



# Ponderful

PONDS FOR CLIMATE



## PONDERFUL Information System

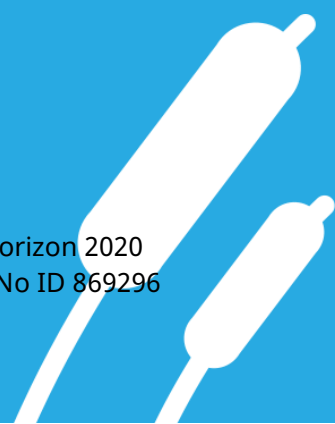
### User Manual for Data Managers

Pond Ecosystems for Resilient Future  
Landscapes in a Changing Climate



Horizon2020  
European Union Funding  
for Research & Innovation

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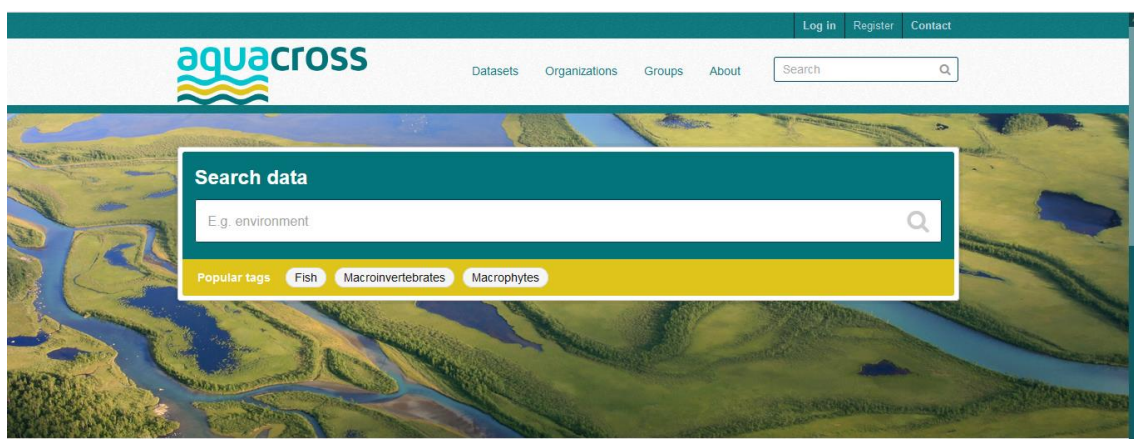
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# 1. Introduction

The project's data strategy counts on the **PONDERFUL Information System (IS)**, which is embedded in the AQUACROSS Information Platform, to facilitate an easy electronic access (under copyright and intellectual property constraints), to the wide range of data types generated in PONDERFUL, for a diverse group of data users requiring different levels of interpretation (<http://dataportal.ponderful.eu>).

The PONDERFUL IS represents the operational software tool for implementing the management practices described in the PONDERFUL Data Management Plan aiming at providing open access to a wide range of resources related to pond ecosystems at the European Level. The primary focus is on data used in the various project Demo Sites and work packages, as well as resulting maps, model outputs and tools.

The PONDERFUL IS is based on Comprehensive Knowledge Archive Network (CKAN) software, an open-source framework for developing open data portals, which provides a reliable entry point for all data and metadata collected, processed or analysed by the project. Therefore, it takes advantage of the latest developments and interoperability standards for harvesting and collecting relevant data and metadata files from other European reference data portals. The aim of this functionality is to create an access point to the different existing data portals without replicating the information by developing a decentralised information system. Actually, CKAN is currently the technical solution implemented by the European Commission to publish pan-European open datasets across the European Union.



**All project foreground information including newly collected and processed data, results of analysis, tools and products developed by the project will be accessible through the PONDERFUL IS**, in accordance with the standard European Commission (EC) Reuse and Copyright notice ([https://data.jrc.ec.europa.eu/licence/com\\_reuse](https://data.jrc.ec.europa.eu/licence/com_reuse)).

The platform offers the possibility of creating several views using the same dataset allowing users to explore and analyse the data on the fly making the data easier to understand without having to install any specific software or download the data for analysis.

**In the case of public data not directly accessible through PONDERFUL IS, the sources of the data and respective contact points will be provided, along with the metadata** uploaded to the IS. When a restriction on open access to research data is necessary, attempts will be made to make data available under controlled conditions.

This document provides a basic manual on how to use the PONDERFUL IS. This manual is based on the existing user documentation from CKAN at: <http://docs.ckan.org/en/latest/user-guide.html>

## 1.1 Terminology

### Dataset

The data publishing unit in the PONDERFUL IS is called “dataset”. A dataset is a parcel of data - for example, it could be a description of the biodiversity of a specific pond. A dataset consists of “metadata” (see below) and a number of “resources”, which hold the data itself. Data formats can include CSV or Excel spreadsheets, XML file, PDF documents, image files, linked data in RDF format etc. A dataset can contain any number of resources, for instance, regarding the example above an Excel table with species and their occurrence coordinates, maps illustrating the distribution of the species and pictures showing the species.

### Metadata

“Metadata” are loosely defined as “data about data”. It describes all aspects of a specific dataset (i.e., who, why, what, when and where) that allow understanding of the physical format, content and context of the data, as well as how to acquire, use and cite the data. Within the PONDERFUL IS the metadata describe the dataset, including the title and publisher, publishing date, data format, license of availability etc.

### Organization

The owner of a dataset is called “Organization”. Each dataset in the PONDERFUL IS is owned by a contributor Organization. Therefore, for PONDERFUL the organizations are defined as data publishing institutions. All PONDERFUL partners are seen as contributor organizations.

### Groups

Shared topic for grouping different datasets (e.g., datasets created within a Case Study or Work Package). Within the PONDERFUL IS “groups” can be used to create and manage collections of datasets. They represent a simple way to help people

search and find published datasets. For each Work Package (WP) a “group admin” will exist (i.e., WP Data Manager), who will be responsible to assign datasets to the group they are member of.

### Public User

Public user is any user who can access the PONDERFUL IS but is not logged on to the data portal. He/she is any person interested in navigate through and/or download the public datasets stored at the PONDERFUL IS. When users first access the portal, they access it as public users, whether or not they have the ability to log on (see below).

### Registered User

Registered users have their own credentials to log on the PONDERFUL IS. The registered user can be assigned three different alternative roles:

- **Member:** can see the organization’s private datasets.
- **Editor:** can see the organization’s private datasets and can edit and publish datasets.
- **Admin:** can see the organization’s private datasets; can edit and publish datasets and can add, remove and change roles for the organization members. The administrator role will be only assigned to the WP Data Managers.

## 2.Registration and user management

Public users of the PONDERFUL IS can search for and find datasets without any restriction. However, for all publishing functions (e.g. upload a dataset, edit a dataset etc.) a login with appropriate permissions is needed.

To create a user, use the “Register” link at the top right of any page and enter the following information: username (only letters, numbers, - and \_ allowed), full name, e-mail address (will not be visible to other users) and password.

After registration the user will be logged in automatically, but he/she will need specific authorisation rights set by the WP Data Manager (i.e., to be assigned to a particular group and organisation; to be assigned the suitable user role, see below) to be allowed to manage data.



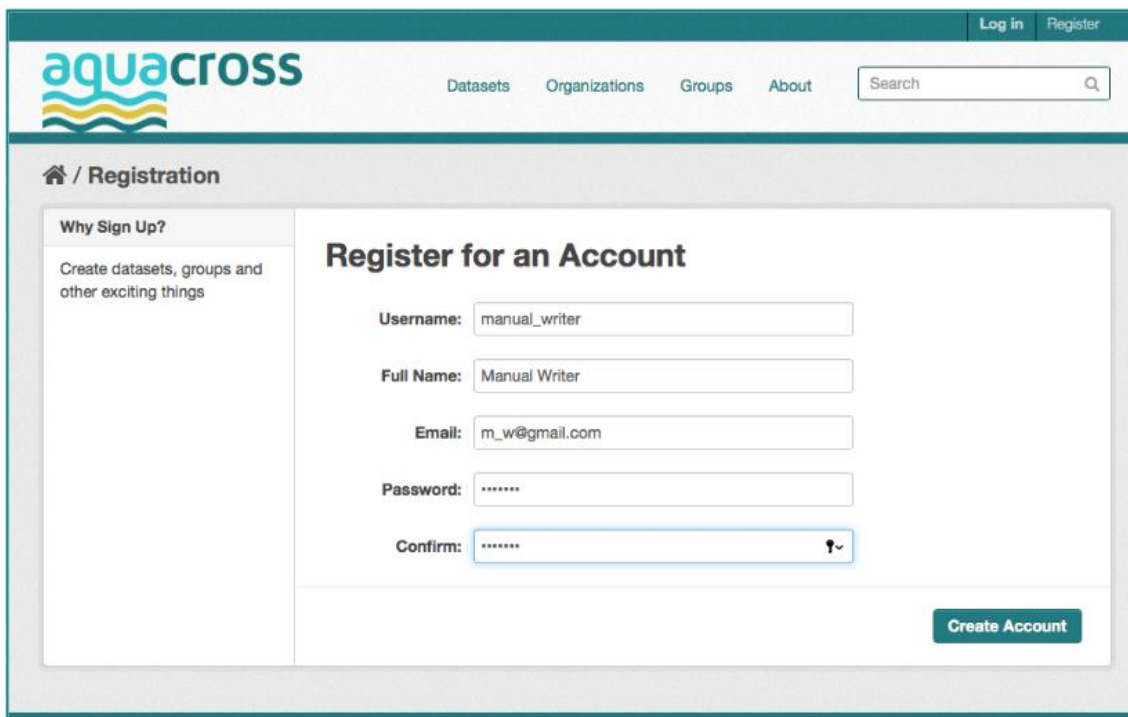


Figure 1. Registration page.

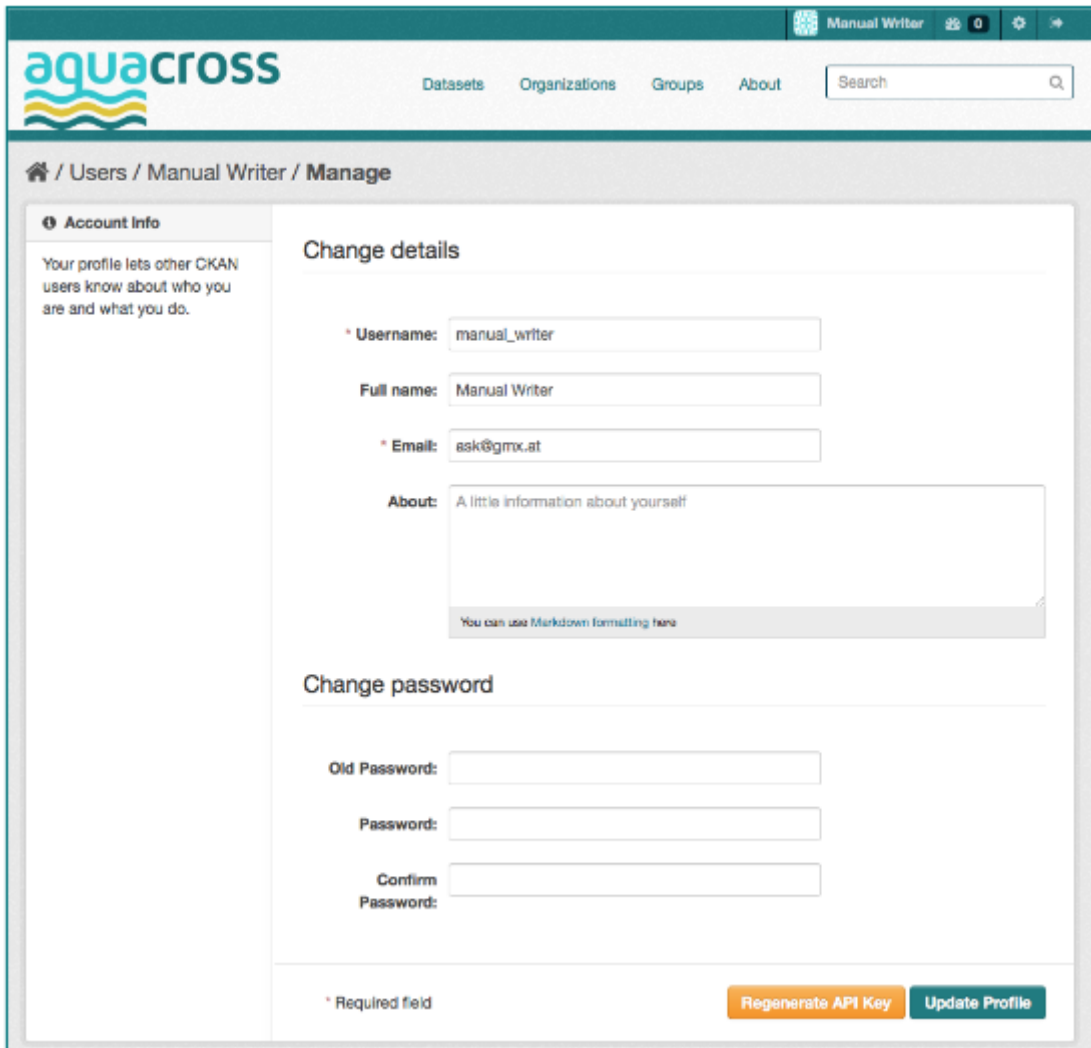
For a new session you can login by clicking on “Log in” at the top right of the PONDERFUL IS page.

