

# Girls on Ice Switzerland

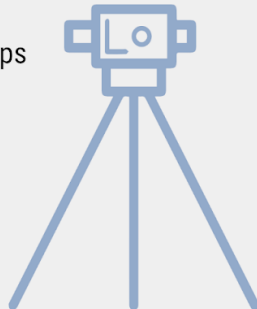
## Annual Report 2020



- field glaciology
- geomorphology, ecology, meteorology, etc.
- scientific experiments in groups of 3 girls over several days

- 2016 Girls on Ice Switzerland founded
- 4 expeditions between 2017 and 2019
- Findelengletscher above Zermatt
- 11 day program, 8 days camping near the glacier
- 1 weekend in a hut 2020 (Glacier de la Plaine Morte)

- 9 participants per expedition (15-17 years old)
- diverse team: socio-economically, intellectually
- german- or french-speaking
- 3-4 female instructors incl. certified mountain guide



- mountaineering training
- knots and rope up
- using crampons and ice axes
- ice climbing in a crevasse
- peak day



- mini-workshops 'Glaciers & Climate Change' and 'Art & Science' at schools
- alumni-scientist tandem lead the workshops
- unique peer-to-peer science communication







# Content

Girls on Ice Switzerland	<b>3</b>
Impressions from 2020	<b>4</b>
What we achieved in 2020	<b>5</b>
Alternative Event Girls on Ice Schweiz and Suisse	5
Transferring Women on Ice into Alpine Azure	5
From glacier to classroom	6
Board activities	6
Activities for Inspiring Girls Expeditions	6
Cooperation with the umbrella organisation	6
Supporting the development of new programs and strengthening the community	7
Organization and structure of Girls on Ice Switzerland	9
The history of Girls on Ice Switzerland and of its global network Inspiring Girls Expeditions	10
Who was involved in Girls on Ice Switzerland in 2020?	11
Who we worked with in 2020	11
The year 2020 in figures	<b>13</b>
Income statement of the association account	13
Balance Sheet of the association account	14
Statistics	15
Alternative Event 2020: Exploring while adhering to COVID-19 guidelines	<b>17</b>

*All images are courtesy of Girls on Ice Switzerland.*



## Girls on Ice Switzerland

Empowering young women through science, art and wilderness exploration. *Inspiring Girls Expeditions* **seeks** to...

- Increase the participation and diversity of women in field sciences, art, and outdoor recreation. We encourage attitudes which foster supportive and inclusive science and outdoor communities.
- Foster young women's self-confidence in their physical, intellectual, and leadership abilities while creating lifelong advocates for Earth science and wilderness stewardship.
- Support a network for current early-career scientists, artists, and guides through continuing development opportunities and collaboration.

We **believe** young women deserve opportunities to be curious about the world around them. Research shows that many girls are interested in science and the outdoors at an early age, but drift away as they grow older. By encouraging girls' natural curiosities, inspiring them to connect their interests in science and art, and cultivating trust in their own physical capabilities, we motivate more women to pursue their passions in science and outdoor activities. We believe in making science and outdoor spaces open and inclusive and this takes much more than our expeditions; this takes changing the culture of science and outdoor exploration from the inside.

*Inspiring Girls Expeditions* **runs** unique programs for high school students that combine experiences in nature and science – at no cost to participants. *Girls on Ice Switzerland* gives one or two teams the opportunity to spend twelve days in nature to discover and learn about glaciers and the alpine landscape. The teams consist of nine young women and three leaders. We focus on creating a diverse team, with an emphasis on providing this experience to those women who might not otherwise be able to have an opportunity like this. They conduct scientific experiments and observe their surrounding environment through an artistic lens under the direction of professional glaciologists, natural scientists, mountain guides and artists. With mini-workshops we further bring the spirit of the glacier to the classroom of participants and the peer-to-peer communication will increase the interest of the classmates for these topics.

After the program, the association is a platform for mentoring and networking, as well as spreading the goals of the association to a broader public. *Girls on Ice Switzerland* can also organise events and programmes for women of all ages to represent the aims of the association to a wider audience.

