Deliverable 7.2: Initial communication, dissemination and exploitation plan

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Work package no	WP7
Deliverable no.	D7.2
Lead beneficiary	FMI
Deliverable type	X R (Document, report) ☐ DEC (Websites, patent filings, videos, etc.) ☐ OTHER: please specify .....
Dissemination level	X PU (public) ☐ CO (confidential, only for members of the Consortium, incl. Commission)
Estimated delivery date	M6
Actual delivery date	15/08/2024
Version	Final
Reviewed by	Giulia Saponaro
Accepted by	Ewan O'Connor
Comments	

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1. Introduction

The overarching goal of CARGO-ACT is to deliver a clear roadmap for sustainable global cooperation between key organisations for integrating current ground-based networks having different interests and priorities into global entities capable of tackling the global and regional challenges of climate change, extreme weather, air quality and policy effectiveness. This effort to achieve global interoperability is motivated by the compelling need to respond to the user-driven requests and requirements for globally consistent datasets; therefore, the aim of CARGO-ACT is to provide all users, in the scientific community and beyond, with the best possible services for accessing and using data related to the properties of aerosol, clouds and trace gases in the atmosphere.

The CARGO-ACT consortium involves the European research infrastructure on short-lived Aerosol, Cloud and Trace Gases (ACTRIS) and three agencies in the US (U.S. Department of Energy's Atmospheric Radiation Measurement program, ARM; NOAA Global Monitoring Laboratory, GML; NASA Micro-Pulse Lidar Network, MPLNET), and it is a first step towards convergence to a global research infrastructure for aerosol, clouds and trace gases, with actions that will develop, strengthen and maintain the position of ACTRIS within the international landscape. The scope is not limited to the immediate consortium beneficiaries, and CARGO-ACT has the ambition of attracting additional networks to collaborate in these actions promoting convergence. To be effective in promoting the goals of CARGO-ACT, a clear plan for **disseminating**, **exploiting** and **communicating** the project strategy and activities is required.

CARGO-ACT is a three-year project that started in March 2024 and will last until February 2027. Communication within the project is handled by WP7, namely task 7.3, for which the responsible entity is the coordinating institute, FMI. This deliverable has been prepared early in the project timeline, and describes the initial plan for communicating, disseminating, and exploiting (C, D, and E) the actions arising from the project. This deliverable will set out the objectives, tools, channels and materials that will aid in ensuring that CARGO-ACT activities and results are delivered to target audiences both within and outside of the immediate project consortium. This plan is to be updated two years into the project and submitted to the European Commission as deliverable D7.5 Updated communication, dissemination and exploitation plan.

1.1. Communication, dissemination and exploitation

Here, we introduce the three terms and describe the expected activities to be undertaken for each term (Source: Quick guide and tools for Communication, Dissemination and Exploitation in Horizon 2020; Horizon Europe Programme Guide).

1) **Communication**: inform, promote and communicate the project activities and results
    a. Action: define clear objectives and provide a description and timing for each activity
    b. Timeline: from the start of the project
    c. Tools: website, newsletter, interviews, conferences, social media, press releases

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2) **Dissemination**: the public disclosure of results arising from the project
    a. Action: transfer knowledge and results for other to use
    b. Timeline: from as soon as there are results available
    c. Tools: publish reports, scientific publications, datasets, software, training, workshops
3) **Exploitation**: use of the results in activities beyond the project
    a. Action: enable concrete use of results by others
    b. Timeline: once exploitable results are available, extending beyond the end of the project
    c. Tools: roadmaps, software and services, reports/whitepapers, workshops

1.2. Target audience for CARGO-ACT

There are multiple audiences for each of these actions. The communication, dissemination and exploitation strategy for CARGO-ACT targets a wide range of groups: 1) worldwide research communities in atmospheric science and related areas; 2) national and international public organisations with responsibility for the environment; 3) policy actors at the national and international level; 4) private companies, including but not limited to SMEs; 5) ministries and funding agencies; 6) educators; and 7) civil society. For CARGO-ACT, these can be grouped into four broad target categories shown in Table 1.

Table 1: Stakeholders targeted by CARGO-ACT and grouped into broad categories

Target Group	Includes
Scientific community	• Satellite-related • Earth monitoring • Forecasting, climate, and air quality modelling
Service providers	• EU research infrastructures and US partners • Related measurement networks and RIs
National and International agencies, policy-making	• Global environmental and health policy makers • Environment and Regulatory agencies
Other target groups	• Research organisations • National metrology institutes and standards bodies

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	• Energy sector (solar, wind), instrument manufacturers

The two target groups, **Scientific community** and **National and International agencies, policy-making** are stakeholders interested in the resulting convergence towards a global research infrastructure (RI) for aerosol, clouds and trace gases. They are particularly interested with respect to the implementation of activities providing harmonised global datasets and the information that can be extracted from these, whether directly or together with outputs from other global networks and activities.

