

EARLICOST

Communication, Dissemination and Valorisation Plan

(Year 1)

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Table of contents

EARLICOST	1
Communication, Dissemination and Valorisation Plan	1
1. Summary	3
2. Governance and Coordination	4
3. Target Audiences and Tailored Approaches	4
3.1 Academia and Research Community	4
3.2 End-Users and Industry Stakeholders	4
3.3 Policymakers and Institutional Bodies	4
3.4 General Public	5
4. Communication Activities, Tools, and Infrastructure	5
4.1 Internal Coordination	5
4.2 Visual Identity	5
4.3 Official Website	6
4.4 Digital Channels and Multimedia	6
4.5 Content Production	6
4.6 Grant Support Communication	7
5. Dissemination Activities	7
5.1 Scientific Dissemination	7
5.2 Conference Participation	8
5.3 Capacity Building	8
6. Open Science and Data Practices	8
7. Monitoring and Evaluation	9
7.1 Digital Performance	9
7.2 Scientific Output	9
7.3 Engagement Metrics	9
8. Valorisation Plan	9
9. Timeline	10

1. Summary

The EARLICOST Action aims to advance our understanding of atmospheric composition and enhance the capabilities of atmospheric lidars to address key gaps in aerosol characterization, temperature, and water vapor profiling. By creating a collaborative network of academic researchers, industry experts, policymakers, and scientific and commercial end-users, the Action fosters knowledge sharing, methodological harmonization, and innovation in lidar technologies.

A primary goal of EARLICOST is to standardize and improve retrievals of aerosol, temperature, and water vapor measurements across different lidar networks, promoting consistency, accuracy, and comparability. The Action also seeks to stimulate interaction between operational agencies, industry, and academia, encouraging the adoption of advanced techniques and supporting the development of new technologies.

Finally, EARLICOST emphasizes the societal relevance of its work: improving the understanding of atmospheric processes contributes directly to climate change mitigation, air quality management, public health, and the optimization of environmental policies and services.

For the Action, a dedicated Science Communication Coordinator will support outreach activities, including the development of a website, social media presence, infographics, videos, and newsletters to communicate the Action's results to the broader scientific community, stakeholders, and the general public. The EARLICOST Dissemination and Communication Plan aims to:

- Ensure effective dissemination of scientific results and technological advances.
- Promote knowledge exchange among researchers, industry, and end-users.
- Increase visibility of the Action at European and international levels.
- Foster stakeholder engagement and uptake of harmonized lidar methodologies.
- Support inclusiveness, interdisciplinarity, and open science principles.
- Continuously assess and improve communication impact through measurable indicators.

EARLICOST's activities are structured around three complementary pillars: Communication, Dissemination, and Valorisation. Communication ensures timely and accessible information sharing with all stakeholders. Dissemination focuses on publishing and presenting scientific results. Valorisation promotes long-term impact through the uptake of methodologies, datasets, and technological advances by the broader scientific, operational, and industrial communities.

This Communication, Dissemination, and Valorisation Plan is a living document, updated annually to reflect progress, emerging needs, evolving stakeholder engagement, and strategic adjustments approved by the Management Committee. Updates ensure alignment with the Action's objectives, KPIs, and long-term impact strategy. The plan follows COST Excellence and Inclusiveness policies and supports open science, FAIR data practices, and broad stakeholder engagement.

2. Governance and Coordination

- Science Communication Coordinator (SCC): Ms. Ioanna Mavropoulou
- Science Communication Manager : Dr. Joelle Buxmann

The Communication Coordinator will:

- Oversee implementation of the communication strategy.
- Coordinate with Working Group leaders.
- Ensure consistency of messaging and visual identity.
- Monitor communication KPIs.
- Report annually to the Management Committee (MC).

Participation in communication activities will be open to interested Action members.

3. Target Audiences and Tailored Approaches

EARLICOST adopts a Quadruple Helix approach, engaging key stakeholders from academia, industry, policymakers, and the general public to ensure that scientific outputs are relevant, usable, and widely disseminated. The Action will implement tailored communication and dissemination strategies for each target group:

3.1 Academia and Research Community

- Scientific publications (open access)
- Conference presentations and workshop participation
- Special journal issue on lidar innovations and aerosol research
- Technical workshops and training schools
- Data sharing and algorithm harmonization reports

3.2 End-Users and Industry Stakeholders

- Technical briefs and operational guidelines
- Stakeholder workshops and collaborative sessions
- Direct engagement through WG3 activities
- Demonstration use cases and pilot applications
- Operational protocol discussions and best practices

3.3 Policymakers and Institutional Bodies

- Executive summaries
- Policy-relevant highlights

- Participation in key international meetings (e.g., WMO, ACTRIS, ESA)

3.4 General Public

- Social media campaigns and posts
- Infographics and short videos (reels)
- Press releases and news updates
- Public-facing webinars and outreach events

Stakeholder feedback and user requirements will be systematically integrated into EARLICOST activities to ensure relevance, usability, and applicability across all Action outputs.

