



NEWSLETTER

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The Project

A description of the project and the consortium of participants.

Kick-off Meeting

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Winter School

The School was held from 5th to 7th April 2022 in the Campus de Móstoles, URJC, (Spain).

ESOF 2022

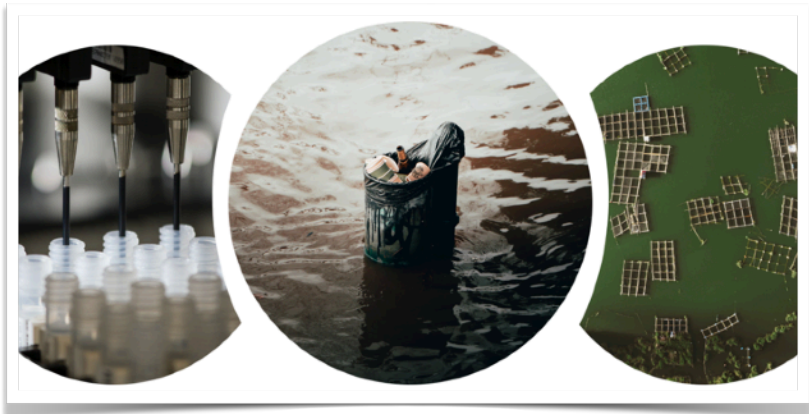
EuroScience Open Forum (ESOF) 2022 took place on 13-16 July 2022 in Leiden (the Netherlands).

Secondment experiences

Elisa Gaggero talks about her secondment in Japan.

Next events

Follow the SusWater's activities for consortium people and other events.

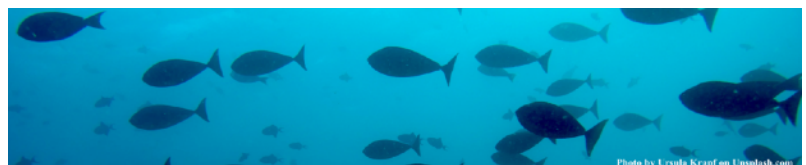


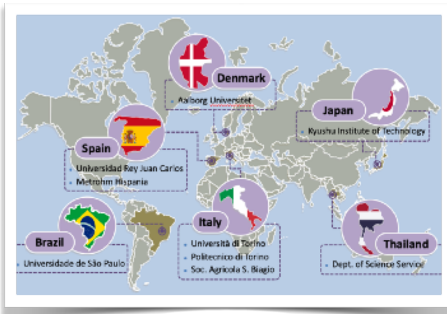
The Project

SusWater is a multidisciplinary and interdisciplinary consortium aiming to promote the development of sustainable integrated approaches to achieve contaminants of emerging concern (CECs) and potentially toxic elements (PTEs) removal from contaminated waters.

In particular, SusWater will assess the quality of water in a pilot wastewater treatment plant (in Spain) and in two aquaculture sites (Italy, Thailand) by monitoring CECs and PTEs in influents, effluents and post-treated waters and by assessing the toxicity through the combination of different bioassays.

New tools useful for eliminating pollutants will be developed. Different strategies will be adopted, all commonly sharing a low environmental impact. Fungi will be used to eliminate CECs, with particular focus on antibiotics and some lipophilic compounds responsible of unpleasant taste on fish. PTEs, such as dissolved As, Hg, Pb or Cd species will be





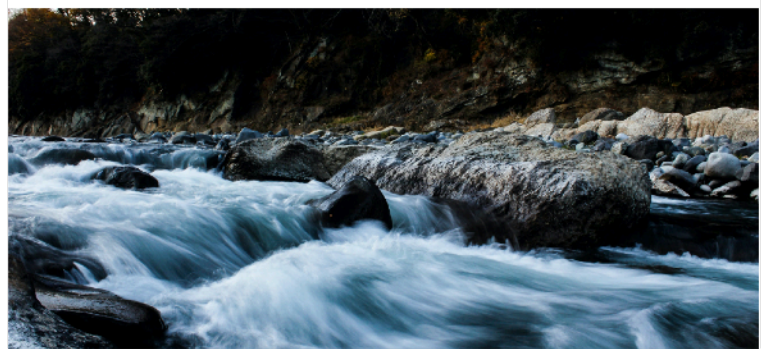
The Consortium

The SusWater project involves a total of nine partners: four European Universities, two European non-academic companies, plus three entities belonging to third countries.

