

## ACTRIS Data Management and Data Policy

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ACTRIS-IB “Aerosols, Clouds, and Trace gases Research InfraStructure Network” project is a European Commission FP-7-Project aiming at integrating European ground-based stations equipped with advanced atmospheric probing instrumentation for aerosols, clouds, and short-lived gas-phase species. ACTRIS will be active for a period of 4 years, from 1<sup>st</sup> April 2011 to 30<sup>th</sup> March 2015. The project is coordinated by CNRS (France) and CNR (Italy) and has 28 partners.

ACTRIS is an infrastructure project improving atmospheric observations, developing new methods and protocols, and harmonizing existing observations. The aim of the ACTRIS data policy is to state the condition of use for all data resulting from the activities of the ACTRIS infrastructure network.

ACTRIS rely on, and further develop, work achieved in networks and previous projects like EARLINET, EUSAAR, EMEP, GAW-AEROSOL, Cloudnet and more. The data policy of ACTRIS is in accordance with the data policy of the underlying networks EARLINET for aerosol profiles, EMEP and GAW-AEROSOL for ground based aerosol and trace gas *in situ* data, and Cloudnet for cloud profiles.

### 1 The ACTRIS Data Centre and Data Management

The ACTRIS Data Centre, <http://actris.nilu.no>, provides access to observations and service products of the ACTRIS infrastructure. The main structure and installations are located at NILU - Norwegian Institute for Air Research, Kjeller, Norway (NILU). The other installations are in Hamburg, Germany (MPG) and in Reading, United Kingdom (UREAD).

All ACTRIS data are reported to 3 core data repositories:

- Aerosol lidar data are reported EARLINET Data base at MPG: <http://access.earlinet.org/EARLINET/>
- Ground based aerosol and trace gas *in situ* data are reported to EBAS at NILU: <http://ebas.nilu.no/>
- Cloud profiles and data are reported to the Cloudnet data base at UREAD: <http://www.cloudnet.org/data/>

The 3 core data repositories are linked in the ACTRIS Data centre: <http://actris.nilu.no/>. ACTRIS Data Centre is giving free and open access to all data resulting from the activities of the ACTRIS infrastructure network, complemented with data from other relevant networks. The ACTRIS data centre web portal allows you to search and analyse atmospheric composition data from a multitude of data archives through a single user interface. For some of the databases, the interface furthermore allows you to download data. The data centre provides scientists and other user groups with free access to atmospheric observational data, and provide products for analysis of atmospheric composition.

## 2 ACTRIS data policy

All ACTRIS data are available at no cost from the ACTRIS Data centre: <http://actris.nilu.no/> and also from each of the core ACTRIS data repositories for non-commercial use. Use of these data implies an agreement to reciprocate. Institutes making similar measurements are strongly encouraged to make their own data available to the scientific community in a complete and easily accessible form.

Types of data provided by the ACTRIS Data Centre:

### **Type 1: Data organised, produced or funded within the context of the ACTRIS project.**

Every dataset created within ACTRIS is owned by the ACTRIS partner(s) who created this dataset. The data policy and use of these data is regulated in section 2.1 (aerosol profiles), section 2.2 (aerosol and trace gas *in situ* data), and section 2.3 (cloud data).

### **Type 2: Data archived and owned by other organisations or data providers**

These data are managed and owned by other organisations or data providers and hosted in other data bases, but are identified and made available through the ACTRIS Data Centre. Type 2 data are provided with the permission of each organisation or data provider contributing to the data archive. Each dataset of Type 2 may have its own data policy that will supersede the ACTRIS data policy. The condition of use of these data is described in section 2.4.

## 2.1 ACTRIS aerosol lidar profile data

ACTRIS aerosol lidar data are reported to the EARLINET Data base: <http://access.earlinet.org/EARLINET/>. The data policy of these data is similar to EARLINET.

