

# Annual Report 2023



*During the Antarctic expedition DML 2023/24, the researchers seek to answer how Antarctica will develop in a future with a warmer climate. Part of the answer lies in the bedrock and erratics deposited by the ice sheet. Photo: Arjen Stroeven.*

Department of  
Physical Geography



Stockholm  
University

# Department Structure

## Department Board

### Extended Management Group

#### Executive Management Group

**Head of Department**  
*Sara Cousins*

**Deputy**  
*Stefan Wastegård*

**Director of Studies**  
*Björn Gunnarson*

**Administrative director of Studies**  
*Moa Holmlund*

**HR Responsible**  
*Susanna Blåndman*

**Head of Administration**  
*Katrin Lindroth*

#### Heads of Staff Units

*Stefano Manzoni*

*Qiong Zhang*

*Gustaf Hugelius*

**Director of PhD Studies**  
*Helle Skånes*

**PhD subject representative**  
*Arjen Stroeven*



*Sunflowers in late summer outside the Geoscience building.*

## Research and Education Grants Awarded 2023

Grant Receiver	Funding Organisation	Project Name	Total Grant (TSEK)
Brown Ian	RISE	Rymddatalabb	303
Cousins Sara	Kungl. Vitterhetsakademien	Stensjö	100
Frampton Andrew	Bolin Centre for Climate Research	Quantifying flow interactions from hillslopes to arctic wetlands	60
Gunnarson Björn	SU	Distansprogrammet Tellus	250
Hugelius Gustaf	EU	ILLUQ	4 492
Hättestrand Martina	Bolin Centre for Climate Research	RT3/Solleröprojektet	54
Jaramillo Fernando	FORMAS	Förslag på optimal återställning av hydrologiska regimer i svenska våtmarker genom djupinläring och hydrogeodesi	3 805
Jaramillo Fernando	FORMAS	Utökad övervakning av vattenresurser för att möta klimatrelaterade risker i vattenförsörjningen	3 917
Jaramillo Fernando	STINT	Unraveling the hidden coastal water dynamics in Ecuador from space	140
Jaramillo Fernando	Board of Science, SU	SFO PhD / Fernando	3 160
Manzoni Stefano	International funding	CALIPSO	7 635
Qiong Zhang	STINT	QZ / travel	600
Rosqvist Gunbild	Bolin Centre for Climate Research	Hurdles for implementation of wetlands as Nature-based Solutions (NbS) in Sweden	52
Sannel Britta	The G.Gustafsson Foundation	Natur och miljö i Lappland	30
Skånes Helle	SU	Virtualisering datorb utb	400
Treydte Anna	FORMAS/SLU	Storskalig restaurering av betesmarker i torrområden kan drivas genom synergier mellan biologisk mångfald, vatten och klimat (RestaureraMera – Restore4More)	318
Treydte Anna	SASUF	UU / Seed Grants	100
Treydte Anna	STINT	Plastic pollution affecting local pastoralist communities of South Africa	135
Treydte Anna	Bolin Centre for Climate Research	Seedbombs as restoration tool for degraded rangelands under climate change : A socio-ecological approach in Enduimet Wildlife Management Area, Tanzania	50
Österlin Carl	FORMAS	Överbetat eller intrång? Utforskande av markanvändningskonflikters politiska ekologi i Sápmi.	3 999
		<b>Sum</b>	<b>29 600</b>

## Research Contracts Awarded 2023

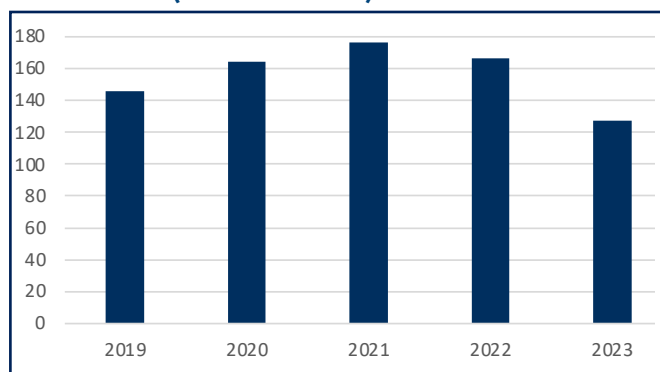
Grant Receiver	Funding Organisation	Project Name	Total Grant (TSEK)
Andrew Frampton	SKB	DFN	150
Belyazid Salim	SLU	Heureka	203
Hugelius Gustaf	ESA	ESA AMPAC net	789
Stroeven Arjen	SKB	Moränanalys	602
<i>Sum</i>			<b>1 744</b>



Students on the course "Soil Science, Landforms and Vegetation" visiting Reutersbergs nature reserve in Kungsör. Photo: Helle Skånes.

## Publications

### Publications (Peer Reviewed)



Number of peer reviewed publications 2019-2023. A total of 127 papers were published in peer reviewed journals 2023. Statistics for 2023 reported in DiVA.

### QR-code to all publications in 2023



# 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
- Fluvial Geomorphology Laboratory



Students on the course "Geomorphological Processes, Natural Hazards and Risk Assessments" in Andalucia, Spain. Photo: Sofia Samuelsson.

