



SWISS POLAR INSTITUTE



Annual Report 2019

This image shows the daily routine of the ice camp of the Arctic Ocean 2018 expedition. It was taken at a latitude higher than 88°N, close to the geographic North Pole.

From left to right: meteorological tower, balloon site from which tethered balloons were launched, ROV (Remotely Operated Vehicle) tent to deploy the underwater vehicle, buoy site to measure basic properties of the air, the ice and the water underneath.

Photo credit: Andrea Baccarini (PSI), funded by an SPI Polar Access Fund grant to participate in this expedition and gather unique atmospheric datasets

FOREWORD BY THE DIRECTORS

This annual report gives an overview of the numerous activities of the Swiss Polar Institute in 2019. It also serves the purpose to reflect on its priorities and achievements during this time.

We feel that 2019 has been a year of consolidation of established instruments and of diversification of the Swiss Polar Institute's activities. In the spirit of continuity, all funding schemes launched in 2017 and 2018 were pursued on the same basis. In order to reinforce the innovation capability of the Swiss polar community, the SPI acquired additional funding to support "SPI Technogrants" which fund the development of new technologies and instruments for work in polar regions. After a first pilot, the Health and Safety courses as well as related services were offered openly to the Swiss science community and proved to be in very high demand.

The new dynamics induced by the SPI's activities and support can now really be felt and are a very positive signal for the future. Numbers show that our activities and calls for proposals are met with growing interest and demand by the community and our portfolio of funding. Researchers from research institutions and universities previously not active in SPI have applied successfully to our calls for proposals and are showing that research in polar regions is increasing its breadth in Switzerland. Underlining the same trend, the SPI was delighted to welcome the University of Lausanne as a new funding member.

In a more long-term perspective, the SPI Science and Technology Advisory Board presented in July 2019 a set of priorities for the future. The document entitled "Polar Science in Switzerland" maps the competences and main fields in which Swiss polar science can and should make a strong impact by 2025 and beyond. The reception of this document by the community was very positive and highlighted once more the strategic importance for SPI to move beyond individual project support and to enable large bottom up and interdisciplinary initiatives with a strong international component.

On the basis of this growing national and international anchoring, the SPI applied for a recognition of its status as an institution of "national importance" under article 15 of the Law on Research. Currently under review, this federal funding would take effect in 2021 and allow SPI to make the level of investments necessary for the Swiss polar community to organise field campaigns with adequate support and medium-term security of funding and, in return, have the international recognition and scientific impact its research deserves.

Once again, the SPI is indebted to all external experts and panel members who invest their time to support SPI's reviews and processes. We would also like to thank the members of the SPI Board of Directors and the SPI Science and Technology Advisory Board (STAB) for their continued support and engagement.

Our sincere gratitude also goes to the BNP-Paribas Swiss Foundation and to the Swiss Polar Foundation, with whom we enjoy excellent collaboration and which have both been central in enabling the SPI to grow its activities in 2019.

Looking forward to future endeavours together,

Prof. Konrad Steffen
SPI Scientific Director

Danièle Rod
SPI Executive Director

SPI ACTIVITIES AND HIGHLIGHTS - 2019

2019 has been an important year for the SPI to position itself at the service of the community of Swiss polar scientists. With the expansion of its portfolio of funding instruments and the creation of new partnerships, the institute ensures a continuity of its development.

A) Funding activities

In 2019, the Swiss Polar Institute enriched its portfolio of support activities for the Swiss polar community. A particular accent was laid on young researchers as well as the funding of technological development serving the science linked to polar topics.

All funding activities are issued annually as open and competitive calls for proposals. The latter are evaluated by independent panels of specialists from diverse fields of expertise. Grant agreements are elaborated and managed by the SPI together with the support of the EPFL financial and legal departments.

1) SPI Polar Access Fund

The Polar Access Fund is a funding instrument which enables young researchers to undertake field trips, often their first one, to polar regions or remote high-altitude areas.

While there is no restriction in the scientific discipline of the proposed project, the latter must be linked to climate change issues. The projects, jointly funded by the SPI and the BNP Paribas Swiss Foundation, are evaluated based on their scientific merit, added-value of the field trip for the research and the applicant, feasibility, and potential of the applicant.

