Annual Report 2020

Malin Stenberg de Serves (ED)

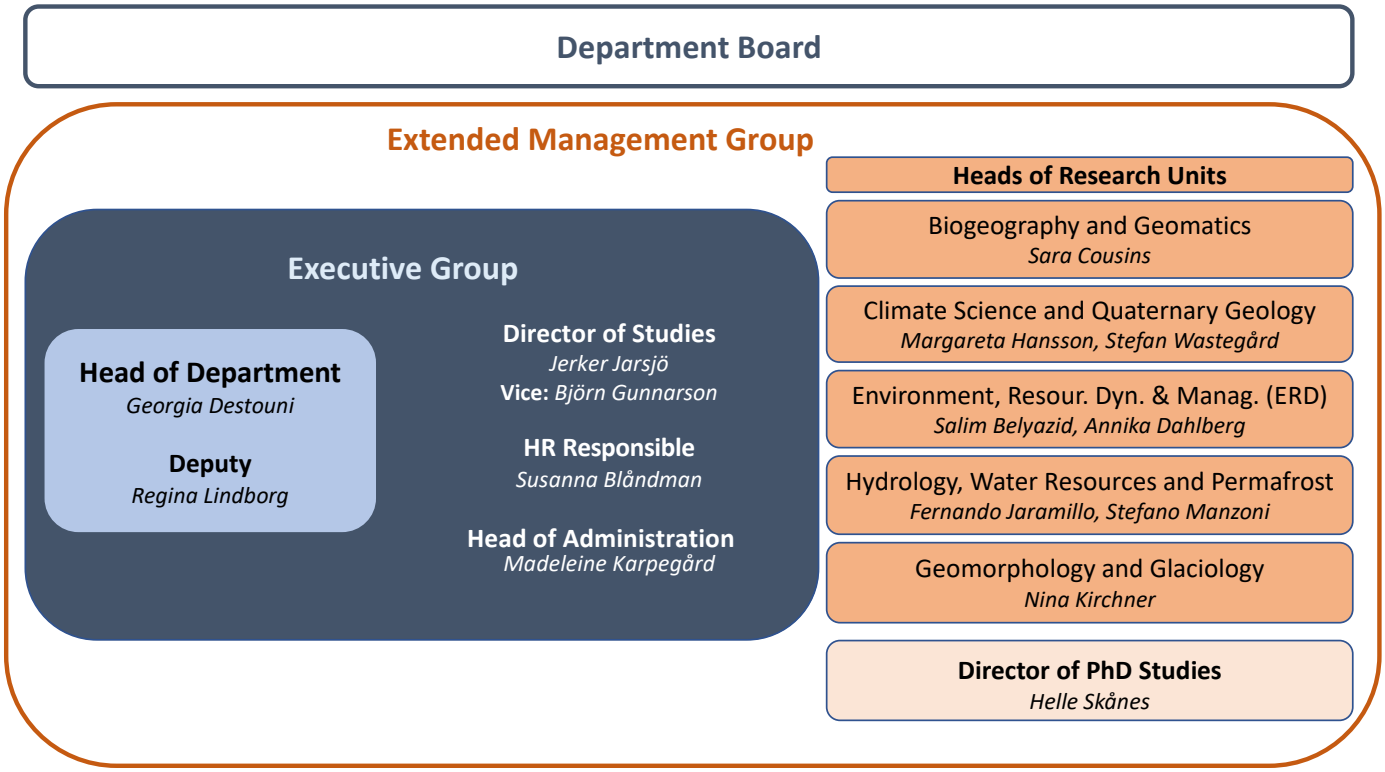
Geography and earth science students studying coastal geomorphology at Cabo de Gata, Spain. Photo: Lars-Ove Westerberg.

Department of
Physical Geography

Stockholm
University

Contents

Department Structure



Words from the Head of Department

The year 2020 has been exceptional. We managed to switch to distance teaching faster than we ever thought was possible, and done a great job in a very difficult and strange situation. This has showed us what we can achieve while supporting and caring for each other through hard times and what amazing people we all work with in our department.

Among our key 2020 achievements, we have for example continued to increase our research publication and have also increased our education contributions after a decreasing trend in previous years. We have also become more efficient in achieving these increased contributions in research and education, by cutting some key costs, for example for premises. This has led to a very good financial result that can be used to meet expected rise in premises costs as well as further enhance our future research and education contributions.

In addition to these core academic contributions, we also engage very actively with other parts of society, in joint research projects and research co-creation with various partners and sectors outside the academia. Our researchers are often invited as experts on sustainability issues and other topics, and regularly interact with the public and schools, for example in open panel discussions and seminars, and at annual events like Forskardagarna, Researchers Night, the Geology Day, the Bolin Centre Climate Festival and the World Water Day. Even in the difficult year of 2020, with a pandemic raging over the world, we managed to keep relatively balanced, even though overall decreased, numbers of outgoing and incoming students within the international Erasmus student program.

An imbalance that still remains to correct, at our department as overall in academia, is that of gender in senior faculty positions. We still have considerably fewer female than male full, associate, and assistant professors, while we have more female than male PhD students.

Many department colleagues were recognized through various awards, prizes, and honours in 2020. For example, our professors emeriti Margareta Ihse and Karna Lidmar-Bergström were awarded The Johan August Wahlberg Medal in Gold for their respective major and pioneering contributions to research in physical geography, professor Regina Lindborg was elected member of the The Royal Swedish Academy of Agriculture and Forestry, adjunct professor Johan Kuylenstierna received Fostrargärningsmedaljen, associated professor Stefano Manzoni was ranked among the Highly Cited Researchers in the Cross Field category, research fellow Sina Khatami received the Leaders in Communities Award of the University of Melbourne, and the Distinguished Global Talent honour of the Department of Home Affairs in Australia, and I was awarded the Sigge Thernwall Grand Prize for Research on Sustainable Infrastructure and Built Environment. Congratulations to these and all other achievements by department colleagues!

I thank all for making the strange 2020 yet another successful year, and hope for a return to a sustainable and healthy normality next year for all of us!

Professor Georgia Destouni

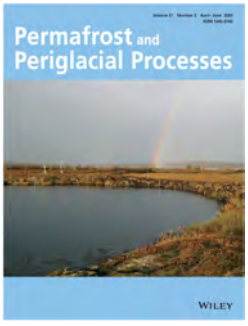
Photo: Rickard Kilström / Stockholm University.

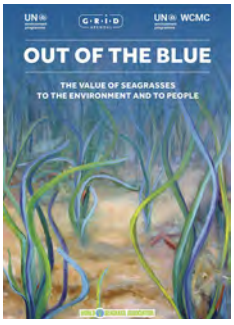
Some pictures from 2020

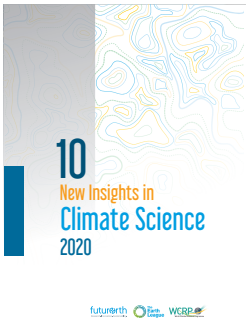
Solar cells at the roof of the Geoscience building this year!

Corona distance and a fairly empty house. BG in a Zoomfika!

Some new popular science books, reports and a photo on the cover of a magazine.



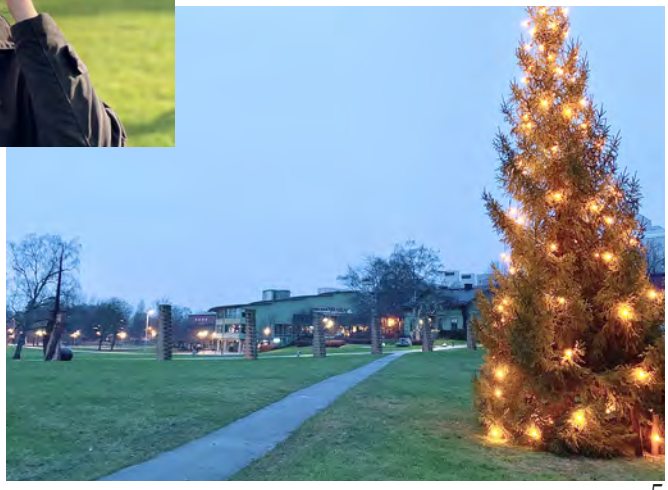




Teachers in the field produce films for teaching via Zoom.

Welcoming new students at Campus.

Congratulations to our eight new doctors! Nailing live and via Zoom. Some new doctoral hats!



