

Deliverable 1.2: Summary report of organised community building events

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List of acronyms and abbreviations

ACTRIS - Aerosol, Clouds and Trace gases Research Infrastructure

ACTRIS ERIC- ACTRIS European Research Infrastructure Consortium

ACTRIS IMP - ACTRIS Implementation Project

BEIS - Department for Business, Energy and Industrial Strategy, UK

BMBF - Federal Ministry of Education and Research, Germany

CARS - Centre for Aerosol Remote Sensing

CCRES - Centre for Cloud Remote Sensing

CEO-TERRA - Research Centre for environment and Earth Observation project

CF - Central Facility

CHMI - Czech Hydrometeorological Institute

CiGas - Centre for Reactive Trace Gases In-Situ Measurements

CIS - Centre for Cloud In-Situ Measurements

CNRS - Centre National de la Recherche Scientifique, France

CREGARS - Centre for Reactive Trace Gases Remote Sensing

CSIC- Spanish National Research Council

DC - Data Centre

CAIS-ECAC - Centre for Aerosol In-Situ Measurements

EMME-CARE - Centre of Excellence for climate and atmosphere research in the Eastern Mediterranean and Middle East region

ENVRI - Environmental Research Infrastructures

FTMC - Center for Physical Sciences and Technology, Lithuania

FZJ - Forschungszentrum Jülich GmbH, Institute for Energy and Climate Research, IEK-8: Troposphere, Germany

HO - Head Office

IAC - Interim ACTRIS Council

ICPF- Institute of Chemical Process Fundamentals, Czech Republic

IE-BAS - Institute of Electronics of the Bulgarian Academy of Sciences

INAR/UHEL - Institute for Atmospheric and Earth System Research/University of Helsinki

INDAAF - International Network to study Deposition and Atmospheric composition in Africa

INOE - National Institute of Research and Development for Optoelectronics, Romania

INSA - Integrated Nitrogen Studies in Africa project

LAERO - Laboratoire d'Aérodynamique, Toulouse, France

LISA - Laboratoire Interuniversitaire des Systèmes Atmosphériques, Créteil, France

LOA - Laboratoire d'Optique Atmosphérique, CNRS, Université de Lille, France

LSCE - Laboratoire des Sciences du Climat et de l'Environnement, France

METNO - Norwegian Meteorological Institute, Norway

NCAS - National Centre for Atmospheric Science, UK

NCP - National ACTRIS Contact Person

NF - National Facility

NILU - Norwegian Institute for Air Research, Norway

PGN - Pandora Global Network

PMCost - Sources and Chemical Composition of Particulate Matter in Poland and their Control Strategies project

QA - Quality Assurance

QC - Quality Control

RI - Research Infrastructure

RPF - Regional Partner Facility

RPO - Research Performing Organization

SAB - Scientific Advisory Board

SAMU - Service and Access Management Unit

SIAB - Scientific and Implementation Advisory Board

SMEAR - Station for Measuring Ecosystem-Atmosphere Relations

TC - Topical Centre

TROPOS - Leibniz-Institut für Troposphärenforschung, Germany

UCol - University of Cologne – UC, Germany

1. Background

The Aerosol, Clouds and Trace Gases Research Infrastructure (ACTRIS) is the pan-European research infrastructure (RI) producing high-quality data and information on short-lived atmospheric constituents and on the processes leading to the variability of these constituents in natural and controlled atmospheres. ACTRIS serves a vast community of users such as scientists, policy makers, private sector, funding organizations and educators. ACTRIS activity started almost 20 years ago, and currently more than 100 European partners from 22 countries are engaged in building the research infrastructure.

The ACTRIS implementation project, ACTRIS IMP, takes ACTRIS into a new level of maturity and sets the needed structures for the implementation actions, both at the national and European levels. ACTRIS IMP builds on three main pillars: securing the long-term sustainability, implementing of ACTRIS functionalities, and positioning ACTRIS in the national, European, and international science and innovation landscape. ACTRIS IMP aims to enable ACTRIS to respond to the users' needs and requirements.

This document briefly summarizes the steps taken to engage and enlarge the ACTRIS community and eventually the ACTRIS membership and includes the organized community building events.

Engagement and enlargement of the participation at country level included several steps. First, the atmospheric community within a country should be aware of ACTRIS, its activities and objectives. Then, this national research community needed to organize themselves and set up a National ACTRIS consortium to link themselves to the pan-European ACTRIS community activities. The next step was to link the country funders and stakeholders to be involved and to apply for member or observer status in ACTRIS ERIC, or in IAC prior to the establishment of ACTRIS ERIC. In addition, ACTRIS also aims to engage key facilities in non-member countries through a Regional Partner Facility program or other means.

With the contribution of ACTRIS IMP, on 25th April 2023, the European Commission took a long-anticipated decision to establish ACTRIS as a European Research Infrastructure Consortium, ERIC. ACTRIS ERIC coordinates the infrastructure and access to a large variety of high-quality services to a wide range of users and needs, for scientific, technological, and innovation-oriented usage through its internationally recognized National Facilities (NFs). ACTRIS National Facilities operated by Research Performing Organizations (RPOs) are distributed across ACTRIS ERIC's 17 countries: Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Finland, France, Germany, Italy, Netherlands, Norway, Poland, Romania, Spain, Sweden, and Switzerland. Some NFs are located outside continental Europe, in locations such as Cabo Verde, Antarctica, French overseas territories and Tajikistan. Greece and the UK expressed interest in joining the ERIC in near future. With their commitment, the members demonstrate atmospheric and air quality research as a national priority, thereby supporting scientific excellence across Europe. Being a member country of ACTRIS ERIC means that a country's representatives can help shape the strategy, participate in mission-based research, and join ACTRIS's unified voice at the forefront of European science and education landscape of atmospheric research focused on aerosol, clouds, and trace gases. ACTRIS facilities make up the largest, multi-site atmospheric research infrastructure in the world and offer its users open access to data, instruments, expertise, training opportunities and data management services.