Call for proposals 2019

15 November 2018	Call for proposals out
15 January 2019	Submission deadline (6 submissions)
5 March	Evaluation panel (Lausanne) (selection of all the projects)
End of March	Information of STAB and BNP Paribas Foundation
3 April	Approval by Board of Directors
April	Information to all applicants and grant agreements

Call for proposals 2020

November 2019	Call for proposals out
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List of 2019 grantees

Grantee	Field trip	Region	Financial support (CHF)
Alfonso Ferrone, PhD student, EPFL	Summer campaign at "Princess Elisabeth Antarctica" research station, in the Dronning Maud Land region	East-Antarctica	14'000.-
Evan Miles, PhD Student, WSL	Accumulation via Borehole teLeviewing at high Elevation (ABLE): proof of concept	Nepal Himalaya	12'500.-
Jacqueline Huber, PhD Student, University of Zurich	Elevation changes of Greenland's peripheral glaciers	Northern Greenland	20'000.-

Teresa Jorge, PhD student, ETH Zurich	In flight testing of Peltier Cooled Frost point Hygrometer under Polar Tropospheric and Stratospheric conditions	Ny-Ålesund, Svalbard	20'000.-
Tobias Erhardt, PhD student, University of Bern	Shallow ice core drilling campaign	Northeast Greenland	20'000.-
Vaios Moschos, PhD Student, Paul Scherrer Institute	Filter sampling to identify the sources and processing of atmospheric organic aerosols	Siberia	17'000.-



Photo credits : From left to right, Evan Miles, Alfonso Ferrone and Tobias Erhardt (2019 grantees)

2) SPI Exploratory Grants

The SPI Exploratory Grants were created as a financial support for Swiss scientists active in polar regions (and remote high-altitude areas such as Andes and the Himalayas). It allows them to fund additional field work or launch and participate in new collaborations with financial support for logistics. The SPI encourages collaborations across disciplines and research groups as well as participation in larger/international activities.

Call for proposals 2019

22 August 2019	Call for proposals out
23 October	Submission deadline (10 submissions)
26 November	Evaluation panel (Bern) (selection of 5 projects)
10 January 2020	Approval by Board of Directors (written procedure)

List of 2019 grantees

Grantee	Project	Region	Financial support (CHF)
Dr. Isabelle Gärtner-Roer, University of Zurich	Rockglacier Dynamics on Disko Island (RockDynDisko)	Greenland, Disko Island	31'000.-
Dr. Myriam Guillevic, EMPA	New Persistent Pollutants in the Arctic Atmosphere (NPPAA)	Svalbard, Zeppelin Station and Jungfrauoch	36'000.-
Dr. Theo Jenk, Paul Scherrer Institute	ICE MEMORY Tanzania	Kilimanjaro, Tanzania	35'000.-
Dr. Eric Pohl, University of Fribourg	Consistent water and glacier mass balance measurements in Central Asia (CoWaG)	Pamir, Tien Shan	23'000.-

Dr. Andrew Tedstone, University of Fribourg	'HI-SLIDE': The influence of climate on the decadal dynamic stability of high-elevation sectors of the Greenland Ice Sheet	Greenland	35'000.-
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Photo credits : Akçar Naki (left) and Guillaume Juvet (right) (2018 grantees)

3) SPI Technogrants

The SPI Technogrants were launched for the first time in 2019. The main objective of this funding mechanism is to support Swiss developments of science supporting technologies relevant for research in polar regions (and other extreme environments such as remote high-altitude regions).

These grants were created as a complementary tool to the previously established funding instruments. They were launched after observing the growing interest of the scientific polar community towards technology developments in other calls for proposals. Considering this trend, SPI seized the opportunity to better fit the needs of the Swiss researchers and explore a new type of funding instrument.

The SPI Technogrants are funded through a donation by the Swiss Polar Foundation and managed by the SPI.

Call for proposals 2019

22 August 2019	Call for proposals out
23 October	Submission deadline (6 submissions)
26 November	Evaluation panel (Bern) (selection of 5 projects)
10 January 2020	Approval by Board of Directors (written procedure)

List of 2019 grantees

Grantee	Project	Region	Financial support (CHF)
Dr. Maciej Bartosiewicz, University of Basel	Coupling carbon processing to microbiomes in small permafrost ponds: A real time observation platform	Siberia	47'000.-
Dr. Guillaume Juvet, ETH Zurich	Autonomous retrieval of ice samples by Unmanned Aerial Vehicle	Swiss Alps	46'000.-
Prof. Julia Schmale, Paul Scherrer Institute	Developing the 'Modular Multiplatform Compatible Air Measurement System' (MoMuCAMS)	Arctic	20'000.-
Dr. Martin Vollmer, EMPA	DAAMAA: Digital Air Archive Markers in the Arctic and Antarctic	Arctic (Zeppelin Station), Antarctic (Troll Station)	37'000.-

4) Field and summer schools

In the same spirit as the Polar Access Fund for young researchers, and in collaboration with international partners and institutions, the SPI supports Swiss students to join field universities/summer schools linked to polar topics. In 2019, three students were selected and then funded by SPI to attend the said courses.

The SPI prepared a list of eligible field and summer schools in many fields of study related to polar research for which Swiss students can obtain funding from SPI. The list for 2020 was published on the SPI website in November 2019. The list is not exhaustive and students can apply for other programmes as long as they guarantee the required quality of teaching and competitive selection of participants.

Additionally, the Changing Arctic programme started the preparation of two fieldtrips for the summer 2020 and for which five Master students obtain grants of 2'200 CHF each from the SPI in order to participate in this one-year programme and the related fieldtrips in the Russian Arctic.

