
National Centres of Competence in Research NCCR

Programme Call 2011

Deadlines

Call: July 2011

Pre-proposals: submission deadline 16 January 2012

Proposals: submission deadline ~~16 January 2013~~ new: 28 February 2013

Start of research: early 2014

Contact

Swiss National Science Foundation SNSF

NCCR Programme Office

P.O. Box

3001 Bern

Tel. + 031 308 22 22

Fax + 031 301 30 09

E-mail nccr@snf.ch

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1. Summary

The objective of the "National Centres of Competence in Research" (NCCR) Programme is the sustained strengthening of Swiss research in strategically important fields. The programme seeks to promote research projects of the highest quality with a particular emphasis on interdisciplinary approaches, but also on new, innovative approaches within the disciplines. At the same time, the programme seeks to stimulate a concentration of forces and an improved division of work among research institutions in Switzerland, as well as to promote partnerships in the academic and non-academic sectors. NCCRs serve to strengthen research structures, particularly at their Home Institutions. In addition, NCCRs must be active in the fields of knowledge and technology transfer, the promotion of young researchers and the advancement of women in research as well as in communication.

In principle, each NCCR consists of a centre of competence (Leading House) affiliated to the Home Institution and of the network of partners from other academic or non-academic institutions. It requires the explicit support of its Home Institution, and is headed by the NCCR Director. NCCRs with more than one Home Institution are eligible.

This present call is not restricted to a particular topic. Researchers are free in their choice of the topics to form the focus of their research. The selection procedure will take place in two stages (pre-proposals, proposals). The available funding will permit the establishment of presumably 5 to 6 new NCCRs that can commence their activity in early 2014.

2. General principles of the instrument

In the Ordinance on the Research Act (Research Ordinance), the object and content of the National Centres of Competence in Research (NCCR) are stipulated as being the following¹:

Article 8b Object and Content

¹ *With the establishment of National Centres of Competence in Research the following goals are being aimed at in particular:*

- a. The maintenance and sustained strengthening of Switzerland's position in strategically important fields of research by promoting research of the highest quality:*
- b. The sustainable renewal and optimising of Swiss research structures by promotion of the division of work and co-ordination among the research institutions, as well as their international interlinking:*
- c. The improved co-ordination of promotion measures with respect to basic research, the transfer of knowledge and technology, as well as the training of the rising generation of researchers by means of an appropriately oriented and coherent promotion strategy.*

² *A National Centre of Competence in Research is an institutionally based research project of significance for Switzerland as a whole. It consists of a Leading House*

¹ http://www.admin.ch/ch/d/sr/c420_11.html (German) or
http://www.admin.ch/ch/f/rs/c420_11.html (French)

and a network of partners and partner institutions from the academic or non-academic sectors, is assigned to a clearly designated and thematically delimited field of research and has adequate support with regard to staff and material from the institution in which its Leading House is established.

³ *A National Centre of Competence in Research shall have a maximum duration of twelve years. The following principles shall apply:*

- a. The Swiss National Science Foundation, on the basis of Article 8d Paragraph 2, shall assure the financing of a National Centre of Competence in Research for a first stage of up to four years in each case.*
- b. The continuation of the support shall take place on the basis of an application for further financing as well as the result of an interim evaluation.*

⁴ *A Centre of Competence (Leading House) pursuant to Paragraph 2 is the central organisational and academic office for the respective National Centre of Competence in Research. In particular, the Centre of Competence shall be responsible for:*

- a. the superior co-ordination of all research institutions and groups of researchers involved in the National Centre of Competence in Research;*
- b. the academic leadership and overall alignment of the National Centre of Competence in Research;*
- c. the operative control and supervision of the funds of the National Centre of Competence in Research.*

A National Centre of Competence in Research that comprises more than one strong centre, can be hosted by more than one Home Institution. The prerequisite being that all Home Institutions involved must afford a significant contribution in financial and structural respects. The Home Institution where the NCCR Director is employed will be appointed as contact for the SNSF; it hosts the NCCR management and assures the central administration of the funding.