The two target groups **Service providers** and **Other target groups** are interested in the implementation towards convergence itself, including the potential implications for their own activities. All target groups will benefit from the improvement in the services driven by the convergence in standards and procedures being delivered by CARGO-ACT.

Note that the CARGO-ACT consortium comprises a limited number of beneficiaries representing their research infrastructure or measurement network (i.e. not all members of each research infrastructure or measurement network are present in the CARGO-ACT consortium); therefore, the research infrastructure and measurement networks involved are both internal and external stakeholders (as are the research organisations involved). The draft plan for communication, exploitation and dissemination of results, and the project outcomes of CARGO-ACT, are designed to benefit all members of the partner measurement networks and each of the target groups mentioned above.

2. Internal communication

Internal communication deals with the communication among the project beneficiaries, linked-third parties and Associate Partners. Several dedicated mailing lists have already been established to aid in the efficient communication towards and within the project consortium (MS23). A dedicated CARGO-ACT website (www.cargo-act.eu) has also been created to provide a platform for project participants to have easy access to the latest project information, including project meetings and event announcement, deliverables and milestones and other relevant information. Annual community meetings will be organized in order for the consortium to meet together to share the latest results and progress of the project and to discuss the challenges and issues arising within the project. The CARGO-ACT Kick-Off meeting has already taken place during the third month of the project and proved to be both a success and a necessity for the project. Internal communication will take place following the strict GDPR regulations.

3. External communication

With CARGO-ACT being a truly global project, external communication is of utmost importance not only for the successful outcome of the project, but also for its legacy after the project's lifetime. By employing

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the already operational communication offices from the participating RIs, CARGO-ACT is fully ready to support efficient communication activities. The dissemination strategy will target specific audiences, namely the relevant user groups and stakeholders of the RI facilities: scientific communities, policy makers, funding agencies/funders, industry partners, other projects/initiatives. The communication plans for CARGO-ACT will leverage the expertise of the communication teams in the participating RIs, enlisting their support in delivering brochures, press releases, interfacing with social media and direct contact with journalists. Whilst a strong visibility and identity of RIs throughout the project will be established and communicated, the project is meant as providing support and added value to the long-term existing atmospheric RIs.

The exploitation and dissemination plan will include: 1) identification of the main CARGO-ACT results, 2) areas of expected impact, 3) description of the main dissemination and exploitation actions, and 4) communication activities. The draft plan for the exploitation and dissemination of results in CARGO-ACT is shown in Table 2.

As stated previously, CARGO-ACT will employ the communication practices and channels of the already well-established RIs, namely ACTRIS. ACTRIS already has mailing lists for the private sector, innovation and the National Facility principal investigators, as well as the overarching ACTRIS Community mailing list, which currently has over 500 subscribers. ACTRIS has a dedicated newsletter released several times a year. All of these can be efficiently utilized for the DEC activities within CARGO-ACT. ACTRIS also organizes annual ACTRIS Week meetings, and well as the biennial ACTRIS Science Conference, both of which will aim to attract the CARGO-ACT parties, especially those from the US. ACTRIS Science Conference 2024, held in May 2024 in Rennes France, drew a lot of submissions from the US institutions involved in CARGO-ACT and set the stage for the CARGO-ACT Kick-Off meeting. These large meetings will continue to provide unique opportunities for the non-European members of the CARGO-ACT consortium to closely collaborate with and meet their European counterparts.

In addition, a stakeholder meeting will be held in Matera, Italy, at the end of the first week of November 2024, already early in the project (Month 8), aligned with the ACTRIS Week meeting being held during the week. This is a key activity for attracting stakeholders from international agencies (all target groups are invited) with the aim of including them in CARGO-ACT activities from the start. CARGO-ACT has already been successful in attracting two additional networks very early in the project lifetime:

- ASCENT; Atmospheric Science and Chemistry mEasurement NeTwork
    - US network for the characterization of aerosol chemical composition and physical properties (https://ascent.research.gatech.edu/)
- TOLNet; Tropospheric Ozone Lidar Network
    - Ground-based Profiling of Tropospheric Ozone (https://tolnet.larc.nasa.gov/)

The activities will extend beyond the official end of the project, since sustainability and convergence are key for the participating RIs to continue to pursue the goal of promoting a global research infrastructure for aerosol, clouds and trace gases.

