

living planet symposium | BONN 23–27 May 2022

TAKING THE PULSE
OF OUR PLANET FROM SPACE



Future-EO at CMIN22: a perspective from Member States

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Tuesday, May 24th, 2022

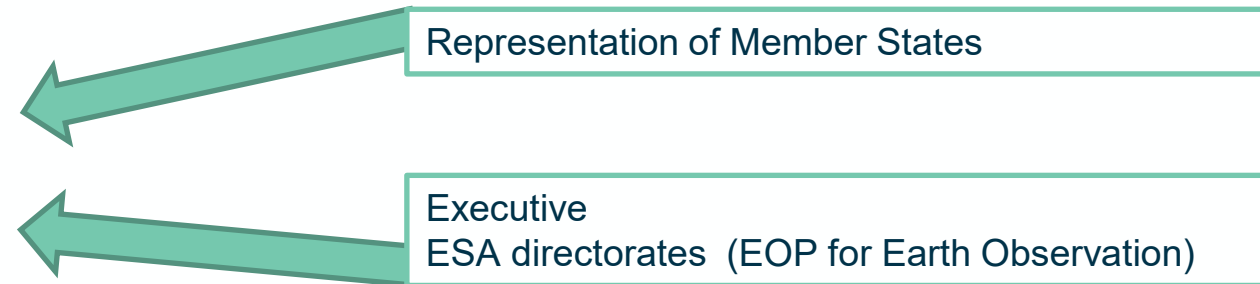
The ESA Convention (Art. X) structured the Agency around two organs:

1. the Council (Convention, Art. XI)
2. the Director General (DG) (Convention, Art. XII).

For the performance of its work, Council delegates a number of tasks to subordinate bodies (Committees, Programme Boards) (Convention, Art. XI 8.b)

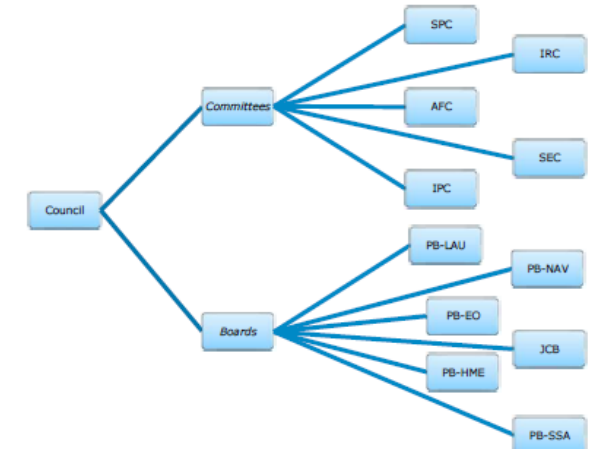
=> PBEO: Programme Board for Earth Observation

The PB-EO coordinates the European and national Earth observation activities and makes recommendations to the Council with regard to future programme and decisions that remain within the competence of the Council.



→ **Committees** address Agency matters (e.g. finance/AFC, procurement/IPC, international relations/IRC); they are composed of representatives of all Member States.

→ **Programme Boards** deal with optional programmes; they are composed of representatives of Participating States; they have the right to vote.



PBEO: Programme Board for Earth Observation



- ESA Executive (mostly EOP)
- 22 Member States AT, BE, CZ, DK, EE, FI, FR, DE, GR, HU, IE, IT, LU, NL, NO, PL, PT, RO, ES, SE, CH, UK
- 4 Associated Members: CA, LV, LT, SI
- Representatives from EUMETSAT and EC

Programmes:

- Future-EO
- Copernicus Space Component
- Earth Watch Elements:
 - ALTIUS, TRUTHS,
 - InCubed,
 - GMECV, GDA
- Meteorological programmes:
 - MTG, Metop-SG, AWS



PB-EO sessions: ~4/yr + informal workshop + Joint CC/PBEO
Data, Operations, Science and Technical Advisory Group (DOSTAG)
Advisory Committee on Earth Observation (ACEO)

