

Future Pathways

Area 2: Research projects on models and methods that break new ground

Last application date: 26/04/2018 at 14:00.

Decision date: Preliminary 14/11/2018

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Description of area 2

Approach

Innovative method development is required in several areas in order to provide for scientifically based decisions at a global, EU and national level for continuing climate action towards a fossil-free welfare society as well as to contribute to fulfilling the Paris Agreement. A better understanding of the complexity of the challenges posed by climate change, such as the many connections between different sectors, different levels, actors and other sustainability goals, requires advanced models and methods that are revised and renewed as research progresses and climate actions unfold. Area 2 concerns critical research on the significance of various assumptions in modelling and in methods, managing uncertainty and the usability of the results as a basis for decision-making. Interdisciplinary perspectives as well as both quantitative and qualitative methods may be of relevance.

Models are an important research method in several disciplines within natural sciences, social sciences and the humanities. Models are used in climate research for studying the climate system, climate impacts and other types of consequences, as well as development and emission pathways. This concerns also modelling specific sectors, socio-economic systems and agent behaviour and actions.

Models are often developed gradually over a longer period of time. In addition to such gradual development, there is also a need to focus on initiatives to explore new opportunities. Approaches that break new ground can be about: making use of the increasing amount of data in different areas and topics (both quantitative and qualitative data), interdisciplinary initiatives, combining data(sets) in new ways, evaluation of models and exposing shortcomings or realizing /revealing new possibilities. It is also important that the transparency in the underlining assumptions and the interpretation of the models and their applications are developed in order to increase usefulness and credibility among users.

Many modelling collaborations are international and Swedish researchers can make important contributions in these contexts and constitute attractive collaboration partners in future EU research collaboration and other contexts.

Scope

You can apply: To be eligible to apply for a grant for research projects the main applicant and participating researchers must have a doctoral degree. Other personnel participating in the project do not need to have a doctoral degree. The grant administrator must be a Swedish university, university college, research institute or government agency that fulfills Formas' eligibility requirements for grant administrating organisations ([read more on eligible grant administrators here](#)). There is no age limit for applicants or participating researchers, but fully retired researchers cannot obtain funding for their salary. There is no requirement for co-funding.

How much you can apply for: Up to SEK 2.5 million per year.

The length of the project: Up to 4 years.

In total Formas grants: Up to SEK 168.4 million for area 1 and 2 together.

Special requirements for researchers early in their career

Special requirements for the project constellation: The project must include at least one early-career researcher. This criterium can be fulfilled either by the main applicant been awarded his/her doctorate at the earliest 8 years prior to the application (this means 1 January 2010 at the earliest), or the project includes financing a doctoral candidate or postdoc. A postdoc financed by the project must have been awarded his/her doctorate at the earliest 5 years prior to the application (this means 1 January 2013 at the earliest). Parental leave, illness, military or public service or other similar circumstance that has prevented research activities after the examination must be specified in the submitted CV and may constitute reason for exemption from the eight or five year rule.

Special requirements for international collaboration

Special requirements for project collaboration: The project must include some international collaboration. This can take different forms and must be described in the application.

Dialogue meeting about the call

Formas will be providing an opportunity for exchange of information and dialogue regarding the call on 23 March 2018 in Stockholm. This will be announced at [Formas kalendarium](#) (<http://formas.se/sv/Kalender/>). The meeting will be filmed and available on the internet.

Last application date

The call closes on 26 April 2018 at 14:00. Generate your application in Prisma preferably well in advance in order to be able to receive help if any problem should occur. Applications can be reviewed in advance at any time during the process. Up until the call closes it is possible to retract the application and make changes to it. Be aware that it is not possible to make any additions to the application after the call has closed.

Your application

What you can apply for

- Grants can be given to projects within Formas' areas of responsibility and within the framework for the call.
- Funding may be sought for costs associated with the performance of the project, for example to support the salary of researchers, doctoral students and technical personnel.
- Salary for doctoral students can be awarded for up to 4 years.
- Note that the total salary costs granted for an individual researcher, doctoral student or other member of the project may never exceed 100 per cent of a full-time position. This implies that further funding of salary costs cannot be granted for a researcher, doctoral student or other project staff member already receiving full salary funding.
- Grants for research projects may, besides salaries, also be used to fund running costs (e.g. consumables, equipment costs of a value below 500 000 SEK, travel, conferences, publication in Open Access journals, etc.), equipment depreciation costs (max 500 000 SEK) and costs for premises.
- Grants cannot be given for study grants or scholarships for research students.
- Grants can also be sought for costs related to publishing in Open Access journals. Note that researchers who receive funding from Formas must guarantee that their research results will be available through Open Access within six months of publication. [Läs mer om Formas policy för öppen tillgång till forskningsdata.](#)

