

OeAW Earth System Sciences (ESS) Call for Proposals 2018

“Water in Mountain Regions”

Call opens: 11 May 2018

Submissions close: 13 August 2018

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1. In brief

Earth System Sciences (ESS), an initiative of the Austrian Academy of Sciences (OeAW) financed by the Austrian Federal Ministry of Education, Science and Research (BMBWF), seeks to research the Earth as a system, presently against the background of Sustainable Development Goals (SDGs; <https://www.bundeskanzleramt.gv.at/entwicklungsziele-agenda-2030>). To complement its existing funding profile, this programme supports inter- and transdisciplinary projects on topics on which very little research currently exists and which represent pioneering areas of research. Consideration will also be given to high-risk-high-potential projects. Important goals of recruitment in 2018 are increasing the initiative's profile and transdisciplinary project work, e.g. via cooperation between two or several project leaders (PIs) from different fields of expertise. Since the UN has announced the *International Decade (2018–2028) for Action – Water for Sustainable Development*, the focus is on the topic of “Water in Mountain Regions” as an interdisciplinary subject. Research projects should be embedded within the interdisciplinary context of mountain regions. They should contribute the development of the Austrian university and research area and use existing long-term research facilities and infrastructure.

2. Aims

A core societal mission is to maintain the natural foundations of life, an issue which is of the utmost priority given current findings on the transformation of the Earth system. Globalisation, economic development, dramatic increased mobility, climate change, migration, demographic and societal changes influence the Earth system from the local scale level to the global scale. An understanding of the connections and reciprocal relationships between physical, chemical, biological and socioeconomic processes depends not only on orientational knowledge but also on knowledge about availability and transformation. Hence we require inter- or transdisciplinary approaches employing all available information, e.g. from remote sensing data, but also from demographic, economic and technical studies, and for certain questions we also require knowledge from the population (e.g. citizen science).

Connecting and exploiting this knowledge is at the core of the present call for applications. The programme contains two foci that should be considered in applications:

- Interdisciplinary and transdisciplinary¹ projects combining the methodologies of various disciplines (Interdisciplinarity) and with transdisciplinary projects connecting practical with knowledge;
- High-risk-high-potential projects promoting extraordinary and risky scientific approaches.

The ESS initiative promotes ties and cooperation between the individual disciplines and research groups. ESS forms an intersection between Austrian science and international research and is involved in international research and cooperation programmes² through its three National Committees “Geo/Hydro-Sciences”, “Global Change” and “Man and the Biosphere”. The programme is part of the

¹ Transdisciplinarity in the context of “Future Earth” means the involvement of various disciplines in the natural and the social sciences and the fields of enterprise, the environment, politics, norms and values, governance and conflicts, as well as cooperation with non-scientific actors on the ground. The intention is, then, to create interdisciplinary research in close consultation with application-oriented institutions and persons in the region. Transdisciplinary research is oriented around societal needs and its results are always consistent with scientific principles.

² These include the UNESCO International Geoscience and Geoparks Programme (IGGP), the UNESCO International Hydrological Programme (IHP), the UNESCO Man and the Biosphere Programme (MAB), the World Climate Research Programme (WCRP), the UN International Strategy for Disaster Reduction (ISDR), the International Scientific Committee on Alpine Research (ISCAR), Long Term Ecosystem Research (LTER) and Future Earth.

“Responsible Science”³ concept and hence plays a special role contributing to the dialogue between science and society by funding inter- and transdisciplinary research projects on select relevant questions concerning the organisation of the relationship between humans and the environment. Through its inter- and transdisciplinary orientation, the ESS programme is committed to the UNESCO *Guidelines on Sustainability Science in Research and Education* (<https://en.unesco.org/sustainability-science/guidelines>).

3. Research topics

The general topic of **Water in Mountain Regions** is to be examined via interdisciplinary and transdisciplinary collaboration. This ranges from hydrogeological questions of the water cycle, melting glaciers and thawing permafrost to socioeconomic impact and conflicts over the use of water resources. The programme sets out from two current global agendas and one national target:

First and foremost, mention must be made of the Sustainable Development Goals⁴ (SDGs), especially SDG 6 on the subject of water, which not only aims to create fair access to clean drinking water, but also considers the economic and ecological importance of water supply and water management, which requires functioning aquatic ecosystems. Austria is working to realise Agenda 2030 on the national, regional and international level by the year 2030 and to take concrete steps towards meeting the sustainable development targets at home and abroad. To this end, the focus is also on the crucial subject of “Water”, since changing environmental and climatic conditions in the Alpine region will bring about changes in the availability of water as a resource and hence future conflicts over water use and water management in the Alps and neighbouring areas.⁵

Secondly, following the *Water for Life* decade (2005–2015), the UN has adopted the resolution for an *International Decade (2018–2028) for Action – Water for Sustainable Development*. This will be launched on World Water Day on 22 March 2018 and last until World Water Day 2028. This call for proposals can help raise the profile of Austrian scientists and especially young scientists working on a transdisciplinary topic.

Thirdly, the “waterland” Austria is in the perfect position to advance research on the subject of water, since prior research activity and investments in facilities have created a broad foundation for further study and optimal conditions for achieving the scientific and societal aims defined in this call. The topic of “Water in Mountain Regions” is ideally suited to collaboration between a wide variety of scientific disciplines (e.g. biology, geosciences, sociology and economics) and is thus a highly relevant interdisciplinary subject from the perspective of the natural sciences, the humanities and indeed politics.