## 2.1. Managing the user profile

### Settings

The PONDERFUL IS provides features to personalise and manage the user profile. At the top of any page, select the “settings” symbol (gearwheel) and the PONDERFUL IS will display your personal settings. You can change the information that the IS holds about you, including what other users see about you. You can change: your username, full name, e-mail address, your profile text (an optional short paragraph about yourself) and your password. To save the changes you require press the “Update Profile” button.





The screenshot shows the 'aquacross' web interface. At the top, there's a header with the logo and navigation links: Datasets, Organizations, Groups, About, and a search bar. The user 'Manual Writer' is logged in, as indicated by the top right. The main content area is titled 'Users / Manual Writer / Manage'. On the left, there's a sidebar with 'Account Info' and a brief description: 'Your profile lets other CKAN users know about who you are and what you do.' The main section is divided into two parts: 'Change details' and 'Change password'. The 'Change details' section has fields for Username (manual\_writer), Full name (Manual Writer), Email (ask@gmx.at), and an 'About' text area with a placeholder 'A little information about yourself' and a note 'You can use Markdown formatting here'. The 'Change password' section has fields for Old Password, Password, and Confirm Password. At the bottom, there's a legend for required fields and two buttons: 'Regenerate API Key' and 'Update Profile'.

Figure 1. User's details page.

## Dashboard

At the top of any page, select the dashboard symbol (next to your name) and the PONDERFUL IS will display your dashboard, which includes the tabs "News feed", "My Datasets", "My Organizations" and "My Groups".

The tab "News feed" shows changes to datasets that you follow, and any change in the data or new additional datasets of organizations/users you follow. The number right of the dashboard symbol shows the number of new notifications in your news feed since you last looked at it.

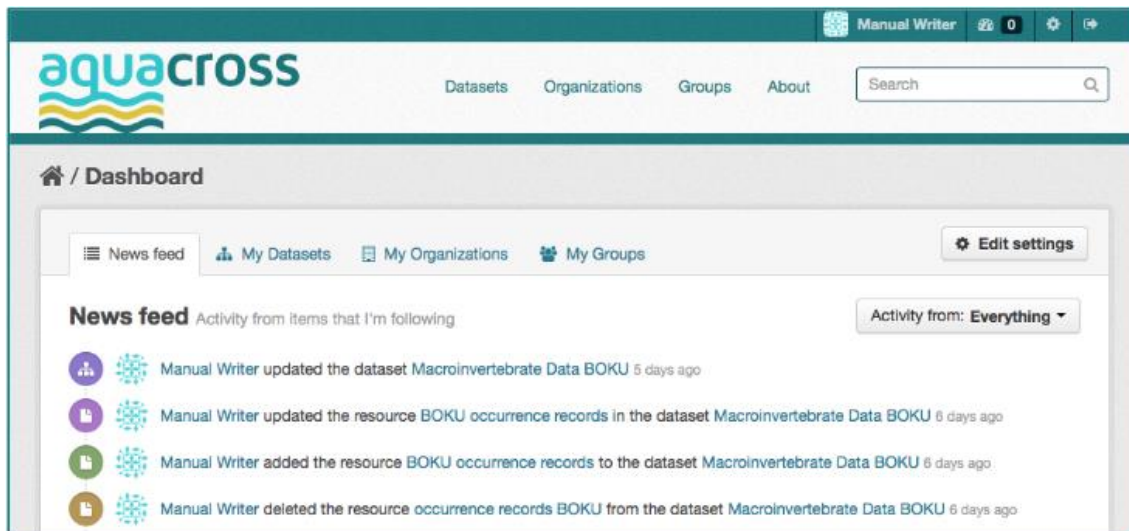


Figure 2. Dashboard page, tab “News feed”.

### Following an organization

If an organization is of special interest for you, you can choose to be notified, in case the organization adds new or modifies existing datasets, by using the “Follow” button on the organization’s page (see below). Please have in mind you must have a user account and be logged in to use this feature.

### Following a dataset

If a dataset is of special interest for you, you can choose to be notified in case it gets modified by using the “Follow” button on the dataset page (see below). Please have in mind you must have a user account and be logged in to use this feature.

The tab “My datasets” allows to directly access and edit your datasets. Similarly, the tabs “My Organizations” and “My Groups” allows to access and edit your organizations, and groups, respectively.

## 2.2. Managing datasets and members – WP Data Managers

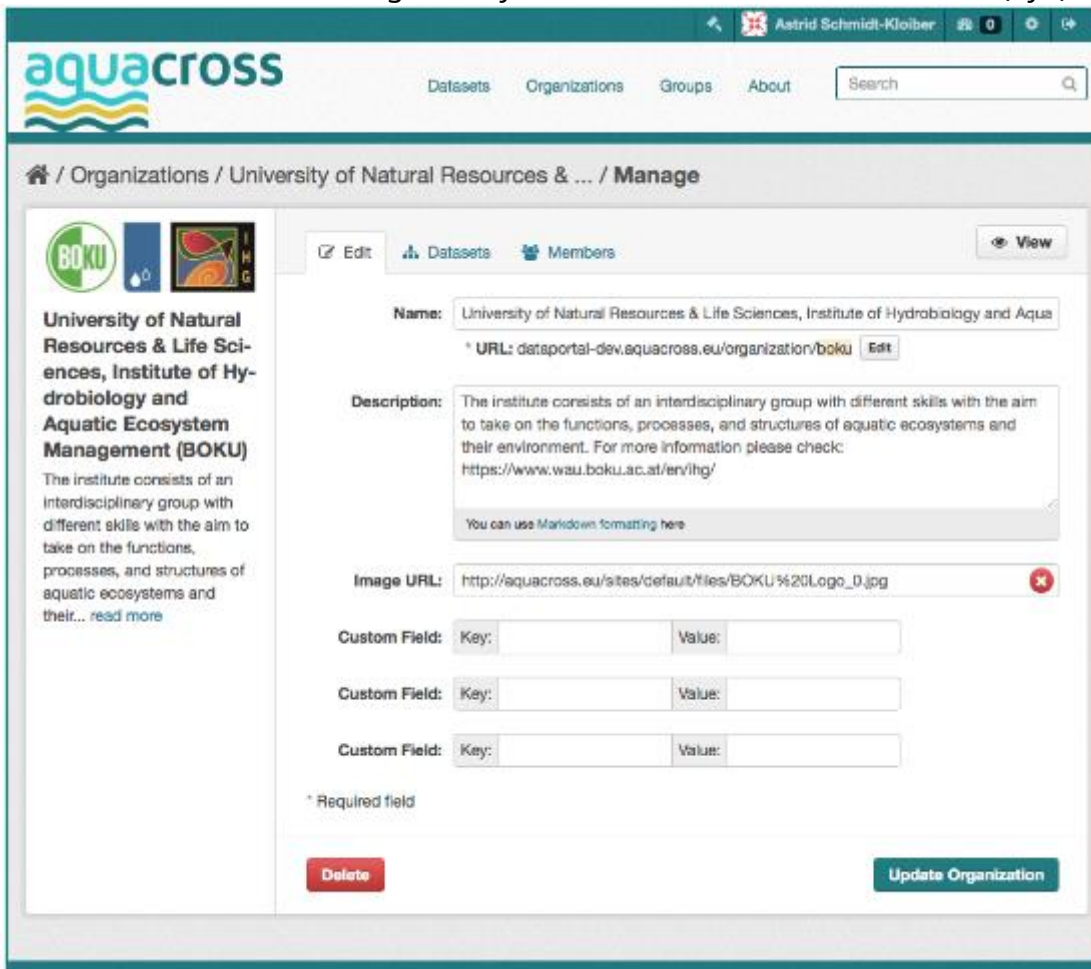
Each WP Data Manager of the PONDERFUL IS will receive specific authorisation and rights through the PONDERFUL IS administrator (i.e., Randbee). The WP Data Managers can then modify their datasets and create new ones. They are responsables for managing other registered users through the assignment of different levels of access to the registered users.

By clicking on the “Manage” button on the top right, the PONDERFUL IS displays the organization’s administration page. This page has three tabs:

- **Edit:** Here the WP administrator can edit the information about the organization (title, description and image). After editing the organization’s details the user must click on the “Update Organization” button to save the changes.

- **Datasets:** Here the WP administrators can manage the datasets of the organizations. They can add new datasets or click on existing ones to edit them. Additionally, they can change the publication status of the datasets: mark the datasets to be changed and then click on the “Make public” button to make them visible to the public or the “Make private” button to make them visible to users of the same organization only. They can also delete datasets by clicking the “Delete” button.
- **Members:** Here the WP administrator can add, remove and change access roles for different users (see below).

Note that to leave the editing mode you need click on the “View” button (eye).



The screenshot shows the 'Edit' tab for an organization in the Aquacross system. The organization is 'University of Natural Resources & Life Sciences, Institute of Hydrobiology and Aquatic Ecosystem Management (BOKU)'. The form includes the following fields:

- Name:** University of Natural Resources & Life Sciences, Institute of Hydrobiology and Aqua
- \* URL:** <https://www.wau.boku.ac.at/en/ihg/>
- Description:** The institute consists of an interdisciplinary group with different skills with the aim to take on the functions, processes, and structures of aquatic ecosystems and their environment. For more information please check: <https://www.wau.boku.ac.at/en/ihg/>
- Image URL:** [http://aquacross.eu/sites/default/files/BOKU%20Logo\\_D.jpg](http://aquacross.eu/sites/default/files/BOKU%20Logo_D.jpg)
- Custom Field:** Three rows of Key/Value pairs.

Buttons: 'Delete' (red) and 'Update Organization' (green).

Figure 3. Organization’s page in the editing mode, Tab “Edit”.

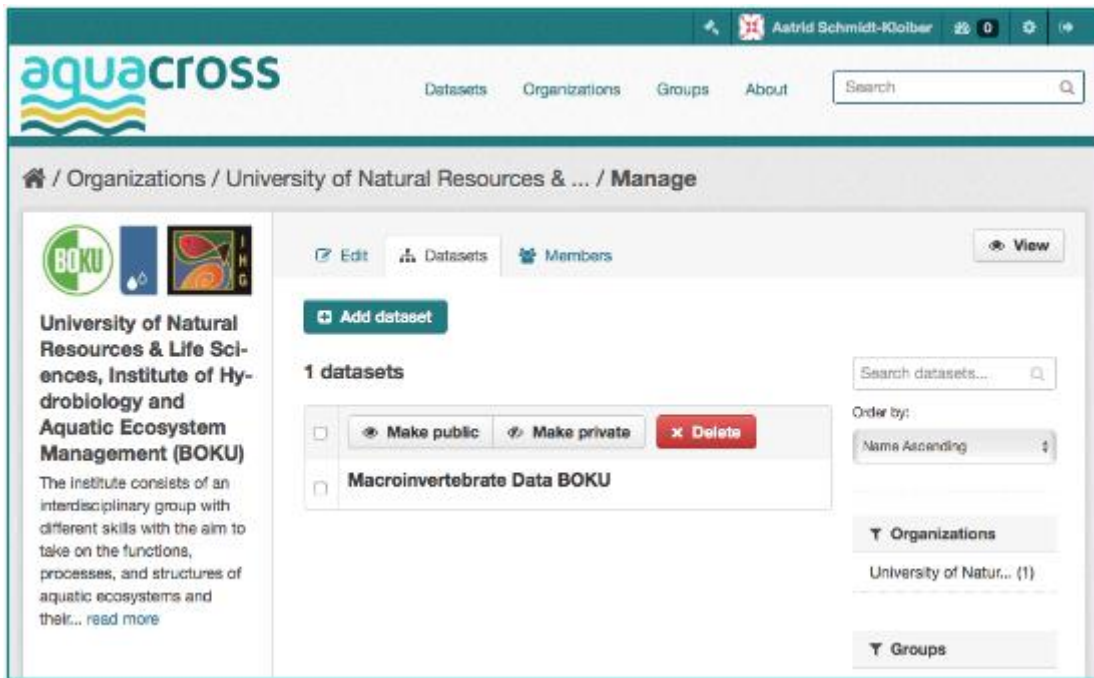


Figure 4. Organization's page in the editing mode, tab "Datasets".

