

Visions and Conditions for a Fossil-Free Welfare Society

Opens: 15 April 2019

Closes: 4 June 2019 (14.00 CET)

Date of decision: 20 November 2019 (preliminary)

Revisions

Changes in the call text after the date of publication will be specified here.

Date	Change

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Description of the call

Introduction

Climate change poses major challenges to society. Greenhouse gas emissions need to be drastically reduced in the near future in order to limit global warming and its negative effects. Sweden has committed to the Paris Agreement to keep the increase in global warming well below 2 degrees, and preferably below 1.5 degrees, and has adopted several national climate targets with the overall goal of achieving net-zero emissions by 2045. A transition of society must happen quickly, with attention to fairness and equality, and in interaction with measures to achieve other sustainability goals such as the Swedish environmental objectives and the UN's global sustainable development goals. The purpose of this call is to support research that provides new knowledge about how to achieve a future fossil-free welfare society and how such a transition will affect and be perceived by different groups of people.

The call is aimed at researchers at Swedish universities, research institutes or government agencies with research assignments. Stakeholders from different parts of society can also take part in research projects through cooperation and collaboration. Applicants can apply for grants for projects that run up to three years. It is possible to apply for a maximum of 2.5 million SEK per year and project, in total maximum 7.5 million SEK. Formas has allocated 45 million SEK per year to the call for the period 2019–2021.

Background

Different countries and societies have different prerequisites for a climate transition. According to the United Nations Framework Convention on Climate Change (UNFCCC), high-income countries like Sweden should lead the way in climate efforts because of greater economic and technological capacity as well as historic responsibility for emissions. The government has declared that Sweden shall become the world's first fossil-free welfare state, and Sweden is often portrayed as a global role model and forerunner in tackling climate issues. High climate ambition has also been highlighted as necessary for maintaining and strengthening the long-term national and global competitiveness of Swedish companies. Through a broad political agreement, several national climate targets have been adopted for Sweden with the overall goal of net-zero greenhouse gas emissions by 2045, and thereafter negative emissions. Achieving this requires government policy action as well as the involvement of a wide range of stakeholders, from the public sector to private companies and civil society as a whole.

At the same time, there are many potential conflicts of interests related both to other Swedish environmental objectives and to the UN sustainable development goals, encompassing environmental, social and economic sustainability. For example, the transition to a fossil-free society should not be carried out in ways that threaten biodiversity or food production, or jeopardize long-term access to other natural resources. The transition takes place in a social context, which raises questions about democracy, citizen support, and the distribution of resources

and risks. Research can contribute valuable knowledge and critical perspectives to efforts to handle climate change by exploring the opportunities and conditions for achieving a fossil-free society while taking other sustainability objectives into account.

This is the third call in the National Research Programme on Climate, which spans the period 2017–2026. The research programme is guided by a strategic agenda that contains several priority themes and perspectives within the area. This call primarily addresses the broader thematic areas of the agenda “Justice and democracy in climate efforts”, “Sustainable lifestyles” and “Sustainable solutions for climate efforts”.

Purpose and focus

The call has two focus areas:

1) Visions for a fossil-free welfare society

According to the government, Sweden shall become the world’s first fossil-free welfare state and serve as a model and inspiration for other countries’ climate efforts. However, concrete visions are lacking for what a fossil-free welfare society actually means. The attainment of agreed climate targets requires a profound transition that involves changes both in society as a whole and for each individual. There are fears that this will require great sacrifices, creating worry and in turn leading to tensions between different groups in society. Yet more and more initiatives and stakeholders are assembling around a commitment to a climate transition, highlighting also the positive effects for individuals and society.

To be able to envision a fossil-free welfare society, we need more knowledge about how it will be experienced by different individuals and groups. What does it mean to be a citizen of such a society? The transition to a fossil-free society will deeply affect us all – but the question is how. We need to better understand and describe linkages – both positive and negative – between a significantly reduced use of fossil fuels and materials and key aspects of quality of life and well-being, at the individual and societal levels. For example, possible areas of research may involve the following themes: Which individuals and groups are expected to be affected the most, and in what ways? Which conflicts of interest exist or may arise, and how can they be managed or avoided? How do people react to messages that highlight opportunities and new ways of living with regard to climate change transition, compared with messages of crisis and threat? What are the potential positive and negative effects of such a transition on public health and well-being? How do people act in relation to major societal shifts, for instance when it comes to acceptance of, demand for and experiences of new technologies and new practices?

