



## **Creating dialogue: a workshop on “Uncertainty in Decision Making in a Changing Climate”**

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Uncertainty is present in all fields of climate research, spanning from projections of future climate change, to assessing regional impacts and vulnerabilities, to adaptation policy and decision-making. In addition to uncertainties, managers and planners in many sectors are often confronted with large amounts of information from climate change research whose complex and interdisciplinary nature make it challenging to incorporate into the decision-making process. An overarching issue in tackling this problem is the lack of institutionalized dialogue between climate researchers, decision-makers and user groups. Forums that facilitate such dialogue would allow climate researchers to actively engage with end-users and researchers in different disciplines to better characterize uncertainties and ultimately understand which ones are critically considered and incorporated into decisions made.

We propose that the introduction of students to these challenges at an early stage of their education and career is a first step towards improving future dialogue between climate researchers, decision-makers and user groups. To this end, we organized a workshop at the University of Zurich, Switzerland, entitled “Uncertainty in Decision Making in a Changing Climate”. It brought together 50 participants, including Bachelor, Master and PhD students and academic staff, and nine selected speakers from academia, industry, government, and philanthropy. Speakers introduced participants to topics ranging from uncertainties in climate model scenarios to managing uncertainties in development and aid agencies. The workshop consisted of experts’ presentations, a panel discussion and student group work on case studies. Pedagogical goals included i) providing participants with an overview of the current research on uncertainty and on how uncertainty is dealt with by decision-makers, ii) fostering exchange between practitioners, students, and scientists from different backgrounds, iii) exposing students, at an early stage of their professional life, to multidisciplinary collaborations and real-world problems involving decisions under uncertainty.

An opinion survey conducted before and after the workshop enabled us to observe changes in participants’ perspectives on what information and tools should be exchanged between researchers and decision-makers to better address uncertainty. Responses demonstrated a marked shift from a pre-workshop vertical conceptualizations of researcher—user group interaction to a post-workshop horizontal mode: in the former, researchers were portrayed as bestowing data-based products to decision-makers, while in the latter, both sets of actors engaged in institutionalized dialogues and frequent communication, exchanging their needs, expertise, and personnel. In addition to the survey, we will draw on examples from the course evaluation to illustrate the strengths and weaknesses of our approach. By doing so, we seek to encourage the organization of similar events by other universities, with the mid-term goal to improve future dialogue. From a pedagogical perspective, introducing students to these ideas at a very early stage in their research careers is an ideal opportunity to establish new modes of communication with an interdisciplinary perspective and strengthen dialogue between climate researchers, decision-makers and user groups.