

Urban Algae one-year report

June 20, 2019

Sonia Herrero Ortega, Cleo Stratmann

SUMMARY	2
PROJECT OBJECTIVES, TIMETABLE, AND MILESTONES	2
TEAM APPLICATIONS / BUILDING THE URBAN ALGAE CONSORTIUM	2
SAMPLING PREPARATIONS AND FIELD SAMPLINGS ACROSS EUROPE	2
DEVELOPMENT OF THE SURVEY (SOCIAL SCIENCE PART)	3
BUDGET AND FINANCES	4
RESUMÉ, CHALLENGES AND OUTLOOK	4
COLLABORATIVE POTENTIAL / INVOLVEMENT OF THE TEAMS	5
WORKING GROUP AND STRUCTURES	5
FORMAL FRAMEWORK	5
MEDIA, PUBLIC REPRESENTATION AND PUBLICATIONS OF THE PROJECT	5

1. Summary

The project Urban algae (the 2nd FreshProject of the [European Federation of Freshwater Sciences \(EFFS\)](#)) aims to foster collaboration among young scientists (≤ 2 years Post-doc) and to acquire novel knowledge about ecosystem services and the ecological status of ponds in urban areas. Specially, the project links natural science and social science to bridge important gaps between science, society and management (Figure 1) of small freshwaters.

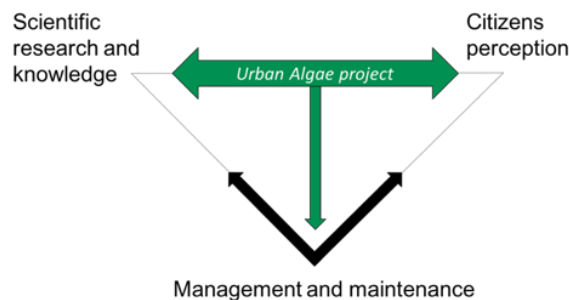


Figure 1. Schematic relationships of the project

Since the start in May 2018, Urban algae joins 97 young researchers from all over Europe, who have been conducting field samplings and working on developing a citizen survey about the perception of urban ponds. Within the last year, the project has reached its aims and is on the way to be completed until May 2020.

2. Project objectives, timetable, and milestones

Team applications / building the Urban algae consortium

Phase one, aiming to set up the project consortium, consisted of releasing a call to join the project. This has been done in March and April 2018, with a short time of extension in order to have a sufficient amount of teams. For this task platforms like twitter, researchgate and the scientific network of the PIs and co-PIs have been used for distribution. Via an application form, stating preconditions that the teams would have to fulfil, we were able to include all teams that applied in the project. Members from all eight supporting limnological associations joined Urban algae. The Urban algae consortium (all team members) met in a Zoom call where a project introduction was given by the PIs in May 2018. The team work was further organized using Google-drive as an online workspace.

Sampling preparations and field samplings across Europe

In a second phase, a field sampling of urban ponds was conducted by each of the teams. Working groups were set up to develop a common sampling protocol. We made use of the advantage of working collaboratively, joining the expertise of different Urban algae members and at the same time allowing non-experts to gain new knowledge in a certain working area (e.g. macrophytes sampling). Communication was done mainly by mail and google drive shared documents.