List of partners:

- ✦ Università degli Studi di Torino (UNITO, Italy)
- ✦ Aalborg Universitet (AUU, Denmark)
- ✦ Politecnico di Torino (POLITO, Italy)
- ✦ Universidad Rey Juan Carlos (URJC, Spain)
- ✦ Universidade de São Paulo (USP, Brazil)
- ✦ Azienda Agricola San Biagio (AASB, Italy)
- ✦ Department of Science Service (DSS, Thailand)
- ✦ Kyushu Institute of Technology (KIT, Japan)
- ✦ Metrohm Hispania (MH, Spain)

captured by exploiting the use of iron, adsorbents derived from biomass and inorganic oxides and photocatalysts jointly linked to strengthen their efficiency. The highest performing materials will then be supported on membranes or columns and will be tested in water for aquaculture or for reuse. In all sites, we will also assess the quality of water by monitoring CECs and PTEs in influent, effluent and post treated waters and by assessing the ecotoxicity and estrogenicity through the combination of different bioassays. The monitoring process will involve not only toxicological assays and chemical analysis using high-resolution techniques; it will also be combined with modelling processes aimed to fully assess the fate of pollutants.



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Kick-off meeting

On 28th April 2021, the coordinator – Prof. Paola Calza – welcomed the participants and officially launched the start of SusWater project. The first part of the meeting was devoted to the presentation of Partners and Beneficiaries, then in the second session objectives of each WP, tasks, deliverables and milestones were listed and the manager structure of the project was defined.

Successively, each WP leader presented the activities to be carried out and the planning of the training events and secondments to be organized of the project was discussed, in particular focus on the activities of the first year.



ESOF2022

EuroScience Open Forum (ESOF) 2022 takes place on 13-16 July 2022 in Leiden (the Netherlands), the European City of Science 2022.

It is a biennial meeting designed to offer the scientific community a platform for interdisciplinary and intersectional debate about scientific culture, scientific research and innovation, for and with society.

During this event the objectives of SUSWATER and those of other research projects (NANOZERO, RECOFARMA INDESMOF) focused on water decontamination were jointly presented with by Roberto Fernández de Luis, Paola Calza and Manuel Valiente Malmagro.

Winter School

The School held from 5th to 7th April 2022 in the Campus de Móstoles, URJC, (Spain). This event was focused on Biological and Abiotic for Transformation Processes for Removal of Pollutants in Water Systems.



The first day started by the welcome introduction by Universidad Rey Juan Carlos and Metrohm Hispania. Then, the day was devoted to lectures about photoinduced transformation of organic and inorganic pollutants, to the use of photoactive inorganic materials, enzyme and fungi for water treatment.

The second day dealt with the role of fungi and sorbent materials for water and wastewater treatment.

The third day focused on oral communications given by ESRs. During the school a technical a cultural visit was also organized for the participants.



ESR Experiences

Episode 1 - Elisa Gaggero

I began my PhD in autumn 2020 and became part of the Suswater project as a UNITO ESR the following spring. The previous year, we had faced one of the most devastating and conditioning events of recent years: the Covid-19 pandemic and a long quarantine period. The lockdown and the new restrictive measures disrupted the life we were accustomed to in so many ways, one of which was undoubtedly the impossibility of travelling and exploring the world as readily as we were used to doing before.

One can therefore easily imagine with how much joy, enthusiasm and impatience I set foot first on the sunny streets of Madrid and then on the green campus of the Kyushu Institute of Technology, thanks to Secondment periods planned in the project. These experiences deserve to be recounted...so



let's jump to the 5th September 2022. Two girls drag their heavy suitcases out of Kitakyushu airport in southern Japan. As soon as they pass through the sliding doors, they are hit by a torrid heat and greeted by two pairs of smiling almond-shaped eyes peeking out from behind the masks of the two students who have been waiting for them. Yes, those two girls were me and Monica Rigoletto, another ESR of the Suswater project.

The first impact with Japan was undoubtedly unsettling: all habits, social behaviour, food, climate, noises and smells we were used to were

swept away and replaced by new ones. Before entering a house, a temple or a simple restaurant (and sometimes even chemical laboratories) shoes off and slippers on; every bus we board was super quiet and tidy even when crowded in accordance with the discretion and gentle spirit of Japanese people; ramen, katsudon, sushi, miso soup and green tea became our daily bread and wandering around the cities we realised that modern and ancient, nature and buildings mingled in a magical maze. All this blended into a state of melancholy for the known mixed with curiosity for the unknown around me and made the two-month experience in this country unforgettable and an exceptional tool for personal growth. Moreover, besides personal development, it was above all a unique opportunity from a professional point of view. At Kyushu Institute Technology (KIT) we found a stimulating and inspiring working environment for our scientific training and working with Prof. Ohno's excellent research team allowed us to learn new techniques and achieve very satisfying scientific results.

I am currently planning my next secondment at the Department of Science Service in Bangkok, so stay tuned.

NEXT EVENTS

Workshop

Exploitation of Polymeric Hydrogels for wastewater remediation and biomedical applications.

28th February-1st March 2023 - Turin (Italy) - Politecnico di Torino

Mid-Term Meeting

2nd March 2023 - Turin (Italy) - Università di Torino