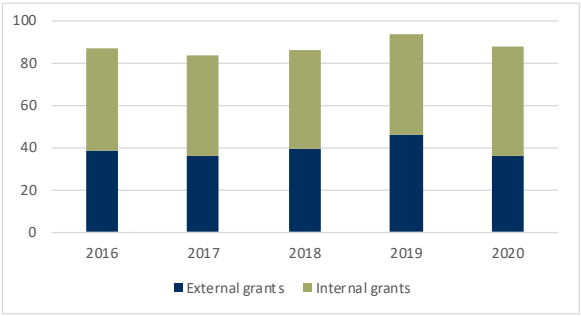
Research Grants Awarded 2020

Grant Receiver	Funding Organisation	Project Name	Total Grant (TSEK)
Berg, Håkan	Formas	Förvaltning av ekosystemtjänster för hållbar produktion av ris i Mekong Deltat i Vietnam	2999
Cousins, Sara	Kungliga Vitterhetsakademien	Uppföljning av skötselförändringar påverkan på vegetationen i Stensjö by 2020 – 2023	184
Destouni, Georgia	Havs- och Vattenmyndigheten	Hållbar vattenförsörjning – tillgång till rent vatten i ett föränderingt klimat	1300
Holmlund, Per	Göran Gustafssons Stiftelse	Glaciärarkeologi vid Luspasjaure och Norra Storfjället	76
Hugelius , Gustaf	Världsnaturfonden WWF	Permafrost och torvmarker i Taavavouma – nu och framtiden	200
Kalantari, Zahra	EU	ChangeMakers - Start-ups for sustainable environment created by youngsters	1851
Kalantari, Zahra	Region Stockholm	Carbon-neutral cities: Sustainable urban-regional development planning and management policies	400
Kalantari, Zahra	Yialova Fish S.M.S.A.	Science-Policy-Society interactions for water management in Gialova lagoon wetland	478
Kirchner, Nina	Göran Gustafssons Stiftelse	Göran Gustafsson Stiftelse för natur och miljö i Lappland	45
Manzoni, Stefano	EU	Soil microbial responses to land use and climatic changes in the light of evolution	16883
Manzoni, Stefano	Vetenskapsrådet	Ökar näringsbegränsning kollagring i skogsmark?	3850
Rosqvist, Gunhild	EU	Interact	1608
Scaini, Anna	Vetenskapsrådet	Sustainability and resilience – Tracking climate and environmental changes	361
Schaffer, Christina	Formas	Blue-green infrastructure for social cohesion: urban and peri-urban public places and spaces	982
		Sum	**31217**

Research Contracts Awarded 2020

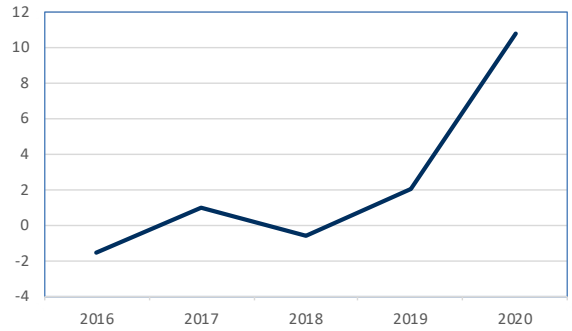
Grant Receiver	Funding Organisation	Project Name	Total Grant (TSEK)
Cousins, Sara	Naturvårdsverket	Metod för att digitalisera potentiell gräsmark från ekonomiska kartan	186
Frampton, Andrew	Svensk Kärnbränslehantering AB	Flow and tracer transport in crystalline media	494
Frampton, Andrew	Svensk Kärnbränslehantering AB	Validering av DFN modeller	457
Jaramillo, Fernando	Myndigheten för samhällsskydd och beredskap	Förstudie risker i ett klimatanpassat Sverige	615
Skånes, Helle	Stockholms stad	Biotopdatabas - verktyg för miljöövervakning av biologisk mångfald	323
Stroeven, Arjen Peter	Svensk Kärnbränslehantering AB	Lithological controls on the glacial erosion of the low relief granitic gneiss basement	153
		Sum	**2228**

Research Grants (MSEK)



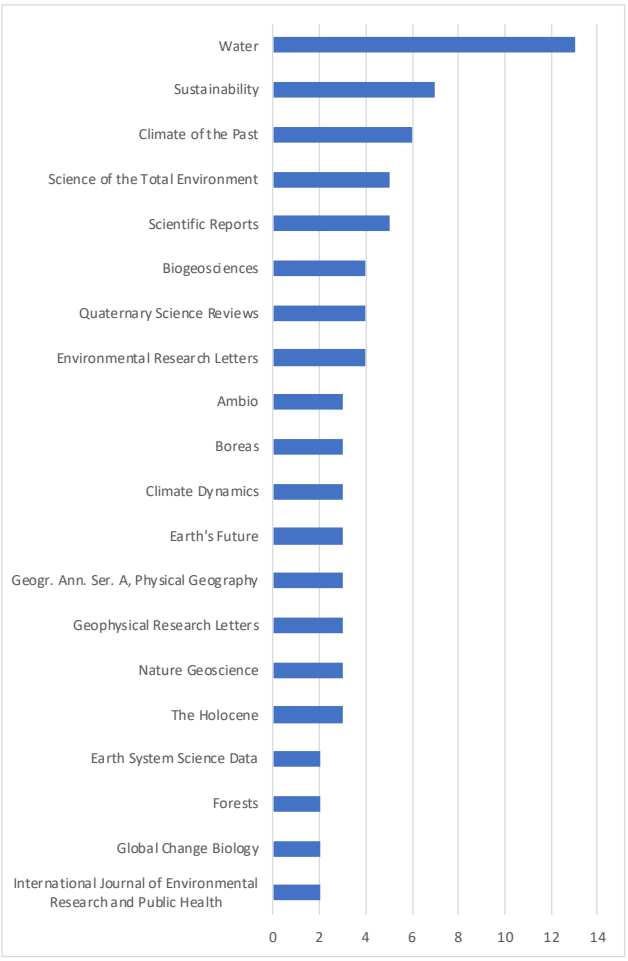
Research grants received 2016-2020.

Financial Results (MSEK)



Department annual financial result 2016-2020.

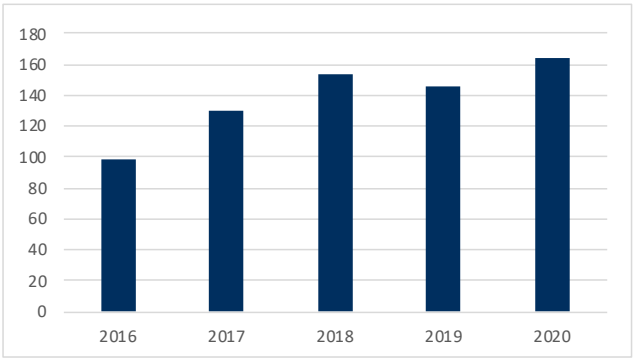
Published Papers per Journal



A total of 164 papers were published in peer reviewed journals 2020, out of which the most frequent journals are listed above. Statistics for 2020 reported in DiVA as of 2021-02-25.

Publications 2020

Publications (Peer Rewieved)



Number of peer reviewed publications 2016-2020.

QR Code to All NG Publications in 2020

Biogeography and Geomatics

Head of Research Unit: Sara Cousins

Biogeography is the study of the spatial distribution of plants and animals – "Life on Earth". Our research focuses on understanding historical and present interactions of humans, plants and animals with landscapes, and their effects on biodiversity, conservation and ecosystem services. We work at multiple scales, from pastures to regions, from genetic diversity to ecosystems, both in water and on land.

Geomatics is the acquisition, management and analysis of geospatial data. It includes geographical information science (GIS), Earth Observation (EO), surveying and geodesy. Our research develops methods to exploit the capabilities of geodata for a range of applications in Earth and environmental sciences. Presently our research focus is on questions related to the Arctic and sub-Arctic, including research into snow and permafrost. Both areas have become increasingly important for informing environmental policy relating to climate and land use change from the local to the international scale.

Our unit is responsible for two Master's programs; Landscape Ecology and Geomatics with Remote Sensing and GIS, and we are engaged in all three of the department's Bachelor level programs.

We have three research area leaders in the Bolin Climate Research Centre; Gustaf Hugelius - Biogeochemical Cycles and Climate (RA4), Regina Lindborg - Landscape processes and Climate (RA7), and Sara Cousins - Biodiversity and Climate (RA8). Many of the unit members are also part of the Bolin Centre.

Much field work and meetings were postponed, cancelled or disrupted because of the covid-pandemic. Many of our researchers focused on Swedish field sites and regions, on lab work and mapping. We have carried out field work in all biogeographical regions in Sweden this year, from the northern mountain ranges to southernmost Sweden, both on land and in water.

Amelie Lindgren defended her thesis, focusing on reconstructing the evolution of the northern soil carbon pool since the last glacial maximum. Edmond Alavaisha defended his thesis entitled Agricultural expansion impacts on wetland ecosystem services from Kilombero Valley, Tanzania.

Marianne Stoessel had her half-time seminar on Effects of land use and climate change on northern pastures.

Gustaf Hugelius led a paper on northern peatlands and permafrost thaw which was featured in media, including the SVT and BBC in the UK.

Felicity Pike participated in an international collaborative study to survey and collect samples from seagrass meadows on the coast of Gotland, led by the Smithsonian Institute's MarineGEO programme as part of the Baltic Sea team.
Regina Lindborg was appointed member of the The Royal Swedish Academy of Agriculture and Forestry (KSLA).

Sara Cousins is part of the management team to advice on the landscape restoration around Stensjö Village (owned by Vitterhetsakademin). Cousins is monitoring the plant biodiversity.

BGs yearly excursion was reduced to a barbeque outside the department

Barbeque outside the department keeping safe distance.

Regina Lindborg's inauguration at KSLA.

Edmond Alavaisha, Therese Bennicht (ERD) and Amelie Lindgren defended their theses.

Daniela Guasconi and Nina Roth's field site at Tovetorp, investigating drought, carbon amendments and biodiversity.

Clearing forest for grazing at Stensjö village (owned by Vitterhets-akademin) were Sara Cousins is part of the management council.

Rozi Kapas counted seedlings from seed banks and seedtraps in different type of grasslands throughout the growing season in 2020.

Winter warming experiment in Teesdale, UK led by Nina Roth and Sara Cousins. The experiment could continue thanks to helpful colleagues in the UK.