### *Primary goals for participants*

- Increase young women's self-efficacy and interest in pursuing science (specifically STEM subjects)
- Create lifelong advocates for the scientific process and its role in public policy
- Inspire curiosity about the world around us
- Teach critical thinking skills
- Enhance leadership and self-confidence

### *Primary goals for involved professionals and volunteers*

- Community/networking for female scientists
- Opportunities to start own outreach program
- Foster teaching and project management skills
- Increase visibility of young female scientists
- Enhance leadership self-confidence

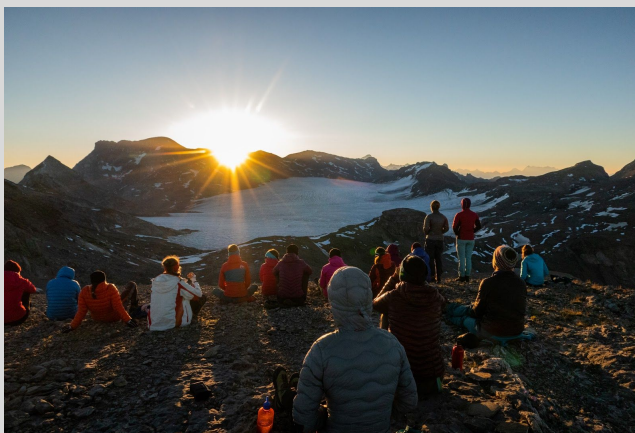
### *Educational philosophy consists of three core values*

- Teaching the process of scientific research gives students ownership of the science
- Teaching the subject in a holistic way puts the science into context
- Diversity of ideas inspires new approaches and better, more robust science

## Impressions from 2020

‘Für mich war das ganze Wochenende ein Highlight voller kleinen Highlights! So unterschiedliche Frauen kennenlernen, draussen in den Bergen sein, etwas Neues entdecken und lernen, es hat mir total Spass gemacht.’

‘Pour moi, le plus grand défi a été l'approche de personne inconnu mais au final je trouve que sur ce weekend ça a été très facile et je pense que ce séjour m'a beaucoup fait progressé et j'ai réussi en quelque sorte à vaincre ma timidité.’



‘Il me semble que dans le programme initial, les francophones et les germanophones ne sont pas mélanger alors que personnellement, j'ai vraiment apprécié être en contact avec des personnes avec qui je n'ai pas la même langue maternelle. Peut-être que les groupes peuvent être séparés pour les activités mais on pourrait manger ensemble le soir et simplement rigolé ensemble! Je trouve que c'est toujours sympa.’

‘Ich habe die Wissenschaft immer nur als etwas mathematisches gesehen und sie nicht mit etwas anderem in Verbindung gebracht. Durch das Wochenende sehe ich das jetzt sehr anders und interessiere mich mehr dafür.’

‘Auf dem ersten Platz meiner Liste steht die Verbindung zwischen Wissenschaft und Kunst. Zuvor hatte ich mir noch nie wirklich überlegt, ob diese zwei Dinge etwas miteinander zu tun haben, doch nach der Gesprächsrunde am Samstagabend war es mir klar. Zwischen ihnen besteht eine Bindung und es sind beides Mittel um seine Gedanken und Gefühle widerzuspiegeln. Mein zweiter Punkt ist der Gletscher, zuvor wusste ich noch nicht sehr viel über den Gletscher, aber die Informationen über den Gletscher haben mein Interesse geweckt und ich werde dieses Thema sicher noch weiter verfolgen. Das Dritte ist die Entstehungsgeschichte der Alpen und Gesteine. Ich finde es einfach sehr spannend, wie alles entstanden ist.’





## What we achieved in 2020

Since its foundation in 2016, the association has successively developed the different sectors of its activities. The focus in 2020 was on adapting the expeditions to the corona situation, building up school activities and fundraising efforts.

	2015	2016	2017	2018	2019	2020	2021
		Einbindung von Frauen in MINT-Berufen			Women on Ice	Einbindung von Frauen in MINT-Berufen	
		Einbettung in und Austausch mit Dachorganisation "Inspiring Girls Expeditions"					
Network				Austausch zwischen jungen Wissenschaftlerinnen international (Konferenzen) internat. Workshop			
			Austausch zwischen Vereinsmitglieder / jungen Wissenschaftlerinnen in der Schweiz Austausch zwischen (ehem.) Expeditionsteilnehmerinnen und Einbindung in Verein				
Schools			Schulbesuche			Durchführung Mini-Workshops Aufbau Module	Unterstützung Jug.
Expedition			Evaluation 1 Expedition (D)	1 Expedition (D)	2 Expeditionen (D&F)	Alternativ-Event Aufbau Alt. Event	Evaluation 2 Expeditionen (D&F)
		Aufbau Exp./Eval.		Aufbau Expedition F			
Association	Fundraising	Medienarbeit				Fundraising / Medienarbeit / Vorträge an Tagungen von Privaten u. Vereinen	
	Aufbau Verein	Etablierung Partnernetzwerk (Unis, Sponsoren, Partner, etc)					

