Enhancing the bilateral S&T Partnership with the Russian Federation

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Abstract

Deliverable 2.2 of the BILAT-RUS project provides an overview of bilateral funding programmes for research, development and innovation (RDI) between selected EU Member States, countries associated to FP7 and Russia. The report is structured in an overview of cooperation and funding programmes per country, including statistics. In an annex, bilateral cooperation programmes are presented in table form, which will be a complementary input for an online RDI programme database prepared in the framework of the ERA.Net RUS project.

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Executive Summary

Deliverable 2.2 prepared under the Bilat RUS project is an analytical report identifying 'best practice instruments' and barriers for successful S&T cooperation between Russia, the EU Member States (MS) and countries associated (AC) to the EU's 7th Framework Programme for RTD (FP7). The report provides an overview of bilateral S&T cooperation programmes of EU MS/AC with Russia. It includes a selection of countries, which have substantial cooperation with Russia, in first place funding programmes. It does however not cover all EU MS/AC.

The legal basis for the cooperation, the available funding instruments (programmes) for the RDI cooperation, as well as its implementation procedures are described. Thematic priorities are listed, a statistical analysis presented and perspectives of cooperation outlined per each country. The document includes a short reflection on the bilateral S&T agreements between EU MS/AC and Russia. In a separate annex the bilateral programmes are presented in table form.

1 Introduction

This report discusses good practice examples of S&T and innovation cooperation between the EU, its Member States (MS)[1], countries associated (AC)[2] to the FP7 and Russia. It sheds light on good practice examples at programme level and discusses detailed elements of bilateral R&D and innovation programmes between the cooperating regions. It includes a selection of countries, which have substantial cooperation with Russia, in first place funding programmes. It does however not cover all EU MS/AC.

Per each country, the legal basis for the cooperation, the available funding instruments (programmes) for the RDI cooperation, as well as its implementation procedures are described. Thematic priorities are listed, a statistical analysis presented and perspectives of cooperation outlined. The document includes a short reflection on the bilateral S&T agreements between EU MS/AC and Russia. In a separate annex the bilateral programmes are presented in table form.

The report is complementary to another report prepared in the framework of the BILAT-RUS project on good practice examples at project level (D 1.2 – Several case studies of good cooperation practice in S&T (continuously) and analytical summary report on the lessons learnt). In this latter report examples of successful R&D and innovation projects supported in the programmes are outlined.

This Deliverable 2.2 on bilateral programmes is also closely related to the activity in BILAT-RUS Task 1.1, where templates for describing best practice instruments were developed and collected. Moreover this Deliverable and Task 2.1 are strongly interlinked with the activities under ERANET RUS, in which framework an analytical report on bilateral S&T cooperation between EU MS/AC and Russia was prepared and published in 2010. The ERA.Net RUS report analysed cooperation at an aggregated level, comparing the various bilateral programmes, whereas this BILAT-RUS report goes into the details of the bilateral programmes for each EU MS/AC country for which data where available.

[1] EU member states are: Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxemburg, Malta, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, United Kingdom

[2] Countries associated to the FP7 are: Albania, Bosnia and Herzegovina, Croatia, Faroe Islands, FYR of Macedonia, Iceland, Israel, Liechtenstein, Moldova, Montenegro, Norway, Serbia, Switzerland, Turkey

The ERA.Net RUS report as well as this Deliverable was based on a solid survey implemented in the ERA.Net RUS project among Programme Owners. In this survey a question was included on good practice examples. Several Programme Owners have replied to this question and have given hints for examples such as joint laboratories (CNRS), specific funding instruments (innovation programme IB-DLR), etc. Some good practice examples were also presented at an ERA.Net RUS workshop in June 2009 in Tallinn. These sources have provided valuable input for this analytical report, which was supplemented with more detailed information from Programme Owners. As good practice examples are only shortly presented in the ERA.Net RUS report, this BILAT-RUS report is complementary in providing detailed information on bilateral programmes.

An analysis of bilateral S&T agreements, which Russia has concluded with a broad range of EU MS/AC has also been performed. It showed that this provides only limited input for the analytical purposes of this task, as these agreements are mostly standard legal documents. These agreements are therefore only briefly discussed in a following chapter. Barriers for successful S&T cooperation have been tested in the ERA.Net RUS survey and are analysed mainly in the ERA.Net RUS report. For completeness of this report they are referred to briefly in a chapter of this report too.

2 Methodology

This analytical report is based methodologically on desk research, study of online sources and of other literature. Furthermore, two major surveys and interviews with research and innovation funding organisations in the countries covered by the report were analysed for this report. And material of a workshop on bilateral programmes, held in the frame of the ERA.Net RUS project was also included.

A broad variety of data sources was studied and analysed for this report:

- A survey conducted in the year 2008 among members of the CREST working group on internationalisation of S&T. The survey questioned representatives of ministries responsible for research on the RDI cooperation of their country with Russia.
- A second survey was implemented in 2009/10 by the ERA.Net RUS consortium among all major RDI funding organisations survey in EU Member States and countries associated

to FP7 on their cooperation programmes with Russia. Around 150 funding organisations were contacted here.

- Interviews to deepen the survey results were conducted in 2010 with selected funding organisations also under the ERA.Net RUS project and provided qualitative information.
- Information from Programme Owners was also received in frame of workshops organised under the ERA.Net RUS: workshops in Tallinn 2009, Moscow 2010, Oslo 2010 (PPP slides, data, etc.).
- Data on funded projects under the various bilateral programmes were collected under the ERA.Net RUS project and used for statistical analysis in this report.
- Programme documents were analysed.
- Web resources were studied. The websites of the funding organisastions were consulted and relevant programme information collected.

Work on the report has been distributed among the partners involved in this task. Centre for Social Innovation (ZSI) coordinated the drafting of the report. Each partner (ZSI, CNRS, HSE, IB-DLR) drafted then the analysis for a selected group of countries. The final compilation and editing of the chapters was performed by ZSI. The following countries are covered in this report:

- Austria
- Bulgaria
- Czech Republic
- Estonia
- Finland
- France
- Germany
- Greece
- Hungary
- Israel
- Norway
- Poland
- Serbia
- Slovenia
- Spain
- Switzerland

- Turkey
- United Kingdom

Only countries having a form of a bilateral RDI funding programme with Russia were included in the analysis. The selection of countries was done on the basis of available information and if a response to the ERA.Net RUS survey was available.

3 S&T agreements EU-Russia

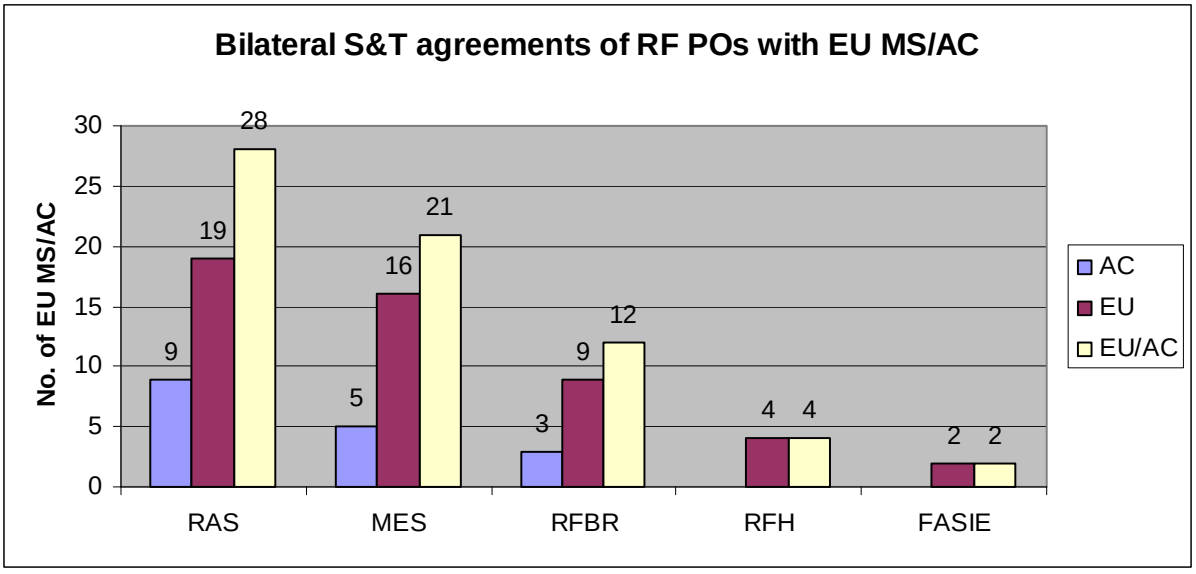
A research of S&T cooperation agreements shows that on the bilateral level, Russia has concluded Science and Technology agreements with a broad range of EU Member States and Associated Countries to the FP. According to the Russian Ministry of Education and Science[3], the Russian Federation has active agreements in place with fifteen out of the twenty seven EU members (Austria, Bulgaria, Czech Republic, Estonia, Finland, France, Germany, Hungary, Poland, Slovenia, Spain, and United Kingdom) and with four Associated Countries to FP7 (Israel, Norway, Serbia and Turkey). Agreements have been established similarly on the level of research funds, between the Russian Foundation of Basic Research (RFBR) and its European counterparts. What concerns research organisations, especially the Russian Academy of Sciences has a dense network of cooperation agreements with Academies in EU countries and Associated Countries to FP7 in place. Not all of these agreements have though resulted in substantial cooperation in the form of joint funding programmes.

There is differentiation in international S&T cooperation between the Russian Programme Owners along the lines of the innovation chain: the most comprehensive and long lasting bilateral cooperation programmes are established in basic research (RAS, RFBR), while funding bodies in applied research and innovation (such as FASIE) have been increasing and developing their international activities in recent years and are trying to catch up. The whole setup of Russia's international S&T and innovation cooperation is underpinned by bilateral S&T agreements, which the **Ministry of Education and Science** has been concluding with a broad range of EU Member States and Associated Countries since the early 1990s; at the time this survey was finalised in late 2009, there were 16 agreements with EU MS and 5 with AC

[3] See www.mon.gov.ru last accessed on 27 March 2012.

in place. The following diagram shows the status of agreements of Russian Programme Owners in late 2009:

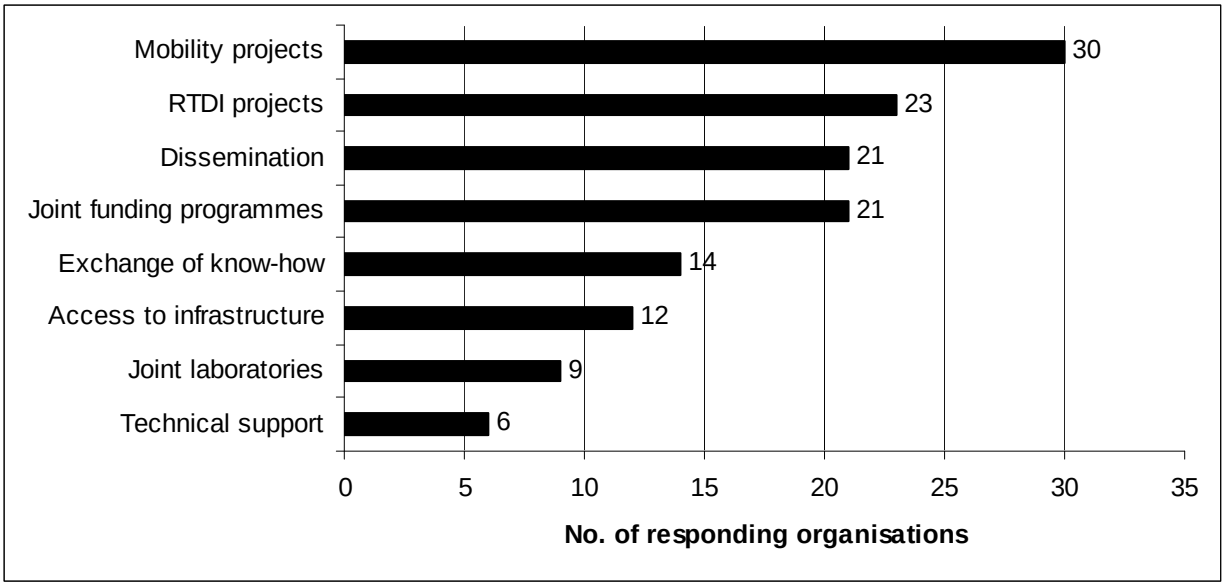
Figure 1: Bilateral S&T agreements of RF POs with EUMS/AC



4 Overview of cooperation instruments

Instruments used for support of R&D cooperation with Russia concern most frequently support of mobility: out of 40 responding organisations, 30 use this instrument. Funding of R&D and innovation projects, implementation of joint funding programmes, and dissemination of R&D and innovation results are supported by slightly more than 20 organisations each. When it comes to more institutionalised and mature cooperation instruments, such as access to R&D infrastructure and joint laboratories, the number decreases to 12 and 9 supporting organisations respectively.

Figure 2: Funding instruments used for R&D cooperation



5 Barriers to EU-Russia S&T cooperation

A variety of obstacles, such as legal problems, budgetary limitations, problems with the transfer of funds and material, obtaining a visa, as well as cultural and language barriers, have been mentioned by funding organisations as hindrances to bilateral cooperation. But also there is a lack of information on bilateral cooperation programmes and on the funding procedures applied by Programme Owners; the information exchange taking place through ongoing initiatives such as the ERA.Net RUS project should help to improve this situation.

Although evaluations of programmes confirm positive results and satisfaction with scientific cooperation with Russia, and policy makers in several countries and at the EU level intend to increase it, serious barriers still hamper this cooperation. We rely again on results of the ERA.Net RUS survey, where these barriers were tested and revealed the following points: Visa policy is an important hurdle for researcher mobility. Exchange of scientific material and equipment, and financial transfers to Russia are complicated and may be costly because of taxation. Bureaucratic procedures, administrative hurdles, uncertainty about protection of property and IPR in Russia, and unreliability of the judicial system limit the expansion of R&D and innovation cooperation. Lack of funding for joint projects, language barriers, housing problems and harsh living conditions in Russia are further factors.

- Visa
- Lack of S&T or cooperation agreements
- Language and cultural barriers
- Lack of information on funding instruments
- Limited budgets

- Other information deficits: lack of contacts in Russia, no or only limited experience in cooperation with Russia
- Administrative and legal problems: taxes on financial transfers, import of instruments & equipment, import/export of scientific material
- Housing for scientists and cooperation partners in Russia: standard, costs, etc.
- Sensitive areas: e.g. defence related research
- Bureaucratic procedures at national as well as EU level: comprehensive reporting requirements, frequent changes of legal framework conditions (e.g. FR)
- Changes of rules during call implementation
- IPR is getting more critical, the closer activities move towards innovation

6 Good practice of cooperation instruments

6.1 AUSTRIA

6.1.1 General Overview

The cooperation in the field of Science and Technology between Austria and the Russian Federation is based on the **bilateral S&T Cooperation Agreement on Fundamental and Applied Research** concluded in 1997. The agreement is prolonged every five years by a protocol.[4]

The main objective of this Agreement is to intensify scientific cooperation by promoting mobility of researchers in the framework of joint bilateral S&T projects. On the Austrian side the Federal Ministry of Science and Research[5] is responsible for the Agreement and the Austrian Agency for International Cooperation in Education and Research (OeAD) is in charge of the implementation. On the Russian side the Ministry of Education and Science of the Russian Federation is responsible for the Agreement and the Russian Foundation for Basic Research (RFBR) for the implementation.

Apart from the ministerial level, also research performing, research funding, and higher education institutions have bilateral inter-institutional cooperation agreements or have signed Memorandums of Understanding. The following institutions from Austria have signed bilateral cooperation agreements on a joint funding programme with Russian S&T institutions:

- Austrian Academy of Sciences has signed a bilateral agreement with the Russian Academy of Sciences in 1993.
- The Austrian Science Fund (FWF) has signed a Memorandum of Understanding with the Russian Foundation of Basic Research in 2007.

Furthermore Austrian universities and other higher education institutions have different forms of cooperation. The cooperation is mainly on mobility of researchers and students.

It should be pointed out, that the cooperation with Russia in the field of S&T is also one of the Austrian priorities for international cooperation in the EU RTD Framework Programmes,

[4] Up to date the new protocol to the Agreement has not be signed yet. It is still under negotiation between Austria and the Russian Federation.

[5] http://www.bmwf.gv.at/home/research/

therefore the Austrian Research Promotion Agency (FFG)[6] promotes this cooperation in an active way.

6.1.2 Thematic Priorities for S&T cooperation Austria/Russia

- Nanotechnology; Materials
- Hydrology
- Biotechnology
- Natural Sciences
- Medical Sciences
- Space
- Mathematics
- Social Sciences and Humanities

6.1.3 Forms of Cooperation

- Joint research projects
- Mobility grants
- Scholarships
- Other activities (Conferences, Events, etc.)

6.1.4 Implementation Procedures

Austrian Federal Ministry of Science and Research (BMWF)

The Scientific and Technological Cooperation with the Russian Federation is based on the above-mentioned inter-governmental agreement about cooperation in the fields of science and technology between Austria and Russia. **The Scientific and Technological Cooperation Programme (WTZ) for the Support of Mobility for bilateral and multilateral research projects** is financed by the Austrian Federal Ministry of Science and Research (BMWF). The Austrian Agency for International Cooperation in Education and Research (OeAD) is responsible for its implementation in Austria. On the Russian side the Ministy of Science and Education is responsible for the Agreement.

[6] http://www.ffg.at/en

The main objective of this programme[7] is the intensification of the international scientific cooperation of Austrian scientists with scientists from Russia. The programme covers mobility costs within the framework of bilateral scientific cooperation projects.

Scientists at universities and universities of applied sciences and other public research institutions are eligible to take part in this programme. Short-term stays (up to ten days) and long-term stays (up to three months) are possible and the travel and living costs are covered. Approved bilateral projects are financed by both sides: BMWF finances the Austrian scientists and the Russian Ministry of Education and Science covers the costs of the Russian scientists.

For detailed information refer to Annex 1.5.

Austrian Science Fund (FWF)[8]

Under the Memorandum of Understanding (2007) between the Austrian Science Fund and the Russian Foundation for Basic Research (RFBR) bilateral research projects with duration of three years, as well as conferences are funded.

Two funding instruments are available in the frame of the joint FWF-RFBR programme, namely research projects and seminars. The first call was launched in 2008 with nine projects and nine seminars funded. Research projects can last up to three years. Funding of the joint projects is substantial in financial terms and therefore comprehensive joint research projects can be implemented.

In addition, another funding tool is available with support for seminars. These are also jointly funded by FWF and RFBR and support amounts to up to € 10,000. Seminars are conceived as a stimulation instrument for preparing research projects; they are not foreseen as a simple travel grant programme.

Prior to this joint funding programme, the Austrian-Russian scientific cooperation has already been funded by FWF in the frame of its main national funding programme "Stand-alone Projects". Russian scientists could be involved by Austrian scientists in such stand-alone projects, which has indeed been the case and is still continuing.

Thematically, the cooperation with RFBR is rather broad; supported projects cover an extensive range of scientific disciplines within natural sciences.

[7] http://www.oead.at/welcome_to_austria/grants_scholarships/international_cooperation_mobility_project_support/scientific_and_technological_cooperation/EN/

[8] http://www.fwf.ac.at/en/index.asp

As FWF is covering all scientific disciplines, cooperation with the Russian Foundation for Humanities is also considered by FWF, because the Humanities and Social Sciences are usually not funded by RFBR. Since 1999 evaluations of applications to FWF funding programmes have all been performed by foreign scientists.
Further information is available in Annex 1.2.

FWF also runs a programme for **International Mobility, the Lise Meitner Programme for scientists from abroad.** The programme is open in general to international mobility to Austria, including for scientists from Russia. The Lise Meitner Program is designed:
- to enable highly qualified researchers from abroad to work at Austrian research facilities and participate in Austrian research programmes for the benefit of, and to stimulate research in Austria;
- to introduce in Austria new scientific fields, to establish new scientific approaches, methods, processes and techniques, to exploit newly gained know-how for Austrian science and to provide a lasting strengthening of the host institute's scientific quality based on the applicant's scientific expertise; and
- to promote cooperation between Austrian scientists and the home countries of Lise Meitner Scientists upon their return.
Further information is available in Annex 1.1.

COIN Programme – Cooperation and Networks

COIN – Cooperation & Innovation Programme - is a joint initiative launched by the Federal Ministry for Transport, Innovation and Technology (bmvit) and the Federal Ministry of Economy, Family and Youth (BMWFJ). COIN is a Unilateral Programme for international innovation cooperation of Austrian companies and contributes towards fostering Austria's innovation performance by the better and broader transposition of knowledge into innovation.

COIN contains transnational cooperation opportunities; strategic cooperation projects between Austria and South Eastern/Eastern Europe are particularly addressed (at every second call of COIN-Net). This regional cooperation focus lies within the responsibility of the BMWFJ. For further information see Annex 1.3.
The following costs can be covered under this programme:

- Travel costs
- Personnel

- Consumables
- Equipment
- Conferences, Exhibition
- Dissemination

Austrian Academy of Sciences

The Austrian Academy of Sciences runs a bilateral Mobility Programme with the Russian Academy of Sciences. This is an on-going programme which is thematically open. Under this Programme staff members as well as scientists temporarily involved in research projects of the Austrian Academy of Sciences are offered a financial support of their research stays abroad. Applications must be submitted within the period of registration at the International Relations Department of the Austrian Academy of Sciences. After the proposal has been approved in the session of the respective section of the Academy, it is passed on to the partner institution in the host country (see Annex 1.4).

Another funding programme relevant for Austrian-Russian research cooperation is implemented by the Open Medical Institute (OMI).[9] The OMI supports and organises science based training seminars for medical doctors from countries in transition, including from Russia. In addition it offers observerships in Austrian hospitals for medical doctors from the target countries (see Annex 1.6)

6.1.5 Overall statistics Austria/Russia

Under the Bilateral S&T Cooperation (WTZ) for mobility between 2006 -2007, 55 bilateral mobility projects have been funded. Since the year 2008 there was no call, due to a long renewal procedure of the bilateral agreement, which has to be renewed every 5 years.

In 2009 Austrian Science Fund and RFBR have funded under the permanent call:

- 9 Joint Research projects
- 9 Seminars

Under the Lise Meitner Programme between 2006-2008, 5 scholarship have been awarded to Russian researchers. In 2009 the approval rate of the Lise Meitner-Program was 35 % (25 projects).

[9] http://www.aaf-online.org/index.php/open-medical-institute.html

6.1.6 Future Perspectives and Opportunities for Russian - Austrian Cooperation

Bilateral S&T cooperation with Russia should be further enhanced in the future. A number of funding instruments at national and European levels is available and should be used by scientists.

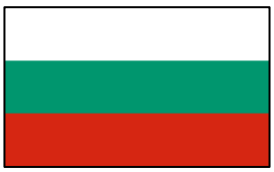
The ERA.Net concept has a very high relevance for BMWF being an umbrella for inter-ministerial cooperation with ministries from other countries.

Russia has an enormous S&T potential and is especially strong in the formal and technical sciences, e.g. physics, life sciences, ICT, but also military research could be mentioned here. Several research institutions in Russia are well funded and well known.

There is a lot of willingness and openness for cooperation on the Russian side. Thematically, the S&T cooperation between Austria and Russia is relatively broad and it includes also the humanities and social sciences. Furthermore, excellent cooperation has been established with Russia at the institutional level as well as with the Russian embassy in Austria.

For the future FWF considers to cooperate also with the Russian Foundation for Humanities because the Humanities and Social Sciences are usually not funded by RFBR.