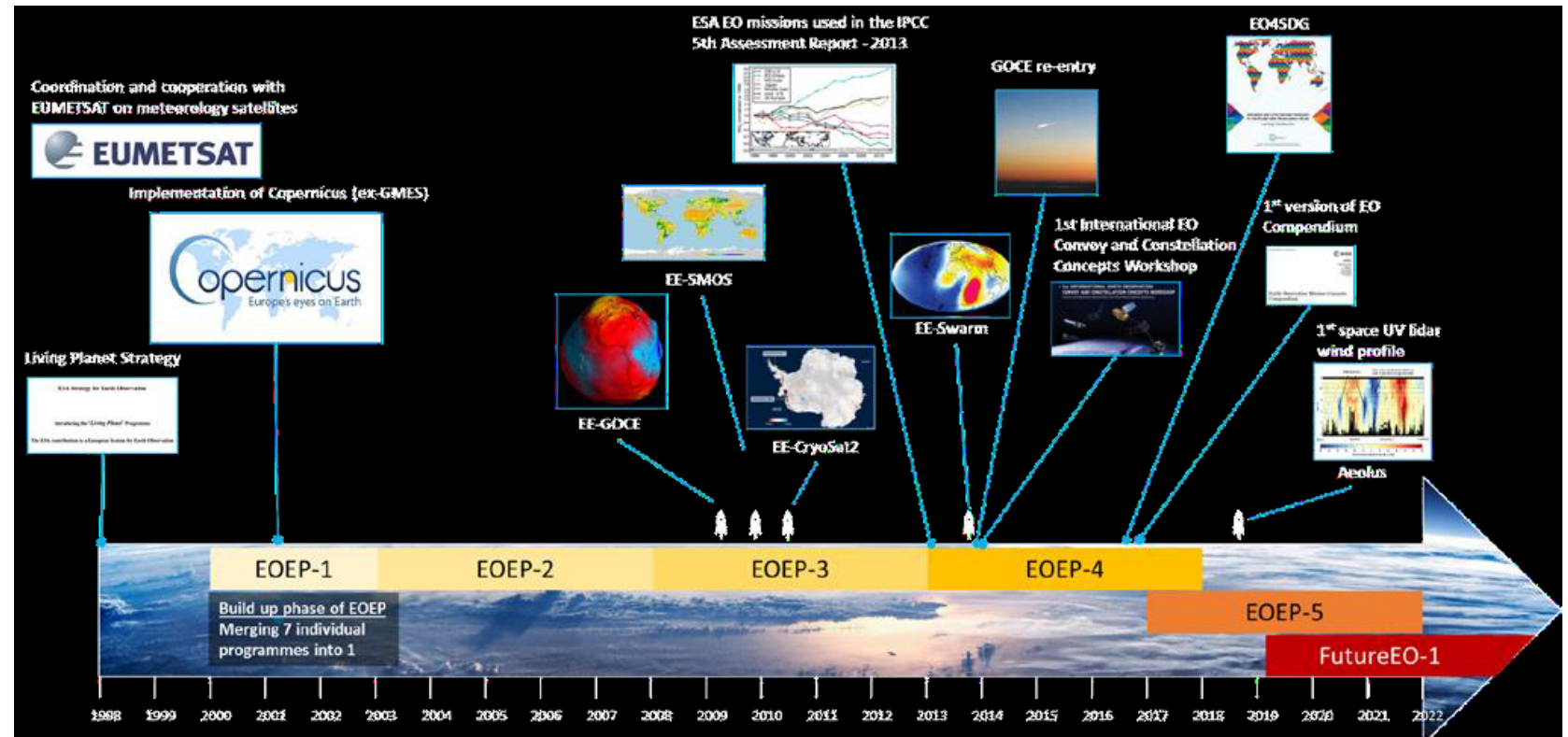


Earth Observation Envelope Programme

Comprehensive programme : All ESA member states and associated states, All ESA/EOP departments
 Science-driven and delivering science
 Source of future operational programmes

4 blocks:

- Foundation & Concepts
 - Earth Explorers
 - SCOUTS
 - Mission of Opportunity
- Mission management
- Science for Society



Preparatory work on Programme Proposal



1. The context (1/2)



EO Programme in Sep. 2021



May 2021: « CMIN22 approach » presented by Executive

Sept 2021: PBEO workshop « CMIN 22 »

Nov 2021: PBEO189: Elements for a programme proposal

Dec 2021: Head of Delegations Workshop

Feb 2022: PBEO 191: First draft of programme proposal

March 2022: EOEP5-FutureEO Programmatic and Technical Review Seminar

May 2022: PBEO 192: Programme proposal finalized!

Not to mention: written comments, bilateral meetings...

FutureEO

5.1. Research

5.2. Studies

5.3. Business

5.4. Future

5.5. Future

5.6. Launch

Future

FutureEO-1 Segment 2 – The implementation approach

HOW

Overall Review process

ESA Unclassified - For ESA Official Use Only

ESA/PB-EO(2022)10, rev.1
Paris, 28 April 2022
(Original: English)

EUROPEAN SPACE AGENCY

EARTH OBSERVATION PROGRAMME BOARD

Earth Observation Envelope Programme

FutureEO-1 Segment 2 – Draft Programme Proposal

Summary

FutureEO-1 is the ESA core Earth observation science, research, and development programme, fundamental to laying the foundations for innovative space technologies, implementing state-of-the-art satellite missions and delivering the scientific excellence of the future.

