

SNSF Roadmap 2013-2016

International co-operation strategy

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1. Internationalising research

1.1 Support for international scientific co-operation

International co-operation is an important element of scientific research. It can take various forms among research scientists:

- international scientific encounters and contacts, at conferences for example;
- academic mobility in the form of short or longer stays abroad spent with research groups in other countries;
- collaboration with one or more foreign research groups on joint projects or in international networks;
- development and use of joint research infrastructures.

A large number of international co-operation projects between research groups are set up on the initiative of the scientists themselves; however, these individual initiatives often have a limited scope within which it is not possible, for example, to fund visits to partner groups or to transfer money to partners.

Universities, governments and research funding bodies negotiate and implement co-operation agreements with the aim of supporting the international component of research and creating an institutional framework to promote co-operation. These agreements may be concluded between just two parties (bilateral agreements) or may involve wider co-operation within a community with shared interests (multilateral agreements). They define the options and schemes which are available to scientists seeking to co-operate and the conditions for gaining access to these schemes (including, for example, the fields in which joint research is to be pursued).

1.2 The SNSF mission statement and general strategic framework

The SNSF helps to facilitate international co-operation between research groups by actively supporting the implementation of programmes launched by other research funding institutions in Switzerland and in other countries, both as a member of international organisations and by developing its own funding schemes.

In 2012, the SNSF adopted a mission statement¹ which it uses, within the framework defined by its mandate, to define strategic objectives and the specific activities that it will pursue in the coming years. They are directed towards promoting high-quality research and improving the processes and the structure of the organisation.

The international strategic alignment of the SNSF is illustrated by several facets of its mission statement:

- The SNSF strives to develop research in Switzerland, to advance its international integration and to consolidate its leading position in the global arena.
- The SNSF co-operates with partners abroad to facilitate cross-border research activities and to play a part in shaping the international research environment.
- Proposals are reviewed by expert researchers from all over the world based on international standards.
- The SNSF is committed to making the results of research accessible and contributes to knowledge sharing in society.²

¹ The mission statement is available at: <http://www.snf.ch/E/about-us/funding-policy>

² This aspect immediately assumes a global dimension by virtue of the options now offered by information and communication technologies.

1.3 The foreign policy dimension

Switzerland has a reputation as a leading player in fields such as finance and economics, environment, science, research, innovation, education, and healthcare. In research and innovation, Switzerland can make a contribution to finding solutions to the global problems facing us now and in the future.³ The Federal Council wants to guarantee that researchers in Switzerland have access to international research programmes and research infrastructure.⁴

Research, innovation and education contribute to economic growth and competitiveness of a country. The international co-operation pursued by the SNSF can be regarded as an integral part of Switzerland's foreign policy. Its international co-operation schemes and programmes offer researchers working at Swiss institutions a way of becoming involved in and of contributing their expertise to Switzerland's efforts to reach out to other countries and to establish lasting contacts with partners abroad.

By integrating its international co-operation efforts into Switzerland's foreign policy, the SNSF assumes the role of a national institution. This commitment should help to secure a favourable position for research and innovation within the country's domestic policy.

1.4 The SNSF in an ever-changing environment

This document describes the SNSF's international co-operation strategy and defines the associated objectives and scope for action, with special reference to schemes for promoting research and specific programmes. It takes into account developments which have taken place since the preceding document on international co-operation⁵ was written:

- Greater involvement of the SNSF in the implementation of science and technology co-operation programmes between Switzerland and countries defined as priority countries (based on experience during the period 2008-2011/2012)
- Launch of the SNSF's and the Swiss Agency for Development and Cooperation's (SDC) new joint programme with developing countries – r4d.ch
- Experience gained during the preceding period from other international programmes (joint calls for project proposals as part of Switzerland's contribution to the enlargement of the European Union (EU), D-A-CH multilateral agreement between Germany, Austria and Switzerland).
- Changes in the structure and instruments of the new European research and innovation framework programme Horizon 2020 and their impacts to the framework conditions for research and innovation in Switzerland.
- Realisation of the European Research Area (ERA) for which the SNSF has committed, also through its involvement in Science Europe (in particular in aspects like open access, peer review, human resources or mobility).

It forms part of the SNSF Multi-Year Programme 2012-2016 and takes into account the strategic documents issued by other key national and international players (e.g. Switzerland's international education, research and innovation strategy). It describes the underlying principles of the SNSF's international co-operation policy and the schemes through which this policy is implemented. It exists in a context of constant change and is therefore likely to evolve.