6.2 BULGARIA



6.2.1 General Overview

Bulgaria and Russia have signed the following bilateral documents representing the legal basis for scientific and technological cooperation:

- Agreement between the Government of the Russian Federation and the Government of the Republic of Bulgaria on Cooperation in the fields of Culture, Education and Science, signed in Moscow on April 19, 1993;
- In 1994 Russian Academy of Sciences (RAS) and Bulgarian Academy of Sciences (BAS) signed an Agreement on Scientific Cooperation;
- Agreement on Scientific and Technological Cooperation between the Ministry of Education, Science and Technology of the Republic of Bulgaria and the Ministry of Science and Technology Policy of the Russian Federation (1995);
- The Agreement on Scientific Cooperation between the Russian Academy of Sciences and the Bulgarian Academy of Sciences in the field of Basic Space Research (2002);
- The Agreement on Economic, Scientific and Technological Cooperation between the Government of the Republic of Bulgaria and the Government of the Russian Federation (2007);
- In 2007 intergovernmental Russia-Bulgaria agreements on economic and S&T cooperation, on mutual protection of IPR obtained under bilateral military-technical cooperation and on exchange and taxonomic information security, as well as on cooperation in the sphere of tourism were signed;
- In 2007 was established an Intergovernmental Russian-Bulgarian Commission on Economic and Scientific-Technical Cooperation.

Based on these agreements, the thematic cooperation plan for 2006-2008 signed between the Bulgarian Academy of Sciences (BAS) and the Russian Academy of Sciences (RAS) included 44 subjects in natural and social sciences. Also, the Bulgarian National Centre of Agrarian Sciences (NCAS) concluded agreements with its Russian counterpart, the Russian Academy of Agricultural Sciences (RAAS). The existing normative base makes it possible for each Bulgarian higher education institution and research organisation to sign bilateral agreements

on specific research tasks with any Russian research entity without approval or coordination with Bulgaria's Ministry of Education and Science.

6.2.2 Thematic Priorities for S&T cooperation Bulgaria/Russia

- Nanotechnologies/Materials
- Energy
- Environment (incl. climate change)
- Information and Communication Technologies (ICT)

6.2.3 Forms of Co-operation

According to the above mentioned agreement between the **Russian Academy of Sciences and the Bulgarian Academy of Sciences** (updated in 2009), for the year 2010, 80 joint projects (mobility) (see the section "Statistics" below) in different thematic fields have been approved. Most mobility projects (around 40% of projects) have been approved in Astronomy and second comes the thematic field of Materials and Nanotechnology (16% of projects).

Joint participation of Bulgarian and Russian research teams in the EU's Framework Programmes for Research & Technological Development, as well as participation of Russian researchers in Bulgaria's national programmes and calls for proposals, and the collaboration with the Russian Foundation for Basic Research and Russian Foundation for Humanities offer opportunities for broad scientific cooperation between the two countries. In this context, it should be noted that, in accordance with Bulgarian legislation, foreign research teams, including those from Russia, can in principle participate in competitions organised by the **Bulgarian Ministry of Education and Science as well as through the Foundation for Scientific Research**. (see Annex 2)

6.2.4 Implementation Procedures

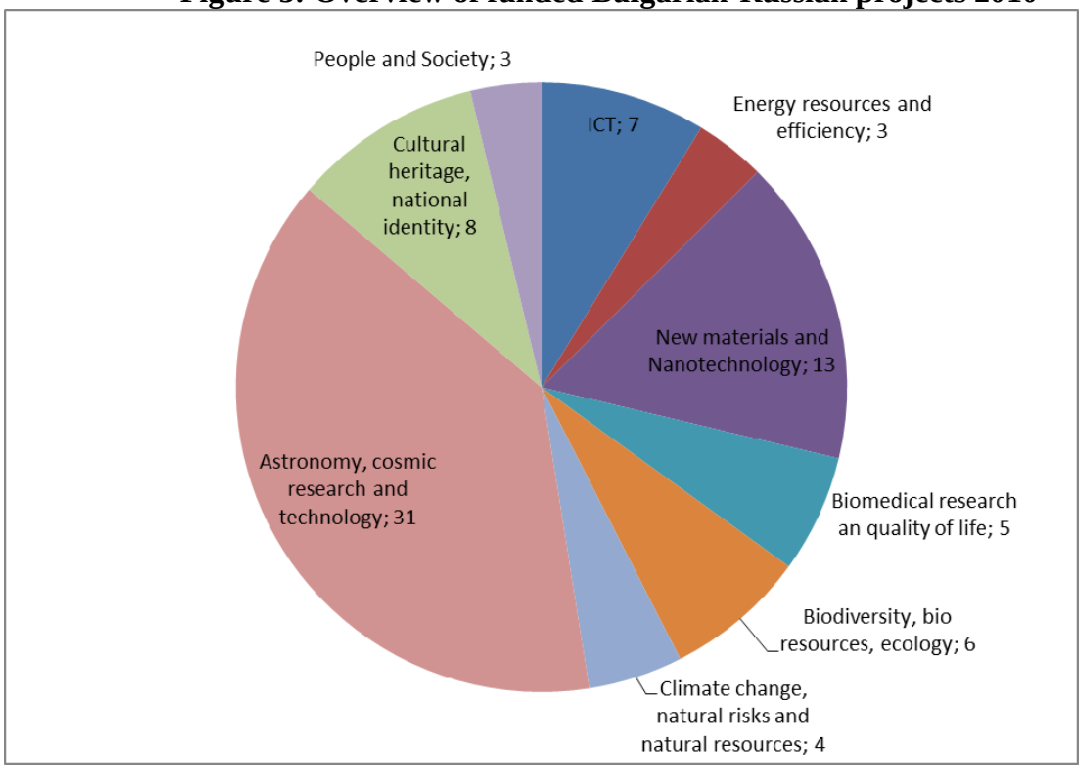
The Agreement on Scientific Cooperation signed between Russian Academy of Sciences (RAS) and Bulgarian Academy of Sciences (BAS) in 1994 fosters bilateral cooperation and the mobility of researchers. Proposals must be submitted in Russian and Bulgarian language and submitted in both countries. Beneficiaries of the cooperation may be only public research organisations. For detailed information see Annex 2.1.

6.2.5 Overall statistics Bulgaria/Russia

Table 1: Overview of the Cooperation between Bulgarian Academy of Sciences and Russian Academy of Sciences in 2010

Research domain	Number of projects	Number of Publications
ICT	7	5
Energy resources and efficiency	3	0
New materials and Nanotechnology	13	30
Biomedical research an quality of life	5	22
Biodiversity, bio resources, ecology	6	9
Climate change, natural risks and natural resources	4	4
Astronomy, cosmic research and technology	31	68
Cultural heritage, national identity	8	13
People and Society	3	1
TOTAL	**80**	**152**

Figure 3: Overview of funded Bulgarian-Russian projects 2010



6.2.6 Future Perspectives and Opportunities for Russian - Bulgarian Cooperation

In accordance with the Agreement on Scientific Cooperation in the field of Basic Space Research of 19 September 2002, the Executive Working Group on Basic Space Research held its seventh session in Moscow, in December 2010. The following documents were signed: the Protocol on Scientific Cooperation between RAS and BAS in the field of Basic Space Research for 2011 - 2015 and the list of 31 joint Russian-Bulgarian projects in the field of Basic Space Research for 2011 - 2015. Another example of successful cooperation is the collaboration between the Institute of Geochemistry and Analytical Chemistry RAS and the Institute of General and Inorganic Chemistry BAS.

6.3 CZECH REPUBLIC

6.3.1 General Overview

Czech Republic and Russian Federation have signed following documents representing the legal basis for scientific and technological cooperation:

- **Agreement on Economic, Industrial, Scientific and Technological Cooperation** (2005), between Government of Czech Republic and the Government of the Russian Federation
- **Agreement between the Ministry of Education, Youth and Sport of The Czech Republic ant the Ministry of Science and Technical Policy of Russian Federation** (1995) (the responsible body for the implementation of the provisions of this agreement on the Russian side it the Ministry of Education and Science)

Under this Agreement a **Joint Committee for Economic, Industrial, Scientific and Technological Cooperation** has been set up. The Joint Committee consist of the members of both countries and meets annually.

In general, the major objectives of the governments' S&T cooperation with Russia is to promote mutual co-operation in the field of science, technology and innovation, nevertheless there have not been any strategic initiatives taken within the past 3 years and there are any strategic initiatives planned by the Czech Government in order to strengthen the S&T cooperation with Russia.

6.3.2 Thematic Priorities for S&T cooperation Czech Republic/Russia

- Biotechnology
- Environment
- Industrial research (leading to new products, technologies, services, new materials, industrial products, information and management products)
- Information and Communication Technology
- Physics
- Nanotechnology
- Medicine
- Nuclear and Sub-nuclear Physics

6.3.3 Forms of Cooperation

Following forms of cooperation in S&T are possible under the Agreement with Russia:

- Mobility of researchers
- Bilateral cooperation projects/target-oriented research projects funding
- Joint scientific actions (conferences, workshops, seminars, exhibitions)
- Transfer of knowledge (short-term visits e.g. of scientists for research courses and educational courses for specialists in the area of innovative entrepreneurship)

The **Ministry of Education, Youth and Sports**[10] is responsible for the state administration of higher education institutions and plays a key role in developing and implementing research and development policy as well as in international cooperation with Russia in this field. The science cooperation with Russia in the area of basic and applied research is supported primarily by the Bilateral Programme of the S&T Cooperation with Russia.

The target orientated industrial research with Russia is funded by the **Ministry of Industry and Trade**[11] with an aim to develop new products, technologies, services, new materials, industrial products, information and management products. A **Czech-Russian working group** operating under the **Czech-Russian Intergovernmental Committee for Economic Commercial, Scientific & Technological Cooperation** consists of members of the Czech Ministry of Education, Youth and Sport as well as of the Russian counterpart, the Ministry of Education and Science of the Russian Federation. They meet regularly once a year in order to mutually discuss research, development and national policies of both countries as well as to identify and then select common Czech-Russian cooperative projects to be supported in science and technology.

The **Academy of Science of the Czech Republic** (ASCR)[12] has cooperation agreements with following Russian science and research funding organizations:

- **Russian Academy of Sciences** (RAS)[13]
- **Russian Academy of Medical Sciences** (RUSSMED)[14]

[10] www.msmt.cz/
[11] www.mpo.cz
[12] www.avcr.cz/
[13] www.ras.ru/
[14] www.russmed.ru/eng/ramn.htm

Based on above mentioned agreements, the Czech Academy conducts regular calls for research proposals and there was for example a joint call of the Czech Academy and the Russian Academy of Medical Science for the years 2008-2010 announced.

As indicated in the Report of the Czech Academy of Science 2009, an intensive research cooperation particularly in the fields of experimental, theoretical and mathematical physics, ion and transuranium physics, radiobiology, medical physics and geophysics and polymers research was held between certain workplaces of the ASCR (in particular the Institute of Nuclear Physics, the Institute of Macromolecular Chemistry, the Institute of Geophysics and the Institute of Physics) and the laboratories of the Joint Institute for Nuclear Research in Dubna in Russia.

Next to **the Research Development Council, the Association of research organizations** (AVO) **[15], the Czech Science Foundation** (GACR)[16] plays an important role in supporting and promoting international science cooperation. Currently, the GACR focuses on scientific cooperation with other Asian scientific institutions (such as with National Science Foundation of Korea and the National Science Council of Taiwan), but there is a new research project (Nr. 103/10/0628) implemented jointly by Czech and Russian researches focusing on semi-definite programming for nonlinear dynamical systems. This project is financed by GACR for the period January 2010 - December 2012.

The **Association of research organizations** (AVO) is the only organization within the Czech Republic, which represents and promotes in full extent the interests of applied research in entrepreneur sector. Members of AVO are the most Czech organizations and units oriented to research and development, who are promoted and operated from largely private resources in various branches of industry, building and architecture. The members of AVO represent at present more than 8 thousand professionals working in this area.

6.3.4 Implementation Procedures

The **mobility programme** of the **Academy of Sciences of the Czech Republic** is an on-going programme. There are two possibilities for the researchers, depending on the scientific field:

- Mobility projects with Russian Academy of Sciences

[15] http://www.avo.cz/index_e.htm
[16] http://www.gacr.cz/international.htm

- Mobility projects with Russian Academy of Medical Sciences

Beside the mobility, Czech Academy of Sciences also cooperates with Russian institutions in the frame of two **cooperation instruments:**

- scientific cooperation between the Czech academy of science and the Russian academy of science
- scientific cooperation between the Czech academy of science and the Russian academy of medical science

In frame of this cooperation in the field of basic research in last years several project has been funded.

Further detailed information about the funding and duration is available at Annex 3.1.

The Bilateral programme of the S&T cooperation covers basic research, applied research and innovation. The implementing institution of the programme is **Ministry of Education, Youth and Sports.** Proposals for joint projects are then presented to the Intergovernmental Committee for Economic Commercial, Scientific and Technological Cooperation which selects the joint research projects to be funded from the public funds.

All project proposals are evaluated. Based on project selection done by the Czech-Russian working group operating under the Czech-Russian Intergovernmental Committee for Economic Commercial, Scientific and Technological Cooperation, there are three streams of research/cooperation projects supported under the Bilateral Programme of the S&T Cooperation with Russia:

- cooperation projects in basic research
- cooperation projects in applied research
- cooperation projects in area of innovations

Further information is available in Annex 3.2.

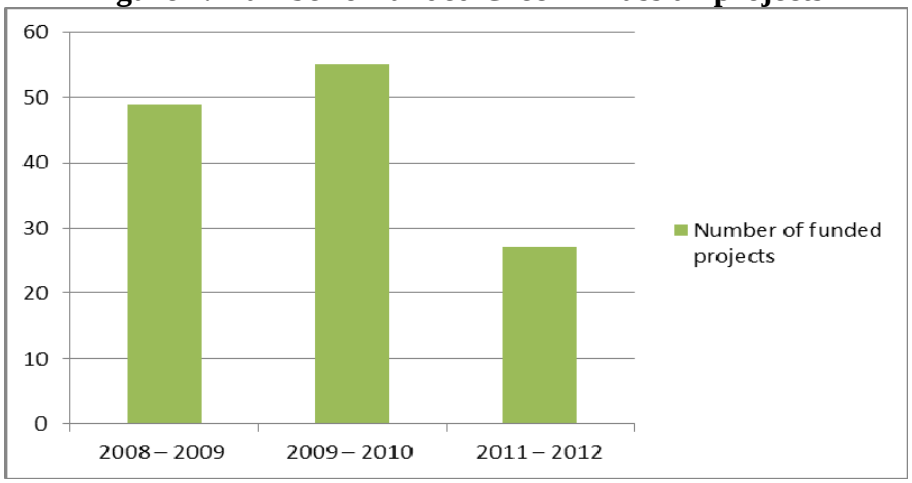
6.3.5 Overall statistics Czech Republik/Russia

The table and figure below show the number of the joint projects funded under the bilateral S&T programme of the Ministry of Education, Youth and Sports. In the past five years 131 joint projects have been funded. For detailed information refer to Annex 3.2.

Table 2: Number of funded Czech – Russian projects

Year	Number of funded projects
2008 – 2009	49
2009 – 2010	55
2011 – 2012	27
Total	**131**

Figure 4: Number of funded Czech – Russian projects



6.3.6 Future Perspectives and Opportunities for the Russian - Czech Cooperation

Research funding cooperation between Russia and Czech Republic exists in many fields. In the next years the potential is being seen in a few areas, e.g. in Energy, Industrial research and Nanotechnology.

Ministry of Education, Youth and Sports is responsible for the implementation of the KONTAKT II Programme (2011-2017), which aims to support bilateral, alternatively multilateral, international cooperation of the research and development institutions in basic and industrial research of the Czech Republic, to lay the special emphasis on the cooperation with no member EU countries**.**[17]**.**

A parallel programme has been created on the Russian side which offers support for Russian researchers and further cooperation can also be carried out under this new programme, as well as under the mobility programme of the Academy of Sciences of the Czech Republic which supports the implementation of joint projects by funding the mobility costs.

[17] http://www.isvav.cz/programmeDetail.do?rowId=LH

There are also further possibilities under the projects funded by **Czech Ministry of Industry and Trade**. The ministry fund supports the projects with target-oriented research, the results of which are to be used in subsequent industrial R&D, in new products, technologies, services, new materials, industrial products, information and management products.

6.4 ESTONIA

6.4.1 General overview

Estonian – Russian S&T cooperation is based on cooperation agreements signed between the two countries. The following agreements are in place:

- **Agreement on Cooperation in the Field of Education signed in 1994**
- **Agreement on Scientific Cooperation signed between the Russian Academy of Sciences and the Academy of Sciences of Estonia** signed in 1993
- **Cooperation Agreement between the Estonian Science Foundation and the Russian Foundation for Humanities** signed in 2008

- Beside the above mentioned agreements the Estonian government has launched also the **strategic initiatives for supporting the internationalisation of the Estonian higher education and research institutions**. In the frame of this initiative Russian PhD students and researchers at postdoctoral level can apply for the following grants:
  - Scholarships for PhD studies for non-resident students
  - Fellowships and grants for researchers at post-doctoral level

6.4.2 Thematic Priorities for S&T cooperation Estonia/Russia

- Natural sciences
- Technology
- Medicine
- Socio-economic Sciences and Humanities

6.4.3 Forms of Cooperation

The following bilateral tools are available to support the cooperation:

- Scholarships for PhD studies for non-resident students
- Fellowships and grants for researchers at post-doctoral level
- Scientific exchange programme between the Estonian Academy of Sciences and the Russian Academy of Sciences
- Joint programme between the Estonian Science Foundation (since March 2012 Estonian Research Council) and the Russian Foundation for Humanities

6.4.4 Implementation Procedures

In the frame of the **Estonian strategic initiatives for supporting the internationalisation of the higher education and research institutions** Russian PhD students and researchers at postdoctoral level can apply for the following grants:

Scholarships for PhD studies for non-resident students (see Annex 4.1)

Area of study or research: natural and exact sciences, technology and medicine. Implementing Agency is the *Centre for Higher Education Development Foundation Archimedes*

Target group: Study positions are opened for persons who are not residents of Estonia. The candidates must have prior qualification that gives access to PhD studies and must start their studies in an Estonian university in the academic year subsequent to admission.

Terms and conditions of scholarship: The study grant equivalent to the standard public grant of PhD students is allocated to the grant holder.

Fellowships and grants for researchers at post-doctoral level (see Annex 4.2)

The post-doctoral funding scheme targets the mobility of researchers by opening post-doctoral positions at Estonian universities and research institutions.

Area of research: all areas of science and humanities, preferably natural and exact sciences, technology and medicine.

Target group are PhD degree holders who received their degree no earlier than 5 years prior to the start of the grant.

Authority awarding grant: Estonian Science Foundation (ETF) via the research institutions. The duration of grant is 2 years.

Selection procedure: is based on a merit-based competition, founded on an international peer-review, without limitations regarding the applicants' origin. Application is in two stages: through the host institution. The one-stage post-doctoral grant scheme, when individuals can apply from ETF directly will be announced shortly.

Academic exchange programmes for researchers can be also implemented within the framework of the cooperation agreement signed between the Estonian and Russian Academies of Sciences:

- **Scientific exchange programme between the Estonian Academy of Sciences and the Russian Academy of Sciences** (see Annex 4.3)

The Agreement on Scientific Cooperation signed between Russian Academy of Sciences and Academy of Sciences of Estonia in 1993, fosters international mobility of researchers and aims at facilitating scientific networking.

The area of study or research includes all areas of science and humanities.

Target group: in Russia, researchers affiliated to institutes of the Russian Academy of Sciences are eligible (incl. PhD students). In Estonia, all public universities and research institutes are eligible as host institutions (a letter of invitation is required from a Russian applicant). Recommendation on excellent research and good links with Estonian research institutions are the criteria, potential to trigger other sources of funding and/or grow the existing links into wider international collaboration is an asset.

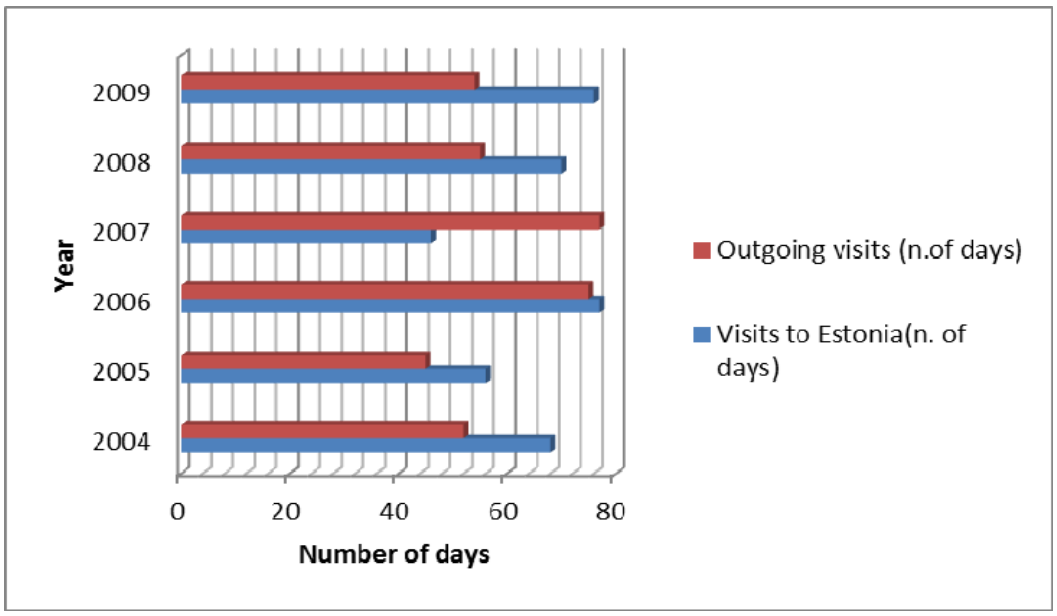
Authority awarding grant: nomination in Russia: Russian Academy of Sciences; final decision: Estonian Academy of Sciences. Duration of grant: short study stays or conference visits (1-2 weeks).

Grant benefit paid: the Estonian Academy of Sciences covers the living costs (accommodation, daily subsistence allowance) during the stay in Estonia.

Table 3: Scientific exchanges, effected under co-operation agreements signed between the EAS and RAS inbound and outbound visits in 2004-2009

Foreign partner	Annual quota (number of days as of 2009)	Visits to Estonia (number of days)						Outgoing visits (number of days)					
		2004	2005	2006	2007	2008	2009	2004	2005	2006	2007	2008	2009
RAS	75	68	56	77	46	70	76	52	45	75	77	55	54

Figure 5: Scientific exchanges, effected under co-operation agreements signed between the EAS and RAS inbound and outbound visits in 2004-2009



Partner institutions of the Estonian public research universities

- University of Tartu[18]: Herzen State Pedagogical University of Russia, Russian State University for Humanities, Saint-Petersburg State University and Voronezh State University;
- Tallinn University of Technology[19]: St. Petersburg State Polytechnic University and Samara State Technical University;
- Tallinn University[20]: St. Petersburg University of Humanities and Social Sciences, Herzen State Pedagogical University of Russia and Krupskaya Pedagogical Institute in Mari EL;
- Estonian University of Life Sciences[21]: Saint-Petersburg State Agrarian University, Russian Saint-Petersburg State Academy of Veterinary Medicine, Saint-Petersburg State Forest Technical Academy, Petrozavodsk University etc.

- **Joint programme between the Estonian Science Foundation and the Russian Foundation for Humanities** (see Annex 4.4)

In March 2008 the Estonian Science Foundation signed a cooperation agreement with the Russian Foundation for Humanities. Under this Agreement, both Institutions support the

[18] http://www.ut.ee
[19] http://www.ttu.ee
[20] http://www.tlu.ee
[21] http://www.emu.ee

development of cooperation in the following research fields: socio-economic sciences and humanities.