SNF Agora     
   SNF Agora no-cost extension  
  SNF Agora - Rolling Call     
   Women on Ice (finanziert durch Teilnehmerinnen)     
   Sponsoring (gesichert)

## Alternative Event *Girls on Ice Schweiz and Suisse*

In the midst of a global health crisis, thinking, planning and organising this year's edition was a hectic journey. After many hours spent discussing and brainstorming, the organising committee took the difficult decision to replace the 10-day expedition by a 3-day alternative event, offering an experience that interweaves science, art and a step into a high-mountain environment, whilst following the COVID-19 guidelines. This meant that this year, the French and German-speaking teams worked together to share a common programme. The leading team, involving Tamara, Lena, Natalie, Julie and Jessica, was able to put together a revised curriculum adapted to a new and unusual context. Nineteen participants (ten from the French-speaking programme and nine from the German-speaking programme) had the opportunity to discover the area of the Plaine Morte glacier. Laurence and Martina, the visiting artist and scientist, respectively, joined the team for a day to share their expertise. Insights into the alternative event are presented in the last section of this annual report.

## Transferring *Women on Ice* into *Alpine Azure*

After the successful *Women on Ice* pilot programs in 2019, Chris and Andrea will continue providing programs separate from our association with "Alpine Azure" (<https://shecoaches.ch/alpine-azure/>). This step was taken together with *Girls on Ice Switzerland* after intensive deliberations on the strategic orientation and content of both programs. The collaboration with Andrea and Chris has always been very enriching and we will continue the exchange. The learnings from last year's programs were shared with the wider Inspiring Girls community, where efforts to create other fundraising programs in the future are ongoing.



## From glacier to classroom

Presentations that were held by *Girls on Ice Switzerland* participants at their schools after the expeditions always received very positive feedback. An extension of these activities is now guaranteed thanks to our new SNF-project ([Swiss National Fonds](http://p3.snf.ch/project-194500)) *From glacier to classroom: peer-to-peer communication to foster curiosity in science* (<http://p3.snf.ch/project-194500>), which got approved this year. The goal of this project is the organisation and realization of mini-workshops at schools of *Inspiring Girls Expeditions* participants, with a focus on sharing the direct experiences that the girls had during the expedition to their classmates. We will bring the spirit of the glacier to the classroom and the peer-to-peer communication will increase the interest of the classmates in these topics. The interactive workshops will be around two to three hours long and will be led by one of the program participants in collaboration with one of the female scientists who are involved in the project. The main target group are the participants' classmates but the workshops are generally open for all highschool students and can be adjusted as needed. We have started in autumn 2020 and will continue in following years to establish the mini-workshops as a standard after-expedition activity. We have hence begun to broaden our reach to the classmates and other students who participate in the workshops.

## Board activities

This year was obviously an exceptional one and included many uncertainties and special circumstances. The board convened on a regular basis to discuss and steer the adjustments and decisions that we had to make during the corona crisis. Additionally, we compiled the achievements over the last years and discussed how we want to focus but also broaden our impact in the future. Based on this overview, we managed to execute many of the plans laid out in our fundraising strategy and have started new partnerships/collaborations with the Oeschger Center for Climate Change Research (OCCR) and the Science Lab UZH. This was also the basis for conversation with the Swiss Federal Office for Gender Equality about submitting a larger proposal by the beginning of next year. We are confident to present a project eligible to them thanks to our new collaborations and also because the peer-to-peer communication in *From glacier to classroom* is a perfect addition to the glacier expeditions; the participation in our expeditions creates unique opportunities for peer role models - an effect that we want to foster and which enhances the reach of our activities considerably. The board members further oversee and direct Lena's activities in the *From glacier to classroom* project described above.

As our organization is growing, we discussed ways to involve people from outside of our "bubbles". This includes broader publicity for possible participants, but also discussions on how to involve different instructors. One of these efforts is to offer ECTS credits (for higher education) to instructors who teach our programs. These efforts are ongoing. Unfortunately, our second attempt to receive tax exemption status was not successful. We will evaluate the reasons for this rejection and include the findings in our future strategic orientation of the association.