Climate Science and Quaternary Geology

Heads of Research Unit: Margareta Hansson and Stefan Wastegård

We study climate and environmental changes, under present conditions and back in time during the glacial cycles of the Quaternary period. Modern instrumental observational data are used together with information from natural archives such as lake sediments, peat bogs, ice cores, cave deposits, tree rings, glacial sediments, and archaeological material, to study changes in climate and the environment. Our research material come from the entire world and we have ongoing projects in the Nordic countries, Europe, Africa, the Himalayas, Antarctica and Greenland. We also perform simulations with climate models on large computers to study the functional behaviour of the climate system under conditions different from those of today. That helps us to better interpret the information stored in the different natural archives.

The year 2020 was a very different year, marked by the COVID-19 pandemic. The pandemic affected almost all activities that we do in a normal year, and many of us had to cancel fieldwork and excursions. Most teaching was moved online using the Zoom platform and we replaced some of the field-based teaching and laboratory practicals with short video clips that were greatly appreciated by the students. To keep the unit together in these strange times, we also organised a recurrent “CQ Fika” on Zoom, almost every week (picture 1). Some field activities could be performed, however, including preparations for field courses in the coming years (picture 2).

The first drilling season in the EU-supported deep ice core drilling project in Antarctica, Beyond EPICA, in 2020/21 had to be cancelled due to the COVID-19 pandemic and the project has been prolonged. Margareta Hansson is one of the WP leaders in the project responsible for International and Cross-disciplinary Exchange. The field campaign in Greenland in summer 2020 within the ongoing international East Greenland Ice-core Project (EGRIP) was also cancelled. This deep drilling is approaching bedrock and delays in the program are troublesome due to fast moving ice streams in the study area. The EGRIP project is prolonged, however also the field season in summer 2021 has been cancelled.

Calle Österlin joined the CQ-unit in December 2020. He will work as a researcher in the project 'Multiple pressures from changes in climate and land use on northern landscapes' together with Ninis Rosqvist, where new high resolution climate models developed by SMHI will be combined with traditional knowledge of reindeer herders to better understand the impacts on reindeer herding in northern Sweden of changing climate and land use.

Anders Moberg released a collection of daily meteorological observation data from Stockholm back to 1756, with live daily updates of new temperature data and with interactive data graphics, at the Bolin Centre Database, https://bolin.su.se/data/stockholm.

Steffen Holzkämper is involved in a project investigating the effects of volcanic activity (e.g. emission of gases) on living trees in the Laacher See area (Eifel, Germany). Amongst others, we study trace element variations in tree rings and compare them to direct gas measurements near so called mofettes. Steffen Holzkämper and Björn Gunnarson (BG Unit) cooperate with the universities of Mainz and Frankfurt (Germany).

In October, Stefan Wastegård gave a guest lecture at CEED, the Centre for Earth Evolution and Dynamics at Oslo University about the Late Quaternary Tephrochronology of NW Europe.

The climate modeling group led by Qiong Zhang organised a writing retreat that resulted in the paper "Simulating the mid-Holocene, Last Interglacial and mid-Pliocene climate with EC-Earth3-LR", published i Geoscientific Model Development. Josefine Axelsson visited the Department of Geology at Lund University in October to discuss isotope modelling and speleothems with colleagues there. All members of the climate modelling group participated in the PMIP conference in October with presentations and posters. Furthermore, Ellen Berntell gave a presentation at the Annual Bolin Days in November and Josefine Axelsson presented "Last Millennium data-model comparison using the SISALv2 and isotope-enabled model simulations" at the SISAL working group community meeting in November. Ellen Berntell got a grant from Arctic Avenue for the project "Effects of coarse dust on Arctic climate".

Benjamin Chandler, Simon Larsson, Benedict Reinardy, Stefan Wastegård, Hannah Watts and Qiong Zhang participated in the 34th Nordic Geological Winter Meeting in Oslo, in January.
Hannah Watts won 1st prize and 20 000 SEK for the oral presentation at the Bolin Centre Climate Research School PhD day (22nd of October), with her talk on “Geophysics at Glacier Forelands”. Simon Larsson was interviewed by the Science news media at Stockholm University on “How are the doctoral students faring in the wake of the pandemic”, published the 8th of December 2020.

"CQ Fika" with the unit in December 2020.

Members of the CQ Unit on a bog in Värmland, September 2020 preparing for field-based teaching on the Tellus III course.

Environment, Resource Dynamics and Management (ERD)

Heads of Research Unit: Salim Belyazid and Annika Dahlberg

The mission of the Environment, Resource Dynamics and Management (ERD) unit is to contribute to a deeper understanding of the dynamic interactions between society and the environment, particularly concerning the interdependencies between resource management and natural resource sustainability. ERD's aim is to consistently deliver high quality innovative research and education employing a variety of methods including interdisciplinary and transdisciplinary approaches in cooperation with societal actors and targeted towards societal and environmental needs.

The strong link between the environment and society is reflected in ERD's teaching. ERD hosts the Masters' program in Environmental Management and Physical Planning, the MSc course in Political ecology and other elective courses. The high employability of our Masters students are an indication of both the quality of our recruited students and the success of the contents and pedagogics used. The value of our external teachers in bringing other disciplinary perspectives or practical experiences to our courses, also at basic level such as Miljövård och miljöarbete (GE2012), are of fundamental importance for applied and multi-disciplinary courses – and greatly appreciated by students and prospective employers. The courses at MSc level attract many international students and we continue to supervise master student's projects with high societal relevance and applicability through joint collaborations with governmental institutions, NGO's and companies.

A project funded by SU to further advance cartographic education, led by Sophie Trygger, was carried out during 2020. Cartography as a method to effectively visualize geospatial patterns has a long tradition within the department, and is as relevant in environmental sciences as in geography. As of spring 2021, students can start enrolling in updated courses within cartography.

The initiative in 2018 by PhD students from the ERD group to create a PhD course on "transdisciplinary research for sustainability" was taken a further step through a writing workshop which resulted in a scientific article based on their findings and experiences. Bennich, T., Maneas, G., Maniatakou, S., Piemontese, L., Schaffer, C., Schellens, M., & Österlin, C. (2020). Transdisciplinary research for sustainability: scoping for project potential. International Social Science Journal.

Baraka Nyangoko presented his research on Mangrove Ecosystem Services for Livelihoods and Local Adaptations in Tanzania in a half time seminar and published the first paper in his thesis. Deogratias Mulokozi compiled his thesis on integrated aquaculture and agriculture, including three published papers and two submitted manuscripts.

Håkan Berg received a three year grant from Formas on Recognizing Wetland Ecosystem Services for Sustainable Rice Farming in the Mekong Delta, Vietnam.

Calle Österlin successfully defended his doctoral thesis "Nature conservation, landscape change and indigenous rights: The role of Sámi reindeer herding for environmental objectives in the Swedish mountain landscape" in October 2020. Now he works as a researcher within the project "Multiple pressures from changes in climate and land use on northern landscapes" at the department of Physical Geography.

During 2020 and the first months of 2021 nine ERD PhD students have defended their thesises. Jonathan Stoltz thesis focused on Perceived sensory dimensions - A human-centred approach to environmental planning a design and analysed the importance of green areas for human wellbeing, Daniel Ketzer analysed land use conflicts between biomass and agrophotovoltaic power production. Of the double degree students within the Marie Slodowska Curie EU project AdaptEconII, Ed Nedelciu defended his thesis Global phosphorus supply chain dynamics-sustainability implications for the 21st century at the University of Iceland but also have a doctoral exam from Stockholm University.

Ingrid Stjernquist has continued her research cooperation with colleagues from SLU and Vytautas Magnus University, Lithuania focusing on co-management of landscapes and wetlands. During 2020 she also received money from HaV to evaluate the Tullstorpså wetland project. The Vinnova project "Restorative green environments" ended in 2020.

Christina Schaffer received 500 000 SEK from Ekahagastiftelsen for research with Örebro university. She started working with SLU on the project "Blue-green infrastructure for social cohesion: urban and peri-urban public places and spaces, in the eyes of new-Swedes" financed by Formas, project leader Associate Professor Marine Elbakidze. She also worked in the project "Restorative Workplace", an applied project financed by Vinnova on how green environments can contribute to health and wellbeing in the working environments. Phase 1 and 2 are finished, and an application for Phase 3 was submitted in Sept 2020. https://www.movium.slu.se/projektparter-i-restorativa-arbetsplatser-samlades-till-workshop

The Formas project "Accessing urban nature". (Annika Dahlberg with KTH and SRC) continued their work. However, all conferences were cancelled. Several papers and a book-chapter are under way, and several MSc and BSc thesises were completed. Cooperation with new partners at other departments were initiated.

Marie Schellens and Therese Bennich have both successfully defended their respective PhD theses within the Marie Slodowska Curie EU program AdaptEcon. The subjects were different, reflecting the breadth of research in the unit. Therese Bennich's thesis investigated the pre-requisites and tradeoff of a transition to a bio-based economy, while Marie Schellens thesis studied the role of natural resources in violent conflicts. Both defences were carried out in a hybrid in person and virtual setting due to Covid restrictions.

The unit welcomed a new PhD student, Daniel Escobar, who will be investigating land use scenarios to reduce green house emissions from drained forested organic soils in Sweden. The project is funded by Formas in a collaboration between Salim Belyazid and researchers from Gothenburg University, Lund University and the University of York.

