

ACTRIS Glossary

ACTRIS - Aerosol, Clouds and Trace Gases Research Infrastructure which produces high-quality data documenting short-lived atmospheric constituents and processes leading to their variability in natural and controlled atmospheres and integrates, harmonizes and distributes datasets, activities and services provided by Central Facilities and National Facilities.

ACTRIS data - is data produced by the ACTRIS National Facilities complying with the procedures established within ACTRIS and is defined in ACTRIS data policy as accepted and amended by the decisions of the Interim ACTRIS Council and later General Assembly.

ACTRIS ERIC - Aerosol, Clouds and Trace Gases Research Infrastructure to be set up as a European Research Infrastructure Consortium (ERIC). The legal entity of ACTRIS to establish and operate a distributed research infrastructure is foreseen to be in the place in 2022. ACTRIS ERIC shall include all functions of ACTRIS Head Office and part of the Data Centre. The statutory seat of ACTRIS ERIC is in Helsinki, Finland.

ACTRIS IMP - ACTRIS Implementation Phase Project is an EU Horizon 2020 Coordination and Support Action (grant agreement No 871115). ACTRIS IMP started on 1 January 2020 for a period of 4 years.

ACTRIS label - “ACTRIS National Facility” label granted through ACTRIS labelling process to Observational and Exploratory Platforms that comply with the ACTRIS standards.

ACTRIS labelling process - proves the operational capacities of the NFs and ensures the high quality of ACTRIS data by granting the label “ACTRIS National Facility” to Observational and Exploratory Platforms that comply with the ACTRIS standards.

ACTRIS observational components – ACTRIS observational components refer to the classification of measurement techniques. ACTRIS has six observational components: aerosol in situ (AIS), cloud in situ (CIS), reactive trace gases in situ (RTGIS), aerosol remote sensing (ARS), cloud remote sensing (CRS), and reactive trace gases remote sensing (RTGRS).

Atmospheric Simulation Chamber Committee (ASCC) - supports the operation of ACTRIS atmospheric simulation chambers on matters related to procedures, quality, consistency and relevance.

Central Facility (CF) - a European level ACTRIS component, Head Office, Data Centre or Topical Centre, that offers ACTRIS data or research services and other services to users as well as operation support to National Facilities.

Central Facility (CF) Leader - the person responsible for leading, managing, developing and implementing the activities of a Central Facility according to the agreed ACTRIS policies and rules.

Central Facility (CF) Unit - part of a Central Facility located at and operated by a research performing organization (RPO) or by ACTRIS ERIC.

Central Facility (CF) Unit Head - the person responsible for the coordination and representation of a Central Facility Unit.

Central Facility (CF) Management Board - an internal Management Board to support the implementation of CF tasks and the daily CF operation and management. Each Central Facility (HO, DC and TCs) has this board and it is chaired by the CF leader and includes the Head of each CF Unit.

Centre for Aerosol In Situ Measurements (CAIS-ECAC) - one of the six ACTRIS Topical Centres. The European Centre for Aerosol Calibration and Characterization (ECAC) acts as the ACTRIS Centre for Aerosol In Situ measurements (CAIS), whose mission is to offer operation support to ACTRIS NFs operating instrumentation for aerosol in situ measurements and specialized services to wide range of users.

Centre for Aerosol Remote Sensing (CARS) – one of the six ACTRIS Topical Centres. The mission of the CARS is to offer operation support to ACTRIS NFs operating aerosol remote sensing instrumentation and specialized services to wide range of users.

Centre for Cloud In Situ Measurements (CIS) - one of the six ACTRIS Topical Centres. The mission of the CIS is to offer operational support to ACTRIS NFs operating instrumentation for cloud in situ measurements and specialized services to wide range of users.

Centre for Cloud Remote Sensing (CCRES) - one of the six ACTRIS Topical Centres. The mission of the CCRES is to offer operational support to ACTRIS NFs operating cloud remote sensing instrumentation and specialized services to wide range of users.

Centre for Reactive Trace Gases In Situ Measurements (CiGas) - One of the six ACTRIS Topical Centres. The mission of CiGas is to offer operational support to ACTRIS NFs operating instrumentation for reactive trace gases in situ measurements and specialized services to wide range of users.