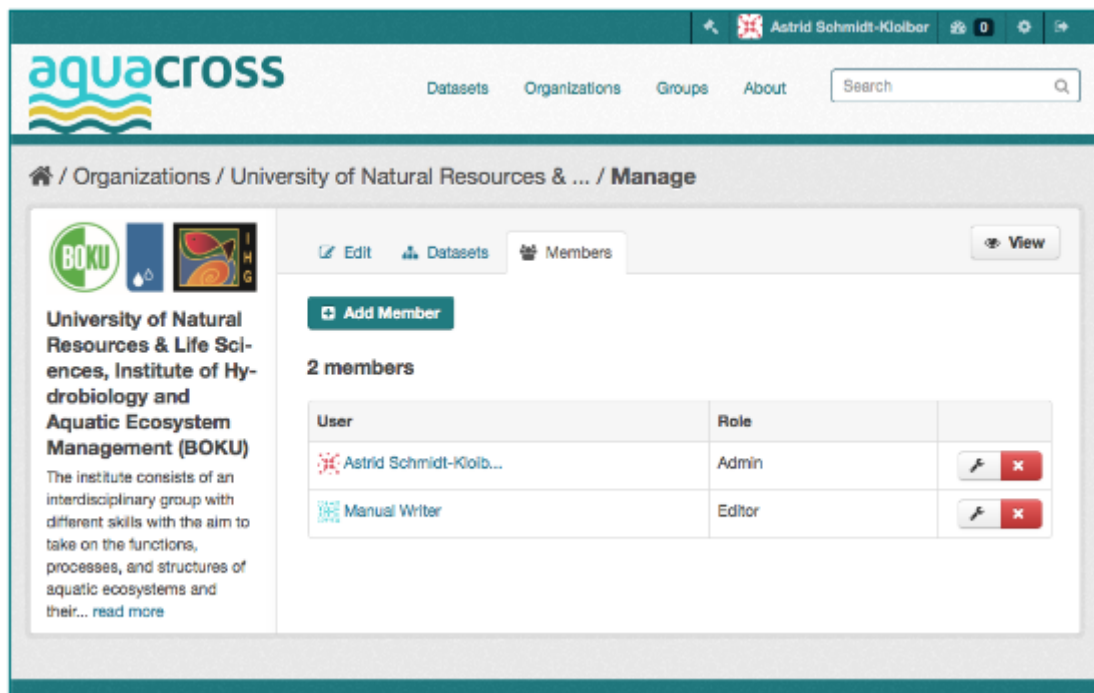


Figure 5. Organization's page in the editing mode, tab "Members".

### Adding registered users and assigning rights

WP Data Managers are allowed to provide authorisation rights to a new registered user. For this aim, it is required to click on the "Manage" button on the top right. Once under the "managing" mode on the particular organization's page, choose the tab "Members" and press the "Add Member" button. In this tab, it is possible either to choose an existing user from the selection list or to add a new one.

Members of an organization can be assigned one of the following three roles:

- Member: can see the organization's private datasets.
- Editor: can see the organization's private datasets; can edit and publish datasets.
- Admin: can see the organization's private datasets; can edit and publish datasets; can add, remove and change roles for the organization members. This last role is reserved to the WP Data Managers.

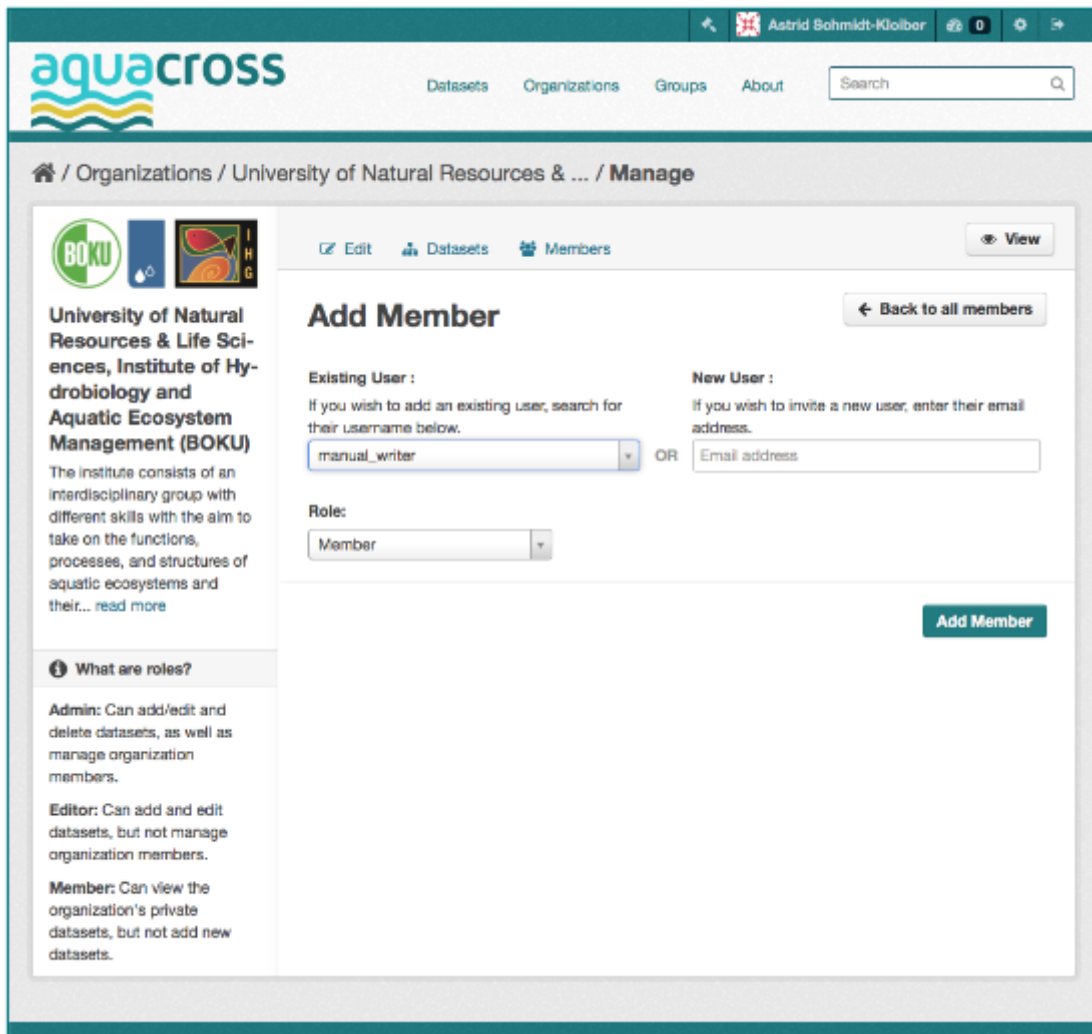


Figure 6. Contributor's page in the editing mode, tab "Members – Add member".

To change the role of an existing member at a later stage, you must be logged in as administrator, select the "Organizations" page and be in "managaging mode" (i.e., "Manage" buttom in the "Organizations" page). Then you must choose the tab "Add Members" and press the "edit" symbol (open-end spanner) to change the user's permissions. To remove a user from an organization, click on the "delete" symbol (white x on red ground).

## 2.3. Managing a group – group administrator

For each Work Package in PONDERFUL a group admin will be assigned (i.e., WP Data Manager). This group admin can manage members, datasets and edit the “About-section” or modify the image of the group if necessary.

### **Adding users to a group and assigning rights**

To add a new user to a group (i.e., WP) you have to be the administrator of that group. On the group’s page choose the tab “Members” and press the “Add Member” button. Now you can either choose an existing user from the selection list or add a new one. Members of an group can be assigned the same roles as defined above.

## **3.Features for publishers**

You need to be a registered member of the PONDERFUL IS and have either the “Editor” or the “Administration” role in order to add and/or edit datasets.

### **3.1. Adding a new dataset**


You can access the screen “Create dataset” of the PONDERFUL IS in two ways:

- Select “Datasets” at the top of any page. From this, above the search box, select the “Add Dataset” button.
- Select “Organizations” at the top of any page. Then select the organization you and the dataset belong to. Finally select the “Add Dataset” button above the search box.

For each new dataset you need to enter specific information (see below). During the metadata entry the user can select if a dataset should be private or public (see below).

### **3.2. Metadata editor**

Before you can actually upload any resources you need to provide “metadata” to your dataset. Before providing metadata you need to be logged in either as a editor or as administrator user.

 **NOTE:** Metadata are loosely defined as “data about data”. More specifically, metadata should document and describe all aspects of a specific dataset (i.e. the who, why, what, when and where) that would allow understanding of the physical format, content and context of the data, as well as how to acquire, use and cite the data.



This can be done in two ways:

- After clicking in “Add Dataset” button, entering information into the fields of the “Create Dataset” page.
- Upload your metadata from an external resource. This is only possible for an administrator of an organization.

The fields you are asked to fill correspond to those established in the PONDERFUL DMP and can be seen in the Annex to this document.

Figure 7. Create dataset page, metadata fields.


At the beginning of the page you will find the “Visibility” field, where you can decide if your dataset should be private or public.

Once you have filled all the metadata fields select the “Next: Add Data” button. This will bring you to the actual upload page (see below). Alternatively select “Cancel” to discard the information filled in.

In the section “PONDERFUL contact point” email and organisation of the person responsible for uploading the dataset within the PONDERFUL project have to be entered (in principle, the WP Data Manager). In the section “Responsible organizations for this dataset” you have to name the organization responsible for the dataset including an email address and then define its role. Roles are defined according to ISO 19115 and INSPIRE:




- author: party who authored the resource
- custodian: party that accepts accountability and responsibility for the data and ensures appropriate care and maintenance of the resource
- distributor: party who distributes the resource
- originator: party who created the resource
- owner: party that owns the resource
- point of contact: party who can be contacted for acquiring knowledge about or acquisition of the resource
- principal investigator: key party responsible for Gathering information and conducting research
- processor: party who has processed the data in a manner such that the resource has been modified
- publisher: party who published the resource
- resource provider: party that supplies the resource
- user: party who uses the resource (note, if you choose this role, please also select a second (non-user) role for this dataset; see below).

 **NOTE:** Note that there is potentially considerable overlap between the roles defined above. For the organization responsible for the dataset, please try to choose the role that seems most specific and appropriate, e.g. the “author” of a dataset is likely to also be “originator” and “owner”, but we recommend entering “author” which is more specific. By default the role is set to “point of contact”. Please enter at least the name and email of the person who could be addressed in case of questions regarding the dataset. If possible please also define other roles for this dataset by using the “+” button on the right. If there are more than one organizations responsible for the dataset also use the “+” button.

In the section “Title” you can also add the title of your dataset in its original language.

The section “Identification” includes a short abstract, the creation and publication dates as well as a lineage statement (i.e. a statement on process history and/or overall quality of the data). Additionally, related publications can be entered. The last fields deal with possible limitations on public use and the Creative Commons license.

 **NOTE:** All the information produced within PONDERFUL is released under the open data licenses “Creative Commons Zero License (CC0)” or “Creative Commons Attribution License (CC BY)” v. 4.0. Details can be found at the PONDERFUL DMP.

If you are not sure about the licence of the dataset you are uploading, please check the original licence assigned at the source. If a license has not been specified for

the external data you are uploading or the option does not appear in the list, please choose the “empty” option. Note that a CC license should be assigned to any original data as mentioned in the box above.

Identification

**Abstract:** Point data of EPT species throughout Austria including environmental information & geographical coordinates; source: diploma thesis data from the database of the working group "Benthic Ecology & Ecological Status Assessment", University of Natural Resources and Life Sciences, Vienna; the dataset contains 1210 points of occurrence.

**Creation date:** 2012-01-01

**Publication date:** 2012-01-01

**Last revision date:** 2014-11-04

**Lineage:** Data were collected according to WFD compliant methods; quality control of species identifications was conducted by taxonomic experts; validated version of the macroinvertebrate BOKU database

**Related Publications:** none

ⓘ Add reference to publication in Chicago Manual Style

**Limitations on public use:** Data provider must be informed of publication 45 d.

**License:** Creative Commons Attribution (CC BY 4.0)

Figure 12. Create dataset page, metadata fields, part 2.

Keywords

**Free keywords:** freshwater, macroinvertebrates

ⓘ Free text (use a comma to separate keywords)

**Vocabulary title:** EnvThes

**Vocabulary date:** 2014-20-17

**Vocabulary date type:** Date of creation

ⓘ If keywords originate from a vocabulary, please enter vocabulary title and date

Classification

**Topic category:** Biota

**INSPIRE theme:** Species distribution

Spatial Information

**Resource type:** Spatial dataset

**Spatial representation type:**

**Projection:** WGS 84 – EPSG-4326

Figure 13. Create dataset page, metadata fields, part 3.

In the section “Keywords” you can define free keywords and enter a vocabulary title if used. In the section “Classification” you have to choose a topic category and theme from INSPIRE. In the section “Spatial information” spatial datasets should be characterised. If the dataset is not a spatial one the “Resource type” should remain empty.

