User guide of the ICP Forests data portal

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1 General information
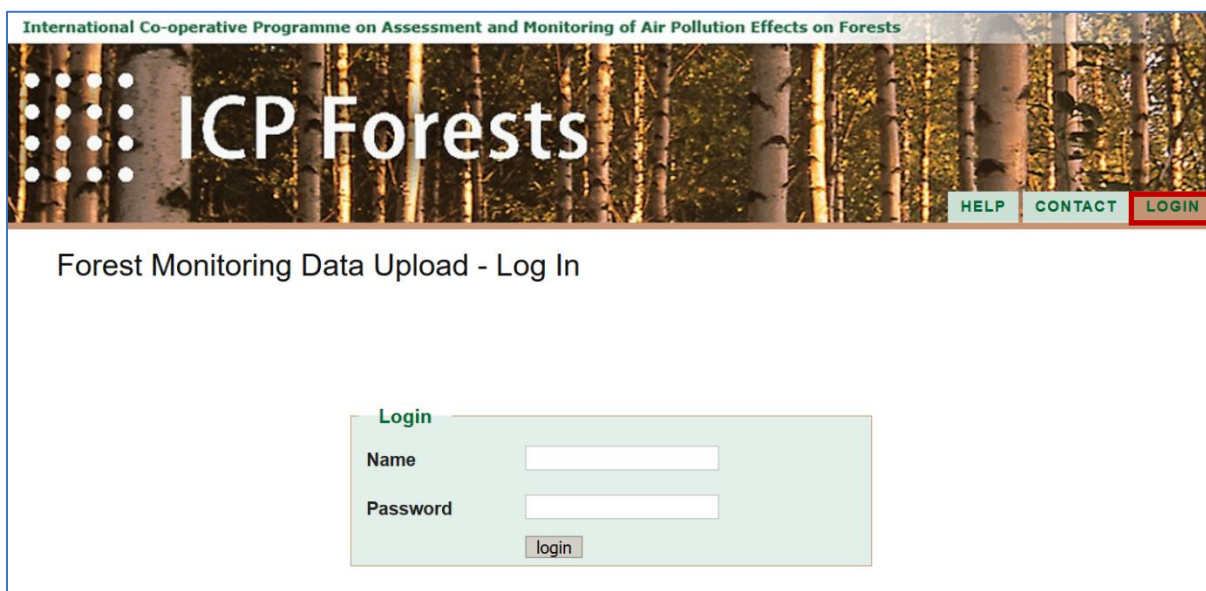
Links needed

Data portal	https://icp-forests.org/data
Documentation of data model (forms)	https://icp-forests.org/documentation
Newest version of this user guide	https://www.icp-forests.org/pdf/icpf_data_portal_user_guide.pdf

On the start page of the data portal you can login with your username and password.

Please contact the PCC of ICP Forests if you forgot your login credentials (pcc-icpforests@thuenen.de).

For any other problems please contact Till Kirchner (till.kirchner@thuenen.de) and Katrin Haggenmüller (katrin.haggenmueller@thuenen.de).

!!! Please note !!!

The data portal guides you already well through several smaller steps, in this case they are not additionally documented here.

Please read all information and instructions on the screen carefully before acting.

Please let us know if you are missing any information here.

Please check for the latest version of this user guide from time to time.
We will try to improve this document continously.

2 Menu – SURVEY SUMMARY

The menu item „SURVEY SUMMARY" lists all your **previous submissions** in this portal and allows you to open a **new submission**.

Please take note, that the central database might comprise more data than is listed in the survey summary. The main reason for this is, that the portal can only report data, which has been submitted via the portal as well. However, some of the data was stored in the database in another way at a time before the portal was available and has never been resubmitted later on.

2.1 List of submissions

The list of submissions (see below) can be filtered using the free text search on top of each column.

Example of a finalized submission from the list:

Survey	Survey code	Country/Partner	Year	Last change	Uploaded files	Compliance	Conformity	Finalized	Go to
	LF		2019						
Litterfall	LF		2019	29.01.2021 13:17	3 files	ok	ok	ok	⇒

By clicking on the green arrow in the right column „Go to" you can go to the submission (see menu item DATA UPLOAD).

2.2 Open a new submission

To open a new submission on behalf of the selection menu as shown below choose the „survey year" and „survey" you want to submit. Then press „go …".
This will open the menu item „DATA UPLOAD".