## Activities for *Inspiring Girls Expeditions*

### Cooperation with the umbrella organisation

We ensure the cooperation of *Girls on Ice Switzerland* with the umbrella organisation, by having Julie as a member of the steering committee and by working together with the coordinators in Fairbanks and Oregon. We use synergies by having common data directories, and working with the same website and



application/review system. As such, we contributed considerably to the transfer of the application system to another platform. A close collaboration also ensures that we are growing and developing the expeditions with the same vision in mind.

## Supporting the development of new programs and strengthening the community

In Europe, motivated women work on the preparation of *Girls on Ice Austria* and *Girls on Ice Germany*. An Austrian and a German association were founded to optimize fundraising possibilities. A future *Girls on Ice Austria/Germany* expedition will be planned and realized together with the option for two expeditions in the long term. The Austrian team was already successful in fundraising and will most likely start with the first expedition in summer 2021, most probably in the Ötztal region in collaboration with the university of Innsbruck. The Swiss team is very happy to see these new programs evolving and is offering logistic support. This year's *Adventure of Science: Women and Glaciers in Central Asia expedition* has been replaced by *Adventure of Science at home expedition*. The decision for an offline program was taken by the instructor team from Central Asia and Switzerland. This year, Tamara and Helga joined Marlene and Martina for the mentorship of local instructors and the organization of the online program. The six Participants from Kazakhstan, Kyrgyzstan, Uzbekistan and Tajikistan and the instructors learned to know and grew together as a team even though they only met on the screen. The program was closed by an open online event with international female speakers hosted by Adventure of Science and UNESCO Almaty Cluster office.