³ Foreign policy report 2011 (FF 2012 2677)

⁴ Switzerland's international education, research and innovation strategy, 30 June 2011

⁵ International co-operation by the SNSF: strategy and portfolio (SNSF, June 2009)

2. Objective and principles of international co-operation by the SNSF

2.1 Objective of international co-operation by the SNSF

The strategic objective which the SNSF pursues in its international co-operation work is to optimise and facilitate the conditions under which international collaboration and scientific exchange can take place. Its activities aim to lower barriers to cross-border co-operation on individual projects, international programmes and access to research infrastructure, to facilitate research scientists' mobility, to foster institutional co-operation and to build scientific capacity in research communities in developing nations and countries in transition.

2.2 Basic principles

International co-operation by the SNSF is based on the following principles:

- It focuses on the added value that international research can confer on the scientific community in Switzerland, is responsive to scientists' needs and minimises the bureaucracy associated with projects;
- It makes scientific excellence the main criterion for allocating funding, defends high level ethical standards and, as far as possible, works solely with other funding institutions that operate a peer review system;
- It encourages a free choice of research topic and defends scientific autonomy;
- It promotes simpler structures and multilateral approaches in preference to creating new funding programmes;
- It takes a pragmatic approach to assessing working conditions in partner countries.

3. Implementation

3.1 Different country categories have different needs

To permit a differentiated approach to international co-operation activities, a number of country categories have been defined. The category to which a country is assigned can of course change. Since the logic underlying activities within each of the categories is very different, the SNSF is keen to avoid a country being assigned to two categories at the same time. However, this can sometimes be difficult and can produce paradoxical situations, particularly with respect to large emerging nations that have made major progress in certain areas of science but remain developing countries in other areas.

3.1.1 Developing countries

Definition and major characteristics

Recipients of international development aid (OECD DAC List), framework conditions unfavourable to research activities. The target countries are in Africa, Asia and Central and South America.

Objectives

To develop research capacity in developing countries so that the Swiss scientific community can co-operate with competent partners, to promote solidarity-based involvement, to facilitate co-operation with partners as a contribution to solving global problems, and develop a network with players who will be competitive in the future.

Principles guiding the SNSF's involvement

The SNSF reviews and manages projects undertaken with these countries autonomously and without the involvement of organisations in the target countries. It commits its own resources and works in partnership with other institutions.

3.1.2 Countries in transition

Definition and major characteristics

This category covers not only the countries of the former Soviet Union (as far as Central Asia) but also countries in Eastern Europe and the Balkans, particularly those which are not yet members of the EU. There are some very skilled scientists in these countries, especially in fields that were designated strategic priorities by the former Soviet Union, but the framework conditions for research are challenging (particularly in terms of research infrastructure and the institutional setting).

Objectives

To enable Swiss scientists to cooperate with excellent scientists, to provide access to research topics, to help build capacity in the scientific community, to develop a network with players who will be competitive in the future (especially among the new member states of the EU).

Principles guiding the SNSF's involvement

The SNSF reviews and manages projects undertaken with these countries autonomously and generally without the involvement of organisations in the target countries. In some cases (such as Switzerland's contribution to the enlargement of the EU) the SNSF co-operates with a partner institution in the target country. The SNSF commits its own resources and works in partnership with other institutions.

3.1.3 Emerging countries

Definition and major characteristics

Countries such as China, India, South Africa and Russia and other Asian and South American countries – most notably Brazil – belong to this category. Their economic performance and growing regional importance distinguish them from the developing countries.

Objectives

To enable partnerships and provide research groups at institutions in Switzerland with access to the research structures in these countries, to support existing collaborations by facilitating co-operation arrangements.

Principles guiding the SNSF's involvement

While realising that it might be difficult to implement, the SNSF feels it is desirable to include the partner countries in the process of evaluating proposals and to require them to make a comparable contribution to project funding. It commits its own resources and works in partnership with other institutions, participates in inter-institutional dialogue alongside the Swiss government and seeks to conclude structural co-operation agreements with equivalent bodies.

3.1.4 European countries

Definition and major characteristics

These are countries in Europe and especially the member states of the EU.

Objectives

To ensure an optimal complementarity between national and European funding instruments in order to maximise their impact.