List of 2019 grantees

Grantee	Field/summer school	Region	Financial support (CHF)
Mr Johannes Marian Landmann, ETH Zurich	Glaciology (AG-825, PhD Level), University Centre in Svalbard (UNIS)	Svalbard	1'500.-
Ms Michaela Mühl, University of Bern	Juneau Icefield Research Program 2019	Canada and Alaska	1'500.-
Mr Sebastián Vivero, University of Lausanne	Permafrost and Periglacial Environments (AG-830, PhD Level), University Centre in Svalbard (UNIS)	Svalbard	1'397.-
Ms Tiffany Hemecker, University of Geneva	Changing Arctic, EPFL	Russian Arctic	2'200.-
Ms Femke Hurtak, ETHZ	Changing Arctic, EPFL	Russian Arctic	2'200.-
Mr Beat Pfund, ETHZ	Changing Arctic, EPFL	Russian Arctic	2'200.-
Ms Julie Seemann-Ricard, University of Geneva	Changing Arctic, EPFL	Russian Arctic	2'200.-
Ms Janine Wetter, ETHZ	Changing Arctic, EPFL	Russian Arctic	2'200.-

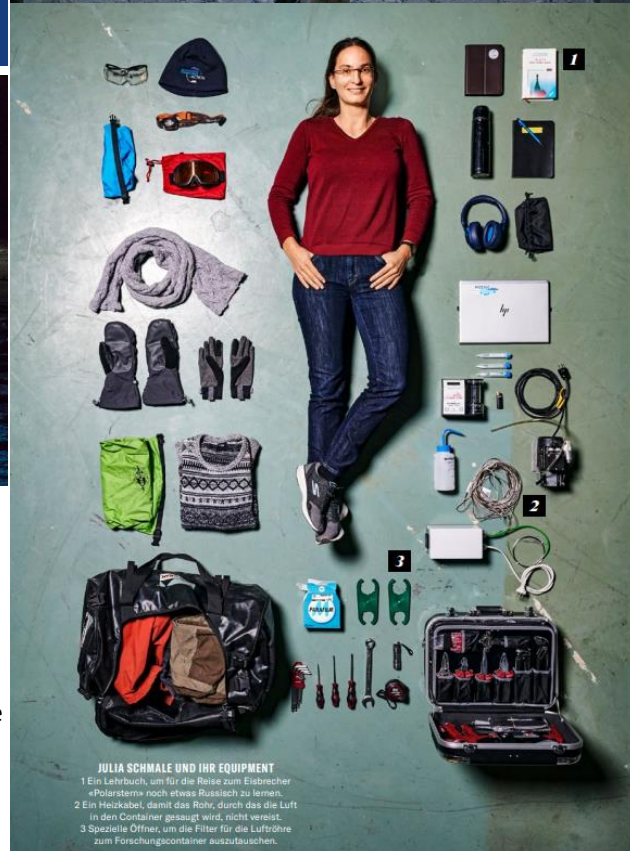
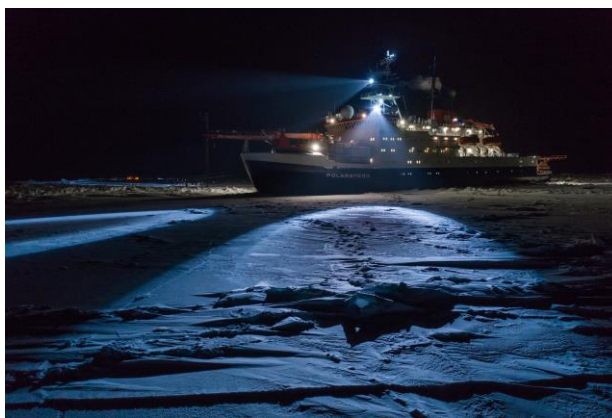
5) Other SPI funding

The SPI also supported the participation of Swiss groups in large international research initiatives in polar regions. By doing so, the institute pursues its vision of encouraging multilateral collaborations, developing a strong network and enable Swiss participation in international research efforts.

In October 2019, two Swiss groups joined the MOSAiC initiative (Multidisciplinary drifting Observatory for the Study of Arctic Climate), the largest and most ambitious interdisciplinary Arctic expedition of all times with researches from 20 countries, on board of the research vessel Polarstern. The SPI supports these two projects financially, according to previous decisions taken by the SPI Board of Directors (2018).

The SPI also annually offers three places for Swiss researchers to work on the Barneo Ice Camp, close to the North Pole. In 2019, two researchers from University of Basel applied and were selected to conduct a

preparatory study on micro-plastics there. The SPI thus financed 50'000.- CHF for their places. Unfortunately, the field campaign had to be postponed due to logistical issues.