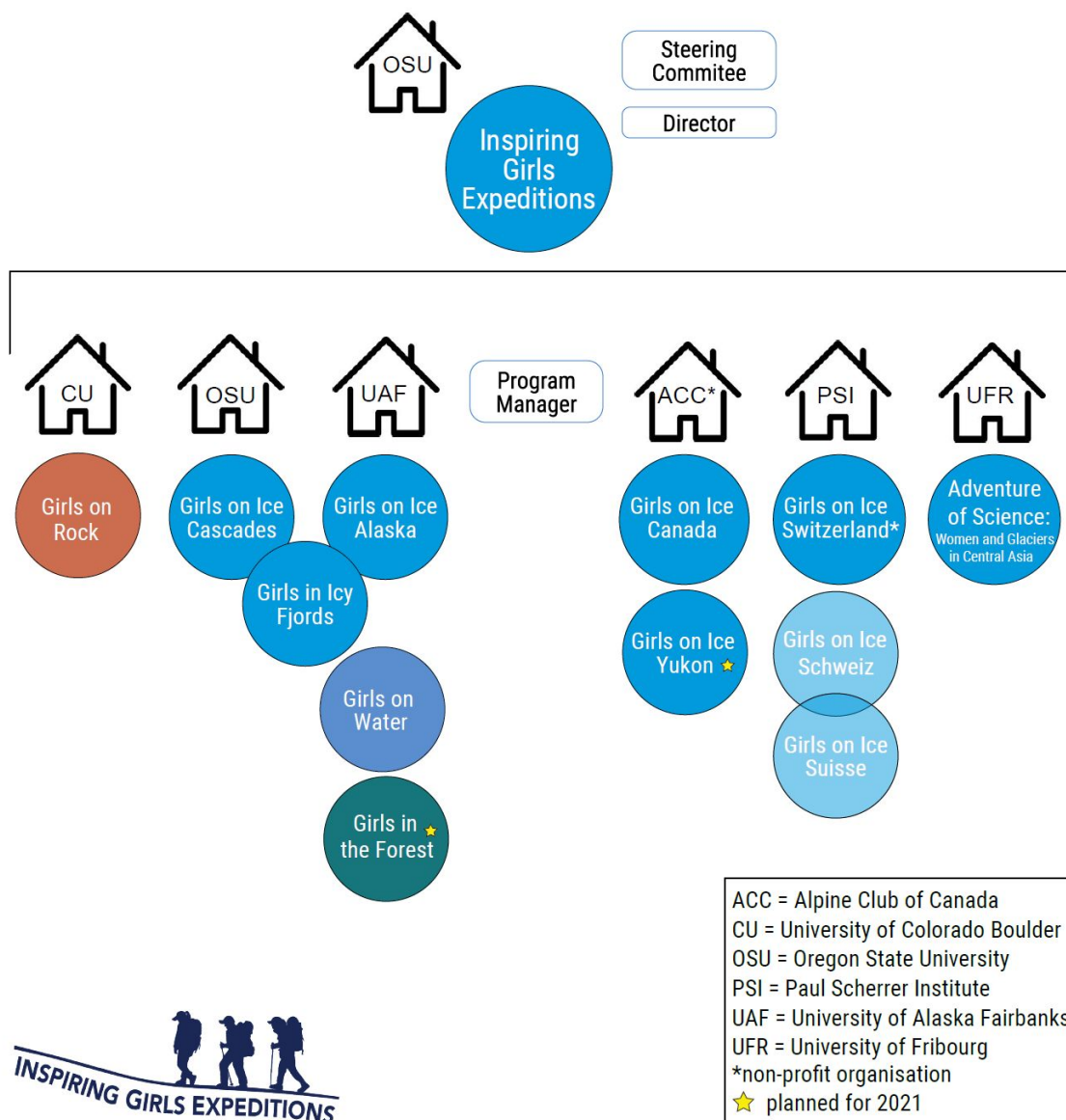




## Who we are

### Organization and structure of *Girls on Ice Switzerland*

*Girls on Ice Switzerland* is an independent and voluntarily organized, non-commercially oriented association based in Thalwil with organizational links to the Paul Scherrer Institute. With Julie, sitting on the steering committee, our registered organisation is embedded in the US umbrella organisation *Inspiring Girls Expedition* with headquarters at the Oregon State University and directed by Erin. The Managing Board of *Girls on Ice Switzerland* coordinates cross-expedition activities and ensures a strong connection to the umbrella organization. The expedition teams consist of glaciologists and other natural scientists, mountain guides, artists and coordinators, and organise themselves independently.



## The history of *Girls on Ice Switzerland* and of its global network *Inspiring Girls Expeditions*

*Girls on Ice* was established in 1999 by Erin in the Cascade mountains. Over ten years later *Girls on Ice Alaska* started to bring girls to Gulkana Glacier. In 2017, two more expedition programs, *Girls in Icy Fjords* and *Girls on Ice Switzerland*, were born. The latter was founded by the co-founder of *Girls on Ice Alaska*, Marijke, and remains the only program (with two expeditions) in Europe up to now. The expansion continued in 2018 with *Girls on Rock* and *Girls on Ice Canada* and *Adventure of Science: Women and Glaciers in Central Asia* in 2019. To incorporate these new programs, the umbrella organisation is now called *Inspiring Girls Expeditions*. Expeditions are currently successfully running at six different places in three countries. Many motivated female scientists are working on establishing new programs in their field of expertise and in various countries.





## Who was involved in *Girls on Ice Switzerland* in 2020?



## Who we worked with in 2020

**Paul Scherrer Institute (PSI), Villingen** and **University of Bern (UniBE)**: Hosts of the SNF Agora-projects.  
**University of Fribourg (Unifr), Fribourg**: Provides storage space for mountaineering equipment and enables some of our instructors to get involved in Girls on Ice Switzerland-expeditions alongside their scientific careers.



We thank our esteemed partners and sponsors that enabled the 2020 activities and we thank the partners who would have participated in the expeditions if we could have carried them out. We are looking forward to collaborating again in 2021!





## The year 2020 in figures

From 2017 to 2019 *Girls on Ice Switzerland* has been mainly funded by SNF-Agora with CHF 170'631.00. For the period 2020-2021 *Girls on Ice Switzerland* has received an additional rolling grant of CHF 49'064 by SNF-Agora. These funds have been handled at the PSI and the University of Bern respectively, and most expenditures (e.g. expedition costs and salaries) went through them. Additional income and expenses were settled via the association account, which is the subject of this annual report.

Financial year	01.03.2018-28.02.2019	01.03.2019-28.02.2020	01.03.2020-28.02.2021
Remaining Balance Agora I CHF	71'902.87	24'212.17	20'400.00 (estimated)
Remaining Balance Agora II CHF	-	49'064.00	30'000 (estimated)