Principles guiding the SNSF's involvement

The European Union is the second source for research in Switzerland. An association to the European framework programmes is crucial for the Swiss scientific community.

3.1.5 Industrialized countries

Definition and major characteristics

These are countries with which scientific co-operation is crucial for Swiss scientists and institutions. The category includes G8 countries such as the USA, Canada and Japan.

Objectives

To support existing co-operation and encourage the creation of new research co-operation projects.

Principles guiding the SNSF's involvement

The SNSF is of the opinion that the evaluation procedures in these countries are generally reliable and that funding for co-operation needs to be provided by both partners. It seeks to conclude structural co-operation agreements with equivalent bodies.

3.2 Areas of involvement in international co-operation and strategic intentions

There are various approaches that the SNSF can adopt in its efforts to promote international research co-operation with countries in the various categories mentioned above:

- **Direct funding through its own instruments** – This approach primarily targets areas that are directly linked to the SNSF's mission; the schemes are designed to complement other, existing forms of funding.
- **Joint programmes with other institutions and implementation mandates** – These programmes are run in conjunction with other institutions active in research funding. They are co-funded by the partner institutions and the SNSF: in addition to observing the principles of independence defined by the SNSF⁶ for this type of co-operation, co-funding is provided for programmes to the extent that the partner institutions' objectives are compatible with those of the SNSF. This criterion applies equally to implementation mandates and/or the management of programmes on behalf of third-party institutions.
- **Contributions to international research initiatives and programmes** - This area of involvement is defined by the interests of the Swiss scientific community; it mainly comprises participation in European initiatives (ERA-Nets (+), Joint Programming Initiatives (JPIs), INCO-Nets, co-funding schemes, etc.)
- **Multilateral co-operation and structural measures** – the SNSF participates in a multi-lateral capacity in Swiss and international organisations: wherever possible, the SNSF promotes organisations whose aim is to modify framework conditions, for example by proposing structural measures designed to facilitate the development of scientific skills in developing nations and countries in transition, or international co-operation between research groups.

⁶ SNSF's principles for implementing assessments and joint programmes with external partners (SNSF, December 2011)

3.3 Gathering information and statistics

A strategy can only be implemented adequately if objective information is available. Many international collaborations develop spontaneously within the normal context of project funding and are mentioned when applications are submitted. The SNSF uses and leverages this information, but it also tries to analyse it more systematically in order to better evaluate the needs of scientists.

The SNSF is also involved in inter-institutional dialogue with Switzerland's partner countries and on a multilateral level. Contacts with representatives of other countries and of Swiss institutions in other countries are an important source of information and should be put to good use.

Given the importance of co-operation between Switzerland and the EU in the field of research, the SNSF funds, together with the Swiss Confederation, a Swiss contact office in Brussels for research, innovation and education: SwissCore. SwissCore monitors the latest developments in European research policy, liaises between the Swiss and European stakeholders and supports the Swiss participation in EU programmes.

3.4 Schemes and programmes for promoting international co-operation

3.4.1 Direct financing through the SNSF's funding schemes

The SNSF has the following schemes to facilitate international co-operation:

- **Stays abroad for doctoral students** – Funding in addition to salary for doctoral students working on projects supported by the SNSF.
- **Fellowships for young and experienced scientists** – Fellowships enabling young scientists to spend time at a research institute in another country.
- **International Short Visits** – Short visits (between one week and three months) by a Swiss scientist to another country or by a foreign scientist to Switzerland. No restriction on countries.

Depending on the needs of a specific programme, the SNSF has the following schemes at its disposal:

- **Preparatory Grants (PG)**– They facilitate the elaboration of proposals for Joint Research Projects (JRPs) providing scientists from the partner countries and from Switzerland with a financial contribution towards the costs of a meeting to prepare and elaborate a JRP proposal.
- **Joint Research Projects (JRP)** – This funding scheme allows a group of researchers from Switzerland and one or several groups of researchers from other countries to jointly investigate a specific question. These projects typically last three years and cover the following costs: equipment, research funds, salaries. In some cases, the funding comes only from Switzerland, in others the Joint Research Projects are co-funded by Switzerland and the partner country. This co-funding can either be equally divided between the partner countries or not.
- **Institutional Partnerships (IP)**– They are intended to contribute to the structural development and modernisation of research and teaching institutions in other countries. The aim is to increase their attractiveness and international competitiveness by improving basic overall conditions. Research should not be the main component of an IP. Grants for IPs are meant to establish medium to long-term partnerships between research institutions abroad and Switzerland. The funds of an IP are earmarked to overcome shortcomings of foreign institutions and to contribute to the improvement of institutional and

research management, the improvement of teaching and training, development of curricula, modernisation of methodology and approaches, improvement of networking, and to the research infrastructure.