2. ACTRIS community building and widening community participation

The backbone of ACTRIS is the wide participation of the European atmospheric research communities in ACTRIS activities. The connections are important as the ACTRIS research community participates in the planning, implementation, and operation of NFs in their countries. At the same time, many members of the community are also users of ACTRIS data and other services.

This deliverable, linked to ACTRIS IMP Task 1.1 “ACTRIS community building and widening community participation”, summarizes and presents the meetings organized during ACTRIS IMP. The goal of these meetings has been to ensure regular and effective connection with the ACTRIS communities and the widening participation of research communities both in ACTRIS ERIC member countries, foreseen near future member countries and in regions and countries that were not yet well-connected to ACTRIS.

Even though ACTRIS has a good European coverage, target actions were required to expand this further. ACTRIS identified several potential countries, for example Iceland, the Balkan and Baltic countries, for tailored community building actions. Moreover, ACTRIS created a portfolio of community actions and a toolkit for targeted one-to-one community building events.

In addition to tailored events, Task 1.1 supported the participation of these new research communities in European-level ACTRIS meetings such as the 1st ACTRIS science conference in 2024, annual ACTRIS Week and ACTRIS IMP meetings.

3. Methodology

Sustainability of ACTRIS is closely related to the active engagement and widening participation of the user communities. In addition to financial sustainability, ACTRIS IMP consolidated the existing ACTRIS partnership and engaged substantial efforts to expand country participation in ACTRIS. Key to extending the European coverage of ACTRIS was to reach out and mobilize atmospheric research communities in countries not yet fully connected to ACTRIS, contributing to the development of the national ACTRIS activities, and acting as a leverage for national and structural funds, and to the integration of potential RPFs to ACTRIS in the European RI landscape. At the same time, actions in countries already members of ACTRIS ERIC is important for enhanced community building and participation of the national ACTRIS related communities at larger scale.

The methodology to reach out and mobilize atmospheric research communities in regions and countries, which is the main outcome of deliverable D1.2, included, first of all, the identification of stakeholders and key target audience.

3.1 Key target audience

Engagement of the target audiences is crucial for the success of the ACTRIS IMP project. ACTRIS IMP not only makes use of the networks and channels from the individual RIs, but also has its own official channels for promoting its messages and opportunities. Joint efforts of every RI and ACTRIS IMP communities

enhance the dissemination of the information and reach specific audiences, not only connected to the project.

ACTRIS IMP aims to expand the ACTRIS European atmospheric research community further. These pursuits are for exchanging the knowledge and the experience of researchers in regions and countries that are not yet well-connected to ACTRIS through targeted events and communication with the ACTRIS related research communities. The dissemination strategy for this audience group is to enhance engagement and raise awareness of the project opportunities for atmospheric science researchers. The communication actions have been done both online (virtual meetings, newsletter information, social media, etc.) and during face-to-face meetings.

As atmospheric pollution and climate impacts differ greatly across regions, therefore, tailor-made responses and measures at the regional or local levels are required. To this end, ACTRIS IMP targets regions including supra-municipal, county, provincial or district stakeholders.

The early engagement of stakeholders and key actors in target regions focused on the following groups:

- **Decision-makers and political representatives:** head of units, local and regional administration, regional inter-sectorial decision-makers, planners, and local authorities, e.g., prime ministers and their supporting (cabinet) teams, regional and local associations and networks. This target group includes both funding agencies and policymakers.
- **Universities and research centres:** on air quality, atmospheric pollution, climate adaptation, on institutional governance and change, related think tanks, initiatives and projects, etc. - professors and students as future researchers. ACTRIS IMP aims to gather the European atmospheric research communities in ACTRIS activities. The strategy for this audience group is to enhance engagement and raise awareness of the opportunities for atmospheric science researchers. A specific focus on engaging early career scientists and Ph.D. students is crucial. Additionally, every RI can advertise ACTRIS opportunities to the science institutions (Universities, Academies, and Polytechnics) focusing on the atmosphere or climate studies onside.

Real engagement ensures through the collaboration with the main actors involved in WP1, which disseminate project information within their communities afterward. Regular virtual meetings and emails have proven efficient for dissemination access opportunities. It is worth noting the users from the various communities don't have the same knowledge about ACTRIS service offer, access, and their interest. Specific actions targeting specific platforms or variables could be envisaged.

ACTRIS enhances the opportunities for the career development of early-stage researchers and young scientists, but also for managers and technical operators for RIs, enabling them to gain the skills and experience that will allow them to work towards their career goals.

- **Educators/ Citizens / NGOs:** and related associations, educators, civil society organizations (with focused policy and awareness activities on air pollution, climate adaptation and public health such as on community building, the environment, consumer advice and the evaluation and transparency of public policies), citizen groups, urban and regional planners, observatories (CSOs).