3. Requirements set for NCCRs

3.1 Thematic orientation

The call is not subject to thematic specifications. The NCCRs must submit research projects of a long-term nature, the focuses of which are clearly rooted in basic research. They must choose research questions which need a collaborative effort to be treated successfully. The topics are interdisciplinary or demand novel approaches within the disciplines. The proposed research must be innovative with respect to the state of the art in the field. An NCCR can be planned for a duration of less than 12 years if the scientific and structural goals can be achieved in a shorter time.

NCCR applicants proposing a topic which is very close to a running NCCR, need to take into consideration the achievements of this NCCR. They must propose clearly distinguishable scientific questions and substantially new structural goals.

3.2 Coherent research programme – added value

The NCCRs display an adequate breadth of themes and disciplines with a coordinated coherent research programme mapped out for the first four years. The programme

must be coherent by showing what the individual projects are contributing to the overall questions and how they interact. The expected added value created by the NCCR cooperation must be clearly demonstrated. Furthermore, an outline of the research outlook for the following funding years should be provided.

3.3 Strengthening of existing structures

An NCCR must be based on already existing and proven points of focus in the respective fields of research and teaching at the Home Institution and the institutions involved in the network. It is expected that, during their period of existence, the NCCRs will contribute toward the further gain in reputation and concentration of efforts at academic institutions (e.g. the creation of new (assistant) professorships, extension or refocusing of institutions, creation of instruments for supporting young researchers etc.). After the closing of the NCCR, the changed structures and newly created networks in the field must be sufficiently strengthened and financially secured so that they continue to have positive effects on the progress of research and education.

3.4 Transfer and career building

The NCCR must demonstrate which goals it pursues in the sector of knowledge and technology transfer, the advancement of young researchers and women as well as the means by which these goals are to be achieved. Corresponding plans should also be drafted for internal and external communication. The plans refer to existing activities at the Home Institutions.

3.5 Evidence of academic attainment/Leadership experience

The main persons responsible in an NCCR (NCCR Director, Deputy NCCR Director, the heads of individual projects) provide evidence of their first-class academic standing.

NCCR Directors must have experience in heading and co-ordinating a larger research network coming from different disciplines or have equivalent qualifications. They must enjoy a high international reputation in their respective field of research. NCCR Directors shortly due to retire must be able to lead an NCCR for at least the first full period (4 years). In such cases, the successor must already be designated.

3.6 Organisation

NCCRs are distinguished by a high degree of academic, organisational and financial autonomy. In order to guarantee smooth operation, NCCR Directors have to stipulate an organisational structure to suit the respective environment and a management procedure. The NCCR Director is assisted by a Deputy Director. The NCCR will deploy specialists to fulfil the tasks in knowledge and technology transfer, education/training and the advancement of women as well as for communication and administration.

3.7 Financial scope

On principle, the financial requirement shall have to be guided by the needs of the respective NCCR. The Swiss National Science Fund assumes an annual SNSF contribution of CHF 3 to 5 million per NCCR. The NCCR Budgeting Guidelines (downloadable from mySNF) must be followed when creating the budget.

The funding available for this call is sufficient for presumably 5 to 6 new NCCRs.

4. Requirements for Home Institutions

Each NCCR pre-proposal and proposal must be accompanied by a letter of support from the Home Institution(s). These institutions and their strategic planning are therefore ascribed an important role already at the beginning of the selection procedure. The Home Institutions pledge to support the NCCR throughout the entire period both in terms of personnel and funding and to implement the necessary structural measures. It is expected that the improvement of the structures at the Home Institutions is organised in a sustainable way.

5. Formal requirements

5.1 Eligibility

The designated NCCR Directors submit the pre-proposals and proposals for the establishment of an NCCR. They shall have to prove that they hold a permanent post at a recognised Home Institution and must devote at least 30% of their working time to the NCCR.

Persons eligible to lead an individual project have a proven scientific track record in research work at a Swiss institution (institute of higher education, university of applied sciences, private research institution).