## Income statement of the association account

Financial year	01.10.2017-30.09.2018	01.10.2018-30.09.2019	01.10.2019-30.09.2020
<b>Income in CHF</b>			
Donations	2'300.00	6'190.00	7'464.00
Participants' Fees	995.78	26'888.00	-
Boesner Discount	-	-	-
<b>Total income</b>	<b>3'295.78</b>	<b>33'078.00</b>	<b>7'464.00</b>
<b>Expenses in CHF</b>			
Insurances	30.00	190.90	555.30
Website	2'076.26	-	-
Personnel costs	-	14'658.72	-
Expenses, Supply	1'961.30	13'347.42	4'732.00
Equipment	979.10	-157.33	108.20
Membership Fees	-	-	50.00
Course Fees	1'450.00	800.00	-
Account Fees	12.00	17.90	49.20
<b>Total expenses</b>	<b>6'508.66</b>	<b>28'857.61</b>	<b>5'494.70</b>
<b>Profit / Loss</b>	<b>-3'212.88</b>	<b>4'220.39</b>	<b>1'969.30</b>

## Balance Sheet of the association account

### Assets in CHF

Financial year	01.10.2017-30.09.2018	01.10.2018-30.09.2019	01.10.2019-30.09.2020
<b>Assets in CHF</b>			
Non current assets	-	-	-
Receivables	-	283.40	-
Bank	1'000.27	17'752.98	493.38
<b>Sum of Assets</b>	<b>1'000.27</b>	<b>18'036.38</b>	<b>493.38</b>
<b>Liabilities in CHF</b>			
Equity	1'000.27	5'220.66	7'189.96
Non current liabilities	-	-	-
Current liabilities	-	12'815.72	108.20
<b>Sum of Liabilities</b>	<b>1'000.27</b>	<b>18'036.38</b>	<b>7'298.16</b>

In addition, the association disposes over or has access to all equipment required to run an expedition, mainly thanks to our esteemed sponsors.

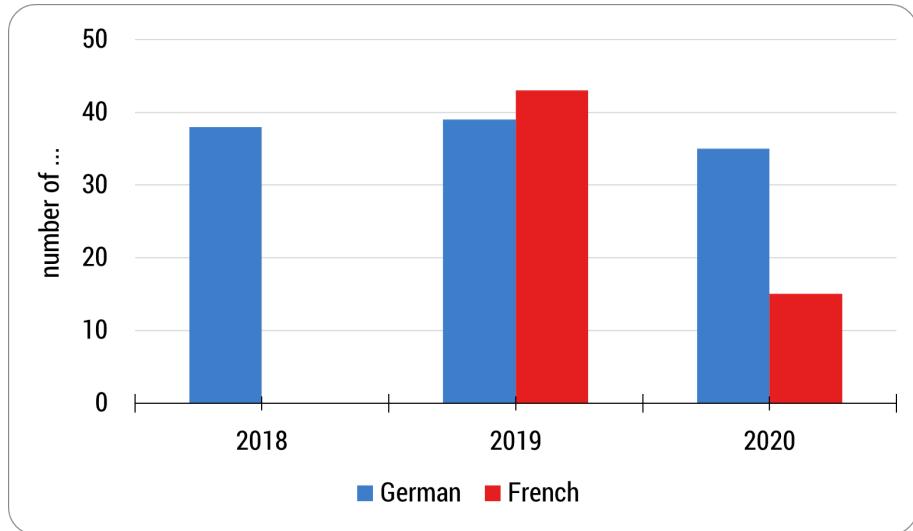
Category	Items	Total new value	
Camping (e.g. tents, sleeping bags, cooking utensils)	152	15'218.00	donated or put at disposition of Girls on Ice Switzerland
Clothes (e.g. (polartec/down) jackets, rain pants, gloves)	63	10'756.00	
Miscellaneous (e.g. camera, solar panels, first aid kits, batteries)	8	1'084.00	
Hardware (e.g. backpacks, helmets, harnesses, ropes, sun glasses)	111	8'830.00	
<b>Total in CHF</b>	<b>334</b>	<b>35'888.00</b>	



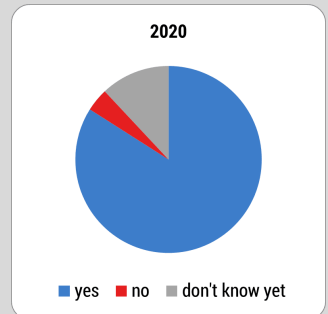
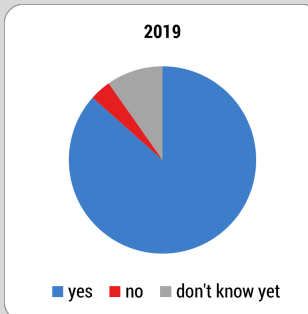
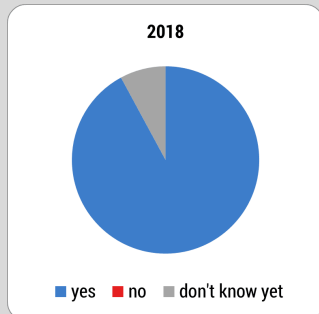
## Statistics

