

European Space Agency (ESA) Opening

Dr Rune Floberghagen

Head of the Climate Action, Sustainability and
Science Department
Directorate of Earth Observation Programmes

| *BIOSPACE25 - Biodiversity Insight from Space* | 10-14 February 2025 | ESA-ESRIN | Frascati - Italy |

GLOBAL WARMING

Climate Change is one of the various factors impacting biodiversity loss

Global warming and biodiversity loss 1970 – 2018

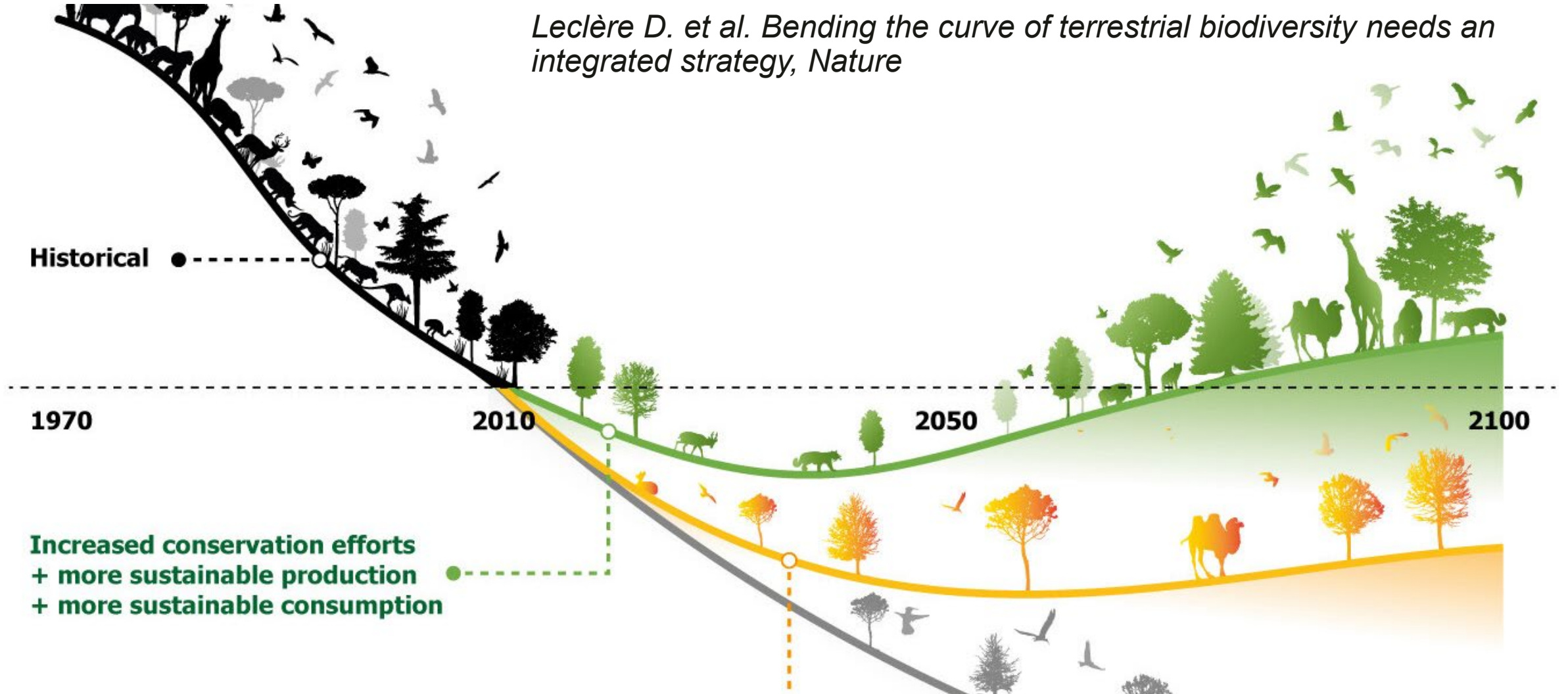
GlobalWarming Stripes #showyourstripes. Data Source UK Met Office CC BY 4.0
From biodiversitystripes.info Data: LPI 2022. Living Planet Index <http://stats.livingplanetindex.org/>

GLOBAL BIODIVERSITY LOSS

biodiversitystripes.info and LPI 2024, Living Planet Index database. (www.livingplanetindex.org)

EO at the Service of Biodiversity: Tackling Biodiversity Loss

Leclère D. et al. Bending the curve of terrestrial biodiversity needs an integrated strategy, Nature



One Planet, One Goal: United for Biodiversity Conservation



DG RTD, Patrick Child, Earth System Science Initiative. Jan 2020.