Therese Bennich in discussion with her opponent Pål Börjesson, with the committee virtually connected from Skania, Norway and Portugal.

Restorative working place, Stockholm university.

Restauration of wetlands for nutrient retension, Ådala.

Geomorphology and Glaciology

Head of Research Unit: Nina Kirchner
Text: Per Holmlund

The Geomorphology and glaciology research unit studies and teaches Earth surface processes and their effects on landscapes and society in a wide range of environments from the Cryosphere in the north and south as well as at high elevation through the Mediterranean to the Subtropical climate zones.

In the year 2020 only limited field activities could be executed due to the ongoing Corona pandemic. However, a few campaigns were carried out among them the photogrammetric study of the development of the tongue of Isfallsglaciären before and after the dramatic collapse in August 2018. The project involves Per Holmlund and Nina Kirchner and it is planned to be ended in 2021 with radar soundings and aerial photography.

The photogrammetric study of shape changes in the shape of the glacier summit of Kebnekaise, Sweden's highest mountain, was continued. While the highest peak is reduced in height over time it grows in thickness in other parts indicating changes in wind pattern.

Per Holmlund, together with Kerstin Lidén from the Department of Archeology and Classical Studies, planned to visit Norra Storfjället and the mountains north of Ammarnäs with the aim to find artefacts on newly deglaciated areas giving information on early human settlements and activities in the area. Dated findings also provide information on the history of glacier extents, thus a proxy climate data. However, the combination of travel restrictions and the large amount of snow in the summer reduced the fieldwork to visit and re-photograph three glaciers in the Norra Storfjället massif. The other part was postponed to 2021.

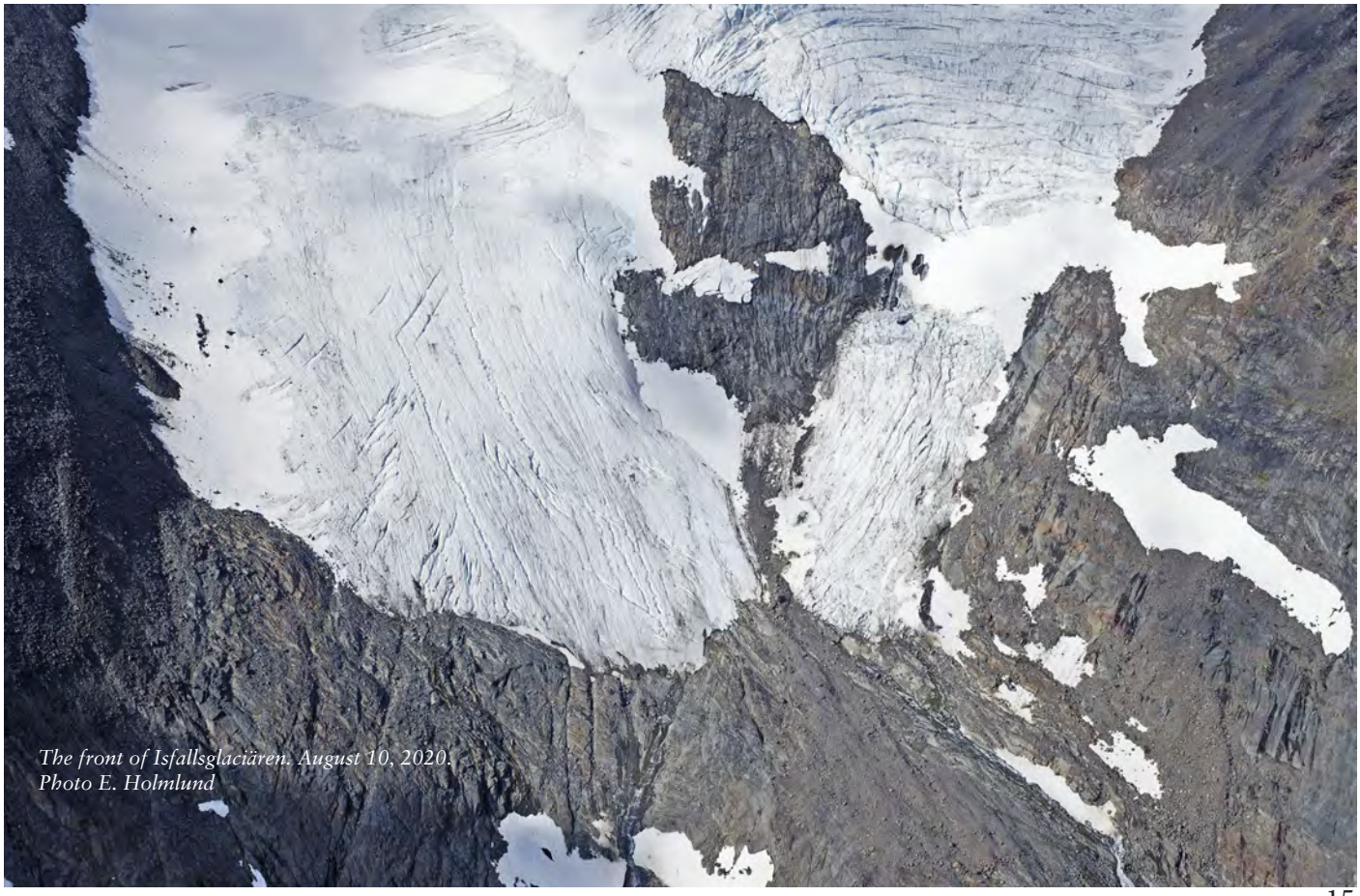
The Tarfala organization was reviewed by an investigation committee from the faculty which came up with a suggestion to a new organization. New regulations were taken and a new board was established in the autumn and Nina Kirchner and Per Holmlund were suggested as directors after Gunhild Rosqvist who stepped down after 16 years in service. The new directorships began in January 1, 2021.

The department's ice lab was under threat of closure in 2020. An inspection found mold in the entrance room and the cooling system is in a need for restoration within a short time at a significant cost. An additional problem was that there was no person formally responsible for the lab. A group was formed and the situation was solved by Peter Jansson taking on the main resposibility of the lab with support from the investigation group. The plan is to make use of the year 2021 to find sustainable solutions for how to integrate the lab in teaching and research and to find economic solutions for the restoration.

A manuscript involving several members of the Department was as published on glacial ripping, a newly-recognised and high-impact process of glacial erosion in gneiss bedrock. Desktop DEM studies and fracture analysis continued on a SKB-funded extension contract on glacial ripping around Forsmark. The current project involves Adrian Hall in collaboration with Maarten Krabbendam and others at the British Geological Survey. Planned fieldwork in Sweden for summer 2020 was lost to the Covid-19 crisis but a small field survey was undertaken in October in the NW Highlands of Scotland on glacial ripping in Cambrian quartzite bedrock. An analysis was completed and published by Adrian Hall and Mikis van Boeckel of the origin of the Baltic Sea basin by glacial erosion. This project set out a source-sink sediment budget for the basin by comparing erosion in basement and cover to the volume of Quaternary sediment present around the southern Baltic. A long-running collaboration between Adrian Hall and members of GTK, the Geological Survey of Finland, published a major review study on denudation on the Fennoscandian shield which identified ultra-slow denudation rates since 1.5 Ga. The study brought together evidence on erosion depths over geological timescales from unconformities, impact structures, kimberlites and thermochronology. A short review led by David Sugden of Edinburgh University was completed with Adrian Hall on Antarctic blue-ice moraines as potential analogues for Northern Hemisphere ice sheets.

One of the ice cores from Antarctica stored in the ice lab. Photo: Johan Marklund.

The summits of Kebnekaise on August 11, 2020.
Photo P. Holmlund



The front of Isfallsglaciären. August 10, 2020.
Photo E. Holmlund

Hydrology, Water Resources and Permafrost

Heads of Research Unit: Fernando Jaramillo and Stefano Manzoni

We investigate hydrological processes in water and land environments, the anthropogenic effects on these processes and their variability and change, both in time and space, to contribute to the knowledge and capacity advancement needed for sustainable development. We also develop methods and tools for decision support in urban development and planning, watershed/urban modelling integration, and water resources management, by combining subdisciplines such as hydro climatology, remote sensing, geodesy and ecology.

Our research focuses on water quantity and quality, how liquid and frozen, subsurface and surface water compartments interact, and how water flows and carries other substances through the landscape – in plants, locally, regionally and globally, and from past, through present and into the future. We study the possible fate of permafrost under global warming and the total amount, landscape distribution and vertical partitioning of soil organic carbon stocks in these regions. We also inform decision makers and planners on managing current and mitigating future hydrologic impacts of weather extremes.

New personnel
- One Ph.D. student: Daniel Escobar (formerly in ERD)
- Two postdocs: Carla S. S. Ferreira and Wei Weng
- Two guest researchers: Julian García and Sina Khatami
- Salim Belyazid and Mattias Winterdahl formally joined HWP from ERD

Graduations
- William Senkondo defended his PhD thesis
- Yan Ma, Imenne Åhlen and Sandra Fischer delivered their half-way PhD seminars

Awards and significant publications
Congratulations to Gia Destouni who was awarded the Sigge Thernwall's prize 2020, Stefano Manzoni who was ranked among the Highly Cited Researchers in the category Cross Field, and Sina Khatami, who received the Leaders in Communities Award (University of Melbourne, Australia) and the Distinguished Global Talent (Dept. Home Affairs, Australia). We also published several articles in high-impact journals including Nature Plants, Nature Geoscience, Nature Climate Change, Nature Communications and Global Environmental Change.