MOSAIC expedition route, early January 2020 (upper left), the supply icebreaker Kapitan Dranitsyn (upper right, photo credit : Michael Gutsche), the research vessel Polarstern (lower left, photo credit : The New York Times, "Endless Night at -50 Degrees: A look at Life on an Icebreaker", 7 February 2020, Esther Horvath), Prof. Julia Schmale with her instruments and material onboard (lower right, photo credit : Schweizer Illustrierte, 3 January 2020, p. 21)

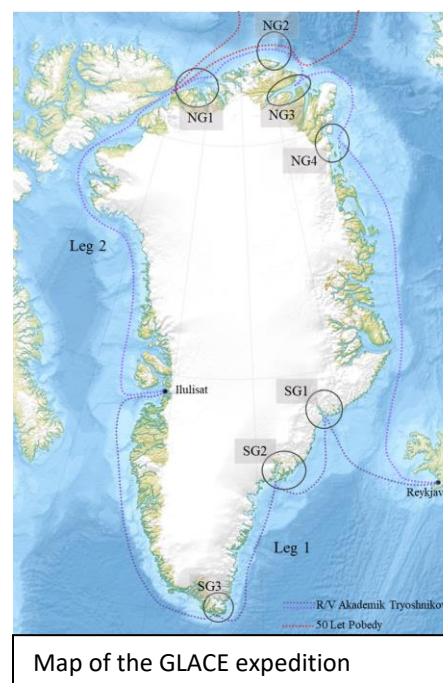
B) Expeditions

1) GreenLand Circumnavigation Expedition (GLACE)

After a full and very complex preparation process involving logistics, permit authorities, researchers from all over the world and media/outreach activities, the SPI had to take the difficult decision to postpone the GLACE expedition planned for August-September 2019. This unique expedition would have taken 15 groups of researchers to conduct interdisciplinary work all around Greenland. A specific focus was laid on the coastal regions of Eastern and Northern Greenland where least data is currently available about the extend of climate change impact.

Following the postponement of GLACE, the SPI remained in close contact with the involved groups, notably in order to reimburse all their incurred costs and ensure that all young researchers who had been hired in order to work on the expedition would not be facing a gap in their careers.

Contacts were then established with different potential partners with a view to find a different research vessel to carry out the expedition (GLACE 2.0), probably in 2022.



Map of the GLACE expedition

Summary of GLACE milestones in 2019

Dates	Meeting/Event	Location
7-8 February	GLACE PIs planning meeting	Lausanne, Switzerland
21-22 February	Visit of Akademik Tryoshnikov	St-Petersburg, Russia
16-17 May	Media Cell meeting	Lausanne, Switzerland
21 May	Meeting with mountain guides	Lausanne, Switzerland
3-4 June	Visit of Akademik Tryoshnikov	Kiel, Germany
7 June	Postponement of the expedition	
9 September	Meeting with Danish Foreign Affairs	Copenhagen, Denmark

2) Antarctic Circumnavigation Expedition (ACE)

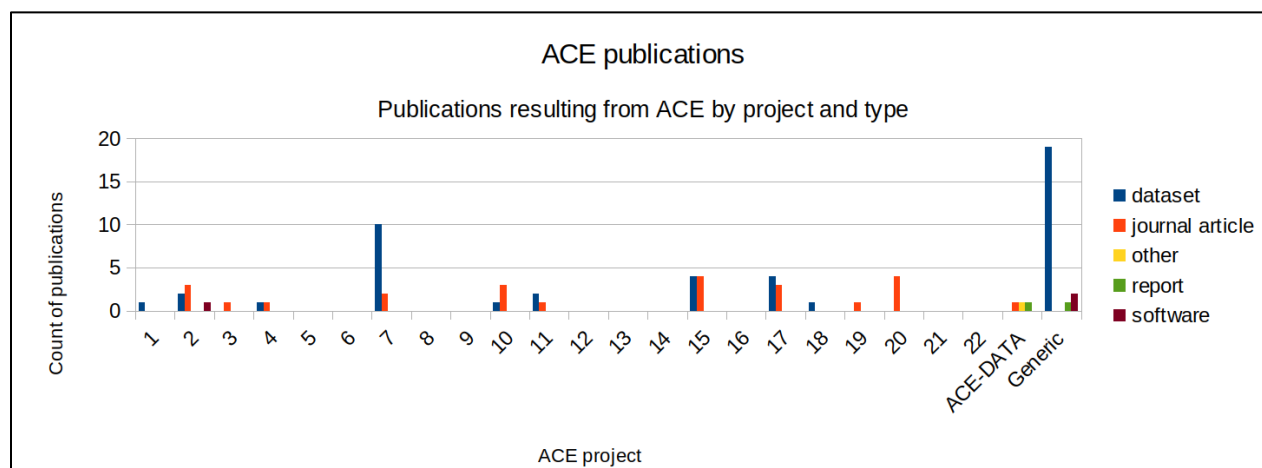
The ACE expedition finished at the end of March 2017 but the SPI continues its work with the ACE data manager Jen Thomas. She answered 20 requests for data from ACE during the year, over half of which were from outside the ACE community (notably permit authorities).