The individual’s role and responsibility in promoting different aspects of climate change transition needs to be explored and problematized. There is also a need for research on issues of fairness and distribution – between women and men, city and countryside, various socio-economic groups, and generations – both from a national and a global perspective. For example, Swedish consumption and travels are causing major emissions outside the country’s borders. At the same time, there are major differences between inhabitants’ climate footprints also within the country that must be

understood in order to enable effective climate work with broad citizen support and among various stakeholders in society. Ideas about what constitutes a climate-smart lifestyle must be explored based on knowledge of how individuals' carbon footprints are linked to factors such as income, gender, age and background. The concept of welfare itself needs to be discussed and widened in light of climate challenges.

Formas welcomes applications that, in addition to generating new knowledge, also contain aspects of communication and design and put into practice new or existing knowledge, with the aim to deepen and refine prevailing beliefs about what a climate transition means for different groups of people. This is not a formal requirement but can strengthen the application when relevant for the project at hand.

Research funded within the call should aim to increase understanding of the social and cultural aspects of the transition to a fossil-free welfare society, rather than to directly develop infrastructure and technological solutions for reduced emissions.

2) Reaching negative emissions – possibilities and conditions

According to the UN expert panel on climate change, IPCC, keeping global warming well below 2 degrees (and preferably below 1.5 degrees) will require a rapid and comprehensive reduction of greenhouse gas emissions in combination with the use of technologies for carbon capture and storage. To limit global warming to 1.5 degrees, the IPCC estimates that global emissions will have to be net-zero as early as 2050, and thereafter become net-negative. However, the economic, technical, industrial and natural resources for achieving drastic emission reductions vary greatly from one country to another. Through global agreements, some countries have pledged to lead the way and attempt to achieve net-negative emissions earlier than that.

According to our Swedish climate targets, emissions should be net-zero by 2045, and thereafter become net-negative. The plans for achieving this include the possible use of so-called supplementary measures – the removal of carbon dioxide from the atmosphere or investments in emission reductions in other countries. Options for the active removal of carbon dioxide from the atmosphere include afforestation and reforestation, and the capture and long-term storage (CCS) or utilisation (CCU) of carbon dioxide. When the carbon dioxide that is captured and stored comes from the combustion of biomass (bio-CCS), the effect is net-negative. Other options, such as increased carbon binding in soil and biochar, can be relevant in several areas, as well as other newer technologies whose potential is currently difficult to estimate.

However, the possibility to achieve negative emissions on a scale needed to meet climate commitments is very uncertain. There is an important balancing act between taking strong measures now to bring about a rapid reduction in emissions on the one hand, and relying on future supplementary measures on the other hand. Several potential measures clearly entail conflicts of interests, for example with other land uses such as for food production and biodiversity conservation. We need a better understanding of the conditions, opportunities and responsibilities of Sweden and other countries from a global perspective, and of the impacts on the geopolitical landscape. Also needed are systemic analyses of the potential contribution of different sectors towards achieving negative emissions. At what ambition levels in measures might different

conflicts of interests arise? What are the realistic long-term opportunities for developing and scaling up current and future technologies? What risks may arise? Questions about the political, legal and financial responsibilities for the implementation of various measures are also relevant, such as those involving incentives and risk minimisation.

Research funded within the call should aim to deepen the understanding of national and global prerequisites and opportunities for achieving negative emissions, rather than to develop the technology itself.

Target groups and collaboration

Formas strives for a great breadth of disciplines and approaches in order to achieve a diversity of research perspectives and different types of knowledge.

The call is aimed at researchers at Swedish universities, research institutes, as well as government agencies with research assignments. Main applicants and participating researchers must have a doctoral degree. We welcome applicants from all different disciplines. The proposed projects may include interdisciplinary collaboration or a larger system perspective on the topic being studied. Other societal stakeholders can also take part in the projects through cooperation and collaboration.

