

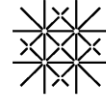
Public engagement with science: relevance and methods

Program, abstracts and bio sketches for the Mini Symposium

Monday, 10 April 2017, 9:15 - 16:00

ETH Zürich, MM C78.1 (Alumni-Pavillon)

- 09:15-09:45 **Risk perception and public engagement. Best practice and success factors.** Page 2
Christoph Beuttler, Stiftung Risiko Dialog
- 09:50-10:20 **Narratives and Worldviews. How to deal with thought patterns on sustainable lifestyle, global footprint and agriculture** Page 3
Melanie Paschke, Zurich-Basel Plant Science Center
- 10:20-10:40 **Coffee Break**
- 10:40-11:25 **How Can We Help Public Engagement with Science and Responsible Research and Innovation Reinforce Each-other?** Page 4
Brian Wynne, University of Lancaster (UK)
- 11:30-12:15 **Two parallel workshops:**
Workshop 1: Identifying social dimensions of own research
Workshop 2: Practice on public engagement
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- 12:15-13:15 **Lunch Break** (Complimentary)
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- 13:15-13:45 **Consumption corridors – who to engage when? Work in progress in the involvement of policy makers, stakeholders, and the general public in transitions towards sustainable consumption.** Page 5
Antoinetta Di Giulio, University of Basel
- 13:50-14:20 **Engaging in a useful dialogue with the public - The *Climate Garden 2085* experiment** Page 6
Juanita Schlöpfer, Zurich-Basel Plant Science Center:
- 14:25-14:45 **Reasons for minimal engagement of the public in research: An example on conservation genetics of valuable timber trees.** Page 7
Sascha Ismail, Zurich-Basel Plant Science Center:
- 14:45-15:00 **Coffee Break**
- 15:00-15:45 **Workshop:**
Benefits and limitations of public engagement with research
- 15:45-16:00 **Concluding remarks and wrap-up**
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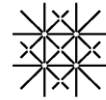


Risk perception and public engagement. Best practice and success factors.

Christoph Beuttler, Stiftung Risiko Dialog
09:15-09:45

Throughout history and especially since the petrochemical revolution the principal risks humans face have changed dramatically. In addition to risks emitting from the natural world we are in the modern world confronted with an array of man-made risks as well. It is evident that we have better control over natural risks through technology as it has created an incredible array of solutions, but also a completely new set of technological risks for society and indeed the whole planet. However our built in risks assessment systems (heuristics) that have developed as a response to the dangers of living in the natural world is not well adapted to these new types of risks. Moreover in today's world where (often conflicting) information is freely accessible the discourse about- and assessment of these risks remains no longer the preserve of professionals and scientist but moves more and more into the sphere of public debate. Chief amongst reasons for this might be an ever-stronger sense for democratic legitimation combined with the rise of the internet. The question in this new scenario is: how can these different groups enter into fruitful dialogues on these topics and how can they come to better understand the respective position of the other? This short presentation will after an introduction on risk perception, provide some best practices from Risk-Dialogue Foundation St.Gallen.

Christoph Beuttler is deputy CEO at Risk-Dialogue Foundation, a St. Gallen based think tank, where he specializes in energy transitions and climate change. Before, Christoph was a digital consultant, worked in IT consulting and as a Lecturer in Management and Sustainability at University of London. He studied economics, business administration and international business in Heidelberg and London. He is a visiting lecturer for risk perception and stakeholder engagement at ETHZ.



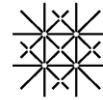
Narratives and Worldviews. How to deal with thought patterns on sustainable lifestyle, global footprint and agriculture.

Melanie Paschke, Zurich-Basel Plant Science Center

09:50-10:20

Scientists are operating within value frames but strive for value neutrality. A conceptual model for the roles of scientists engaging with the society is the honest broker (Pielke 2007). When engaging with the public it is the credibility of scientific results, but also the transparency about the value frames that can create acceptance and consensus in the social valorisation process. Value frames are often not declared by scientists but linked to narratives (or worldviews) that are running as an underlying motive through the communication of the scientific evidence. Taking the examples of sustainable agriculture and of climate engineering, we will together explore some of the narratives, underlying normative values and how they are communicated by stakeholders, scientists and the public.

Dr. Melanie Paschke is co-managing director of the Zurich-Basel Plant Science Center leading for example the Science & Policy Program and the PSC summer schools. She has a PhD in Environmental Sciences. Her interest is on how moral and normative values are communicated in science with a special focus on scenarios for the world in 2050.



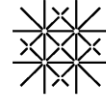
How Can We Help Public Engagement with Science and Responsible Research and Innovation Reinforce Each-other?

Brian Wynne, University of Lancaster (UK)

10:40-11:25

Public Engagement with Science was advanced around the turn-of-century as a proposed improvement to the previous commitment to Public Understanding of Science. It was intended to replace the one-way communication of science to (ignorant) publics with a more two-way interactive process in which scientists and scientific institutions *also* attempted to understand publics and their concerns about science and how it is translated into social impacts, typically through new technologies. In recent years the related aim of rendering existing scientific research and innovation "Responsible" has been adopted by important international policy bodies such as the EU (as in the 70bn Euro EU Horizon 2020 R&D funding programme). In this presentation I will explain: how both these laudable developments were conceived and advanced into science-policy processes internationally; how they have been (variably) interpreted by scholars and practitioners; and how they could be developed so as to help science and technology become more socially and democratically robust.