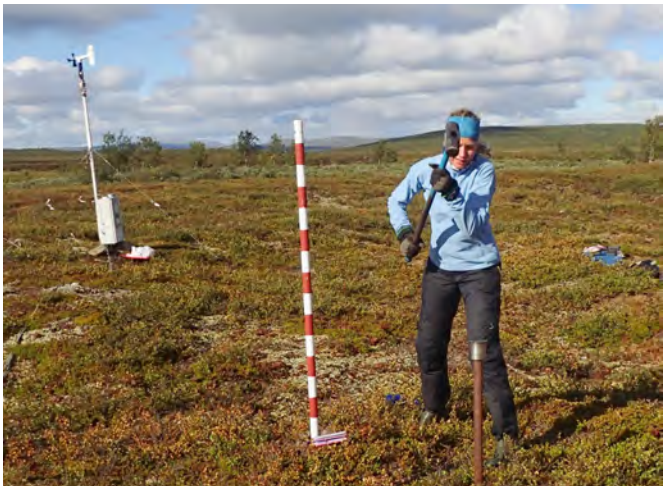
Funded research
We received four major external research projects led or co-led by HWP researchers:
B. Sannel: co-applicant in a Formas research grant
G. Destouni and Z. Kalantari: applicants in an IVA (Ingenjörs Vetenskaps Akademien) grant
S. Manzoni: main applicant in a European Research Council Consolidator Grant and a Vetenskapsrådet Research Grant.
Other grants were awarded to A. Scaini (Vetenskapsrådet), F. Jaramillo (Myndigheten för samhällsskydd och beredskap), B. Sannel (Arctic Avenue), S. Khatami (Mannerfelt and Ahlmanns foundations, Bolin Centre), and M. Winterdahl (Mannerfelt foundation)

Collaborations and activities
S. Fischer, J. Jarsjö and Guest Prof. M. Åström visited the MAX IV synchrotron lab to analyze the iron and copper speciation of contaminated soil samples from mining sites.

Outreach
John Livsey has been interviewed for the Munhwa Broadcasting Company documentary "Tap water! Do you have any pride?". The documentary aims to improve Koreans' perceptions of drinking tap water and share sustainable aspects of it by showing how well Stockholm city manages its drinking water.

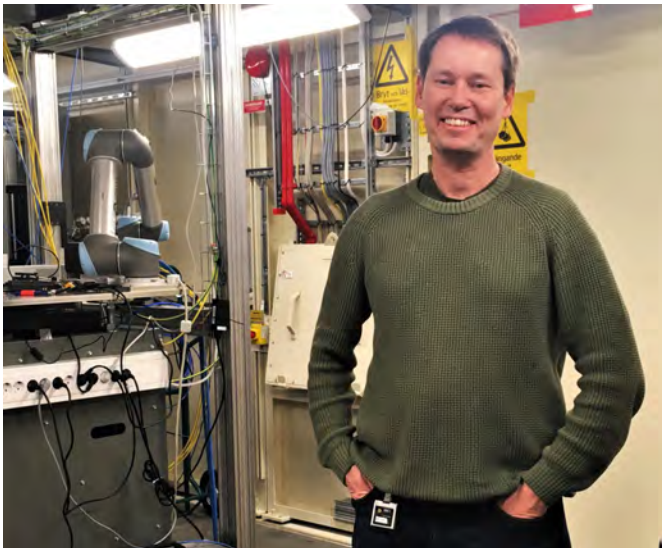
Anna Scaini has been interviewed for three newspaper articles, two radio programs, and co-organized online material on the hydrology and conservation of the Tagliamento river in the North-eastern Italian Alps.

If you search the hydrology blogosphere, you will most likely hit some of Sina Khatami and Fernando Jaramillos's posts in EGU and AGU blogs on topics ranging from hydrological uncertainty and human impacts on water resources, hydrological tipping points, to diversity in hydrology research.



Britta Sannel making a hole for thermistor cable installation in a permafrost peatland. Photo: J. Sannel.

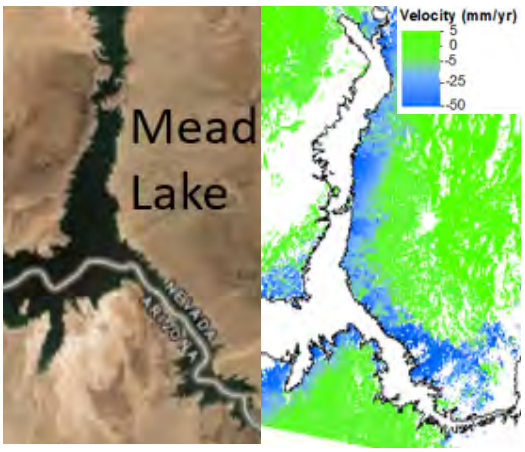
Britta Sannel downloading temperature data from a permafrost peatland in northern Sweden. Photo: J. Sannel.



Jerker Jarsjö at the MAX IV synchrotron lab. Photo: S. Fischer.

Imenne Åhlén sampling water at a contaminated site in northern Sweden. Photo: S. Fischer.

John Livsey during filming of the documentary "Tap water! Do you have any pride?". Photo: M. Mosesson.



Ground deformation around Lake Mead, United States, due to changes in water volume in the reservoir (modified after Darvishi et al., 2019, Remote Sens. 2021, 13, 406).

Tarfala Research Station (TRS)

Director: Gunhild Ninis Rosqvist
Research Engineer: Pia Eriksson
Superintendent: Torbjörn Karlin

TRS

Tarfala Research Station (TRS) is a well-known Arctic hub where international scientists and students meet to conduct fieldwork or take part in field-courses learning about the rapidly changing arctic alpine environment. The station is located at 1130 m a s l in the Kebnekaise Mountains, northern Sweden. TRS is managed by Stockholm University and is part of the Swedish Infrastructure for Ecosystem Science (SITES; www.fieldsites.se) which is supported by the Swedish Research Council. TRS is also a partner of the EU funded International Network for Terrestrial Research and Monitoring in the Arctic (INTERACT; https://eu-interact.org/).

Environmental monitoring at TRS includes measurements of; (i) surface mass balance on four glaciers, Mårmaglaciären, Rabots glaciär, Riukojietna and Storglaciären; (ii) meteorology based on six automatic weather stations, (iii) discharge and water chemistry of the Tarfala river, (iv) temperature and water chemistry of the Tarfala lake, (v) permafrost in soil and bedrock depth-profiles, and (vi) vegetation dynamics based on pollen sampling, phenology and NDVI measurements.

Storglaciären is one of the most well studied glaciers in the world. The measurements of surface mass balance started in 1946. Since then research projects have provided detailed information about e.g. short and long-term ice dynamics, glacial-hydrology and microbiology.

Storglaciären and Rabots glacier are reference glacier in the World Glacier Monitoring Service database (https://wgms.ch/). To qualify as a reference glacier, the mass balance data series must be longer than 30 years. Together with 40 other glaciers, the two glaciers in Tarfala´s vicinity provide a unique record of the state of the world´s glaciers and their response to climate change.

The generous amount of snow and cold spring weather provided good conditions for measurements of the winter mass balance of Riukojietna, Rabots glacier and Storglaciären during an unusually short and late covid-19 restricted fieldwork period between 2-15 May.

The station was open for the summer season between 15th of June and 17th of September. The summer air temperatures (JJA) were surprisingly even with the highest monthly average air temperature in June. After a few relatively dry years some high rainfall events occurred in the end of July. The continuous low cloud base in September challenged fieldwork on the glaciers. Despite the relatively high amount of winter snow and cold spring the summer melt still resulted in a small negative net mass balance. As part of the long-term monitoring of glacier status the position of the fronts of 10 glaciers located in the Sarek and Kebnekaise mountains were surveyed in August.

The two summits of Kebnekaise are the highest peaks in Sweden. The south summit is ice covered and its elevation therefore reflects changes in the long-term warming and annual weather variation. TRS staff measures the altitude of the summit at the end of each summer melt season. The elevation was measured to be 2096 m the 17th of September, which was 0.8 meter below the elevation of the rocky north summit (2096.8 m).
Data from the monitoring program at TRS is now available through the Swedish Infrastructure for Ecosystem Science (SITES) dataportal (fieldsites.se).

Stockholm university could only host a very small number of visitors at TRS in 2020, and no student field-courses were held due to the covid-19 situation. The United States ambassador Ken Howery visited Tarfala in June. Scientists from Humboldt-Universität in Berlin carried out fieldwork on Storglaciären in August, their project was funded by transnational access funds from INTERACT. Another project, with a PI from British Antarctic Survey in the Tarfala lake was funded by remote access funds from INTERACT.

Gunhild Ninis Rosqvist was the director of TRS, Pia Eriksson research engineer and Torbjörn Karlin superintendent. TRS hired ten field season personnel in 2020.

NEO

Measuring the summit of Kebnekaise. Photo: Patrik Mäler.

Navarino Evironmental Observatory (NEO)

Director: Johan Kuylenstierna
Station Manager: Giorgos Maneas

The Navarino Environmental Observatory (NEO) is a Mediterranean hub for research and education where science, business, society and policy makers join in a pioneer cooperation to create a more sustainable future under a changing climate. NEO is a collaboration between Stockholm University, the Biomedical Research Foundation of the Academy of Athens (BRFAA) and the Tourism Enterprises of Messinia S.A. (TEMES), in an innovative international partnership between the academia and the private sector.