- **Valorisation Grants (VG)** – They aim to increase the effects and sustainability of the supported activities and the results achieved by JRPs/IPs (e.g. publications, websites, organisation of conferences with stakeholders or the general public). Additionally, VGs can be requested if a JRP/IP intends common activities with another JRP/IP in order to make the most of possible synergies.
- **Conference Grants (CG)**– They aim to strengthen the international networks of scientists from Eastern Europe and open new perspectives for their international co-operation as well as for the development of their scientific CV. Funds for travel and accommodation costs can be made available for Eastern European researchers wishing to participate in scientific conferences with international participation taking place in Switzerland.

3.4.2 Joint programmes with other institutions and implementation mandates

The SNSF partners other Swiss institutions in implementing joint programmes designed to promote research activities:

- Swiss Programme for Research on Global Issues for Development (**r4d.ch**) – Programme run jointly with the SDC to fund projects aimed at promoting the development and spread of new knowledge and innovative solutions that contribute to sustainable global development, with the emphasis on reducing poverty and preserving public assets in developing countries.
- Scientific co-operation between Eastern Europe and Switzerland (**SCOPES**) – Programme run jointly with the SDC to fund projects aimed at promoting fair co-operation with scientists in Eastern European countries in transition and building the scientific capacity of their institutions.
- **Bilateral science and technology co-operation programmes** – Programme run jointly with the State Secretariat for Education, Research and Innovation (SERI) to fund joint research projects between groups of scientists in Switzerland and emerging countries with which Switzerland has partnerships (the BRICS countries, Japan, Korea).
- **Programme implementation mandates** – Given the limited resources available to the SNSF for promoting international co-operation, it is especially important for it to pursue complementary activities with other initiatives. As a result, the SNSF seeks to create links and establish an exchange with external initiatives. This enables the SNSF in Switzerland to play an active role in supporting initiatives and programmes organised by other organisations (particularly SERI and the SDC). If the necessary criteria⁷ are met and the resources are available, the SNSF can also accept mandates to review and/or manage programmes of this type (such as the Romanian Swiss Research Programme (RSRP) and the Bulgarian Swiss Research Programme (BSRP), which are part of Switzerland's contribution to the enlargement of the EU).

3.4.3 Input into international research initiatives and programmes

International research programmes are regularly initiated by major research organisations, governments and other international organisations. The objectives of these programmes can be defined in such a way as to initiate or reinforce scientific and technological co-operation with certain countries or regions in the world, or with the aim of uniting research capacities to tackle a larger-scale global problem.

⁷ The SNSF's principles for implementing assessments and joint programmes with external partners (SNSF, December 2011)

The SNSF is committed to the European level through its constructive dialogue with the European institutions and its commitment to the realization of the ERA and its participation in the European Framework Programmes for research. This is ensured through inter alia the mandate SwissCore via Science Europe, as well as active participation in groups of European experts.

INCO-NETs and ERA-Nets (+)

Under the FP7's 'Capacities' Programme, a special horizontal scheme called INCO-NET and ERA-Net is meant to strengthen the bi-regional coordination of science and technology cooperation. This type of initiative will most probably continue under Horizon 2020. IZ monitors the INCO-NET and ERA-Net activities and may decide to participate if a Swiss participation brings any added-value.

3.4.4 Multilateral co-operation

The SNSF is involved in multilateral co-operation through the following institutions:

- **European Science Foundation (ESF)** – The ESF will cease to play a major role in the coming years. In future, science policy will primarily be the responsibility of Science Europe. The last *à la carte* schemes (Research Networking Programmes and Eurocores) will be withdrawn in 2015 and no further calls for proposals are being issued. The basic level of funding will be reduced from year to year.
- **Science Europe** – As the successor organisation to EUROHORCs, Science Europe will play a key role in representing the interests of research organisations and research-funding organisations in Europe. The SNSF, as a research-funding organisation in a non-member state of the EU that is nonetheless involved in European framework programmes to promote research and innovation, intends to play an active part as a member organisation of Science Europe and to use it as a privileged multilateral platform for co-operation between the partner institutions in European countries, and more particularly to develop a Grant Union.
- **Global Research Council (GRC)** - The GRC is an informal forum set up in 2011 with the aim of exchanging good practice and establishing shared principles for international scientific co-operation, for example in the field of peer review. Topics currently under discussion are scientific integrity and open access.
- **International Foundation for Science (IFS)** – The main goal of IFS is to invest in young scientists in developing countries. In contrast to many other funding organisations, the IFS does not grant scholarships to researchers for stays in Europe or the USA. The grantees have to conduct their research in their own country.
- **Commission for Research Partnerships with Developing Countries (KFPE)** – The KFPE is dedicated to research partnerships with developing countries and promotes the quality of north-south research. It develops ethical and methodological principles and supports scientists active in this field of research. The KFPE's 11 principles, in particular, have gained international recognition. The KFPE builds awareness of the issues that arise in north-south research among the relevant stakeholders in research, politics, government and industry.

The SNSF also supports the Swiss scientific community's involvement in other scientific initiatives such as the International Continental Drilling Programme and the International Ocean Discovery Programme). By contributing to their basic funding, it enables members of the Swiss scientific community to participate in such initiatives and individual projects within them. The SNSF's decision to participate in initiatives such as these is taken on the basis of their scientific quality and their appeal for the Swiss scientific community.

3.5 Structural activities to promote international co-operation

The SNSF and its sister organisations in foreign countries fund research through a variety of sources operating according to their own specific rules and procedures. This introduces barriers to transnational collaboration and benchmarking of excellence across national boundaries. The following procedures should therefore be considered when looking for appropriate agreements with sister organisations in other countries:

- **Money Follows Researchers Process (MFR)** – The Money Follows Researchers Process allows researchers who move abroad to make a request to transfer their national funding to another country in order to be able to finish their project. The project can either continue in the country of origin while being managed from abroad or transferred to the new location.
- **Money Follows Co-operation Line Process (MFCL)** – The Money Follows Co-operation Line Process allows for smaller parts of national projects to be carried out abroad. Projects clearly focused in one country with only a (very) small part in a second country may be submitted to the main funding organisation. If the proposal is approved, this funding organisation also funds the foreign segment. The foreign segment has to be essential for the successful completion of the project. As an example of the application of this process, the Sinergia programme of the SNSF supports projects between different groups generally based at different universities or research institutions in Switzerland, although one group based abroad will be supported directly by the SNSF grant.
- **Lead Agency Agreement (LA)** – The Lead Agency Agreement allows for researchers from two countries to submit a common proposal to only one of the funding agencies. The researchers are requested to submit the proposal to the funding agency in whose country the bigger part of the budget is requested (=Lead Agency). The Lead Agency evaluates the whole proposal independently. In case of a positive outcome, the Lead Agency funds the researchers based in its country. The other agency will recognise the outcome of the evaluation without further evaluation and, in case of a positive result, fund the project partners in its country.

These schemes are at the centre of the European initiatives for the research funding organisations to form a Grant Union to enhance research co-operation and excellence by enabling researchers to form collaborative projects and networks. The SNSF views the Grant Union initiative as an important strategic approach in Europe towards establishing a true European Research Area. It is involved in developing these activities through bilateral agreements with the partner agencies and on a multilateral level, specifically as a member organisation of Science Europe.

The SNSF has Lead Agency agreements with research funding organisations in Germany (DFG), Austria (FWF) and Luxembourg (FNR). It hopes to conclude similar agreements with other European and G8 countries in the coming years.

4. Governance

4.1 SNSF bodies

Strategy definition and implementation monitoring are primarily the responsibility of the Specialised Committee International Co-operation (FA IZ), which brings together representatives of the main divisions of the National Research Council and external experts where appropriate. Its activities have been integrated into the SNSF Roadmap 2013-2016 (objectives, activities and evalu-

ation). The strategy is implemented by the International Co-operation Division of the SNSF Administrative Offices on the basis of programme documentation and specific regulations.

4.2 Overview

Figure 1 provides an overview of the international co-operation activities of the SNSF, shown by country category. The green dots show the institutions with which the SNSF collaborates, the red dots show specific international co-operation programmes run by the SNSF or initiatives in which it is involved.