The NCCR may include and fund research groups from outside Switzerland if their expertise is necessary for the success of the NCCR and if this expertise is not available with the needed quality in Switzerland. In this case the NCCR will have to make sure that the respective capacity is built up in Switzerland in the course of the NCCR.

Pursuant to Article 8b Paragraph 5 of the Research Ordinance the following are recognised as Home Institutions:

- the cantonal universities, the federal technical universities and the 4 research institutions of the ETH Domain
- institutes of higher education recognised by the federal government (university institutions entitled to funding according to the UFG [Federal Act on Aid to Universities])
- all universities of applied sciences (UAS) pursuant to the UAS acts of the federal government and cantons
- research institutions pursuant to Article 16 Paragraphs 1 and 3, c of the Research Act

- further research institutions insofar as these can afford a significant contribution to achieving the goals of an NCCR.

Experience has shown that only institutions already benefiting from high international visibility in their field have real chances of success.

5.2 Completeness, submission deadline

The submissions (pre-proposals, proposals) have to comply with SNSF guidelines and are to be electronically submitted via the mySNF portal by the stipulated deadline. As the submissions are evaluated by foreign experts, they are to be written in English.

6. Submission procedure

The procedure is organised in two stages (pre-proposals, proposals).

6.1 Submission of pre-proposals

The pre-proposals are to be drafted according to the official cover sheet and the corresponding instructions. Pre-proposals are structured as follows (the specified maximum number of pages is to be observed):

1. Summary (*1 page*)
2. Scientific question and its reference to society (*2 pages*)
3. Coherent research programme for the first four years: state of the art, structure of the NCCR for the first phase, intended contributions to the state of the art, added value created by the NCCR cooperation, outlook beyond the first phase (*6 pages*)
4. Research plans of the individual projects: research question, state of the art, intended own contributions to the state of the art, contributions to the overall questions of the NCCR (*2 pages per project*)
5. International networking and embedding in international scientific co-operation activities of the Swiss Confederation (*1 page*)
6. Goals and action plans in the fields knowledge and technology transfer, advancement of young researchers and women, as well as communication (*2 pages*)
7. Structural goals of the Home Institution (*1 page*)
8. Organisation of the NCCR (*1 page*)
9. Annexes:
 - a. List of the leaders of the individual projects and project titles
 - b. CV (max. 2 pages) and list of the publications over the past 5 years of the NCCR Director, the Deputy Director and the project leaders (one file per person)
 - c. Budget for the first phase
 - d. Letter of support from the Home Institution

The letter of support from the Home Institution must provide information on the conformity of the NCCR with the strategic planning of the Home Institution and on the intended structural measures. As an annexe it contains the NCCR form "Self-funding by the Home Institution" providing details about the financial support and an overview of the structural measures.

The pre-proposals must be submitted electronically via the mySNF portal (<https://www.mynsf.ch>) by **16 January 2012 (midnight)**. More specifications about the content and the format of the pre-proposal will be given there.

In view of the evaluation, a pre-proposal can be accompanied by a recommendation/exclusion list of foreign experts.

6.2 Submission of proposals

By comparison with the pre-proposals, proposals are distinguished by their more detailed specifications. The content is to be arranged as follows (the specified maximum number of pages is to be observed):

1. Summary
2. Scientific question and its reference to society (*max. 2 pages*)
3. Coherent research programme for the first 4 years: state of the art, structure of the NCCR for the first phase, intended contributions to the state of the art, added value created by the NCCR cooperation, outlook beyond the first phase (*max. 8 pages*)
4. Research plans for the individual projects: research question, state of the art, intended own contributions to the state of the art, contributions to the overall questions of the NCCR (*max. 6 pages* per project, excl. publication references)
5. International networking and embedding in international scientific co-operation activities of the Swiss Confederation (*max. 2 pages*)
6. Goals and action plan in the field of knowledge and technology transfer; co-operation partners outside of the NCCR (*max. 4 pages*)
7. Goals and action plans in the field of the advancement of young researchers and women (*max. 4 pages*)
8. Goals and action plans in the field of communication (*max. 2 page*)
9. Structural measures (*max. 3 pages*)
10. Organisational structure and procedures (*max. 6 pages*)
11. Justification for the budget of the first four years
12. Annexes:
 - a. List of the leaders of the individual projects and project titles
 - b. CV (*max. 2 pages*) and list of the publications over the past 5 years of the NCCR Director, the Deputy Director and the project leaders (one file per person)
 - c. Budget for the first phase
 - d. Letter of support from the Home Institution