ACE-DATA, a collaboration between SPI, the Swiss Data Science Centre and Paul Scherrer Institute held a meeting to work on sea-atmosphere interactions following the publication of its first findings. A further 16 journal articles were published by ACE projects during 2019, bringing the total to 26 which have been cited 124 times in total. 47 datasets have been published to date of which 28 are freely and openly available for anyone to use. Three reports and three pieces of software have also resulted from the expedition so far. ACE data have been incorporated into international data repositories using community standards to ensure they are usable and widely discoverable in the future.

Photo credit : Carles Pina Estany

The SPI Secretariat also established a searchable media gallery containing the visual material related to the expedition, which will be useful for future outreach projects.



Dates	Meeting/Event	Location
January	Workshop on Machine Learning for Environmental and Geosciences	Dübendorf, Switzerland
November	Polar Data Forum	Helsinki, Finland
14-15 November	ACE DATA/ASAID Workshop	Lausanne, Switzerland

C) SPI services to the Swiss polar community

One of SPI's missions is to support the Swiss scientific community performing research in polar regions and extreme environments. Additionally, a core part of SPI's work is to encourage the creation of synergies within the community in order to bridge disciplinary gaps and to provide network opportunities promoting partnerships. The following section mentions the different services and links the SPI creates with the community of Swiss researchers and its scope to a broader public.

1) SPI Science Plan

Issued in June 2019, the SPI Science Plan "Polar Science in Switzerland - Proposed priorities for the Swiss Polar Institute (SPI) up to 2025 and beyond" is the result of an extended dialogue between the SPI and the Swiss polar community.

The document identifies priorities and initiatives to be supported by the SPI in order to support the growth of the Swiss polar community during the timeframe 2021-2024. It proposes four thematic "Flagship Topics", based on the strengths and interests of the community and provides an outline of the SPI's role in the resolution of upcoming scientific questions.

Although this document will have to be a living document and updated in a few years' time, it currently forms the backbone of SPI's ambitions to support more long term and bottom-up research programmes driven by Swiss groups in polar and high-altitude regions.



2) Health & Safety trainings

Following requests from the community, SPI launched pilot “health and safety” activities and trainings for the polar research community in 2018. Given their success, the SPI has developed a comprehensive offer to support field-going teams. It includes field courses (in environments as similar as possible to what the scientists can encounter in the field) during which the participants are trained to face health issues in prevision of their field work. Some activities are funded by SPI, but for other services, the latter acts as a facilitator. Throughout 2019, GRIMM (Groupe d’Intervention Médicale en Montagne) and Air Zermatt collaborated with the SPI in order to elaborate high-level trainings, regarding the technical and content aspects.

In 2019, two courses were organised and were quickly booked out (12 participants each course). The first one took place on 26-27 April and focused on the needs of field parties heading to the Arctic Tundra and other comparable remote environments. The second covered the subject of medical issues in extreme temperatures and took place on 13-14 December in the canton of Valais.

Institution	Number of participants
EPFL	2
ETHZ	4
WSL	5
PSI	1
University of Zurich	6
University of Bern	1
University of Lausanne	2



Health & Safety trainings of 2019
Photo credits : Evan Miles and Milad Dulloo

3) Conferences

In response to a request from Prof. Hubertus Fischer (University of Bern) and Margit Schwikowski (PSI) and in recognition of the strength of the Swiss ice core community, the SPI Board approved to cover a large part of the funding of the 3rd Open Science Conference of the International Partnerships for Ice Core Sciences, that will be held from 18 to 23 October 2020 (see table below).

Grantee	International initiative	Project name	Financial support (CHF)
Prof. Hubertus Fischer, on behalf of the Swiss organizing committee	IPICS Conference	3rd Open Science Conference of the International Partnerships for Ice Core Sciences	40'000.- (incl. deficit guarantee of 10'000.-)

4) SPI container

In 2016, the SPI supported, together with the PSI, the purchase and fitting of a container to hold scientific experiments during ACE expedition. A second container was purchased in 2019 for the GLACE expedition

and, since the expedition was postponed, made available to the Swiss scientific community. The two containers can be used for the transportation of material and serve as mobile laboratories for field experiments.

In 2019, SPI supported with a small amount of funding the transport of both containers to remote polar research locations. In October, one container was set up as a laboratory on board the RV Polarstern where it will remain for the entire MOSAiC expedition. The other container currently serves as a laboratory for a Swiss led research project in Svalbard, where it will remain from August 2019 until the end of the year.