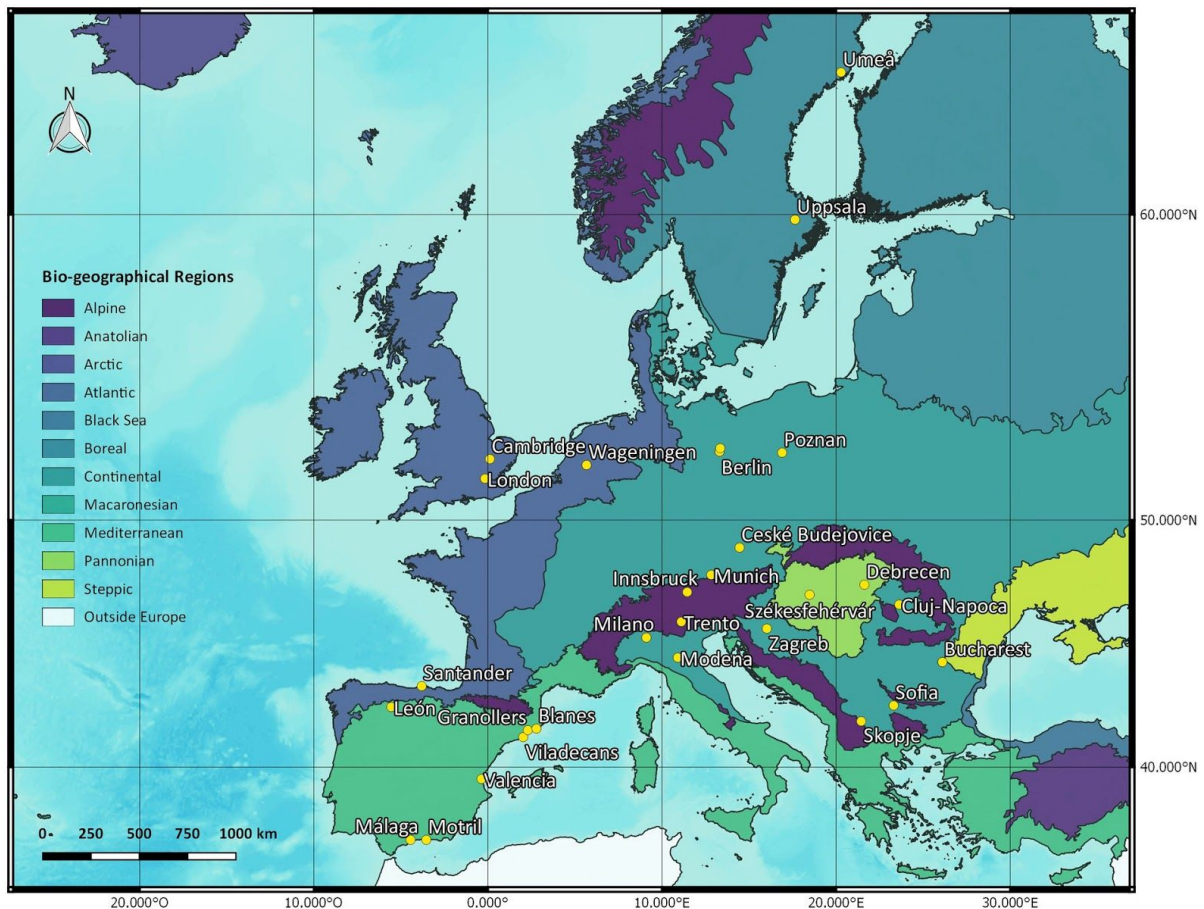


Figure 2. Distribution map of the urban nuclei corresponding to each team, except for Bucharest and Berlin, where 2 teams at each urban nuclei are based.

Pond samplings happened in July and August 2018 by 30 out of 31 teams. One team (Tirana, Albania) had to withdraw due to time constrictions of the team members. Another team (Munich, Germany) was accepted after the team application deadline. The final number of teams is 30 (Figure 2). Each team sampled two ponds in one urban area. Field samplings were successful, and laboratory analysis were started at NIOO (Netherlands Institute of Ecology) and at IGB (Leibniz-Institute of Freshwater Ecology and Inland Fisheries) after samples arrived. Last water sample analyses were completed in June 2019. During this time data analysis started, as well.

Differently to the plan described in the original proposal, we did not held a workshop on image analysis for the identification of phytoplankton samples. Instead, the image analysis will happen by each team using a common methodology protocol. This protocol is developed by the phytoplankton working group.

Development of the survey (social science part)

The research about citizens' perception of urban ponds became an own part, being treated in a third phase of the project. The aim of the third phase was to develop a citizen survey to get new insights about the perception of urban ponds by society. The development of the survey started partially parallel to the pond sampling preparation, and has extensively been progressing since fall 2018. Expertises from social scientists and natural scientist have been merged and the survey is in a final state. At this moment, the survey is being translated by working groups in the

languages of the participating countries, that were involved in pond samplings in 2018 (14 languages). The release of the survey is the next step and planned for July 2019.

Budget and finances

The total budget of the project was 8.600 €, from which 8.000€ were provided by the FreshProject 2.0 call, and 600 € from the group of aquatic ecology (AKWA, NIOO-KNAW). Leibniz-Institute of Freshwater Ecology and Inland Fisheries, provided technical support and analyses free of charge. Figure 3 shows the expenses by topic/activity:

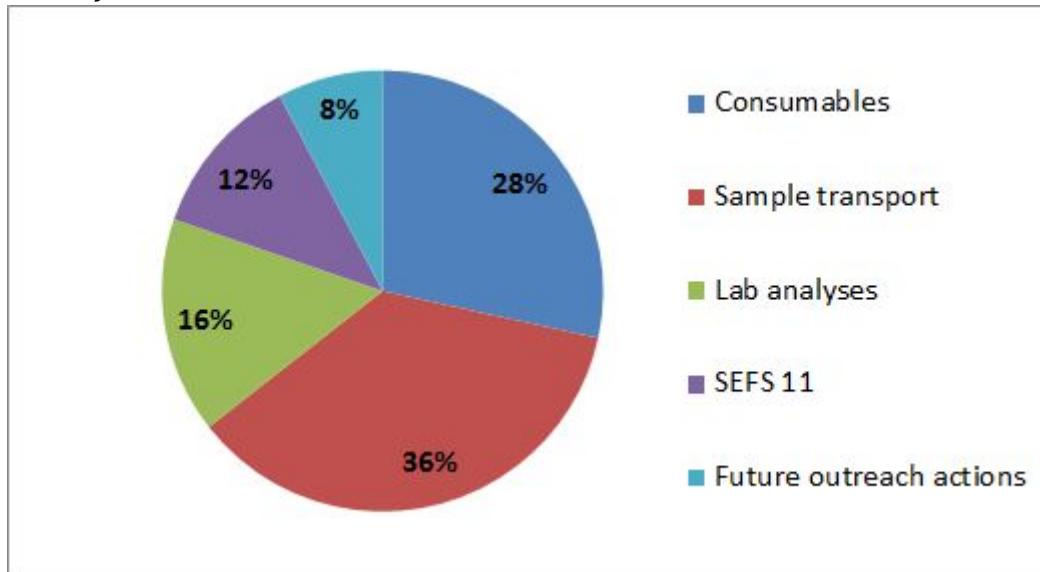


Figure 3. Budget distribution of Urban algae (8.600€). SEFS 11 = 11th Symposium of European Freshwater Sciences (2019)

The main discrepancy with the proposed budget is the removal of the workshop in favour of increasing the number of teams participating in the project.

Resumé, challenges and outlook

In summary, the following milestones have been completed until now:

- Building up the Urban algae consortium
- Conducting pond field samplings.

This milestone is in its final phase:

- Developing and releasing a citizens survey on urban ponds.

The next milestones are:

- Analysing and combining all data from the field samplings and the citizens' survey
- Preparing a manuscript from the project results for publication.

Major challenges that we came across during the last year were specially the communication with a large amount of people involved (97). For group calls we used Zoom, for smaller group calls also Skype. As free Zoom accounts have time limitations, we had to renew the connection after some time. Email communication was sufficient for most purposes, however, changes in email addresses from project members during time needed to be considered and constantly updated. Also, the amount of email send should always be kept as little as possible.

We have not experienced any problems concerning collaboration and team work of many people with various backgrounds, languages and cultures. The opposite, we have found many interesting and new inputs and possibilities learning from each other.

We found it very important giving all project members the chance to give their input to abstracts, common protocols and ideas by planning sufficient time for commenting or correcting documents. This is crucial for a good and involving teamwork and we all have improved our skills on how to manage big group works.

Logistics for sending water samples from the field samplings were especially challenging, as not the same logistic companies work and function in the same way in different european countries. Express sendings were very expensive in some regions, and sometimes took longer than promised. Due to transportation difficulties we will not able to use the water samples from four out of 60 ponds.

3. Collaborative potential / Involvement of the teams

Working group and structures

Working groups were structured using file folders in Google drive. Groups had separated meetings when needed and were able to work independently. Nonetheless, the PIs were managing the working groups and were actively providing structure and organization as the last instance.

Formal framework

At the start of the project we set up a data policy to assure responsible and proper handling of the data we gathered in this project and informed all project members about this. Also, we kept the project consortium regularly informed about updates and news by sending around update emails.

4. Media, public representation and publications of the project

At the start of the project, a twitter account ([@Urbanalgae2018](#)), a [ResearchGate](#) site and the [Urban Algae](#) webpage were developed. In all of these media management Urban algae team members were involved and were giving important input. Short articles about the project were published via IGB ([IGB annual report 2018](#) and [IGB webpage](#)).

A [project poster](#) was prepared from different Urban algae team members. The poster was presented during the AIL (Iberian Association of Limnology) 2018 meeting (Portugal), the DGL (Deutschen Gesellschaft für Limnologie) 2018 meeting (Germany) and a presentation about the project was given at the IGB science day (Germany).

During the 11th Symposium of European Freshwater Sciences in 2019 (SEFS 11, in Zagreb, Croatia), a special session (SS.6) is presented by the core team of Urban Algae. The session “Linking natural and social science in freshwater ecosystems” will be hosting talks related to the topic of the project. During the session, an oral presentation about Urban algae will be given, also showing preliminary results of the project.