- **Businesses and private sector:** Sustainability managers, various industries, air quality and climate adaptation-related technology or services offering SMEs. Fostering industry and notably SME participation in the ACTRIS community activities is also a project objective. The communication strategy for engaging the industry representatives rely on stressing the added value of ACTRIS to businesses/private sector. Another way of engaging with industry is taking part in or even organizing exhibitions or trade shows where ACTRIS could be widely exposed. This activity may be conducive to building connection and trust and likely making new contacts for future collaboration.
- **Researchers in other scientific fields:** Researchers from other scientific fields are the next target group for ACTRIS. ACTRIS offers opportunities to allow scientists, beyond atmospheric science, to conduct leading-edge, multidisciplinary research, thereby addressing scientific questions and societal issues in an innovative manner. The dissemination/participation activity towards this target group focuses on the opportunities offered by ACTRIS, either through direct contact with RIs or clusters of RIs like the ENVRI Community (cluster of European environmental research infrastructures).

4. Organization of ACTRIS user community building events

One of the crucial tasks of ACTRIS IMP has been the organization of events to engage different user communities (academia, public and private sector), by identifying their needs, establishing targeted communication of the access offered, and evaluating the adequacy of ACTRIS. This has been conducted together by ACTRIS IMP WP1, WP7, WP9, WP10, and WP11, and by the various national ACTRIS consortia in participating countries.

The core activities that have been done are to:

- a) efficiently communicate on different access opportunities, and*
- b) improve communication strategy for RI partners, academia, private sector, policy makers, international organizations.*

The goal of the project's community building events has been to build the framework for participating and information sharing to successfully engage the relevant users and stakeholders. This is a crucial step to ensure that the solutions proposed in the project for the harmonization of national and European procedures of data and service provision by and to ACTRIS are fully understood and endorsed, when applicable, by all relevant groups. WP1 participates in all the relevant meetings of the project and ACTRIS to make sure the messages are adequately communicated.

The activities detailed in these events were:

- supporting the ACTRIS IMP project goals;
- providing project beneficiaries with information and material to perform communication and dissemination activities in link with the project (together with WP10);
- managing the information flow between the project and the extended community;

- engaging with stakeholders to develop an integrated plan for establishing procedures for access to atmospheric facilities.

4.1 National ACTRIS community events

The national ACTRIS community consists of ACTRIS Central Facility leaders, unit heads and other personnel in the country, NF PIs, technicians, system engineers, programmers, researchers etc., and a national ACTRIS coordinator. The latter coordinates ACTRIS activities nationally, brings the community together, talks to the government and participates in ACTRIS meetings. The national ACTRIS community also nominates a national ACTRIS contact person (NCP) to ensure the proper dissemination and information flow from the European ACTRIS activities to the national science communities and the relevant national stakeholders. The national ACTRIS coordinator and NCP are often the same person, but they can also be different persons depending on the national ACTRIS organization.

One of the Task 1.1. aims has been to provide new solutions for enhancing the liaison between facilities engaged within the project and attracting new users by disseminating ACTRIS objectives and advertising the opportunities it makes. For this purpose, various types of ACTRIS community events were organized at national level and ACTRIS has been disseminated at several events and conferences (listed in Table 1). As the information from some countries is missing in the table, it is likely that the real number of this type of events is even larger.

Table 1: Organized national or regional meetings since the beginning of 2020 to disseminate information on ACTRIS to the scientific community and/or to the stakeholders.

Country	Meeting	Online / face to face	Main organizer	Target audience	Expected outcome
Austria	ACTRIS-AT national meeting (2021)	face-to-face	Sonnblickverein	Austrian ACTRIS community	Update on Austrian NF's and CF's development, national website and publication list
	ACTRIS AT meeting (2022)	face-to-face	LuftBlick	LuftBlick staff, ESA delegate	Update on current ACTRIS AT activities relevant for PGN and ESA
	ACTRIS NF meeting (2023)	face-to-face	Uni Wien	National contact point Austria	Update on conversion works for Aerosol in situ NF
Belgium	ACTRIS-BE national meeting (2020)	online	ACTRIS NCP	Belgian ACTRIS scientific community + representatives of Belgian authorities	Updates on progress of ACTRIS implementation (NFs and CREGARS-BE Units) and national funding
	ACTRIS-BE national meeting (2021)	face-to-face	ACTRIS NCP	Belgian ACTRIS scientific community + representatives of Belgian authorities	Updates on progress of ACTRIS implementation (NFs and CREGARS-BE Units) and national funding
Bulgaria	ACTRIS-BG Stakeholders visit to IE-BAS (2020)	face-to-face	IE-BAS	ACTRIS BG Stakeholders and IE-BAS ACTRIS team	Increase knowledge on ACTRIS and share information on ongoing research
	3 ACTRIS-BG Stakeholders meetings (2020, 2020, 2021)	online	Bulgarian IAC delegates	Bulgarian ACTRIS stakeholders	Agreement on Bulgarian position at IAC13, IAC14 and IAC15 meetings, respectively