DG CLIMA, Kurt Vandenberghe, unite on climate actions from space. Nov 2023.



UNEP, Inger Andersen, environment protection and restoration. Dec 2023.

Other major international collaborations:

Fundamental coordination with DG ENV

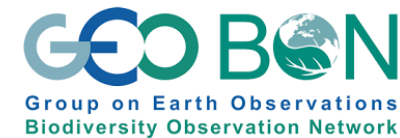
(Nature Restoration Regulation, EU Deforestation Regulation, Nature Finance, Zero-Pollution)

Other major EU collaborations:

DG DEFIS, DG JRC, DG AGRI, DG INTPA, DG CONNECT, DG ESTAT, EEA, EMSA.



Convention on Biological Diversity



Group on Earth Observations Biodiversity Observation Network



Convention on Wetlands



United Nations



System of Environmental Economic Accounting



Food and Agriculture Organization of the United Nations



Taskforce on Nature-related Financial Disclosures



ESA-EC Earth System Science Initiative

FLAGSHIPS ACTIONS



EC-R&I

Horizon Europe

New EU Research and Innovation Framework Programme

Biodiversity

Polar regions

Ocean health

Natural Disasters

Water resources

Food systems

Terrestrial carbon

Knowledge gaps in Earth system:

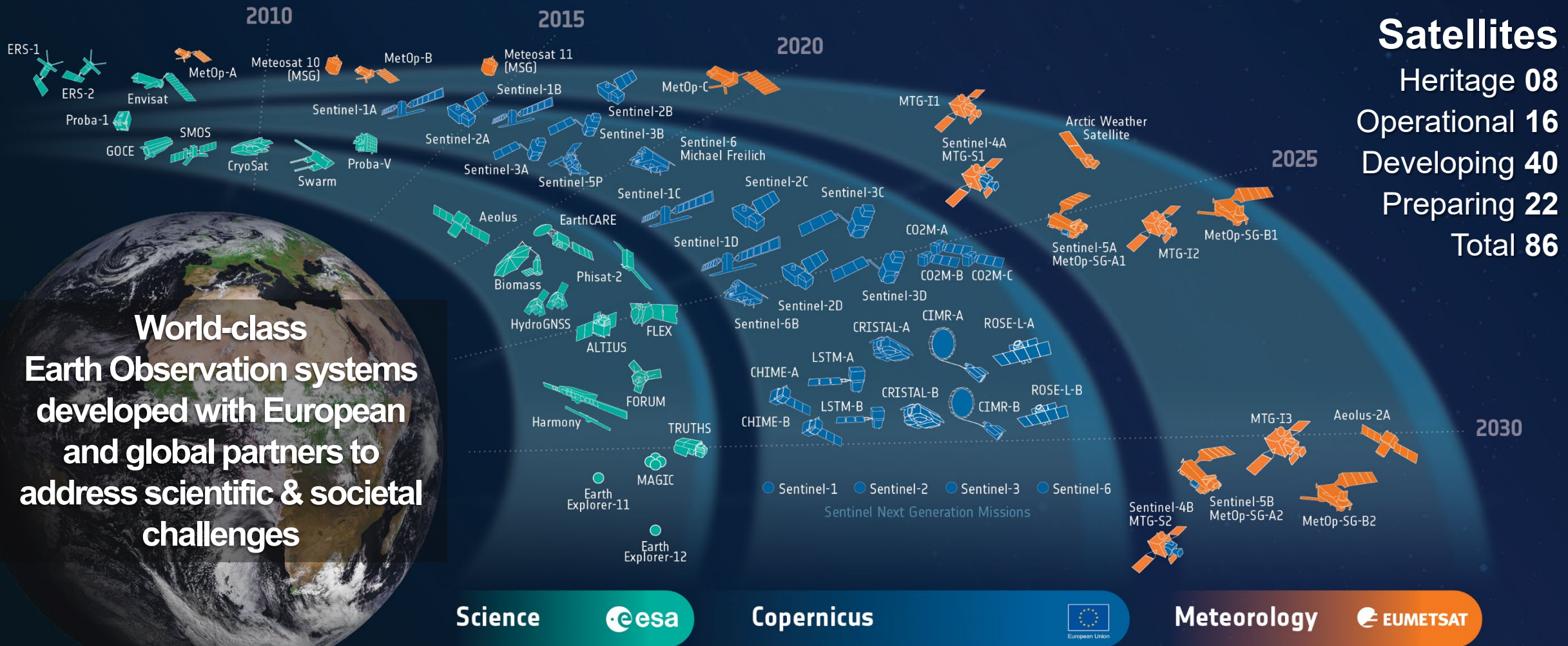
- Methane
- Clouds/Aerosols

ESA

FutureEO

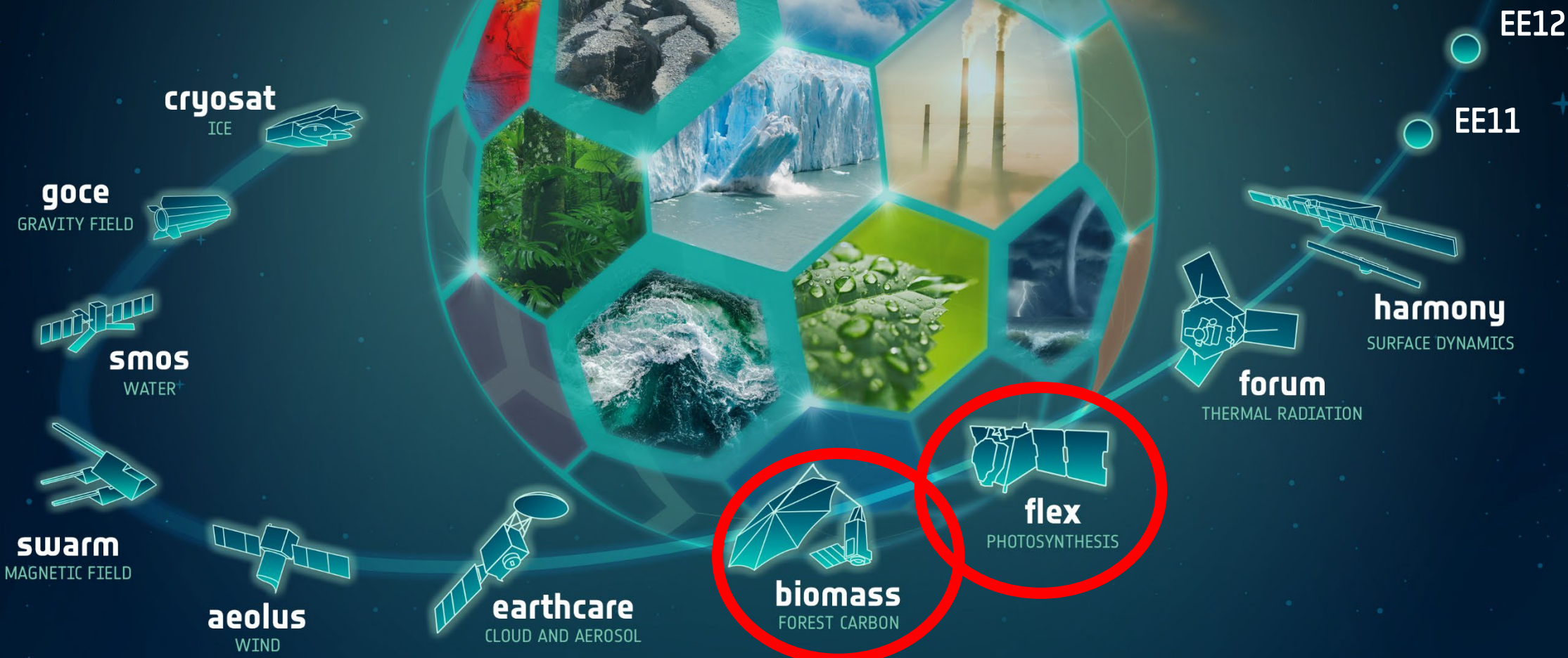
ESA new Science and Innovation Earth Observation Programme