A joint research programme was launched and in March 2009 seven Estonian (and roughly as many Russian) projects were awarded grants. All of the projects deal with SSH-related research with relevance for both parties (such as Russian dialects in the border region, Estonians and Siberia, demography of border areas, etc.). The total sum granted by the Estonian side was EEK 16.9 million (approximately € 1 million). Most of the projects are either Russian or Estonian.[22]

6.4.5 Future Perspectives and Opportunities for Russian - Estonian Cooperation

With March 2012 a new research funding institution was established in Estonia, the Estonian Research Council. Into this Council were merged the Estonian Science Foundation and the research support schemes of the Archimedes Foundation. It remains to be seen, which effects this structural changes will have on bilateral S&T cooperation with Russia.

[22] COUNTRY REPORT Social Sciences and Humanities in Estonia 2010: www.metrisnet.eu/metris//fileUpload/Estonia.pdf

6.5 FINLAND

6.5.1 General Overview

Finland is one of the leaders among EU countries with regard to research on the Russian economy, culture, politics, and environmental concerns. Long Finnish-Russian boarder assures a huge potential for scientific research which exists since mid 90'. During the past few years this cooperation has increased in several fields and the linkages between both states are very well established.

A state-to-state Agreement on S&T Cooperation Russia-Finland (cooperation on basic and applied research in natural sciences; research in engineering and technological development; research in the humanities and social sciences) was signed on July 11, 1992.

The **Academy of Finland (AKA)**[23] represents a key player in bilateral S&T cooperation and its international strategy identifies Russia as one of its main areas of collaboration. The aim of joint research funding is to fund top-quality Finnish-Russian projects through basic research through competitiveness grants.

The Academy of Finland (AKA) has cooperation agreements with three Russian science and research funding organizations:

- **Russian Academy of Sciences** (RAS)[24] the agreement signed on 25 May 1993);
- **Russian Foundation for Basic Research** (RFBR)[25] the agreement signed on 13 April 2000); and
- **Russian Foundation for Humanities** (RFH)[26] the agreement signed on 24 March 2005).

Formerly, the Academy invested in Russian studies by carrying out two extensive research programmes on Russia: the Russia and Eastern Europe Research Programme (1995 - 2000) and the Russia in Flux Research Programme (2004 - 2007). Currently, the AKA participates

[23] The Academy of Finland (AKA) is the prime funding agency for basic research in Finland and supports cutting-edge research, researcher training, internationalisation and the application of research results. The Academy operates within the administrative sector of the Ministry of Education and is funded through the state budget.See: www.aka.fi
[24] www.ras.ru/
[25] www.rffi.ru/
[26] www.rfh.ru/

in ERA.Net RUS programme (2009 - 2012) funded under the EU Seventh Framework Programme for Research.

An important role in promoting scientific exchanges and innovation cooperation with Russia is played also by the **Finnish Funding Agency for Technology and Innovation (TEKES)**[27] allocating funding to R&D projects carried out by companies and financing university research to a large extent. At the beginning of 2011, an agreement on a joint funding programme for support of innovation cooperation was signed by TEKES wit the Russian Foundation for Assistance to Small Innovative Enterprises (FASIE).

Next to collaboration agreements with above mentioned organizations, there is a number of **bilateral cooperation agreements between Finnish ministries**[28] **and universities** and other Russian universities and research organizations implementing multi- and bilateral cooperation programmes with Russia.

6.5.2 Thematic Priorities for S&T cooperation Finland/Russia

- Biosciences
- Business know-how
- Cosmic and solar energy
- Energy including alternative sources and sustainable energy research
- Environment, ecologic construction (green technology)
- History and linguistics
- Health and medicine (addiction research, cognitive brain research)
- Information and Communication Technologies (ICT)
- Material sciences (photonics, materials programmability, prospective of the future electronics)
- Nanotechnologies
- Security research

[27] The Finnish Funding Agency for Technology and Innovation (Tekes) is publicly funded expert organisation for financing research, development and innovation in Finland, boosting wide-ranging innovation activities in research communities, industry and service sectors. See: www.tekes.fi/

[28] The Finnish Ministry of Employment and the Economy and the Russian Corporation of Nanotechnologies (Rusnano) signed a Memorandum of Understanding on cooperation in Moscow in December 2008. The cooperation between Finland and Russia aims at increasing constructive and practical discussions on how to ensure that nanoscience research translates into economic well-being in both countries. More details accessible under: http://www.tem.fi/?89518_m=93413&89518_o=10&l=en&s=2470

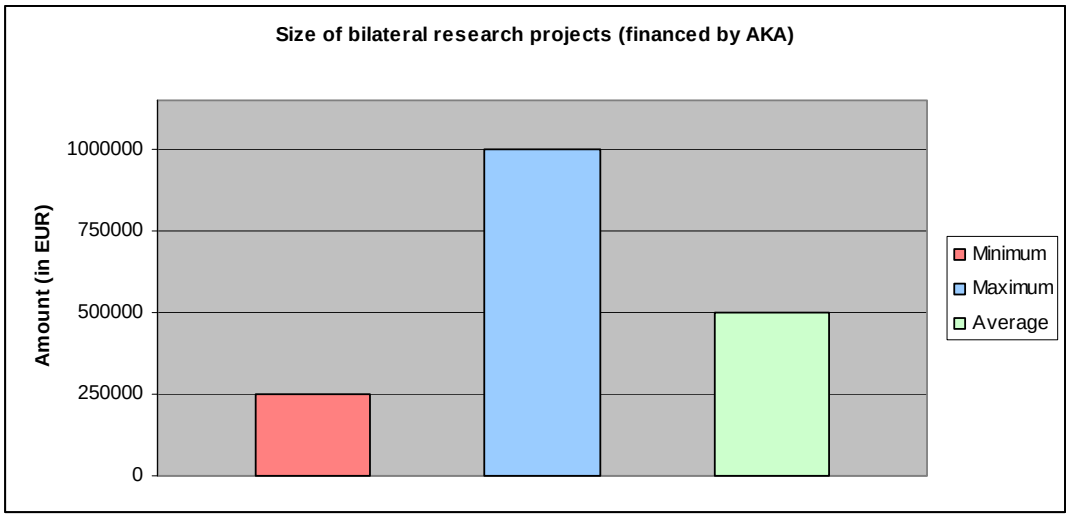
6.5.3 Forms of Cooperation

- Joint research projects;
- Joint research programmes;
- Mobility of researchers (personal mobility grants);
- Dissemination of RTDI results and accompanying measures;
- Joint scientific events (conferences, seminars, workshops etc.);
- Exchange of evaluation expertise.

6.5.4 Implementation Procedures

Financial resources secured by AKA and TEKES (see Annex 5.2) for S&T cooperation with Russia assures funding of several joint calls and in average two seminars per year. Approximately five to ten joint Russian-Finnish projects are funded each year. Size of one project (funding goes only to Finnish partners) is between EUR 250 000 (app. EUR 100 000 a year) to EUR 1 000 000 for a three year long project. The size of the grant is based on the number of partners involved in the project consortium.

Figure 6: Size of bilateral research project (financed by AKA)

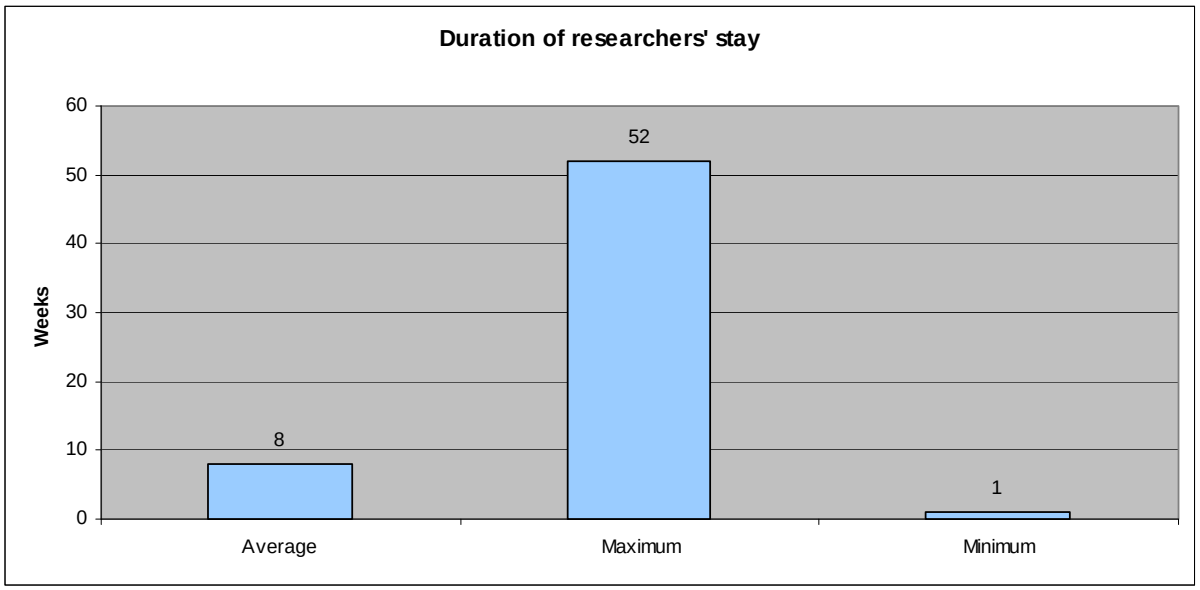


Researchers' mobility to and from Russia represents the most significant funding instrument between Russia and Finland. The Russian researchers come to Finland within the Russian Academy of Sciences (RAS) and Russian Foundation for Basic Research (RFBR) exchange agreements and by individual invitations. In addition to this agreement-based mobility, the Academy also provides funding for purposes of inviting Russian researchers to Finland, nevertheless the Academy wishes to promote research mobility as a part of jointly funded

research projects (not only research mobility). Nearly 300 Russian researchers visit Finland while some 80 Finnish researchers visit Russia a year.

The maximum duration of researchers stay within the mobility scheme is 1 year and minimum 1 week. Majority of researches stay lasts approximately 2 months.

Figure 7: Duration of the researcher's stay

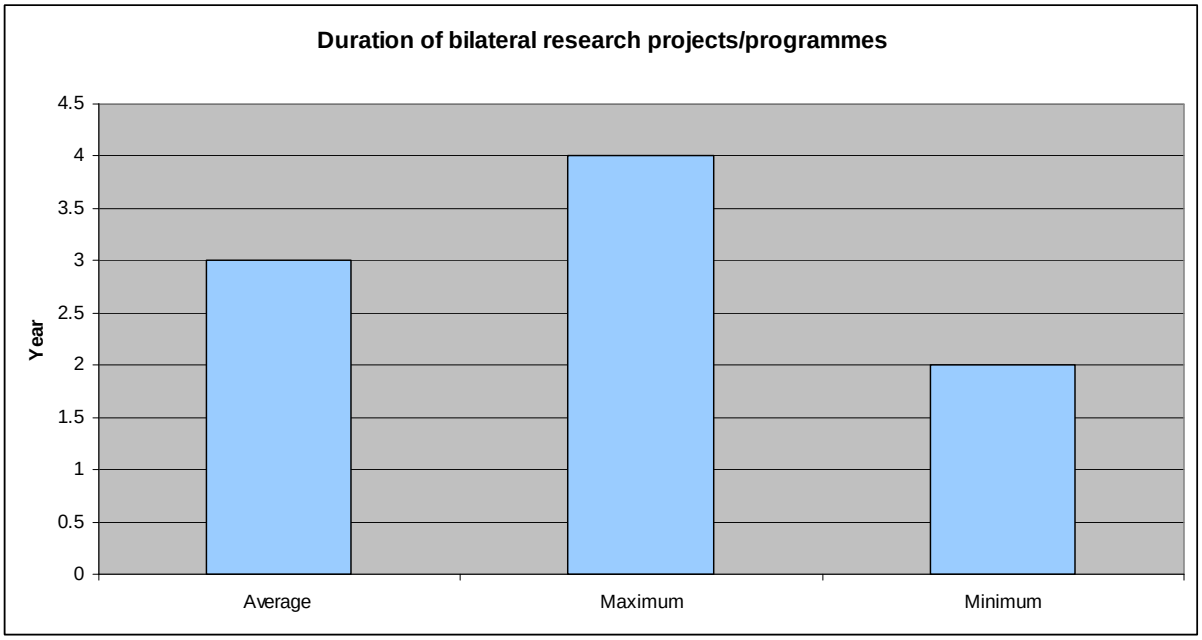


Other possibilities for researchers mobility to and from Russia are assured by number of EU programmes such as FP7 "People" Programme – Marie Curie Actions; FP7 "Cooperation" Programme - mobility within projects; FP7 Specific "Ideas" Programme (ERC); Erasmus Mundus and by the Federal Targeted Programme "Scientific & Education Research Personnel for an Innovative Russia" for 2009-2013 (e.g. measures to reintegrate Russian "scientific diaspora" abroad).

Joint research programmes offer another funding opportunity for Finnish-Russian joint research projects. Finnish and Russian research teams can submit a joint application to one of the Academy of Finland's research programmes once funding cooperation with a Russian funding organisation has been agreed. Joint research projects in joint research programmes are required to include research teams from both Finland and Russia. The parties of the joint project submit their applications to their respective research funding organisations, complete with a joint research plan, a joint budget and the curricula vitae of the project leaders. The research plan shall include a clear description of the planned research collaboration (division of labour and methods) and the added value generated by the cooperation in question.

Application are evaluated by independent evaluation panel and finally approved for funding by Joint Programme Committee.

Figure 8: Duration of bilateral research projects/programmes



The Academy funds the Finnish research team while the Russian research funding organisation funds the Russian research team. Finnish-Russian joint projects are usually funded for three years. Joint calls are announced in the Academy's **annual calls for applications** (see Annex 4.3).

Thematic joint calls for applications are implemented in various fields and they are launched together with Russian funding organisations. The execution period of the scientific projects funded under the joint calls is three years. The themes of the joint calls are selected separately each time and it is not an obligatory to organise joint calls every year. Finnish research councils together with AKA nominate themes to be supported every spring (bottom-up) and then discussed in a special working group. Chosen themes are proposed to Russian funding partners for further discussions and preliminary agreement on content of the call. Once consensus on themes is reached, a Memorandum of Understanding (MoU) is signed and the joint call is announced and published on the internet simultaneously for Finnish and Russian researchers. The call for applications is published one month before the call opens and all applications in English language must be submitted electronically. The standard application consists of an abstract, research plan, curriculum vitae for the applicant, list of

publications of the applicant, progress reports on research projects of the responsible leader of the research.

All submitted applications accepted for the competition are simultaneously evaluated by independent scientific panels: Finnish scientists' applications are evaluated by AKA scientific panels (consisting of AKA and foreign experts on specific topics), while the Russian scientists' applications at the Russian funding organization. Even thought the project title must be identical for both Russian and Finnish applications, the applications are to be considered independently by either party in accordance with their own rules (for AKA procedures see e.g. http://www.aka.fi/en-gb/A/For-researchers/Apply-now/ or http://www.rffi.ru/eng/default.asp?section_id=256 for RFBR procedures). The evaluation criteria included:

- scientific quality and innovativeness of the research plan;
- added value generated by research collaboration;
- feasibility of the research plan;
- scientific merits of the researchers/research teams; and
- promotion of young researchers' careers.

The selection of supported projects is made by scientific advisors and programme managers and listing of selected projects is made available on websites of both parties. The financing of the projects supported by both parties is carried out as follows: the Russian organization pays the costs related to the project implementation by the Russian scientists and the AKA/TEKES) by the Finnish scientists. The accommodation of the sent scientists, per diem expenses and traveling from the place of work of the sent scientist to the place of execution of work by the foreign partner are paid by a sending party. Eligible costs for funding include salaries, social security, travel, organising seminars, visits of foreign researchers and equipment which may be purchased however it has to be justified.

AKA transfers money to research organisations based on the organisations' invoices usually in installments three times a year and the maximum amount per year is approximately EUR 100 000. Yearly funding provided by for example Russian Foundation for Basic Research (RFBR) amounts up to 600 000 Rubles (EUR 14 100[29]). The decision on continuing the

[29] 1 Euro = 42.6243 Russian Rubles as of 22 November 2010.

financing for projects for next year is based on provided interim reports at the RFRB and the AKA.

The reporting is done by the research organisations based on their normal financial accounting procedures (Finnish researched report to AKA or TEKES, while Russian researches to Russian funding agency) and deadlines for providing interim and final reports are provided at the origination of the project implementation.

The last **AKA Call for Applications** was announced in October 2010[30], where new conditions and changes assuring more effective process in applying for Academy funding[31] were presented as well as information on foreseen 2011 application rounds. A joint **Russian-Finish Research Projects Competition 2010**[32] was announced in parallel by the Russian Foundation for Basic Research (RFBR) on 13 October 2010 in the following scientific fields:

- Optical Materials and Material-Radiation Interaction;
- New Optical Imaging Methods; and
- Photonics (Optoelectronics) in Biosciences and Medicine.

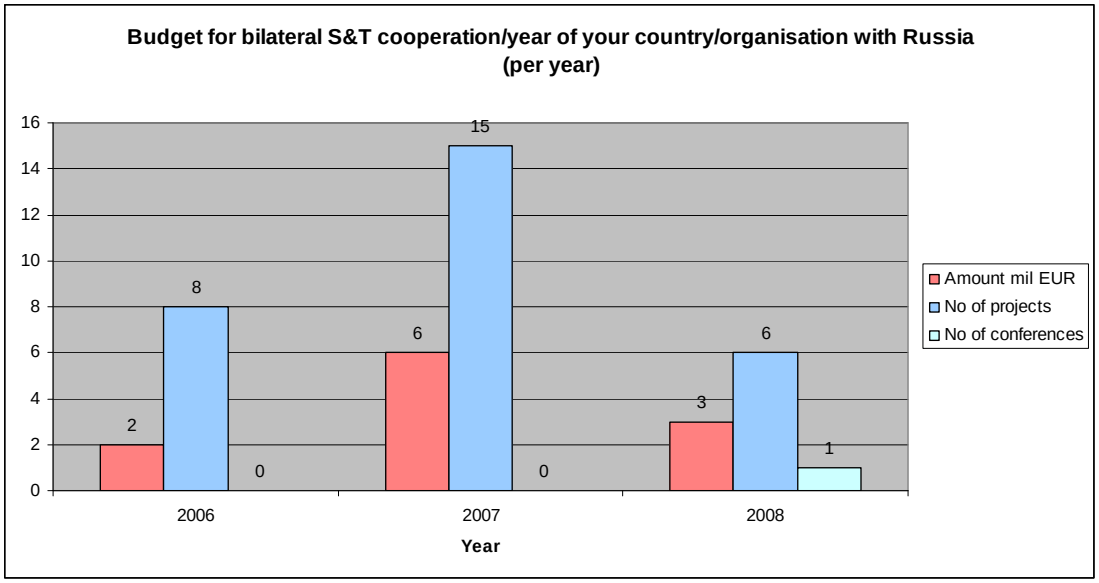
Regarding innovation cooperation, a joint call of TEKES with FASIE was launched shortly after their agreement was signed in early 2011. As a result, seven projects were selected for funding. The minimum consortium needed to involve a small innovative Russian enterprise and a Finnish SME; other research organizations (e.g., universities) could be included. Support has been provided in the size of up to €350,000 (of which up to €100,000 from the FASIE) plus a required co-funding share in the same amount from project partners, raising the project size to around €700,000.
For detailed information refer to Annex 5.

6.5.5 Overall statistics Russia/Finland

Following budget (see Figure below) was used and a number of Russian-Finnish projects/conference were implemented by the Academy of Finland (AKA).

[30] http://www.aka.fi/en-gb/A/For-researchers/How-to-apply/Calls-for-applications/ (4-29 October 2010, 18 June 2010)
[31] http://www.aka.fi/en-gb/A/For-researchers/How-to-apply/Calls-for-applications/October-2010-Call-for-Applications-whats-new/
[32] http://www.rffi.ru/eng/default.asp?doc_id=6196

Figure 9: Budged for bilateral S&T cooperation



6.5.6 Future Perspectives and Opportunities for Russian- Finnish Cooperation

Research funding cooperation between Russia and Finland already exists in many fields. For example the evaluation of the Finland's Russia in Flux Research Programme[33], which was implemented in the period 2004 – 2007, confirmed that Finland is ahead of many other European countries with regard to funding joint research projects with Russia. For detailed overview of Russia-Finland cooperation instruments see Annex 5.

The aim to fund top-quality Finnish-Russian projects, generating added value in research focusing on environment, well-being, society and technology, is fulfilled by number of **joint thematic calls and programmes** used for scientific cooperation. Following areas are currently supported via joint calls for application: nanosciences, medicine, linguistics and communications sciences, optoelectronics, biotechnosciences, photonics, history and environment. The latest joint call of AKA and the Russian Foundation for Basic Research (RFBR) was announced in October 2010 and invites research teams to submit their applications in the area of optical research and photonics in biosciences and medicine.

The research collaboration and **researcher mobility** based on the bilateral agreements of AKA with Russian organisations represents a significant funding instrument and is considered as a sign of an active internationalisation of Russian science. In 2011, the mobility funding of AKA will be provided for grants for research at institutions of the Russian Academy of

[33] http://www.aka.fi/Tiedostot/Tiedostot/Julkaisut/06_09%20Russia%20in%20Flux.pdf

Sciences and at Russian universities as well as for research grants assuring invitations of Russian researchers to Finland.

A huge potential for Russian – Finnish scientific cooperation can be seen in the **Centre of Excellence Programme in Research 2012-2017**[34] and planned **Research Programme on Climate Change (FICCA)**[35]**.** The Academy of Finland's Research Programme on Climate Change (FICCA) will provide significant funding opportunity for joint multidisciplinary research projects to be carried out cooperatively with Russian researchers on climate change. This bilateral call will be arranged by AKA and the Russian Foundation for the Humanities (RFH) and applications for funding will be invited for submission in spring/summer 2011(estimated). Selected projects will be funded mainly for 2011- 2014. The Centre of Excellence Programme in Research 2012-2017 offers an excellent opportunity for research teams and consortia to carry out research of a high international standard with six-year funding. The first stage of the call evaluation was concluded in August 2010 and 36 research teams[36] were invited to submit their full applications to the AKA until October 29, 2010. The Aleksanteri Institute (Finnish Centre for Russian and Eastern European Studies) as once of them intends to establish a **Centre of Excellence "Choices on Russian Modernization"** with an aim to reach a new definition of the research agenda on Russian modernization, and eventually result in a new paradigm in Russian studies. The Academy Board will make decisions on the application of the second stage to be selected to the Centre of Excellence programme 2012-2017 in June 2011.

There are several instruments where Russian researches did not take a part yet, but represent a big potential in enhancing the S&T cooperation between Russia and Finland: programmes supporting exchange of highly merited scientists for the period 2 – 5 years (**Finland Distinguished Professor Programme – FiDiPro**) and fellowship programmes providing mobility grants for young researches up to 1 year (**CIMO Fellowship Programme or FiDiPro Fellow**). The Finland Distinguished Professor Programme (FiDiPro) dedicate joint funding of the AKA and TEKES for recruiting non-Finnish or expatriate Finnish top researchers in scientifically, technologically and industrially significant fields to Finland, while the **CIMO Fellowship Programme** is open to young researchers (after Master-level but not post-doctorate) from all countries and from all academic fields.

[34] http://www.aka.fi/en-gb/A/Academy-of-Finland/The-Academy/Releases/Applicants-to-second-application-stage-selected /
[35] http://www.aka.fi/en-gb/A/Science-in-society/Research-programmes/Open-for-Application/Climate_change-ficca/
[36] http://www.aka.fi/en-gb/A/Science-in-society/Centres-of-Excellence-/Finnish-Programme-for-Centres-of-Excellence-in-Research-20122017-second-round-of-application/

6.6 FRANCE

6.6.1 General Overview

France and Russia have a long tradition of cooperating on research, development and innovation. It covers a broad spectre of research fields, and involves cooperation at the ministerial level, as well as among research funding and research organisations. France has signed an Intergovernmental Agreement on Scientific and Technological Cooperation with USSR on 30 June 1966 and with the Russian Federation on 28 July 1992. Intergovernmental Agreements for Diploma Recognition (Master, PhD) were signed in May 2003.

