



Deliverable 10.6: Provision and documentation of interactive in situ and profile data submission tools

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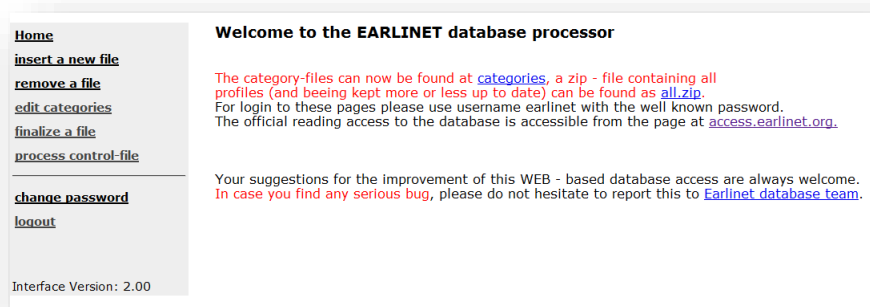
1	Provision and documentation of interactive profile data submission tools	4
1.1	Provision and access to the profile data submission tool	4
1.2	Documentation of the aerosol profile data submission tool	5
2	Provision and documentation of interactive in situ data submission tools	6
2.1	Provision and access to the near surface data submission tool.....	6
2.2	Documentation of the near surface data submission tool.....	7

1 Provision and documentation of interactive profile data submission tools

1.1 Provision and access to the profile data submission tool

Aerosol profile data can only be submitted to the EARLINET DB through the aerosol profile data submission tool available at <https://data.earlinet.org/index.php>.

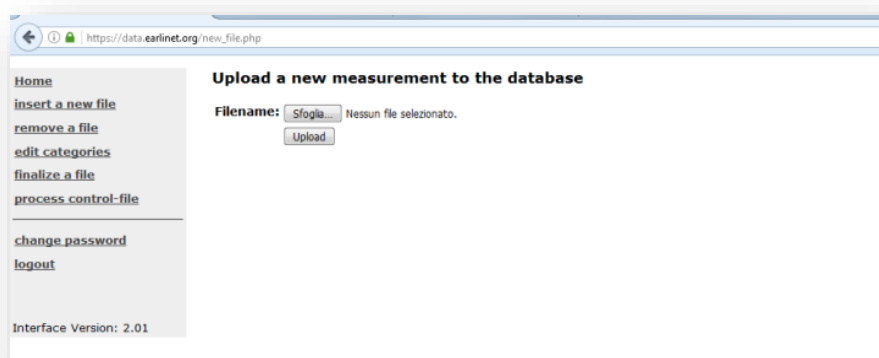
This is the front page of the tool:



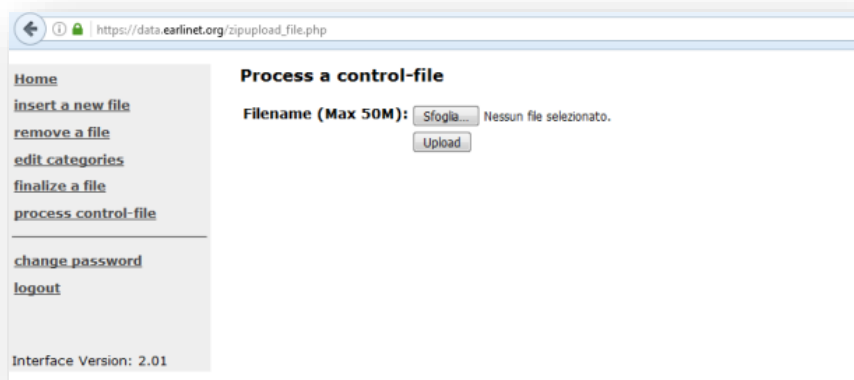
The data submission tool for aerosol profiles was available already before the beginning of ACTRIS-2. The tool is available only to internal users and requires an authentication. There are different levels and ways in accessing and using the tool: for editing /adding files, for making data public and for modifying data not yet public. An extensive check and update of all the permission rights and user accesses has been done by CNR in the first ACTRIS-2 period.

Through the user identification system this submission tool allows the submission of single and multiple files and the labelling of files to specific experiments (categories in the EARLINET nomenclature).

This is the page for the single file submission:



And this for the multiple-file submission tool:



The tool performs also on-the-fly basic check on the submitted data regarding the file name compliance to the EARLINET DB rules.

The EARLINET data submission tool is designed in such a way that new features can be easily implemented for accomplishing the needs of the new EARLINET DB design (D2.1). Scripts and routines for format checking in agreement with all EARLINET data description and formats have been already developed and tested. These procedures will be implemented to work on the submission phase in the first months of 2017. An automatic feedback mechanism with the data originator will be put in place for this tool. This procedure will strengthen the QA/QC allow to reach a higher standard of EARLINET data available on the database.

