SWISS POLAR INSTITUTE

Nunatsinni Ilisimatusarnermik Siunnersuisoqatigiit
Greenland Research Council

Konrad Steffen Workshop and Grant

The Swiss Polar Institute (SPI), in collaboration with the Greenland Research Council (NIS), is launching a call for interest for a new funding opportunity, the Konrad Steffen Grant.

In memory of Konrad Steffen, one of the founders of the Swiss Polar Institute and its first Scientific Director, the Konrad Steffen Grant (KSG) builds on his legacy of collaborative research between researchers based in Switzerland and Greenland on environmental change in Greenland.

Funding will be available for up to two projects up to CHF 50'000.- in total.

The KSG will provide seed money for collaborative research on the topic of Natural Hazards in Greenland. Projects will be selected according to the process outlined below. Through these initial projects we hope to foster exchange of expertise, networking, and future collaboration opportunities between Swiss and Greenlandic researchers to address some of the big challenges ahead related to natural hazards in Greenland.

Information & brainstorming event

An online information event will be held via zoom on 16 December 2021, 14:00 – 15:00 (Registration on SPI website). During this event, SPI and NIS will explain the concept of the KSG and present more concrete potential topics, based on relevant research questions for Greenland (see appendix). Participants will be asked to brainstorm around these topics in smaller groups, and to suggest additional topics within Natural Hazards if applicable.
After the information event, scientists interested in participating in a workshop during which final project will be defined are invited to fill in a short form, outlining their ideas and potential contributions (deadline 10 January 2022). Workshop participants will be selected according to the complementarity of their expertise and potential contribution to ongoing research in Greenland.

Workshop

A two-day workshop will be held in Nuuk from 07-09 March 2022 to bring Swiss and Greenlandic scientists together and define the projects to be funded. The workshop is not intended to be competitive but rather a platform to maximize the opportunity for networking and allow the bottom-up collaborative development of projects with the most effective spread of available funding. The in-person workshop will result in a concise description of the projects including timeline and budget.
Participation will be restricted to 10-12 Swiss and Greenlandic scientists each. All travel costs for Swiss participants will be covered.

Projects

SPI and NIS will jointly approve up to two projects for a maximum total of CHF 50'000.- to be used towards collaboration. Eligible costs include travel (max. 50% of the budget), field work, consumables and equipment. The maximum duration envisaged for the projects is 18 months.

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Appendix 1: Possible research topics for the KSG within the topic of Natural Hazards

The below concrete research topics are suggested based on research needs falling under the umbrella topic of Natural Hazards. Potential partners / stakeholders from Greenland interested in collaboration on these topics include Greenland Institute of Natural Resources, Arctic DTU, Ministry of Mineral Resources, Asiaq, Greenland University, GEUS.

1. Landslides, slope / rock wall stability

- Experiences from Switzerland on landslide monitoring including process understanding, model development, warning and alarm system designs (i.e. sensors, triggering mechanism, defining threshold values, risk assessment, etc.)
- Focus on instability in permafrost region, case studies, climatic impact factors on instabilities, long term trends
- Landslide detection, prevention and warning in a Greenland context: define main challenges and how they can be addressed by new innovations and collaboration within research, public and private sector. (An example could be to define a suitable alarm system for the Karrat region where sea ice and icebergs prevent installation of existing and well-developed alarm systems for tsunamis or landslides. New methods could include seismic methods combined with GNSS-IR techniques or others.)
- Landslides and cascading events

2. Avalanches

- Avalanche formation and dynamics, prevention and warning
- Avalanches in connection with extreme events, such as for example the wet snow avalanche event in April 2016 (https://doi.org/10.1007/s11069-019-03655-8)
- Arctic DTU has many ongoing activities on avalanches in Greenland

3. GLOF (Glacier outburst floods)

- Monitoring, warning, frequency and amplitude trends, impact on ecosystems, etc.

Aspects identified as relevant for all topics

- The human dimension
- Infrastructure, risk and stability
- Process understanding, model development, warning and alarm system designs (i.e. sensors, triggering mechanism, defining threshold values, risk assessment, etc.)
- Regulations and best practices for natural hazard risk management and adaptation strategies

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