A consideration of gender equality or other critical perspectives should be included in the topic where relevant. Applications should also indicate how the proposed project contributes to the achievement of Swedish and international climate goals, as well as any related UN sustainable development goals.

In the call, Formas also wants to emphasise the linkage between research and higher education and the different ways that the projects can relate to teaching and student groups. When relevant for the project, such linkages are encouraged. This can be done through knowledge transfer of the research results to different forms of course content, or can consist of participatory activities that more closely involve students in the research process. Such activities should be clearly described in the application.

Researchers who are awarded a grant will be expected to participate in various seminars related to the call and its themes.

Who can apply

To apply for a grant, the main applicant must have obtained a doctoral degree before the call closes.

Participating researchers must also have obtained their doctoral degree. Other staff involved in the project do not need to have a doctoral degree. The proposed grant recipient must be the project leader on the application.

Grants for projects may only be administered by a Swedish university, college or other Swedish public organisation that meets Formas' criteria for [administrating organisations](#). Participating researchers may however be active at a university abroad.

There is no age limit for the main applicant and participating researchers. However, researchers who are full-time pensioners are not eligible to receive funding for salaries.

Your application

What you can apply for

- In addition to salary funding, grants can include funding to cover operating costs (consumables, equipment, travel, conferences, publication in journals and open-access databases), depreciation costs for equipment, and premises costs. The maximum amount allowed for equipment and depreciation costs is a total of 500,000 SEK.
- The grants may be used for Swedish co-funding of research and development-oriented international projects, such as those within the EU.
- Grants can be used to cover salaries for researchers, PhD students and technical staff. Salaries for PhD students can be funded for up to three years.
- Grants can be used to fund research that is partly conducted outside Sweden, although the research must be initiated and managed from Sweden. The administrating organisation must be located in Sweden and approved by Formas, and is responsible for hiring any foreign staff or paying for activities or services outside Sweden in accordance with the administrating organisation's guidelines.

Grant amount and project duration

- Grants for research and development projects are awarded for a maximum of 2.5 million SEK per year on average during the grant period, meaning a maximum of 7.5 million SEK over three years. So, applicants can apply for more than 2.5 million during one year as long as the amount applied for during another year of the project period is less than 2.5 million. Applicants may not apply for 7.5 million SEK in total for a period shorter than 36 months.
- If the total amount applied for exceeds the average annual amount of 2.5 million SEK, the application will be rejected.
- Note that the total salary amount for a single researcher, PhD student or other staff must not exceed 100 percent of full-time employment. This means that additional salary funding cannot be granted to researchers, PhD students or other staff who already receive grants or contributions with full salary funding. Formas does not grant funding for annual salary increases.
- Funding can be requested for a minimum of one year (12 months) and a maximum of three years (36 months).

- The project must start by January 2020. The first payout will be made in December 2019. Grants paid out in 2019 are for the entire first budget year. The funds may be used for 12 months after the end of the project.

Eligibility criteria

- To apply for a grant, the main applicant must have obtained a doctoral degree as stated under the heading “Who can apply”.
- Researchers may apply for funding under this call even if they have already been granted funding for an ongoing project under one of Formas’ calls.
- Grants can be used to cover salaries for researchers, PhD students and technical staff. Salaries for PhD students can be funded for up to three years.

How to apply

Applying in Prisma

To apply for a grant from Formas, the project manager should submit an application online in the Prisma application system. To create an application in Prisma, you need a user account. We recommend that you create an account and an application as early as possible and contact Formas with any questions in good time.

[Link to Prisma](#)

In order to submit an application, the organisation where the project manager works must be an approved administrating organisation. If the organisation is not already an approved administrating organisation, the organisation must apply to become one in good time before the call closes, as it can take a few weeks to become approved as an administrating organisation.

Information your application must contain

We recommend that the application be written in English because the review panel members come from different parts of the world. Applications written entirely in Swedish must be translated into English by Formas before they are submitted to Formas’ review panel for assessment. In such cases, it will not be possible for applicants to view or make linguistic adjustments to the application after it is translated. The popular science report must be written in Swedish, while the abstract should be in both Swedish and English. Please note that you should always write the budget specification in English; any Swedish budget specification will not be translated but will instead be reviewed as is by the international review panel. All limits for the maximum number of characters refer to characters including spaces. We recommend that you choose the Arial font in font size 12 for the information you enter in all text boxes.