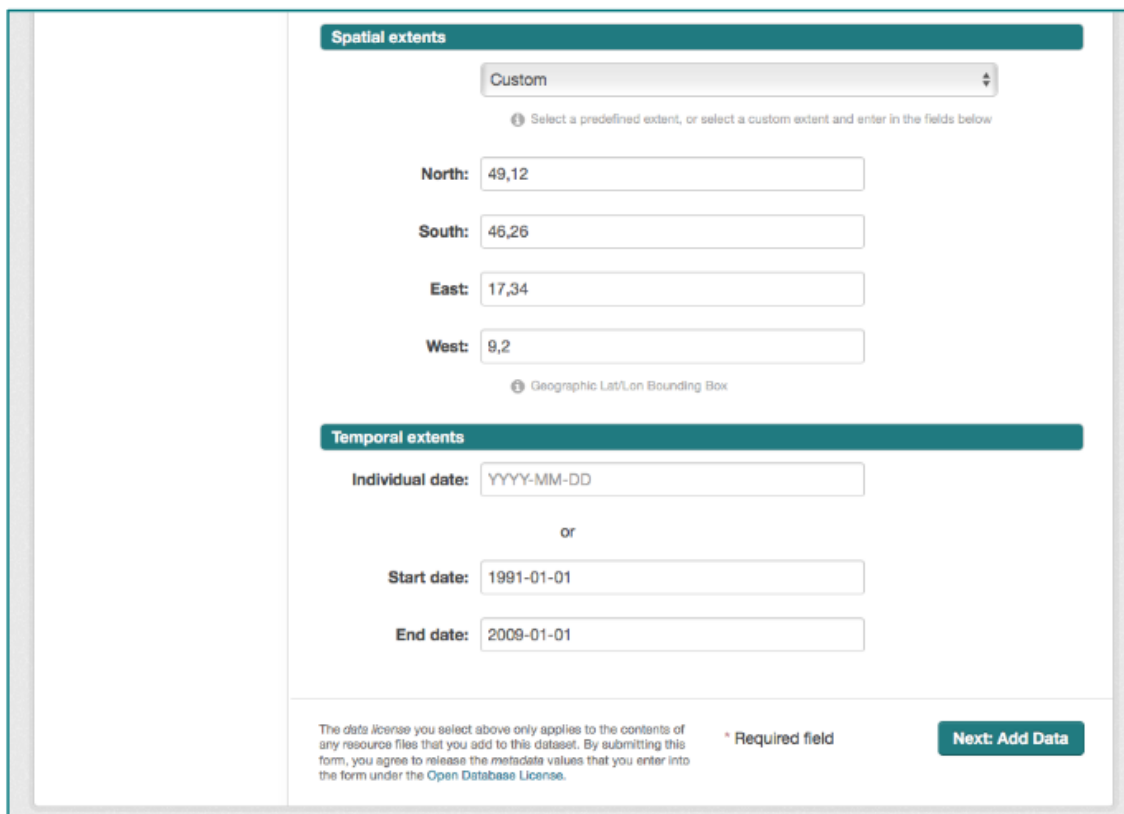


Figure 14. Create dataset page, metadata fields, part 3.

In the section “Spatial extents” your dataset can easily be allocated to one of the PONDERFUL WPs. For the case studies the bounding coordinates will be filled automatically. If your dataset does not relate to a case study, just select “Custom” to define a bounding box on your own. Please use a “.” as decimal delimiter. Once you have filled all the metadata fields select the “Next: Add Data” button. This will bring you to the actual upload page (see below).

### 3.3. Uploading data

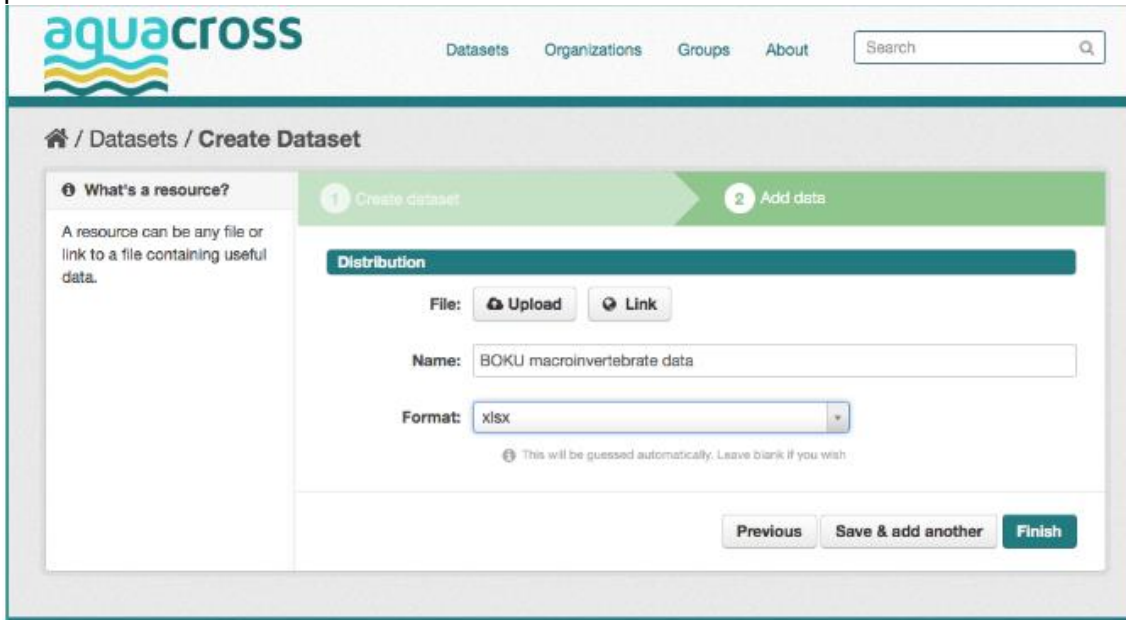
On the “Add data” page you now can add one or more “resources” which contain the only data or multiple data for this dataset.

The following steps are necessary:

- Choose a file from your local directory by pressing the “Upload” button or link to your data resource by clicking the “Link” button.

- Add a name for this particular “resource”; different resources in the dataset should have different names.
- Define the format of the resource, e.g. csv, xls, json, pdf, etc.; this field can also be left blank as it will be guessed automatically.

If you wish to add more resources (files or links) to this dataset, select the “Save & add another” button. Otherwise choose the “Finish” button to complete the upload process.



The screenshot displays the 'Create Dataset' interface of the aquacross platform. The top navigation bar includes links for 'Datasets', 'Organizations', 'Groups', and 'About', along with a search bar. The main content area is titled 'Datasets / Create Dataset' and features a progress indicator with two steps: '1 Create dataset' (active) and '2 Add data'. A sidebar on the left provides a definition of a resource. The 'Distribution' section contains the following elements:

- File:** Two buttons, 'Upload' and 'Link', for selecting the resource type.
- Name:** A text input field containing the value 'BOKU macroinvertebrate data'.
- Format:** A dropdown menu currently showing 'xlsx'.
- Help text:** A note indicating that the format will be guessed automatically and can be left blank.
- Navigation:** Three buttons at the bottom: 'Previous', 'Save & add another', and 'Finish'.

Figure 15. Create dataset page, upload of resources section.

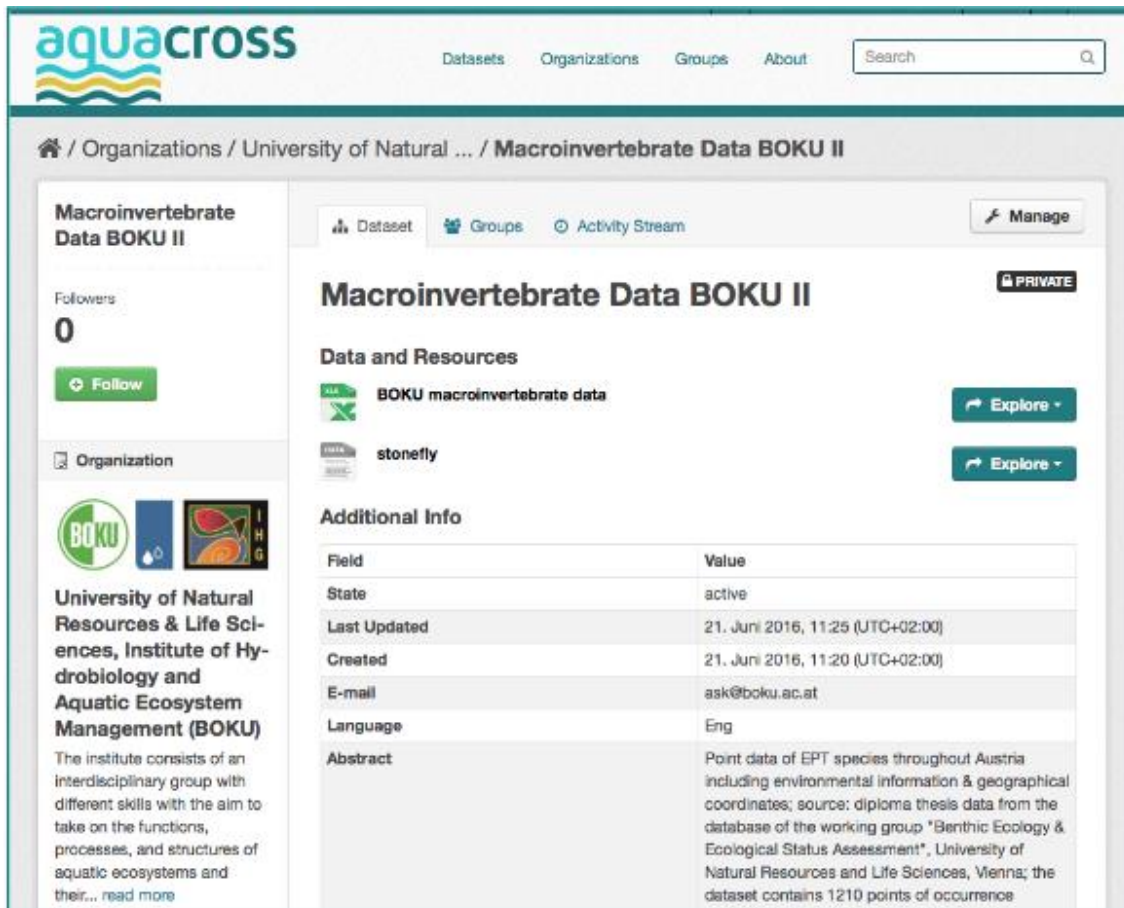


Figure 8. Overview page of a dataset with entered metadata.

### Specific requirements for uploading data

Here we provide a few specific recommendations and requirements for uploading data on the PONDERFUL IS:

- CSV files are preferred to Excel.
- If you want to upload an Excel file, make sure that the data are in the first tab (so That they can correctly be previewed). Be aware that there seems to be a line limitation.
- Shapefiles might only be uploaded if packed into a zip-file.

### Assigning a dataset to a PONDERFUL WP

In order to easily find datasets related to the PONDERFUL WPs, they need to be assigned to a case study "group". This needs to be done by the person providing the dataset or by a person connected to the work package (who has registered on the Information System).

To do so, click on the dataset that you want to assign to a group. Then choose the tab "Groups", select the case study from the dropdown list and click "Add to group". If you cannot choose anything from the groups tab, it is possible that you are not assigned to a work package group. In this case, contact the particular WP Data Manager.

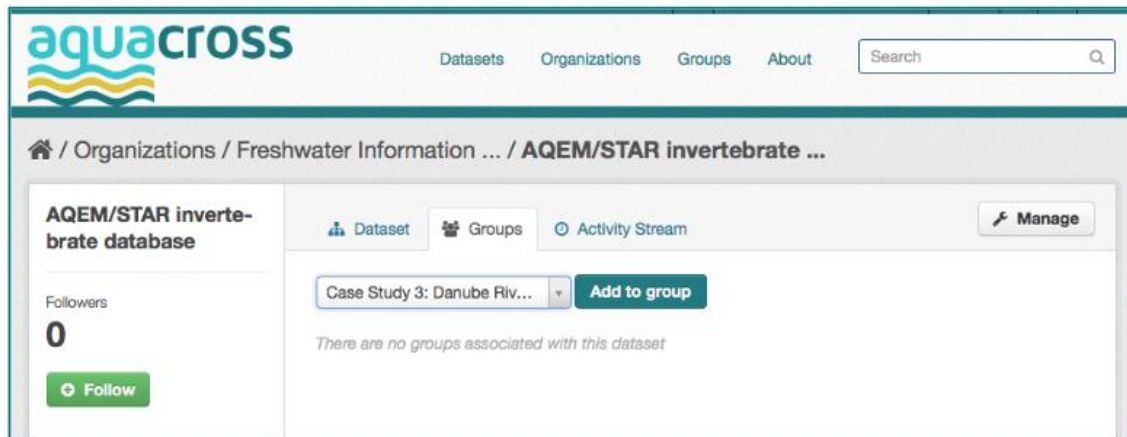


Figure 17. Dataset page, tab “Groups”.