Centre for Reactive Trace Gases Remote Sensing (CREGARS) - One of the six ACTRIS Topical Centres. The mission of CREGARS is to offer operational support to ACTRIS NFs operating reactive trace gases remote sensing instrumentation and specialized services to wide range of users.

Cooperation Agreement - an agreement between ACTRIS ERIC and a National Facility or between ACTRIS ERIC and a Central Facility which is not included in ACTRIS ERIC.

Data Centre (DC) - the Central Facility responsible for ACTRIS data curation, preservation, and distribution of data, value-added products and tools, and hosting the ACTRIS data portal that is a single-entry point for all ACTRIS data.

Director General (DG) – the legal representative of ACTRIS ERIC to be appointed by the General Assembly; responsible for the implementation of the decisions by the GA and ensuring the scientific and strategic development of ACTRIS.

Ethical Advisory Board - consists of independent external members appointed by the GA; the board provides feedback and make recommendations to develop the ethical aspects of ACTRIS ERIC and the research infrastructure activities.

Exploratory Platform - ACTRIS National Facility; an atmospheric simulation chamber, a laboratory or a mobile platform that performs dedicated experiments and provides quality-controlled data on atmospheric compounds, processes, events or regions of relevance by following common standards.

Financial Committee - consists of expert members appointed by the GA; the committee supports on matters related to the management of financial planning of ACTRIS ERIC as an advisory body of GA.

General Assembly (GA) - the governing body of ACTRIS ERIC, composed of delegates of members, permanent observers and observers.

Head Office (HO) - the Central Facility responsible for coordinating and representing ACTRIS as well enabling ACTRIS services. HO supports work of the GA, the advisory bodies and committees of the ACTRIS ERIC.

Host country - a country where a Central Facility unit is located and operated.

Host contribution - support provided by members or permanent observers for the functioning of the Central Facilities that are not part of ACTRIS ERIC, hosted in their own country.

Host premium contribution - the support provided by ACTRIS ERIC members and permanent observers for the functioning of the Central Facilities that are part of ACTRIS ERIC, hosted in their own country.

In situ measurements - in the context of ACTRIS, in situ measurements of aerosol, cloud, and reactive-trace-gas properties refer to techniques that are characterizing a sampling point. They can be performed from observational platform near the surface, from mobile surface-based or airborne platforms, and in atmospheric simulation chambers and laboratories. ACTRIS has three in situ observational components (AIS, CIS, RTGIS).

Interim ACTRIS Council (IAC) - a council of ministry- and funding organization representatives of ACTRIS members and observers, a superior decision body of ACTRIS before ACTRIS ERIC is established.

Interim ACTRIS Head Office (Interim ACTRIS HO) - coordinates the preparations for ACTRIS ERIC, physical set-up of HO, facilitating and overseeing the implementation of the research infrastructure prior to ACTRIS ERIC is established.

Interim ACTRIS Leader - leader of ACTRIS in the interim period before the establishment of ACTRIS ERIC and recruitment of Director General; in charge of ACTRIS implementation and leading the Interim ACTRIS Head Office. The Interim ACTRIS Leader is a contact person towards ESFRI and IAC delegates.

Interim ACTRIS Scientific Chair - a position of trust for the interim period; acts as a focal point in scientific topics and coordinates the scientific cooperation to facilitate the scientific and technological excellence within ACTRIS.

Interim Scientific and Implementation Advisory Board (interim SIAB) - consists of independent external members appointed by the IAC; advises and supports the IAC and the ACTRIS community in their implementation work to obtain the objectives of ACTRIS. This body will be replaced by ACTRIS Scientific and Innovation Body (SIAB) after the implementation phase.

Interim Research Infrastructure Committee (interim RI Committee) - advisory body during the interim period before the establishment of ACTRIS ERIC; supporting the leadership of ACTRIS and facilitating the transition towards RI governance and management. The Interim RI Committee is composed of the CF leaders, NF representatives of different components of ACTRIS, the Interim ACTRIS Leader, and the work package leaders of the ACTRIS IMP project, to ensure information sharing and integration of the project into the ACTRIS interim management.