The following inter-organisation agreements between French and Russian institutions have also been signed:

- Between the French National Centre for Scientific Research (CNRS – Centre National de Recherche Scientifique), the Russian Academy of Science (RAS) and Russian Foundation for Basic Research (RFBR), signed in 2006 and renewed in 2010;
- Between the French National Institute for Agronomic Research (INRA - Institut National de Recherche Agronomique), the Academy of Agriculture, RAS and RFBR, signed in 2008;
- Between the Bureau for Geologic and Mining Research (BRGM Bureau de Recherches Géologiques et Minières) and the Vernadsky Institute;
- Between the National Genotyping Centre (CNG Evry – Centre National de Génotypage), the Enghelhardt Institute and the RAS;
- Between the French Commission for Atomic Energy (CEA – Commissariat à l'Energie Atomique), the State Atomic Energy Corporation "Rosatom", the Russian Research Centre "Kurchatov Institute" and the RAS.

In the field of basic research, CNRS signed two general agreements:

- One agreement on scientific exchanges with the Russian Academy of Science (RAS) was signed on 22nd December 1995, and renewed in 2002 and 2006; and
- One agreement with the Russian Foundation for basic research (RFBR) was signed in 1996, and renewed in 2003.

For the period from 2008 to 2013, the French government has planned several strategic initiatives to strengthen the S&T cooperation with the Russian Federation, among which the association of the IN2P3 with the centre of Dubna, Russian Federation. The CEA is also part of this joint laboratory.

Furthermore, the French National Institute of Nuclear and Particle Physics (IN2P3 - one of the Institutes of CNRS) signed two specific agreements:

- One agreement with the Russian Joint institute for Nuclear Physics in 1972, renewed in 1992
- One agreement with the Institute for Theoretical and Experimental Physics (ITEP) in 1999.

Beside those mentioned above, there are 250 agreements between universities and 74 with engineering schools.

The Russian Federation is ranked sixth in the French co-publication ranking with 1,300 co-publications a year (five papers per day). More than 1,500 French scientists are visiting their colleagues in the Russian Federation every year (average stay of 12 days) and 70 French researchers are present in Russian laboratories each day.

French institutions and actors located in the Russian Federation

CNRS has an international bureau located in the Russian Federation (Moscow); there is also a scientific councillor stationed at the French Embassy in Moscow. Their mission is to promote French research and encourage scientific and academic cooperation between France and the Russian Federation. Besides CNRS, the National Centre for Space Research (CNES) and the Commission for Atomic Energy (CEA) have direct representations in Russia. Other French institutes also have developed links with the Russian Federation: The Institut Français de Recherche pour l'Exploitation de la Mer (IFREMER – strong cooperation in oceanography), the Institut Scientifique de Recherche Agronomique (INRA – projects in soil microbiology and protein research), the Bureau de Recherches Géologiques et Minières (BRGM – joint laboratory with the Vernadsky Institute in Moscow to develop new methodologies based on a Geological Information System (GIS) for sub-soil studies).

6.6.2 Thematic Priorities for S&T cooperation France/Russia

The RTD cooperation between France and the Russian Federation takes place in *all scientific areas* ranging from fundamental to applied science and including also the Social Sciences and Humanities. There are existing cooperations with most of the French research institutions including also those dealing with space studies, mining or agronomic studies, etc.

6.6.3 Forms of Cooperation

Several bilateral tools exist to support cooperation:

- Short-term support to initiate links between French and Russian teams, through calls for proposals launched mainly by the Ministries and the CNRS;
- Long-term support for structured cooperation with specific long-term agreements between partners (International laboratories - UMI, virtual laboratories - LIA, research networks - GDRI, according to the scientific policy of research institutes, or political involvement of French regions).
- Mobility programmes for doctoral students and senior researchers.

French-Russian Joint projects and joint laboratories/ units by domain:

- **Mathematics**: The International Joint Unit (UMI) "Jean-Victor Poncelet" was created in 2006 between CNRS, the National Institute for Computer and Automatics Research (INRIA – Institut National de Recherche en Informatique et en Automatique), the Independent university of Moscow, the Steklov Institute, the Central Institute of Economy and Mathematics, the Institute for communication of information and the Russian Foundation for basic research (RFBR).
- **Space**: The CNES, CNRS, the Russian Federal Space Agency (Roscosmos) and the Space Research Institute of the Russian Academy of Science (IKI).
- **Nuclear Physics**: The IN2P3 and the Joint Institute of Nuclear Research (JINR).
- **Proteomics**: The CNG-Evry and the Engelhart Institute.
- **Metallogeny**: The BRGM and the Vernadsky Institute.
- **Social Sciences and Humanities**: French-Russian Centre in Humanities and Social Science – the INION Institute (RAS).

6.6.4 Implementation Procedures and Overall statistic

The French Ministry for Research (MESR)

The French Ministry for Research has developed three programmes to foster scientific cooperation with Central and Eastern Europe – including the Russian Federation and the Newly Independent States (NIS):

- **PARCECO** Programme supports travel expenses for French researchers to participate in seminars and conferences taking place in a country of Eastern Europe and Central Asia (EECA);
- **ACCES** Programme financially supports Russian researchers (or residents of EECA) to participate in conferences taking place in France;
- **PECO-NEI** Programme funds education-research thematic networks, including at least two French institutes and two institutes from an EECA country, for two-three years. The calls were issued every three years (see Annex 6.1). The last call was in 2009.

The French Ministry of Foreign Affairs (MAEE) supports French-Russian cooperation through three main channels:

- **ECO-NET** Programme is directed towards EECA countries: proposals should include at least two partners from EECA and one French laboratory. Applications are for a maximum of two years and cover travel expenses (max. € 20,000 a year). This call is temporarily closed.
- **ARCUS** Programme, initiated in 2005, aims at developing cooperation between French regions and certain targeted countries, including the Russian Federation. Three French regions have already initiated cooperation with the Russian Federation:
  - Lorraine, on New Materials and Environment,
  - Alsace, on Supramolecular Chemistry and Biotechnologies,
  - Bourgogne, on «green Chemistry» (separation of effluents).
- The budget of the scientific department of the French Embassy in Moscow supports official structured cooperation (joint laboratories, research networks or technology transfer centres) in association with research institutes (CNRS, INRA, BRGM, IFREMER, etc.). The support may cover travel expenses and grants for PhD students. (see Annex 6.2).

CNRS - French National Centre for Scientific Research / Centre National de la Recherche Scientifique[37]

The guiding principles in setting up and selecting bilateral collaborations at the CNRS are manifold. Collaborations may arise at the initiative of the CNRS researchers and their colleagues abroad ("bottom-up approach"). The scientific Institutes can also make their own selection based on excellence mainly, without necessarily taking into consideration explicit disciplinary, thematic or geographic priorities. The CNRS support provided to collaboration can constitute an added value; in such cases the CNRS will mainly support mobility. When setting up international collaborations, similar level of funding is requested (the CNRS versus foreign partner) and the CNRS does not provide direct support to the research activities of a foreign partner. The frame agreements that the CNRS concludes with its foreign partner organizations often play a key role as leverage for generating co-funding, especially in the post-Soviet space.

The CNRS has several **collaborative tools** dedicated to international cooperation (see Annex 6.3):

- **Mobility agreements** (one to two-year projects supporting exchange of researchers; agreements with 85 organizations in 60 countries).
- **International Scientific Cooperation Projects (PICS):** there are about 20 PICS with the Russian Federation starting every year.
- **International Research Networks (GDRI):** in 2010, there were 23 ongoing GDRI including the Russian Federation as a partner.
- **International Associated Laboratories (LIA):** in 2010, there were 15 ongoing LIA including the Russian Federation as a partner.
- **International Mixed Units (UMI):** The Joint Laboratories cover fields such as Mathematics, Chemistry, Physics, Micro- and Nanotechnologies, Geochemistry, Nuclear research and Molecular biology. Nine laboratories have been set up. The French main partners are CNRS, universities, research institutes and centres. On the Russian side, partners are the RFBR, the RAS and research institutes.

The CNRS is deeply involved in research cooperation with the Russian Federation mainly in the field of basic research. The Russian Federation is the sixth country in terms of co-

[37] www.cnrs.fr

publications with French researchers from the CNRS, after the United States, Germany, UK, Italy and Spain. 3.5% of all publications of the CNRS are published with Russian scientists.

Project proposals for the CNRS cooperation with Russia are evaluated separately by the partner organisations. For CNRS usually one CNRS expert evaluates the proposal, within a period of three months. Intellectual Property Rights are regulated in the cooperation with Russia and a co-ownership of results is foreseen.

Table 4:International Research Networks (GDRI) and Associated Laboratories (LIA) with Russian partners by scientific disciplines (2010)

CNRS Institutes	GDRI	LIA
– Mathematics and their interactions	1	
– Computer sciences and their interactions	1	
– Physics	7	4
– Nuclear and Particle Physics	1	2
– Chemistry	4	1
– Biological Sciences	2	2
– Ecology and Environment		1
– Earth and Planetary Sciences	4	1
– Engineering and Systems Sciences		2
– Humanities and Social Sciences	3	2

Figure 10: CNRS Cooperation with the Russian Federation - State of the Art: Funding 2004 - 2009

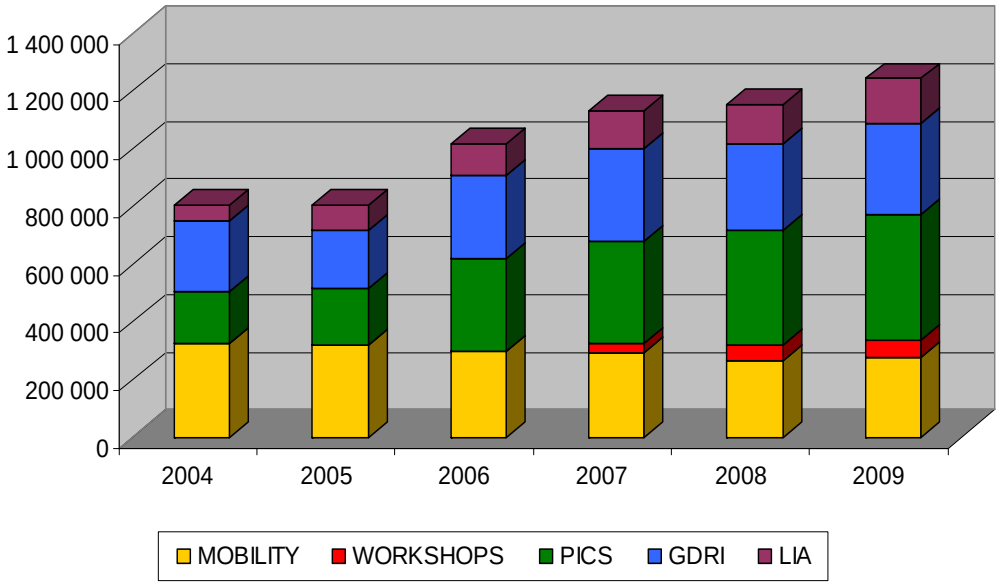


Table 5: Co-publications France-Russia, CNRS-Russia

	Number of total Russian Publications	Co-publications France-Russia	Co-publications CNRS Russia
1995	23 657	731	562
1997	22 788	852	677
1999	21 891	993	765
2001	20 885	1025	799
2006	17 863	1181	913
2007	19 778	1226	933
2008	19 777	1236	948

Source: SCI (DVD Edition/Thomson Reuters)

In 2008 co-publications with CNRS represented 76.7% of the French-Russian co-publications and Russia was CNRS 8th partner in terms of co-publications.

54% of CNRS publications are international co-publications. Among them, 6% are co-publications with Russia.

Table 6 :Scientific fields of publications and co-publications

	Russia	Russia-France	Russia-CNRS
Fundamental Biology	1943	90	50
Medical Research	1800	84	11
Ecology – Applied Biology	575	20	12
Chemistry	5834	206	151
Physics	7803	725	618
Earth Sciences and Astronomy	2429	231	211
Engineering	2226	118	77
Mathematics	749	29	16
Multidisciplinary journals	380	33	28
Total all domains	**19777**	**1236**	**948**

Source: SCI (DVD Edition/Thomson Reuters)

Table 7: CNRS' 20 first partners in 2008

Institutes / Universities	Number of Co-publications	% total of the Co-publications
JOINT INST NUCL RES - DUBNA	184	19,4%
MOSCOW MV LOMONOSOV STATE UNIV	145	15,3%
INST THEORET & EXPT PHYS	88	9,3%
INST HIGH ENERGY PHYS	80	8,4%
ST PETERSBURG NUCL PHYS INST	79	8,3%
BUDKER INST NUCL PHYS	65	6,9%
ST PETERSBURG STATE UNIV	44	4,6%
PN LEBEDEV PHYS INST	44	4,6%
AF IOFFE PHYSICOTECH INST	39	4,1%
KURCHATOV INST	35	3,7%
SPACE RES INST IKI	26	2,7%
LD LANDAU THEORET PHYS INST	23	2,4%
INST NUCL RES	21	2,2%
SIBERIAN BRANCH de la RAS	20	2,1%
ST PETERSBURG STATE POLYTECH UNIV	16	1,7%
AN NESMEYANOV ORGANOELEMENT CPDS INST	14	1,5%
INST APPL PHYS	13	1,4%
MOSCOW ENGN PHYS INST	12	1,3%
AM PROKHOROV GEN PHYS INST	11	1,2%
INST SEMICOND PHYS	10	1,1%
Total for the 20 partners	**608**	**64,1%**

Source: SCI (DVD Edition/Thomson Reuters)

Table 8: Overview of funded CNRS Russian projects 2009

Thematic Field	Number of fundend projects
Aeronautics, Space; Materials, Chemistry, Chemical Technologies	1
Biology and Biotechnology	4
Economics, Social Sciences, Humanities	1
Energy, Energy Technologies; Materials, Chemistry, Chemical Technologies	1
Engineering	3
Geosciences, Climate Research, Environmental Research and Technologies	6
Informatics, Information Technology, Communication Technology	2
Informatics, Information Technology, Communication Technology	
Materials, Chemistry, Chemical Technologies	5
Mathematics	2
Mathematics; Informatics, Information Technology, Communication Technology	1
Medicine	1
Physics, Physical Technologies	8
Physics, Physical Technologies; Biology and Biotechnology	1
Physics, Physical Technologies; Materials, Chemistry, Chemical Technologies	1
Total	**37**

In 2010, researchers from CNRS laboratories did 762 scientific visits to Russia (1.3% of the total CNRS travels). Except the travels to the European Research Area, Russia is the fifth destination abroad after USA, Japan, Canada and Chine.

CNRS scientific cooperation with the Russian Federation: lessons learnt and perspectives

The scientific cooperation of the CNRS with the Russian Federation has been growing fast over the past years. This has a strong significance, because it is the result of a bottom-up approach through a worldwide competition among proposals of all CNRS researchers. The main domains of cooperation are: Natural Sciences, Earth Sciences, and Humanities.

A really balanced cooperation was developed, the Russian Federation being one of the top partners of the CNRS. Both parties ensure symmetrical funding of their projects according to "*juste retour*" principle (exception: for associated laboratories – LIA - CNRS money may cross the border). One of the strong points of the CNRS-Russian Federation collaboration is the fact of being open to third parties (EECA countries, China, Japan).

There is a variety of instruments, but no specific tool targeting the Russian Federation (exception: joint call for seminars between the CNRS and the RFBR). The instruments proposed by the CNRS have been welcomed by the Russian partners (RFBR, RAS).

Some aspects of the CNRS-Russian Federation collaboration still encounter certain difficulties:

- legally binding agreements for GDRIs and LIAs have to be signed at the highest administrative level;
- there are no concrete examples of implementation of IPR on the basis of co-ownership;
- the RFBR needs to implement an additional call dedicated to collaboration with the CNRS in order to support Russian teams participating to GDRI and LIA;
- no real common pot for LIAs (no additional support of RAS);
- there are still obstacles to mobility (visa regime) and access to "protected areas";
- money and equipment cannot cross the border without additional governmental agreement.

The aim of the CNRS is to make a new qualitative step in scientific cooperation with the Russian Federation by combining bottom up and top down approaches:

- fostering strong projects in specific areas of joint excellence (Nanotechnologies), global challenges (arctic and subarctic climate changes), innovative regions (western Siberia);
- opening bilateral cooperation to "Federal" and "Research" universities, as well as to third partners (new German-Russian-French Call for workshops, FP7 coordinated calls, IRSES projects, etc.).

CEA -Commissariat à l'Énergie Atomique – Atomic Energy Commission[38]

Bilateral cooperation agreement between the CEA and the Russian Federal Agency for Atomic Energy "Rosatom"

The agreement between the CEA and Rosatom was signed on 8 June 2010. The CEA actively participates in the programmes with the Russian agency "Rosatom". The fields of this cooperation concern nuclear reactors, the combustible cycle, nuclear security (crisis management), radioprotection, fundamental research on the controlled thermonuclear fusion

[38] www.cea.fr/english_portal

and Plasma Physics. Russian scientists participate in programmes in which the experiments require the use of the French reactors ILL (Grenoble) and ORPHEE (Saclay).

Bilateral cooperation agreement between the CEA and the Kurtchatov Institute of Moscow

An agreement between the CEA and the Kurtchatov Institute had been signed in 1993 and was renewed since then. It concerned cooperation on nuclear reactors and the combustible cycle for innovating reactors, as well as the AIDA-MOX programme which uses Russian VVER 1000 reactors for the elimination of the Russian military plutonium.

Bilateral cooperation agreement between the CEA and the Russian Academy of Science (RAS)

The agreement between the CEA and the RAS was signed on 27 September 2010. When it comes to nuclear security, the IRSN, Institut de Radioprotection et Sûreté Nucléaire (which was formerly part of the CEA), cooperates with the Russian security authority "Rostekhnadzor". In fundamental research, the French Léon Brillouin laboratory of Saclay (supported jointly by the CNRS and the CEA) works with Gatchina (St Petersburg), Kurtchatov (Moscow) and Dubna (the international joint laboratory JINR) on condensed matter.

CNES - The National Centre for Space Research[39]

CNES has an office in Moscow that follows the Russian space policy. It creates and maintains close links with governmental bodies including the Russian Space Agency, with institutes and industry. It monitors the technological development in this field and helps to develop relations between French and Russian industry. The CNES office also has an agreement with the French consulate in Moscow to «certify» invitations received by fax for visas of Russian scientists in the field of Space studies.

OSEO[40]

OSEO was created in 2005, and its mission is to provide assistance and financial support to French SMEs and VSEs in the most decisive phases of their life cycle: start up, innovation, development, business transfer / buy out.

OSEO covers three areas of activity :

[39] www.cnes.fr
[40] http://www.oseo.fr/international

- Innovation support and funding for technology transfer and innovative technology-based projects with real marketing prospects.
- Guaranteeing funding granted by banks and equity capital investors.
- Funding investments and operating cycle alongside the banks.

On the one hand, OSEO has put in place international innovation actions aiming at supporting the international development of SMEs within technological partnerships. The Russian Federation is one of the partners of OSEO for the implementation of these actions. An agreement was signed between OSEO and the FASIE (The Foundation for Assistance to Small Innovative Enterprises) on 16 June 2009 and it foresees:

- the launch of joint calls for proposals;
- the financing of collaborative projects developed by SMEs from France and the Russian Federation;
- the strengthening of relationships between clusters from France and the Russian Federation;
- the support of partner search through existing tools and networks.

The first call for proposals OSEO-FASIE was launched in January 2009 and was open to all technological sectors. The objective was to encourage innovative French-Russian projects. It was expected that projects should be balanced between both countries and their respective participation to be very well defined. Seven projects were supported in this call in 2009 and another five projects in a call in 2010. The success rate in these calls was around 40%. Since 2011, a call is permanently open with few cutoff dates per year for project selection. Funding made available was in the first calls around €100,000 from the FASIE but was increased to around €175,000 for the call 2011; no specific upper funding limit was defined by the OSEO for this call. The minimum consortium requires involvement of at least one small innovative enterprise from Russia and a French SME.

On the other hand, OSEO works closely with the French innovation network RETIS and the FASIE in order to implement the Initiative Entreprises Innovantes programme (IEI – programme for innovative businesses). The IEI programme aims at enhancing collaboration between innovative French and Russian SMEs and research laboratories. The IEI programme was initiated by the French Ministry for Foreign Affairs, which also finances the programme in order to host Russian SMEs visiting French SMEs and laboratories (see Annex 7.1).

Involvement of French Regions in scientific cooperation

The French Regions are more and more involved in international R&D cooperation. The programme ARCUS can be used when cooperation has been ongoing for some time and has reached a certain ”critical mass”. Other grants enable new projects to start up. Grants for doctoral and post-doctoral studies are offered equally to French and foreign candidates (for instance, foreign candidates receive ~30% of all grants allocated by the Ile-de-France Region). The procedure differs slightly depending on the region, but usually the proposal (application) is to be submitted by the French partner, either in response to an annual call or directly. Information and contacts are available on the websites of the Regions. The City of Paris carries out a specific call for foreigner scientists which usually ends in April.

The Ile-de France Region has a programme dedicated to senior highly qualified foreign research scientists: the International Chairs «Blaise Pascal» which enable foreign scientists to be hosted for 12 full months, possibly spread over two years, in one research institution in Paris/Ile-de-France.

Franco-Russian Technology Transfer Centres

A **Franco-Russian network of Innovation Centres**[41] has been established in 2002. A database which has been set up contains technological offers and technological requests from Russian and French companies and R&D organizations. Several Technology Transfer Centres have been established by this Franco-Russian network of Innovation Centres on topics such as Biotechnology, Nanotechnology & Nanomaterials and Optoelectronics. Examples of Technology Transfer Centres:

- The Technology Transfer Centre of Moscow and the French Group of Ecoles Centrales (Lyon, Paris, Marseille) / State University Bauman of Moscow;
- The Innovation and Technology Transfer Centre of St Petersburg and the University of Franche-Comté (Besançon) / Aerospace State University of St Petersburg (GUAP).

[41] http://rfr-net.org

6.6.5 Future Perspectives and Opportunities for Russian - French Cooperation

It should be stressed that the importance of the cooperation in the field of S&T depends on the long-standing collaboration (first agreement signed in 1966) as well as on the establishment of the CNRS international bureau in Moscow. Both of these have contributed to the development of the S&T cooperation in the past years.

As stated above, there are many possibilities for the bilateral cooperation in the field of S&T between France and the Russian Federation. The potential for cooperation is stimulated through short-term support measures (different calls for proposals (e.g., CNRS, Ministries) and long-term support measures (between the French and Russian partners with inter-organisational agreements (e.g., INRA, CEA). The majority of these cooperation tools should be proposed by the French partners.

Strategy

The French strategy towards the Russian Federation as regards S&T cooperation focuses on several aspects:

- Increasing the quality of R&D;
- Create common scientific targets;
- Create common calls for proposals;
- Create international joint units;
- Exchanges of students, PhD, researchers;
- Common rules on intellectual property.

Challenges

The most important challenges with regard to S&T cooperation with the Russian Federation are:

- Intellectual property rules;
- Exchange of scientific materials;
- Mobility of researchers;
- Decreasing corruption in the Russian Federation;
- Common evaluation process;
- Transparency of budget.

6.7 GERMANY

6.7.1 General Overview

Cooperation in research and technology is one of the main pillars of German-Russian relations. It is also an indispensable part of the **Petersburg Dialogue**[42] between Germany and Russia. The Petersburg Dialogue was launched in 2001 as an open discussion forum under the patronage of the German Chancellor and the Russian President. It is carried out in Germany and in Russia alternately with the aim of giving new impetus to German-Russian relations. The participants are representatives from the public sphere and the private sector who may act as multipliers.

In April 2005, a **"Joint Declaration on a Strategic Partnership in Education, Research and Innovation"** was issued by the Federal chancellor and the Russian President, thus reiterating the willingness of both countries to continue and intensify their successful cooperation in a wide range of research areas. In July 2009, **the intergovernmental agreement on scientific and technological cooperation** between Germany and the USSR of 1987 was renewed.