Unlocking the full potential of Earth Observation for biodiversity conservation



Earth Explorers

Pioneering Scientific and Technical Excellence



The European Copernicus Programme



**State-of-the-art
observations with
unprecedented
coverage**

**Systematic data
availability**

**Full, free and open
data policy**

**Long-term
availability**

sentinel-1

→ RADAR VISION

sentinel-2

→ COLOUR VISION

sentinel-3

→ A BIGGER PICTURE

sentinel-4

→ EUROPEAN AIR MONITORING

sentinel-5p | sentinel-5

→ GLOBAL AIR MONITORING

sentinel-6

→ SURFING THE SEAS

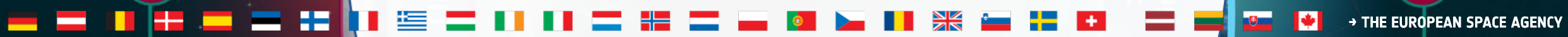
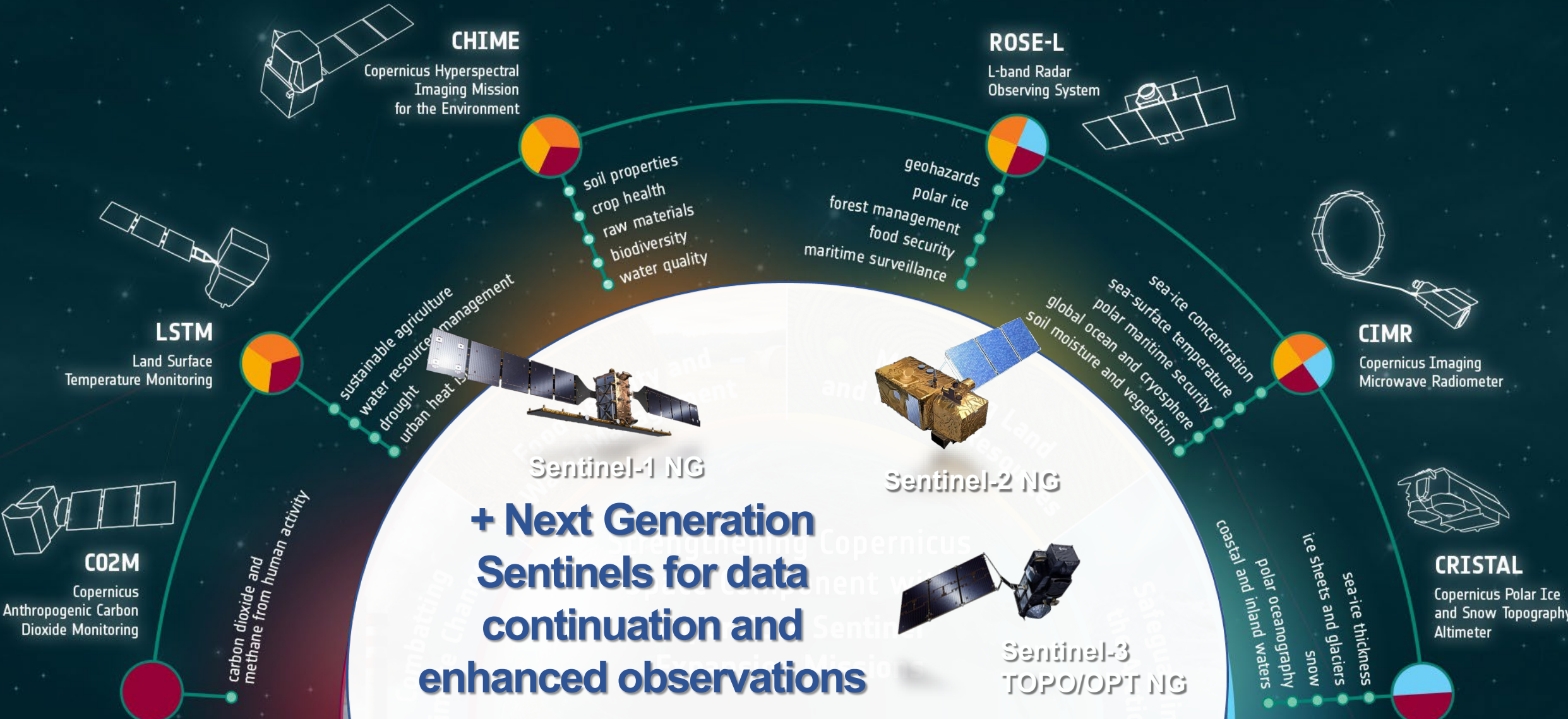
→ Know more: <https://copernicus.eu> and <https://sentinels.copernicus.eu>

Copernicus Space Evolution



PROGRAMME OF THE
EUROPEAN UNION

co-funded with



Earth Action - the approach





“Making Peace with Nature is the Defining Task of the 21st century”

António Guterres
UN Secretary-General

New York, 2 December 2020