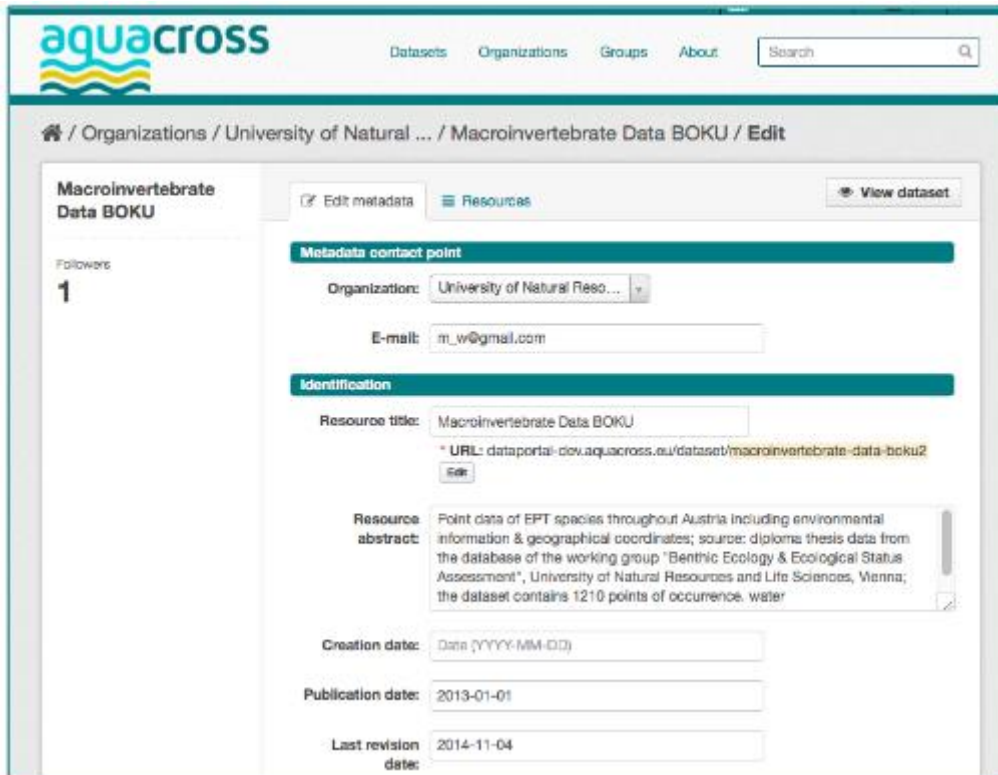
## Managing a dataset

### Editing metadata

The Data Manager and any registered user assigned “editor” or “admin” roles can edit datasets already created by him/her, or any dataset owned by any organization within his/her WP. In addition, he/she is allowed to edit datasets previously created, or any dataset owned by any organization that he/she is a member of. Remember that before editing, it is needed to be logged in.

If the dataset is public, you should be able to find it by typing the title, or some relevant words from the description, into the search box on any page. Alternatively, you can go to the “Datasets” page in the menu in case the dataset was made public or go to the organization the data belong to, if the dataset was marked private.

Click on the dataset you want to edit and then on the “Manage” button (open-end spanner). The PONDERFUL IS displays the “Edit metadata” screen on the first tab. You can edit any of the metadata fields and also change the visibility (Private/Public). When you have finished, select the “Update dataset” button to save your changes.



**aquacross** Datasets Organizations Groups About Search

/ Organizations / University of Natural ... / Macroinvertebrate Data BOKU / Edit

**Macroinvertebrate Data BOKU**

Followers **1**

[Edit metadata](#) [Resources](#) [View dataset](#)

**Metadata contact point**

Organization: University of Natural Reso...

E-mail: m\_w@gmail.com

**Identification**

Resource title: Macroinvertebrate Data BOKU

\* URL: dataportal-dev.aquacross.eu/dataset/macroinvertebrate-data-boku2

[edit](#)

Resource abstract: Point data of EPT species throughout Austria including environmental information & geographical coordinates; source: diploma thesis data from the database of the working group "Benthic Ecology & Ecological Status Assessment", University of Natural Resources and Life Sciences, Vienna; the dataset contains 1210 points of occurrence. water

Creation date: Date (YYYY-MM-DD)

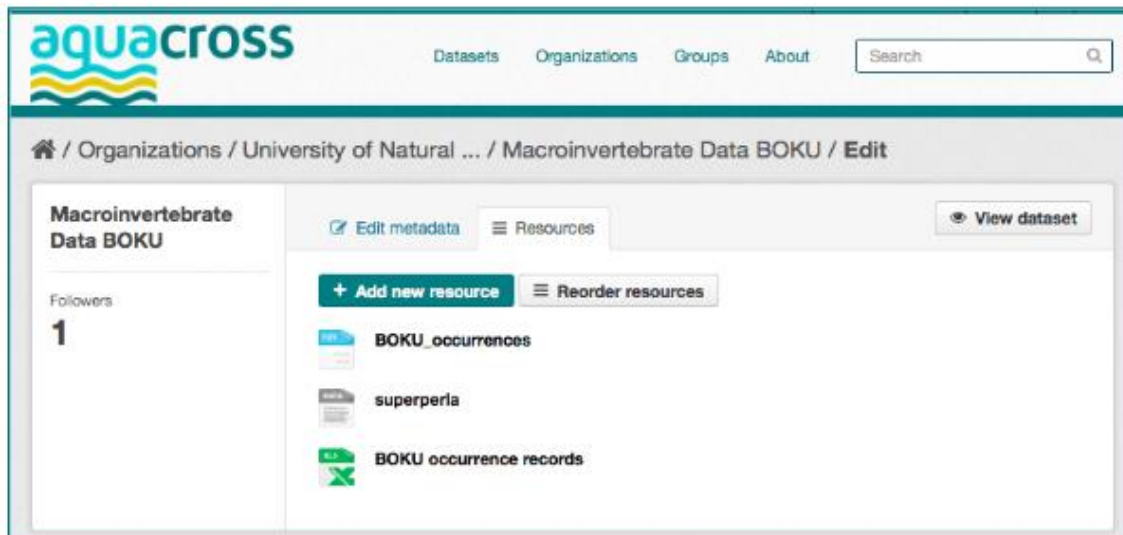
Publication date: 2013-01-01

Last revision date: 2014-11-04

Figure 9. Edit dataset page, tab "Edit metadata".

### Adding, deleting and editing resources

Go to the "Datasets" page, select a dataset and click the "Manage" button (see above). In this case, select the second tab "Resources".



**aquacross** Datasets Organizations Groups About Search


/ Organizations / University of Natural ... / Macroinvertebrate Data BOKU / Edit


**Macroinvertebrate Data BOKU**

Followers **1**

[Edit metadata](#) [Resources](#) [View dataset](#)

[+ Add new resource](#) [Reorder resources](#)

 **BOKU\_occurrences**

 **superperla**


 **BOKU occurrence records**

Figure 10. Edit dataset page, tab "Resources".

You can now choose "Add new resource" to add new resources to your dataset. Once you have filled the information on the "New resource" tab, press the "Add" button to add the resource to the dataset.



To reorder your resources within a dataset choose the “Reorder resources” button and change the order of the resources according to your needs.

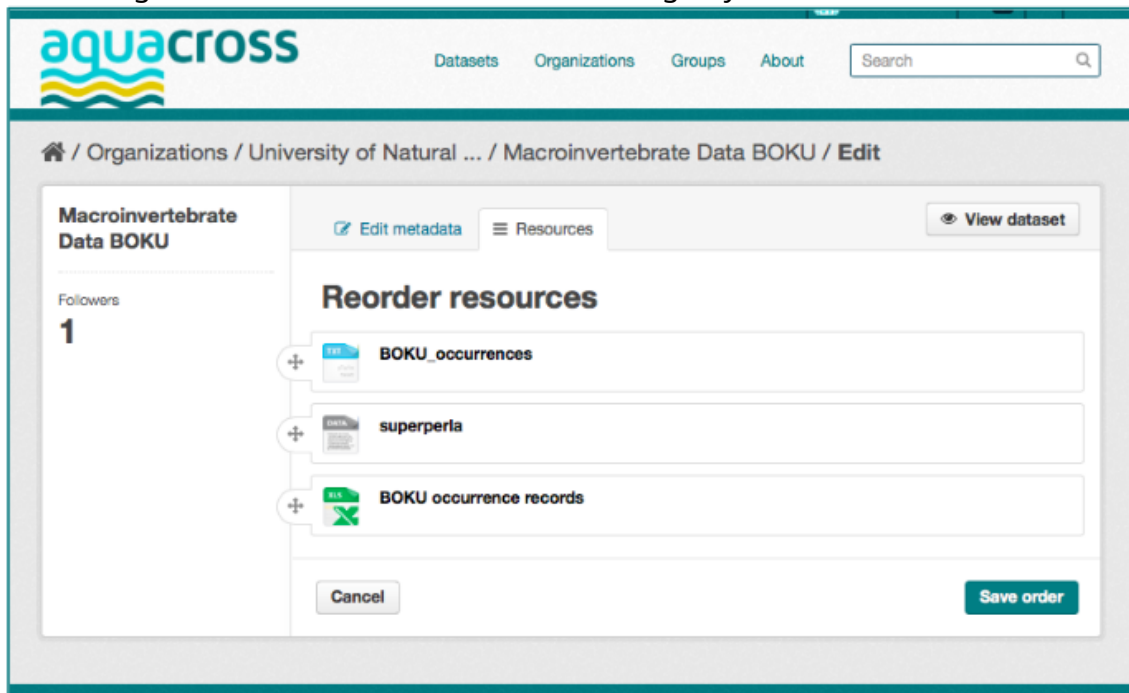



Figure 11. Edit dataset page, tab “Resources – reorder resources”.

If you want to edit or delete an existing resource click on the resource. In the tab “Edit resource” you can edit the information about the resource or change the linked or uploaded file (see above). When you have finished editing, select the “Update Resource” button to save your changes. Alternatively, to delete the resource, select the “Delete” button. The PONDERFUL IS then displays a confirmation dialog box. To complete deletion of the dataset, select “Confirm”.

 **NOTE:** The “Deleted” dataset is not completely deleted. It is hidden, so it does not show up in any searches, etc. However, by visiting the URL for the dataset’s page, it can still be seen (by users with appropriate authorization), and “undeleted” if necessary. If it is important to completely delete the dataset, contact the PONDERFUL IS administrator (i.e., Randbee Consultants).

When you have finished all your editing, click on the “View resource” button to return to the dataset’s overview page.

## 4. Finding and exploring datasets

### 4.1. Searching for datasets

Search of datasets can be conducted by any public or registered user of the data portal and this does not require log in.

#### Searching the site

To find datasets in the PONDERFUL IS, type any combination of search words (e.g. “water”, “assessment”, etc.) in the search box on any page. The PONDERFUL IS will then return all corresponding search results as a list.

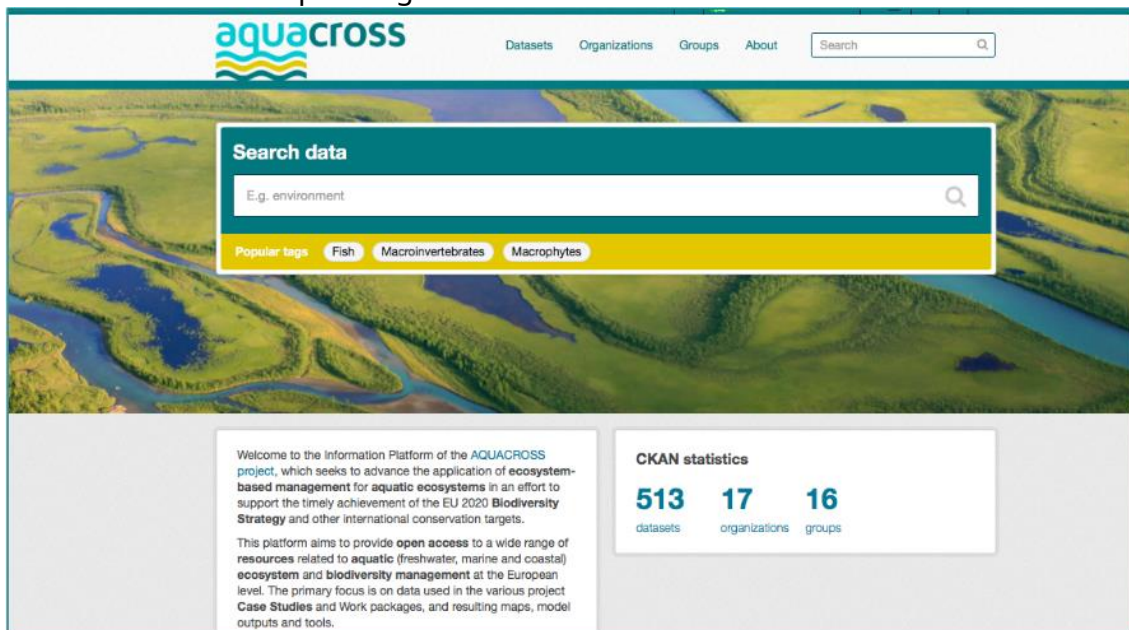


Figure 12. Opening screen of the PONDERFUL IS with the “Search data” field.

