

GAIA ANNUAL MEETING

Christian Stamm, Swiss Federal Institute of Aquatic Science and Technology (Eawag), member of GAIA's Scientific Advisory Board
Patrick Wäger, Swiss Federal Laboratories for Materials Science and Technology (Empa), member of GAIA's Editorial Board

Scaling and mainstreaming of innovations for sustainability transformation from the perspective of scientific institutions and organisations

This year's *GAIA Annual Meeting* took place on the research and innovation campus of Empa and Eawag in Dübendorf, CH, and was for the first time jointly hosted by two institutions: the Swiss Federal Institute of Aquatic Science and Technology (Eawag) and the Swiss Federal Laboratories for Materials Science and Technology (Empa), both research institutes of the ETH Domain. The main topic – innovation scaling and mainstreaming for sustainability transformation, viewed from the perspective of scientific institutions and organisations – emerged from a recent initiative of the two institutions, the Climate Solutions Hub (CSH), which aims to accelerate the uptake and mainstreaming of transformative climate solutions.

The working group *Innovation for Sustainability Transformation* (AG INSIST) of the Swiss Academic Society for Environmental Research and Ecology (saguf) played a special role: it both organised a workshop and invited students involved in a project assessing the transformative orientation of innovation funding programmes developed in collaboration with the Eastern Switzerland University of Applied Sciences (OST) to present and discuss their findings with *Annual Meeting* participants at their booth.



FIGURE 1: Tim Geiges, WSL, and Philipp Lischer, ETH Zurich, presenting the outcomes of workshop 1 on testing and scaling of innovations for the sustainability transformation in living labs. © Kurt Baltensperger

The first part of the *Annual Meeting* started on Friday, April 11, 13:30 at the Empa Akademie with a welcome by the president of the Verein Gaia, **Claudia Bieling**. The two hosts, **Christian Stamm**, deputy director of Eawag, and **Patrick Wäger**, Head of Empa's Technology & Society Laboratory, then introduced the host institutions and outlined the two-day programme.

Livia Fritz

The knowledge systems we invest in shape which futures become thinkable and actionable. With funding for carbon removal research remaining geographically and disciplinarily concentrated, we must ask whose visions of the future are being built and whether we are prepared to grapple with the complexities of scaling.



FIGURE 2: Dinner talks: Bernhard Glaeser and Christian Stamm. © Kurt Baltensperger

The dense Friday afternoon programme featured two keynote talks, three parallel workshops, the *GAIA Best Paper* and *GAIA Masters Student Paper Awards* ceremony, and guided tours of NEST – the modular research and innovation building of Empa and Eawag.

In the first keynote, **Bernhard Truffer**, group leader at Eawag and professor at Utrecht University, NL, provided an overview of the challenges involved in scaling sustainable solutions, with a particular focus on the role of research institutes and universities. The second keynote was delivered by **Livia Fritz**, assistant professor at the University of Geneva, CH, who addressed the question of whose knowledge shapes emerging climate innovation landscapes, using carbon dioxide removal as a case in point.

Bernhard Truffer

The traditional communication and technology transfer approaches often fall short, especially when it comes to complex solutions in the context of climate change. This is why different institutions are working on more systemic approaches that build upon co-creation with practice.

After a lively plenary discussion, which raised, amongst others, the question of power in defining system boundaries of solution domains, the nearly 50 participants joined one of the three workshops organised by representatives of Swiss and international research institutions and organisations to explore selected aspects of the *Annual Meeting's* main topic:

- testing and scaling of innovations for the sustainability transformation in living labs (Vicente Carabias-Hütter, ZHAW WinLab, Tim Geiges, WSL, Philipp Lischer, ETH Zurich);
- innovative scaling formats and structures within and across scientific institutions and organisations (Björn Niesen, Kirsten Remmen, Peter Richner, Empa, Marjan Kreijns, TU Delft, The Green Village);
- scaling transformative innovation for sustainability: potentials and pitfalls (saguf AG INSIST, represented by Basil Bornemann, University



FIGURE 3: Claudia Bieling introducing Clemens Mader, OST, new member of GAIA's Scientific Advisory Board, and Marion Mehring, ISOE, who joined GAIA's Editorial Board. © Kurt Baltensperger

of Basel/UZH, Livia Fritz, University of Geneva, Clemens Mader, OST, Jürg Staudenmann, Wyss Academy for Nature, Patrick Wäger, Empa).