There are a wide range of activities within the strategic partnership of 2005. In addition to the initiatives and direct measures initiated by both governments, these activities include programmes and projects run by education and research institutions in both countries. The long-standing sectoral cooperation agreements between Germany and Russia in different fields of research are an important instrument for the implementation of the Strategic Partnership. The partnership is increasingly adjusted with the topics of the Federal Government's High-Tech Strategy, as well. The following institutions are relevant for the bilateral cooperation:

The main responsibility for research lies with the **Federal Ministry of Education and Research (BMBF)**, which coordinates the federal research and development (R&D) policy[43]. The *national research priorities with Russia* promoted by BMBF are manifested in its specialist programmes. Beside the research universities, publicly supported research is performed mainly by four science and research organisations: The **Fraunhofer-Society**

[42] http://www.petersburger-dialog.de
[43] http://www.bmbf.de

(FhG)[44], the **Helmholtz Association of German Research Centres** (HGF)[45], the **Leibniz Association** (WGL)[46], the **Max-Planck-Society** (MPG)[47]. There are around 260 branch institutions under these four organisations. Altogether, there are more than 750 state-funded research institutions in Germany. The Helmholtz Association has an *agreement on a joint funding programme with the Russian Foundation for Basic Research* since 2005. It also has a representation in Moscow.

Specific organisations and foundations have been established for the support of research and of scientists. The **Deutsche Forschungsgemeinschaft** (DFG)[48] is the self-governing organisation for science and research in Germany. It serves all branches of science and the humanities. In organisational terms, the DFG is an association under private law. Its membership consists of German research universities, non-university research institutions, scientific associations and the Academies of Science and the Humanities. Russia is an important partner for DFG. This is underlined by its liaison office in Moscow, which is one out of only 5 DFG offices abroad. In Russia DFG has three partners:

Since 1970 the Russian Academy of Sciences (RAN)

Since 1994 the Russian Foundation for Basic Research (RFFI)

Since 2005 the Russian Foundation for Humanities (RGNF).

With these partners DFG has agreements (Memorandum of Understanding) which regulate co-funding issues of Russian-German projects.

6.7.2 Thematic Priorities for S&T cooperation Austria/Russia

On ministerial level, the shared research interests between Germany and Russia are expressed in sectoral agreements, which have been concluded in important key areas of cooperation since 1992 by BMBF and the Ministry of Education and Science of the Russian Federation:

- Development and application of accelerator-based photon sources
- Optical technologies
- Marine and polar research
- Innovation strategies and technologies for sustainable environmental protection and the efficient use of natural resources
- Information and communication technologies

[44] http://www.fraunhofer.de
[45] http://www.helmholtz.de
[46] http://www.leibniz-gemeinschaft.de
[47] http://www.mpg.de
[48] http://www.dfg.de

- Biological research and biotechnology

Apart of that, cooperation with Russian scientists has a long tradition, going back until the early 18th century. Today, support for scholarly cooperation is going on in almost every discipline, from the humanities to engineering and natural sciences.

6.7.3 Forms of Cooperation

- Joint research projects
- Joint research programmes
- Joint research institutions
- Mobility of researchers (personal mobility grants)
- Dissemination of RTDI results and accompanying measures
- Joint scientific events (conferences, seminars, workshops etc.)
- Exchange of evaluation expertise
- Multilateral programmes (e.g. participation ERA.Net.RUS-calls)

6.7.4 Implementation Procedures

Federal Ministry of Education and Research (BMBF)

Besides the above mentioned sectoral agreements and other fields of cooperation, the Federal Ministry of Education and Research has developed various programmes to endorse and further develop S&T cooperation with the Russian Federation.

1) The main intention of **Preparatory Measures for International Scientific-technological Cooperation** is to design planned cooperation projects during the phase of definition. The financial support consists of grants for exploratory measures to assess the potential for cooperation, for the establishment and deepening of contacts with organisations in Russia as well as for the preparation of cooperative projects – including feasibility studies and pilot investigations. Projects are implemented by the International Bureau of the Federal Ministry of Education and Research (BMBF) at the German Aerospace Center (DLR). The approval of project proposals is based on an external evaluation procedure implemented by independend experts.

2) The programme **International Partnerships for Sustainable Technologies and Services for Climate Protection and the Environment (CLIENT)** intends to introduce model projects with partners from BRICS countries in order to help establish and expand

international partnerships in the research, development and application of environmental and climate protection technologies and services, and to trigger the development of lead markets in this area. In addition to technological aspects, this also includes socio-economic issues, questions of good governance, and stakeholder involvement at an early stage. Projects are implemented by a) German Aerospace Center (DLR), Project Management Agency Global Change, Climate and Environmental Protection and b) the International Bureau of the Federal Ministry of Education and Research (BMBF) at the German Aerospace Center (DLR). The approval of project proposals is based on an external evaluation procedure implemented by independend experts.

3) The **Joint German-Russian funding competition of BMBF and the Russian Fund for Assistance to Small Innovative Enterprises (FASIE)** is to endorse projects of innovative small and medium-sized enterprises (SMEs) in Germany and Russia that are active in the field of research. On the German side, German research institutions that conduct application-oriented research are also eligible to apply. On the German side, projects are implemented by the International Bureau and by Technology Center at Verein Deutscher Ingenieure (VDI TZ). On the Russian side, projects are implemented by the Russian Fund for Support to Small Innovative Companies (FASIE). The **evaluation procedure** is implemented separately in each country on the basis of external evaluation procedures implemented by independend experts. See Annex 7.2.5.

For detailed information refer to Annex 7.2.

4) Within its **thematic framework programmes**, BMBF is endorsing substantial S&T cooperation projects with the Russian Federation. Projects are implemented by the various thematic departments of the Ministry. The approval of project proposals is based on an external evaluation procedure implemented by independend experts.

Deutsche Forschungsgemeinschaft (DFG)

In its cooperation with Russia DFG funds mobility projects, research projects and other (conferences etc.). DFG/RFFI funding programmes

Under the agreement with the RFFI there is a permanent call for proposals for:

- Bilateral project initiation and expansion
- Projects involving cooperation under the Individual Grants Programme

- Cooperation in the DFG's coordinated programmes

DFG/RGNF call for proposals

Funding for projects covered by the agreement with the RGNF, covering:

- German-Russian projects
- Bilateral events
- Expeditions and field work, experimental laboratory and restoration work

DFG/RAN cooperation

- Joint funding of projects involving cooperation under the agreement with the (RAN).

The aim of promoting international cooperation through the **Collaborative Research Centre programme (or CRC/Transregio programme)** is to establish and/or expand international networking structures with scientists and academics abroad. Establishing a CRC usually requires intensive coordination between the DFG and the participating foreign partner organisation in order to regulate funding and review procedures and funding decisions. The DFG has concluded agreements with a Russian partner organisation (RFBR) to support cooperation and the submission of proposals.

International Research Training Groups are long term cooperation projects of up to 9 years, which are co-funded by DFG and RFFI.

Finally, applications for individual mobility grants by DFG may be submitted at any time.

Evaluation procedures vary from programme to programme. Sometimes proposals are evaluated separately in each country, and sometimes a joint review procedure is applied. Proposals are being evaluated remote or in situ by independent researchers. International experts are involved into the evaluation procedures as well. Proposals are usually evaluated by 2-8 experts and the procedure takes between 3-12 months. Evaluation criteria are the scientific and technical merits of the proposals and the suitability of applicants and feasibility of the projects. At DFG the involvement of junior scientists is also an evaluation criterion. As regards the success rate of the proposals submitted to DFG: About 35 % of all submitted projects are financed.

Funded projects have to provide regular reporting, which is usually annually. There has no impact assessment of DFG programmes with Russia been performed yet.

Helmholtz Association

Since 2005 Helmholtz-Russia Joint Research Groups are supported. In the first four calls up until 2011, a total of 26 Groups were supported. In 2012 already the fifth such call is being implemented jointly by the Helmholtz Association and the Russian Foundation for Basic Research (RFFI).

German Academic Exchange Service (DAAD)

There are specific objectives and implementation procedures for the various mobility programmes, which are listed in detail in the Annex 7.1.

Alexander von Humboldt-Foundation (AvH)

Humboldt Research Fellowships / Georg-Forster Research Fellowship for Postdoctoral or Experienced Researchers (for incoming researchers): Application may be submitted at any time. For the German Chancellor Fellowship for Prospective Leaders, the deadline for applicants from the Russian Federation is 15 November. Candidates from all professions and disciplines, but especially individuals in the humanities, law, social sciences and economics, are eligible to apply to the Alexander von Humboldt Foundation directly.

Further information about the programmes is available in Annex 7.1.

6.7.5 Overall statistics Germany/Russia

As part of its thematic framework programmes, BMBF has financed 31 cooperation projects with the Russian Federation since 2006, of which 30 were bilateral research projects, and 1 multilateral (as of August 2011). At the same time, there were another 19 ongoing projects (10 bilateral, 9 multilateral).

As part of the international cooperation programmes, BMBF has financed 255 projects since 2005, another 62 projects are currently ongoing (as of August 2011). Of these projects, 70 were Preparatory Measures for International Scientific-technological Cooperation (ongoing 53).

Apart of that, BMBF has co-financed 17 projects within the Joint German-Russian funding competition of BMBF and the Russian Fund for Assistance to Small Innovative Enterprises (FASIE). Within this programme, there are currently 28 projects ongoing (August 2011).

Around 100 projects are funded normally per year in the frame of DFGs cooperation with Russia/ Russian organisations. (2006:100, 2007:100, 2008:120, 2009:63).

In 2010, DAAD has given **1,288 grants** for German students for studies in Russia; 472 researchers or academic personal received a mobility grant for Russia. In the same year, 3,141

Russian students and 759 researchers and academic personal received a grant for stays in Germany.

In 2010, AvH has awarded **14 Humboldt Research Fellowships** for German-Russian cooperation.

In 2010, the Max Planck Society endorsed around **100 German-Russian cooperation projects**, more than **400 researchers from Russia** stayed at Max Planck Institutes in Germany.

In 2010, there have been also **20 Helmholtz-Russia Joint Research Groups** established.

6.7.6 Future Perspectives and Opportunities for Russian - German Cooperation

Cooperation in S&T between Russia and Germany has developed excellently during the last two decades. There exists comprehensive cooperation in bilateral and multilateral ways. To maintain the high level of cooperation between Russia and Germany in the future and to assure its fostering in qualitative and quantitative ways, several aspects remain to be taken into consideration.

Efforts should be undertaken to better connect German researchers with high-level science in Russia. For this, the existing positive experience with joint mechanisms for promotion should be expanded. The joint German-Russian funding competition of BMBF and the Russian Fund for Assistance to Small Innovative Enterprises (FASIE) has been implemented in 2008. This very successful cooperation should be continued. Another objective for the continuation of this innovation-oriented initiative is to open-up the potential of innovation in Russia for German science and market players.

Further thematic joint calls should be developed and implemented on the basis of the above mentioned mechanism. For this, the co-operation with the Ministry of Education and Science of the Russian Federation (MON) should be intensified. A possible further partner for joint mechanisms of promotion could be the Russian Academy of Sciences (RAN). The current process of restructuring at RAN (leading, amongst other things to a more competitive approach of its internal processes of funding), makes this partner attractive for the implementation of bilateral funding mechanisms.

Also, the institutional cooperation between Russia and Germany should be intensified. The establishment of sustainable common research institutions would be a suitable way for long-term S&T cooperation, allowing a stronger participation within the current structural developments of Russian S&T funding, intensifying at the same time the ties with Russian high-level research. With this, Germany should underscore its role of promoter of bi- and multilateral joint funding mechanisms.

There might be a much closer S&T cooperation if several barriers could be lifted, be they of administrative (e.g. visa regulations in both countries), legal (e.g. property rights in Russia) or structural (e.g. the problem of corruption in Russia) nature. This is especially true for the challenge to stimulate the involvement of business in the Russian S&T landscape. Innovation based economic growth is a challenge for both countries. Yet, the need for a technology-based modernisation is especially vital for the Russian economy.

In the academic sphere, there are very close relations between both countries. Russians make up the largest group amongst foreign researchers in Germany. For Russian students, Germany is the most important choice for studying abroad (about 10,000 students are studying at German higher education institutions). Yet, there is a clear imbalance, as the number of German students studying in Russia is much smaller. In order to improve this situation progress should be made with respect to the approval of qualifications, or the international orientation of higher education offered in Russia.

6.8 GREECE

6.8.1 General Overview

Greece has signed several agreements with the Russian Federation on science and technology cooperation. The most important is the **Framework Agreement on Economic, Industrial, Scientific and Technological Cooperation,** which was signed on 30 June 1993 between the government of the Russian Federation and the government of Greece. Before, an agreement was already in place between Greece and the Soviet Union. The Framework Agreement of 1993 established meetings of Joint Ministerial Committees every two years. Three main Protocols to the agreement have been signed between Greece and the Russian Federation:

- **Joint Action Plan** (2004) for 2004-2006, which amongst others includes bilateral cooperation in science and technology.
- **Programme of Cooperation on Culture and Science** (2005) for 2005-2007, which includes a reference to scholarships and the exchange of scientists and academics.
- **Agreement on Academic Cooperation** (2004) between the National Kapodistrian University and the State University of Petrozavodsk of the Republic of Karelia.

In this context, three calls for proposals have been published for joint proposals from S&T entities from both countries. Specific protocols for these calls have been signed. The third call was published in 2004 and the relevant protocol was signed in Athens in December 2004.

These protocols contain the Work Programme of the given period of time (bilateral projects, joint workshops and other events), as well as the provisions for their implementation. The rules for a bilateral S&T programme are then for the Greek side defined by the implementing institution (in 2004 this was the General Secretariat for Research and Technology – GSRT, a ministry).

One of the major objectives of the S&T cooperation of the Greek government with the Russian Federation is to improve the qualifications of the R&D personnel through mobility of scientists and students from both countries. The bilateral S&T cooperation Agreement between Greece and the Russian Federation may offer the Russian scientists or students of Greek origin additional opportunities to further benefit from the cooperation.

6.8.2 Thematic priorities for S&T cooperation Greece/Russia

Usually several rather broad thematic areas are defined in the call Greece-Russia. The thematic areas do not change a lot from call to call. Thematic areas in the call 2004 included:

- Solid, particle and laser physics
- Biomaterials
- Oceanography
- Space Research
- Technologies related to Cultural Heritage

Another call was in preparation for 2009/10 (but finally not launched), for which seven thematic areas were planned:

- Renewable Energy Resources and environmental protection
- Cultural heritage
- Nanotechnology
- Information and Communication Technology (ICT)
- Astronomy-Space Science
- Biotechnology
- Oceanography.

6.8.3 Forms of Cooperation

The co-funding of joint bilateral projects for research and mobility of scientists and students are considered to be the main instrument for promoting bilateral S&T cooperation. In addition to projects, the Greek government is also supporting:

- the organisation and funding of seminars and workshops and conferences with the participation of scientists from both cooperating countries;
- the encouragement of small and medium enterprises (in particular) from both countries to participate in the bilateral cooperation programme;
- the funding of a limited number of stipends and fellowships for students from both cooperating countries;
- the funding of purchase of small equipment, consumables and publications.

It is to note that, in the frame of S&T bilateral cooperation with the Russian Federation, all instruments to promote them are agreed by both countries and included in the relevant Protocol (usually for a period of two years). In case an instrument is not included in the frame of a Protocol, it cannot be funded and not be used for bilateral S&T cooperation.

Greece has in 2011 also participated in the multilateral calls for innovation and S&T projects with Russia, which were launched in the frame of the ERA.Net RUS project.

6.8.4 Implementation Procedures

Higher education institutions in Greece have established programmes with the Russian Federation for the joint development of innovative activities and the mobility of students, academics and researchers. The **Ministry of National Education, Lifelong learning and Religious Affairs** grants scholarships, mainly for language learning. (→ See the Ministry of National Education, Lifelong learning and Religious Affairs scholarships webpage.)

At bilateral level, the **Ministry of Development** supervises projects approved in the frame of the Greek-Russian Protocol. A Protocol was signed between the General Secretariat for Research & Technology of the Greek Ministry of Development (GSRT) and the Russian Academy of Science on cooperation between Greek research institutes and universities and institutes of the Russian Academy of Science.

The Greek-Russian call 2004 for proposals was implemented jointly by the General Secretariat of Research and Technology (GSRT, under the Ministry of Development) for Greece, and by the Russian Ministry of Education and Science (MON) and the Russian Academy of Sciences (RAS). Normally a joint call is announced in both countries, including specific call deadlines and eligibility criteria. Proposals have to be submitted in national language, and in hard copy as well as in electronic format. Participating academics and members of research groups could freely choose the research centre or university of their preference in consultation with their partners on the other side. Funding can be allocated in Greece in this programme to public research organisations, universities and enterprises. Individual researchers can not be contracting partners and receive funding.

GSRT covers for Greece the whole call implementation cycle, from launching a call, evaluation and selection of project proposals, to funding and overseeing the implementation of projects. Projects supported in this bilateral programme can deal with basic and applied research, as well as innovation activities. There are no specific Intellectual Property Rights (IPR) regulations agreed between the Greek and Russian partners for this programme. This is due to the fact that project budgets are low and that mostly basic research oriented projects are supported. The maximum budget for Greek teams amounted to €17,600, which can be used for travel, salary for young researchers, equipment, publications and consumables.

Project proposals are evaluated in Russia and in Greece separately and evaluation results are afterwards compared. Those projects get funded, where the highest scores match. On the Greek side, a proposal is usually evaluated by three independent researchers. Evaluation takes place remotely and in situ through meetings of experts. The whole evaluation procedure of project proposals lasts approximately six months. The evaluation criteria, which are applied, cover scientific and technical merits of the proposal, suitability of applicants and feasibility of the project, and the added value of the bilateral collaboration. In the call 2004, if an enterprise was included in the project, the project got bonus points. But this bonus did not have an important effect and participation of enterprises was low.

Funded projects can have a duration between 18 months and three years. On average projects are implemented over a period of two years. Projects have to provide on the Greek side only a final report on the project results, which has to be submitted to GSRT. The final report is evaluated by an ad-hoc committee, composed of a scientific expert in the thematic field of the project and by an administrative expert

Impact assessments of the bilateral programme are performed by GSRT every three years, but the outcome of the assessment and related reports are not published.

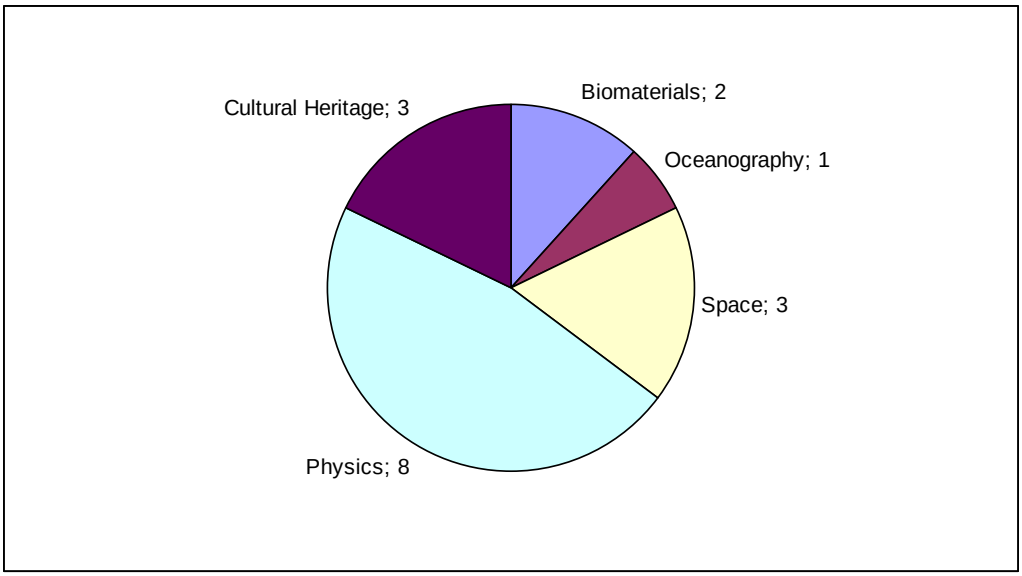
Further information about the programmes is available in Annex 8.

6.8.5 Overall Statistics Greece/Russia

In the Greek-Russian call a total of 17 projects were funded out of 65 submitted ones. The success rate in this call was therefore 26%. The projects were implemented in the period 2005-2008, with a total budget for the Greek participants of € 248,530.

Most projects were supported in the field of Solid, Particle and Laser Physics (8 funded projects), 3 projects were supported each in the fields of Space Research and Technologies Related to Cultural Heritage, 2 projects in Biomaterials and 1 project in Oceanography.

Figure 11: Overview of funded Greek-Russian projects 2004



6.8.6 Future Perspectives and Opportunities for Russian – Greek Cooperation

The bilateral cooperation between Greece and the Russian Federation is considered to have been successful. The calls have stirred a great interest in the Greek scientific community. A large number of scientists and students have been exchanged between the two countries in the frame of the mobility initiative. Successful workshops, conferences and seminars have been organised and are also going to be included in new calls.

Greece grants short to middle-term scholarships to students who study Greek language-related subjects in Russian universities (Moscow, Saint-Petersburg, Krasnodar), and the exchanges of researchers and scientists are ongoing. According to estimations, at least 70 Russian students participated to this type of programmes in 2004 (seminars and up to one year grants).

The focus of funding cooperation between Greece and Russia lies currently on coordination of bilateral activities within the multilateral ERA.Net RUS project. In this framework two calls were launched in 2011 for S&T and innovation projects, whereby Greece participated in both calls.

6.9 HUNGARY

6.9.1 General Overview

The execution of the bilateral intergovernmental agreements on co-operation in S&T is regulated by the Decree of the Government No 3061/91. According to this decree, the agreements are prepared and concluded by the Ministry of Foreign Affairs, whereas their implementation is the responsibility of the National Innovation Office (NIH). The NIH has been responsible for planning and implementing the Hungarian science and technology policy, for the competition based research and development programmes and for promoting the international science and technology co-operation of Hungary, including EU-related research matters.

The NIH has the following responsibilities and missions:

- elaborating the government strategy in the field of innovation,
- forming the means and tools for the R&D and innovation policy at government level,
- preparing documents concerning the national science and technology policy, running technology foresight programmes, preparing reports and reviews for promoting the acquisition and dissemination of new knowledge and information serving the government's science and technology strategy in co-operation with social partners, NGOs, industrial and professional associations,
- representing the government in the international field, in intergovernmental S&T organizations and programmes, organizing and co-ordinates the Hungarian

participation in such programmes. In this capacity, it is also in charge of the multilateral S&T co-operation and participates in the EU accession process,

- co-ordinating the activity of the Research and Technology Innovation Fund,
- raising innovation awareness in the society.

- Hungary has concluded 37 intergovernmental S&T agreements. The number of bilateral projects is between 500 and 600 in a year. The primary objective is to promote mobility and international cooperation, and organizing seminars and workshops in the field of interest of science and technology. As to the international aspects of the responsibility for the R&D policy, the bilateral relations are of primary importance. The NIH together with the foreign governmental body in charge of the co-operation sets up the Joint Committee on Co-operation in Science & Technology. These committees meet annually, or every two years, or every three years and beside an exchange of views on S&T policies, they approve the programme of co-operation for the next period of time.

Co-operation with Russian Federation started in 1993, then the agreement was signed. A state-to-state Agreement on S&T Cooperation Hungary - Russia (Cooperation on fundamental and applied research based on long-term mutual interests) was signed on October 20, 1993. Since 1992 Hungary has a Scientific Attaché based in Moscow, who supports the Hungarian S&T community by acquiring and disseminating information and by building connections between Hungarian and Russian institutions.