# Education

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) in:

- Biology-Earth Sciences
- Geography
- Earth Sciences

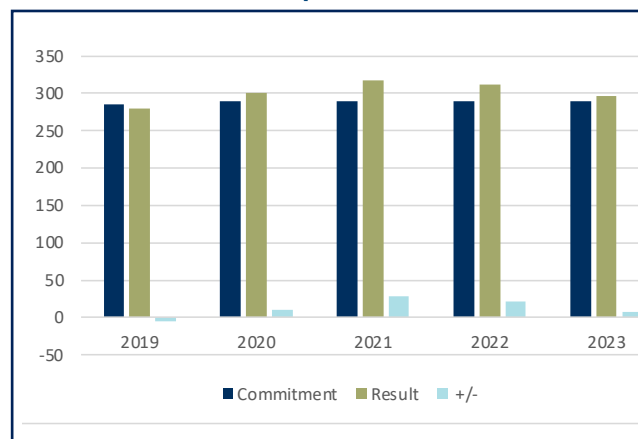
## Master's Programmes (120 credits) in:

- Environmental Management and Physical Planning
- Geomatics with Remote Sensing and GIS
- Landscape Ecology
- Polar Landscapes and Quaternary Climate
- Hydrology, Hydrogeology and Water Resources (starts in 2025)



The Natural Sciences faculty club (NF) arranges many different activities during the year. This is the kick-in for new students with soap football outside the Geoscience building. Photo: Jens Olof Lasthein, Stockholm University.

## Annual Performance Equivalent/HÅP



## PhD Education

### Doctoral theses 2023 and Licentiate thesis

**Felicity Alice Holmes**, *Glacier-Ocean Interactions in the Arctic: Contemporary calving and frontal melt from field observations, remote sensing, and numerical modelling*

**Martim Mas e Braga**, *Modelling ice surface elevation changes in Dronning Maud Land, East Antarctica: Bridging the gap between in-situ and numerical model reconstructions*

**Yan Ma**, *Quantifying hydroclimatic change impacts on infectious diseases: Signals and geographies from local to global scale*

**Jessica Faye Page**, *Sustainable Urban and Regional Development and Related Ecosystem Services and Water-Climate Interactions*

**Ellen Berntell**, *Understanding West African Monsoon Variability: Insights from Paleoclimate Modelling of Past Warm Climates*

**Abhay Prakash**, *Petermann Glacier Ice Shelf in a warming world: Insights from 3-D numerical modelling of ice shelf-ocean interactions at Petermann Fjord, Northwest Greenland*

**Imenne Åhlén**, *Ecosystem services of wetlands and wetlandscapes under hydro-climatic change: Impacts of water flow and inundation patterns*

**Rozália E. Kapás**, *Grassland restoration: Connectivity, plant community change and cows*

**Saeid Aminjafari**, *Monitoring Water Availability in Northern Inland Waters from Space*

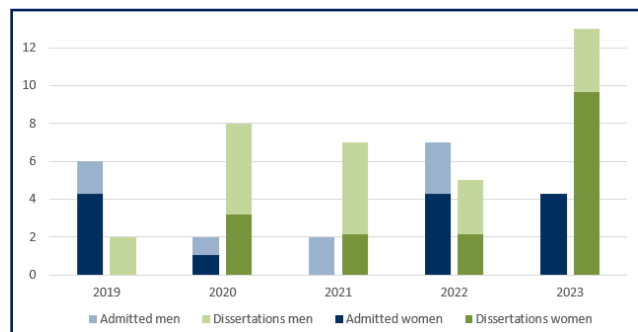
**Christina Fröjd (Lic)**, *Soil organic carbon stocks in high mountain periglacial settings of Patagonia (SW Argentina) and Vindelfjällen (NW Sweden)*

**Alexandra Hamm**, *Permafrost Groundwater Dynamics: Modeling of vertical and lateral flows in the active layer across multiple scales*

**Nina Roth**, *Grasslands in a changing climate: Summer drought and winter warming effects on grassland vegetation*

**Georgios Maneas**, *Towards co-management of Gialova Lagoon: A Natura 2000 coastal wetland in Messinia, Greece*

### PhD Student Admissions and Dissertations 2019-23



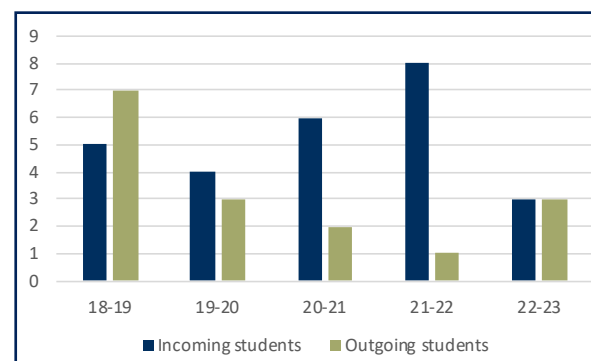
## Collaboration

### International Exchange Education

#### Partner Universities until spring semester 2023

Nanyang Technological University, Singapore  
 Vrije Universiteit Brussel, Belgium  
 Trinity College Dublin, Ireland  
 Freie Universität Berlin, Tyskland  
 Turun Yliopisto, Finland  
 Université de Liège, Belgium  
 RWTH Aachen, Tyskland  
 Universiteit Utrecht, Nederländerna

### Exchange Students 2019-23



The number of students in the graph only show exchange students from our own exchange agreements. In addition we also receive as well as send out exchange students via central (university-wide) agreements, North2North, Nordlys and CIVIS, agreements handled by the International Office at Stockholm University.

### Alumni Network

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 research and education.

### Outreach and Media

The department interact with the public and schools at annual events like; the Researchers' Night, the Geology Day, the Bolin Centre Climate Festival, the Sustainability Forum and the World Water Day.

Our researchers communicate their findings and disseminate new knowledge to society in many different forms. From press releases, popular science papers, debates, national and international media.

# Contact

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Stockholm University in Frescati. Photo: Infrared areal photo used for interpretation of natural resources, UltraCam Eagle, LMV.

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University**