NEO has 9 associated members (research institutions from Greece, Sweden, Germany and the USA), is a member of the European Research Infrastructure for the observation of Aerosol, Clouds and Trace Gases (ACTRIS), the PANhellenic infrastructure for Atmospheric Composition and climatE change (PANACEA), the Global Wetland Ecohydrology Network (GWEN), and the Greek Long-term Ecosystem Research Network (LTER-Greece).

The NEO field station is located at Costa Navarino, Messina, Greece and is open to researchers and students from collaborating institutions and other universities from Greece and abroad, as well as to other societal stakeholders who are willing to share their challenges and contribute to the development of environmental solutions. NEO organizes several events to promote research outcomes by bringing together academics, corporates, policy makers and society members to discuss important environmental issues of local, regional and global interest. NEO turns research on climate change and associated social and environmental challenges into actions.

During 2020, the COVID-19 pandemic had implications on most NEO activities. All the events were cancelled from March and onwards, affecting 86% of the field courses (6/7), the Hellenic Association Aerosol Research (HAAR) summer school, 67% of the workshops and meetings (4/6), and 100% of the research campaigns planned (2/2). With the expectation that the situation will improve in the future, some of the visits at NEO are already rescheduled for 2021. Nonetheless, NEO researchers have been active in publishing 24 new research articles in international journals (17) and (virtual) conferences (7).

In terms of research projects, in 2020, NEO continued the previous work under the COASTAL project but focusing on the development of quantitative System Dynamic models to be used as a base for discussions with stakeholders, establishment of policy recommendations and business road maps. Additionally, in collaboration with Greek research institutions (University of Ioannina and Hellenic Center of Marine Research), local foundations (Captain Vasilis and Karmen Konstantakopoulos Foundation) and management structures (Management Body of Protected Areas of Peloponnese and Kythira island), and the local fishermen, NEO has initiated a new project entitled “Science-Policy-Society interactions for the Water Management of Gialova Lagoon wetland”. The project will be developed during three years, aiming to suggest scientifically robust solutions for the gradual restoration and co-management of the wetland for both environmental and economic factors, under different climatic scenarios. The project involves researchers, practitioners and policy makers in working together for tackling challenges related to management of multi-functional areas, such as coastal wetlands, and provides an example for other similar areas in Greece and across the Mediterranean region.

NEO became part of the European Civic University network (CIVIS) in Solid Earth System Dynamics. The partners involved in this network are from Greece (National and Kapodistrian University of Athens), Romania (University of Bucharest), Italy (Sapienza Università di Roma), and Sweden (Stockholm University). The participation of NEO in this network is established in the core of CIVIS Hub 1 Activities: Climate, Environment and Energy. Part of NEO engagement will involve the preparation of a virtual fieldtrip, based on previous and current NEO research activities about the past, the present and the future of Messinia, to be held in 2021.

During 2020, a NEO Communication Platform was developed in close collaboration with Gullers Grupp. This document comprises a strategy for coherent communication with stakeholders and general society, aiming to further clarify NEO’s current position, explore its future vision, identify potential target groups, and facilitate and harmonize its communication activities.

The NEO Steering Committee recorded a few changes characterized by the appointment of a new chairperson, Johan Kuylenstierna, Adjunct Professor and Senior Advisor to the President on Sustainable Development, Stockholm University, and a new NEO director, Zahra Kalantari, Associate Professor at the Department of Physical Geography, Stockholm University. In addition, NEO operations were strengthened with the recruitment of two postdoctoral researchers: Samaneh Seifollahi in March, and Carla Ferreira in September.

Looking forward to see you at NEO in 2021!
NEO management

For more information please visit: www.navarinoneo.se

The Bolin Centre for Climate Research

Co-directors: Nina Kirchner and Alasdair Skelton

The Bolin Centre is a consortium of more than 350 scientists in Sweden who conduct research and graduate education related to the climate of the earth. The Bolin Centre is a collaboration between SU's departments ACES, DEEP, IGV, MISU, NG and Zoology, together with FLOW at the Royal Institute of Technology (KTH) and the Rossby Centre at the Swedish Meteorological and Hydrological Institute (SMHI).

The Bolin Centre focuses on extending and disseminating knowledge about the Earth's natural climate system, climate impacting processes, climate modelling, human impact on the climate and climate impacts on ecosystems, biodiversity and humanity as well as how society can minimise the negative impacts of climate change. It contributes to the knowledge base for climate mitigation and adaption policies nationally and internationally.

Apart from climate change, we started off 2020 with facing yet another crisis, namely the COVID-19 pandemic. Despite this crisis, our scientists continued to perform outstandingly, publishing over 150 peer-review articles (bolin.su.se/publications), many in top-ranking journals, and carrying out domestic field work when possible. Annual events such as the Climate Festival and the Bolin Days, which would normally take place at Stockholm University, were translated into digital events. The Journalist Breakfast initiative started, with the intentions of having our scientists meet with journalists to exchange their knowledge and experiences. As expected, the breakfast sessions were carried out online. Additionally, Bolin Centre Climate Arena published two Policy Briefs, authored by Bolin Centre scientists and presented during one of the virtual Climate Arena workshops. Although 2020 was a tumultuous year, it spreads hope that we will not let the window of opportunity for sustainable transformation pass by when the pandemic starts to fall behind us. As Directors of the Bolin Centre, we are enormously pleased to see that our members continue to create the fundamental knowledge on which this transformation must be based.

Our eight multidisciplinary cross-departmental research areas:

- Oceans-atmosphere dynamics and climate
- Clouds, aerosols, turbulence and climate
- Hydrosphere, cryosphere and climate
- Biogeochemical cycles and climate
- Historical to millennial climate variability
- Deep time climate variability
- Landscape processes and climate
- Biodiversity and climate

Ready to deploy instruments at the bottom of Lake Sulitelma, to investigate calving activities of Sálajiegna glacier: Field work Kirchner and Granebeck et. al, August 2020. Photo: E. Gylfe.

Behind the scences of the first virtual edition of the Bolin Centre Climate Festival: Nina Kirchner, lecture recorded at the Nordic Museum. Photo: Vetenskapens hus.

Behind the scences of the first virtual edition of the Bolin Centre Climate Festival: Alasdair Skelton, lecture recorded at the Swedish Museum of Natural History. Photo: Vetenskapens Hus.

Infrastructure

Field stations:
Tarfala Research Station (TRS)
Navarino Environmental Observatory (NEO)

Other facilities:
Stockholm Tree Ring Laboratory
Chemical laboratory
Microscope facilities
Optically Stimulated Luminescence Laboratory (OSL)
Sediment laboratory
GIS and remote sensing cluster
Ice laboratory
Geomorphology laboratory

Tarfalasjön captured by time lapse camera installed by Nina Kirchner et al.

Antarctic ice cores stored in the Ice laboratory. Photo: J. Marklund.

Sediment samples from central Norway soaking in potassium hydroxide to disaggregate the material. This is done in preparation of searching for macrofossils (such as plant seeds and leaf fragments) to send off for radiocarbon dating.

Education

Director of Studies: Jerker Jarsjö
Vice Director of Studies: Björn Gunnarson

The Department's goal is to offer high quality education, reflecting its research profile, and meeting society's needs for theoretical and practical expertise and skills.

The Department offers education at undergraduate (Bachelor's) level in Geography, Earth Sciences, Integrated Biology-Earth Science, and Environmental Studies. In addition, a wide spectrum of graduate (Master's level) programmes and courses are given, reflecting the research profile of the Department.

Every year about 1200 students attend our undergraduate and graduate courses.

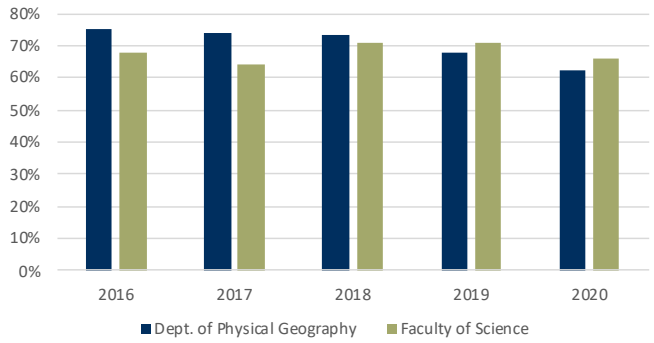
Bachelor Programmes (180 credits)
Bachelor's Programme in Biology-Earth Sciences
Bachelor's Programme in Geography
Bachelor's Programme in Earth Sciences

Master's Programmes (120 credits)
Master's Programme in Environmental Management and Physical Planning
Master's Programme in Geomatics with Remote Sensing and GIS
Master's Programme in Hydrology, Hydrogeology and Water Resources
Master's Programme in Landscape Ecology
Master's Programme in Polar Landscapes and Quaternary Climate

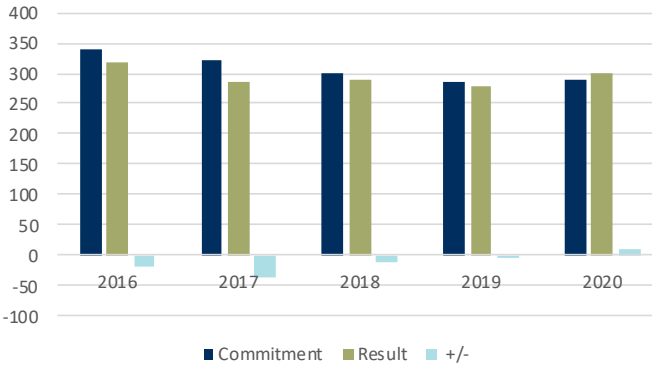
The course "Naturgeografiskt projektarbete" with an excursion to Navariono Environmental Observatory (NEO), Greece in February 2020. Photo: Sara Cousins.