FINALIZED AT PB-EO LEVEL



Outcome from the Programmatic and Technical Review Seminar

Recommendations:

#0: Take into account the ISR (Independent Science Review) recommendations

#1: Short term and longer-term vision for the programme “the Science we need, for the Earth we want”
9-yr period vision, “selling point” and communication, keep the balance development / exploitation

#2: Insist on critical technology development (Boost Future EO)

#3/4: Refine strategy on Mission of Opportunity / SCOUTS => to be address after CMIN

#5: “Explore” the ambitions for large Earth Explorer missions (higher cost cap for EE ?)

#6: Improve data discoverability

#7: Plan for Earth Explorer mission extensions beyond nominal lifetime (add’l scientific challenges)

#8: “Open Science”: reach out to the young generation of scientists and the science community beyond the original science objectives ; EO Science for Society “fil rouge”, as well as “last km challenge”

Implemented when applicable in Future EO-1 segment-2 Programme proposal

FUTURE EARTH OBSERVATION PROGRAMME (FutureEO) - Segment 2

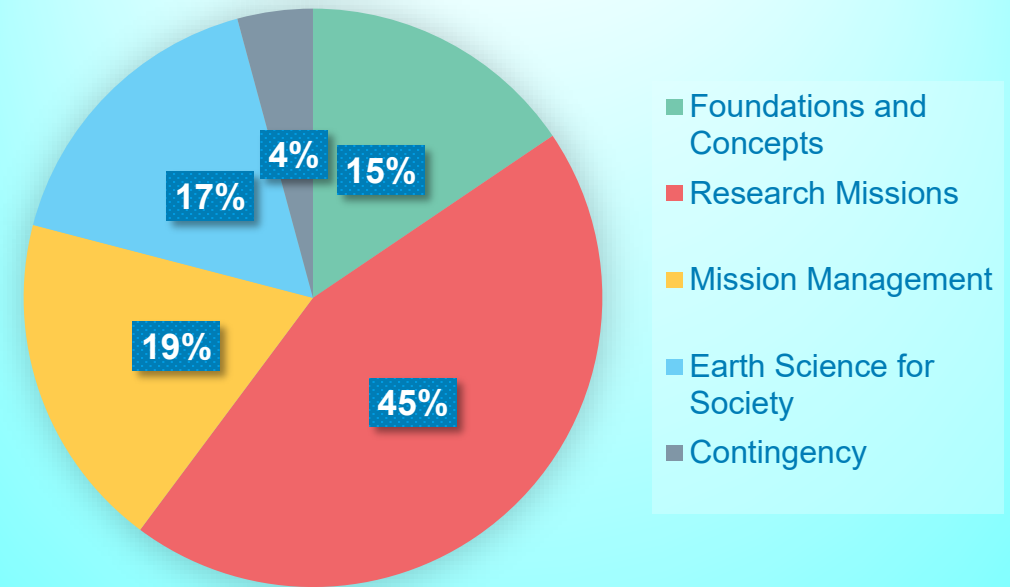
- Continuation of segment 1 initiated at Space19+ (successor to the former Earth Observation Envelope Programme - EOEP, periods 1 to 5)
- 9-year-envelope programme in 3 segments to be subscribed at successive CMIN (19-22-25), for an average ~400M€/yr (although segment 2 PP more ambitious profile...)

⇒ We are on solid ground with this proposal, BUT:

Subscription at CMIN22 will be key

- Wider CMIN22 context
- Competition within EO programmes (CSC, Aeolus-2, TRUTHS, InCubed, Climate Space, DTE...)
- Fast expansion of EO-related activities: (newspace, downstream): long-term science not as central as used to be
- Accelerator initiative may be confusing...

Future EO 1 segment 2 programme proposal



Future-EO is « the » envelope programme of Earth Observation at ESA.

Thanks to the programmatic and technical review, and to prior work between Executive and Member States delegates, lesson learned have been taken on board the proposal for segment 2, as well as for coming months/years (planned in the - PBEO work plan, eg SCOUT strategy)

Member states delegates are overall happy with it (1st programme proposal finalized), and wish to maintain this as an ambitious science-driven programme, paving the way to the future of European EO from space.

Still, level of resource (hence ambition) is subject to CMIN subscription, therefore visibility need to be pushed up to Ministerial level in each Member State (each having its own preparation process)

As members of EO-community **you may help** in advocating for the programme locally as **CMIN approaches: do not hesitate to contact your PBEO and Council delegates**