Brian Wynne is Professor Emeritus of Science Studies at Lancaster University. As a research scientist at Cambridge University (PhD in materials science), Brian became interested in the uneven distribution of research funds to certain fields. This led him to retrain in history, philosophy and sociology/politics of science. He then investigated the developing fields of technology assessment and later, risk assessment, initially mainly in energy domains including nuclear power, later (from the late 1980s) also for biotechnologies, including agricultural innovation. He is interested in how non-scientific knowledges of salient publics of science such as farmers is understood by scientific experts dealing with agricultural innovation. Brian has published widely on scientific knowledge, environmental risk assessment, and publics. In 2010 he was awarded the J.D.Bernal Prize by the Society for Social Studies of Science, 4S, "for distinguished contributions to the field". From 1994 to 2000 he was an inaugural member of the Management Board and of the Scientific Committee of the European Environment Agency, and a member of the London Royal Society's Science in Society Committee from 2000 to 2004. He was also special adviser to the UK House of Lords Select Committee on Science's inquiry and report on *Science and Society*, issued in March 2000. From 2005 to 2007 he chaired the EU Expert Working Group on Science and Governance, producing the 2007 European report, *Taking the European Knowledge Society Seriously*.



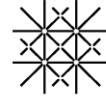
Consumption corridors – who to engage when? Work in progress in the involvement of policy makers, stakeholders, and the general public in transitions towards sustainable consumption.

Antoinetta Di Giulio, University of Basel

13:15-13:45:

The concept of "consumption corridors" is one of the results of the inter- and transdisciplinary research programme "From Knowledge to Action – New Paths towards Sustainable Consumption" funded from 2008 to 2014 by the German Federal Ministry of Education and Research (BMBF) as part of its Socio-Ecological Research Program (SOEF). The programme consisted of 10 research groups (involving a total of 100 researchers from more than 15 disciplines and 80 partners from practice) and an accompanying research project having the task of facilitating integration. The process of knowledge integration led to results primarily directed at a scholarly audience and to eight messages, the so-called "consumption messages" addressing societal actors shaping public discourse on sustainable consumption in Germany. In order to validate and refine them, in the course of their development these eight messages have been subjected to a broad discussion involving about 70 representatives of government, education, business, science, organizations and foundations. In my presentation, I will first explain how these messages were developed and how we identified the societal actors to be involved in this process. I will then discuss, taking the example of "consumption corridors" why and how we distinguish transdisciplinary collaboration and public engagement, and I will present our experiences and plans with regard to getting this concept into public debate.

Dr. Antonietta Di Giulio: PhD in philosophy (University of Bern, Switzerland). Leader of the Research Group Inter-/Transdisciplinarity and senior researcher at the Program Man-Society-Environment (MGU), Department of Environmental Sciences, University of Basel, Switzerland. Until 2014 senior researcher and lecturer at the Interdisciplinary Centre for General Ecology (IKAÖ), University of Bern. I was always fascinated by the question of inter- and transdisciplinary communication and collaboration. That is the reason why I always engaged in inter- or transdisciplinary research and why I started to inquire into the conditions of such collaboration. Another issue that gained importance in my research is how we can relate the notion of good life to sustainability and sustainable consumption, because I am deeply convinced that the notion could provide a new narrative for a sustainable future.

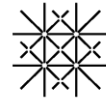


Engaging in a useful dialogue with the public - The *Climate Garden 2085* experiment

Juanita Schlöpfer, Zurich-Basel Plant Science Center:
13:50-14:20:

Climate change has been communicated as a global concern affecting us all, but there is still a disconnection between scientific information and political and social action - the climate paradox. This has been a cause for concern among scientists for some time now. But if, as psychologists tell us, the human brain responds better to experience than to analysis, then climate change must be told as a local and personal story – just as the *Climate Garden 2085* does.

Juanita Schlöpfer is Project coordinator for the Plant Science Expeditions and Discovery Workshops for Youth at the Zurich-Basel Plant Science Center (PSC). She has a Masters in Science Communication and a PhD in knowledge production in art and science. She has twenty years' experience designing inquiry-based learning exhibits in the natural sciences. Since 2012 at the PSC she has developed workshops and experiments to engage children and teens with plant science. Her exhibition *Climate Garden 2085* is a narrative environment designed to engage visitors with the effects of climate change on the food they eat and the landscape they live in. She teaches science communication courses at the ETH Zürich and regularly speaks at conferences on Science Communication and transdisciplinary research.



Reasons for minimal engagement of the public in research: An example on conservation genetics of valuable timber trees.

Sascha Ismail, Zurich-Basel Plant Science Center

14:25-14:45

PhD students have one ultimate goal: Completing the thesis. Especially towards the end of a PhD thesis, considerations of the social dimensions of the research project can become secondary. Using my own PhD thesis as an example, I will present cultural, legal and institutional obstacles, which made me to engage as little as possible with the public.

Working on culturally and economically valuable tree species in sacred groves embedded in coffee plantations in South India is a complex setting for effective conservation. In addition, the extent of illegal timber extractions and the criminal potential of people involved in this was difficult to estimate. Further, there was no legal certainty on access and benefit sharing regulations. From the academic perspective, I soon learnt that for publishing in scientific journals, I need to focus on general ecological phenomena, which are relevant to a broad readership but not necessarily for the local community. Nevertheless, already minimal engagement with the villagers helped that the local populations of the tree species I studied will survive me.

Sascha Ismail is working at the Zurich-Basel Plant Science Center (PSC) as coordinator of the Future Forums, which aim to provide the opportunity for young researchers to engage with the public. He has an undergraduate degree in Environmental Sciences and a PhD in conservation genetics of rare tropical tree species, both from ETH Zurich. He then held two PostDoc positions at the Botanical Garden in Berlin and at the University of Aberdeen. In his research, he uses molecular tools for investigating consequences of habitat fragmentation and small population size for plant reproduction.