Basic information

- Number of years for which the application applies
- Project title in Swedish and English (200 characters including spaces)
- Popular science report in Swedish (4,500 characters including spaces)
- Abstract in Swedish and English (1,500 characters each including spaces)

Applicants must actively select a focus area for the project: 1) Fossil-free welfare society, or 2) Negative emissions

Research programme

- Goals and objectives of the project, and a background description containing an overview of the research area (7,000 characters including spaces).
- Project description, including structure, theory, methodology and implementation as well as a plan for publication in a scientific journal (15,000 characters including spaces). Include the following aspects if you consider them relevant to the project: (i) a short description of existing and future needs for basic equipment, (ii) a brief description of national and international collaboration, (iii) confirmation of compliance with international agreements and rules, (iv) gender perspectives in the content of the research, (v) principal supervisor if funding is sought for a PhD student, (vi) brief description of expertise of the participating staff and/or public-sector stakeholders who do not hold a doctoral degree and thus cannot upload a CV in Prisma, as well as a motivation of how they will contribute to the project's implementation.
- Description of the potential societal benefit of the project and a plan for communicating the research and its results to stakeholders and end users (8,000 characters including spaces). Describe briefly the potential societal benefits of the research and the relevant stakeholders/users of the research. Also describe the planned dialogue with stakeholders/users around the research and its results.
- References. List the in-line references pertaining to the above sections in a separate field (5,000 characters including spaces).

Budget

- Salaries including social security contributions. For any current employment positions, the salary in effect at the time of the application (including social contributions) must be used for all subsequent years. For new employment positions, the starting salary at the administrating organisation must be used for all subsequent years. Note that Formas does not grant funding for annual salary increases.
- Activity level in the project. Specify the level of activity for all project participants, including participants that provide in-kind services for their time or have other funding sources for completing the project.

- Operating costs. Specify operating costs in accordance with practices at the administrating organisation.
- Equipment depreciation. Specify equipment depreciation costs if relevant to the application.
- Premises. Specify the costs for premises (if not part of overhead costs) in accordance with practices at the administrating organisation.
- Total budget. This heading refers to a budget summary.

Specified costs: Data already completed in previous budget tables will be automatically transferred to this table.

Specify the indirect costs in the project budget in accordance with the practices at the administrating organisation. Indirect costs relate to overhead costs. Formas does not allow overhead for equipment depreciation costs or costs of premises.

Other funds: “Other funds” refers to funds that are not sought but that are relevant for completing the project. An example is co-funding from collaborative partners. Also specify whether the project receives funding from another source.

- Budget specification. Provide a brief justification for all salaries and other expenses. A description of the total project budget, including funding from other sources, should also be included. All other costs must be clearly justified, such as costs for participating in conferences, publication fees for open access to publications and data, etc. The budget specification is part of the application assessment.

Note that you should always write the budget and budget specification in English; any Swedish budget specification will not be translated but will instead be reviewed as is by the international review panel. In Prisma, write out the total amount you are applying for in SEK using digits. For example, SEK 1 million should be written as: 1 000 000 SEK.

Ethical considerations

You should specify whether there are specific ethical concerns in your project. If so, you must describe the relevant ethical considerations and how they will be managed. Examples include research that processes personal data, or experiments on humans or animals. [Read more about how to report ethical concerns.](#)

Classifications

- Select a minimum of one and a maximum of three subject areas.
- Select a minimum of one and a maximum of three SCB codes.
- Select a minimum of one and a maximum of three global goals for sustainable development that best fit your project. When selecting more than one goal, specify the goals in priority order. The goal that is most relevant to the project should be stated in the first box. Read an explanation of these goals on the [UN Development Programme website](#). As the meaning of the goals is sometimes narrower than what the title indicates, we encourage you to follow the link and read in

more detail about the goals you intend to specify to ensure that the intended research contributes towards achieving that particular goal.

- Select a minimum of one and a maximum of five key words that describe the project.

Appendices

The following appendix can be uploaded if relevant for the application:

- Appendix J. Illustrations. If you need figures, tables or images to describe the project, you can upload them as an attachment here. A maximum of one PDF attachment of 4 MB can be uploaded.