³ Responsible Science, also known as “Responsible Research and Innovation” (RRI) in the EU context, actively involves civil society in research and innovation processes in order to more effectively deal with current challenges in accordance with the values, expectations and needs of society. For the European Commission, the concept is becoming increasingly important as a new orientational framework for research and research funding and has been integrated into the research framework programme “Horizon 2020”. Austria too has adopted Responsible Science as an important element of the “Aktionsplan für einen wettbewerbsfähigen Forschungsraum” (Plan of Action for a Competitive Research Area) of the Federal Ministry for Education, Research and Science (BMBWF). One of the first steps in this regard has been the establishment of an alliance for Responsible Science, which has already been joined by several institutions from the fields of science, research, education and practice.

⁴ <https://www.bundestkanzleramt.gv.at/entwicklungsziele-agenda-2030>

⁵ This subject is also taken up by the ForumAlpinum 2018 (<http://forumalpinum.org>), organised by the International Scientific Committee for Alpine Research (ISCAR) and the OeAW.

3.1 Principles

The research projects are to be embedded in the context of the interdisciplinary research of mountain regions. Project proposals should

- be inter- and transdisciplinary;
- provide an impulse for international research programmes and strategies;
- promote development and cooperation on the university and research level;
- contribute to the realisation of Agenda 2030 in Austria;
- promote discussion with the public;
- in the case of long-term projects, make use of existing sites and facilities for long-term research (e.g. LTER sites, biosphere reserves, geoparks, national parks, experimental drainage basins).

The projects must give consideration to the latest status of research in the relevant research fields and moreover develop innovative findings. They must meet the existing scientific standards and have a problem-solving orientation (including of practical nature).

4. Procedure

4.1 Fundamentals

Earth System Sciences (ESS) is coordinated by the Austrian Academy of Sciences (OeAW). To this end, three National Committees have been established for the fields of Geo/Hydro-Sciences, Global Change, and Man and the Biosphere (MAB). These National Committees observe the Austrian research landscape, analyse their strengths and knowledge deficits and develop new research foci in targeted fashion on the basis of the findings produced and in collaboration with the international ESS Advisory Board (ESSB-AB). The ESS-AB advises the NCs, the OeAW and the BMBWF on the development of the initiative, conducts the selection process with the support of the ESS office, monitors ongoing projects and undertakes assessment of the final reports. The ESS Programme Administration supports the National Committees and the ESS-AB in the administrative processing of these tasks. Assessment is performed by independent experts on the basis of scientific quality criteria and the aims of the call. Further information is available on the ESS-Webpage (<https://www.oeaw.ac.at/ess/>).

4.2 Application procedure

Project proposals must meet the standards of international research. Young researchers are expressly encouraged to submit project proposals. Collaboration with international partners is welcome, but the project leadership must reside in Austria. A maximum total of 25 % of funding may go to foreign partners; there must be valid reasons for providing funds to foreign project partners.

The total cost of the project may not exceed € 500,000. The maximum duration is three years. If a project is planned as a long-term study extending beyond the three-year period, this must be indicated in the project proposal together with the intended duration. Since the budget only allows project funding for a maximum of three years, potential long-term studies should be planned in such a way that they can be concluded with exploitable results after three years. In order to allow international assessment, proposals must be submitted in English.

The interdisciplinary nature of the project should be made clear in the proposal by stating two or more project leaders from different specialist fields. To this end, the application form contains the rubric “Principal investigators (PIs)” and “Responsible PI”, since the contract can only be concluded with a single person, the “responsible PI”. This lead applicant (“responsible PI”) must work at an Austrian research institution. The transdisciplinary nature of the project should be made clear by stating institutions and/or persons with practical experiences as well as the methodological approach (e.g. Citizen science, Crowdsourcing).

Proposals must be submitted using the form available on the OeAW website. The proposal must contain an exact description of the research question, the innovation potential and the methodology and must also provide a timetable and financial plan as well as planned means of dissemination and exploitation of results. Documentation of the expertise of the submitting project team (CVs, lists of publications) must also be provided.

By submitting and by responding to the call, applicants acknowledge that the related data and materials will be forwarded to the members of the jury and expert reviewers so that they can evaluate the proposal and reach a decision on whether to award funding.

Please direct all queries to the following address:

Contact and
submission address: Dr. Günter Köck
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[Internationale Programme](#)
Dr. Ignaz Seipel-Platz 2, 1010 Wien
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[Application form](#)

4.3 Selection procedure

All proposals received will be checked to ensure they meet the formal requirements. Applications that do not meet the formal demands of the call will be excluded from further assessment. All proposals that meet the formal criteria will be forwarded to the ESS-AB. Assessment is conducted by international experts in the field selected by members of the ESS-AB. At least two reviews are obtained for each proposal.

Selection of the projects recommended for funding takes place in a meeting of the ESS-AB. The final decision is made by the OeAW Presiding Committee together with the BMBWF. The applicants will receive prompt notification of the decision. In accordance with the internationally established procedure, a brief scientific explanation of the decision will be provided. Anonymised excerpts from the reviews will be made available.

4.4 Project support and evaluation

At the halfway stage, the projects will be evaluated by the ESS-AB in the course of a workshop in which all successful applicants to this call present their interim findings. If a project has failed to make progress, funding instalments can be stopped until the shortcomings have been rectified. Project teams must submit a final report no later than three months after the end of the project. In the event that quality criteria are not met, shortcomings are to be rectified within three months. Payment of the final funding instalment (5 % of the approved total budget) will be performed following final approbation by the ESS-AB.

It is expected of project leaders that the research findings are published in internationally recognised journals, that solution for practical use are provided and that further dissemination of the findings in suitable form is ensured.

5. Timetable

The 2018 call for proposals by the Initiative Earth System Sciences (ESS) at the Austrian Academy of Sciences (OeAW) is governed by the following timetable:

11 May 2018	Call
13 August 2018	Submission deadline for proposals (date of email)
1 December 2018	Award decision