	2018	2019	2020
Number of expeditions	1	2	1 alternative Event

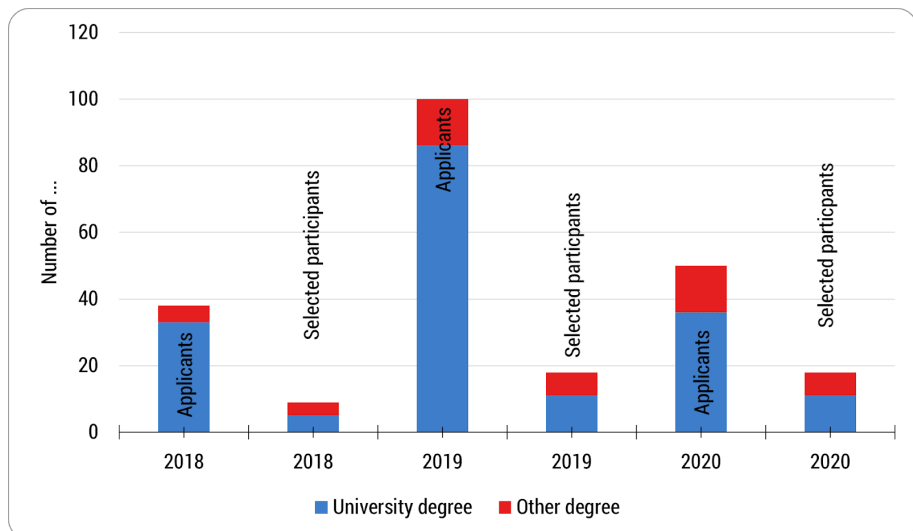
Number of applications



Desire to study when applying to Girls on Ice?