Please take note, that the portal's system allows you to have only one submission per survey in progress.The picture below shows that for the survey „Soil Water" the submission from 2009 is not yet finalized. So you cannot open another submission of the survey „Soil Water" before finalizing data from 2009.

However, you might run into a situation, where you want to cancel a running submission.
This could happen, if for instance you want to submit a new survey year, but you are not able to finalize the previous submission, because during the testing process you realize that you have problems with the data. In order to cancel the running submission open the respective submission under „Survey Summary" (see above) and delete all uploaded files from the system. Afterwards you will be able to start a new submission for this survey.

2.3 Database changes effecting your submission

Sometimes the data model has to be changed in a way that it has a direct effect on the structure of required forms. In this case, the changes will be reported in a popup window for the respective survey you are opening, like below.
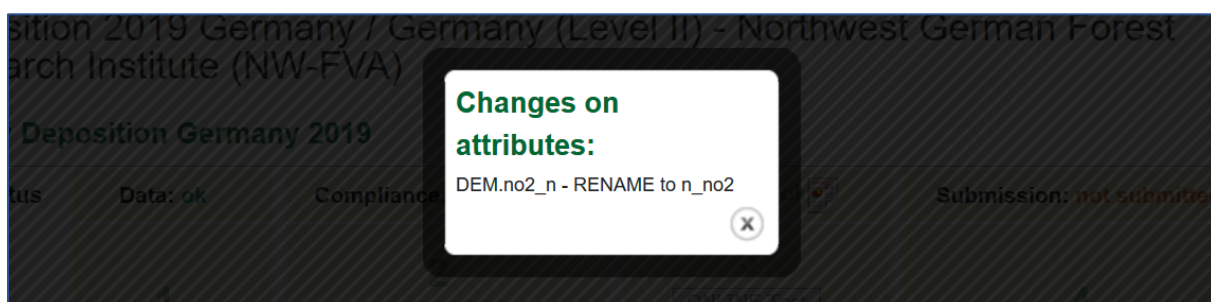
In addition to this, all changes are documented in the online documentation of the data model as well (https://icp-forests.org/documentation).

3 Menu – DATA UPLOAD

The menu item „DATA UPLOAD" allows you to **submit data**.

Submitting data is a step-wise process, implemented in a certain order.
The steps are:

1. Uploading data
2. Compliance test (checking for structural errors, completeness, data type etc.)
3. Conformity test (checking data for content errors, like plausibility, correct cross-linkings)
4. Finalizing

The steps will be described in detail hereinafter.

On top of the site you can control all steps (tasks) and their progress.
The example below shows a completed (finalized) submission of ozone data from Germany.

The button „checkout this submission" in the middle of the site can be used to download the current submission for resubmissions if it has already been finalized (see: menu item „CHECKOUT DATA").

3.1 Uploading data for a submission

The first step is to upload all data of the submission.
Pressing „Add data" will open the following upload dialog.

The button „Durchsuchen…" allows you to choose a file to be uploaded from your local filesystem. After selecting the file it can be uploaded to the portal by pressing „Upload File".

Below this dialog you find a list of forms to be used for this submission.
All forms are described in detail under: https://icp-forests-org/documentation

The system allows you to upload different file types:

- *Form (dataset)*: standardized forms (csv-files) to be used for a submission (e.g. deposition: PLD, DEM, LQA)
- *DAR-Q*: Data Accompanying Report – Additional information provided with the data (see: https://icp-forests.org/documentation/Introduction/General_remarks.html) These reports can be uploaded as ".doc"; ".docx" or ".pdf" files.
- *Free files*: Any additional files (e.g. photos specified for specific surveys)

Note: Please choose the type of the chosen file before uploading it to the portal.

All files uploaded for the submission will be listed on the site (example below).

Data Details for Deposition

Form	Type	File Name	Date	History	View	Delete
Deposition - Laboratory QA/QC information	DP.LQA	042018DP.LQA	27.07.2020 07:40	🗓	📄	✖
Contents of reduced plot file to be used in combination with the deposition measurements	PLD	042018.PLD	23.07.2020 13:59	🗓	📄	✖
Contents of datafile with deposition measurements (mandatory)	DEM	042018.DEM	23.07.2020 13:36	🗓	📄	✖
Data Accompanying Report	DAR-Q	DAR_Q.docx	27.07.2020 08:06	🗓	📄	✖

Already uploaded files can be deleted to be replaced by a new version of the same file by pressing the **X** in the column „Delete".