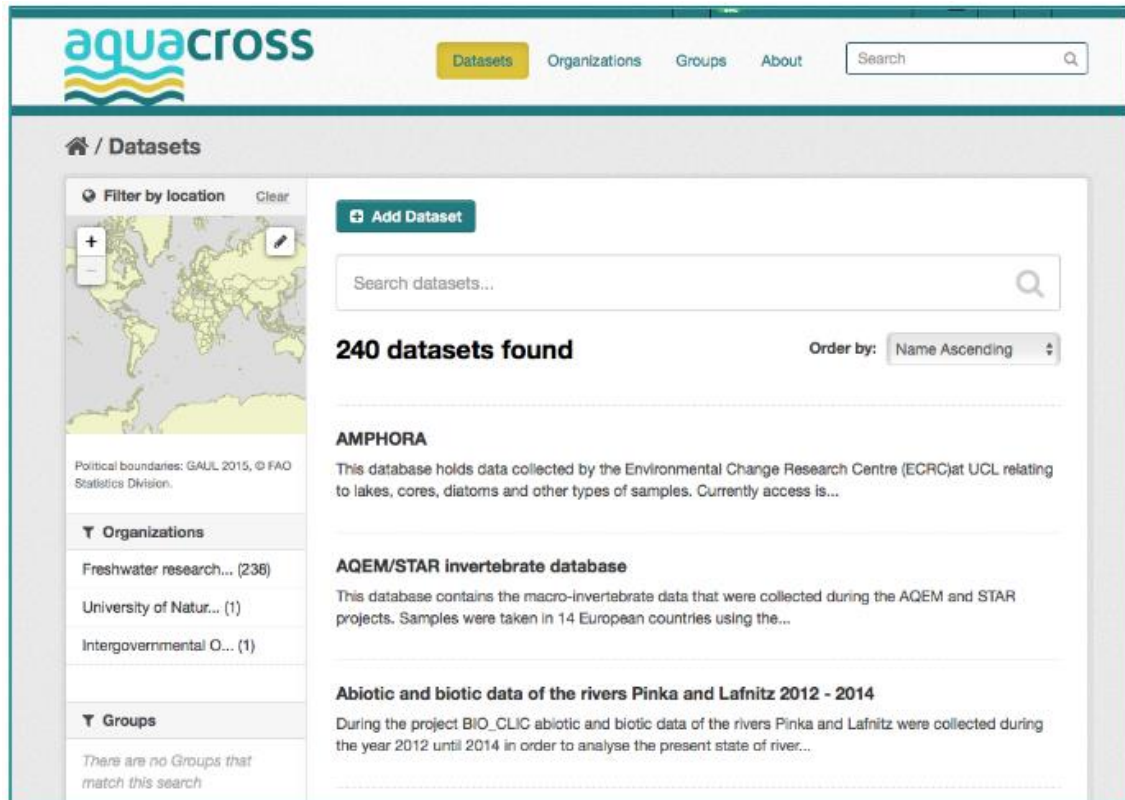


Figure 13. Datasets page with the search field.

On the result page of your search you can do the following things:

- Change the order of the found datasets according to relevance, name or modification date by selecting “Order by”.
- Restrict the search to datasets with particular tags, data formats, etc. using the filters in the left-hand column. You can combine filters, selectively adding and removing them, and modify and repeat the search with existing filters still in place.
- Repeat the search, altering some terms.

### Search and filter by location

Additionally, if datasets are tagged by geographical area, it is also possible to search and filter for datasets by selecting an area on a map. On the “Datasets” page click on the edit button (pencil) on the map in the top left corner. You can zoom in and zoom out using the “+/-” buttons and move the map with the little hand symbol. Then draw a square over the area you are interested in and press the “Apply” button. You will get a list of fitting results.

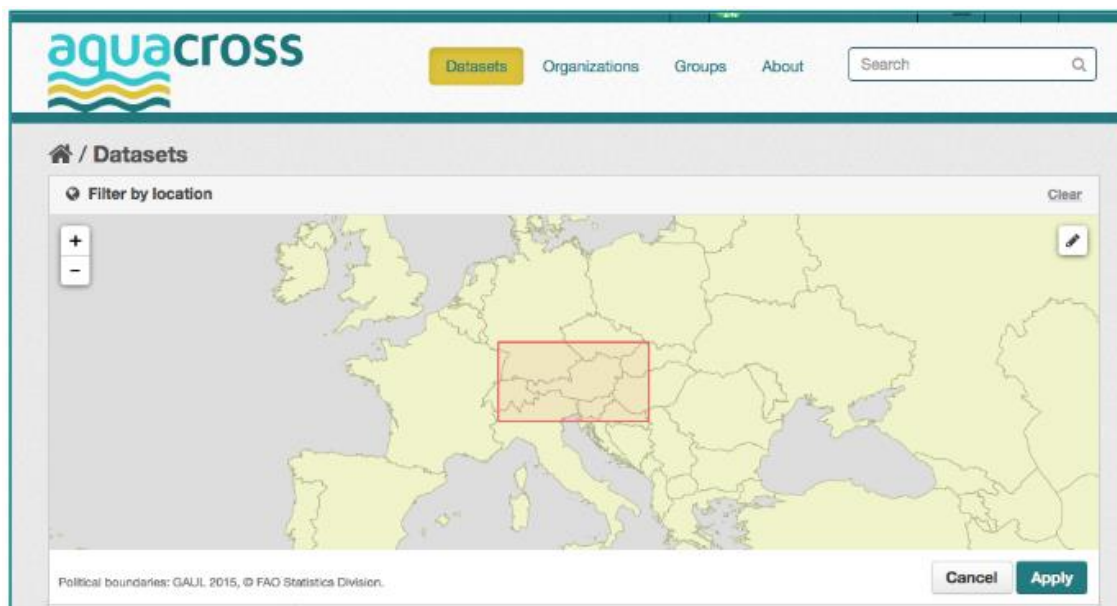


Figure 23. Filter by location option.

### Searching within an organization

If you want to look for data owned by a particular contributor organization, you can search within that contributor's site in the PONDERFUL IS.

Select the "Organizations" link at the top of any page, then select the organization you are interested in and you will be directed to the organization's site. Type your search query in the main search box on the page. The PONDERFUL IS will return search results as described above, but restricted to datasets from the specific organization.

If you want to get notified about the organization's activities (adding new or modifying existing datasets) click on the "Follow" button on the left side of the contributor's page. Note that you need to be a registered user to follow an organization.

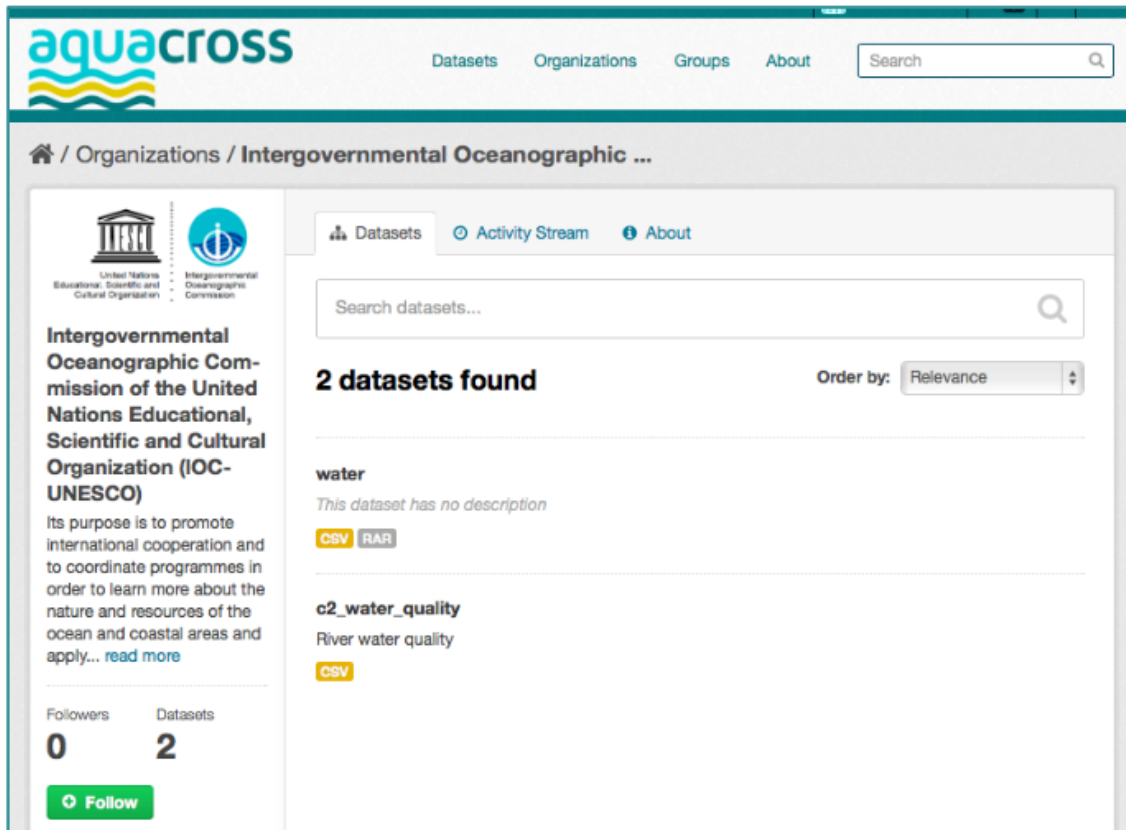


Figure 14. Search results on the contributor's page, also showing the "Follow" button to follow a contributor.

## 4.2. Exploring datasets

Once you have found a dataset you are interested in and selected it, the PONDERFUL IS will display the dataset page. On the overview page of a dataset you will find three tabs:

- "Dataset": Shows the data and resources belonging to this dataset as well as additional info (metadata).
- "Groups": Shared topic for grouping different datasets (e.g., datasets created within a Case Study or Work Package).
- "Activity stream": Shows the history of recent changes to the dataset.

