

Christophe STURM

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Professional project

After 10 years as associate professor in climate modelling (stable water isotopes) at the Bolin Centre for Climate Research (Stockholm University), I joined SMHI in order to pursue my interest for climate change in a more applied manner. Besides my expertise in climate statistics, my task is to answer climate-related questions from the public, and to represent SMHI in several information workshops/conferences. In particular, I have specialised in expliciting relevant information from the IPCC 6th assessment reports (AR6-WG1, SR15, SRCCL, SROCC) for various publics: e.g. Stockholm School of Economics (sustainable finance), media contacts, schools. I wish to pursue this effort and focus on evaluating and implementing climate impact, adaptation and mitigation policies at national, European and international level.

My expertise lies within quantitative data analysis, and scientific publication writing and survey. I have extensive experience with planning, performing and disseminating scientific projects for a broader audience: organisation of workshops, coordination of international partners, supervision of graduate students and early-stage colleagues, oral presentations at international conferences and writing of scientific articles (20 articles in peer-reviewed journals). Based on a long experience of cross-disciplinary collaborations, I looked forward to integrating a team with complementary skills.

Expertise and skills

Communication

- **Communication towards the general public:** as expert IPCC reviewer and member of the SMHI communication task-force on IPCC AR6-WG1, the core of my communication activity is to address the recent advances in climate change physics, impacts, adaptation and mitigation, in particular their level of (un)certainity.
- **Scientific communication:** throughout my career as climate scientist, I have delivered numerous oral and poster presentations at international conferences.
- **Teaching skills:** as associate professor at Stockholm University, I had the opportunity to develop pedagogical methods in both oral and graphical communication. While the subject taught needs to be scientifically rigorous, it is essential that it captures the curiosity of the student and encourages her/him to engage in further learning.
- **Social media:** to get a broader view of the climate debate, reach out to its stakeholders (journalists, sustainable finance/insurance, industry) and explain scientific results, I am regularly active on LinkedIn (>2700 connections worldwide). LinkedIn has proven to be a platform to meet, debate and collaborate with professionals I wouldn't have met otherwise.

Leadership and project managing

- **Production design for climate services at SMHI:** "Klimatscenariotjänsten" is SMHI/Klimatfabriken flagship project, delivering information on Sweden's future climate to policymakers and the general public. My role, as part of the leading group, is to supervise the design of the production line, and optimise the coordination with the research team (Rossby Centre) and the web team (SPOCK).
- **Leadership and participation in international research projects:** It includes the planning phase ("brain storming") in which new concepts are elaborated to be evaluated later; a particular challenge is to get partners from different countries and/or fields of expertise to collaborate in the most effective way. During the performing of the research project, the Principal Investigator is responsible for insuring that all sub-tasks are delivered timely, so that colleagues can carry on with follow-up tasks without delay. It is also critical to regularly adapt the initial plan, reorient it if needed, once it becomes clear that initial ideas cannot be performed as expected.
- **Supervision of students and early-stage researchers:** As associate professor, I completed the "Supervision and leadership" course required for the docent grade. I have supervised 5 students in the completion of their Masters' research project, and 2 early-stage researchers (Post-Doctoral fellows). Beyond the scientific requirements of this responsibility, this task taught me how to improve my communication skills, focus on adapted methodology for each collaborator, and raise motivation and personal support though the various phases of the project.

Cooperation

- Leading interdisciplinary projects: In response to a joint call by INRA/FORMAS, Jérôme Ogée and myself organised a workshop in Biarritz (2009) bringing together European researchers (>30) in land-surface modelling, tree physiology and paleo tree-ring experts. The major challenge during this workshop was to ensure that each community would understand the fundamental notions and tools that other used, in order to have constructive discussions. The International Atomic Energy Agency (IAEA) mandated Kei Yoshimura and myself to organise a workshop in Vienna (2008), in order to bring together all researchers worldwide (18) incorporating stable water isotopes in global and regional climate models. The workshop and follow-up project gave us the opportunity to illustrate and reach out to other scientific communities, such that they could use the results SWI-enabled climate models for their own research.
- SIDA-funded Nepal-Bhutan project: Based on earlier contacts, established with interested partners in Bhutan and Nepal during an international conference in Thimpu (2012), a proposal was prepared as a collaborative effort for a SIDA call for projects on the Monsoon dynamics and variability – which was innovative in this part of the world. It required special attention to assess the partners' particular interests (in relation to stakeholders' requirements), local resources and feasibility of field studies, as well as addressing the scientific challenge of understanding the local repercussions of the Indian monsoon system.

Professional experience

Climate statistician and communicator | SMHI – Climate statistics and information unit | Nov 2018 – Now

- Production leader for “Klimatscenariotjänsten”: presenting future climate scenarios for Swedish policymakers
- Expert reviewer to AR6-WG1 and WG2, member of SMHI communication task-force for IPCC AR6-WG1 report
- Project leader for the homogenisation of historical (1850 – present) climate observations

High-school Supply Teacher | Lärarjouren and Vikarie Direkt | May 2018 – Nov 2018

- Registered for following subjects: Maths, Physics, Chemistry, Biology, French, German

Associate Professor | Bolin Centre for Climate Research (Stockholm Uni.) | Feb 2008 – Mar 2018

- Project leader for a workshop on stable water isotope-enabled climate models, mandated by the International Atomic Energy Agency (IAEA), Isotopic Dendroclimatology Workshop funded by INRA/FORMAS, Research project on Monsoon Dynamics and Variability funded by SIDA.

Visiting scientist | Uni. of Victoria (British Columbia, CA) | Mar 2011 – Aug 2011

- Coupling atmospheric and hydrologic models with stable water isotope diagnostics

Researcher | Bjerknes Centre for Climate Research (Bergen, NO) | Aug 2006 – Feb 2008

- Modelling of the terrestrial carbon cycle, coupling to the oceanic carbon cycle, CMIP-type projections

Researcher | Australian Nuclear Science and Technology Org. (Sydney, AUS) | Jun 2005 – June 2006

- Evaluation water and energy fluxes in stable water isotope enabled land-surface parameterisation schemes.

PhD | Max-Planck-Inst. für Meteorologie (Hamburg, D), Glaciology Inst. (Grenoble, F) | Jan 2002 – Jun 2005

- Development of the stable water isotope module in the regional climate model REMO.

Consultant | Jawaharlal Nehru Uni. (New Delhi, IN) | Aug 2001 – Jan 2002

- Scientific cooperation between the Glacier Research Group, Jawaharlal Nehru University (JNU, New Delhi, India) and the Great Ice unit, Institut de Recherche pour le Développement (IRD, Montpellier, France)

Education

PhD | June 2005 | Max-Planck-Institut für Meteorologie (Hamburg-D) / Laboratoire de Glaciologie (Grenoble-F)

- Title: Regional modelling of the atmospheric stable water isotope cycle
- Supervision: Dr Gerhard Krinner (LGGE), Prof. Hans Graf (MPI-M), Dr Georg Hoffmann (LSCE, Saclay-F)

Master in Geosciences | June 2001 | Ecole Normale Supérieure (Lyon-F) / Université Grenoble-Alpes (F)

- Admitted at rank #9 in national entrance examination to French elite university ENS (Earth & Life Sciences, 1998), including 4-year scholarship
- Major: Climate and Physics-Chemistry of the Atmosphere
- ERASMUS exchange: Hydrology programme at Uppsala University (VT 2000)

Language skills

- French: mother tongue
- German: mother tongue
- English: fluent in speaking and writing
- Swedish: fluent in speaking and writing
- Spanish: good comprehension