Following brief summaries of the workshop outcomes (figure 1), GAIA's Editor-in-Chief **Irmis Seidl** announced the winners of the GAIA Best Paper and the GAIA Masters Student Paper Awards, followed by presentations by the authors of the winning papers.

The afternoon sessions concluded with tours of the NEST building. Reto Largo, Empa, and Eva Reynaert, Eawag, provided insights on digital and circular innovations in construction and building technologies, including the Water Hub, a living lab focused on recovering nutrients, water, and energy from households.

Vicente Carabias-Hütter (workshop 1)

To ensure that successful innovation approaches for the sustainability transition can be continuously scaled up, we need a transdisciplinary coalition of like-minded individuals, professional project management, supportive system services, a scaling ecosystem, legitimacy and blueprints.

A guided walk along the Green Belt, a park-like open space stretching from the Empa Academy to the Forum Chriesbach, rounded off the day – ending at Eawag's Restaurant aqa for a shared dinner (figure 2). Seasonal and regional products, alongside wine from a new fungi-resistant cultivar, demonstrated that culinary highlights can easily go together with a low ecological footprint.

Björn Niesen/Kirsten Remmen (workshop 2)

Successfully scaling solutions for sustainability requires a shift in focus from technology development alone to the broader systems that enable adoption. Future efforts should therefore prioritise implementation, market creation and cross-sector collaboration to accelerate the transition from innovation to impact.

saguf AG INSIST (workshop 3)

Scaling transformative sustainability innovations confronts power relations, differing values, fears of loss, and tensions between speed and patience. Addressing these challenges requires inclusive innovation design, decentralised responsibility and learning processes, including the reflective use of digital opportunities.

Many attendees also joined the second part of the *Annual Meeting* on Saturday morning, April 12 at Eawag's Forum Chriesbach, which opened with a workshop on the role of AI in submitting and evaluating journal contributions. **Michael Bachmann** from Lib4RI, the library of the four research institutes of the ETH Domain, and **Ulrike Sehy**, co-head of journals department at oekom, introduced the workshop before participants split into two sub-groups: one focusing on the detection of AI misuse and the other on GAIA's AI policy. While there were concerns about misuse of AI putting the integrity of science and scientific publications at risk, participants also acknowledged the benefits of AI, such as its potential to review available literature to a much larger extent and to assist non-native speakers in writing good-quality texts. The workshop discussions and outcomes will feed into a revised GAIA AI policy, closing gaps in current declaration requirements and defining what to regulate and prohibit.

After a coffee break, **Claudia Bieling** introduced two new GAIA board members: **Clemens Mader**, OST, joining GAIA's Scientific Advisory Board, and **Marion Mehring**, ISOE, joining GAIA's Editorial Board (figure 3).

As is tradition, the *Annual Meeting* closed with reports from the Verein Gaia, GAIA Editorial Board and the publisher/Editorial Office on current activities, journal developments, and submission trends, before concluding with an outlook to the next *Annual Meeting* from 12th to 13th March 2027 at Eurac Research in Bozen, IT.

Finally, heartfelt acknowledgments went to **Kurt Baltensperger**, the two hosts and their institutions, all involved staff at Eawag and Empa for their outstanding support, and the keynote speakers and workshop organisers (figure 4).



FIGURE 4: Ulrike Sehy, oekom, acknowledging Kurt Baltensperger and the two hosts of GAIA's Annual Meeting 2026 Christian Stamm, Eawag, and Patrick Wäger, Empa. © Kurt Baltensperger