### **Conditions of use**

ACTRIS aerosol lidar data are freely available to individual users upon acceptance of EARLINET data usage policy. Usage of ACTRIS aerosol lidar data should follow these principles:

- Use of Data from the EARLINET Database are freely available through the ACTRIS portal and at <http://access.earlinet.org/>
- Username and password are required to access the data.
- Registration is necessary in order to get username and password.

Notice to users:

The ACTRIS aerosol lidar data are contributed by the ACTRIS and EARLINET consortium. Each ACTRIS-EARLINET site has a Principal Investigator(s) (PI), responsible for deployment, maintenance and data collection. The PI has priority use of the data collected at the site. The PI is entitled to be informed of any other use of that site data.

Users of ACTRIS aerosol lidar data must not redistribute these data to third parties, but encourage access and dissemination of ACTRIS data directly through ACTRIS data centre or EARLINET data bases to accept the data policy, and ensure use of last version of data.

### **Recommended guidelines for data use and publication**

- Using ACTRIS aerosol profile data: Please consult with the PI(s) of the data to be used.
- Publishing ACTRIS aerosol profile data and EARLINET data: Please consider authorship for the PI(s).
- When data from the EARLINET Database are used in a publication, the following acknowledgment to be included:

Acknowledge ACTRIS using the following citation: "The research leading to these results has received funding from the European Union Seventh Framework Programme (FP7/2007-2013) under grant agreement n° 262254."

"The authors acknowledge EARLINET for providing aerosol LIDAR profiles available at <http://access.earlinet.org/>" and the following reference to cite:

J. Bösenberg, et al., EARLINET: A European Aerosol Research Lidar Network to Establish an Aerosol Climatology. Max-Planck-Institut Report No. 348 (2003).

EARLINET requests a reprint of any published papers or reports or a brief description of other uses (e.g., posters, oral presentations, etc.) of data downloaded from the EARLINET database. This will help us determine the use of EARLINET data, which is helpful in optimising product development. It also helps us to keep our product-related references current.

## **2.2 ACTRIS ground based aerosol and trace gas *in situ* data**

All ACTRIS ground based aerosol and trace gas *in situ* data are reported to EBAS: <http://ebas.nilu.no>. The data policy of these data is similar to GAW-WDCA.

### **Recommendation to data users:**

Access to ACTRIS *in situ* data is open and ruled under ACTRIS data policy as described. Although direct contact with data providers is not compulsory (except in the case of substantial use of data), it is highly recommended and appreciated to inform of use and discuss interpretation of data with relevant persons. Please remember that it is important to ACTRIS and data providers to keep track of publications and that offering co-authorship is also fully appreciated.

### **Conditions of use**

#### **Validated data:**

The data associated with "ACTRIS" in EBAS, i.e. ACTRIS data reported to EBAS regularly on an annual basis, are available free of charge for non-commercial and scientific use. By using this data, you as data user accept that an offer of co-authorship will be made through personal contact with the data providers or owners whenever substantial use is made of their data. In all cases, an acknowledgement must be made to the data providers or owners and to the project name ACTRIS when these data are used within a publication. ACTRIS data are public and available in EBAS without login.

Users of ACTRIS *in situ* data must not redistribute these data to third parties, but encourage access and dissemination of ACTRIS data directly through EBAS to ensure that the data policy is accepted, and that the user will get access to the last version of data.

Users of ACTRIS *in situ* data must acknowledge ACTRIS using the following citation: Measurements at "location" have been performed by "institute". The research leading to these results has received funding from the European Union Seventh Framework Programme (FP7/2007-2013) under grant agreement n° 262254.