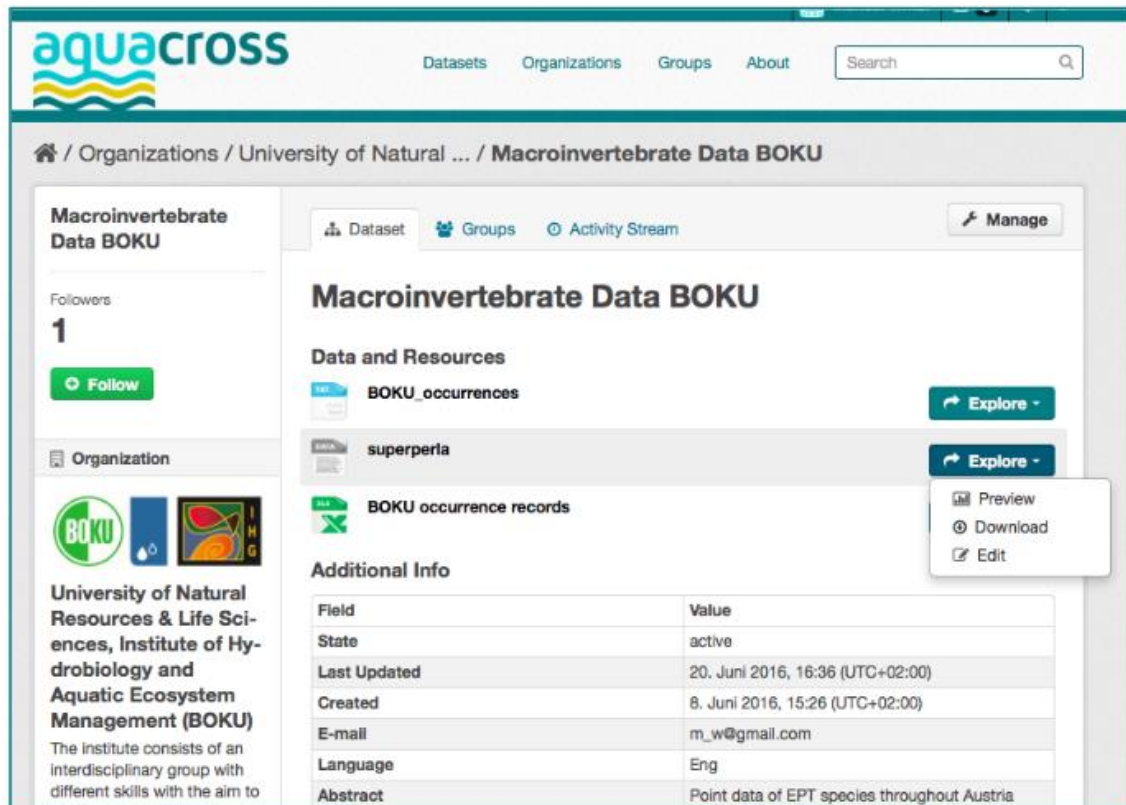


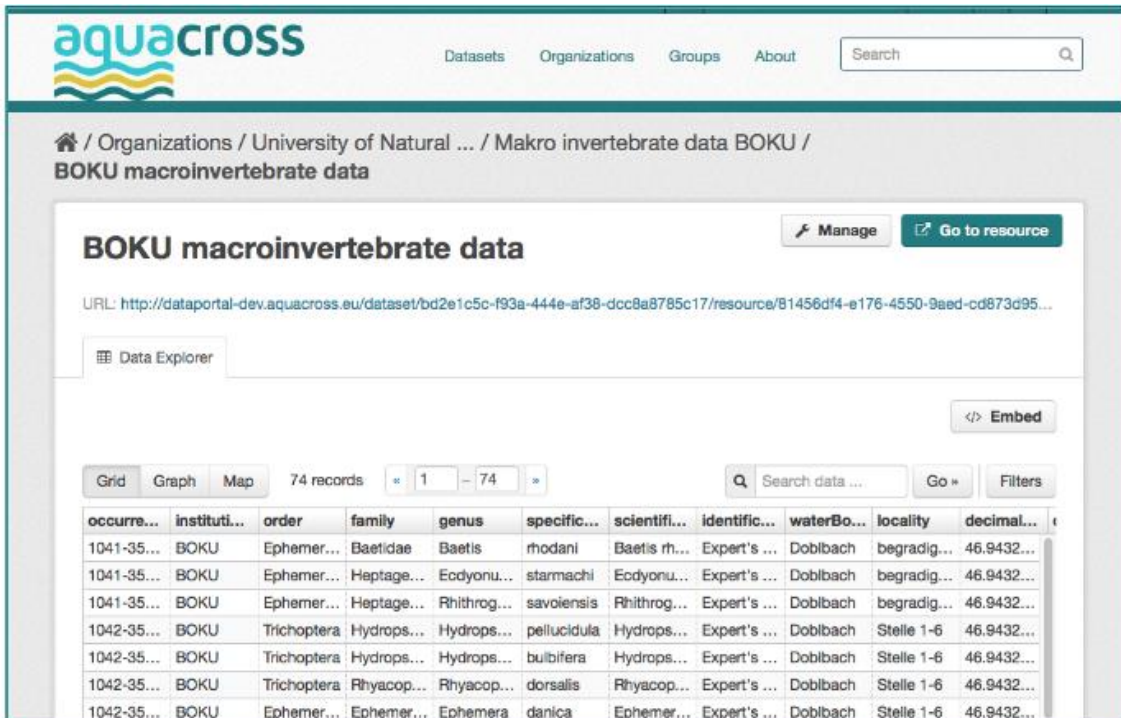
Figure 15. Dataset overview page, also showing the “Follow” button and the different options to explore a dataset.

On the “Dataset” tab you will find all data and resources. The “Explore” button right of the resource offers the following options:

- **Preview:** Shows a preview of the resource including additional information (like e.g. the licence). CSV and XLS spreadsheets are previewed in a grid view, with map view also available if the data is suitable. The resource page will also preview resources if they are common image types, PDF, or HTML.
- **Download:** Downloads the file.
- **Edit:** Allows editing or deleting of the resource. This option is disabled if you are not the owner of the data and you have not previously logged in.

If you want to get notified about activities regarding a specific dataset (e.g. adding or editing of resources) click on the “Follow” button on the left side of the dataset’s page. Note that you need to be a registered user to follow a dataset.

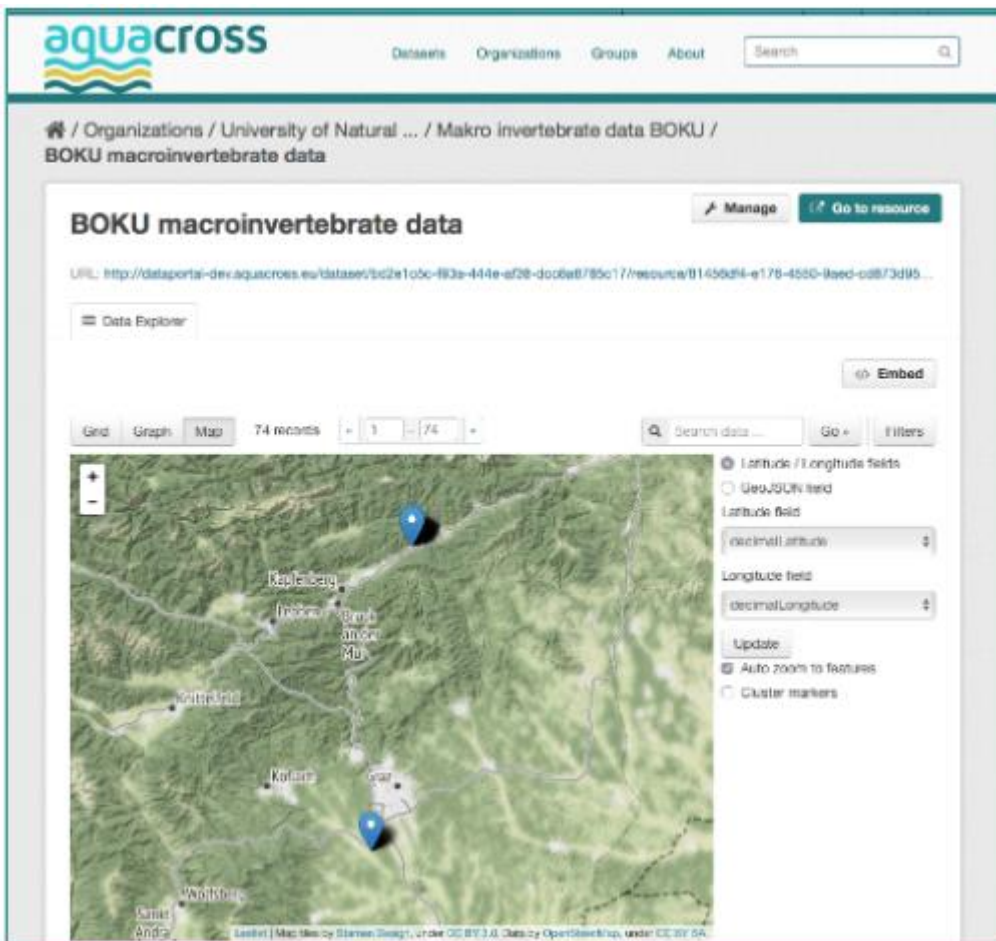




The screenshot shows the 'aquacross' web application. The top navigation bar includes 'Datasets', 'Organizations', 'Groups', and 'About', along with a search bar. The breadcrumb trail indicates the path: / Organizations / University of Natural ... / Makro invertebrate data BOKU / BOKU macroinvertebrate data. The main heading is 'BOKU macroinvertebrate data', with 'Manage' and 'Go to resource' buttons. Below this is the dataset URL and a 'Data Explorer' button. The view is set to 'Grid', showing 74 records. A search bar and 'Filters' button are present. The table displays columns: occurrence, institution, order, family, genus, specific, scientific, identification, water body, locality, and decimal. The first few rows of data are visible, showing various invertebrate species and their locations.

occurrence	instituti...	order	family	genus	specific...	scientific...	identific...	waterBo...	locality	decimal...
1041-35...	BOKU	Ephemer...	Baetidae	Baetis	rhodani	Baetis rh...	Expert's ...	Doblbach	begradig...	46.9432...
1041-35...	BOKU	Ephemer...	Heptage...	Eodyonu...	starmachi	Eodyonu...	Expert's ...	Doblbach	begradig...	46.9432...
1041-35...	BOKU	Ephemer...	Heptage...	Rhithrog...	savoien...	Rhithrog...	Expert's ...	Doblbach	begradig...	46.9432...
1042-35...	BOKU	Trichoptera	Hydrops...	Hydrops...	pellucidula	Hydrops...	Expert's ...	Doblbach	Stelle 1-6	46.9432...
1042-35...	BOKU	Trichoptera	Hydrops...	Hydrops...	bulbifera	Hydrops...	Expert's ...	Doblbach	Stelle 1-6	46.9432...
1042-35...	BOKU	Trichoptera	Rhyacop...	Rhyacop...	dorsalis	Rhyacop...	Expert's ...	Doblbach	Stelle 1-6	46.9432...
1042-35...	BOKU	Ephemer...	Ephemer...	Ephemera	danica	Ephemer...	Expert's ...	Doblbach	Stelle 1-6	46.9432...

Figure 16. Dataset explore page, preview of Excel data.



The screenshot shows the same 'BOKU macroinvertebrate data' dataset explore page, but with the 'Map' view selected. The map displays the geographical distribution of the data points in a mountainous region. Two blue location pins are visible on the map. To the right of the map, there are settings for the map view, including options for 'Latitude / Longitude fields', 'GeoJSON field', 'Latitude field', 'Longitude field', and 'Update'. There are also checkboxes for 'Auto zoom to features' and 'Cluster markers'.



Figure 17. Dataset explore page, preview of occurrence data in a map.

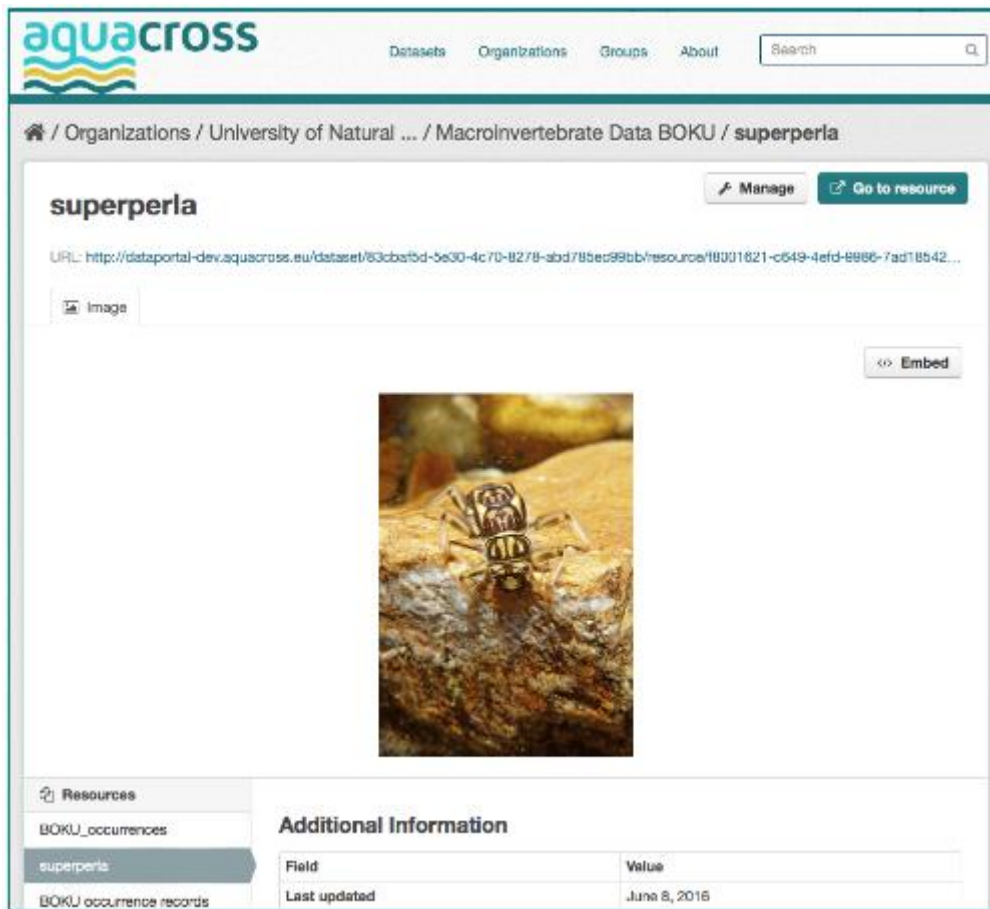


Figure 18. Dataset explore page, preview of a photo file.

### 4.3. Information on organizations

Each contributor organization has a dedicated page, where users can find information about the organization (tab “About”), search within its datasets (tab “Datasets”) and look at the latest activities of the contributor (tab “Activity Stream”). Organization dedicated page

Each partner organization will have a dedicated page, where users can find information about the organization (tab “About”), search within its datasets (tab “Datasets”) and look at the latest activities of that organization (tab “Activity Stream”).



Figure 19. Contributor page, tab “About”.

#### 4.4. Information on groups

In the PONDERFUL IS you will find different groups related to the Work Packages. Each group has a dedicated page, where users can find information about the group (tab “About”), search within its datasets (tab “Datasets”) and look at the latest activities of the group (tab “Activity Stream”). You can follow this group by clicking the “Follow” button. Note that you need to be registered user to follow a group. To assign a dataset to a group see section 2.1 above.

