

Scaling up geospatial research and innovation to meet the needs of the SDGs The role of satellite Earth Observations

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European Space Agency

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General Assembly

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Seventieth session Agenda items 15 and 116

Resolution adopted by the General Assembly on 25 September 2015

[without reference to a Main Committee (A/70/L.1)]

70/1. Transforming our world: the 2030 Agenda for Sustainable Development

The General Assembly

Adopts the following outcome document of the United Nations summit for the adoption of the post-2015 development agenda:

Transforming our world: the 2030 Agenda for Sustainable Development

Preamble

This Agenda is a plan of action for people, planet and prosperity. It also seeks to strengthen universal peace in larger freedom. We recognize that eradicating poverty in all its forms and dimensions, including extreme poverty, is the greatest global challenge and an indispensable requirement for sustainable development.

All countries and all stakeholders, acting in collaborative partnership, will implement this plan. We are resolved to free the human race from the tyranny of poverty and want and to heal and secure our planet. We are determined to take the bold and transformative steps which are urgently needed to shift the world on to a sustainable and resilient path. As we embark on this collective journey, we pledge that no one will be left behind.

The 17 Sustainable Development Goals and 169 targets which we are announcing today demonstrate the scale and ambition of this new universal Agenda. They seek to build on the Millennium Development Goals and complete what they did not achieve. They seek to realize the human rights of all and to achieve gender equality and the empowerment of all women and girls. They are integrated and indivisible and balance the three dimensions of sustainable development: the economic, social and environmental.

The Goals and targets will stimulate action over the next 15 years in areas of critical importance for humanity and the planet.



Article 76:

... We will promote transparent and accountable scaling-up of appropriate public-private cooperation to exploit the contribution to be made by a wide range of data, **including Earth observation and geospatial information**, while ensuring national ownership in supporting and tracking progress.





Please recycle



Satellite Earth Observations, an essential source of information to study climate change



Chlorophyll



Soil Moisture



Sea Level Height



Carbon Dioxide



Sea Surface Temperature



Nitrous Oxyde

Commonly stated obstacles to the scaling-up and operational use of EO in the global sustainable development agenda



Open and Free Access to Earth Observations data makes the difference

MILLIONS OF LANDSAT SCENE DOWNLOADS



The European Copernicus initiative, Securing satellite data access on the long term		
	Sentinel 1 – SAR imaging All weather, day/night applications, interferometry	2014 / 2016
	Sentinel 2 – Multi-spectral imaging Land applications: urban, forest, agriculture, Continuity of Landsat, SPOT	2015 / 2017
	Sentinel 3 – Ocean and global land monitoring Wide-swath ocean color, vegetation, sea/land surface temperature, altimetry	2017 / 2018
X	Sentinel 4 – GEO Atmospheric Chemistry Atmospheric composition monitoring, transboundary pollution	2019
	Sentinel 5 & Precursor – LEO Atmospheric Chemistry Atmospheric composition monitoring (S5 Precursor launch in 2016)	2017 / 2019
A	Sentinel 6 Jason-CS – Altimetry Mission High precision measurements of global sea-level (continuation of Jason ocean topography missions)	2020

Long term EO data continuity sustained monitoring



Promoting universal access to satellite data



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Sentinel-1 Constellation Observation Scenario: Revisit & Coverage Frequency



validity start: 05/2017





S1A/B

S2A/B

S3A/B

S4A/B

S5P

55A/B/C

-CS A/B

Ho Chi Minh City

🔁 Ho Chi Minh City







DLR



National crop mask (Ukraine 2016)





National crop type mapping at field scale (Ukraine 2016)





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National crop statistics by administrative units (Ukraine 2016)





European Space Agency

Towards high quality Global Data Sets at high resolution (10-30m)



Towards high quality Global Data Sets at high resolution (10-30m)



Towards efficient EO data access and visualisation

Towards efficient "big data" exploitation platforms

The power of the Cloud The power of Partnerships

"Bringing the users to the data"

Simplify the extraction of information from EO data Enable large scale exploitation of EO data Stimulate innovation with EO data

How is the EO community organising to scale up EO innovation for the full achievements of the SDGs?

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CEOS EO Handbooks on societal challenges

CEOS EO Handbook on SDGs soon available for UNSC-49 in March 2018

Earth Observation: A necessity for achieving the Sustainable Development Goals

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