

Newsletter 2019/2020

Dear members and friends of IESP.

Since its beginning, the year 2020 has kept science and politics, economy and society, but all of us as individuals on their toes in adjusting to “new normality”. Just before the summer break, we would like to inform you about IESP's activities over the last academic year.

Welcome New Members

We are delighted to introduce formally two new members to the IESP close network,

[Prof. Dr. Markus Disse](#), holds the chair of Hydrology and River Basin Management at TUM. He is a renowned and widely published expert in his field and has been affiliated with IESP for many years.

[Dr. Anton Frank](#) specializes in the modeling of environmental data, he coordinates the LRZ HydroBITS project works towards a modern, robust, and sustainable IT basis for Bavarian water management.

Corona

Over the last few weeks, the pandemic, its systemic risks, and challenges were a hot topic for writers of all trades. Now it is time to think about the possibilities that arise from this existential crisis. IESP's commitment to preserve and contribute to a healthy earth system, already germinated in two projects:

- A joint publication with the TUM Senior Excellence faculty that provides food for thought for the time after Corona.
- An IESP-signature-workshop in October 2020 that will intensively discuss the need for a stronger commitment to the Sustainable Development Goals (SDGs) to master the time after Corona.

General Assembly – Postponed

Subject to your approval, we have–nonetheless–decided to postpone this year's IESP General Assembly. Depending on the development of the Covid-19 pandemic and the accompanying restrictions to protect those among us at risk, we might gather sometime later in 2021.



Report: Agenda 2030 Goals at EASA 2020

Right before the lock-down in March 2020, IESP conducted a discursive afternoon seminar at the annual meeting of the European Academy of Science and Arts held at the University of Salzburg. Under the imperative, “Sustainable Development Goals –We are lacking dynamics!,” a heterogeneous group of international scholars discussed the broader questions raised by the complementing presentations of two keynote speakers: What consequences will the failure to meet several of the Sustainable Development Goals defined in the Agenda 2030 have on biodiversity and climate, especially in riverine and forest ecosystems.

First, Prof. Dr. Jürgen Geist of TU Munich spoke about the protection and use of water resources that can appear to be contradiction and synergy at the same time. Second, Dr. Anastasia Makarieva of the St. Petersburg Nuclear Physics Institute explained how the unity of forests and their water cycle define a critical edge in the fight for sustainability. It became clear how specific and complex the challenges for the individual ecosystems already are under the advent of climate change. Moreover, the juxtaposition outlined the need for broad interdisciplinary research that approaches the interdependence of water and forest ecosystems in their biological and physical nature.

Forests, like those of the Siberian taiga, are complex self-sustaining rainmaking systems. They recycle vast amounts of moisture into the air, and, in the process stir up winds that pump that water around the world. On a global scale, this makes forests a major driver of atmospheric circulation on Earth. On a local scale, they secure healthy aquatic and boreal ecosystems, which in turn contribute to the functioning of the biotic pump.

Project Update: New Perspectives for Agriculture and the Environment - Wir bleiben im Gespräch!

As part of the dialogue process, “Agriculture-Water Management-Climate Change. New Perspectives for Agriculture and the Environment,” launched in 2018, two consecutive two-day workshops have been held in 2019 and 2020, so far. The participants were farmers, agricultural stakeholders, representatives of the food trade, the environmental administration, the Bavarian Ministries of Agriculture and Environment, scientists, and representatives of civil society.



The respective workshops aimed to unravel the often diffusely expressed conflicts and expectations of the different sides in a protected environment. They identified the specific potential for social conflict to agree on new, specific topics for discussion preparing the next workshop. In between the events, the group intends to present the results of the very successful last workshop to a broad, concerned public. They are doing this because they believe that we can provide valuable suggestions for an overdue in-depth dialogue between the conflicting parties on ways to achieve a sustainable, socially recognized agriculture.

The last workshop in March 2020 identified five topics, which the participants unanimously agreed should be given priority in further discussions. These are, transparency, a connective model agreed between agriculture and society, transformation, dialogue, and self-organization. These results and recommendations for action (in German) are [for download](#) on the project website on www.iesp.de

The next workshop will take place in March 2021.

If you want to get involved with the project, please contact Wolfram Mauser.