All deleted files will be stored in the portal together with the current version of files.
You can access them by clicking on the calender icon in the column „History".
Here you will get a list of all versions of the corresponding file uploaded to the portal (see example below).

History for File 042018.DEM

Form	Type	File Name	Date	ArchiveDate	View
Contents of datafile with deposition measurements (mandatory)	DEM	042018.DEM	23.07.2020 13:36	-	
Contents of datafile with deposition measurements (mandatory)	DEM	042018.DEM	23.07.2020 12:34	23.07.2020 13:35	
Contents of datafile with deposition measurements (mandatory)	DEM	042018.DEM	23.07.2020 12:17	23.07.2020 12:34	

By clicking on the table icon in the column „View" the file content will be shown in the browser.

There is no direct download option for uploaded files, but you can mark everything in the browser window with „strg + a", copy the content with „strg + c" and insert it into any textfile with „strg + v".

3.2 Testing data
Uploaded data needs to be tested in two steps as described in detail below.

3.2.1 Compliance test
After uploading all needed forms to the data portal (see: 3.1 Uploading data for a submission) you can start the „Compliance" test.
The test will check:

- Columnwise structure of all forms
- Data types used
- Completeness of mandatory attributes
- Codes used for categorized variables
- Filetype (CSV) and used characterset (UTF8)

All specifications are described in more detail in: https://icp-forests-org/documentation

The test results will be documented and can be downloaded as a PDF report by pressing the document icon.

After passing the Compliance test you can go on with the next step: the conformity test.

3.2.2 Conformity test

Each survey has specific tests for content errors, which are executed during the conformity test. Violating a test routine will end up in a „warning" or an „error". In order to pass this test successfully

- all warnings need to be either confirmed or corrected and
- all errors have to be corrected (no confirmation possible).

An example of a list of warnings is shown below:

DOWNLOAD WARNINGS AS CSV   UPLOAD CONFIRMATION WARNINGS FROM CSV

Because some warnings but no errors occured, you have the chance to confirm those data:

Confirmation Details for Deposition

Nr.	Sequence	Issue	Data File	Line	View	Confirm
1	4	value sampler_surface: 0.948 not in range between 0.025 and 0.5 (Rule_ID:)	042019.PLD	5	📰	☐
2	7	value sampler_surface: 1.023 not in range between 0.025 and 0.5 (Rule_ID:)	042019.PLD	8	📰	☐
3	12	value sampler_surface: 0.736 not in range between 0.025 and 0.5 (Rule_ID:)	042019.PLD	13	📰	☐

You can check the data by clicking the table icon in the column „View".
The corresponding line which raised the warning is highlighted in red (see below).

```
1;4;101;1;001;+54    ;+10    ;1;211218;211219;14;1;1;0.031;27;
2;4;101;2;001;+54    ;+10    ;1;211218;211219;14;1;1;0.031;3;
3;4;101;3;001;+54    ;+10    ;1;211218;211219;14;1;1;0.05;1;WetOnly
4;4;101;4;001;+54    ;+10    ;1;211218;211219;13;1;1;0.948;4;basal area in 1.30 m hight of the 4 stemflow trees
5;4;301;1;001;+52    ;+10    ;3;271218;231219;16;1;1;0.031;15;
6;4;301;2;001;+52    ;+10    ;3;271218;231219;15;1;1;0.031;3;
```

If a data correction is necessary, adapt your dataset and repeat step 3.1 Uploading data for a submission.

If you consider your data as proper despite the warning, then there are two ways of confirming their validity:

- by checking the checkbox in the column „Confirm"
- As there might be several warnings to be checked and confirmed you can also download all warnings as a list by pressing „DOWNLOAD WARNINGS AS CSV".
  Then confirm warnings in the downloaded CSV by changing the value of the column „Warnstatus" from „0" to „1".
  Afterwards you can upload the list of confirmed warnings by pressing „UPLOAD CONFIRMATION WARNINGS FROM CSV".

To end the confirmation press „Confirm the data".
Note that this button is located at the end of the list of warnings.

After passing the confirmity test you can finalize your submission.