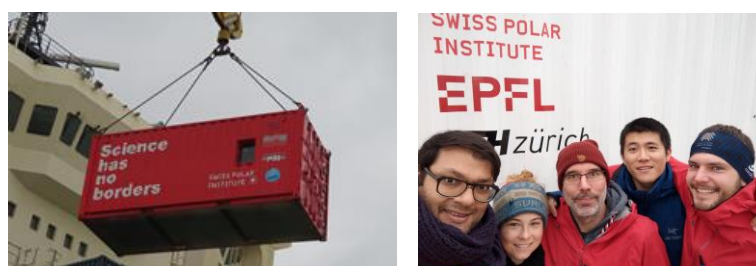


Photo credits : Julia Schmale and Zamin Kanji

D) Outreach activities and pedagogical programmes

1) PolARTS

Together with Pro Helvetia, the Swiss Arts Council, the SPI launched a brand-new funding instrument aiming at supporting exchanges between polar science and the world of arts. The proposed format seeks to provide a framework for dialogue and an enabling environment for new collaborative and explorative practices.

On 5 December, the event “Arts meet Polar Science – Networking and discussion event for PolARTS” gathered approximately 70 people for its speed-meeting. Passing from table to table, the meetings generated fruitful discussions and was a first step towards the formation of tandems. This success has given way to a large number of submissions, which will be subject to evaluation in 2020.

Call for proposals 2019

December 2019	Call for proposals out
January 2020	Submission deadline (15 submissions)



Photo credit : Pro Helvetia, the Swiss Arts Council

2) Museums

Reaching out to a wider public, SPI has collaborated with the Museum d'Histoire Naturelle de Neuchâtel for its exhibition "Pôles - Feu la Glace" in 2018. The exhibition ended in August 2019 with a closing event, after a great success and popularity.

3) ATKA

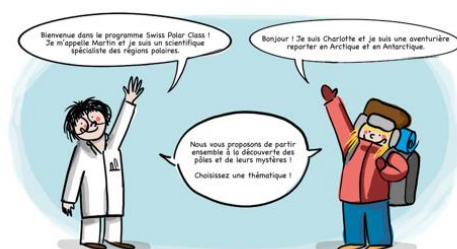
The SPI extended support for the ATKA pedagogical platform for students from 10 to 12 years old. The latter was a pilot programme presenting the expedition of the polar sailing boat ATKA and raising awareness of environmental issues in polar regions. It established a collaboration with schools in Western Switzerland, with the support of the ATKA expedition crew. In total 370 pupils from 20 classes in Switzerland enrolled in the ATKA programme and followed its activities.

ATKA Polar School 2019	Classes involved	Milestones of the programme
	4 classes (primary level) in Sierre 3 classes (secondary level) in Sierre 1 class in Vers-Chez-Les-Blancs 2 classes in Lausanne 5 classes (primary level) in Renens 5 classes (primary level) in Bussigny	<u>January, February, March</u> - Creation of educational content on board of ATKA - Creation of an educational web series - Correspondence (Greenlandic and Swiss students) - Publication of the website: https://polar-school.atka.fr/ <u>April</u> - Interventions in Swiss schools <u>May</u> - End of year party, highlighting of students' work, exhibition, concert and movie <u>July, August</u> - Creation of content during the summer program and of the learning game "Pikkori" <u>October</u> - Return of the boat, enhancement of the educational program <u>December</u> - Activity report on ATKA Polar School

4) Swiss Polar Class

As an extension of the ATKA pilot activities, SPI, together with an external expert, has started to create pedagogical programme "Swiss Polar Class" for students in the same age group. This program provides information about polar regions presented in thematic documents, videos and exercises. The objective is to provide learning material about polar topics tailored to Swiss educational requirements. The online platform will be launched at the beginning of March 2020 and the related activities will start during the spring semester.

Images from the Swiss Polar Class and the ATKA Polar School websites



5) Events

Networking, sharing ideas and concepts, learning about partners activities and projects, strengthening the polar community: those are the reasons for the SPI to create and participate in local and international events.

The Swiss Polar Day is traditionally the flagship event of the year for SPI. In 2019, in spite of a sub-optimal date, it proved a success with around 150 participants from very diverse fields of study. SPI observed a strong involvement of the participants during the workshops and obtained a lot of feedback from the community of scientists.