Workshop Announcement: Sustainable Development Goals after Corona

“Sustainable Development after Corona. Stronger Commitment and Responsible Dynamics Are Needed. Approaches in Science, Technology, and Education,” is the title for the 2020 IESP signature-workshop.

From 14.-16.October 2020, a group of 40 scholars, political administrators, or entrepreneurs, will gather at the TUM Study and Science Center in Raitenhaslach to discuss the issue. The working groups will focus on aspects in ecology; the interconnection of water, nutrition, and employment; socio-economic dynamics; and innovative education.

Diverse opening presentations range from, “A Global Assessment of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) – towards a transformative change?” (Prof. Dr. Josef Settele, UFZ & iDiv), to “Germany in International Comparison in the Implementation of the SDGs” (Prof. Dr. Miranda Schreurs, TUM-HfP).

For the full program, [please visit the event page](#).

If you want to attend, feel free to send a message to Michael von Hauff.

Geo-Engineering - Rainfall Enhancement?

Since the early days of IESP, following the conference in Wildbad Kreuth in 2008, and the resulting "Zugspitze Declaration. The Art of Dealing Wisely with the Planet," geoengineering remains a central topic for the expert network.

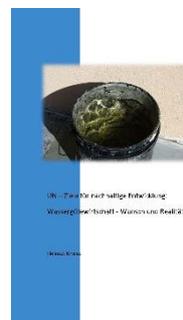
The drought of recent years has motivated some of the participating experts to promote the ion-emitter technology of Helmut Fluhrer's company WeatherTec that generates rainfall based on particle physics but without chemical pollution. In Jordan, Switzerland, and Australia, such naturally induced rainfall has already generated measurable success for the environment and society. Efforts are made that Germany's forests and plains can benefit from this innovative technology in the near future.

IESP-Publications

Over the year, IESP members have published amply in their respective field and contributed to interdisciplinary research or publication projects. Some of those are collected on our [website at the TUM Institute for Advanced Study](#):

Memoranda: The Memoranda section is a repository for the recommendations for action of past and present IESP-signature-Workshops, for example, the results from the workshop in March 2020.

Workshop Proceedings: The Workshop Proceedings from our Raitenhaslach meeting in spring 2019 is in the publication process with Springer Nature's Strategies for Sustainability Series. It will be the third contribution to this series, this time under the editorial lead of Peter Wilderer, Michael Molls, Martin Grambow, and Konrad Oexle.



IESP-Scripts: The section on workshop proceedings features a sub-category of special papers, essays, etc. For example, the co-authored paper “Schlüsselressourcen (Key Ressources),” an outcome of the 2019 workshop in Raitenhaslach, organized by Peter Wilderer.

Members Publications:

- [Anastasia Makarieva](#) and [Wolfram Mauser](#) are part of a research discussion on “Forest restoration“ in *Nature*, where research groups around the two scientists look at „Transformative trees“ the latter on „Expanding Agriculture.
- The environmental science blog “[Cassandra’s Legacy](#)” published a research epitaph of the late Victor Gorshkov, composed by Anastasia Makarieva. The article summarizes the work of the two Russian nuclear physicists and makes it accessible for a public audience. In June, Science Magazine published the article “[Weather Makers](#),” authored by Wildbad Kreuth emeritus Fred Pearce featuring the research team and locates them in the ongoing critical debate.
- A joint publication project with the TUM Senior Excellence Faculty, “[Science, Reason, Sustainability. Food for thought for the time after Corona](#),” contribtes to designing a human-friendly future, also for later/coming generations. The central questions in this publication are: What do the terms "responsibility" and "sustainability" entail the context of political, economic, and social action? What are the latest sustainable innovations in technology, communication, and education? How can digitalization and artificial intelligence contribute to solving these challenges?

If you have any news or publications to share with the IESP community via website, email, or newsletter, please send the information to iesp@ias.tum.de, and we will take it from there.

Last but not least

IESP’s funding is currently secured by the project on “Agriculture, Water Management, Climate Change”. However, your annual contribution of 120.- € with financial liberties, for example, to provide affiliated Ph.D. students or PostDocs supporting the workshops as rapporteurs with small stipends.

Very best wishes,

Michael von Hauff, Jörg Drewes, Wolfram Mauser, and Martin Steger
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