Up until the year 2000, scientific cooperation between Hungary and Russia was based mostly on direct contacts between researchers and research organisations from the two countries or took place in the context of multilateral programmes such as the Centre Européenne pour la Recherche Nucléaire (CERN), the EU Framework Programmes, and INTAS.
Scientific cooperation on the programme level received an impetus through the conclusion of a Memorandum of Understanding (MoU) between National Office for Research and Technology (NORT) and the Russian Foundation for Basic Research (RFBR) in 1993. Based on this MoU, two co-funded calls for research proposals have been conducted jointly by The National Office for Research and Technology (NORT) and RFFI, last time in 2005. Hungary and Russia signed a Governmental Agreement for cooperation in nanotechnologies in 2006.

The Russian organisation in charge of the co-operation is the Ministry of Education and Science of the Russian Federation.

The latest meeting of the Russian-Hungarian Intergovernmental Joint Committee on Co-operation in S&T was held in 2005.

The **Hungarian Academy of Sciences, Hungary** (MTA)[49] represents a key player in bilateral S&T cooperation with Russia and has signed cooperation agreements with the following Russian science and research funding organizations:

- **Russian Academy of Sciences** (RAS, www.ras.ru/, the agreement on scientific cooperation signed in 1996);
- **Russian Academy of Medical Sciences** (RAMS, the agreement on scientific cooperation signed in 2002); and
- **Russian Academy of Agricultural Sciences** (RAAS, the agreement on scientific cooperation signed in 2005);

6.9.2 Thematic Priorities for S&T cooperation Hungary/Russia

- Aeronautics
- Mining & oil refining
- Laser & nanotechnologies
- Medical research

6.9.3 Forms of Cooperation

- Mobility of researchers(NIH, MTA)
- Joint research projects

6.9.4 Implementation Procedures

International R&D cooperation programmes are managed by the NIH (formerly NKTH). As a rule, the programmes of co-operation set out the general framework of co-operation, specifically the kind of support provided for joint research & development projects and organization of scientific and technological symposia, conferences and workshops.

[49] http://mta.hu/

The primary objective is to promote mobility and international co-operation, organising seminars and workshops in the field of interest of science and technology.

Governmental support is provided in the form of financial grants by both of the co-operating governments. Scientists may get grants by competing in a bidding system. Institutes and companies, governmental or private, dealing with basic sciences and/or applied research may apply for grants to support the exchange of scientists, as needed to achieve predetermined objectives.

Procedures, as well as forms to be filled in and timing regarding the call for proposals, are agreed upon by the governmental bodies, which manage the co-operation. The agreed project proposal must be submitted simultaneously to both of the governmental bodies. The governmental bodies review, assess and rank the project proposals according to their internal procedures, but basically using the following criteria:

- the scientific merits of the proposals, as measured by a peer review,
- the national priorities with regard to scientific & technological co-operation.

The decision regarding the projects to be jointly funded is taken by the Joint Committee. In Hungary, the approved projects are funded by the Research and Technology Innovation Fund (known in Hungary as KTIA). The programmes of co-operation are managed by the International Department of International Relations of the NIH. This department is in charge of:

- publication of the call for proposals;
- administration of the peer reviewing process;
- organizing the meetings of the Hungarian Committee on International Co-operation in S&T (made of representatives of the ministries concerned, the Hungarian Academy of Sciences, and various non-governmental bodies dealing with S&T);
- linking with the foreign governmental bodies in charge of the co-operation; organizing the Joint Committees' meetings.

The Science and Technology Foundation (a non-governmental body set up by the National Committee for Technological Development and the Ministry of Foreign Affairs) is in charge of the following administrative aspects of the co-operation:

- conclusion of the funding contracts with the grantees;
- remitting the grants to the scientists;
- financial supervision of the projects;

- collection of the annual as well as of the final reports pertaining the co-operative projects.

The proposal must be signed by an authorised person and by the project leaders of both countries. A separate evaluation procedure is applied in the cooperation. Proposals are usually evaluated remotely by 2 independent researches. The evaluation procedure usually takes 3 months. The evaluation criteria include:

- Scientific and technical merits of the proposals;
- Suitability of applicants and feasibility of the projects;
- Significance of the research regarding international co-operation; and
- Requested budget.

A final report must be submitted after the completion of the project

Researcher mobility:
Both sides, usual period of stay 12 days or 1-3 months (NIH/NKHT)
Both sides, usual period of stay 1 week – 10 days (MTA)
Average stay: 24 months

MOBILITY Call - HUMAN-MB08

Rules of funding:
Form of funding: final grant disbursed to the beneficiary with no repayment obligation. The funding covers the personnel costs of the applicant researcher and part of the management and overhead costs of the Hungarian home or host institution.

6.9.5 Overall statistics Hungary/Russia

Russia as an international cooperation partner is ranked as number five in Research Council of Norway projects' archive (after USA, UK, Germany and Sweden). In total 22% of RCNs international cooperation within the field of energy and environment (climate change) is implemented with Russia.

Budget for international cooperation NKTH, Hungary
Year 2006 0,6 billion HUF
Year 2007 0,7 billion HUF
Year 2008 0,7 billion HUF

Further information about the programme is available in Annex 9.

6.9.6 Future Perspectives and Opportunities for Russian - Hungarian Cooperation

In general, Hungarian researchers and research organisations are entitled to include partners from other countries (including Russia) in research projects for which they apply for support from Hungarian national funding sources. In most cases, however, Hungarian national funding may be used only to support the activities of Hungarian researchers and organisations, but the details should be checked in each individual case.

The Ministry of Education & Culture offers support funds for Hungarian researchers & research organisations to participate in international projects and for research visits of Hungarian scientists abroad (including in Russia). The Ministry also offers a limited number of scholarships to support short term visits (up to six months) of foreign scientists in Hungary for research and for teaching courses at Hungarian universities and institutes. Contact: Department for International Cooperation, Hungarian Ministry of Education & Culture.

The Hungarian Academy of Science (HAS) operates a conference support programme to support Hungarian institutes in the organisation of scientific meetings, seminars, and workshops, including those with international participation.

6.10 ISRAEL

6.10.1 General Overview

The Russian Federation is a valuable cooperation partner for Israel. Russia, like other successor states of the former Soviet Union, holds a vast accumulation of scientific S&T knowledge. At the same time, a large immigrant community in Israel of excellent scientists, proficient in the languages proves to be an invaluable asset for Israeli S&T cooperation which facilitates mutual collaboration. Due to the extent of active speakers of Russian language living in the country, Israel has a strong orientation towards Russia.

The main responsibility for the coordination and funding of research lies in Israel with the Ministry of Science and Technology (MOST).[50]

Israel has signed an **umbrella agreement on cooperation in the fields of culture and education with the Russian Federation** in April 1994. Within the context of this umbrella agreement, Israel and Russia signed in 2005 the first **Working Programme between the Israeli Ministry of Science and Technology and the Russian Foundation for Basic Research** (RFBR). It was decided to establish a programme for funding scientific research proposals jointly submitted by investigators from both countries. Currently, this programme is in its third stage (2011-2012).

6.10.2 Thematic Priorities for S&T cooperation Israel/Russia

The first stage of the above mentioned **joint scientific programme between the Israeli MOST and the RFBR (2006-2008)** funded 27 joint projects in four priority areas:

- Mathematics
- Physics
- Geology and Geophysics
- Advanced Materials

[50] http://www.most.gov.il/

The second phase of the joint scientific programme for the years 2009-2010 supported 16 joint research projects in the fields of:

- Nanotechnologies
- Green Energy

For the third and current phase of the **scientific cooperation between the countries (2011-2012),** it was decided to focus on two leading research areas, namely:

- Information Science, with sub-fields Cognitive Science Research, Super Computing and Next-Generation Internet
- Nanomaterials, with sub-fields Advanced Materials and Nanotechnology.

In March 2011 a **framework agreement between the Russian Federal Space Agency and the Israel Space Agency was signed.** The agreement enhances cooperation between the Israeli and Russian space agencies in the fields of:

- space research
- earth observation
- navigation
- medicine and biology in space
- research in advanced materials
- rocket launchings.

Furthermore, there exists an agreement on cooperation between the Israel Academy of Sciences and Humanities and the Russian Academy of Sciences signed in 1995. Four Russian researchers visited Israel under the agreement in 2002, and one Israeli researcher visited Russia. A programme for the exchange of scientists with Russia has not been implemented since 2004.

6.10.3 Forms of Cooperation

- Joint research projects
- Joint funding programmes

6.10.4 Implementation Procedures

Within the framework of the **Israeli-Russian agreement on scientific cooperation**, the two organizations – the **Russian Foundation for Basic Research (RFBR) and the Ministry of Science and Technology of Israel (MOST)** provide financial support for joint research projects carried out by Israeli and Russian scientists. On the Israeli side, the cooperation programme is operated directly by MOST. Basic and applied research is supported in the programme.

The cooperation may take the form of:

- joint research activities, where interdependent subprojects of a single programme are conducted in the Russian and the Israeli laboratories;
- complementary methodological approaches to a joint problem;
- joint use of research facilities, materials, equipment and/or services by cooperating scientists;
- joint planning of research and evaluation of results.

Each party (MOST and RFBR), in principle, bears the costs of the participants from its own country. In the second stage of the programme, MOST provided a maximum of 87,500 Shekel per year (25,000 USD) to funded projects; RFBR provided a maximum of 600,000 Roubles (25,000 USD) per year. The Projects are scheduled for a two year period. Contracts are signed accordingly.

Proposals must involve a Principal Investigator from each country. The Principal Investigator on each side must be affiliated to an academic institution or research institute. Researchers from industry may take part in the programme as partners in teams headed by Principal Investigators from an academic institution or research institute. The Principal Investigator and the affiliated Research Authorities are expected to take responsibility for the execution of the research work throughout the duration of the project.

Proposals are **evaluated** by a joint Israeli-Russian scientific committee. The evaluation is based on scientific merit and extent of genuine scientific collaboration between the Russian and Israeli research teams.
Evaluation criteria are:

- Scientific and technical merits of the proposal

- Suitability of applicants and feasibility of the project
- Significance of the research regarding international co-operation
- Requested budget
- National priorities
- Added value of the bi -(or multi-) lateral collaboration
- Strength of cooperation between the researchers
- Participation of young researchers
- Links to industry

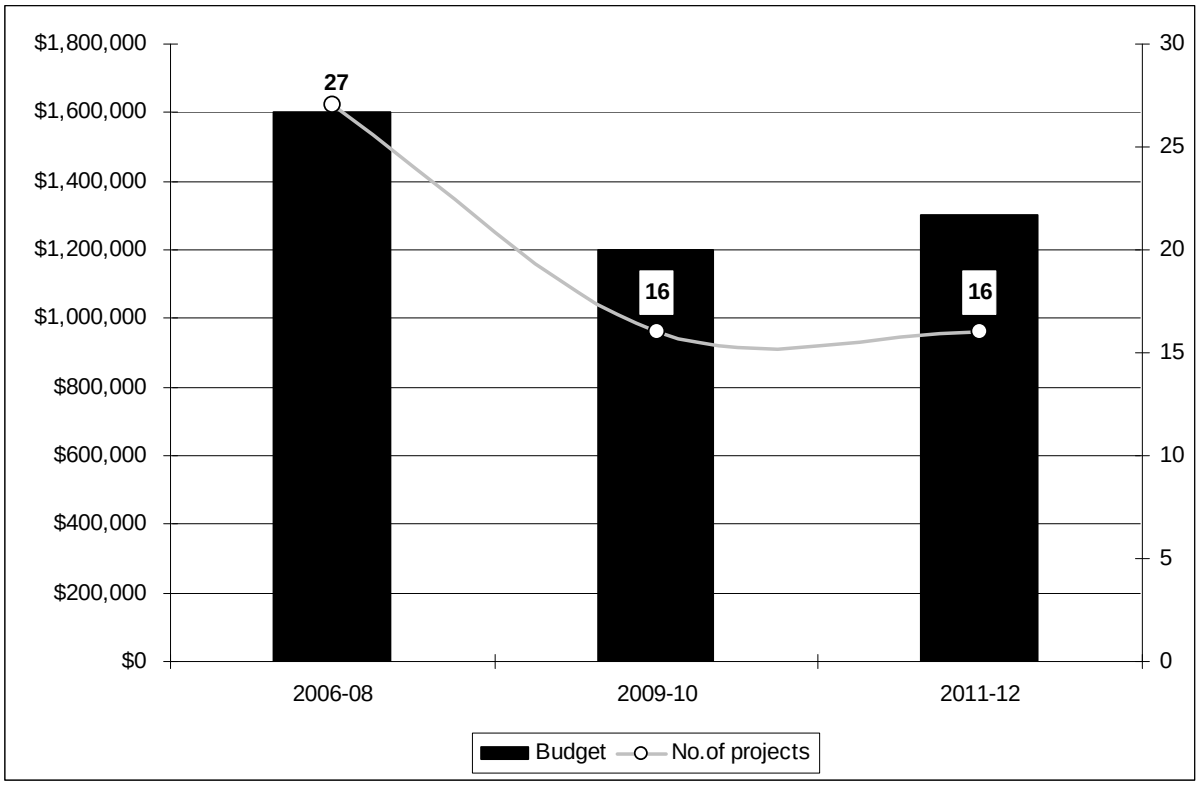
The evaluation procedure takes usually 6 months. Normally 3-6 experts (coming from the ministry or independent researchers) evaluate a project proposal.
Projects have to provide **reports** on their activities and achievements to the funding parties.

Intellectual Property Rights (IPR) are regulated in the bilateral programme only in rather broad terms: The Parties, within their competence, shall take part in the settlement of disputes, connected with acquisition, realisation and protection of intellectual property rights according to the legislation of each of Party's State and of international law. Intellectual property rights acquired as a result of joint activity will be allocated by mutually agreed conditions set out in separate contracts and agreements.
An **impact assessment** of the bilateral programme has not yet been performed.
Further information is available in Annex 10.

6.10.5 Overall statistics Israel/Russia

The framework of funding in the first stage of the mentioned programme (2006-2008) was 1.6 million USD for the overall research cooperation, divided equally between the funding agencies. Support was given to 27 joint projects. In the second phase of the programme (2009-2010), 1.2 million USD were funded equally by both sides. 16 research projects were funded. The budgetary framework for the third stage (2011-2012) is about 1.3 million USD, equally funded by both partners. Out of 50 joint research proposals submitted, 16 were selected for funding. This gives a success rate of 32% in this bilateral call 2011.

Figure 12: Overview of funded Israeli-Russian projects 2006-2012



6.10.6 Future Perspectives and Opportunities for Russian -Israeli Cooperation

The Russian-Israeli cooperation in science and technology can be considered as successful. The first stages of the joint funding programme of MOST and RFBR have been implemented smoothly. Since 2005, this scientific relationship with the Russian Federation has been conducted uninterruptedly. Currently, the third phase of this programme is being implemented. It can be expected that the fruitful cooperation will be continued.

6.11 NORWAY

6.11.1 General Overview

Internationalisation of Norwegian research is a structural priority within Norwegian research policy; along with basic research and research based innovation and one of the priorities include strengthening of bilateral research cooperation, particularly with North-America, countries of current interest in Asia, Russia and South-Africa. Bilateral research cooperation between Russia and Norway has long traditions over a broad field of areas, and marine research, environmental research, polar research, and energy research focusing on sustainable exploration and production in the High North is of significant importance for both counties.

Science and technological cooperation with Russia is one of the key priorities in the **Norwegian Government's High North Strategy**[51] (published in December 2006) and aims to protect the environment while maintaining settlement patterns and promoting business development. The Strategy indicates Russia as a central partner since both countries have interests and face common challenges in the region and significantly promotes research aimed at further development of expertise and technology for sustainable petroleum exploration and production in the High North. Also the **White Paper on Research**[52] (presented in April 2009) lays down Norway's priority areas of research and calls for the escalation of basic research and greater emphasis on infrastructure measures and researcher recruitment. Research cooperation and internationalization are areas given high priority.

The Russian-Norwegian S&T cooperation aims to join financial and human resources in order to enhance the quality of research and tackle challenges of a global nature, such as climate change. Both countries jointly identify common priority areas based on several formal cooperation agreements which are forming the basis for increased research cooperation between Norway and Russia. The state-to-state "**Agreement on S&T Cooperation with the Russian Federation"** was signed in 1998, but the Norwegian Government is currently working on a new agreement which should replace the existing agreement from 1998. The

[51] http://www.regjeringen.no/upload/UD/Vedlegg/strategien.pdf
[52] http://www.regjeringen.no/nb/dep/kd/dok/regpubl/stmeld/2008-2009/stmeld-nr-30-2008-2009-.html?id=556563 (in Nowregian)

renewal of this general agreement will not directly specify or regulate the research activity between the two countries.

The **Research Council of Norway**[53] (RCN) is a key player in S&T bilateral cooperation with Russia and has signed following cooperation agreements forming the basis for increased research cooperation between the two countries:

- **"Agreement on Technical Scientific Cooperation in Artic and North Research"** (signed in 1996) regulates the cooperation between the Federal Agency for Science and Innovation of the Ministry of Education and Science of the Russian Federation and the RCN. Based on this agreement, a number of joint Russian-Norwegian polar research projects were implemented within the International Polar Year.
- **"Agreement on S&T Cooperation in Polar Regions"** for the period 2002 and 2012 was signed between the RCN and the Russian Ministry of Industry, Science and Technologies. As a follow up of this agreement, the RCN and the Russian Academy of Science (RAS)[54]had started cooperation within the petroleum sector.
- **"Declaration of Intent between the Russian Academy of Science and the Research Council of Norway** regarding the Cooperation in the Area of Science and Technology**"** was signed in June 2009 and sets the principles of the cooperation (establishing "Joint Coordination Committee" and promoting joint research projects, bilateral seminars and workshops, strengthening researcher training etc).
- "**Agreement** on Cooperation in the Area of Reseach and Technology between **the Institute for Oil and Gas at the Russian Academy of Science** (RAS Institute, Moscow) **and the PETROMAKS Programme at the Research Council of Norway**" was signed in June 2009 and is valid for 4 years. The collaboration encompasses projects to which RAS Institute and/or Russian Foundation for Basic Research and the PETROMAKS Programme have provided funding.

Additionally, the Research Council of Norway is working on a **Memorandum of Understanding (MoU) between the Research Council of Norway and the Russian Foundation for Basic Research** (RFBR)[55] and the MoU should be signed by the end of

[53] The Research Council Norway (RCN) identifies strategic research areas, allocates research funds and evaluates research within all fields and disciplines. The Council is the principal research policy adviser to the ministries, and acts as a meeting-place and network builder for Norwegian research. About 30% of all public R&D funding in Norway is channelled through the RCN. See www.forskningsradet.no/

[54] www.ras.ru/

[55] www.rffi.ru/

2010. Preparation of cooperation agreement between RCN and the Russian Foundation for Humanities (RFH) [56]is under the process.

Other agreements promoting scientific/academic cooperation (including education cooperation and exchange) are signed between Ministry of Education and Research[57] and Norwegian universities and other Russian universities and research organizations[58]. A number of information centers for Norwegian and Russian researchers and students have been established for example in St.Petersburg[59] and Arkangelsk[60].

Very good example of bilateral cooperation between the Research Council of Norway (RCN) and the Russian Academy of Science (RAS) is a series of **Norwegian-Russian Arctic Offshore Workshops**[61] which are being organized annually since 2005[62]. The workshops are held in the frame of PETROMAKS programme and aim to identify possible thematic areas for R&D co-operation across the boundaries (including relevant Russian and Norwegian partners for collaborative R&D projects) and to agree on a suitable framework for common research and technology co-operation and its financing.

6.11.2 Thematic Priorities for S&T cooperation Norvay/Russia

- Biotechnology
- Energy(carbon capture and storage)
- Environment including climate change (environmental surveillance, modelling, Barent Sea)
- Food, agriculture and fisheries
- Health
- Information and communication technologies (ICT)

[56] www.rfh.ru/
[57] http://www.regjeringen.no/en/dep/kd.html?id=586
[58] There is e.g. very good R&D cooperation established within the PETROMAKS projects with the Gubkin University, the Moscow State University, the Polar Expedition in St. Petersburg and the Center for Ecological Safety, St. Petersburg.
[59] The Norwegian University Centre in St. Petersburg (funded by four Norwegian universities) provides information and assistance to Norwegian students and researchers in Russia and offers language courses. Nansen International Environmental and Remote Sensing Centre (NIERSC) was established in St. Petersburg as a satellite of the Nansen Center in Bergen and part of a network of environmental science centre.
[60] The Norwegian-Pomor University Centre at the Pomor University in Arkangelsk is funded both by Norwegian and Russian resources. The Centre provides information and assistance to Norwegian and Russian students and researchers interested/involved in cooperation activities at research and higher education institutions in Arkangelsk and in the north of Norway.
[61] http://www.forskningsradet.no/servlet/Satellite?c=Page&cid=1253954327624&pagename=petromaks%2FHovedsidemal
[62] Norwegian-Russian Arctic Offshore Workshops: Moscow (2005), Stavanger (2006), St.Petersburg (2008); Oslo (2009), Murmansk (16- 17 June 2010, Workshop topics within PETROMAKS scope for R&D: Arctic Offshore Field Development; Environmental Aspects, Geology of the Barents Sea and Adjacent Arctic Areas)

- Marine and maritime research (sustainable resource management)
- Nanotechnologies/materials
- Petroleum research
- Polar research
- Socio-economic sciences and humanities

6.11.3 Forms of Cooperation

- Mobility of researchers;
- Joint research projects;
- Joint cooperation programmes;
- Joint scientific events (conferences, seminars, bilateral workshops etc.);
- Exchange of know-how;
- Joint scientific publications;
- Technical support/provision of equipment; and
- Dissemination of RTDI results and accompanying measures.

6.11.4 Implementation Procedures

Bilateral research programmes with Russia carried out under the auspices of the Research Council of Norway (RCN) do not implement common announcements together with Russian partners, but there are several programmes where collaboration with Russia is strongly supported at project level in the area of basic, applied research, technology development and innovation. The implementation of the joint research programmes is regulated by signed cooperation agreements between the Russian and Norwegian scientific organizations and the financing opportunities specifically designed for applicants from Russia can be divided into four main implementation groups:

a) research programmes;
b) independent R&D projects;
c) infrastructural and institutional measures; and
d) networking measures.

The eSøknad electronic submission service is the Research Council's Internet-based system for completing and submitting grant proposals with attachments. All applicants must apply through this system unless explicitly instructed otherwise. The Council's website[63] contains

[63] http://www.forskningsradet.no/en/Find_calls_for_proposals/1184150364108

information about all RCN's calls for proposals and all calls are published simultaneously in Norwegian and English websites. Applicants from Russia must as a rule have a formal affiliation with a Norwegian institution to be eligible to seek Norwegian funding. However, some financing opportunities are specifically designed for foreign researchers and partners.