Teaching in the field with corona distace at Campus. Photo: Elisabeth Sturesson.

Student Completion Rate in % (Genomströmning)



Annual Performance Equivalent/HÅP



PhD Education

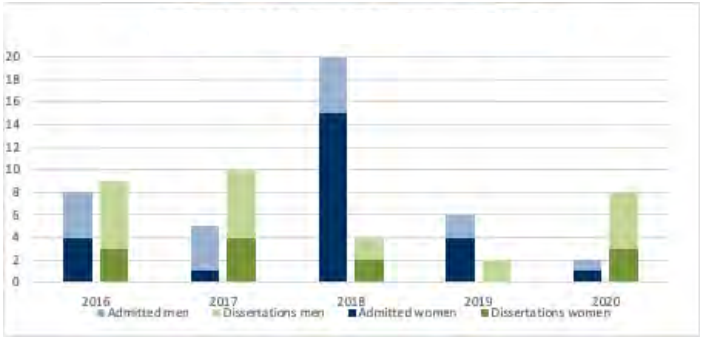
Subject representative: Stefan Wastegård
Director of PhD Studies: Helle Skånes

The year 2020 was a very different year, marked by the COVID-19 pandemic. The pandemic affected basically everything within the PhD education as well as the entire society. Everyone worked hard to mitigate the situation and the remedy was to move almost all activities to online mode, using software for video conferencing. During the year we had eight dissertations (see list). All of them were held completely or partly in Zoom. Introductions to new PhD students, halfway seminars, nailing ceremonies, and follow-ups of individual study plans were all held in Zoom. Other recurrent activities were individual supervisor meetings in the spring, and a meeting for the entire group of supervisors in the autumn.

The PhD students did a great effort keeping their projects afloat and to mitigate the negative effects of the COVID-19 pandemic. One of their initiatives was to organize a survey to assess the wellbeing of department's PhD students. Our students were also represented in a task group at the faculty aiming at evaluating how the PhD students have been affected by the COVID-19 situation.

The annual department PhD day was organised by the PhD students in April. They also organised a Q&A event in October about "PhD facts and myths" where Helle busted myths and cleared rumors about the PhD dissertation. A writing workshop with Hildred Crill was organized in Zoom in November with 13 participants. Hannah Watts won 1st prize and 20 000 SEK for the oral presentation at the Bolin Centre Climate Research School PhD day (22nd of October), with her talk on "Geophysics at Glacier Forelands". Simon Larsson was interviewed by the Science news media at Stockholm University on "How are the doctoral students faring in the wake of the pandemic", published the 8th of December 2020.

PhD Student Admissions and Dissertations 2016-20



Doctoral Theses 2020
Congratulations!

Jonathan Stoltz, *Perceived Sensory Dimensions – A Human-Centred Approach to Environmental Planning and Design*

Daniel Ketzer, *Land Use Conflicts between Agriculture and Energy Production - Systems Approaches to Allocate Potentials for Bioenergy and Agrophotovoltaics*

William Senkondo, *Modelling water resources despite data limitations in Tanzania's Kilombero Valley*

Amelie Lindgren, *Northern Permafrost Region Soil Carbon Dynamics since the Last Glacial Maximum – a terrestrial component in the glacial to interglacial carbon cycle*

Edmond Alavaisha, *Agricultural expansion impacts on wetland ecosystem services from Kilombero Valley, Tanzania*

Therese Bennich, *The transition to a bio-based economy – Toward an integrated understanding*

Marie Schellens, *Violent natural resource conflicts – From definitions to prevention*

Carl Österlin, *Nature conservation, landscape change and indigenous rights - The role of Sámi reindeer herding for environmental objectives in the Swedish mountain landscape*

Doctoral defence, behind the scenes.

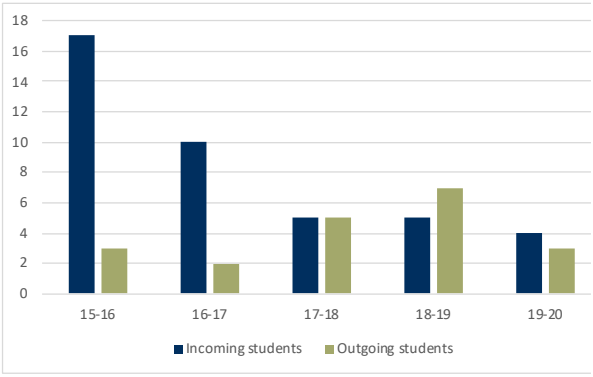
Collaboration

International Exchange (Education)
International coordinator: Maria Damberg

Partner Universities
Aachen, Germany
Brussels, Belgium
Copenhagen, Denmark
Freiburg, Germany
Gent, Belgium
Grenoble, France
Innsbruck, Austria
Kiel, Germany
Leuven, Belgium
Liège, Belgien
NTU, Singapore
Turku, Finland

Singapore. Photo: Maria Damberg.

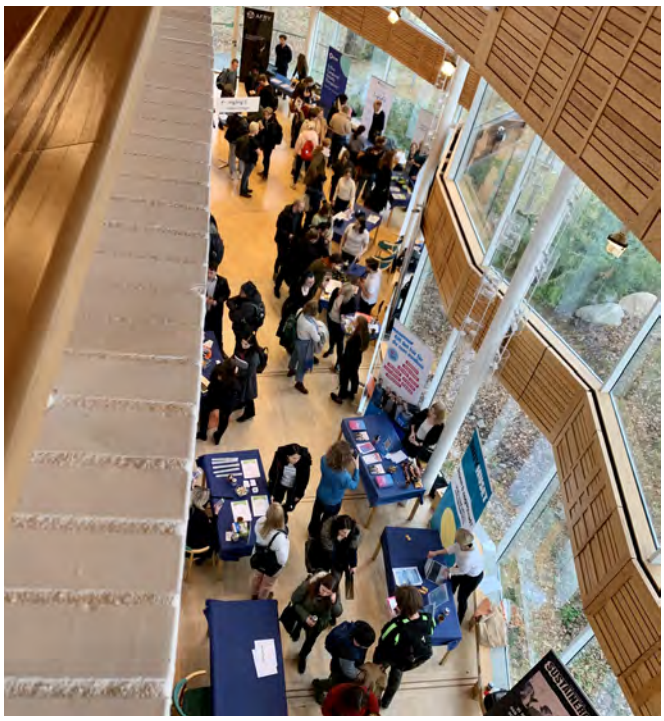
Erasmus Exchange Students 2016-20



The number of students in the graph are exchange students from our own exchange agreements. We also receive incoming exchange students from neighbour departments and central agreements of Stockholm University. It is common that our programme students choose exchange studies thru Stockholm University central agreements (for example via North2North).

Alumni Network
Alumni coordinator: Malin Stenberg de Serves

We wish to stay in touch with former students and researchers. Our alumni are part of the valuable network that supports us in a range of different ways: by being important ambassadors and by engaging in the development of reserach and education.



Carrier Day 12 February arranged by the Faculty of Science in Aula Magna. Several of our alumni met our students.

Some of our alumni were involved in a panel discussion and visited an Alumni event 18 February about: "Lev hållbart, jobba klimatsmart".

Some Awards and Prizes

Gia Destouni (middle) was awarded the Sigge Thernwall Grand Prize for Research on Sustainable Infrastructure and Built Environment. Photo: Joakim Ström.

The Johan August Wahlberg Medal in Gold to Professor Emeritus Margareta Ihse (right), Stockholm University, and to Professor Emeritus Karna Lidmar-Bergström (left), Stockholm University, for their major and pioneering contributions to research in physical geography.

Stefano Manzoni (left) still one of the highly cited researchers, cross field category. Johan Kuylenstierna (right, photo: Jonas Ekströmer/TT) receives Fostrargärningsmedaljen 2020.

Hannah Watts first prize winner at the Climate Research School's PhD Day.

Outreach

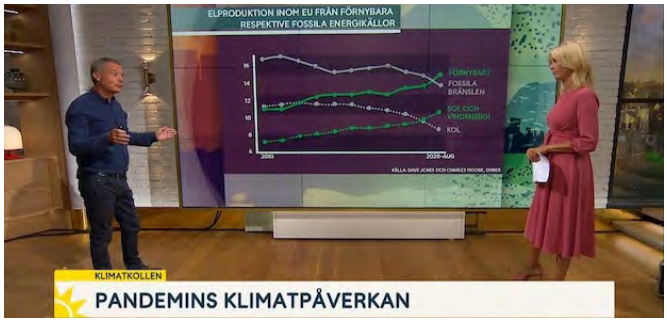
We interact with the public and schools at annual events like: Forskardagarna, Researchers´ Night, the Geology Day, the Bolin Centre Climate Festival and the World Water Day.

