

Lessons learnt from the design, development and use of an Information Platform for the protection of aquatic biodiversity

Tools like the AQUACROSS Information Platform (IP) - <http://dataportal.aquacross.eu/> - are meant to support not only scientists, but also EU Member States and policy makers focussed on data (in AQUACROSS related to biodiversity and ecosystem services). This brief summarises the development of the AQUACROSS Information Platform ([see Information Platform](#)) and informs interested parties about what AQUACROSS has learnt during the development of it. Recommendations included in this brief are directed to IT developers in terms of technology, scientists in terms of project planning and data publishing as well as to policy makers in terms of sustainability.

To facilitate the dissemination of research and innovation results of AQUACROSS, the project established a common and free of charge open-access information platform with focus on the eight AQUACROSS case studies. On the one hand, this platform acts as publishing tool for project partners. On the other hand, it is a central access point for data on different types of aquatic ecosystems, biodiversity and ecosystem-based management practices addressed to the entire scientific community, stakeholders and policy makers.

Building up complex infrastructures like the AQUACROSS Information Platform always includes challenges to be met and decisions to be taken. In order to present a broad spectrum of feedback for the lessons learnt, several user surveys and developer interviews were conducted and visitor statistics evaluated. AQUACROSS Information Platform development recommendations are summarised in the following paragraph with indication of the relevant audience(s) and actors:

TECHNOLOGY → SCIENTISTS, PROJECT LEADERS, DEVELOPERS

Among a variety of technical options, the decision was made to use CKAN as technical base for the Information Platform. This turned out to be a good and practicable solution as CKAN is an excellent tool for making data and information visible and disseminating results. Technology-wise it makes datasets available for harvesting through and integration in other CKAN installations, which multiplies the potential visibility of AQUACROSS results. CKAN offers high flexibility and modularity, with a large number of available plug-ins. Technical implementation requires experienced developers, but is mostly straightforward with a very active and growing CKAN support community in the background.

DEVELOPMENT PROCESS → DEVELOPERS

Executing development work through distributed teams, while having to reconcile differences in expectations and perspectives, is obviously challenging and requires good communication among partners. As a result of the AQUACROSS Information Platform work, a set of communication tools can be recommended to support the development process. This includes regular teleconferences and email exchanges, common programming events and participation at developer conferences as well as the use of a tracking tool to document processes and procedures (e.g., Redmine).

DATA MOBILISATION → PROJECT LEADERS, FUNDING BODIES

An infrastructure like the AQUACROSS Information Platform can only fulfil its purpose if it presents a critical mass of relevant data. Successful data mobilisation needs extensive operational support to actively hunt for data. Therefore, sufficient resources (personnel- and budget-wise) need to be foreseen for data delivery as well as for data processing. The process of publishing (uploading) data needs to be embedded in the entire project workflow, which means that the timing of development work needs to be well aligned with the other project work. These steps should already be described in the project proposal and in the Data Management Plan.

CHANGE OF CULTURE → SCIENTISTS

Scientists tend to be reluctant to let go of their data and to publish them open access owing to various reasons. This reluctance towards publishing and uploading data needs to be overcome. This can be done by highlighting the advantages of data publishing (such as visibility, recognition, possibility of new research collaborations, etc.) as well as by making the upload process as easy and clear as possible by providing good default options and clear guidance in the developed infrastructure.

SUSTAINABILITY OF INFRASTRUCTURES → FUNDING BODIES

It is highly necessary to create sustainable solution options for the development and maintenance of infrastructures like the AQUACROSS Information Platform from the side of the funding body. Currently European research schemes do not foresee funding for the maintenance and further development of IT tools after the project ends and their continuation still relies on other (sometimes unrelated) sources of funding. Therefore, very often there is a risk that these developments disappear from the infrastructure landscape and considerable time and development knowledge becomes lost if alternative sources of funding are not found. AQUACROSS therefore encourages the European Union to create dedicated post-project funding schemes that allow sustainably maintaining IT infrastructures and software research tools in order to avoid duplication of work and re-inventing the wheel after each project.

Go to Brief #32: ← Case Studies: Lessons	www.aquacross.eu/results	Go to Brief #34: EBM: Why involve stakeholders? →
---	--	--

Further information

This is one of 38 short briefs summarising the key results of the AQUACROSS Project. For more detailed information on the topics covered in this brief, see the following:

- The AQUACROSS Information platform is available at: <http://dataportal.aquacross.eu>
- Arévalo-Torres et al. (2016) AQUACROSS Data Management Plan. Deliverable 6.1, European Union's Horizon 2020 Framework Programme for Research and Innovation grant agreement No. 642317. ([Deliverable](#))



AQUACROSS has received funding from the European Union's Horizon 2020 Programme for Research, Technological Development and Demonstration under Grant Agreement no. 642317.