Funding amounts and project duration

- Funding can be sought for a maximum of four years (48 months).
- The total amount for an individual research project may be up to a maximum of SEK 10 million. Grants for research projects may be up to a maximum amount of SEK 2.5 million per year, averaged over the period stated in the application. If the total amount applied for exceeds an average annual amount of SEK 2.5 million the application will be rejected.
- The start date of the project is pre-selected in Prisma as December 2018 and cannot be altered; as funding for the entire first year of the project will be paid out during December 2018. Funding for research projects may however be allocated up until one year after the end of the project timespan.
- Reporting of funded projects must be completed within three months of completion of the funded project duration. Financial reporting is completed annually for projects lasting longer than 18 months. Financial and scientific final reports are completed three months after the end of the disposal period.
- No co-funding is required for this call.

Prerequisites for application

- The main applicant and all the participating researchers in the project must have a doctoral degree.
- Other personnel participating in the project do not need to have a doctoral degree.

- Grants for research projects can only be administered by a Swedish university, university college, research institute or government agency that fulfills Formas' eligibility requirements for grant administrating organisations (read more on eligible grant administrators [here](http://www.formas.se/en/Financing/General-instructions/Grant-administrating-organisation/)). (<http://www.formas.se/en/Financing/General-instructions/Grant-administrating-organisation/>)
- There is no age limit for project applicants and participating researchers in a project, but fully retired researchers cannot obtain funding for their salary.

How to apply

Applications for grant funding are submitted using the application system Prisma. A personal account is needed to be able to create an application in Prisma.

[Link to Prisma \(https://prisma.research.se/Start\)](https://prisma.research.se/Start)

The application may be written in Swedish or English but Formas recommends that the application is written in English. The evaluation panels have an international composition and applications that are entirely written in Swedish will be translated into English before they are given to the evaluation panel for assessment. It is not possible to make changes to the application after it has been translated. The popular science description must be written in Swedish, but the project summary must be written in both Swedish and English. Please note that the budget specification must always be written in English. A Swedish budget specification will not be sent for translation, but will instead be assessed by the international review panels in its original format.

The application must contain the following information

All the limits for the maximum number of characters refer to characters including spaces.

Basic information

- The number of years applied for
- Project title in Swedish and English (200 characters)
- The popular science description in Swedish (4,500 characters)
- Brief project description in Swedish and English (1,500 characters each)

Research programme

- The proposed project's aims and objectives including a background description containing an overview of the research area. (7,000 characters).
- Project description, including summary of the approach, theory, methods, performance including a description of how the project include at least one early-career researcher and international collaboration and a plan for scientific publication (15,000 characters).
- Description of the potential societal benefits of the project, focussed communication efforts and interaction with stakeholders. Describe here the groups that the research is relevant for, how these will potentially be included in the research and how the results of the project will be communicated. Describe also how the potential impact of the research will affect different groups in society. (8000 characters).
- References included in the narrative text describing the points above are stated in a separate field (4000 characters).

Budget

Grants can be applied for direct and indirect costs:

- Salaries, including social-security contributions for each project participant. For existing employment positions, the current salary at the time of application (including social-security contributions) must be used for each of the subsequent years. For new employment positions the starting salary at the grant administrating organisation must be used for each subsequent year. Note that Formas does not grant funding for annual salary increase.
- Salary for doctoral students can be awarded for up to 4 years.
- State the proportion of activity in the project for all participants, even for project participants who contribute with services in-kind or have other funding for performing the project.
- Note that the total salary costs granted for an individual researcher, doctoral student or other member of the project may never exceed 100 per cent of a full-time position. This means that additional funding for salary costs cannot be granted to researchers, doctoral students or other project staff members already receiving full salary funding.
- Specify running costs and costs for premises (if costs for premises are not included in OH-costs) according to the practice at the grant administrating organisation.
- Specify equipment depreciation costs if relevant for the application.
- State indirect costs directly in the project budget according to the practice of the grant administrating organisation. Indirect costs are considered to be overhead costs (OH costs). Formas does not permit OH costs to be included in equipment depreciation costs or costs for premises.
- Budget specification. Here a short motivation for all salary costs and other costs is required. A description of the total budget for the project, including funding from other sources, must also be described. All other costs applied for must be clearly explained, such as participation in conferences, Open Access publication and data repositories, etc. The budget specification is part of the evaluation and should be written in English (a budget specification written in Swedish will not be translated to English).
- In the field "Other costs" funding from other sources should be indicated. Here funding that is not applied for from Formas but is of relevance for the project should be included.
- Note that in Prisma amounts should be written out in full, e.g. one million SEK is entered as: SEK 1 000 000.