Cyprus	Innovation in Atmospheric Sciences Virtual Workshop (2021)	online	ACTRIS and EMME-CARE	Atmospheric Sciences Community/Stakeholders from Academia and Industry	Raise awareness about ACTRIS and facilitate knowledge-exchange for innovation between academia and private sector
Czech Republic	3 ACTRIS-CZ national meetings (2020, 2021, 2023)	online	ACTRIS Czech Republic	Czech Science Community	Regular national meeting of Large Research Infrastructure
	Large Research Infrastructure national day (2022)	face-to-face/online	ACTRIS Czech Republic	Czech Republic stakeholders	Meeting of Large Research Infrastructures
	2 ACTRIS-CZ Scientific and Advisory Board meetings (2022, 2023)	face-to-face/online	ACTRIS Czech Republic	Czech Science Community	Regular meeting of Large Research Infrastructure with SAB
	2 ACTRIS-CZ Workshop with Air Quality Division of CHMI (2022, 2023)	face-to-face	ACTRIS Czech Republic	Czech Science Community	Presentation of results within project ACTRIS-CZ,
	2 ACTRIS-CZ stakeholder meetings (CHMI part) (2022, 2023)	online	ACTRIS Czech Republic	Czech Republic stakeholders from CHMI	Project overview
	Large Research Infrastructure national day (2023)	face-to-face	ACTRIS Czech Republic	Czech Republic stakeholders	Meeting of Large Research Infrastructures

	ACTRIS-CZ stakeholder meeting (2023)	face-to-face	ACTRIS Czech Republic	Czech Republic stakeholders	Increase knowledge on ACTRIS
Denmark	-	-	-	-	-
Estonia	-	-	-	-	-
Finland	SMEAR Seminar (2022)	online	INAR/UHEL	Finnish science community	Increase knowledge on ACTRIS
	2nd ACCC Impact Week (2023)	online	INAR /UHEL	public sector, private sector, policymakers, researchers	Increase knowledge on ACTRIS
	Towards Global Earth Observatory workshop (2023)	online	INAR/UHEL	RI experts, international participation	Collaboration between RIs on a global level
	ACTRIS-FI Science Seminar (2023)	online	INAR/UHEL	Finnish science community	Increase knowledge on ACTRIS and share information on ongoing research
France	ACTRIS-FR stakeholders meeting (2020)	online	ACTRIS-FR	French ACTRIS stakeholders	Decisions on national ACTRIS facilities and funding model
	4 ACTRIS-FR stakeholders meetings (2021, 2022, 2023)	Online / face-to-face, Paris	ACTRIS-FR	French ACTRIS stakeholders	Update on ACTRIS activities and implementation
	36 ACTRIS-FR regional meetings (2020, 2022, 2023)	face-to-face	ACTRIS-FR	French regional stakeholders and funders	Update on ACTRIS activities and national funding

	ACTRIS-FR Workshop (2022)	face-to-face, Autrans	ACTRIS-FR	French ACTRIS community + users (~100 people)	Update on ACTRIS activities & Implementation + Scientific session
	ACTRIS-FR Workshop (2023)	face-to-face, Aussois	ACTRIS-FR	French ACTRIS community + users	Update on ACTRIS activities & Implementation + Scientific session
	ACTRIS-FR @ Rdv Carnot (2021)	face-to-face, Lyon	Carnot Institutes	French SMEs/ other Ris	Inform on ACTRIS activities and potential for collaboration with industry
	Business meeting Photonics (2022)	online	Photonics	French SMEs	Inform on ACTRIS activities and potential for collaboration with industry
	Obs4clim Kick off meeting (2022)	Toulouse, online	Obs4clim coordination (ACTRIS-FR, IAGOS, ICOS FR)	French ACTRIS, IAGOS, ICOS communities + stakeholders	Develop a joint strategy for investment and service developments to reinforce the integration of French “atmospheric Ris” and their synergies
	Obs4clim Annual meeting (2022)	Lille, online	Obs4clim coordination (ACTRIS-FR, IAGOS, ICOS FR)	French ACTRIS, IAGOS, ICOS communities + stakeholders	Develop a joint strategy for investment and service developments to reinforce the integration of French “atmospheric Ris” and their synergies
Germany	ESFRI Roadmap information meeting (2020)	face-to-face	Leibniz Association	German ESFRI Roadmap process participants	Exchange of expertise (ACTRIS presentation)
	2 ACTRIS-D stakeholder	online	German national	German ACTRIS stakeholders	Agreements on German positions in IAC-13

meetings (2020)		delegates/ UBA		
ACTRIS-D stakeholder meeting (2020)	online	German national delegates/ UBA	German ACTRIS stakeholders	IAC-13 Debriefing
5 ACTRIS-D stakeholder meetings (2020, 2021, 2022)	online	German national delegates/ UBA	German ACTRIS stakeholders	Agreements on German positions in IAC-14, IAC-15, IAC-16, IAC-17 and IAC-18, respectively
ACTRIS-D Central Facility meeting (2020)	online	ACTRIS-D coordinator TROPOS	German TC Units	Update on ACTRIS funding model and German contributions
ACTRIS-D national meeting (2020)	online	ACTRIS-D coordinator TROPOS	German ACTRIS community	Update on ACTRIS activities and implementation
2 ACTRIS-D national meetings (2021)	online	ACTRIS-D coordinator TROPOS	German ACTRIS community	Preparation of ACTRIS-D implementation project
ACTRIS-D implementation kick-off meeting (2021)	online	ACTRIS-D coordinator TROPOS	German ACTRIS community and funders	Starting and organizing the ACTRIS-D implementation project
ACTRIS-D implementation project meeting (2022)	online	ACTRIS-D coordinator TROPOS	German ACTRIS community and funders	Update on ACTRIS-D implementation progress
ACTRIS-D Steering Committee/ Regular bi-	online	ACTRIS-D coordinator TROPOS	German national NF and CF PIs	Project coordination and information exchange

