

Candidate Earth Explorer 12 Mission Advisory Group

Terms of Reference

The Candidate Earth Explorer 12 Mission Advisory Group (MAG) is tasked to support the Directorate for Earth Observation Programmes during Phase 0.

1. The MAG is requested to provide advice on:

- Scientific needs of the user community;
- Formulation of the detailed scientific aim and objectives of the mission;
- Specification of Level-2 products necessary to reach the scientific aim and objectives;
- Translation of mission aim and objectives into Level-1 observation requirements (including advice on technical implementation trade-offs);
- Methods and approaches to verify and validate mission requirements;
- Data product requirements, format specifications and product quality indicators and data dissemination/timeliness;
- Geophysical algorithms from Level-1 to Level-2 that support the mission aim and objectives;
- Uncertainty budget specification and uncertainty propagation from Level-1 to Level-2 products;
- Pre-launch/In-orbit payload calibration aspects, including calibration traceability to recognised standards and the use of on-ground vicarious calibration approaches if necessary;
- Methods and procedures for geophysical validation of mission products;
- Scientific study and campaign needs to meet the mission scientific aim and objectives;
- Preparing evidence to justify the scientific readiness level of SRL 4 "Proof of Concept" by the end of Phase-0.

2. Members are requested to help maintain and evolve the Mission Assumptions and Technical Requirements Document (MATeR) throughout the Phase-0, culminating in the drafting of the Mission Assessment Report to be published before the User Consultation Meeting (planned in the 3rd Quarter of 2026).

3. The Group shall advise on and strengthen the link to international user communities, including promotion of the mission via scientific publications, presentations, and on-line tools.

4. The MAG will typically meet on an ad-hoc basis up to four times a year throughout Phase 0. Membership and the terms of reference will be reviewed at the end of Phase 0 activities.

5. Membership of the Group is not supported by consultancy contracts, though the Agency will cover necessary travel and subsistence*. Exceptions may occur when specific tasks require particular effort**.

6. A member of the group cannot be a member of, or consultant to, any industrial consortium awarded the Phase 0 industrial study contracts being run by the Agency for this mission.
7. A member of the group shall be independent from ESA Advisory Boards to Earth Observation Programmes, which comprise Member State Delegates (e.g. Programme Board for Earth Observation, and the Data Operations, Scientific and Technical Advisory Group) and the Advisory Committee for Earth Observation. Members shall not be Delegates or engaged in an advisory capacity to Member State Delegations.
8. Members of the Group shall sign a non-disclosure agreement to safeguard proprietary information and intellectual property.
9. Communications, press releases and publication material concerning the Candidate Earth Explorer Mission shall be discussed and agreed with the Agency prior to release.

***Subsistence Allowance & Responsibilities of the Agency**

The subsistence allowance (Group II per diem), as paid by the Agency shall be deemed to cover all out-of-pocket expenditure, during the relevant period, with the exception of travel expenses. These allowances shall be deemed to cover expenditure such as meals and hotels. ESA assumes no responsibility, or obligation, refund expenses such as personal insurance, medical expenses, and travel documents (except visa). In the absence of submission of the relevant invoice concerning the hotel (or other official or commercial accommodation), the daily subsistence allowance shall be reduced by 50%. The Agency shall only reimburse travel expenses and subsistence to a bank account held in the name of the attendee of a meeting and not to the bank account of his/her institute or company. Travel expenditure and subsistence shall not be paid to those people who have a non-exchange of funds (NEF) agreement with the Agency.

*** In the case of instances where study contract and MAG meetings take place on consecutive days, the ESA study contract reimbursement rules shall take precedence. Although subsistence, if due, will be paid for the days of the MAG meeting.*