4. Communication Activities, Tools, and Infrastructure

The communication framework of EARLICOST combines structured internal coordination, external visibility tools, digital outreach, and targeted content production. Together, these elements ensure efficient collaboration within the network and effective engagement with external stakeholders, including academia, industry, policymakers, and the general public.

4.1 Internal Coordination

Efficient internal communication is essential for achieving collaboration across all Working Groups. EARLICOST will use dedicated digital platforms to facilitate collaboration, document sharing, and structured interaction among members:

- EARLICOST Google Drive and/or NextCloud Platform (shared repository)
- Knowledge Base Platform on project website (Open platform with login/open-access options)
- Virtual meetings

4.2 Visual Identity

A strong and consistent visual identity will reinforce the recognition, credibility, and professional image of EARLICOST across all communication outputs. Harmonized branding will ensure coherence between digital communication, printed materials, and scientific dissemination products. A consistent visual identity will be applied across all EARLICOST outputs to enhance recognition and professional presentation. This includes:

- EARLICOST logo
- Standard presentation templates
- Branded document templates
- Banners and promotional materials

Visual identity guidelines will ensure cohesion across digital and physical communications.

4.3 Official Website

The EARLICOST website will serve as the central communication hub for both internal and external communication, acting as a one-stop platform for networking, information sharing, and engagement with stakeholders, and will include:

- Action description and structure
- Working Groups information
- Open calls and grants
- News and upcoming events
- Publications and deliverables
- Knowledge base and forums access

4.4 Digital Channels and Multimedia

To effectively engage diverse target groups, EARLICOST will adopt a multi-channel digital communication strategy. Different platforms will address different audiences, ranging from scientific communities to policymakers and the general public. EARLICOST will leverage multiple digital channels to reach target audiences effectively:

- Official EARLICOST Website (<https://earlicost.eu/>)
- LinkedIn (<https://www.linkedin.com/company/earlicost/>)
- Facebook (<https://www.facebook.com/earlicost/>)
- X (ex Twitter)
- YouTube Channel (for webinars, workshops, recordings)
- Instagram

Links to additional social media channels (X, Instagram, YouTube) will be provided as they are established during the first year of the project. Additional platforms may be evaluated depending on relevance and audience engagement trends. Short educational videos may also be developed in Years 2–4 to increase outreach and public understanding of lidar technologies and atmospheric research.

4.5 Content Production

Structured and periodic content production will ensure continuity, visibility, and impact of EARLICOST communication efforts. Content will be tailored to scientific, policy, industry, and public audiences, balancing technical depth with accessibility. The Action will produce key content types that include:

- Newsletters: Three issues per year (approximately every four months) to provide updates on project milestones, upcoming events, and achievements.
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- Press Releases: Issued at major milestones to highlight key results and increase visibility among the broader scientific community, media, and public stakeholders.
- Infographics: Visually engaging graphics to explain complex scientific concepts, methodologies, and findings in a clear and accessible manner.
- Video Summaries: Short videos summarizing key results, workshops, or training sessions to reach both expert and general audiences and support online engagement.

4.6 Grant Support Communication

Clear and proactive communication of funding opportunities is essential to maximize participation, inclusiveness, and mobility within the network. EARLICOST will ensure that grant-related information is widely distributed and easily accessible.

EARLICOST will ensure visibility of its funding opportunities through targeted communication activities. Open calls for Short-Term Scientific Mission (STSM) Grants, Inclusiveness Target Countries (ITC) Conference Grants, Young Researchers Inclusiveness (YRI) Grants, Dissemination Conference (DG) Grants and Virtual Mobility (VM) Grants will be promoted through the website, newsletters, and social media channels each Grant Period. All communication efforts will highlight eligibility, objectives, and application procedures to maximize awareness and participation among the relevant communities.

5. Dissemination Activities

Dissemination activities in EARLICOST aim to ensure that scientific results, technical advancements, and methodological developments reach the widest possible audience, including researchers, industry stakeholders, policymakers, and operational users. The Action will adopt a structured dissemination framework combining the following activities:

5.1 Scientific Dissemination

Scientific dissemination constitutes a core pillar of EARLICOST, ensuring that methodological harmonization, technological advancements, and novel findings are systematically documented and shared with the international community. Emphasis will be placed on transparency, reproducibility, and open science principles.