Membership

- **Member of IAC** - a country in Interim ACTRIS Council that has signed the Letter of Intent or provided a political support to the ACTRIS ESFRI proposal in 2015. Member countries have the right to vote in the IAC meetings. The IAC is open for new members during its entire lifetime.
- **Member of ACTRIS ERIC** – a Member State of the European Union, associated country, third country other than associated country, or an intergovernmental organization that has joined ACTRIS ERIC. The rules of ACTRIS membership and obligations and rights of members are defined in the ACTRIS ERIC statutes.

Membership contribution – a cash contribution to ACTRIS ERIC to be collected from a member, permanent observer or observer according to the rules defined in the ACTRIS Internal Financial Rules. ACTRIS ERIC is responsible for allocating the agreed contributions to each Central Facility.

National Contact Person (NCP) – a person nominated by the countries that have shown their commitment to ACTRIS at organizational or state level. The ACTRIS Contact Person is responsible for organizing the coordination of the ACTRIS community at national level and is responsible for ensuring the proper dissemination and information flow from the European ACTRIS activities to the national science communities and the relevant national stakeholders.

National Facility (NF) - an observational or exploratory platform which has a contractual relationship with ACTRIS ERIC and which provides data and/or physical/remote access to its premises. National Facilities are developed, managed and operated by national Research Performing Organisations.

National Facility Principal Investigator (NF PI) – The scientist in charge of the measurements performed at a National Facility, usually also the contact person of the facility.

National Facility (NF) Technical and Scientific Forum - It is a highly technical and operative forum to develop the RI and ensure the connection of scientific expertise and technological development. It is an advisory body that may provide recommendations to the RI Committee or to the ACTRIS community. The forum is inclusive; the forum is open for the whole ACTRIS community and ACTRIS users. The forum is established during the ACTRIS Interim Phase. The term of the forum shall continue also after the ACTRIS ERIC has been established.

Observational Platform - ACTRIS National Facility; a fixed ground-based station acquiring reliable high-quality data on the variability of aerosol, clouds and trace gases and their complex interactions by applying standardized remote-sensing and in-situ measurement techniques. Observational Platforms may also provide physical and/or remote access to users.

Observership

- **Observer of IAC** – a country that has the right to attend Interim ACTRIS Council meetings without a voting right. Country may participate in the IAC as an observer by sending a request to the Chairperson of the IAC. The IAC is open for new observers during its entire lifetime.
- **Observer of ACTRIS ERIC:** a Member State of the European Union, associated country, third country other than associated country, or an intergovernmental organisation that has joined ACTRIS ERIC as an observer or permanent observer. The rules of ACTRIS observership and obligations and rights of observers are defined in the ACTRIS ERIC statutes.

Physical access - physical access to an ACTRIS Central Facility or National Facility. Centrally managed via SAMU, following the ACTRIS Access and Service Policy.

Remote access - access to an ACTRIS Central Facility or National Facility without users physically visiting the facility.

Remote sensing measurements - in the context of ACTRIS, remote sensing measurements refer to active and passive atmospheric remote-sensing techniques for the observation of aerosol, clouds, and trace gases. They can be applied at observational sites and on mobile surface-based platforms. ACTRIS has three remote sensing observational components (ARS, CRS, RTGRS).

Research Infrastructure Committee (RI Committee) - to be established by the GA; the committee supports the DG on matters related to the RI to ensure consistency, coherence, and sustainability of the operations of the RI. The RI Committee is convened by the Director General and shall have representatives both from the CFs and NFs.

Scientific and Innovation Advisory Board (SIAB) - consists of independent external members to be appointed by the GA; the board monitors scientific and operative quality of and advice to develop ACTRIS ERIC and the research infrastructure activities in operation phase. This body replaces the Interim ACTRIS Scientific and Implementation Advisory Board (Interim SIAB) after the implementation phase.

Science and User Access Forum - a focused space dedicated to all matters related to the physical and remote access of users to ACTRIS services and for users to interact with ACTRIS.

Service and Access Management Unit (SAMU) - a part of ACTRIS Head Office facilitating the access to ACTRIS services.