Additionally some on-the-fly checks about the aerosol lidar data have been developed and tested. These QCs are working during the submission phase and will allow real time QC of the data.

1.2 Documentation of the aerosol profile data submission tool

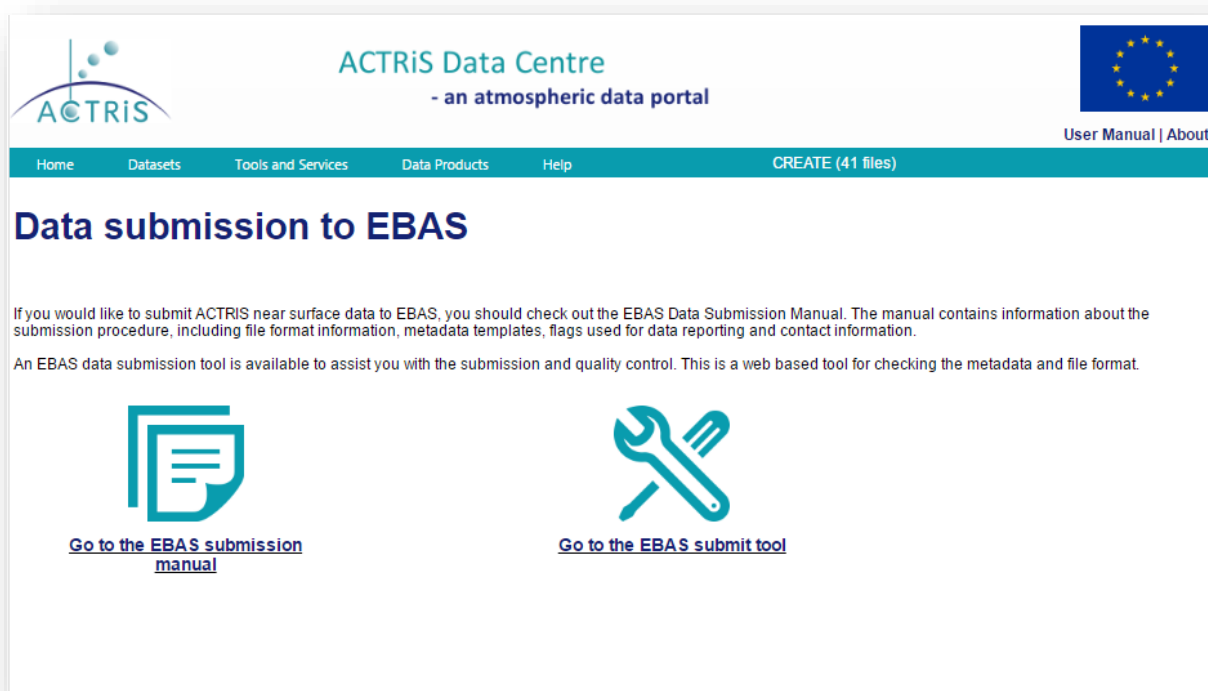
The submission tool and its use are based on the EARLINET agreed data file structure and data archive and use <https://www.earlinet.org/index.php?id=125> and <https://www.earlinet.org/index.php?id=25>. Documentation about the instruction multi-file submission have been provided to all the EARLINET users.

During ACTRIS FP7 project, some common questions and typical errors in files for submission were identified. From this experience guidelines for check up of the data before the submission were prepared and distributed within the network (<https://www.earlinet.org/index.php?id=46>). Additionally guidelines concepts are recalled during ACTRIS WP2 meetings and during courses about the check of aerosol lidar data (ECARS school in May 2016 and LICAL workshop planned for March 2017).

