



Soil as a Resource

National Research Programme NRP 68

Second Call for proposals



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Second Call of the National Research Programme “Sustainable use of soil as a resource” (NRP 68)

The overall goal of the NRP 68 is to establish a basis for political decision-making which takes into account both the ecological and the socioeconomic functions of soils and consequently paves the way for soil resources to be used sustainably in Switzerland. Our understanding of the processes occurring in the soil at the macro- and microscopic level should be improved. We should be able to quantify its functions more precisely and manage the soil in a resource-efficient manner. Moreover, we should gain knowledge on how socioeconomic aspects influence the perception of the challenges and stress factors presented in the implementation plan and find possible socially acceptable solutions. For this reason, the Steering Committee of NRP 68 has approved an amount of CHF 1.2 to 1.4 million to support presumably four to six research projects.

1. Purpose of the second call

Following the initial call for proposals, the National Research Council approved 19 projects based on the recommendations by the Steering Committee of NRP 68. It turned out that aspects of economic and social assessment and management of soils are not sufficiently addressed by these projects.

In the second call for proposals, an increase of knowledge in management options, policy instruments, and socioeconomic and legal approaches are envisaged. Proposals should therefore focus on the economic and social valuation of soil functions and soil ecosystem services (provisioning, supporting, regulating and cultural services) and the integration of these services into private and public decision making. Practical tools and methods should be developed fostering the valorisation of soil functions in decision-making and addressing implementation issues taking legal, socioeconomic and cultural aspects into account.

As a basis for normative approaches in the economic and social context, a second focus should be on the fundamental understanding of the comprehensive soil ecosystem, its physical and sociocultural aspects and their coupling. Projects in this focus may range from abstract theoretical to high-resolution numerical. Their center may be in the physical or in the socio-cultural sphere, provided the necessary coupling is sufficiently addressed.

2. Research foci of the second call for research proposals

The research foci of the second call are oriented towards (i) quantitative socio-economic research of soil functions and sustainable use of soil, and (ii) improved understanding and theory building of the soil ecosystems' dynamics. Special emphasis should be placed on the following research questions:

2.1 Economic and social valorisation, policy instruments and legal framework

How can the diverse values of soil functions and soil ecosystem services be appraised by economic and social valuation methods? How can changes in soil functions and services be measured and their societal impacts be consistently quantified?

What are gaps and inconsistencies in existing soil-related policies? What policy instruments (e.g. regulative instruments, taxes, market-based instruments like Payments for Ecosystem Services (PES)) can be designed for capturing the “true” value of soils, including relevant soil functions and soil ecosystem services? How can land-use policy be designed so that urban sprawl can be reduced and/or a more sustainable use of soil can be guaranteed?

Is the current legislation adequate to safeguard a sustainable use of soils? Which rules in Swiss land-use related policies should be sustained and which should be amended? Which legal approaches are necessary to better include the manifold soil functions and soil services into the existing regulatory frame and planning procedures? Presented approaches should assess the political and social feasibility in order to enable transformative policies that ensure the sustainability of Swiss soils.

2.2 Theoretical analysis of soil ecosystems

What concepts and methods are suitable, or can be developed that allow the qualitative analysis of the comprehensive soil ecosystem with respect to its natural and forced dynamics? Aspects of interest may range from models describing micro-biological dynamics in soils, assessment frameworks supporting long-run soil health, soil ecosystem services to economic value and their interactions. Drivers may range from a changing climate to changing economic or cultural settings, including legislation, social aspects between poverty and wealth and political shifts, and it may in particular account for the stochastic nature of these processes. What are indicators for the nature of the respective evolving dynamics and to what extent can they be extracted from historic data? What are predictive skills of the necessarily coarse-grained representations? What are the fundamental challenges and options to derive robust management recommendations given complex system behaviors of soil processes and services?

3. Submission procedure

Research projects from the second call must adhere to SNSF guidelines. The implementation plan of NRP 68 as well as the funding regulations and instructions for the submission on the *mySNF* portal must be considered. The start of research for these new projects is set between 1 November 2014 and 1 January 2015. The projects must be limited to a duration of no more than 36 months.

The call does not include a pre-proposal stage. Full proposals must be submitted online via the *mySNF* portal. The research plan must be composed using the template provided on *mySNF*. Furthermore, please consider the directives for research plans. In order to access the two documents a new application must be created on *mySNF* choosing Programmes (national and international) > National Research Programmes (NRP) > NRP 68: Second Call. The documents you can find on the left-navigation at the bottom of the page under "Information/documents". For submission, user-registration is needed and can be obtained from the homepage of the *mySNF* website: www.mysnf.ch. User accounts from the past are still valid. New user accounts must be opened at least two weeks before the submission deadline so that proposals can be submitted in good time.

The Steering Committee of NRP 68 expects full proposals to be submitted in English, unless it can be shown that either German or French is intrinsically better suited to the research topic of the project.

Full proposals must be submitted using the template to be found on the *mySNF* portal. The deadline for submission is 23 May 2014.

3.1 Selection criteria

The secretariat of the Programmes division will check for formal criteria such as completeness of application, adequate formal presentation and submission by the deadline. Applications that do not satisfy these formal criteria will not be processed further.

Based on external national and international peer-review followed by a scientific assessment by the Steering Committee, research proposals will be submitted to the National Research Council for approval or rejection.

Full proposals will be reviewed on the basis of the following criteria:

- _ **Scientific quality:** Theory, research questions, research design and methods must be presented comprehensibly. The projects must reflect the state of the art in the field and meet international academic standards.
- _ **Scientific originality:** The projects must contain an innovative component as compared to completed or running research projects in the field.
- _ **Scientific track record:** Applicants must have a proven track record in their field and meet the personal and formal requirements for submission (see Funding Regulations). The academic track record involves successfully completed research activities and high-level national and international publications.
- _ **Compliance with the goals of the NRP 68:** Proposals should reflect the scientific objectives as outlined in the implementation plan, comply with its overall framework and coincide with the purpose and research foci of the second call (see chapter 1 and 2 of this call announcement).

_ **Feasibility:** The proposed study must be shown to be feasible (e.g. in ethical terms or with regard to availability of and access to data, personnel recruitment and timely completion).

_ **Inter- and transdisciplinarity:** Projects should address research questions that demand approaches crossing disciplinary boundaries or should go beyond each individual discipline including stakeholder in defining research objectives and strategies.

_ **Application and implementation:** The potential for practical application and implementation of results is a key element of National Research Programmes. Projects of high practical relevance are therefore given priority.

_ **Personnel and infrastructure:** Adequate personnel resources and an adequate infrastructure must be secured for the project.

3.2 Schedule of the second call

The following schedule is set out:

Call for proposals	21 March 2014
Deadline for submission of full proposals	23 May 2014
Final decision on full proposals	September/October 2014
Start of research	November 2014 – January 2015

3.3 Contacts

For general questions concerning the submission and evaluation procedure, please contact the programme coordinator Pascal Walther: nfp68@snf.ch or 031 308 22 22.

For questions concerning salaries and eligible costs, please contact the Head of Finances, Roman Sollberger: roman.sollberger@snf.ch or 031 308 22 22.

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