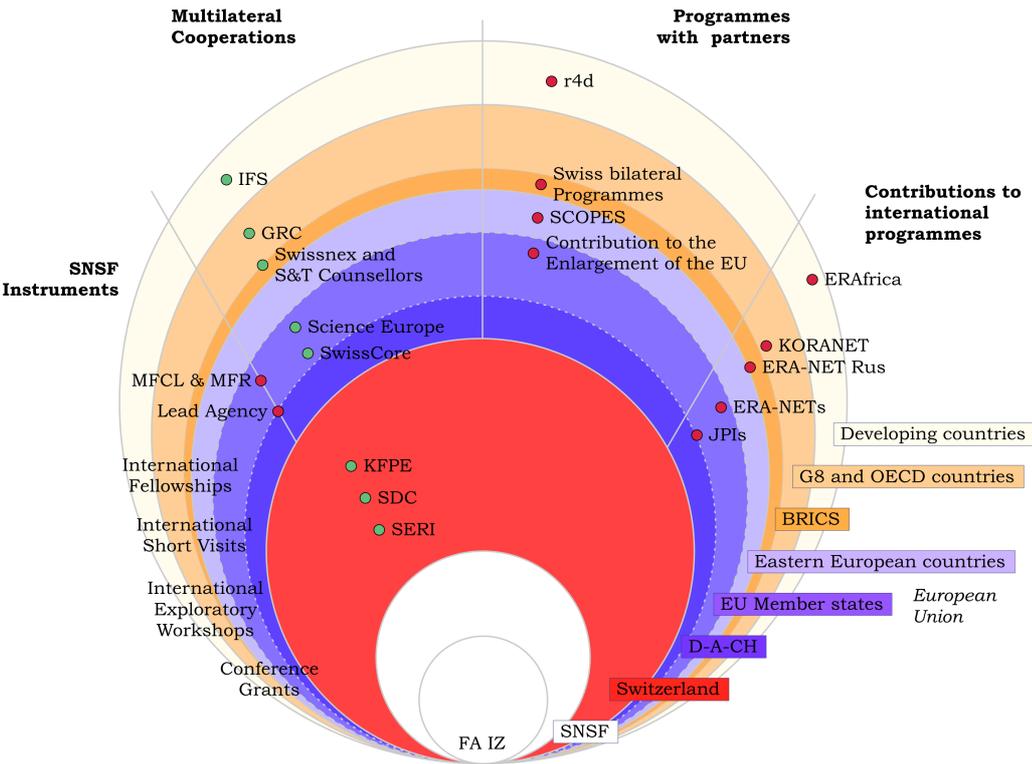


Figure 1 Overview of international co-operation activities and instruments of the SNSF

Abbreviations

BRICS	Brazil, Russia, India, China and South Africa
BSRP	Bulgarian Swiss Research Programme
CG	Conference Grant
DAC List	Development Assistance Committee List of the OECD
D-A-CH	Germany-Austria-Switzerland
DFG	German Research Foundation (Research Funding Organisation)
ERA-Net	European Research Area Network
ESF	European Science Foundation
EU	European Union
EUROCORES	European Collaborative Research
EUROHORCs	European Heads of Research Councils
FA IZ	Specialised Committee International Co-operation of the SNSF
FNR	National Research Fund, Research Funding Organisation in Luxemburg
FP7	Framework Programme 7
FWF	Austrian Science Fund (Research Funding Organisation)
G8	Group of Eight (Canada, France, Germany, Italy, Japan, Russia, United Kingdom, United States of America)
GRC	Global Research Council
IFS	International Foundation for Science
INCO-Net	International Cooperation network(s) by the European Commission
IP	Institutional Partnership
IZ	Department International Co-operation of the SNSF
JPI	Joint Programming Initiative
JRP	Joint Research Project
KFPE	Commission for Research Partnerships with Developing Countries
KORANET	Korean scientific cooperation network with the European Research Area
LA	Lead Agency
MFCL	Money Follows Co-operation Line
MFR	Money Follows Researcher
OECD	Organisation for Economic Co-operation and Development
r4d	stands for: Research for Development; the full name of the programme is: Swiss Programme for Research on Global Issues for Development
RSRP	Romanian Swiss Research Programme
SCOPEs	Scientific Co-operation between Eastern Europe and Switzerland
SDC	Swiss Agency for Development and Cooperation
SERI	State Secretariat for Education, Research and Innovation
STC	Science and Technology Counsellor
VG	Valorisation Grant