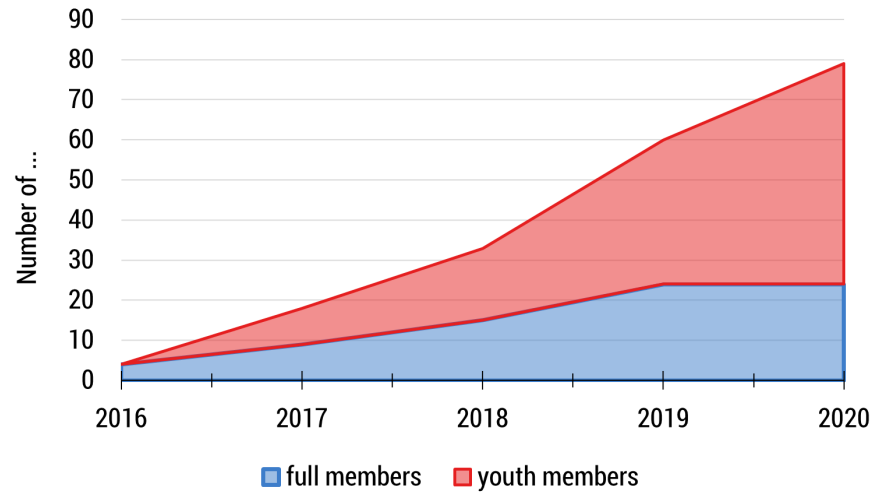


Educational level of parents

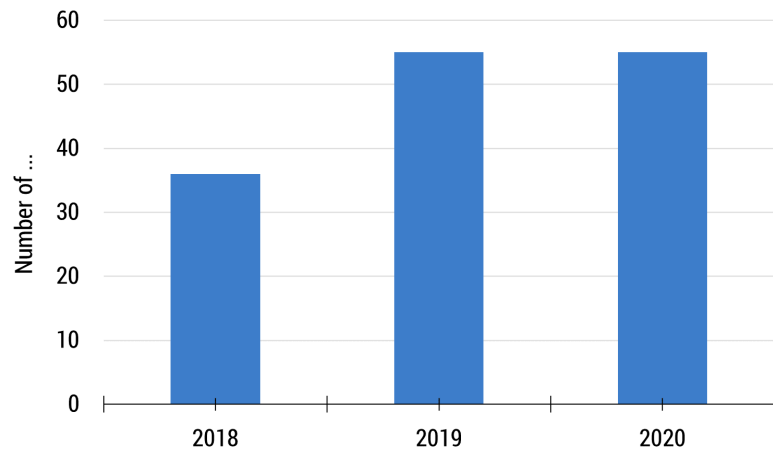




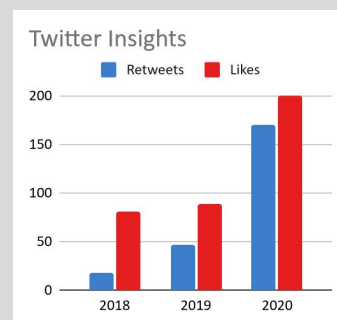
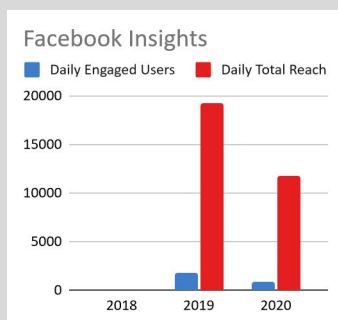
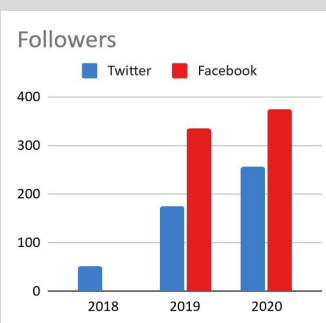
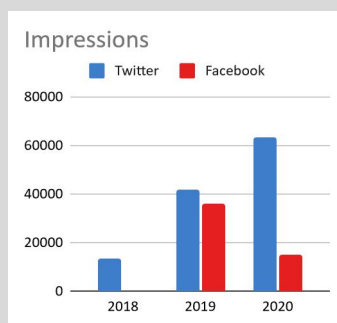
Members of the association



Number of potential gear fairies



Social media





## Alternative Event 2020: Exploring while adhering to COVID-19 guidelines

*Girls on Ice Switzerland* was realized in a shorter version this year since we had to cancel our regular expedition due to COVID-19. However, we could offer a great alternative three-day program from the 07th-09th of August on the Plaine Morte glacier in the Valais. The accommodation in the Wildstrubelhütte allowed us to adhere to COVID-19 guidelines and have more time for the activities without the logistics of a campsite! Following distancing guidelines and wearing masks when distancing would not have been possible at the campsite, which is why we offered an alternative unique experience for the girls despite the special situation and to give them new insights in science, art, and mountaineering.

The first day started in Sierre (Valais, Switzerland) with a short presentation round and the distribution of equipment, before we travelled up to Crans-Montana. From there, we took the cable car to Pointe de la Plaine Morte with the first view on the beautiful plateau glacier.

The three days offered educational activities about glaciers, glaciology, landscape reading, maps and orientation, geology, as well as sketching and drawing. A small ablation experiment showing an ice melt of about 1 cm per day illustrates the high dynamics of glaciers. Our team consisted of a mixture of experienced alpinists and girls who walked on the glacier for the first time in their lives. The participants learned how to put on crampons, how to rope up and how to walk safely on the glacier. Striking glacier moulins made the walk over the glacier unforgettable.

Besides the beautiful sunsets and -rises, the highlight of the weekend was probably the visit of Laurence Piaget-Dubuis and Martina Barandun. Laurence as a professional artist fascinated us with her passionate talk about art and science and made us rethink our presumptions. Her input combined with the personal thoughts of the participants led to a very inspiring discussion about art and science in the evening. Martina showed us the work of a glaciologist and the investigation of ice-cores. The process of taking an ice core by hand and seeing the magnificent ice crystals was as impressive as the information about the research possibilities regarding paleoclimate.

We had inspiring exchanges between the German- and French-speaking participants since we did not separate the two groups language-wise. After some shy initial moments, the participants appreciated the diverse input from different cultures and in the end they managed to communicate no matter which language they spoke.

The most difficult part was the end that came too soon! With such a group of impressive young women, we would have loved to stay an entire week at the glacier and get deeper into the world of sciences and art.





We are grateful for any support to carry out further expeditions in the coming years.

Girls on Ice Switzerland  
Mühleweg 14  
8136 Gattikon  
Raiffeisen Bank Thalwil  
IBAN: CH37 8080 8002 0966 1951 8