As for the content of the letter of support: see pre-proposal stage (chapter 6.1, above)

The proposals must be electronically submitted via the mySNF portal (<https://www.mynsf.ch>) by the ~~16 January 2013~~ **new: 28 February 2013 (mid-night)**. More specifications about the content and the format of the proposal will be given there.

7. NCCR selection procedure

The evaluation of the contents of the pre-proposals and proposals is preceded by a formal check by the NCCR Programme Office. Submissions which do not comply with the formal prerequisites will not be admitted to the further selection procedure, and will be rejected if the fault cannot be remedied without further ado. The formal prerequisites shall be regarded as being particularly:

- Compliance with the submission deadline
- Completeness of the application
- Submission by the responsible NCCR Director
- Letter of support from the Home Institution

7.1 Evaluation of the pre-proposals

The pre-proposal stage has the object of determining the suitability of the submissions for the NCCR instrument, their potential for restructuring the chosen research fields and their expected impact on science, knowledge and technology transfer, education/training and advancement of women.

On the basis of the Federal Council's guidelines on the selection procedure concerning the National Research Programmes and Centres of Competence in Research of 28 June 2000², the following evaluation criteria shall be applied at the pre-proposal stage:

- a. *Significance of the research topic for Swiss research*
- b. *Originality, innovation potential and interdisciplinary nature*
- c. *Critical mass and added value of the NCCR in comparison with the sum total of the individual projects*
- d. *Potential of the NCCR to attain a leading international role*
- e. *Plausibility of the goals/measures with respect to knowledge and technology transfer, advancement of young researchers and women*
- f. *Academic reputation of the NCCR Director or Deputy, and leadership experience of the management team*
- g. *Academic reputation of the project leaders*
- h. *Suitability of the Home Institution*

Scientific evaluation

For each pre-proposal at least two written assessments by international experts will be solicited. A small interdisciplinary committee of about 8 experienced high-level scientists from abroad will evaluate the pre-proposals based on the written assessments and on their own appraisal.

The scientific evaluation will focus on the criteria a, b, c, d, f and g from the list mentioned above.

Structural evaluation

Division IV of the Research Council will carry out an evaluation of the structural aspects of the NCCR pre-proposals. These include the need for restructuring of the proposed field (criterion a), the plans for knowledge and technology transfer, ad-

² <http://www.sbf.admin.ch/htm/dienstleistung/formulare/nfp/richtlinien-nfp-d.pdf> (German) or <http://www.bbw.admin.ch/html/pages/form/nfp/richtlinien-nfp-f.pdf> (French)

vancement of young researchers and women (criterion e), the suitability of the Home Institution and its planned structural measures (criterion h), and the delineation and novelty of topics and structural goals with respect to previous NCCRs in the field.

Rating

Based on the results of the scientific and the structural evaluation Division IV will rate the pre-proposals in 3 categories:

- A) Chances of success: good
All evaluation criteria are met.
- B) Chances of success: uncertain
Some criteria only partially met, but the flaws seem to be fixable in the given time span.
- C) Chances of success: slight
Some criteria are not met; the solving of the problems seems to be unrealistic in the given time span.

Already at the pre-proposal stage, a first joint meeting shall take place between the Home Institutions (Rectors' Offices), the State Secretariat for Education and Research (SER) and the Swiss National Science Foundation at which structural aspects are to be discussed. The SER shall not make any evaluation of the contents of the pre-proposals.