Administrating organisations

- Select your administrating organisation and add your project's department or institution. [Read more about who can become an administrating organisation.](#)
- Prisma contains a default list of approved administrating organisations. Contact your organisation if it is missing from the list. In that case, your organisation will need to create an organisation account in Prisma.
- After the call is closed, a registered application will be sent automatically to the administrating organisation, which will have seven business days to digitally sign the application.

Participants

- Main applicants invite participating researchers (researchers who are considered co-applicants for the project) and participating administrators (people not involved in the project but who help you fill in the application form).
- Each participant must have created a user account in Prisma.
- Main applicants invite people to participate in the application process by searching for their given name, surname and email address in Prisma (note that exact spelling of names and email addresses is required).

CVs

Applicants retrieve the data from their personal profile that are relevant for their application. Participating researchers add their CV details from their profile to the application themselves. They should review their CV in Prisma in good time to ensure that it is complete and up to date. The CV information must include:

- Education: postgraduate, undergraduate and graduate level.

- Professional experience: Current employment and major relevant prior positions, postdoctoral stays, postgraduate exchanges that are relevant for the research, and any significant gaps in the research (such as parental leave, illness, military service or political duties).
- Qualifications and merits:
 - Lectureships
 - Number of advisor engagements: Doctoral students, postdocs, graduate theses; specify the total number for each category and name the most relevant ones (max. 10)
 - Grants received in competition: Specify the most relevant ones (max. 10)
 - Awards and distinctions: Specify the most relevant ones (max. 10)
 - Other qualifications: Here, the main applicant and participating researchers can give an overview of their publication (max. 800 characters including spaces), as well as other qualifications that are relevant to the application, such as proven experience of collaboration and research communication (max. 10)
 - Intellectual property: For example, patents and open source software that you have developed (max. 10)

Publikationslista

The main applicant and participating researchers should list up to ten of their most relevant publications. Note that the publications should be linked from the applicants' personal profiles.

Assessment of applications

The applications we receive are assessed by a panel of experts. The panel includes both active researchers and users of research results who are qualified to assess the potential societal benefit.

Applications are assessed with respect to scientific quality and societal relevance. This includes the following five criteria.

Criteria for scientific quality

- Research question
- Methods and performance
- Scientific competence

Criteria for societal relevance

- Potential societal benefit of the research topic
- Communication with stakeholders and users

All the criteria must be addressed in the application, and we advise applicants to clearly relate their application to these criteria. We also strongly advise applicants to clearly and accurately structure and write the application, as the review is based solely on the information contained in the application. Gender perspectives should be considered in project proposals where applicable.

[In-depth information about Formas' assessment criteria and review process](#)

Grant award decisions

Formas' Scientific Council is expected to reach a decision on 20 November 2019 concerning which projects will be granted funding. Decisions will be announced the following day at the latest on Formas' website and later sent via email from Prisma. Grant award decisions cannot be appealed.

For granted projects

Reporting for granted projects

Financial statements must be submitted each year for projects longer than 18 months. The final financial and scientific reports must be created as agreed and are usually submitted within three months after the end of the availability period.

[Learn more about how to report expenses and results.](#)

Open access to publications and research data

Results from research funded by Formas must be published with open access. [Read more about our requirements for open access to research results and data.](#)

The projects that are granted funding must develop a data management plan for the data produced in the project. By signing our grant terms and conditions, you certify that a data management plan will be available before the research begins and that it will be maintained.

SweCRIS

Formas shares information about awarded grants to SweCRIS, a national database of grant-funded research that was instituted by request of the government.

Support and shortcuts

- [How it works](#)
- [Ethics policy](#)
- [Who can become an administrating organisation?](#)
- [Formas' assessment process](#)
- [Global sustainable development goals](#)
- [Prisma](#)
- [Prisma online help](#) and [contact information](#)

Timetable

The call closes on 4 June 2019 at 14:00 Central European Time.

Formas' Scientific Council decides on the grant award on 20 November 2019.

Contact information

For more specific questions regarding the call, please contact:

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For Prisma technical support

[Prisma Support](#)