

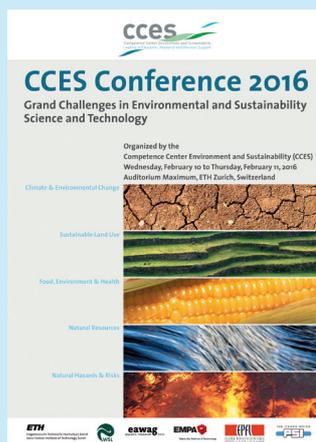
## CCES News 16

### News from the CCES Office

#### CCES Conference 2016 – «Grand Challenges in Environmental and Sustainability Science and Technology», February 10 to 11, 2016, ETH Zurich

The aim of the conference is to give an account of the state-of-the art knowledge in the **five research areas** covered by CCES and how this knowledge can contribute to solving various pressing societal problems. During the two-day event, there will be six research sessions. Each will consist of three talks of 25 to 30 minutes followed by a half-hour discussion. A challenger will promote and stimulate discussion in each session. The sessions' topics will be addressed and presented by leading CCES scientists as well as by well-known international personalities. The conference will be concluded by a panel discussion in the afternoon of the second day, addressing the challenges and difficulties encountered in the dialog between politics and science. Further information on speakers and contents of the sessions can be found on our [program](#) page.

The target audience of the event are members of the environmental scientific community (master and PhD students, postdocs, and senior scientists including professors), as well as stakeholders outside academia who are interested in the topics addressed. The conference provides a unique opportunity to learn about the newest scientific



developments in areas of great societal relevance, and it offers an interesting platform for networking. Save the date and [register already now](#). Please let other persons potentially interested in the conference topics know about the event and forward this announcement or the flyer [[www.cces.ethz.ch/conference2016/Flyer\\_CCES\\_Conference\\_2016.pdf](http://www.cces.ethz.ch/conference2016/Flyer_CCES_Conference_2016.pdf)].

For further information, please contact the CCES office at [info@cces.ethz.ch](mailto:info@cces.ethz.ch) or Patrick Jiranek (phone: +41 (0) 44 632 85 37).

### Outreach

#### CCES Winter School 2015 «Science meets Practice» at ScienceComm'15

The CCES Winter School «Science meets Practice» was once again participating at ScienceComm, a key conference held in Switzerland dedicated to science communication. This year's conference themes were on «Crisis of Science» and «Open Science / Citizen Science», the latter being specially relevant for the CCES Winter School given the techniques in co-production of knowledge that are imparted to participants during the program. One key technique focuses on communicating results from surveys, interviews and focus groups back to stakeholders for discussion and validation through knowledge exchange. An approach tried out by Winter School participants in 2015 aimed



Poster presentation at ScienceComm'15. Photo: Patricia Fry

at creating a space for knowledge exchange with stakeholders by using an open market environment (market space method) via a series of posters and other displays. The open market approach was the topic of the poster [[www.cces.ethz.ch/winterschool/ScienceComm15\\_CCES\\_Winter\\_School\\_Poster\\_Adler.pdf](http://www.cces.ethz.ch/winterschool/ScienceComm15_CCES_Winter_School_Poster_Adler.pdf)] presented at ScienceComm'15 to share knowledge based on this experience, which proved to be a very useful means for engaging

with stakeholders. Planning for the next edition of the CCES Winter School is well under way, with applications already received from many diverse disciplinary backgrounds and countries.

For more information, see our website: [www.cces.ethz.ch/winterschool](http://www.cces.ethz.ch/winterschool).

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### Workshop «Dialog between Politics and Science – the Case Study of Energy Transition»

Co-organized by the Swiss Academy of Sciences (SCNAT) and CCES, a follow-up workshop analyzing the science-policy interface took place at ETH Zurich on November 6, 2015. Participants comprised 45 personalities from politics, public administration, business, science, and from the science-policy interface. The workshop aimed at identifying strategies and institutional prerequisites for improving the dialog between science and politics, particularly with respect to complex scientific issues. Landmark decisions towards the energy transition in Switzerland served as a up to date topic (case study) in order to focus the group discussions on successful or failed knowledge transfers as well as on recommendations for interaction improvements.

Among other conclusions, participants agreed that basic requirements for an improved science-politics dialog include the establishment of more powerful permanent exchange channels between science and political stakeholders including public administration. With such channels the awareness within the scientific community for actual political issues as well as the awareness within the political community for future



Workshop participants during roundtable discussion. Photo: Omar Kassab

challenges could and should be significantly improved. In general, scientific consensus as well as dissent and knowledge gaps should be made more transparent. Since many of the present and future problems to be solved are very complex in nature, appropriate funding is required for inter- and transdisciplinary research as well as for knowledge transfer of complex issues. In this context, career opportunities in problem-oriented research areas should be further developed. The results of the workshop will form the base of a panel session at the CCES Conference 2016 ([www.cces.ethz.ch/conference2016](http://www.cces.ethz.ch/conference2016)).