	monthly meetings				
	RI Workshop on sustainable access models (2022)	online	BMBF	German RI stakeholders	Exchange of expertise and strategy discussion (ACTRIS and ATMO-ACCESS presentation)
	ACTRIS-D Annual Conference 2022	face-to-face	ACTRIS-D coordinator TROPOS	German ACTRIS community and stakeholders	ACTRIS-D Starting Event for national stakeholders, community building
	"Klimanavigator" - meeting 2023	online	Leibniz Association	Leibniz RPOs involved in European RIs	Exchange of expertise (ACTRIS presentation)
	ACTRIS-D stakeholder meeting (2023)	online	German national delegates/ BMUV	German ACTRIS stakeholders	Agreements on German positions in 1st GA
	Leibniz RI Workshop (2023)	online	Leibniz Association	Leibniz RPOs involved in European RIs	Exchange of expertise (ACTRIS presentation)
	ACTRIS-D Annual Conference 2023	face-to-face	FZJ and UoCI	German ACTRIS community and stakeholders	Scientific exchange and community building
Greece	ACTRIS-GR national meeting (2020)	online	ACTRIS Greece	Greek Science Community	Regular National Meeting of Atmospheric Community
	ACTRIS-GR national meetings/Regular monthly and bimonthly meetings	online	ACTRIS Greece	Greek ACTRIS Community	Actions needed for joining IAC

Ireland	-	No Meetings	Only phone conversations with Government about possible support	-	-
Italy	ACTRIS-IT JRU General Assembly (2021)	online	CNR	Italian ACTRIS JRU and partners	Update on ACTRIS activities and ACTRIS-IT implementation
	PON Research and Innovation 2014-2020 (2023)	face-to-face	University of Basilicata	Italian research community and innovation sector	Strengthening the awareness of the potential impact of research on the innovation
	ACTRIS-IT national meeting (2023)	face-to-face	CNR	Italian ACTRIS community	Update from the stations and partners, and scientific presentation
Netherlands	-	-	-	-	-
Norway	ACTRIS-N kickoff (2022)	face-to-face	NILU	Norwegian ACTRIS community	Update on ACTRIS, planned ACTRIS-Norway activities and funding
	7 ACTRIS-N national meetings (2022, 2023)	Hybrid / face-to-face	METNO/ NILU	Norwegian ACTRIS community	Update on ACTRIS activities and ACTRIS-Norway development
Poland	ACTRIS-IMP KoM (Implementation of RI) (2020)	face-to-face	University of Warsaw	Polish ACTRIS Community and invited persons/institutions working in atmospheric research	ACTRIS activities and implementation plan, national funding possibilities

IV Konferencja PolandAOD (ACTRIS Session) (2020)	online	Poland AOD Consortium / University of Warsaw	Polish Aerosol Research Community and Modelling Community	Introducing ACTRIS and national research done with use ARCTIS infrastructure.
Meeting of Science Panel of Polish Space Agency (2021)	face-to-face/document	Polish Space Agency	Polish Space Agency	Univeristy of Warsaw contributed to preparing the "Report on Needs of the Polish scientific community in the field of space research and exploration using satellite missions" (in Polish)
Polish Multimedia Climate Report (2021)	publication-online	FundacjaTO GETAIR under wins of Polish Ministry of Climate and Environment	general public	University of Warsaw contributed with article "In-depth understanding of smog as a way of effective prevention!" (In Polish)
ACTRIS-PL meeting (2022)	hybrid	University of Warsaw	ACTRIS-PL Consortia Members	Status on ACTRIS national activities (NF implementation, investments status, funded new grants, plan for joint campaigns)
PMCOST Campaign (2022)	hybrid	University of Wrocław	Several ACTRIS-PL partners, non-ACTRIS partners from Poland and EU	In field campaign ACTRIS-PL following partners took part: University of Wrocław (organizer), University of Warsaw (participant with mobile lidar lab), University of Silesia

					(participant with hot-air balloon lab), Institute of Geophysics PAS (remotely - sent instruments for observations).
	ACTRIS-PL meeting (2023)	online	University of Warsaw / Uniwersity of Wrocław	ACTRIS-PL Consortia Members	Status on ACTRIS national activities (equipment procurement, NF implementation, website, communication strategy for ACTRIS-ERIC announcement)
Portugal	PICO Mountain Observatory	online	University of Azores	Stakeholders and funders related to the observatory	Discussion of the observatory and potential funding mechanisms
Romania	ACTRIS-RO national meeting (2020)	face-to-face	INOE	Romanian ACTRIS community+ representatives of Romanian authorities	Update on ACTRIS activities and implementation
	ACTRIS-RO national meeting (2020)	online	INOE	Romanian ACTRIS community	Update on ACTRIS activities, decisions on active national ACTRIS facilities
	CEO-Terra workshop (2021)	online	INOE	Romanian science community and stakeholders	
	ACTRIS-RO national meeting (2022)	face-to-face	INOE	Romanian ACTRIS community & national collaborators	Information on ACTRIS, ACTRIS-RO; scientific and technical presentations

