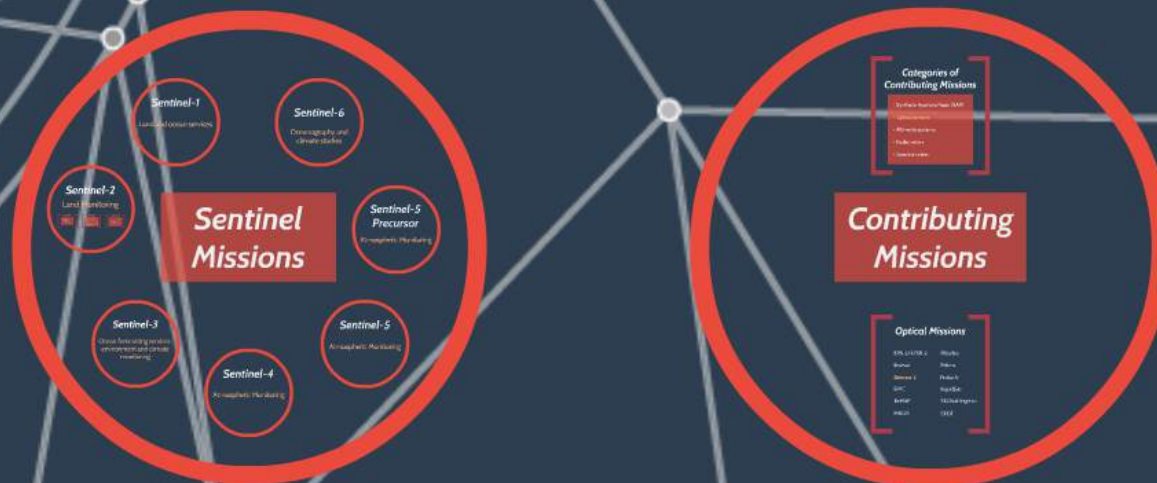
In-Situ
Coordination

Services
Component

Earth
Observations
Missions



Earth Observations Missions



Sentinel Missions

Sentinel-1

Land and ocean services

Sentinel-6

Oceanography and climate studies

Sentinel-2

Land Monitoring



Sentinel-5 Precursor

Atmospheric Monitoring

Sentinel-3

Ocean forecasting services, environment and climate monitoring

Sentinel-5

Atmospheric Monitoring

Sentinel-4

Atmospheric Monitoring

Sentinel-2

Land Monitoring

Resolution and Swath

- 13 spectral bands
 - 4 bands (10m)
 - 6 bands (20m)
 - 3 bands (60m)
- Orbital swath width - 290km

Mission Objectives

- High-resolution multispectral images
- SPOT and LANDSAT-type image data
- Repeat time of 5 days at the equator in cloud-free conditions
- Observation data for the next generation products
 - Land-cover maps
 - Land-change detection maps
 - Geophysical variables

Geographical Coverage

- Data acquisition from 56° S to 83° N (latitude)
- Include:
 - Islands greater than 100km² in area
 - Islands in the EU
 - All other islands within 20km of coastline
 - The Mediterranean Sea
 - All inland water bodies
 - All closed areas

A network diagram with white nodes and lines on a dark blue background, overlaid with a red semi-transparent rectangle containing text.

Land Management
Agriculture and forestry
Disaster control
Humanitarian relief operations
Risk mapping
Security concerns

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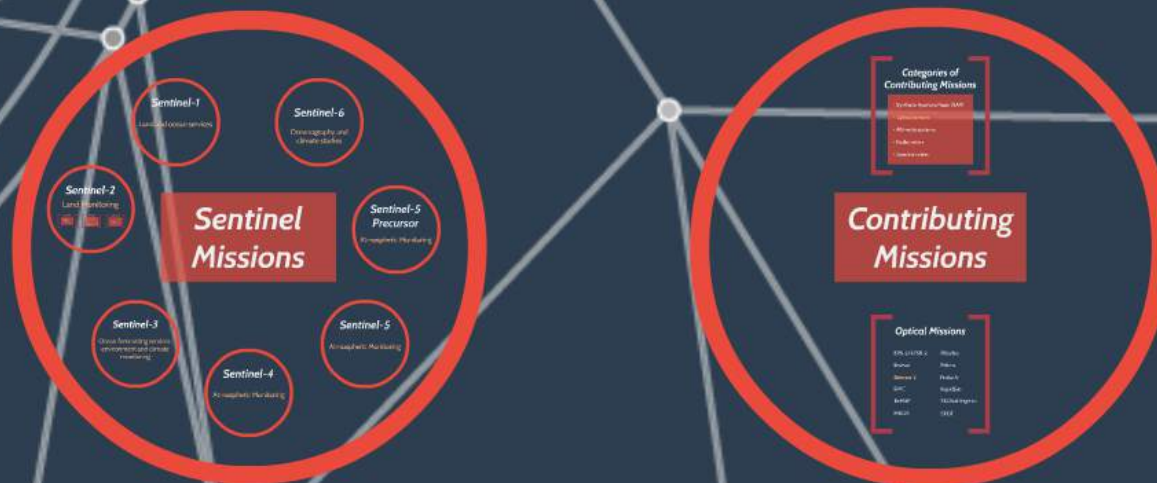
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Earth Observations Missions



Categories of Contributing Missions

- Synthetic Aperture Radar (SAR)
- Optical sensors
- Altimetry systems
- Radiometers
- Spectrometers

Contributing Missions

Optical Missions

ERS-2/ATSR-2	Pleiades
Envisat	Prisma
Belmos-2	Proba-V
DMC	RapidEye
EnMAP	SEOSat-Ingenio
HIROS	SPOT

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HiROS

SPOT



Prezi

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Lagoon of Seven Cities, São Miguel - Azores



***Future CORINE Land
Cover in Azores***

Based on...

Sentinel-2 images

- High resolution
- High revisit frequency
- Covers the EU islands

Contributing missions images

- Optical Missions
e.g. DEIMOS-2

Copernicus
Land
Monitoring
Services

Production of future
CLC in Azores with
more frequency and
a greater detail

CORINE Land
Cover

***Thank you for your
attention***

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