Topical Centre (TC) - a Central Facility supporting the operation of NFs and offering services and operation support for quality assurance and quality control of ACTRIS measurements and data (including training and knowledge transfer, calibration, quality assurance/quality control tools, and development of standard operation and evaluation procedures). Six TCs are set up to respond to the scientific and technical needs of ACTRIS, each with a particular focus on either remote sensing (from the ground) or in-situ (near-surface) measurements:

- CARS - Centre for Aerosol Remote Sensing
- CAIS - Centre for Aerosol In-Situ Measurements
- CCRES - Centre for Cloud Remote Sensing
- CIS - Centre for Cloud In-Situ Measurements
- CREGARS - Centre for Reactive Trace Gases Remote Sensing
- CiGas - Centre for Reactive Trace Gases In-Situ Measurements

User - a person, a team, or an institution making use of ACTRIS data or other ACTRIS services, including access to ACTRIS facilities.

Virtual access – wide and free access to ACTRIS data and digital tools provided by DC through the ACTRIS website.

ACTRIS data and service specific glossary

ACTRIS data levels

- **level 0 data:** Raw sensor output. Native resolution, metadata necessary for next level.
- **level 1 data:** Calibrated and quality assured data with minimum level of quality control.
- **level 2 data:** Approved and fully quality controlled ACTRIS data product or geophysical variable.
- **level 3 data:** Elaborated ACTRIS data products derived by post-processing of ACTRIS Level 0 -1 -2 data, and data from other sources. The data can be gridded or not.

Data curation - the activity that stores, manages and ensures access to all persistent data sets produced within the infrastructure.

Data originator - entity operating instruments at a National Facility or Topical Centre, resulting in ACTRIS data and delivering ACTRIS data to the Data Centre.

Data provider - the Data Centre offering the ACTRIS data and value-added data products and tools to users.

Digital tools - tailored codes and software for processing and visualization of ACTRIS data, production of ACTRIS data products, and for data analysis and research.

Data traceability - an unbroken chain of uniquely identified process steps leading from raw data to any kind of processed data, where identification of process steps follows the data.

Measurement traceability - an unbroken chain of comparisons relating an instrument's measurements to a known standard, in the ideal case SI units.

Quality assurance and control - quality assurance is process oriented and focuses on defect prevention and quality control is product oriented and focuses on defect identification:

- **Quality Assurance (QA)** - the process or set of processes used to ensure the quality of a product (e.g. data series, instrument, sample, measured value of a variable, etc.).
- **Quality Control (QC)** - the process and activities of ensuring products and services meet the expectations.

Synthesis product - data product not under direct ACTRIS responsibility from e.g. research activities, citizen science, for which ACTRIS offers repository and access.

Variables – almost 135 different atmospheric variables are measured within ACTRIS. The variables are listed in the ACTRIS data management plan.

Reference documents

[ACTRIS ERIC Statutes](#): Approved by IAC on 1.3.2021 in its 15th Meeting and sent to the Commission in September 2021.

[ACTRIS Technical and Scientific Description](#): Approved by IAC on 1.3.2021 in its 15th Meeting

[ACTRIS PPP Deliverable 2.3](#): Data policy. The document has been approved by IAC on 25.10.2018 in its 5th meeting.

[ACTRIS PPP Deliverable 2.6](#): ACTRIS Access and service policy. The document has been approved by IAC on 26.10.2018 in its 5th meeting.

[ACTRIS PPP Deliverable 4.1](#): Concept document on ACTRIS Central Facilities structure and services

[ACTRIS PPP Deliverable 4.2](#): ACTRIS Data Management Plan

[ACTRIS IMP Deliverable 5.1](#): ACTRIS National Facility labelling plan.

[ACTRIS IMP Deliverable 6.1](#): Science and User Access Forum accessible via <https://www.actris.eu/science-and-user-access-forum>

[National Facility \(NF\) Technical and Scientific Forum Terms of Reference](#), approved by IAC on 14.6.2021 in its 16th meeting.

[Atmospheric Simulation Chamber Committee \(ASCC\) Terms of Reference](#), approved by IAC on 14.6.2021 in its 16th meeting.

[Financial Committee Terms of Reference](#), approved by IAC on 4.11.2021 in its 17th meeting.