



Dear CNDS fellows,

Hope everyone had a nice and relaxing summer!

Highlights since the last CNDS news flash

- The summer was kick-started with the NEEDS conference, which provided many of us with the opportunity to present our research and learn about other research efforts. Here is the [NEEDS 2019 conference package](#) for those of you who were not able to attend or for those of you who would like to refresh their memory of the conference proceedings. The conference Facebook page also has some video footage of the speakers. The NEEDS 2020 Conference will be hosted in Östersund by the Risk and Crisis Research Centre on March 10-12. The deadline for panels is September 1 and the deadline for abstracts is October 1. [More details here.](#)
- CNDS held its second annual summer school last week (19-23 August) at Uppsala University for early career scientists from earth, social and engineering sciences who wanted to learn more about the interplay between natural hazards and vulnerabilities. Twenty-one PhD students from nine countries participated in the summer school, where they had the opportunity to interact with our CNDS researchers as well as our two invited speakers: Philip Ward (Vrije Universiteit Amsterdam) and Hannah Cloke (University of Reading). European Geosciences Union (EGU) supported the event through, e.g., travel grants for ten participants.
- [Several CNDS fellows presented their research at EGU 2019.](#) See the entire [conference programme here.](#)
- Congratulations to Eduardo Reynolds who successfully defended his doctoral thesis!

Congratulations to the recipients of the CNDS Interdisciplinary Grant

- [Maria Rusca](#), “After the Disaster - An interdisciplinary analysis of post flood and drought recovery” (field work, data collection, documentary, and videography).
- [Elisa Savelli](#), “Engaging Socio-Hydrology with Urban Planning (AESOP workshop).
- [Braden Walsh](#), “Early warning systems for debris flows: state of the art and challenges” (workshop held at the Free University of Bozen-Bolzano).
- [Eirina Katsidoniotaki](#), “OpenFOAM Advanced – Summer” (summer course organized by Department of Civil, Chemical and Environmental Engineering, University of Genova).

New positions within CNDS

- A big warm welcome to [Karagiorgos, Konstantinos](#), Centre for Climate and Safety's new postdoctoral researcher. Konstantinos holds a PhD in flood vulnerability and risk analysis. At CCS, he is working on the research project Swedish Pluvial Modelling Analysis and Safety Handling (SPLASH). His research interests focus on hydrologic analysis, hydraulic simulations, vulnerability assessments, exposure analyses, and catastrophe modelling.



CNDS Reference Group, established March 2019

- Viveca Norén – A former CNDS doctoral candidate who successfully defended in 2016 and who works at the Swedish Civil Contingencies Agency (MSB)
- Malin Mobjörk - Stockholm International Peace Research Institute (SIPRI)
- Ilias G. Pechlivanidis - Swedish Meteorological and Hydrological Institute Research (SMHI)
- Pär Holmgren - Länsförsäkringar Alliance
- Johan Litsmark - Länsförsäkringar Alliance
- Yvonne Andersson-Sköld - Swedish National Road and Transport Research Institute (VTI)

Important dates for 2019

- **4 September, CSS, Karlstad University.** Seminar on modeling of societal exposure and vulnerability to natural hazards. Speakers will be Jesse Rozelle and Casey Zusak from the Federal Emergency Management Agency in USA and Daniel Knös from JLT Re. Contact [Tonje Grahn](#) you are interested.
- **12 September, 14:15-17:00.** CNDS day, Swedish Defence University. Mingle lunch then the research seminar “The future of DRR in Sweden and beyond: Prospects and challenges” followed by the teambuilding activity “The Old Town Challenge” and dinner at 19ish. If you would like to attend part of or the entire program, please send an email with any dietary requests to [Stephanie Young](#) by September 4. [Full programme](#) attached to this email.
- **23 October, 10:00–17:00.** CNDS Annual Assembly, Karlstad. More details provided closer to the date.
- **24 October, 14:15-17:00.** Research seminar, Karlstad. More details provided closer to the date.
- **5 December, 14:15-15:00.** Research seminar. More details provided closer to the date.

Current research projects

- [HydroSocialExtremes - Understanding the interplay of water and society](#) - This ERC-granted CNDS project aims at unravelling the mutual shaping of society and hydrological extremes by explaining the causal mechanisms underlying this interplay, and uncovering the conditions in which the dynamics described above tend to emerge. [Check out the project's website and follow their research journey here.](#)
- [Stable yields also under extreme weather?](#) Researchers at SLU and CNDS, Uppsala University received funds from Formas, for a project to support the adaptation of agriculture to climatic extremes. The project will not only take into account the crops, cropping options and weather conditions, but also the human dimension – the farmers’ risk attitude and their decision making under uncertainty.