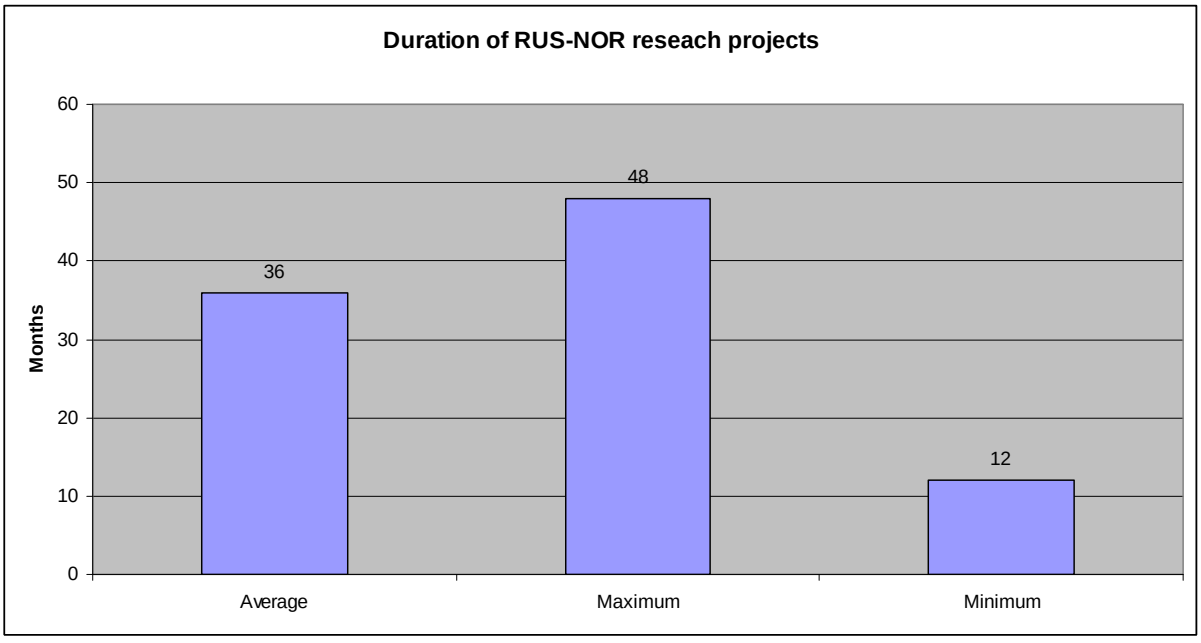
The Research Council utilizes a standard contract concept for all project allocations and each contract includes the following:

- Agreement document pertaining to an R&D project;
- Project description;
- General terms of contract.

Projects that receive funding from the Research Council are required to submit progress and final reports pursuant to their contracts. Progress and account reports as well as final reports are to be submitted to the Research Council electronically via the individual's user area.

When it comes to **joint research projects,** the RCN finance the Norwegian part of the projects and Russian partners finance the Russian part of the project. The project proposal must be submitted in both countries and has to be signed by an authorized person and by the project leaders of both countries. Joint research projects are usually funded for longer periods, maximum up to 4 years. The minimum duration of the projects varies between 3 – 12 months.

Figure 13: Duration of Norwey – Rusian research project



Submitted applications are evaluated by at least two external scientific evaluators/referees. In cases of particularly extensive or complicated projects a minimum of three evaluators/referees is required. In many cases, the assessment process is carried out by a referee panel consisting of several experts who work together to review and rank grant proposals. As alerady mentioned, an online grant review and assessment system developed by the RCN is used for accessing grant proposals and submitting the evaluators' assessments. All communication to and from evaluators/referees is conducted via encrypted communication channel.
Submitted project proposals are evaluated separately in each country and the evaluation procedure takes approximately 3-5 months. Following evaluation criteria are used:

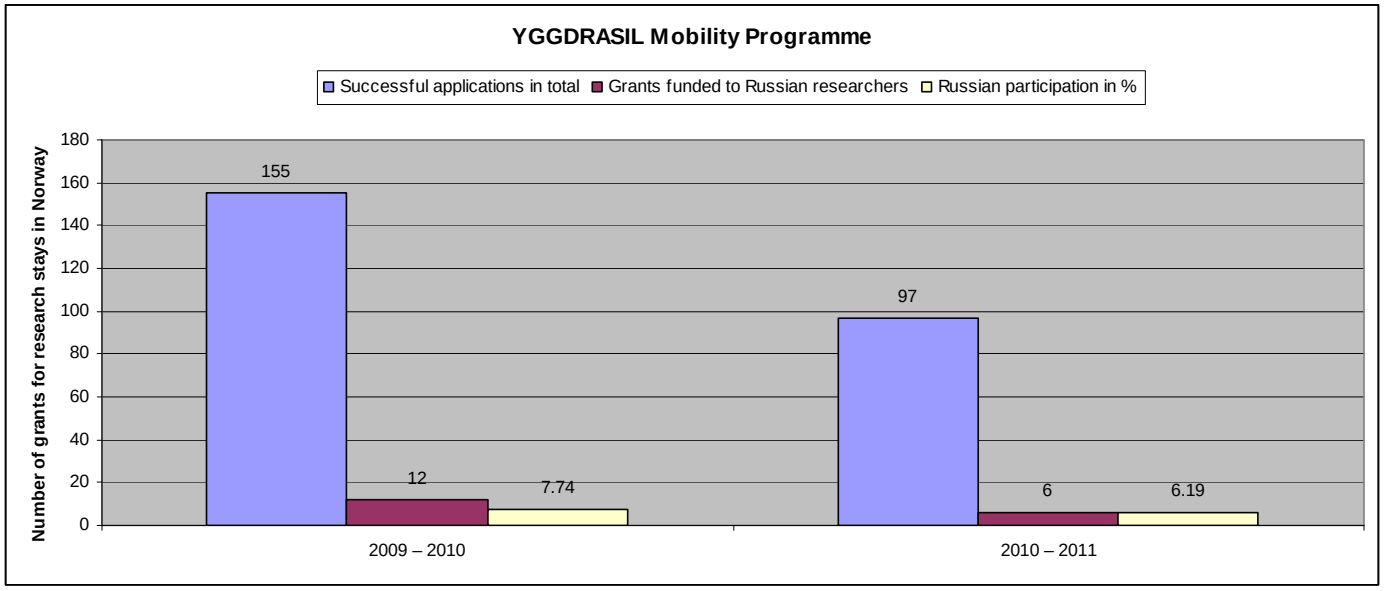
- Scientific and technical merits of the proposals;
- Suitability of applicants and feasibility of the projects;
- Significance of the research regarding international co-operation;
- Requested budget; and
- National priorities.

Mobility of researchers across the borders is of paramount importance for developing and maintaining word-class research and Norway offers strong research communities and favorable conditions attracting qualified researchers from Russia. Mutual mobility is supported within the respective calls for proposals under the programmes directly targeted at researches/students exchange (YGGDRASIL Mobility Programme[64], Fellowship Programme[65]), but also within other ccooperation programmes such as Cooperation Programme on Research and Higher Education[66]. The RCN has stipulated fixed rates for various types of fellowships and positions and calls for applications are announced on yearly basis in spring. The calls are open to all fields and disciplines. Received applications are reviewed by external scientific evaluators/referees and the final decisions of awarding mobility grants is usually taken by the programme boards, expert committees or research board of the relevant RCN division. Applicants may themselves recommend specific external experts to serve as referees for reviewing their applications, but the RCN is not obliged to comply with such a recommendations. (see Annex 11.5)

[64] Young Guest and Doctoral Researchers' Annual Scholarships for Investigation and Learning (YGGDRASIL) Mobility Programme: http://www.forskningsradet.no/en/Funding/ISMOBIL/1233557743178.
[65] Fellowship Programme for Studies in the High North: http://siu.no/en/Programme-overview/Fellowship-Programme-for-Studies-in-the-High-North.
[66] http://www.siu.no/en/Programme-overview/Cooperation-Programme-with-Russia/Programme-document-2007-2010

The Young Guest and Doctoral Researchers' Annual Scholarships for Investigation and Learning (YGGDRASIL) Mobility Programme and the Fellowship Programme for Studies in the High North contribute to mutual mobility and an increased contact and cooperation between institutions of higher education and research in Norway and Russia. Grants and mobility support for exchange of researchers and bachelor, master and Ph.D.-students is provided for period of 1 – 10 months.

Figure 14: Mobility Programme – YGGDRASIL (Norway)

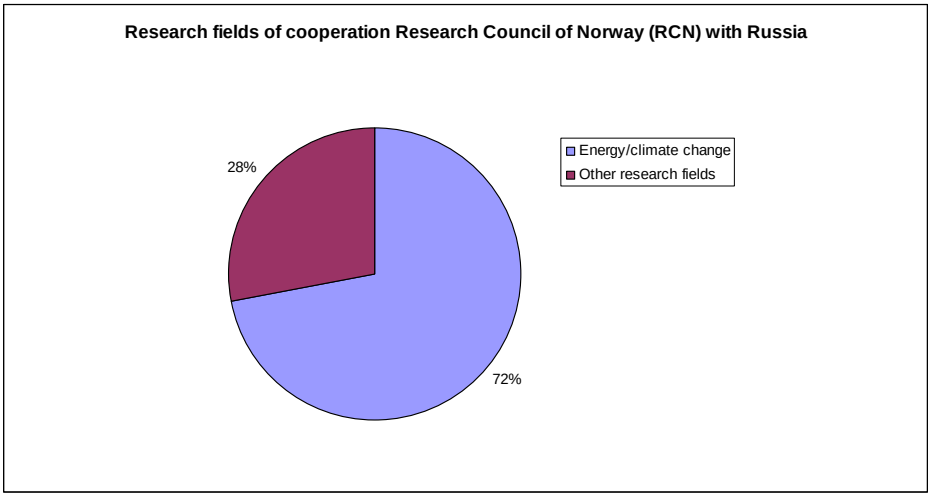


Further information is available in Annex 11.

6.11.5 Overall statistics Russia/Norway

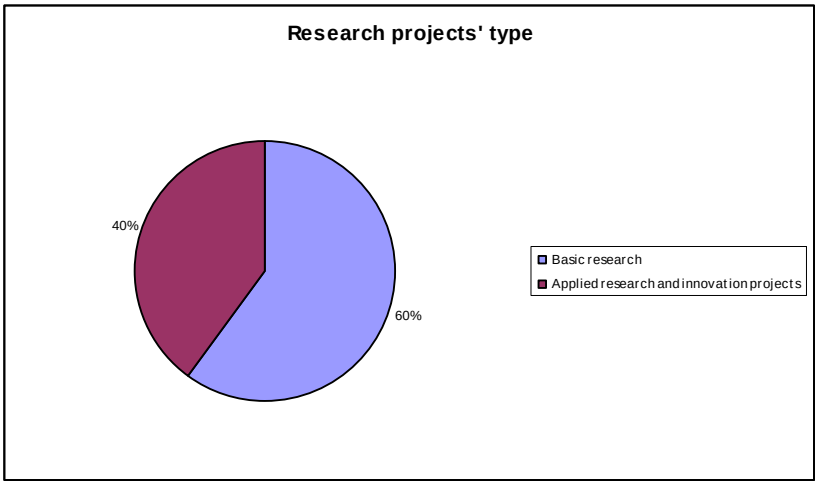
Russia as an international cooperation partner is ranked as number five in Research Council of Norway projects' archive (after USA, UK, Germany and Sweden). In total 22% of RCNs international cooperation within the field of energy and environment (climate change) is implemented with Russia.

Figure 15: Research fields of Cooperation Resarch Council of Norway with Russia



Approximately 60 % of RCNs cooperation with Russia is implemented within basic research. Remaining 40% of bilateral cooperation includes applied research, technology development and innovation research.

Figure 16: Research project by type



The budget dedicated to bilateral research projects amounts to NOK 120 million (2008)

6.11.6 Future Perspectives and Opportunities for Russian - Norwegian Cooperation

The Norwegian Government put ongoingly emphasis on strengthening research cooperation with Russia in variety of scientific fields. The **Cooperation Programme on Research and Higher Education with Russia** (2007 – 2010) will be continued by means of agreements

signed with the Russian research funds and through targeted calls for proposals issued under the Research Council's thematic programmes in fields such as the environment, climate, energy, geo-science, aquaculture, health and welfare. More support is envisaged in social sciences and humanities as shown by the example of newly announced R&D programme on **Russia and International Relations in the Northern Areas (NORRUSS)** with the principal aim of generating Norwegian expertise on Russia and Russian society.

The Research Council of Norway (RCN) will significantly promote research cooperation with Russia and other countries having interests and activities in the Arctic region and new initiatives can be expected. The Research Council's Research Strategy for the Arctic and Northern Areas (forskning.nord) under the Focus on the Arctic and Northern Areas Initiative is currently under revision and a new version with indicated possibilities for international 8bilateral) cooperation should be available in summer 2011.

Based on former successful cooperation in **polar research** under the Agreement on technical-scientific cooperation in Arctic and North research between the Federal Agency for Science and Innovations of the Ministry of Education and Science of the Russian Federation and the Research Council of Norway, special calls for proposals can be expected for example for projects involving bilateral research cooperation between Norway and Russia on Svalbard[67]. The recent agreement[68] (signed in September 2010) on the Barents Sea borderline between Russia and Norway should open up for new cooperation possibilities especially in the area of **marine research** and sustainable management of the environment and resources in the Barents sea and increased Norwegian-Russian **research cooperation** within the **petroleum sector**.

The **YGGDRASIL Mobility Programme** has issued a funding announcement for approximately NOK 10 million in grants with a deadline for submission on February 16, 2011. Additionally, NOK 2 million has been contributed by the **PETROMAKS programme** in order to give especially Russian researchers in mathematics, natural science and technology the opportunity to carry out research visits to Norway.

[67] Svalbard is an archipelago in the Arctic, constituting the northernmost part of Norway. Bilateral research cooperation includes networking between Norwegian and Russian research groups through joint activities carried out in Svalbard, the establishment of a database of Russian research on the archipelago as a basis for new joint projects, intercalibration of instruments for comparative studies and expanding Russian participation in cooperative projects at Norwegian research stations in Ny-Ålesund.

[68] The agreement between Norway and Russia on maritime delimitation in the Barents Sea and the Arctic Ocean was signed in Murmansk on 15 September 2010. More information available at http://www.barentsobserver.com/norway-and-russia-sign-maritime-delimitation-agreement.4819173-16149.html.

The **Barentsplus programme - Barents 2020** supports cooperation with Northwestern Russia in the area of health, environment, safety, business development and innovation. The Barentsplus programme is designed to promote cooperation between Russian and Norwegian institutions of higher education in the Barents region. The programme is open for both students and teachers.[69]

[69] See http://www.barentsplus.hifm.no/

6.12 POLAND

6.12.1 General Overview

Polish – Russian bilateral cooperation in the field of the Science and Technology is based upon the **Agreement between the Government of the Republic of Poland and the Government of the Russian Federation for Cooperation in the field of Science and Technology (1993),** but is should be noted that bilateral S&T cooperation between the two countries has long standing on-going tradition.

In accordance with this Agreement the following bilateral agreements between the **Polish Academy of Sciences (PAN)**[70] and Russian institutions have been signed:

- **Russian Academy of Sciences** (RAS)[71], the agreement on scientific cooperation signed on 7 December 2002. An Agreement on scientific cooperation in the field of basic space research was signed on 14 March 2005);
- **Russian Academy of Agricultural Sciences** (RAAS)[72], the agreement on scientific cooperation signed on 7 December 2002);
- **Russian Academy of Medical Sciences** (RAMS)[73], the agreement on scientific cooperation signed on 7 December 2002).

In 2011 the new **Protocol on scientific cooperation with the Russian Academy of Sciences, the Russian Academy of Agricultural Sciences and the Russian Academy of Medical Sciences** for the years 2011 – 2013 has been signed.

In Poland **the Ministry of Science and Higher Education**[74] is responsible for the development and implementation of research policy, coordination of scientific activities at the national level, financial plan regarding science budget, funding of statutory activities of research units and large research infrastructure and construction investments, as well as promotion and financing of international co-operation in the area of research.

[70] www.english.pan.pl/
[71] www.ras.ru/
[72] http://www.rashn.ru/
[73] http://www.ramn.ru/
[74] http://www.nauka.gov.pl/scientific-research/international-co-operation/

For the **bilateral S&T cooperation between Poland and Russia** an **Implementation Programme**, supplementary to the Agreement and foreseeing specific projects, is signed every two years.

Main objectives of S&T cooperation between Poland and Russia are the following:

- benefiting of existing knowledge and gaining access to new markets;
- the support of the scientists' exchange and mobility;
- the support of the implementation of the joint Polish-Russian scientific projects, especially these ones which can modernize the Polish and Russian economy;
- the participation in the conferences, symposiums and other scientific meetings.

6.12.2 Thematic Priorities for S&T cooperation Poland/Russia

- Aeronautics, aerospace technologies
- Energy safety
- Laser & nanotechnologies
- Mining & oil refining
- Medical research

6.12.3 Forms of Cooperation

Following types of cooperation are established between Polish and Russian S&T institutions:

- Mobility of researchers;
- Joint scientific events (conferences, seminars, bilateral workshops etc.);
- Joint research projects (projects' support within the framework of the Polish-Russian Committee of the Scientific and Technological Cooperation);
- Joint laboratories;
- Student scholarships for young researchers

The majority of the S&T cooperation between Poland and Russia takes place through the **Polish Academy of Sciences** (PAN) which is a key player in bilateral S&T cooperation with Russia. The Academy has a number of actively working external research stations. One of them is also **Scientific Center of the Polish Academy of Sciences in Moscow**[75]**.**

[75] http://www.panmoskwa.pl/pl/strona/strona-glowna (only in polish and russian language)

Beside **Polish Academy of Sciences** also other polish S&T institutions have establish successful cooperation with Russian institutions:

- The **Institute of Oil and Gas** cooperates with Russian Academy of Mining and Metallurgy, Russian Sate institute of Geology and with the Military Technical Academy in the filed of the metallurgy.

- **Polish Aviation Institute** implements joint research projects with Russian partners in the field of aeronautics and also in other S&T areas.
- Poland and Russia have also good cooperation in the field of nuclear research which is carried out in the **Joint Nuclear Institute in Dubna** for over past 50 years.

Under the Agreement with Russia also more than **10 scholarships** are foreseen for young researchers from Russia to perform research at Polish higher education institutions for one- or two-year period. The scholarships are funded by the Polish Government.

In addition to above it should also be noted that the majority of the Polish higher education institutions have some kind of cooperation with Russia, usually in the exchange of students and researchers.

6.12.4 Implementation Procedures

The cooperation projects in the frame of the Bilateral S&T Programme from different scientific fields are approved by the **Joint Polish - Russian S&T cooperation committee** composed of the representatives of the scientific and academic communities as well as of experts from sectors concerned.

Every two years a new implementation programme is signed under the Agreement between Poland and Russia, therefore priorities differ. From the Polish side 20 higher education institutions, 11 research institutes of the Polish Academy of Sciences and 9 R&D institutes took part in these projects in 2011[76].

The **Researchers' mobility programme,** managed by the Polish Academy of Sciences, supports the implementation of the joint S&T projects by funding the mobility expenses of the researchers. Time frame of this programme **is "on-going".** The researchers from both sides (Polish and Russian) can apply for mobility funds. The typical period of stay is usually

[76] http://www.nauka.gov.pl/scientific-research/international-co-operation/

between 3 to 28 days. An average of 4000 PLN (~€1000) is possible for mobility in one joint Polish-Russian research project.

Further Information is available in Annex 12.

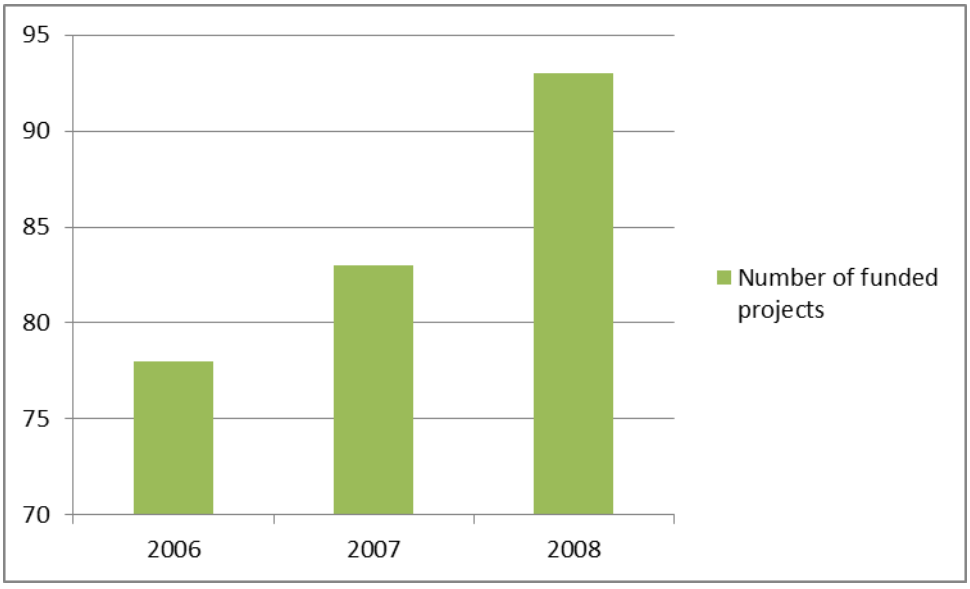
6.12.5 Overall statistics Poland/Russia

Table 9: Amount in PLN per annum of funded projects between Polish Academy of Sciences and Russian partners

Year	Amount in PLN
2006	334000
2007	382000
2008	369000
Total	**1085000**

The table above shows the financial data of spending per year for the R&D projects with Russia by the Polish Academy of Sciences. During 2006-2007, 1,085,000 PLN (€ 261,225) per reference date December 2008) has been available for funding joint projects. Newer statistical data are not available to date.

Figure 17: Number of Funded project per year



The Figure above shows the number of funded projects per year from 2006 to 2008. In this period 254 joint projects between Polish Academy of Sciences and their Russian partners have funded. Newer statistical data are not available to date.

6.12.6 Future Perspectives and Opportunities for Russian - Polish Cooperation

In the recent years special focus has been placed on technology projects in the fields of mining and oil refining, laser and nanotechnologies, aeronautics and also medical research. It is to expect that the cooperation between Polish and Russian companies operating in the area of optic electronics, energy safety, renewable fuels, aerospace, laser technology, nanotechnologies & new composite materials is also considered to be promising.

Russian-Polish S&T cooperation has recently been stimulated also through a regional ERA.Net project for Russia, the ERA.Net RUS, which is funded under the EU's FP7. The Polish National Centre for Research and Development (NCBiR) has joined a group of funding parties (including Russian ones) in pooling of resources for a call for S&T projects. This call was implemented in 2011 and projects will start implementation in 2012.

6.13 SERBIA

6.13.1 General Overview

Several cooperation agreements provide a legal basis for Serbian – Russian S&T cooperation. The following agreements have been signed between the two countries:

- Bilateral cultural relations are developing on the basis of the **Intergovernmental Agreement on cooperation in the fields of culture, education, science and sports** (Belgrade, July 19, 1995). Based on this agreement a **Programme of Cooperation in the Areas of Education, Science and Culture** was signed in December 2001 for the period 2002-2004.
- During 2009 the **Protocol on Scientific Cooperation between the Russian Academy of Sciences and the Serbian Academy of Sciences and Arts (SASA)** for the period 2009-2011 was signed.
- On March 23, 2011 an **Agreement between the Government of the Russian Federation and the Government of the Republic of Serbia on Scientific and Technical Cooperation** was signed.

The main ministry in Serbia with responsibility for S&T policy and management, planning and financing of the public R&D sector is the Ministry of Education and Science (MES). It also has core and full responsibility for international R&D cooperation. MES uses the following instruments for international S&T cooperation:

- S&T agreements with foreign organisations
- Mobility of researchers
- Dissemination of RTDI results and accompanying measures
- Joint funding programmes

Research priorities for the Serbian - Russian S&T cooperation:

- Basic Research
- Applied Research
- Technology development
- Innovation

6.13.2 Thematic Priorities for S&T cooperation Serbia/Russia

Thematic priorities differ slightly for the cooperation of MES with Russia and of SASA with RAS. The Ministry prioritises:

- Biotechnology
- Nanotechnologies/Materials
- Energy
- ICT

The Serbian Academy has defined the following priority fields:

- Health
- Nanotechnologies/Materials
- Socio-economic sciences and humanities
- Energy
- Environment

6.13.3 Forms of Cooperation

Scientific exchange programme between the Serbian Academy of Sciences and Arts and the Russian Academy of Sciences[77]

The Agreement on Scientific Cooperation signed between Russian Academy of Sciences and Serbian Academy of Sciences and Arts (SASA) in 1994 fosters international mobility of researchers and aims at facilitating scientific networking. The supported projects provide support for exchanges between few involved researchers and are based on research projects.

A mobility programme of the Serbian Ministry of Education and Science with Russia was in place in previous years (before 2008), but since then no funding activity was launched any more.