- Open-access scientific publications (e.g.: Remote Sensing, Atmospheric Measurements Techniques, Atmospheric Chemistry and Physics, Atmosphere, Acta Geophysica)
- Conference proceedings
- Coordinated multi-author papers
- Promotion of FAIR data principles (Findable, Accessible, Interoperable, Reusable)
- Repository integration (e.g., Zenodo, gitHub)
- Planning of a dedicated Special Issue in a relevant open-access journal during Year 1 (definition of scope, topics etc.), to be launched in subsequent years and remain open for submissions throughout the Action.

5.2 Conference Participation

Active participation in major scientific events will enhance the visibility of EARLICOST results and foster dialogue with the broader atmospheric research and operational communities. Conference presence will also support networking, stakeholder engagement, and valorisation of outcomes. Activities will include:

- Oral and poster presentations at major international conferences (e.g. European Lidar Conference-ELC, International Lidar Radar Conference ILRC, European Geophysical Union (EGU), EARTHCARE-related workshops and conferences).
- Annual progress updates at lidar networks, WMO, ACTRIS, and ESA meetings.
- Organization of a Final Conference at the end of the Action.

5.3 Capacity Building

Capacity building is central to EARLICOST's mission to strengthen expertise in advanced atmospheric lidar technologies and data harmonization methodologies. Through structured training and knowledge exchange activities, the Action will enhance skills, promote inclusiveness, and support the development of young researchers and emerging experts. Activities will include:

- Training Schools (e.g. first year training school: AGORA training school on Atmospheric Characterization Using In-Situ and Remote Sensing Techniques: <https://atmosphere.ugr.es/about/presentation/agora/training>)
- Workshops
- Webinars
- Hybrid and online participation options to maximize inclusiveness.

Topics will include:

- High Spectral Resolution Lidars (HSRL)
- Fluorescence lidar techniques
- Multi-sensor synergies
- Algorithm harmonization
- Data standardization methods

6. Open Science and Data Practices

EARLICOST is committed to promoting transparency, accessibility, and reproducibility in all aspects of its research. The Action will encourage open-access publishing to ensure scientific results are freely available to the community. Data produced within EARLICOST will follow the FAIR principles (Findable, Accessible, Interoperable, and Reusable), and relevant datasets, algorithms, and materials will be deposited in recognized repositories such as Zenodo. In addition, the Action will facilitate the sharing of best-practice guidelines and standardized methodologies, supporting the broader uptake of reproducible and high-quality research outputs across the atmospheric science community.

7. Monitoring and Evaluation

To ensure effective implementation of the communication and dissemination strategy, EARLICOST will monitor its impact through a set of quantitative and qualitative **Key Performance Indicators (KPIs)**. These indicators will assess digital visibility, scientific impact, stakeholder engagement, and capacity-building outcomes as follows:

7.1 Digital Performance

- Website traffic, unique visitors, and page analytics
- Newsletter subscriptions, open rates, and click-through rates
- Social media growth (followers), reach, and engagement rates
- Multimedia content performance (video views)

7.2 Scientific Output

- Number of peer-reviewed publications
- Number of coordinated multi-author papers within the network
- Contributions to the dedicated Special Issue
- Conference presentations (oral/poster) at international events

7.3 Engagement Metrics

- Participation in training schools and workshops
- Number of dissemination events organized or supported by Action members
- Industry and stakeholder participation in events and forums

An annual communication impact assessment will be conducted and presented to the MC. The communication strategy will be updated adaptively based on performance indicators and stakeholder feedback.

8. Valorisation Plan

Valorisation ensures that EARLICOST outputs continue to generate scientific, technological, and societal impact beyond the Action's lifetime.

The valorisation plan for EARLICOST aims to ensure that the knowledge, methodologies, and networks developed during the Action will have a lasting impact. The Action will establish a collaborative network of scientists, industry partners, policymakers, and end-users, fostering sustained interactions that continue beyond the project's conclusion. The nature of the valorisation—whether focused on fundamental science, technological applications, dissemination, or a combination—will be guided by the Action's objectives achieved.

One key avenue for valorisation is linking the EARLICOST network with international organizations and research infrastructures, such as ACTRIS, WMO, and other lidar and atmospheric monitoring networks. This integration will amplify the Action's impact by embedding its results within the broader European and global atmospheric science community.

The Action's outputs—such as harmonized lidar methodologies, standardized calibration procedures, optimized retrieval algorithms, and interoperable datasets—will provide a solid foundation for future developments in atmospheric profiling, climate research, and environmental monitoring. These outputs will enable innovations in both hardware and software, support more accurate atmospheric models, and improve data-driven decision-making in air quality and climate policy.

EARLICOST will also promote the uptake of its results in operational applications and commercial contexts. The interaction between scientists, industry, and end-users will cultivate an interdisciplinary community capable of developing new measurement techniques, improving model parametrizations, and addressing emerging societal challenges.

