

## Science with and for Society – Project Partner Search Form

### CALL: Science with and for Society 2017

- I offer my expertise to participate as a Partner in a Project
- I am planning to coordinate a project and I am looking for Project Partners

| Topics   |   |
|--|---|
| <b>1. Institutional Change to Support Responsible Research and Innovation in Research Performing and Funding Organisations</b> |   |
| <input type="checkbox"/>   | SwafS-03-2016-2017: Support to research organisations to implement gender equality plans  |
| <input type="checkbox"/>   | SwafS-05-2017: New constellations of Changing Institutions and Actors   |
| <input type="checkbox"/>   | SwafS-06-2017: Engaging industry – Champions for RRI in Industrial Sectors  |
| <input type="checkbox"/>   | SwafS-08-2017: European Community of Practice to support institutional change   |
| <b>2. Embedding Responsible Research and Innovation in Horizon 2020 Research &amp; Innovation</b>                              |   |
| <input type="checkbox"/>   | SwafS-10-2017: Putting Open Science into action   |
| <b>3. Strengthening the Science with and for Society Knowledge-Base</b>  |   |
| <input checked="" type="checkbox"/>  | SwafS-11-2017: Science education outside the classroom  |
| <input type="checkbox"/>   | SwafS-12-2017: Webs of Innovation Value Chains and Openings for RRI   |
| <input type="checkbox"/>   | SwafS-13-2017: Integrating Society in Science and Innovation – An approach to co-creation   |
| <input type="checkbox"/>   | SwafS-14-2017: A Linked-up Global World of RRI  |
| <b>4. Developing Inclusive, Anticipatory Governance for Research &amp; Innovation</b>  |   |
| <input type="checkbox"/>   | SwafS-21-2017: Promoting integrity in the use of research results in evidence based policy: a focus on non-medical research                       |
| <input type="checkbox"/>   | SwafS-22-2017: The ethical dimensions of IT technologies: a European perspective focusing on security and human rights aspects                    |
| <input type="checkbox"/>   | SwafS-23-2017: Responsible Research and Innovation (RRI) in support of sustainability and governance, taking account of the international context |
| <input type="checkbox"/>   | SwafS-24-2017: Trans-national operation of the EURAXESS Service network   |
| <input type="checkbox"/>   | SwafS-26-2017: Science4Refugees - Support to highly skilled refugee scientists  |
| <input type="checkbox"/>   | SwafS-27-2017: Implementing a European Train-the-trainers initiative with regard to Ethics and Research Integrity                                 |

### 1) PROJECT INFORMATION

**Field of expertise related to the topic:** STEM, biology (ecology), field student courses, science education, teaching methods in biology, inquiry-based learning (IBL), problem-based learning (PBL)

**Potential contribution to the project:** The Faculty of Science of the University of Zagreb, Croatia (PMF; <https://www.pmf.unizg.hr/en>) is the leading Croatian scientific and teaching institution in the field of natural sciences and mathematics. One of its constituting departments - the Department of Biology - is recently expanding its opportunities by developing active and life-long learning curricula, as well as biology teaching approaches and strategies. By organising various forms of learning throughout the education spectrum, from accredited programmes to seminars

and courses, the PMF's Department of Biology provides opportunities for its alumni and others interested in segments of biological education to participate in further professional development and training. Additionally, the Department organizes field trips for the pregraduate and graduate students, and many workshops and events for pre-school children, primary- and secondary-school students and teachers, which enable the participants to get an insight into "the real world of STEM".

For example, in collaboration with several faculties and institutions, the biology department organises the "Training course for persons working with experimental animals and animals for the production of biological products". As well, the Department organizes an annual field course "Ecological Interactions" (topic: freshwater biology) - for students from the Queen Mary University of London, UK - at the Ecological Station "Vrlika". The Ecological Station "Vrlika" is located in the Dinaric karst region of Croatia; it was initially planned as an accommodation and education facility for the PMF-students during field courses, but over time it has proven to be an exceptionally useful facility for similar field courses, workshops and "out-of-the-classroom" programs. It offers a variety of opportunities for exploring natural phenomena, such as karst geomorphology and hydrology, biodiversity (for both aquatic - freshwater and marine - and terrestrial species), species invasions, climate change, as well as opportunities for bird and bat watching, investigating species and habitat richness, influence of disturbance, predation and competition on biodiversity patterns, etc. More detailed information on the Ecological Station "Vrlika" is available at the following link: <https://www.pmf.unizg.hr/images/50011135/Ecological%20Station%20Vrlika.pdf>.

Particular attention at the Department of Biology of the Faculty of Science, Zagreb, has been dedicated to lecturers who are a part of the cooperation with school programmes/curricula, biology teachers in primary and secondary schools, and the on-line support activities (such as the Department's "Educatio biologiae" program). Under the auspices of the Department of Biology and the Croatian Biological Society, a mentorship network has been created for support, exchange of experiences, and the development of teaching biological content in schools (e.g., through the "Croatian National Biology Competition", opened sessions of student seminars entitled "BioStudologies", series of workshops for primary and secondary school students entitled "Bioznlac", various teaching and learning activities within PriMaTeh - an organisational unit of PMF, representing a center for improving education in the fields of natural sciences, mathematics and techic, etc.). As well, the members of biology department actively participate within the GLOBE (Global Learning and Observation to Benefit the Environment) program - a worldwide, hands-on environmental science and education program that provides students and the public with the opportunity to participate in data collection and the scientific process, and contribute meaningfully to our understanding of the Earth system and global environment.