Events organised by SPI in 2019

Date	Events	Location	Details
18 February	Workshop on social sciences and humanities in polar regions – 25 attendees	Neuchâtel	Workshop to support the SSH community in Switzerland working in polar regions
19 February	GlobalArctic workshop – 12 attendees	Lausanne	Workshop presenting the GlobalArctic programme and associated training opportunities to interested researchers
5 June	Scienziati alpini fra i ghiacci polari - Svizzera e Italia protagoniste nella ricerca polare – 65 attendees	Rome, Italy	Event at the Swiss Embassy in Rome about polar and high alpine research synergies with the participation of Carmine Bustelli (Minister for the Arctic), Leonardo Langone (Director Italian Polar Institute) and Stefano Aliani (researcher and ACE participant)
21 March	Information event on SPI activities and calls for proposals	Davos	Information event for SLF and WSL researchers
23 April	Swiss Polar Day – 145 attendees	Bern	Annual conference and networking event for the Swiss polar community
3 July	Too close for comfort? Embedded science journalism in extreme environments	Lausanne	Session moderated by Danièle Rod with Linda Capper (BAS), Lawrence McGinty (ITV), John Sparks (Sky News), Paulin Bashenghesi (ICRC) Organised in the context of the World conference of science journalists (WCSJ)
6 November	Round table on Swiss – AWI collaboration	Lausanne	Round table and exchange between EPFL/Swiss researchers and AWI Director Antje Boetius
29 November	Speed meeting, round table and exhibition at BNP Paribas Foundation – 60 attendees	Geneva	Event for BNP Paribas' collaborators and workshop for the Polar Access Fund grantees Co-organised with BNP Paribas Foundation Switzerland
5 December	Arts meet Polar Science – Networking and discussion event for PolARTS – 70 attendees	Zurich	Speed meeting for artists and polar scientists to exchange and form tandems in view of the PolARTS call Co-organised with Pro Helvetia



Participants to the BNP Paribas event (left), dialogue between Prof. Hubertus Fischer and the audience at the Swiss Polar Day (centre), panel at the WCSJ2019

Attendance at external events and conferences in 2019

Date	Events	Location	Details
17-22 March	Gordon Research Conference on Polar Marine Science	Barga, Italy	Poster presentation and side meetings with TARA science team
4 May	Swiss Commission on High altitude and Polar research (SKPH)	Bern	Presentation of SPI news
7 May	Swiss Polar Foundation	Lausanne	Board meeting – report on SPI news
28-31 July	COMNAP AGM	Plovdiv, Bulgaria	Annual meeting – SPI invited as observer delegate
14 August	Closing event of the SPI sponsored “Pôles, Feu la Glace” exhibition	Neuchâtel	Event held at the museum
3 September	Meeting with delegation of University of Tromsø	Lausanne	Presentation of SPI activities and GLACE
10-13 October	Arctic Circle	Reykjavik, Iceland	Annual networking meeting and conference with arctic science and policy actors with numerous bilateral meetings (US Arctic Commission, GL authorities, DK authorities, AWI, NSF, ...)
31 October	Landsgemeinde of the Arctic	Bern	Organised by FDFA – presentation of the SPI activities
4 November	Swiss Polar Foundation	Lausanne	Board meeting – report on SPI news
7 November	Swiss Commission on High altitude and Polar research (SKPH)	Bern	Presentation of SPI news



COMNAP AGM (left) and Arctic Circle in Reykjavik (right)

E) Collaborations

As a (relatively) new organisation, SPI continues to work actively on increasing its visibility and networks within Switzerland and abroad, as part of its collaborative strategies and partnerships.

1) Collaborations in Switzerland

The Swiss Committee on Polar and High-Altitude research (SKPH) counts the SPI as an ex-officio member. Furthermore, the SPI continues its exchanges with institutions such as the Swiss National Foundation as well as the Swiss Federal administration and other scientific networks related to climate and environmental sciences topics.

2) International collaborations

In 2019, SPI participated to the proposal writing for the second EU-PolarNet project application to start in 2020. EU-PolarNet is a joint platform for all EU polar actors to plan joint activities and exchange on priorities and science policy.

In 2019, SPI continued to represent Switzerland within FARO, the Forum of Arctic Operators, and COMNAP, the Committee of Managers of National Antarctic Programmes set up under the Antarctic Treaty.

Additionally, SPI is maintaining close contact with a number of Polar Organisations which it supports through bilateral meeting and exchanges. Preliminary discussions on potential collaboration have notably been held with AWI (Germany), IPEV (France), BAS (UK), NSF (USA), AARI (Russia), DEA (South Africa), AAD (Australia) and could be useful in the formulation of future collaboration agreements or joint initiatives.

3) Sponsorship

In 2019, SPI continued its excellent collaboration with the BNP Paribas Swiss Foundation for the Polar Access Fund management. SPI also works closely with the Swiss Polar Foundation, especially in regards to the implementation of the SPI Technogrants.

SPI is very thankful to its partners and donors for their trust and excellent collaboration in 2019.

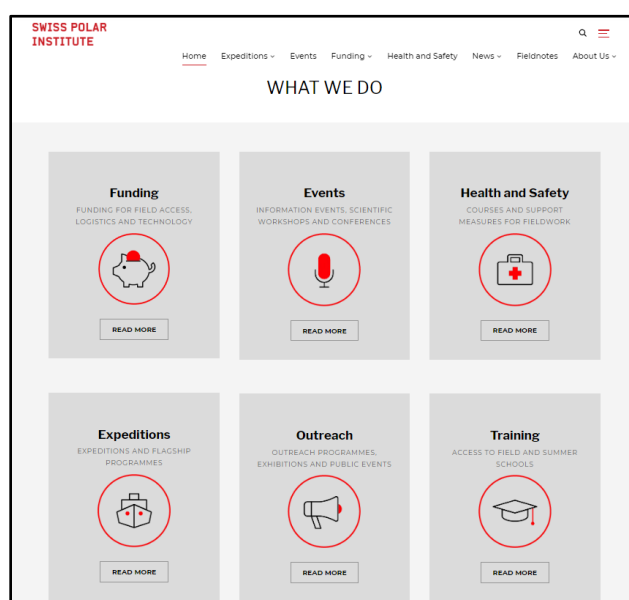
F) Internal developments

1) Institutional communication

In 2019, SPI developed a brand-new website, together with a range of new flyers showcasing current SPI features and activities.