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3.1. Activity-specific strategies

Here, we note some CARGO-ACT deliverables that will provide results that are immediately available for dissemination and exploitation to specific stakeholder groups. Listed here are the stakeholder groups that will benefit initially; all stakeholder groups will benefit in the longer term. The results will take the form of reports (which may include links to software and online services), and channels for delivering will include: website, conferences and workshops, publications. Meetings and workshops include those organised by the stakeholders and not just those organised by CARGO-ACT.

3.1.1. Services and tools

Stakeholder groups: **Scientific community** and **Service providers**

Responsibility	Deliverable no.	Deliverable name	Channel
NILU	D1.2	Roadmap for convergence of FAIR Enabling Resources used in partner data infrastructures	Publication, website, online service
FMI	D1.3	Roadmap for integrating vocabularies across partner data infrastructures	Publication, website, online service

3.1.2. Protocols, standards

Stakeholder groups: All (including **Scientific community**, **Service providers** and **National and International agencies, policy-making**)

Responsibility	Deliverable no.	Deliverable name	Channels
NILU	D2.2	Agreement on common vocabulary for describing instrument traceability and calibration, quality assurance and quality control	Publication, website, online service
TROPOS	D2.4	Recommendation for a common approach in measurement uncertainty estimation	Publication, website, online service, conference, workshop
CNRS	D3.5	Recommendations for developing current and new integrated multi-decadal, multi-parameter datasets	Publication, website, conference, workshop

3.1.3. Collaboration

Stakeholder groups: **Service providers** (partner RIs)

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Responsibility	Deliverable no.	Deliverable name	Channels
TROPOS	D2.1	Identification of opportunities for harmonised calibration and operation practices and data production software	Publication, website
TROPOS	D2.5	Strategy plan for the harmonisation of a regional aerosol in-situ calibration centre in the US (CAMS) with the ACTRIS Central Facility for aerosol IS measurements	Publication, website
INOE	D2.6	Implementation plan for harmonised lidar calibration services in Europe and in the US	Publication, website, workshop
BIRA-IASB	D4.2	Research needs assessment mapped to CARGO-ACT capabilities, and remediation plan	Publication, website, workshops, conference
CNR	D4.3	CARGO-ACT site distribution strategy	Publication, website
UHEL	D6.1	Action and guidance plan	Publication, website

3.1.4. Guidelines and outreach

Stakeholder groups: All (including **Scientific community**, **Service providers** and **National and International agencies, policy-making**)

Responsibility	Deliverable no.	Deliverable name	Channels
TROPOS	D2.3	Recommendations for common calibration and operation procedures	Publication, website, online service
CNR	D3.4	Roadmap for cross-network quality control services	Publication, website, online service
CNRS	D5.3	Recommendations for sustainable international access strategies to global RIs	Publication, website
UHEL	D6.2	Roadmap for sustainability	Publication, website

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Table 2. Plan for the exploitation and dissemination of the CARGO-ACT results

	Scientific	**Economic**	**Societal**	**DEC Measures**
Target group 1: scientific community	Foster research on climate and air quality Benefits to all categories of researchers Seamless access to services	Favour establishing common standards for instrument performance Create business opportunities for instrument and service provider start-ups and spinoffs	Favour development of Green Technologies by setting joint standards for life cycle of scientific technologies Extensive training opportunities for researchers	D & E: Inform and engage national/international stakeholders. Produce technical and white papers on integrated solutions for interoperability and harmonised data, measurement and quality control principles for exploitation by similar networks in other regions of the globe. C: Interaction in meetings and workshops, publish widely
Target group 2: service providers	Increased uptake of data and products Higher visibility of resources available	Drive FAIRness in Global Earth Observing Systems Favour establishment of joint operation standards	Optimization of national investments Engage additional stakeholders worldwide	D & E: Knowledge transfer within the consortium to other organisations within and beyond the RIs in the consortium, with capacity building and training activities through technical workshop and the RI calibration centres
Target group 3: international agencies and policy making	Support to science-based assessments for climate and AQ policies Consolidate existing partnerships	Identification of future needs Support to establishing CEN standards	Support in providing better management of environment crisis Support implementation of EU Green Deal Support to UNFCCC policies	D & E: Promote the results of converging to global interoperability to policy- and decision-makers and civil society. C: Stakeholder meetings, publish widely
Target group 4: other target groups	Foster collaboration in an international context Consolidate contributions to international networks	New methodologies, prototypes or designs in conjunction with National	Training for employees Favour growth of RI suppliers	D & E: Promote the results of convergence and publish global datasets C: Stakeholder meetings, publish widely

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		Metrology Institutes and adopted as CEN standards		

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