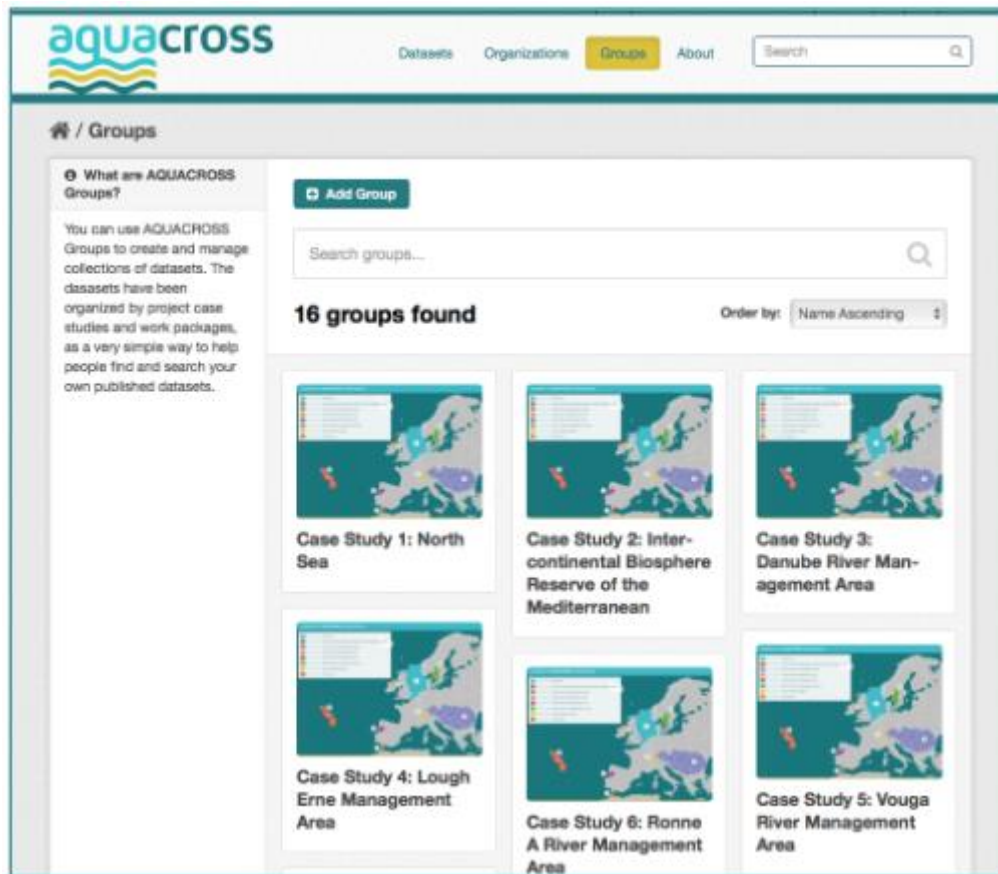


Figure 30. Groups page showing the case study groups.

## 5. Additional useful information

### 5.1. Interoperability

The PONDERFUL IS offers interoperability with several other open source tools, e.g. R or QGIS. In terms of R the CKAN API is necessary to interact with the PONDERFUL IS via ckanr. Each user needs her/his own API private key, which can be found in the user profile. Via R it is currently possible to upload data, download data, create groups or survey the users' activity. For QGIS a CKAN plugin is required (e.g., R: <https://docs.ropensci.org/ckanr/>).

## Annex I - METADATA

Metadata fields and explanations according to the PONDERFUL DMP and the AQUACROSS GIS guidelines “AQUACROSS Geographic Information Systems (GIS) Guidelines, Version 1.0”.

Table A1. Discovery Metadata template

IDENTIFICATION INFO	Instructions	Example
<b>Metadata on metadata</b>		
Metadata point of contact: Organisation	Add the description of the organisation responsible for the creation and maintenance of the metadata.	IOC/UNESCO
Metadata point of contact: E-mail	Add the e-mail of the contact point	<a href="mailto:a.barbosa@unesco.org">a.barbosa@unesco.org</a>
Metadata date	Add date which specifies when the metadata record was created or updated.	05/12/2015
Metadata language	<p>This is the language in which the metadata elements are expressed.</p> <p>The value domain of this metadata element is limited to the official languages of the Community expressed in conformity with ISO 639-2.</p>	ENG
<b>Identification</b>		
Resource title	Add the name of the data/indicator and the time coverage (e.g.: INDICATOR_2010 and INDICATOR 2010–2015 for time series)	Large_Marine_Ecosystems_2010.shp
Resource locator	Please add the link to the link(s) to the data and/or the link to additional information about the resource.	<a href="http://aquacross.eu/case-studies">http://aquacross.eu/case-studies</a>
Resource abstract	<p>Add a brief narrative summary of the content of the data.</p> <p>Free text, concise, pertinent.</p> <p>NB you can add here the measurement units (e.g. km, tons, US\$.). For raster datasets, add cell size in geographic units</p>	<p>Large Marine Ecosystems (LMEs) are regions of ocean encompassing coastal areas from river basins and estuaries to the seaward boundaries of continental shelves and the outer margins of the major current systems. These areas of the ocean are characterized</p>

IDENTIFICATION INFO	Instructions	Example
<b>Metadata on metadata</b>		
		by distinct bathymetry, hydrography, productivity and trophic interaction.
Resource type	Select the following options: - dataset for spatial datasets; - series for spatial dataset series; - service for spatial data services	dataset
Resource unique identifier	A value uniquely identifying the resource.  The value domain of this metadata element is a mandatory character string code, generally assigned by the data owner, and a character string namespace uniquely identifying the context of the identifier code (for example, the data owner).	e24425e1 -b073- 11e1- 9105- 0017085a97ab
<b>Classification of data and services</b>		
Topic category	Please check here the topic categories available for spatial data resources. Biota, Boundaries, Climatology, Meteorology, Atmosphere, Economy, Elevation, Environment, Farming, Geoscientific information, Health, Imagery base maps earth cover, Inland waters, Intelligence military, Oceans, Planning cadastre, Society, Structure, Transportation, Utilities communication	Oceans/ Boundaries
<b>Keyword</b>		
Keyword value:	Keyword from INSPIRE Data themes. See INSPIRE themes at: <a href="http://inspire.ec.europa.eu/index.cfm/pageid/2/list/7">http://inspire.ec.europa.eu/index.cfm/pageid/2/list/7</a>	Administrative units; Bio-geographical regions; Habitats and biotopes;
Free Keywords:	Free text (use a comma to separate keywords)	WP 4, Boundaries, marine, fish, fishery, ocean, seas, coastal, water systems

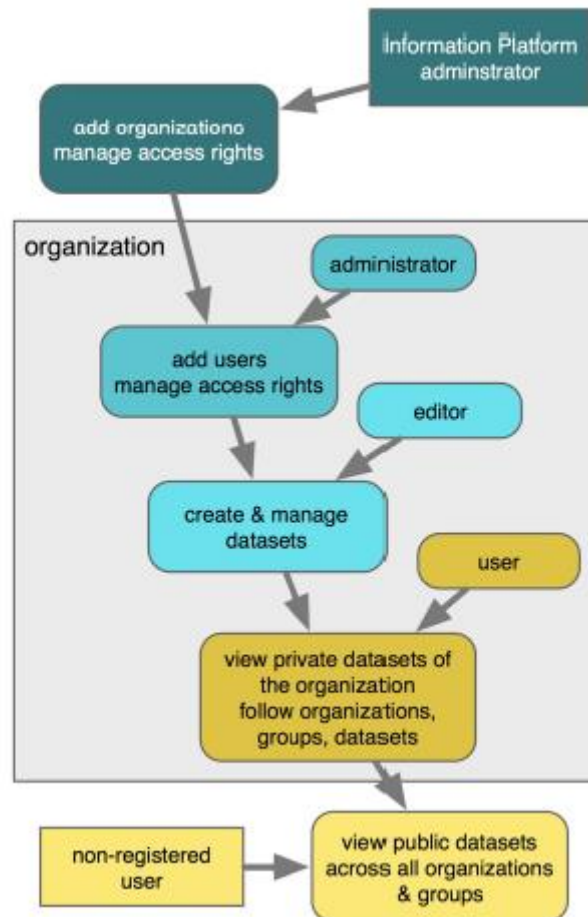
IDENTIFICATION INFO	Instructions	Example
<b>Metadata on metadata</b>		
Originating controlled vocabulary: Title	<p>If the keyword value originates from a controlled vocabulary (thesaurus, ontology), for example GEMET, the citation of the originating controlled vocabulary shall be provided.</p> <p>This citation shall include at least the title and a reference date (date of publication, date of last revision or of creation) of the originating controlled vocabulary.</p>	GEMET – INSPIRE themes, version 1.0
Originating controlled vocabulary: Reference date	Add the a reference date (date of publication, date of last revision or of creation) of the originating controlled vocabulary	01/06/2008
Originating controlled vocabulary: Date type	Select one of the three options: - Date of creation; - Date of revision; - Date of publication;	Publication
<b>Geographic extent</b>		
Geographic Bounding Box (ETRS89)	Add the extent of the resource in the geographic space, given as a bounding box.	Please add the extent of your case study in decimal degrees: North Bound Latitude East Bound Longitude South Bound Latitude West Bound Longitude
<b>Temporal Extent (Add option A or B)</b>		
A) Individual data:	Add the individual date of the temporal extent of the data	01/01/2002
B) Interval of dates expressed through the starting date and end date of the interval.	Add the begin date:	01/01/2002
	Add the end date:	01/01/2010
<b>Quality and validity</b>		
Lineage (optional)	This is a statement on process history and/or overall quality of the spatial data set. Where appropriate it may include a statement whether the data set has been validated or quality assured, whether it is the official version (if multiple versions exist), and whether it has legal validity.	

IDENTIFICATION INFO	Instructions	Example
<b>Metadata on metadata</b>		
<b>Distribution</b>		
Data format	Choose an item: Tabular data, Spatial Layer (shapefile, raster), OGC WMS, WCS or WFS, GEOTIFF	Shapefile
Spatial representation type	Choose an item	Charts, table, map, document, etc.
Conditions applying to access and use	Add a predefined license from Creative Commons.	CC0 1.0 Universal
Limitations on public use:	Provide information on the limitations on public use and the reasons for them. If there are no limitations on public access, this metadata element shall indicate that fact.	No limitations
<b>Responsible party (add more entries if necessary)</b>		
Responsible Party	This is the description of the organisation responsible for the establishment, management, maintenance and distribution of the resource. Add the name of your institution.	National Oceanic and Atmospheric Administration (NOAA) and National Marine Fisheries Service
Email	Add a contact e-mail address.	Kenneth.Sherman@NOAA.gov
Responsible role party	Add the role of the party: Resource, Provider, Custodian, Owner, User, Distributor, Originator, Point of Contact, Principal Investigator, Processor, Publisher, Author	Owner (owner)
Related Publications	Add reference to publication in Chicago Manual Style	Alcamo, Joseph, Jacqueline Alder, Elena Bennett, Edward R. Carr, Danielle Deane, Gerald C. Nelson, and Teresa Ribeiro. 2005. "Four Scenarios." In Ecosystems and Human Well-Being: Scenarios, Chapter 8, by Millennium Ecosystem Assessment, 223–294. Washington D.C.: Island Press.

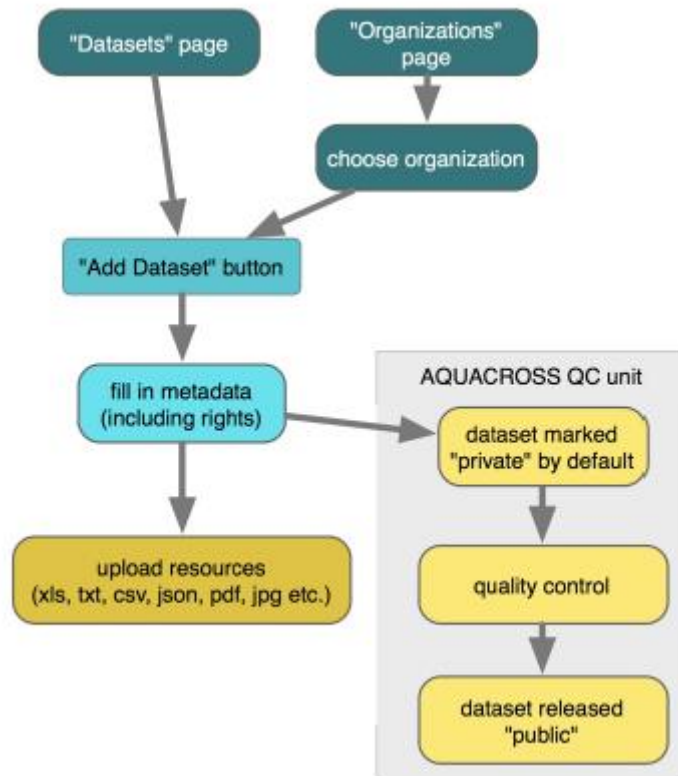


## ANNEX II - SHORT GUIDES

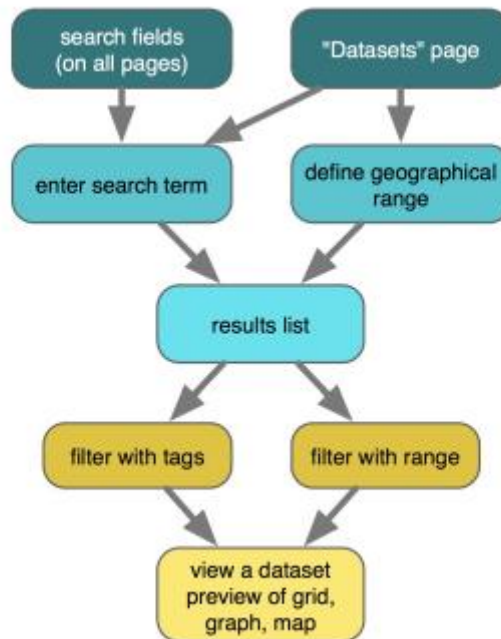
### Roles and rights



## Add dataset



## Finding data





# Ponderful



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