List of new publications, debate articles, blogs, and opinion pieces

- Ö. Bodin; S. M. Alexander; J. Baggio; M. L. Barnes; R. Berardo; G. S. Cumming; L. E. Dee; A. P. Fischer; M. Fischer; M. Mancilla Garcia; A. M. Guerrero; J. Hileman; K. Ingold; P. Matous; T. H. Morrison; D. Nohrstedt; J. Pittman; G. Robins; and J. S. Sayles. **Improving network approaches to the study of complex social–ecological interdependencies**. *Nature Sustainability*. Vol 2, July 2019, p. 551–559.
*The study contributes to understanding how societies interact with ecosystems, which in turn can add new insights to research on disaster risk reduction.
- **Civil Protection Cooperation in the European Union: How Trust and Administrative Culture Matter for Crisis Management**. Sten Widmalm, Charles Parker, and Thomas Persson.
*The book provides insights to what kind of cooperative structures exist in Europe in this issue area—in single countries, between countries, and at the EU level. It shows how trust, shared norms, cooperative networks, and administrative culture determine how well the system functions and the ability of countries to cooperate in this area. It also analyses how much cooperation within the Union can be sensibly expected and which cleavages and barriers must be overcome in the pursuit of future policy reforms.
- Christie Nicoson & Nina von Uexkull. **Overlapping vulnerabilities: the impacts of climate change on humanitarian needs**. Norwegian Red Cross: Oslo
*CNDS fellow and Associate Professor Nina von Uexkull, together with Christie Nicoson and colleagues from the Norwegian Red Cross, were commissioned to investigate in what ways climate change is affecting humanitarian work and needs. In their report they present the broad humanitarian consequences of global warming, with the aim to inform humanitarian actors across different fields. It is the first of its kind and it highlights the short-term impacts of climate change that will be the most relevant within a 10-year timeframe.
- Katharine J. Mach; Caroline M. Kraan; W. Neil Adger; Halvard Buhaug; Marshall Burke; James D. Fearon; Christopher B. Field; Cullen S. Hendrix; Jean-Francois Maystadt; John O’Loughlin; Philip Roessler; Jürgen Scheffran; Kenneth A. Schultz; & Nina von Uexkull. **Climate as a risk factor for armed conflict**. *Nature*, Vol 571, pages 193–197 (2019).
*This study suggests that climate change has increased conflict risks over the past century, but other drivers, such as low socioeconomic development and low capabilities of the state, are much more influential. The study, based on expert elicitation, suggests that risks increase with intensifying climate change. While uncertainty about pathways are substantial, the study underlines the potential for important security implications if the emission of greenhouse gases is not curbed.
- F. Nardi; A. Annis; G. Di Baldassarre; E. R. Vivoni; & S. Grimaldi. **GFPLAIN250m, a global high-resolution dataset of Earth’s floodplains**. *Scientific Data*, Vol 6, Article number: 180309 (2019).



*Abstract: Research findings on the relationship between climate and conflict are diverse and contested. Here we assess the current understanding of the relationship between climate and conflict, based on the structured judgments of experts from diverse disciplines. These experts agree that climate has affected organized armed conflict within countries. However, other drivers, such as low socioeconomic development and low capabilities of the state, are judged to be substantially more influential, and the mechanisms of climate–conflict linkages remain a key uncertainty. Intensifying climate change is estimated to increase future risks of conflict.

- Harri Geiger, Valentin R. Troll, Ester M. Jolis, Frances M. Deegan, Chris Harris, David R. Hilton, & Carmela Freda. **Multi-level magma plumbing at Agung and Batur volcanoes increases risk of hazardous eruptions.** Scientific Reports, 12 July 2018.

* The island of Bali in Indonesia is home to two active stratovolcanoes, Agung and Batur, but relatively little is known of their underlying magma plumbing systems. The authors define magma storage depths and isotopic evolution of the 1963 and 1974 eruptions using mineral-melt equilibrium thermobarometry and oxygen and helium isotopes in mineral separates. Olivine crystallised from a primitive magma and has average $\delta^{18}\text{O}$ values of 4.8‰. Clinopyroxene records magma storage at the crust-mantle boundary, and displays mantle-like isotope values for Helium (8.62 R_A) and $\delta^{18}\text{O}$ (5.0–5.8‰). Plagioclase reveals crystallisation in upper crustal storage reservoirs and shows $\delta^{18}\text{O}$ values of 5.5–6.4‰. The authors' new thermobarometry and isotope data thus corroborate earlier seismic and InSAR studies that inferred upper crustal magma storage in the region. This type of multi-level plumbing architecture could drive replenishing magma to rapid volatile saturation, thus increasing the likelihood of explosive eruptions and the consequent hazard potential for the population of Bali.

Greetings from former CNDS PhD student, Colin Walch

Dear all,

I have recently left Uppsala University to work with the International Committee of the Cross (ICRC) as a delegate in Bunia, a small town in Eastern Democratic Republic of the Congo affected by armed conflict and Ebola. Among other things, I'll be in charge of negotiating humanitarian access with various armed groups to facilitate aid in conflict zones, and I will be visiting prisons to make sure that combatants on both sides of the civil conflict are treated according to the Geneva Conventions.

I would like to thank CNDS for the wonderful time I had as a PhD student and all the friends I made. It has been a very hard decision to leave, but I know this will be a great opportunity to have an impact in the field. I hope to keep doing research on the side and to stay in touch with CNDS.

Yours,
Colin Colin.walch@gmail.com



Reminders

- Please send your updates (new publications, conference participation, video footage, news items or any other exciting events we should share) to [Stephanie Young](#) or [Johanna Mård](#).
- Please remember to add your CNDS affiliation (and logo where appropriate) in your correspondences and publications. Example: Name, Department, University, “Centre of Natural Hazards and Disaster Science”



Hijack the CNDS twitter account and keep the rest of us updated on what's happening. If you are interested in doing this, please contact [Stephanie Young](#) or [Frederike Albrecht](#).

Links to the CNDS units

Uppsala University

[Department of Earth Sciences](#)

[Department of Government](#)

[Department of Peace and Conflict Research](#)

[Department of Engineering Sciences](#)

[Department of Information Technology](#)

Karlstad University

[Centre for Climate and Safety](#) (CCS)

Swedish Defence University

[Centre for Societal Security](#)

Centre of Natural Hazards and Disaster Science

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