	ACTRIS-RO national meeting (2022)	face-to-face	INOE	Romanian ACTRIS community	Update on ACTRIS and ACTRIS-RO implementation
	ACTRIS-RO national operative meeting (2023)	online	INOE	Romanian ACTRIS candidate NFs	Clarification of the labelling process
Spain	ACTRIS-ES stakeholders meeting (2020)	online	CSIC	Vicedirectorate General of Clean Air and Industrial Sustainability - Ministry of Ecological Transition and Demographic Challenge	Support for membership contribution
	ACTRIS-ES stakeholders meeting (2021)	online	ACTRIS-SPAIN	Spanish Office of Climate Change - Ministry of Ecological Transition and Demographic Challenge	Support for membership contribution
	3 ACTRIS-ES national meetings (2021)	online	ACTRIS-ES coordinator UPC	Spanish ACTRIS community	Update on national funding
	ACTRIS-ES national meeting (2021)	online	ACTRIS-ES coordinator UPC	Spanish ACTRIS community	Proposals for participation in INFRA-TECH-2022 call
	ACTRIS-ES national meeting (2021)	online	ACTRIS-ES coordinator UPC	ACTRIS-ES coordinator UPC	Update on national funding and status of ACTRIS-ES in ACTRIS ERIC

	ACTRIS-ES national meeting (2022)	online	ACTRIS-ES coordinator UPC	ACTRIS-ES coordinator UPC	Organization of ACTRIS national activities
Sweden	-	-	-	-	-
Switzerland	3 Swiss ERIC events (2021, 2022, 2023)	hybrid/ face-to-face	SERI	Funding Agency, ERIC NCPs and further stakeholders	Information and coordination
	Swiss GAW-GCOS symposium (2021)	hybrid	MeteoSwiss	Swiss Science community in the field of GAW and GCOS	Scientific presentations and topical workshop on future observation needs
	11 ACTRIS-CH national meetings (2021, 2022, 2023)	online	PSI	Swiss ACTRIS community	Update on ACTRIS activities and ACTRIS-CH implementation
	ACTRIS-CH national meeting (2022)	face-to-face	Univ. of Berne	Swiss ACTRIS community	Update on ACTRIS activities and ACTRIS-CH implementation
	Swiss GAW-GCOS roundtable (2023)	face-to-face	MeteoSwiss	Swiss Science community in the field of GAW and GCOS	Information and topical workshop on AI in the field of observations
United Kingdom	ACTRIS-UK stakeholders meeting (2022)	online	BEIS (Science ministry)	UK organisations involved in ACTRIS	Support for membership contribution
	ACTRIS-UK participants meeting (2022)	online	NCAS	UK scientists	Support for UK membership of ACTRIS
	ACTRIS-UK participants meeting (2023)	face-to-face	NCAS	UK scientists	Getting community ready for UK to join ACTRIS

Moreover, Table 2 presents the organized dissemination meetings towards non-ACTRIS countries by ACTRIS partners.

Table 2: Organized dissemination meetings towards non-ACTRIS countries

Target country	Meeting	online / face to face	Main organizer	Target audience	Expected outcome
Denmark (now an ACTRIS country)	HO-Denmark bilateral meeting (2021)	online	ACTRIS Head Office	Danish NCP and stakeholders	Clarification on actions needed for joining IAC
Slovakia	Meeting of CHMI and ICPF with Uni Zilina (2021)	online	CHMI/ICP F	University of Zilina	Discussion how to become ACTRIS NF and how to create the national ACTRIS
Lithuania	Meeting with FTMC (2022)	face-to-face	University of Warsaw / FTMC	FTMC members of Atmospheric Department	Advertising ACTRIS (profits & responsibilities), discussing possibilities to join RI.
Serbia	WeBaSOOP-ACTRIS (2022)	online	ACTRIS Head Office	Serbian science community in WeBaSOOP project	Clarification how to connect to ACTRIS
Latvia	Meeting with private sector (2023)	online	University of Warsaw	EVENTECH	Discussing access to ACTRIS sites and potential product co-developments and/or testing

4.2 TC community meetings

ACTRIS includes eight Central Facilities (CFs): six Topical Centres (TCs), the Data Centre (DC) and the Head Office (HO), the latter comprising the Service and Access Management Unit (SAMU). Each CF consists of several Units led by various RPOs being also partners in ACTRIS IMP.

ACTRIS Topical Centres are:

1. European Center for aerosol calibration and Characterization (CAIS-ECAC):
 - Units: WCCAP (Lead), PACC, CCC, OGTAC-CC, EMC2 and ACMCC
2. Centre for Aerosol Remote Sensing (CARS)
 - Units: AHL-INOE (Lead), AHL-LMU, AHL-CNR, ALC-DWD, ALC-LMU, ASP-CNRS, ASP-UVA, ASP-AEMET
3. Centre for Cloud In-Situ Measurements (CIS)
 - Units: CCIce (Lead), CCPar, CCWaC, ECCINT
4. Centre for Cloud Remote Sensing (CCRES)
 - Units: CCRES-FR (Lead), CCRES-NL, CCRES-DE, CCRES-UK, CCRES-FI
5. Centre for Reactive Trace Gases In-Situ Measurements (CiGas)
 - Units: CiGas-FZJV (Lead), CiGas-FZIN, CiGas-IMT, CiGas-UHEL, CiGas-DWD, CiGas-EMPA
6. Centre for Reactive Trace Gases Remote Sensing (CREGARS)
 - Units: FTIR-BE, BIRA (Lead), FTIR-BE, Ulliege, FTIR-DE, UVVIS-BE, UVVIS-AT, UVVIS-FR, UVVIS-NL, O3DIAL-FR

ACTRIS TCs have similar roles in the general structure, and their activities can be harmonized, by increasing the clarity and efficiency of the research infrastructure. For communication between the units of the above TCs and the related scientific communities, regular meetings are conducted in order to discuss and decide any aspects of relevance for implementing, operating, and further developing the TCs. Moreover, TCs organize discussion and training workshops together with responsible scientists and engineers of the TC units in order to discuss general scientific, technical, and operational aspects of relevance.