3.3 Finalize a submission

When your data passed the tests successfully, you can „finalize" the submission: The system sends a mail to the data management team of the PCC and they will transfer your data to the final dataset. Afterwards the system is open again for further submissions of this survey (see: Open a new submission).
To finalize a submission press the button „Finalize".

4 Menu – INSPECT DATA

This menu allows you to have a **quick preview** of your data and to **download** your data.

4.1 Data preview

For a preview choose „Mode" = „table".

Then choose the table to view from the list of „data table"s and press show … .

You can further specify the survey year with the drop-down menu „year" and the maximum number of rows shown in the preview („max lines").

4.2 Data download

To download your data choose „Mode" = „SURVEY".

Then choose a form of the survey to be downloaded from the drop down list „data table" and press show … .

Example: To download the survey „deposition" choose one of the forms „dp_pld", „dp_lqa" or „dp_dem"). You can define a single survey year to be downloaded by selecting it from the list „year".

The download will be provided as CSV files in a ZIP archive. A download will always include all files (forms) of a survey.

The data structure is described in detail under: https://icp-forests.org/documentation

4.2.1 Folder „adds"

The ZIP archive of a data download will always include a folder named „adds".

Please read and check the content of the folder „adds" carefully. It includes a Data Availability Report which gives you a quick overview of the data availability for the downloaded survey (see: Data Availability Report).

For surveys including chemical analysis it includes also the ring test results in a file named „xx_rt.csv" and the easy to use combination of LQA information and ring test results in a file named „qif_xx.csv".

All files provided are described in detail in an included README file.

5 Menu – DATA REPORTS

This site provides different reports that can help you to get an easy **overview** about your data in the ICP Forests database, and to **identify potential gaps and problems**.
The reports are based on your data that is currently present in the ICP Forests database.
We recommend to download and to check these reports once per year after the annual submission.
In addition these reports should be checked after each bigger change or update to your data.

All Data Reports are provided as CSV files.

5.1 Data Availability Reports

The „Data Availability Reports" are aggregated overviews (tables) which can be downloaded for each survey. They are provided as part of the ZIP archive and when downloading data in the folder „adds" (see Menu INSPECT DATA). The reports summarize your available data in the central database. The structure of the report differs from survey to survey. It is exactly described in an added „README" textfile.

!!! Please note !!!

Due to technical reasons the Data Availability Reports provided with the data download are just created once a day. So take into consideration that these reports have an update delay of up to 24 hours. The benefit is, that these reports have a short download time, as they are not queried live. Especially for big datasets like meteorology this can save a lot of time.

In contrast the Data Availability Reports downloaded from the site-menu „Data reports" is created on the fly. So if you want to check the completeness of data submitted at the same day, please use reports from this site. Be aware that reports for big datasets can take some time.

5.2 Missing submissions

These reports give a general overview about forms which might be missing completely for a specific survey year in the database.
Remark: The content of these reports should be checked first before the report ‚missing plot years'.

5.3 Missing plot years

These reports give a general overview about plot-years which might be missing for a specific survey.

6 Menu – CHECKOUT DATA

This menu item „CHECKOUT DATA" allows you to **download** your survey specific data of a year **in the format needed for a resubmission**.

The checkout option can also be used to download data which has not been submitted to the central database using this portal (see: Menu – SURVEY SUMMARY)

Please find a detailed description for this module under:
https://www.icp-forests.org/pdf/checkout_module.pdf

Example – small corrections to a dataset:

1. You found out that a value submitted in your deposition data from 2010 is wrong.
2. You „checkout" the deposition 2010 dataset, correct the mistake in the downloaded files.
3. Reupload the corrected files and run the testing routines again.

This way you do not have to recreate the needed forms.

Example – resubmission after a change in data structure:

1. In 2018 it was decided to add a new attribute to a form.
   This new attribute is then available for submissions, also for survey years before 2018.
   You have measured this attribute already for some years and would like to add it to your existing data.
   When checking out your already submitted data, the download will fit to the new structure including the newly added attribute as a blank column.
2. You could then easily add the values of this attribute to the dataset and resubmit it.

7 Additional menus

7.1 Item HELP/SETUP

This menu item can be used to edit …

- your user properties (Name, phone number, E-Mail address)
- and change your password.

7.2 Item CONTACT

This menu item includes contact information and the imprint.

7.3 Item LOGIN / LOGOUT

This menu item is simply used to login and logout from the data portal.