

Copernicus CRISTAL Mission Advisory Group for Phases D/E1

Terms of Reference

The objective of the CRISTAL Mission Advisory Group for Phases D/E1 is to advise ESA on the development and commissioning of the Copernicus Sentinel Expansion Mission CRISTAL. User Requirements identified under the responsibility of the European Commission (EC) have been consolidated in the CRISTAL Mission Requirements Document (MRD), and used throughout the Phase B2/C activities to guide design consolidation activities. During Phases D and E1 ESA will closely collaborate with the EC to ensure that there will be a seamless flow of information between the space and ground segments, and the other components of the targeted operational service(s).

In this context, the CRISTAL Mission Advisory Group (MAG) for Phases D/E1 is tasked with providing advice to ESA and EC as follows:

1. Support, guidance and advice on:
 - trade-off considerations between the core and add-on options in the implementation of the space and ground components,
 - instrument calibration (on-ground/in-orbit, as necessary),
 - refining Level 1 & 2 products and product quality requirements, and specifying requirements for new products based on the consolidated design of the mission,
 - specification and approaches to derive uncertainty estimates at L1b and L2, and verification of the uncertainties,
 - evolution of the L1 and L2 retrieval algorithms,
 - requirements, methods and accuracy of geophysical validation,
 - study and campaign requirements, including for end-to-end product calibration/validation,
 - preparation for Phase E1 calibration, validation and verification activities and coordination of international validation contributions,
 - end-to-end performance simulations for the space component,
 - promoting the mission using presentations and publications.
2. Members may be asked, within reasonable effort, to help generating documentation or presentation material addressing specific topics.
3. Members will be expected to meet on an *ad hoc* basis up to four times a year, as needed.
4. 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 or when members are involved in scientific study contracts**.
5. Membership of the Group is expected to last from the start of Phase D into the commissioning Phase E1. Group membership and Terms of Reference will be reviewed at the In-Orbit Commissioning Review during phase E1, in particular to assess the scope/need for extension of the MAG activities.
6. Any member of this Group shall be obliged to declare any potential conflict of interest in relation to this activity.
7. A member of the Group cannot be a member of, advisor to, or consultant to, any industrial consortium awarded the Phase B2/C/D/E1 industrial study contracts run by the respective Agenc(ies) for this mission.
8. A member of the Group shall be independent from ESA and/or EUMETSAT 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). Members shall not be Delegates or engaged in an advisory capacity to Member State Delegations.
9. All members of the Group shall sign a Non-Disclosure Understanding (NDU) to safeguard proprietary information and intellectual property.
10. All Communications, Press Releases, Publications or publicly distributed material concerning the candidate Mission shall be discussed and the content agreed with ESA (and/or EUMETSAT) 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, to 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. Subsistence, if due, will be paid for the days of the MAG meeting only.*