2 Provision and documentation of interactive in situ data submission tools

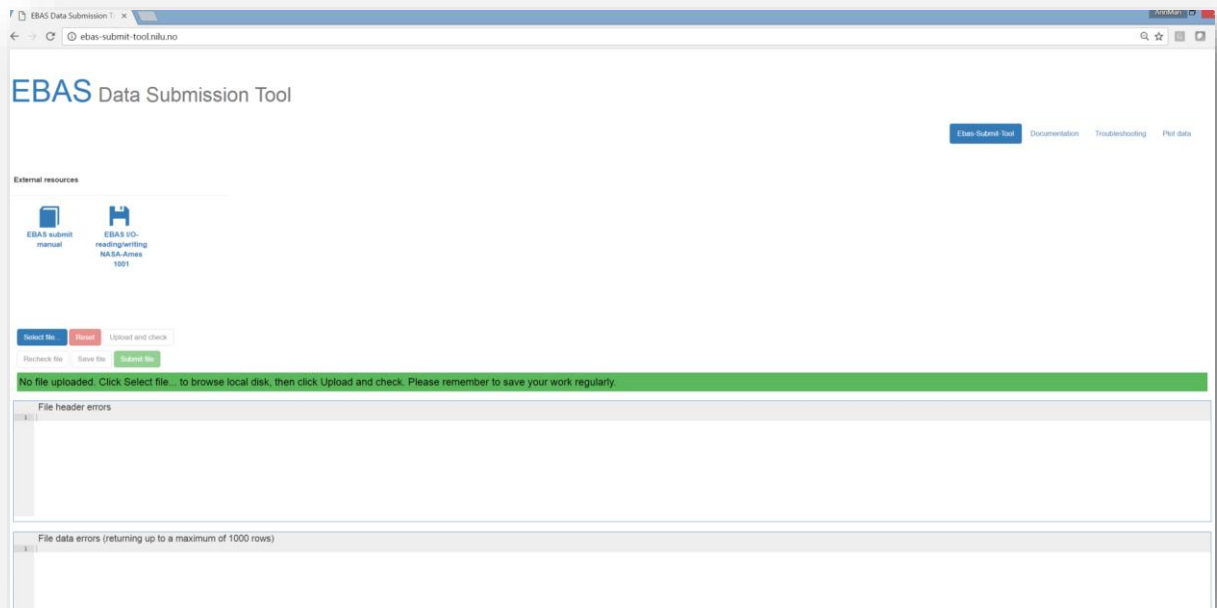
2.1 Provision and access to the near surface data submission tool

A new EBAS interactive in situ data submission tool is provided since May 2016: <http://ebas-submit-tool.nilu.no/>. This is a web based portal developed as a part of the ACTRIS and EBAS data centre activities, in close collaboration with ACRTIS WP3. The tool is accessible from <http://ebas-submit-tool.nilu.no/> and also from the ACTRIS Data Portal, under the sub menu "Tools and Services" -> "Data submission to EBAS", see: <http://actris.nilu.no/Content/?pageid=e02eafd4aa184995b9341289c1982c0f>:



The purpose of the tool is to improve the process around the annual data submission of near surface data to the database EBAS, both on data submitters side (with e.g. instant feedback on file format) and on the data centres side (with e.g. fewer errors in the submitted data). The tool is also data format checker.

This is the front page of the tool:



The format checker is directly linked to all (ca 40) data format templates located at <http://ebas-submit.nilu.no/> and the ftp server designed for incoming data <ftp://ebas-submissions.nilu.no/incoming>. The tool aims to:

- Check the consistency of their NASA Ames file
- Upload data to EBAS submissions in case it passes the check.

The tool facilitates validation and submission of files, allow plotting of data prior to submission, and troubleshoot validation errors. For the data submitters, the tool enable instant feedback (both errors and warnings) on file formats, the templates used, metadata included, and facilitates checking of data through online plotting prior to submission to the data centre.

A built-in feature for online modification of header during check- and submission- procedure steps, facilitates a relatively quick and easy checking procedure on the users side.

2.2 Documentation of the near surface data submission tool

The documentation on how to use the tool is publically available for all users: <http://ebas-submit-tool.nilu.no/documentation>

After the first phase, some common questions and typical errors in files for submission are identifies, and these are listed here: <http://ebas-submit-tool.nilu.no/troubleshooting> with described possible solutions.

The use of the tool was on the expected level during the submission of ACTRIS 2015 data, during summer 2016. About 20-25% of the data sets was tested herein before being sent to EBAS. Especially data submitters from the trace gas community were well represented among those who used the tool for the 2016 data submission. The figure below shows the geographical distribution of the users, over

the first 6 M period. At NILU we started tracking the dataset submissions mid october, and we have had 170 dataset submissions through the ebas-submission-tool from 10 different countries the last two months. This is high numbers and positive, since the ACTRIS and EBAS data submission deadlines are 31 July, but data submission of GAW-WDCA data are 31 December.

Country	Sessions	Sessions
	1,418 <small>% of Total: 100.00% (1,418)</small>	1,418 <small>% of Total: 100.00% (1,418)</small>
1. Norway	363	25.60%
2. United Kingdom	178	12.55%
3. Germany	165	11.64%
4. Australia	107	7.55%
5. Slovenia	83	5.85%
6. France	62	4.37%
7. Finland	61	4.30%
8. Italy	55	3.88%
9. Spain	51	3.60%
10. Latvia	35	2.47%
11. Greece	26	1.87%
12. Switzerland	26	1.83%
13. Bolivia	22	1.55%
14. Czech Republic	22	1.55%
15. Netherlands	22	1.55%
16. Poland	18	1.27%
17. Iraq	17	1.20%
18. Argentina	15	1.06%
19. (not set)	10	0.71%
20. Russia	9	0.63%

The first course presenting the tool for a broad user group was held at NILU October 2016 jointly with EMEP and other programs: <http://www.nilu.no/projects/ccc/tfmm/index.html>