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## Education

### NFZ-Summer School 2015: Climate change impacts on forest ecosystems

The CCES supported this year's NFZ-Summer School which took place at Fafleralp in the Swiss Lötschental valley. The NFZ.forestnet (Nancy-Freiburg-Zurich) is a European research and higher education network, which gathers French, German

and Swiss institutions working on forest ecosystems. The yearly Summer School alternately organized by one of the three partner countries is a central project of the network. The motivation for this summer school was initially – based on expe-

periences in the CCES project MOUNTLAND – that sustainable solutions in the context of climate change impacts on forest ecosystems often ask for interdisciplinary and cross-scale approaches (Huber et al. 2013). Distinguished researchers with different methodological background such as stable isotopes, eddy covariance flux, dendrochronology as well as landscape modeling explored the possibilities and limits of interdisciplinary and cross-scale concepts within their specific research field and discussed linkages to other levels and scales. In addition, excursions to field experiments and experimental platforms provided hands-on experience to climate change research in European mountain forests. The 19 students from nine different countries across the globe profited from outstanding scientific presentations and they learned in interactive group works, facilitated by the TdLab of ETH, how to apply methods in co-producing knowledge to develop interdisciplinary or cross-scale research proposals.

**Contact:** Robert Huber, Swiss Federal Research Institute WSL; [robert.huber@wsl.ch](mailto:robert.huber@wsl.ch)



Hands-on experience of climate change impacts in mountain regions: the NFZ-Summer School in the Lötschental valley. Photo: Michèle Kaennel Dobbertin.

Huber R. et al. (2013). Sustainable Land Use in Mountain Regions Under Global Change: Synthesis Across Scales and Disciplines. *Ecology and Society* 18 (3). DOI:10.5751/ES-05499-18033

### Teaching Unit on «Landscape Genetics»

In cooperation with CCES and Janine Bolliger from the Swiss Federal Research Institute WSL, Patrick Faller and the team of the MINT-Learning Center at the ETH Zurich developed a teaching unit on landscape genetics for biology lessons at Swiss gymnasiums. Landscape genetics answers ecological questions by using the methods of molecular genetics. Thus, landscape genetics is an important basis for planning in the protection of the environment and a research area of growing interest.

This teaching unit is suited for all Swiss short- and long-term gymnasiums and contains teaching materials for six lessons. In addition to detailed suggestions for the organization of each lesson, it also contains cognitively activating introductory questions as well as prompts for self-explanations to promote the construction of intelligent knowledge. It is supplemented by metacognitive questions that help learners to reflect their understanding.

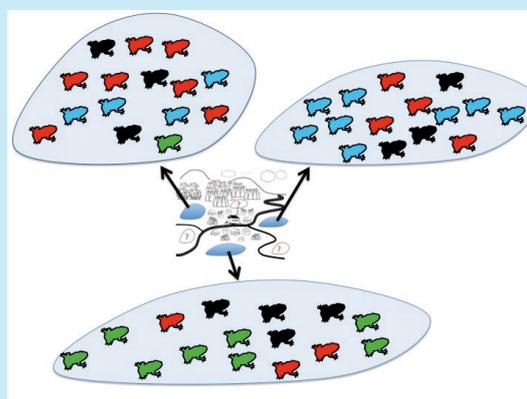
For further information, please visit our website: [www.educeth.ch/mint/fort](http://www.educeth.ch/mint/fort)

The teaching unit is based on results of the CCES project GeneMig:

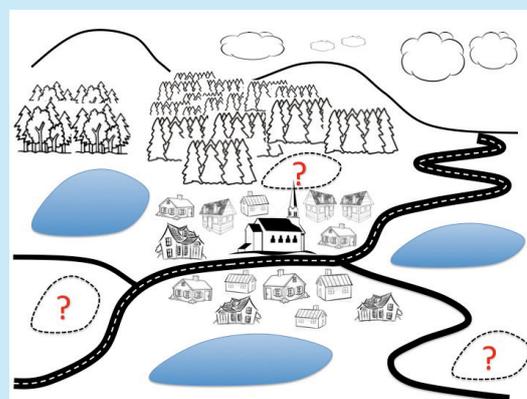
[www.cces.ethz.ch/projects/sulu/genemig](http://www.cces.ethz.ch/projects/sulu/genemig)

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Where shall the new pond best be placed?  
Illustration: MINT-Learning Center, ETH Zurich



Molecular genetics answers questions about the degree of kinship of the different populations.  
Illustration: MINT-Learning Center, ETH Zurich