Table 3 includes the online and face to face organized TC community meetings for their respective scientific communities, including those arranged during ACTRIS Weeks.

Table 3: TC community meetings

CF	Meeting	online / face to face	Main organiz er	Target audience	Expected outcome
CAIS- ECAC	8 Aerosol in-situ Community meetings (2021, 2022)	online	CAIS- ECAC	ACTRIS aerosol in-situ community	
	2 Aerosol in-situ Community meetings (2022)	Hybrid (Athens, Prague)	CAIS- ECAC	ACTRIS aerosol in-situ community	
	2 Aerosol in-situ Community meetings (2023)	online	CAIS- ECAC	ACTRIS aerosol in-situ community	
CIS	CIS community meeting (2020)	online	CIS	NFs	Introduction of TC CIS, its units and variables, presentation of future CIS NFs
	CIS implementation workshop (2021)	online	CIS	NFs	Community meeting, status and update on variables, instruments, and data workflow
	CCIce community meeting during workshop on QA/QC of INP measurements (2021)	online	CIS (CCIce Unit)	NFs and users	Update on status of CCIce and planned activities, discussion of CCIce technical requirements and standard operation procedures.

CIS workshop at ACTRIS week (2022)	Hybrid (Prague)	CIS	NFs	Community meeting, update on status and planned activities
CClce community meeting during workshop on QA/QC of INP measurements (2022)	online	CIS (CClce Unit)	NFs and users	Update on status of CClce and planned activities, discussion of CClce technical requirements and standard operation procedures.
CCWaC community meeting during CCWaC intercomparison (2022)	Hybrid (SBO)	CIS (CCWaC Unit)	NFs and users	CCWaC community meeting and discussion of instrumentation for measuring CIS variables
ECCINT community meeting during ECCINT intercomparison (2022)	Hybrid (SBO)	CIS (ECCINT Unit)	NFs and users	ECCINT community meeting and discussion of instrumentation for measuring CIS variables
4 ECCINT-INT01 Data Workshops (2023)	online	ECCINT	ECCINT-INT01 group	ECCINT-INT01 campaign summary, data review steps, analysis, and definitions. Update and discussion on data handling, definitions and publications.
CCWaC Community workshop (2023)	online	CCWaC	CCWaC Community	Update about implementation status & upcoming activities; discussion of technical

						requirements and measurement guidelines;
DC	2 ACTRIS DC Workshops (2021, 2022)	online	DC (DVAS unit)	ACTRIS group	DC	The aim of the workshop is to clarify expectations for work and activities in 2021 and in 2022 respectively and exchange information in the group
	ACTRIS DC Workshop (2022)	online	DC (DVAS unit)	ACTRIS group	DC	The aim of the workshop is to have progress on joint work and core activities defined in the 2022 workplan
	ACTRIS DC Workshop (2022)	Hybrid (Paris)	DC (GRES/ASC unit)	ACTRIS group	DC	The aim of the workshop is to meet and discuss specific implementation tasks in detail and to exchange information and views on upcoming tasks and needs
	ACTRIS DC Workshop (2023)	Hybrid (Potenza)	DC (ARES unit)	ACTRIS group	DC	The aim of the workshop is to meet and discuss specific implementation tasks in detail and to exchange information and views on upcoming tasks and needs
CiGas	3 CiGas data quality Workshops (2021, 2022, 2023)	online	CiGas (EMPA)	CiGas NF data submitters		QA/QC controlled data for NOx and VOC; Scientific advances
	CiGas Users meeting (2022)	online	CiGas (FZJV)	CiGas User		Community meeting

	CiGas Users meeting (2023)	hybrid	CiGas (FZJ)	CiGas User	Community meeting
	ACTRIS NOx/VOC QA Workshop	online	CiGas	NOx and VOC communities	Technical meeting
CARS	CARS-ARES webinars (monthly except vacations)	online	CARS-AHL-INOE (INOE)	ACTRIS ARS NF & users	Scientific and technical aspects related to lidar instruments and data
	ACTRIS aerosol remote sensing workshop 2021 (2021)	online	CARS-AHL-INOE (INOE)	ACTRIS ARS NF & users	Guidelines for ACTRIS aerosol remote sensing National Facility, and the requirements applicable during the labelling Step1a (initial acceptance)
	ACTRIS aerosol remote sensing workshop 2022 (2022)	hybrid	CARS-AHL-INOE (INOE)	ACTRIS ARS NF & users	ACTRIS ARS workflows explained
	AERONET workshop (2023)	face-to-face (Lille)	LOA /Lille/France	AERONET components (internal workshop)	Meeting of all actors of AERONET (USA, France, Spain, Australia, Canada, Taiwan, China). Network updates, Calibration, instrumentations, processing, new developments.
	INDAAF workshop (2021)	face-to-face (Abidjan-Lamto)	SNO INDAAF ACTRIS -Fr	INDAAF scientific and technical community	Scientific and technical animation of the long term INDAAF measurement network. Participation of 4 French labs (LOA, LAERO, LISA, LSCE) and universities