The SNSF shall inform applicants as well as the Home Institutions in writing about the results of the evaluation of the pre-proposals. The letter shall contain:

- rating of the pre-proposal
- feedback on the scientific evaluation
- feedback on the structural evaluation

No decisions will be issued; all those whose pre-proposals have been admitted for evaluation can submit an NCCR proposal, provided that their Home Institution continues to support the project.

All main applicants (designated NCCR Directors) whose pre-proposals are admitted to the scientific evaluation procedure and the representatives of the Home Institutions will receive a list of all the admitted pre-proposals together with the results of the evaluation. The list contains: name of designated NCCR Director, NCCR title, Home Institution(s). This list shall help the applicants to contact other applicants of pre-proposals in the same field (for delimitation, collaboration or merging of proposals).

7.2 Evaluation of the proposals by the SNSF

The proposal stage has two goals:

1. In-depth scientific evaluation of each proposal
2. Selection of the best proposals

The evaluation shall take place on the basis of the Federal Council guidelines already mentioned in accordance with the following criteria:

- a. *Scientific quality of the research plan as a whole*
- b. *Added value of the NCCR in comparison with the sum total of the individual projects; potential for stimulating interdisciplinary research, new scientific approaches/methods within disciplines, and collaboration in new research fields*
- c. *Scientific quality of the individual projects including the potential for stimulating new scientific approaches and methods in individual disciplines*
- d. *Quality of the concepts concerning knowledge and technology transfer, advancement of young researchers and women*
- e. *Suitability of the Leading House as the organisational and academic management office of the NCCR*
- f. *Adequacy of the financing by the SNSF that is being applied for, as well as its own and third-party funds*
- g. *Support by the Home Institution*

Scientific evaluation

Within the framework of the scientific evaluation, the proposals shall be submitted to selection committees composed of international experts. Each committee shall be chaired by a member of the National Research Council. The evaluation shall take place in accordance with the criteria set out above. The committees shall complete their evaluation with a report to be submitted to the SNSF.

Structural evaluation

In analogy of the pre-proposal stage, Division IV of the Research Council will again carry out an evaluation of the structural aspects of the NCCR proposals.

The fact that NCCRs cannot receive any overhead funding from the SNSF will be taken into consideration while assessing the proposed self-funding.

Rating

Based on the results of the scientific and the structural evaluation, Division IV will assign the proposals to either of the two following categories:

- recommended for funding
- not recommended for funding

The SNSF shall forward the NCCR proposals recommended for funding to the SER for evaluation with regard to research and higher education policies. The SNSF shall inform those applicants whose proposals have not been recommended for funding of its negative decision by means of an official notification.

7.3 Evaluation of the proposals by the SER

In accordance with Article 8c Paragraph 2 of the Research Ordinance, the SER is responsible for evaluation with regard to research and higher education policies.

The Federal Department of Home Affairs (FDHA) shall conclusively decide which National Centres of Competence in Research are to be established and fix the financial framework for each NCCR.

Pursuant to the aforementioned guidelines of 28 June 2000 subparagraph 72, the following criteria of structural sustainability shall be mainly applied in the examination:

- a) Conformity of the Leading House with the Home Institution's strategic planning*
- b) Division of work and co-ordination in the higher education sector*
- c) Incorporation into the regional and national overall distribution of leading houses in accordance with the goals of the National Centres of Competence in Research programme*
- d) Agreement with the federal government's research policy goals*
- e) Embedding in Switzerland's international scientific co-operation agreements and co-operation endeavours on an institutional level*

8. Start of the NCCRs selected

According to current planning, the approved NCCRs can reckon with a start in early 2014. After the FDHA's positive decision, the SNSF shall conclude a contract with the parties responsible for an NCCR (Home Institution, NCCR Director, the leaders of the individual projects). In particular, this contract shall contain the NCCR's goals for the first four years of the contract, the contracting parties' rights and obligations and the provisions with respect to the progress review and the application procedure of the second phase. Requirements by the FDHA or the SNSF may be stipulated in the contract.

11/07/2011