The Copernicus Programme

European Commission – DG GROW-I3
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Copernicus
Europe's eyes on Earth

Space

Copernicus

User Uptake

User Uptake

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COPERNICUS IN BRIEF

- **Copernicus is a flagship programme** of the European Union:
  - ✓ To monitor **the Earth,** its environment and ecosystems
  - ✓ To prepares for **crises, security risks** and **natural disasters**
- **EUR 7.4 Bn** between 2008 and 2020
- A **full, free and open data policy**
- It is also:
  - ✓ A tool for **economic development**
  - ✓ a driver for the **digital economy**
  - ✓ A contribution to the **EU's role as a global power**

THE SENTINELS

Space Component

FULL, FREE AND OPEN

Sentinel Mission and Status		Key Features
 SENTINEL-1: 9-40m resolution, 6 days revisit at equator	*S1-A and B in orbit*	Polar-orbiting, all-weather, day-and-night radar imaging
 SENTINEL-2: 10-60m resolution, 5 days revisit time	*S2-A in Orbit S2-B in Orbit*	Polar-orbiting, multispectral optical, high-res imaging
 SENTINEL-3: 300-1200m resolution, <2 days revisit	*S3-A in Orbit S3-B Launch Q4 2017*	Optical and altimeter mission monitoring sea and land parameters
 SENTINEL-4: 8km resolution, 60 min revisit time	*1st Launch Q4 2022*	Payload for atmosphere chemistry monitoring on MTG-S
 SENTINEL-5p: 7-68km resolution, 1 day revisit	*Launch in Q2 2017*	Mission to reduce data gaps between Envisat, and S-5
 SENTINEL-5: 7.5-50km resolution, 1 day revisit	*1st Launch in 2021*	Payload for atmosphere chemistry monitoring on MetOp 2nd Gen
 SENTINEL-6: 10 days revisit time	*July 2020*	Radar altimeter to measure sea-surface height globally

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COPERNICUS SERVICES

Monitoring the State of the Earth System Environment ...

... Six cross-cutting Thematic Services

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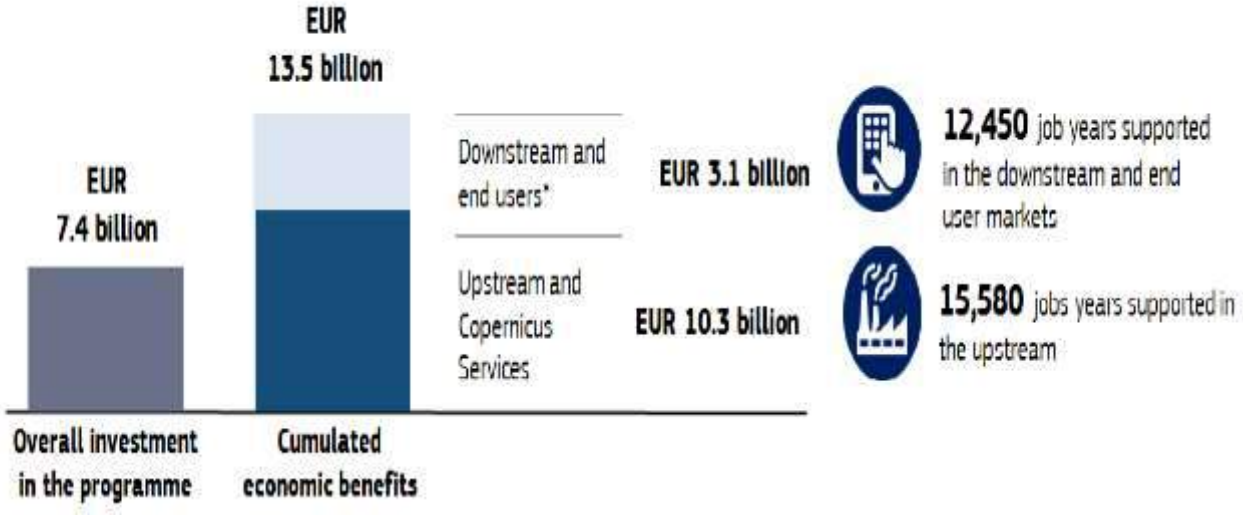
COPERNICUS MONETARY BENEFITS

User Uptake

Estimated direct monetary benefits between 2008 and 2020



* The Downstream and end user analysis includes only 8 value chains: Agriculture, Forestry, Urban Monitoring, Insurance, Ocean Monitoring, Oil & Gas, Renewable Energies and Air Quality. Estimates for end users were only calculated for Insurance, Oil&Gas and Urban Monitoring. The estimates of downstream and end user benefits should be seen as extremely conservative because they were calculated a year after the launch of the first Sentinel satellite. Benefits are likely to increase significantly as more Sentinels become operational.

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EXAMPLES OF COPERNICUS BENEFITS

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Pipeline Infrastructure Monitoring in the Netherlands

Benefits for the Netherlands: €15 to €18 M/year

Forest Management in Sweden

Benefits for Sweden: €16 to €22 M/year

Winter Navigation in the Baltic

Benefits for Sweden and Finland: €24 to €106 M/year

Source: EARSC

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