#### **Near-Real-Time Data**

ACTRIS near-real-time data reported to EBAS associated with "ACTRIS\_NRT" are raw, automatically processed data that have not passed through any review by scientists. They are intended for applications where gaps and glitches in the data are expected and accepted, for example, assimilation by air quality forecast models. Near-real-time data should not be used in lieu of final, "clean", regularly reported data, and the data providers expressly deny permission for users to publish near-real-time data. Access to ACTRIS NRT data requires a registration and the user's consent not to distribute or publish data without agreement of data provider. Data providers are very interested in learning about how the data are being used and contact between data users and providers is strongly encouraged. To obtain access to ACTRIS NRT data, please send a request to [ebas@nilu.no](mailto:ebas@nilu.no).

#### **Campaign data and data from ACTRIS joint research activities (JRA):**

These data are considered as preliminary data. Preliminary data must be made available to other project participants as soon as possible. These data will be associated with "ACTRIS\_preliminary" in EBAS and

have protected access for project partners where log in is necessary. After validation by responsible data provider these data will be associated with "ACTRIS" and follow these conditions of use.

### Conditions of use in operational services

All ACTRIS ground based *in situ* data are openly available for operational use (for example in GMES service production and satellite validation), but it is necessary to publicly document how the data are used (for example on a project web site). Direct contact between ACTRIS coordinators/ACTRIS Data Centre and the operational service provider is necessary to negotiate procedures for use and details on how the acknowledgement to ACTRIS should be expressed.

## 2.3 ACTRIS cloud data

ACTRIS Cloud profiles and data are reported to the Cloudnet data base: <http://www.cloudnet.org/data/>.

### Conditions of use

ACTRIS cloud data and Cloudnet data is free to use but is available for non-commercial research purposes only. To obtain access to the data, contact the Cloudnet data manager Ewan O'Connor in the first instance ([e.j.oconnor@reading.ac.uk](mailto:e.j.oconnor@reading.ac.uk)).

If you use ACTRIS cloud data in a publication you must include an acknowledgement to the ACTRIS and Cloudnet project, the site at which the measurements were taken and the institute that provided the dataset you used. Guidelines for the form of such an acknowledgement are given below.

If you receive assistance in data analysis or detailed advice essential to the interpretation of the data from a project partner, then co-authorship should be proposed to that partner in any forthcoming publications.

In publications using ACTRIS and Cloudnet products you should reference the paper in which the algorithm is described, if available.

Additionally we request that you:

- Do not redistribute data to other institutes, but rather ask them to contact the Cloudnet data base and access the data directly.
- Inform the project of your proposed analysis, so that we can keep you updated on changes and improvements to the datasets, and, if you wish, put you in touch with other researchers engaged in similar activities.
- Send a reprint of any publication in which ACTRIS cloud data were used.

How to acknowledge ACTRIS and Cloudnet in publications:

Acknowledgements in publications should mention the ACTRIS and Cloudnet projects, the site/institute at which the raw data were taken, and the institute that produced the product that you used. The recommended format for the acknowledgement is:

We acknowledge the ACTRIS project (European Union Seventh Framework Programme, FP7/2007-2013, under grant agreement n° 262254.) and the Cloudnet project (European Union contract EVK2-2000-00611) for providing the [DATASET], which was produced by [INSTITUTE] using measurements from [SITE].

The release datasets are listed on the Release Products page; you may phrase [DATASET] how you like. The [INSTITUTE] responsible for producing each dataset is listed for each product. If you have a query about a dataset you should generally contact the product maintainer rather than the algorithm designer in the first instance.

## **2.4 Conditions of use for non ACTRIS data available through the ACTRIS Data Centre**

### **Recommendation of use for Type 2 data:**

Users should:

- Contact the organisation or data provider(s) responsible for the particular measurement to verify proper interpretation of the data in the context of the intended use.
- Grant data provider(s) the opportunity to review the use of the data and conclusions drawn from it.
- Invite the data provider(s) at an early stage to be co-author on any papers written if their data is essential to the work or an important result or conclusion has been obtained using their data.

Users of other groups' data must not redistribute these data to third parties, but encourage dissemination through the ACTRIS data portal to follow and accept the data policy, and ensure use of last version of data.