The SPI contacts database (approx. 1250 contacts) has undergone a full revision in 2019, which will be followed by regular maintenance.

Different channels of communication are used to make information regarding the SPI's activities available to the broad public. The different twitter accounts, mailings through the database lists and news posts on the official website inform the scientists and other "polar passionate" about the SPI activities and new opportunities



Posts and many follow-ups were added to the ACE website (<http://spi-ace-expedition.ch/>) and Twitter account to communicate the publications and activities of the research groups.

Similarly, a comprehensive strategy and set of communication tools was set up for the GLACE expeditions (<http://glaceexpedition.ch>) and then frozen following the decision to postpone the expedition.

SPI communication tools in key figures

SPI twitter account @Swisspolar	540 followers	Launched October 2017
ACE twitter account @ACEexpedition	1100 followers	Launched December 2016
SPI contact database	1250 addresses	
Mailings in 2019	6	

2) SPI Secretariat

The SPI hired new staff in 2019 in order to develop its activities: John Maxwell (since July, to support IT and web design), Charmilie Nault (since July, to support the team with the new instruments such as the SPI Technogrants) and Christel Hassler (since October, to work on the Forel project) all joined the SPI.

SPI staff (as of 31.12.2019)

Paul Ducommun	Swiss Polar Class
Basil Fahrlander	Scientific Collaborator
Christel Hassler	Scientific Collaborator
John Maxwell	Web and Communication Specialist
Laurence Mottaz	Administrative Assistant
Charmilie Nault	Scientific Collaborator
Carles Pina Estany	Systems Architecture Manager
Danièle Rod	Executive Director
Konrad Steffen	Scientific Director
Nina Schuback	Scientific Collaborator
Jenny Thomas	Data Manager

3) SPI Board of Directors

The SPI Board of Directors is the SPI decision-making body and is tasked with decisions regarding the SPI's strategy and finances. Its members are high level representatives of the SPI's funding institutions. In 2019, the Board of Directors met on 3 April and 8 November.

SPI Board of Directors (as of 31.12.2019)

Prof. Martin Vetterli – Chair	EPFL
Dr. Frederik Paulsen	Editions Paulsen
Prof. Detlef Günther	ETHZ
Prof. Christoph Hegg	WSL
Prof. Christian Leumann	University of Bern

The State Secretariat for Education, Research and Innovation (SERI), the Federal Department of Foreign Affairs (FDFA), the Swiss Commission for Polar and High-Altitude Research as well as the chair of the SPI STAB and the SPI Directorate are present as guests at SPI Board meetings.

The University of Lausanne will become a new member of the SPI in 2020 and thus, will have a representative on the Board of Directors next year. The University of Lausanne was thus invited to join as an observer at the meeting on 8 November and was represented by its Rector, Prof. Nouria Hernandez.

4) SPI Science and Technology Advisory Board (STAB)

The STAB of the SPI is composed of experts active in various fields of polar and earth sciences. It advises the SPI on scientific activities and it gives a guidance on the priorities of the institute. The STAB met on 11 February, 7 March (online meeting), 24 April and 10 September 2019.

A number of members of the STAB will be stepping down after their first three-year term in spring 2020. STAB therefore prepared a list of potential suitable candidates in order to complement the STAB's expertise from April 2020 onwards and presented a list for adoption by the Board of Directors. The new SPI STAB members will start their term at the April 2020 meeting of the STAB and their names will be made public then.

SPI STAB members (as of 31.12.2019)

Prof. Karin Lochte – Co-Chair	AWI, Germany
Prof. Thomas Stocker – Co-Chair	University of Bern, Switzerland
Mr. Christian de Marliave	Editions Paulsen, France
Prof. Hubertus Fischer	University of Bern, Switzerland
Prof. Philippe Gillet	EPFL, Switzerland
Prof. Gerald Haug	ETHZ, Switzerland / MPG, Germany
Prof. Gabriela Schaepman	University of Zurich, Switzerland
Prof. Heini Wernli	ETHZ, Switzerland
Prof. Konrad Steffen (ex-officio)	SPI, ETH-Z, EPFL, WSL Switzerland
Ms. Daniele Rod (ex-officio)	SPI

Lausanne, 6 March 2020