We are of opinion that the above mentioned activities, facilities and the expertise offered by the Department of Biology (Faculty of Science, University of Zagreb, Croatia) have a vast potential to be enclosed and/or further developed within the eventual partnerships in the topic "Science education outside the classroom".

**Role in the project:**

- |  |   |                                |
|--|---|--------------------------------|
| <input checked="" type="checkbox"/> Research | <input checked="" type="checkbox"/> Dissemination | <input type="checkbox"/> Other |
| <input checked="" type="checkbox"/> Training | <input type="checkbox"/> Technology Development   |                                |

Project idea: 1) to open the door to various forms of informal STEM education for target participants (e.g., gifted and/or underrepresented populations of children, students, adults) - through coursework, workshops, internships and/or other extracurricular activities, which would

utilise the environment and natural objects for teaching and learning benefits; 2) to use the action research approach during the "out-of-the-classroom" activities, which would be targeted towards: A) examining the teaching practice of the differing STEM-instructional teams, B) strengthening the cooperation and dialogue among the differing STEM-instructional teams, and C) assessing the learning improvement of the targeted groups of participants during the "out-of-the-classroom" activities.

Project description: We are greatly flexible regarding the project activities, and everything is opened for a discussion, in accordance with the potential Project idea(s). The foreseen "out-of-the-classroom" activities could be organized within the frames of the above mentioned activities/facilities and with the support of the Croatian expert staff, and/or within alternative collaborative framework.

Already experience as a Coordinator:  yes  no

As a Partner:  yes  no

If "yes", which project: -

Other partners in consortium already identified (with countries): -

## 2) TARGET COORDINATOR / PARTNER SOUGHT

### Organisation details:

Higher education / university

Industry / SME

Research institution

Other

NGO

Please specify:

Education

**We are looking for following Expertise / Competencies:** Members with an experience as Coordinators and/or Partners of the similar programs/projects that link science and technology with society (e.g., education), nature and environment.

## 3) CONTACT DETAILS

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Ms  Mr

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Short profile of the Organisation: The Faculty of Science of the University of Zagreb was established in 1946, although teaching started already in 1876. The Faculty includes 7 departments, the Seismological Service, the Mareographic and Meteorological stations, and the Botanical garden. The Faculty has 288 full professors, associate and assistant professors, 180 junior researchers and about 4500 students. The Faculty offers undergraduate, graduate, and postgraduate study programmes, and pursues research in the fields of natural sciences and mathematics. The Faculty of Science is engaged in excellent cooperation with numerous universities and institutes abroad. Professors of the Faculty have been invited as visiting lecturers

to European and American universities, and young staff members, as well as postgraduate students, are regularly sent to international universities and institutes for further research.

#### PROGRAMME EMPHASIS

The Faculty of Science has 8 undergraduate study programmes (Bachelor degree) encompassing 3 years of studies (180 credits), 26 graduate study programmes (Master degree) encompassing 2 years of studies (120 credits) or 5 years of studies (300 credits) and 7 postgraduate study programmes (PhD degree) encompassing 3 years of studies (180 credits). Education is at all levels characterized by teaching and supervision at a high academic level by staff actively involved in research. Departments of the Faculty are placed on several locations in Zagreb. The departments of Physics, Mathematics, Geophysics, Chemistry, Geology, and the main administration of the Faculty are set at Horvatovac where a “campus of science” is being built. Departments of Biology and Geography are also going to be set at the same location in the near future.

#### CAREER PROSPECTS

The education of students in science and mathematics is a part of a comprehensive science education that qualifies them to work in research institutes, different branches of industry and production, the civil service (environmental protection, regional planning), public institutions (national parks, nature parks, reserves) and elsewhere, or as teachers in primary, secondary, and vocational schools.

#### RESERACH ORIENTATION

All the academic staff is actively involved in research carried out at high international standards. They are supported by postgraduates and research personnel from seven departments. They work across the whole spectrum of scientific activities ranging from basic to applied research and many have been recognized internationally for their contributions to research and development.

THE DEPARTMENT OF BIOLOGY is one of the 7 departments within the Faculty of Science at the University of Zagreb. From 1995 it comprises of:

- Division of Botany
- Division of Zoology
- Division of Animal Physiology
- Division of Molecular Biology
- Division of Microbiology
- Botanical Garden

**Date:** 14.2.2017.

**The offer is valid until:** undefined

I agree with publication of my contact data on “Science with and for Society” network website

YES     NO



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**PLEASE FILL THE FORM AND RETURN IT TO YOUR HORIZON 2020 NATIONAL CONTACT POINT FOR SCIENCE WITH AND FOR SOCIETY.**



Horizon 2020