					or institutes of Côte d'Ivoire, Mali, Niger, Benin, Senegal, Cameroon, Tunisia
	INSA workshop (2022)	face-to-face (Abidjan-Lamto)	H2020 MSCA INSA project		INSA bilateral European staff exchange program: International Nitrogen Studies in Africa. The aim of the workshop was to exchange knowledge on nitrogen studies between European (7) and African (8) partners.
	Meeting at the French Embassy in Côte d'Ivoire (2023)	face-to-face (Abidjan)	LAERO	Europe, University of Abidjan, ACTRIS	The aim of the meeting was to present ongoing research activities in Côte d'Ivoire, including the development of the INDAAF ACTRIS LAMTO Supersite as a potential ACTRIS international NF site
	Meeting Côte d'Ivoire's ministry of research and education (2023)	face-to-face (Abidjan)	LAERO	Ivorian research institutions and research ministry	Update and discussion of the development of the LAMTO super site in the framework of ACTRIS

4.3 Other ACTRIS events

Table 4 summarizes the general ACTRIS dissemination events including ACTRIS IMP GA meetings, the annual ACTRIS weeks and ACTRIS Science Conferences.

Table 4: Other ACTRIS events

Event title	Date	Location	Nr of participants	Action items
2020				
ACTRIS IMP Kick-off Meeting	2-6 March 2020	Larnaca, Cyprus	94	<ul style="list-style-type: none"> · Implementation Scope, Expectations and Risks · Community Involvement and new members · Overall ACTRIS Implementation Plan/CF Implementation Plans - Next Steps · SIAB Report · NF Plan and Labelling · TNA pilot for access to ACTRIS services · Optimisation of meetings and attendance, and ACTRIS community interlinkages
ACTRIS Week 2020	26-28 October 2020	virtual	319	<ul style="list-style-type: none"> · Scientific/Technical Plenary Session on synergies between the ACTRIS Components · TNA Access and Access Funding · Access Services · NF Plenary Session and Conclusions
2021				
ACTRIS IMP Meeting 2021	29-30 March 2021	virtual	180	<ul style="list-style-type: none"> · National Progress Reports · CF Progress Reports · NF Labelling Plan · User Access to ACTRIS · ACTRIS in the European and International landscapes and Innovation
ACTRIS Week 2021	27-29 October 2021	virtual	307	<ul style="list-style-type: none"> · Progress Report of ACTRIS · ACTRIS Information Sharing · Atmospheric Simulation Chambers: past experiences and future perspectives of ACTRIS · ACTRIS Science Session · ACTRIS Services · Development of the Labelling Process · Cross-RI Activities and Integration · ACTRIS in a European Landscape

				<ul style="list-style-type: none"> · SIAB Feedback and the Closing of the Meeting
2022				
ACTRIS IMP Meeting 2022	20-21 April 2022	virtual	145	<ul style="list-style-type: none"> · National and Regional ACTRIS Activities · Long-term Sustainability · Implementation of Central Facilities · NF Labelling Plan · Focus on Remote and Physical Access as a Core Activity of ACTRIS · Innovation and Cooperation with the Private Sector · Community Engagement
1st ACTRIS Science Conference 2022	11-13 May 2022	virtual	186	<ul style="list-style-type: none"> · Bringing together members of different atmospheric science communities and discussing the latest scientific breakthroughs e.g., in air quality and climate research · Encouraging the participation of the scientists working in the other European Environmental Research Infrastructures to share their findings and access unique opportunities for networking and R&D collaboration
ACTRIS Week 2022	24-27 October 2022	Prague, Czech Republic	303	<ul style="list-style-type: none"> · Introduction and Updates from the Head Office · Updates from the Data Centre · Building the ACTRIS National Facility Strategy · NF Labelling Process and Next Steps · The ACTRIS Atmospheric Chamber Community – Updates and Outlook · Perspectives on ACTRIS by SIAB Experts · Innovation and Private Sector Liaison in ACTRIS
2023				
ACTRIS Week 2023	24-27 October 2023	Heraklion, Crete, Greece	277	<ul style="list-style-type: none"> · Bring the ACTRIS Community together · Update the community about the most recent and ongoing ACTRIS progress and challenges · Provide a platform for various ACTRIS and ACTRIS-adjacent groups and communities to get together
2024				
ACTRIS Science Conference 2024	13-16 May 2024	Rennes, France		<ul style="list-style-type: none"> · Scheduled · Bringing together members of different atmospheric science communities and discussing the latest scientific breakthroughs e.g., in air quality and climate research

5. Conclusions

The ACTRIS IMP WP1 has built the foundation and approaches to work with communities to identify and implement appropriate engagement activities. The aims were to expand the existing ACTRIS user community to build awareness of ACTRIS, its services and benefits, as well as to prepare new members and communities for considering entering ACTRIS. Moreover, ACTRIS IMP set up internal and external support for ACTRIS to facilitate stakeholder engagement and build an engagement network with diverse backgrounds and expertise who also understand the mission and vision of ACTRIS and its priorities. This D1.2 report summarizes and presents the collocated meetings, large workshops and other ACTRIS events having been organized to bring together the ACTRIS community since the beginning of 2020.