Ethical considerations

The applicant should always state whether the project includes specific ethical aspects. If this is the case, the ethical issues in question and the way they will be handled in the context of the research must be described. This may be a matter of research that involves the utilisation of personal data, or experiments on humans or animals. Read more about ethical considerations in [Formas General Instructions](http://www.formas.se/en/Financing/General-instructions/) (<http://www.formas.se/en/Financing/General-instructions/>).

Classifications

- Select a subject area
- Select at least one, and at most three, SCB codes.
- Select at least one, and at most three, of the Global Sustainable Development Goals that best apply to the project. For more information on the Sustainable Development Goals, please click [here](http://www.un.org/sustainabledevelopment/sustainable-development-goals/) (<http://www.un.org/sustainabledevelopment/sustainable-development-goals/>).
- Select at least one, and at most five, key word(s) to describe the project

Appendices

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

- **Appendix J.** Illustrations. If figures, tables or pictures are needed to describe the project idea, these are enclosed as an appendix. Maximum one appendix of 4 MB in PDF format can be uploaded.

Note! The following appendix is mandatory and must be uploaded for all projects:

- **Appendix K – Research Data.** Appendix K should be filled out and uploaded for all project applications. If data collection is not part of the project or if it is not possible to make the data available through open sources this should be stated in the Research Data form. Please note that Swedish universities, university colleges and other authorities are responsible for the safe storage of data collected as part of their activities. Funding to enable data storage that can be regarded to be within the responsibility of these authorities must not be included in the application. Formas recommend that scientific data is published within a reasonable period of time and made accessible via relevant national and/or international organisations for data publication. Use this template for appendix K.
(http://formas.se/Documents/Prisma_appendices/Bilaga_K.pdf)

Grant administrating organisation

Select your grant administrating organisation and add the project department or unit where the project is based. Read more about Formas requirements for grant administration organisations in [Formas General Instructions](http://www.formas.se/en/Financing/General-instructions/) (<http://www.formas.se/en/Financing/General-instructions/>).

- Approved grant administrating organisations are prelisted in a menu in Prisma. If your research organisation is not included in the list, contact your organisation as it must create an organisation account in Prisma.
- A registered application is automatically sent to the grant administering for approval once the call closes. The administrating organisation has seven calendar days to sign the application.

Participants

- The main applicant invites participating researchers (i.e. researchers who are considered to be co-applicants for the project) and participating administrators (not a part of the project, but persons who help you fill out the application form).

- Participants must themselves be registered and have their own personal account in Prisma. The main applicant invites the participants who will be participating in the project by searching for their first name, surname and e-mail in Prisma (note that correct spelling of names and e-mails is required).

CV

The applicant retrieves the relevant information from their personal profile in Prisma. Participating researchers add their CV-information from their personal account in Prisma and should ensure that their CV in Prisma is complete and up to date. The information should include:

- **Education:** Post-graduate (doctoral) education, undergraduate and graduate education.
- **Professional history:** Current position and relevant previous longer-term positions, post-doctoral residencies, research exchange visits relevant to the described research project, as well as any extended period of interruption to the research (for example parental leave, illness, military or public service).
- **Merits and awards:**
 - **Associate professorship**
 - **Supervision:** doctoral students, post-doctoral students, and exam project students; state the total number in each respective category and provide the names of the most relevant supervisions (max. 10).
 - **Grants awarded in competition,** state the most relevant grants (max. 10).
 - **Prizes and awards,** state the most relevant grants (max. 10).
- **Additional merits, including information about publications:** Here the main applicant and the participating researchers must state the number of their publications over the past 5-year period and the total number of publications if the applicants have been active within the profession for a period longer than five years (max. 800 characters including spaces). This summary must include the following: i) The number of publications of different types (such as articles in peer-reviewed journals, book chapters, books and other monographs, conference contributions, popular science contributions). Under additional merits other merits relevant to the application may also be listed, such as documented experience of collaboration and research communication (max. 10).
- **Intellectual property:** For example patents and public access software programs developed by the applicant (max. 10).

Publication list

The main applicant and participating researchers should specify up to ten of their most relevant publications. Be aware that the publications must be linked from the applicants' personal accounts in Prisma.

Evaluation of the applications

The applications are assessed by an international evaluation panel that is composed of active scientists and people with the competence to assess the relevance of the research. All of the evaluation criteria must be addressed in the application and the applicant is encouraged to clearly and distinctly relate the application to these criteria. The applicant is encouraged to be very thorough with the structure and clarity of the application, as the review will be based solely on the information provided in the application.