We are also active in many panel discussions and seminars outside the academy.

Our researchers are often invited as experts in discussions of sustainability issues and other topics.

Nina Kirchner and Fernando Jaramillo at the Bolin Centre Climate festival. UR documents the digital lectures for Kunskapskanalen.

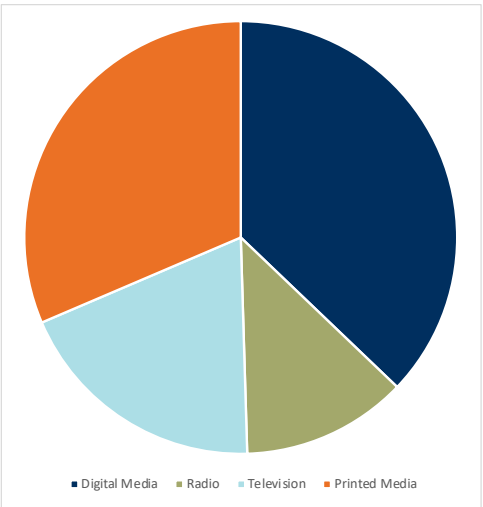
Gustaf Hugelius presented research on permafrost in connection with the World Economic Forum in Davos, Switzerland. This was a side event that focused on the role of the cryosphere and the importance of limiting warming to +1.5 degrees Celcius.



Johan Kuylenstierna in the "Klimatkollen", a program series on TV4.

Our Department in the Media

Advances in research are not just for us but for the public, too. Through the media, we can contribute to the dissemination of knowledge and debate. With communication we can increase understanding and interest and broaden the views for the future. Almost every week our researchers and teachers appear in the media. The diagram below shows the distribution of apparances in different kinds of media in 2020.

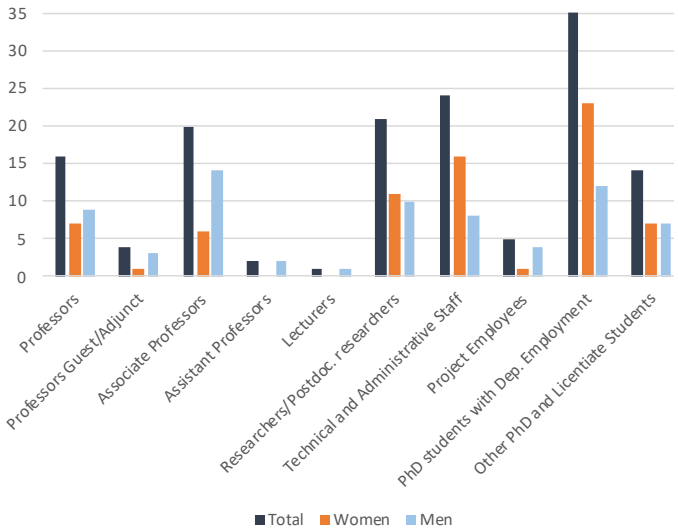


Staff 2020

Head of Department: Professor Georgia (Gia) Destouni
Deputy Head of Department: Professor Regina Lindborg
Head of Administration: Madeleine Karpegård

The list reflects employments during any part of the calendar year 2020.

Number of Employees



Academic Staff

Professors

Cousins, Sara	*Prof. in Physical Geopgraphy*
De La Torre Castro, Maricela	*Prof. in Natural Resource Management*
Destouni, Georgia (Gia)	*Prof. in Hydrology, Hydrogeology and Water Resources,*
Hansson, Margareta	*Prof. in Environmental Science with emphasis on Physical Geography/ Quaternary Geology*
Holmlund, Per	*Prof. in Glaciology*
Hättestrand, Clas	*Prof. in Physical Geography*
Jansson, Peter	*Prof. in Physical Geography*
Jarsjö, Jerker	*Prof. in Hydrology*
Kleman, Johan	*Prof. in Remote Sensing*
Kuhry, Peter	*Prof. in Physical Geography*
Lindborg, Regina	*Prof. in Geography with emphasis on Natural Resource Management and Sustainability*
Lyon, Steve	*Prof. in Quantitative Environmental Hydrology*
Rosqvist, Gunhild	*Prof. in Geography, especially Physical Geography*
Schlüter, Maja	*Prof. in Sustainability Science*
Stroeven, Arjen	*Prof. in Physical Geography*
Wastegård, Stefan	*Prof. in Quaternary Geology*

Adjunct and Guest Professors

Harbor, Jonathan	
Kuylenstierna, Johan	*Adjunct Prof. in Water Resources*
Varner, Ruth	
Åström, Mats	

Associate Professors

Belyazid, Salim	*Senior Lecturer*
Berg, Håkan	*Senior Lecturer, Docent*
Blomdin, Robin	*Senior Lecturer*
Brown, Ian	*Senior Lecturer, Docent*
Dahlberg, Annika	*Senior Lecturer, Docent*
Frampton, Andrew	*Senior Lecturer, Docent*
Holzkämper, Steffen	*Senior Lecturer, Docent*
Hugelius, Carl-Gustaf	*Senior Lecturer, Docent*
Jansson, Krister	*Senior Lecturer, Docent*
Kalantari, Zahra	*Senior Lecturer, Docent*
Kirchner, Nina	*Senior Lecturer*
Manzoni, Stefano	*Senior Lecturer, Docent*
Moberg, Anders	*Senior Lecturer, Docent*
Risberg, Jan	*Senior Lecturer, Docent*
Sannel, Britta	*Senior Lecturer*
Seibert, Jan	*Senior Lecturer, Docent*
Skånes, Helle	*Senior Lecturer*
Zhang, Qiong	*Senior Lecturer, Docent*
Westerberg, Lars-Ove	*Senior Lecturer*
Winterdahl, Matthias	*Senior Lecturer*

Assistant Professors

Reinardy, Benedict
Jaramillo, Fernando

Lecturer

Norris Lam

Researchers and Postdoctoral Researchers

Chen, Yuanying	*Researcher*
Darvishi, Mehdi	*Researcher*
Gunnarson, Björn	*Researcher*
Ghajarnia, Navid	*Researcher*
Gumbricht, Thomas	*Researcher*
Hall, Adrian	*Researcher*
Kimberley, Adam	*Researcher*
Lindgren, Jessica	*Researcher*
Madani, Kaveh	*Researcher*
Norström, Elin	*Researcher*
Stadlinger, Nadja	*Researcher*
Thorslund, Josefin	*Researcher*
Österlin, Carl	*Researcher*
Dessirier, Benoit	*Postdoctoral Researcher*
Ferreira, Carla	*Postdoctoral Researcher*
Lindh, Magnus	*Postdoctoral Researcher*
Munishi, Subira	*Postdoctoral Researcher*
Scaini, Anna	*Postdoctoral Researcher*
Seifollahi-Aghmiuni, Samaneh	*Postdoctoral Researcher*
Tumbo, Madaka	*Postdoctoral Researcher*
Weng, Wei	*Postdoctoral Researcher*

PhD students

PhD Students with Department Employment

Aminjafari, Saeid
Axelsson, Josefine
Bennich, Therese
Berntell, Ellen
Cantoni, Jacopo
Chakrawal, Arjun
Escobar Carbonari, Daniel
Fischer, Sandra
Goldenberg, Romain
Guasconi, Daniela
Hamm, Alexandra
Holmes, Felicity
Hovemyr, Mikael
Högberg, Charlotta
Kåresdotter, Elisie
Kapás, Rozalia
Larsson, Simon
Lindgren, Amelie
Livsey, John
Ma, Yan
Mas E Braga, Martim
Newall, Jennifer
Page, Jesscia
Pike, Felicity
Prakash, Abhay
Rocha, Eva
Roth, Nina
Schellens, Marie
Stoessel, Marianne
Stoltz, Jonathan
Vigouroux, Guillaume
Wagner, Julia
Watts, Hannah
Wood, Heather
Åhlen, Imenne

Other PhD and Licentiate Students

Aggemyr, Elsa
Alavaisha, Edmond
Fröjd, Christina
Gisladottir, Johanna
Hichens-Bergström, Marit
Joandi, Linnéa
Ketzer, Daniel
Maneas, Giorgos
Mulokozi, Deogratias
Nedelciu, Eduard
Nyangoko, Baraka
Oostdijk, Maartje
Senkondo, William
Sigfridsson, Sabine

Administrative Staff

Blåndman, Susanna	*Human Resources Officer*
Damberg, Maria	*Study and Career Counsellor*
Hansson, Erik	*Educational Administrator*
Holmlund, Moa	*Educational Administrator*
Hörnby, Kerstin	*Educational Administrator*
Jacobson, Rolf	*Web Editor*
Jacobsson, Runa	*Financial Officer*
Karpegård, Madeleine	*Head of Administration*
Paldanius, Marcus	*Financial Officer*
Persson, Karin	*Educational Administrator*
Schaffer, Christina	*Educational Administrator*
Stenberg de Serves Malin	*Communicator*
Stolarska, Monika	*Administrator*
Sturesson, Elisabeth	*Educational Administrator*
Trygger Bergman, Sophie	*Educational Administrator*
Åkerblom, Lena	*Educational Administrator*

Technical Staff

Burger, Mikael	*Systems Engineer*
Eriksson, Pia	*Research Engineer*
Hättestrand, Martina	*Laboratory Officer*
Karlin, Torbjörn	*Superintendent Tarfala Research Station*
Li, Qiang	*Research Engineer*
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