Furthermore, the Action's findings could support wider innovation ecosystems, including startups, incubators, and research spin-offs, fostering technology transfer and applied research. Civil society organizations and policymakers can leverage the outputs to promote environmental awareness, sustainable development practices, and evidence-based regulations.

By combining scientific excellence, stakeholder engagement, and strategic dissemination, EARLICOST aims to create a self-sustaining community that continues to advance lidar research, atmospheric monitoring, and climate services well beyond the formal duration of the Action. This network will act as a catalyst for future research, technological innovation, and societal benefits, ensuring that the Action's legacy contributes meaningfully to both science and public policy.

9. Timeline

The timeline presented below outlines the priority actions for Year 1 of the EARLICOST Action. This section constitutes a living planning framework and will be reviewed and updated annually to reflect progress, newly identified needs, evolving stakeholder engagement, and strategic adjustments agreed by the Management Committee. Annual updates will ensure alignment with the overall objectives of EARLICOST and its long-term impact strategy.

Year 1 Priorities

Year 1 - Communication Priorities: The timeline presented below outlines the priority communication actions for Year 1 of the Action.

- *Establish EARLICOST visual identity:* A coherent and professional visual identity is being developed to ensure consistent representation of EARLICOST across all communication

<https://earlicost.eu/>

materials. The initial design phase is already in progress, with three logo concepts prepared by a professional graphic designer, and will be under evaluation by the Core Group. Following the final selection, the visual identity framework will be formalized, including typography, color palette, and standardized templates for presentations, reports, newsletters, and social media materials. Visual identity guidelines will be documented to ensure uniform application across all Working Groups and communication outputs throughout the Action.

- Launch the official EARLICOST website: The official EARLICOST website will be developed and deployed as the central communication hub of the Action. The website will provide structured information on the objectives, Working Groups, governance structure, open calls, news, events, publications, and deliverables. It will also serve as the main public interface for stakeholders and external audiences, ensuring transparency and accessibility of information from the early stages of the Action.
- Open EARLICOST social media channels: Official social media accounts (e.g., LinkedIn, Facebook initially, and other relevant platforms) will be created and activated to support outreach and engagement with different target audiences. A structured content approach will be defined, including frequency of posts and audience targeting. These channels will be used to promote open calls, events, publications, and scientific achievements, as well as to enhance visibility within the atmospheric and remote sensing communities.
- Publish the first EARLICOST newsletter: The first EARLICOST newsletter will be prepared and distributed to introduce the Action to the broader community. It will present the objectives, structure, initial activities, and upcoming opportunities (e.g., grants, training schools). The newsletter will establish the tone and format for future editions and will support the development of a subscriber base among researchers, stakeholders, and institutional partners.
- Define the EARLICOST communication KPIs baseline: A structured monitoring framework will be established to assess communication performance. During Year 1, key performance indicators (KPIs) will be defined, and initial baseline values will be recorded, including website traffic, social media followers, newsletter subscriptions, and engagement metrics. These baseline indicators will serve as reference points for evaluating growth, outreach effectiveness, and impact throughout the lifetime of the Action.

Year 1 - Dissemination Priorities: The following outlines the priority dissemination actions for Year 1 of the Action.

- Establish scientific dissemination channels: Open-access publication and conference presentation plans will be defined. In parallel, plans will be initiated for a dedicated Special Issue focusing on lidar innovations and aerosol research, including the identification and engagement of potential contributing authors.
- Conference and workshop participation: Identify key international and European conferences (e.g., WMO, ACTRIS, ESA) for Year 1 presentations and plan workshops/webinars targeting both scientific and operational audiences.
- Internal knowledge sharing: Initiate structured knowledge exchange among Working Groups and stakeholders through the Knowledge Database and Forums to be established on the

EARLICOST website, facilitating early discussions on harmonized methodologies, algorithm comparisons, and system configurations.

- Data harmonization and FAIR principles: Begin collecting and documenting existing SOPs, calibration protocols, and data management practices.
- Engagement with end-users and industry: Conduct initial stakeholder surveys to capture needs and requirements, laying the groundwork for future pilot applications and operational uptake.

Year 1 - Valorisation Priorities: The following outlines the priority valorisation actions for Year 1 of the Action.

- EARLICOST network establishment: Build the EARLICOST collaborative network connecting academic researchers, industry partners, policymakers, and operational end-users, both nationally and internationally.
- Stakeholder mapping and engagement: Identify key stakeholders, including international organizations (e.g., ACTRIS, WMO) and relevant research infrastructures, and establish initial contacts for sustained collaboration.
- Working Group and task force initiation: Launch technical and scientific discussions within Working Groups to ensure early engagement of all relevant partners.
- Communication of outputs: Begin publishing initial reports and newsletters to introduce EARLICOST objectives, methodologies, and available grants to the broader community.