Evaluation criteria

The review panel evaluates the applications in accordance with the following specific criteria:

Criteria for scientific quality

1. Research questions

- Scientific significance of the objectives of the research
- Originality and novelty of the purpose, theory and hypotheses
- Possibility of significant scientific results
- Objectives consistent with the call

Clarifications:

- Multidisciplinary and interdisciplinary approaches must be regarded as being advantageous when appropriate for the research topic
- Equality and gender, or other critical perspectives, must be included in the research topic whenever relevant.

2. Methods and performance

- Feasibility and suitability of the scientific methods
- Innovativeness of the methods
- Specific and realistic work plan
- Specific and realistic plan for scientific publication and dissemination of information
- Coordination of the project and the research group
- Suitability of multidisciplinary and interdisciplinary approach
- Ethical considerations
- Feasibility of the budget in relation to the structure of the project and the anticipated results

Clarifications:

- The feasibility and suitability of scientific methods must primarily be considered

3. Scientific competence

- Scientific quality of the publications
- Ability to carry out the project according to the project plan
- Experience of supervision of younger researchers (postdocs, doctoral students and degree project students for applicants who are young researchers themselves)
- Experience of project leadership
- National and international activities, including projects, networks, commissions, honorary commissions as well as participation in or organisation of workshops and conferences
- Interest in, experience and ability to disseminate research and research results to stakeholders/users
- Strength and competitiveness of the research group

Clarifications:

- The quality of the scientific publications must be assessed, taking into account the standards within each scientific field
- When several researchers collaborate the scientific competence of the individual researchers and the collective scientific competence of the group is assessed

Criteria for societal relevance

1. Potential societal value of the research topic

- The research topic addresses important social/sectoral issues within the focus areas of the call, nationally and/or internationally
- The project can, over a short-term or long-term perspective, contribute to sustainable development nationally and/or internationally
- Stakeholder/end-user needs have been taken into account in the design of the project
- The objectives are consistent with the call

Clarifications:

- Taking into account stakeholder/end-user needs can include reference to, for example, directives, environmental goals, global sustainability targets and strategies, as well as discussion with relevant stakeholders/end users.

2. Communication with stakeholders/users

- Description of relevant stakeholders/users
- Specific and realistic plan for the involvement of relevant stakeholders/users in the project and for the communication of the research and its results to these parties

Clarifications:

- Stakeholders/users must be regarded in a broad sense as actors outside and/or sometimes also within the scientific community (depending on whether the project has a more basic research or applied research character), nationally as well as internationally, who can benefit from the research results or facilitate the future use of the results in society
- Communication with stakeholders/users may take different forms and have different time scales depending on the research topic addressed, but should include different forms of dialogue with stakeholders and potential users of the research and the research results. See [Support to address the criterion for communication](#).
(<http://www.formas.se/Global/Communication%20criterion.pdf>)

How is the evaluation process carried out?

Formas evaluates the applications in accordance with the instructions and stipulations stated in the respective call announcement text. The research must be of relevance to the sustainable development of society and must be of the highest scientific quality.

[Read more about the evaluation process on Formas' website.](#)

(<http://www.formas.se/en/Financing/How-Formas-processes-your-application/>)

Decision on research funding

Formas' Scientific Council plans to make its decisions on 14 November 2018. The decisions will be announced the same day on Formas' website. Decisions about funding grants cannot be appealed.

Call background

The National Research Programme on the Climate shall contribute to reaching Sweden's target of becoming a fossil-free welfare society and its ambition to be a leader in the global efforts to make the Paris Agreement's targets into reality. The programme is implemented in collaboration with other relevant research financiers and actors, and calls will be made continuously during the ten year period of the programme. Area 2 Research projects on: Models and methods that break new ground is part of the second call within the research programme.

Support and links

- [General instructions](http://www.formas.se/en/Financing/General-instructions/) (<http://www.formas.se/en/Financing/General-instructions/>)
- [Ethical Policy](http://www.formas.se/en/Financing/Ethical-Policy/) (<http://www.formas.se/en/Financing/Ethical-Policy/>)
- [Requirements from grant administration organisations](http://www.formas.se/en/Financing/General-instructions/Grant-administrating-organisation/) (<http://www.formas.se/en/Financing/General-instructions/Grant-administrating-organisation/>)
- [Prisma](https://prisma.research.se/Start) (<https://prisma.research.se/Start>)
- [Prisma support](https://prismasupport.research.se/user-manual.html) (<https://prismasupport.research.se/user-manual.html>)

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