6.13.4 Implementation Procedures

After an agreement between SASA and RAS is signed, a joint call for proposals with a specific deadline is announced. Proposals must be submitted in English and Serbian languages and include definition of annual researcher exchange quota, daily allowance, duration of joint projects and intellectual properties rights. A joint evaluation procedure is

[77] Serbian Academy of Sciences and Arts, Bulletin of Scientific Research, Annual Report for 2009 http://www.sanu.ac.rs/English/Projekti/Bilten/Bulletin2009.pdf

applied. Independent researchers compose evaluation panels. Evaluation proceeds in committee meeting. Normally 3 experts evaluate one proposal. Evaluation period usually takes 2-3 months.

In January 2009 the Protocol on Scientific Cooperation between the two academies was concluded. Under the Protocol annual researcher exchange quota was increased from 25 to 30 weeks. A Thematic Cooperation Plan including 31 projects was also adopted.

Out of 30 weeks anticipated for exchange of researchers, the Serbian side used 10 and the Russian side 23 weeks.

Further Information is available in Annex 13.

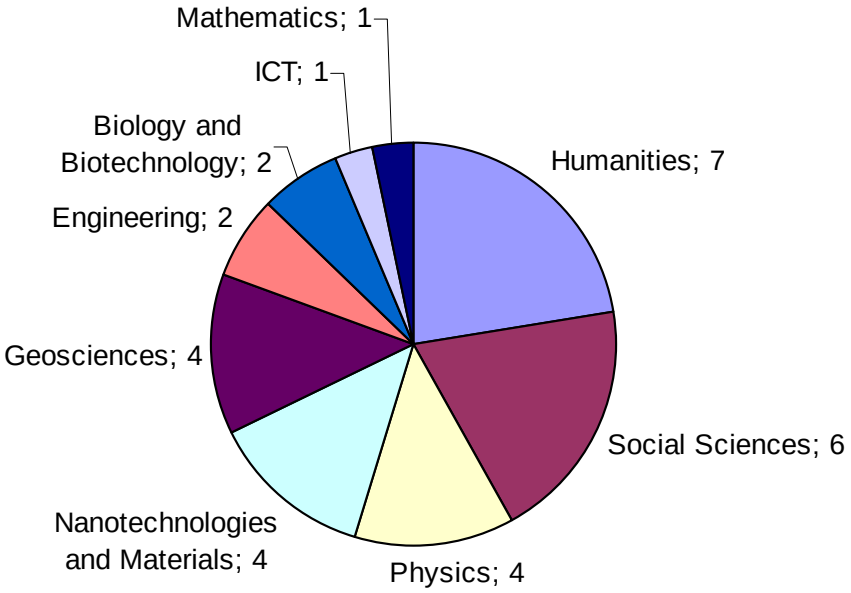
6.13.5 Overall statistics Serbia/Russia

In the period 2006-2008 the Serbian Academy invested RSD1,640,750 million in the cooperation with Russia (in € 18,692 for the reference date December 2008)[78].

In the period 2009-2011 a total of 31 projects of researchers of the two partner academies were approved for funding. For the list of the joint research projects agreed by the Serbian Academy of Sciences and Arts and the Russian Academy of Sciences see:

http://www.sanu.ac.rs/English/Projekti/MedjunarodniProjekti.aspx?arg=17,undefined

Figure 18:: Overview of funded projects SASA-RAS 2009-2011



[78] See for conversion: http://ec.europa.eu/budget/contracts_grants/info_contracts/inforeuro/inforeuro_en.cfm

6.13.6 Future Perspectives and Opportunities for Russian-Serbian Cooperation

A new memorandum of understanding is under negotiation between the Serbian Academy of Sciences and arts and the Russian Academy of Sciences. The new call for joint projects is expected till the end of 2012.

6.14 SLOVENIA

6.14.1 General Overview

Slovenia and Russia have signed a number of bilateral documents representing the legal basis for scientific and technological cooperation:

- **Agreement on Cooperation in the fields of Culture, Science and Education between the Government of the Republic of Slovenia and the Government of the Russian Federation** (1996);
- **Agreement on Scientific and Technological Cooperation between the Ministry of Science and Technology of the Republic of Slovenia[79] and the Ministry of Science and Technology Policy of the Russian Federation** (1995) on the basis of which the two countries sign two-year programmes of cooperation;
- **Agreement on Scientific and Technological Cooperation between the Ministry of Science and Technology of the Republic of Slovenia and the State Committee for Higher Education of the Russian Federation** (1994);
- **Agreement on Cooperation in the Development of Satellite Communications for Connecting National Academic and Research Networks of the Republic of Slovenia and the Russian Federation** (1993).

To date, however, bilateral cooperation has mostly built on direct contacts between researchers and research organisations from the two countries, or has taken place in the context of multilateral programmes. Since 2003 Slovenia has unilaterally funded joint Slovenian-Russian research projects (approx. 15 each year). In 2007 it was agreed that a Slovenian-Russian working group for scientific and technological cooperation will prepare a plan for bilateral cooperation in the areas of information & communication technologies, nano-systems and new materials, living systems (medicine, biotechnology), sustainable use of natural resources, energy and security (new sources of energy).

[79] Since 2012 Ministry of Education, Science, Culture and Sport http://www.mizks.gov.si/en/

6.14.2 Thematic Priorities for S&T cooperation Slovenia/Russia

- Health
- Food, agriculture and fisheries
- Biotechnology
- Nanotechnologies/Materials
- Energy
- Environment (incl. climate change)
- Transport and Aeronautics
- Socio-economic sciences and humanities
- Information and Communication Technologies (ICT)
- Mathematics
- Chemistry

6.14.3 Forms of Cooperation

In general, Slovenian researchers and research organisations are entitled to include partners from other countries (including from Russia) in research projects for which they apply for support from the Slovenia national funding sources. In principle, bilateral scientific and technological cooperation consists of joint research projects in whose framework the mobility of project partners is co-funded by each side, not excluding other forms of cooperation.

The Slovenian Research Agency in cooperation with the Ministry of Education, Science, Culture and Sport conducts regular calls for research proposals. Slovenia expects the Russian side to nominate a funding organisation and to financially support joint research projects and other joint activities. The opportunities within European projects and programmes also merit special attention.

6.14.4 Implementation Procedures

The Slovenian Research Agency (ARRS)[80] and the Ministry of Education, Science, Culture and Sport launch biannual *unilateral calls for proposals* with specific deadlines, and specific forms in Slovenian and English. The unilaterally funded Slovenian-Russian projects provide usually small scale support, mainly for travel costs.

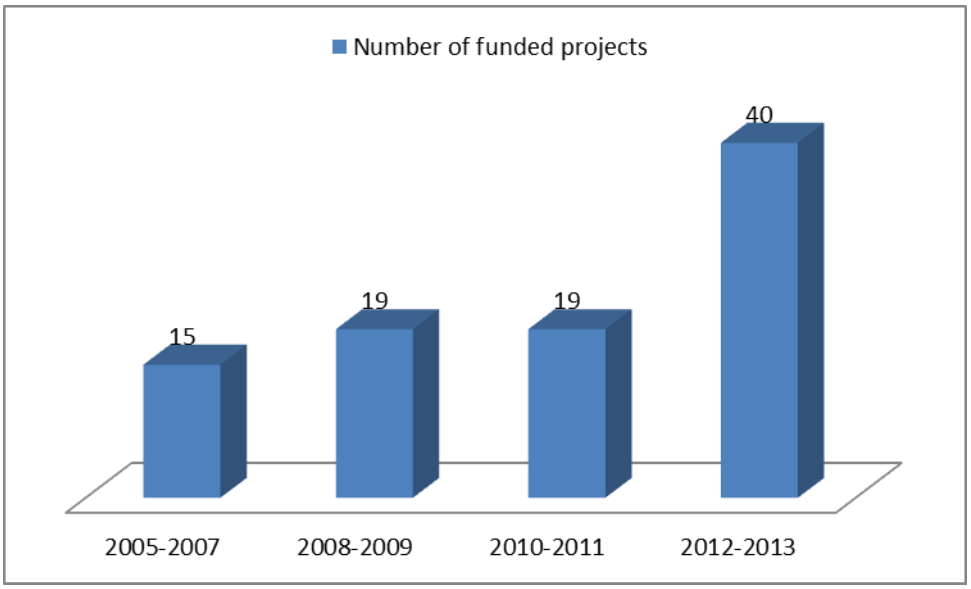
[80] http://www.arrs.gov.si/en/progproj/

Beneficiaries of the cooperation supported by the Ministry of Education, Science, Culture and Sports may be public research organisations, private non-profit research organisations, enterprises and individual researchers. For further information see Annex 14.

The evaluation of the project proposals is organised by ARRS and done only in Slovenia, as the current programme is still a unilateral activity, financed by Slovenia.

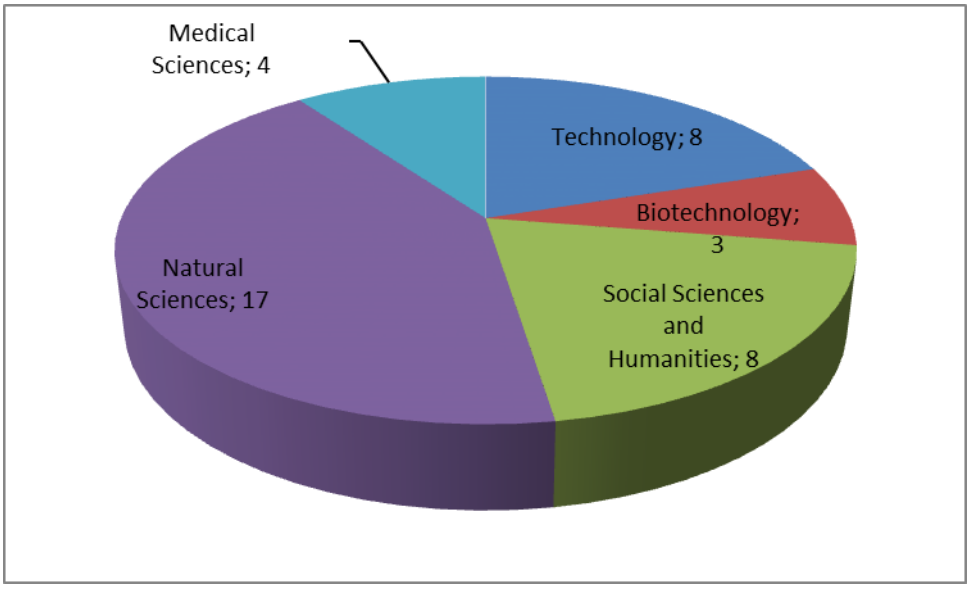
6.14.5 Overall statistics Slovenia/Russia

Figure 19: Number of funded Slovenian-Russian projects 2005-2013



In the period from 2005-2012 a total of 93 small scale projects between Slovenia and Russia have been funded. In the frame of the last call 40 projects have been funded and will be implemented in the period 2012-2013.

Figure 20: Overview of funded Slovenian-Russian projects 2012-2013 per thematic field



6.14.6 Future Perspectives and Opportunities for Russian – Slovenian Cooperation

The bilateral agreements between Slovenia and Russia provide a firm legal basis for successful cooperation in science and technology. In addition, the Slovenian-Russian working group for scientific and technological cooperation is expected to discuss the preparation of a Memorandum of Understanding between the Ministry of Education, Science, Culture and Sport of the Republic of Slovenia and the Russian Foundation for Basic Research (RFBR) as a basis for co-funding joint basic research.

6.15 SPAIN

6.15.1 General Overview

The **Agreement on Science & Technology Cooperation between the Kingdom of Spain and the Russian Federation (2001)** is a general cooperation agreement whose main purpose is to foster collaborative research and technological cooperation in fields of common interest. It has two attached documents: one related to intellectual property rights and one related to the management of the technological plan. A Joint Commission is established by article 5 of the general agreement. In addition, the Programme of Cultural and Educational Cooperation between Spain and Russia for the years 2004-2007 refers to technological and scientific university cooperation.

The Memorandum on Cooperation between Spain's National Research Council (Consejo Superior de Investigaciones Científicas - CSIC) and the Russian Academy of Sciences (RAS), signed on 16 April 2002, aims to promote collaborative research. It has mainly focused on scientists' exchange of free stays varying from one week up to one month. Every year, 10-15 Spanish researchers are hosted by Russian institutes of RAS and reciprocally 20-25 Russian specialists move to Spain. Their scientific fields cover all disciplines from experimental sciences to the humanities, from basic research to technological development.

An extension of the scope of this collaboration toward the development of joint projects is being considered, including possible joint calls for proposals with RAS and other Russian entities, such as the Russian Foundation of Basic Research.

As regards bilateral cooperation in space for peaceful purposes, the agreement between the **Government of the Kingdom of Spain and the Government of the Russian Federation on Cooperation in the Exploration and the Peaceful Use of Space**, signed on 09 February 2006, pursues commercial activities related to the launching of spacecraft; encourages joint scientific cooperation and research; and promotes mutual exchanges of relevant expertise, technologies, and equipment.

According to this agreement, **the Centre for Technological and Industrial Development** (Centro para el Desarrollo Tecnológico Industrial - CDTI), a governmental agency responsible for the development of the Spanish space industry, and the **Russian Federal Space Agency Roskosmos** are empowered to implement it through joint projects, collaborative research and exchange of information. Priorities are space launchers and space exploration, space medicine and biology, space communications and satellite navigation.

Cooperation in the field of nuclear energy is managed, on the Spanish side, by two state-owned entities: the **Centre of Research and Technology for Energy and** Environment (Centro de Investigaciones Energéticas, Medioambientales y Tecnológicas - Ciemat), which is the main public research organization in energy research, and the National Nuclear Security Council (Consejo de Seguridad Nuclear – CSN).

6.15.2 Thematic Priorities for S&T cooperation Spain/Russia

- Health
- Food, agriculture and fisheries
- Biotechnology
- Nanotechnologies/Materials
- Energy
- Environment (incl. climate change)
- Transport and Aeronautics
- Socio-economic sciences and humanities
- Security
- Space
- Information and Communication Technologies (ICT)

6.15.3 Forms of Cooperation

The **Framework Agreement on scientific cooperation between The Spanish National Research Council** and the **Russian Academy of Sciences** was signed in Madrid on April 16, 2002.

The cooperation is carried out through a fruitful short-term exchange of knowledge and scientists, the implementation of joint projects in areas of common interest and any other initiative of mutual interest.

Funding provided by sending party and also the host party.

Another framework for the cooperation is **the Scientific Cooperation Programme** between **the Russian Academy of Sciences** and **the Spanish National Research Council** signed in Madrid on July 5, 2003. This programme enables the exchange of researchers between two institutions through providing of the free accommodation, not exceeding 80 weeks a year.

6.15.4 Implementation Procedures

The evaluation procedure in the CSIC-RFBR joint programme is as follows: on the Spanish side, each proposal is evaluated by two persons. For each thematic field there is a coordinator who disposes of a panel of evaluators. The evaluation is remote or in situ depending on the type of project. The criteria that are used are the quality of projects, the quality of teams and researchers of both sides, if they are competent, the possibility of collaboration, the importance of scientific links and the development of the project in the future. The final decision on the funding is made by the CSIC Vice President.

Funded projects have to provide regular reporting. Concerning IPR, CSIC has issued principles for the "Protection and Use of Intellectual Property Rights", which have to be followed by the researchers implementing a project.

For further details see Annex 15

6.15.5 Overall statistics Spain/Russia

Table 10: Cooperation (mobility) between the CSIC and RAS 1999 -2009

YEAR	STAYS
1999	1
2002	33
2003	28
2004	16
2005	18
2006	26
2007	24
2008	43
2009	29
TOTAL	218

Table 11: Available funding per year

YEAR	1999	2002	2003	2004	2005	2006	2007	2008	2009
AMOUNT	1202,02	32468,38	27255,34	17260,23	17070,85	29961,1	26533,18	36238,76	39250
TOTAL	1202,02	32468,38	27255,34	17260,23	17070,85	29961,1	26533,18	36238,76	39250

Table 12: CSIC-RAS co-publications until 2009

Areas	Nº publications
PHYSICS, CONDENSED MATTER	99
MATERIALS SCIENCE, MULTIDISCIPLINARY	64
CHEMISTRY, PHYSICAL	55
ASTRONOMY & ASTROPHYSICS	45
PHYSICS, PARTICLES & FIELDS	44
PHYSICS, APPLIED	30
BIOCHEMISTRY & MOLECULAR BIOLOGY	25
CHEMISTRY, MULTIDISCIPLINARY	21
PHYSICS, MULTIDISCIPLINARY	20
GEOCHEMISTRY & GEOPHYSICS	18
POLYMER SCIENCE	18
PHYSICS, ATOMIC, MOLECULAR & CHEMICAL	15
PHYSICS, NUCLEAR	14
NANOSCIENCE & NANOTECHNOLOGY	13
BIOPHYSICS	12
CHEMISTRY, INORGANIC & NUCLEAR	10
GEOSCIENCES, MULTIDISCIPLINARY	10
OPTICS	10
CHEMISTRY, ORGANIC	9
INSTRUMENTS & INSTRUMENTATION	9
CHEMISTRY, ANALYTICAL	8
CRYSTALLOGRAPHY	8
MARINE & FRESHWATER BIOLOGY	8
SPECTROSCOPY	8
EVOLUTIONARY BIOLOGY	7

S&T COOPERATION: The Spanish National Research Council - the Russian Foundation for Basic Research

The Framework Agreement on scientific cooperation between The Spanish National Research Council and the Russian Foundation for Basic Research was signed in Madrid on 13 November 2007 and in Moscow on 19 November 2009.

In 2009 10 joint projects have been funded and 126.947 EURO have been invested by the Spanish side.

6.15.6 Future Perspectives and Opportunities for the /Russian - Spanish Cooperation

Both Ciemat and CSN cooperate regularly with Russian counterparts, especially in the fields of nuclear energy, both fission and fusion, and energy generation security. In nuclear fission, Ciemat has concentrated on nuclear safety and technologies for radioactive waste treatment (i.e., partitioning and transmutation) with regular collaboration with departments and laboratories from Russia. Ciemat's Nuclear Fusion Laboratory has been subcontracting

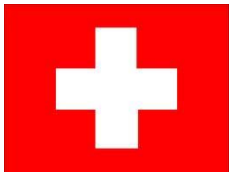
research with Russian institutes, mostly the Russian Research Centre - Kurchatov Institute and the Ioffe Physical Technical Institute of the Russian Academy of Sciences (St. Petersburg).

Another field of priority interest in the bilateral cooperation is high-energy physics, particularly accelerators and plasma physics. Collaborative activities implemented with the Budker Institute of Nuclear Physics SB RAS (Novosibirsk), the Institute of Theoretical and Experimental Physics (Moscow), and the Institute of High Energy Physics (Protvino). Finally, Ciemat actively takes part in activities of the ISTC (International Science & Technology Centre, Moscow) and supports three ongoing EU Contact Experts Groups (CEG) on nuclear energy.

Collaboration in the field of polar research has developed intensively in recent years. It is based on technological, university and project-to-project cooperation. Projects have to date mainly focused on the joint participation in expeditions of Spanish and Russian scientific bases, both in the Antarctic and the Arctic (Bellingshausen, Vernadsky, Svalbard, Barentsburg and King Juan Carlos), and the use of the polar research vessels.

Cooperation between Spain and Russia has been developing recently also in the multilateral framework of the FP7 funded ERA.Net project for Russia, the ERA.Net RUS. In this framework bilateral cooperation programmes are coordinated and resources pooled for a joint call. The Spanish Ministry of Science and Innovation (MICINN) has participated as funding party in the ERA.Net RUS call for S&T projects in 2011.

6.16 SWITZERLAND



6.16.1 General Overview

Switzerland and Russia have long standing relations in the fields of science and education. The S&T cooperation is based on the expired Intergovernmental Agreement between Switzerland and Russian Federation. To this date negotiations about the new Agreement in S&T have still not been finished.

The State Secretariat which isacting on behalf of the Federal Council, is conducting negotiations with the Ministry of Education and Science of Russian Federation to finalise a bilateral agreement on cooperation in the fields of science and technology. The bilateral Agreement will be signed in the coming months[81].

However, because of the already established cooperation, there has been a mutual consensus between Russian and Switzerland side to use the instruments for the funding and cooperation already before the new S&T Agreement will be signed[82]. In this regard the **Bilateral Science and Technology Cooperation Programme with Russia 2008 – 2011** has been approved by the Swiss Federal Council within the „Message Education, Research and Innovation ERI 2008-2011 " in 2007.

On the Switzerland side for the implementation of the S&T programme with Russia the **State Secretariat for Education and Research (SER)**[83] is responsible.

In February 2007, **the State Secretariat for Education and Research (SER)**, designated the **University of Geneva** as the Leading House (LH) and the **École Polytechnique Fédérale de Lausanne (EPFL)** as the Associated Leading House (ALH) for the implementation of the bilateral science and technology cooperation program with Russia.

[81] http://www.unige.ch/collaborateurs/recherche/STCP-CH-RU.html
[82] www.sbf.admin.ch/htm/dokumentation/.../bilateral/.../russland_de.pdf
[83] http://www.sbf.admin.ch/htm/themen/international/bilateral_programm_en.html

The Intergovernmental Agreement, which has not been signed yet, foresees the creation of a **Swiss-Russian Joint Working Group (JWG)** on scientific and technological cooperation. The tasks of the JWG are as follows:

- consideration and coordination of recommendations and proposals on issues concerning the creation of the most favorable conditions for the implementation of scientific and technological cooperation of the Contracting Parties;
- identification of priority areas of cooperation in the framework of the Agreement and development of programmes of cooperation;
- consideration of measures for development of cooperation and enhancement of its efficiency on the basis of the Agreement;
- discussion of other questions of the implementation of the Agreement.

Moreover, the sessions of the JWG take place alternately, i.e., in the Russian Federation and Switzerland on dates to be agreed upon through the diplomatic channels. The JWG will remain virtual as long as the new bilateral agreement will not signed.

Moreover, **the Swiss National Science Foundation (SNSF)** signed an **Agreement on Scientific and Technological Co-operation between the Russian Foundation for Basic Research (RFBR)** in 2003. This agreement provides a framework for the co-operation within **SCOPES programme** and also in a long-term perspective beyond SCOPES[84].

6.16.2 Thematic Priorities for S&T cooperation Switzerland/Russia

- Engineering, including information and communication technologies
- Nanosystems and materials
- Life sciences, particularly systems biology
- Natural resources, energy and energy conservation/efficiency
- Transport systems
- Economics

6.16.3 Forms of Cooperation

Cooperation within the Bilateral Science and Technology Cooperation Programme with Russia 2008 – 2011State Secretariat for Education and Research (SER)[85]

[84] http://www.snf.ch/E/international/europe/Pages/default.aspx
[85] http://www.sbf.admin.ch/htm/index_en.php

For the Bilateral Science and Technology Cooperation Programme with Russia 2008 – 2011 CHF 6.850 million CHF have been approved by the Swiss Federal Council This budget was subsequently increased with 450'000 CHF to support additional Joint Research Projects.
In 2011 the funding of the bilateral programme has been extended to the year 2012[86].
Funding instruments of the Bilateral S&T programme with Russia:
- Joint research projects
- Utilisation of special infrastructure
- Faculty exchange
- Student exchange

Main Objective of the bilateral programme[87]:
- To promote Swiss Science and Swiss Higher Education abroad.
- To create, exploit and disseminate, in conjunction with Russian partners, new areas of knowledge that will contribute to prosperity and development.
- To establish safe conditions for the exchange of expertise and experience over the long term, based on mutual benefits and respect.
- To promote high standards in science and research.

The Swiss National Science Foundation (SNSF)[88] is Switzerland's leading provider of scientific research funding. The SNSF annually supports some 7200 researchers, almost 80 percent of whom are aged 35 years or younger. With its federal mandate, it supports basic research in all disciplines, from philosophy and biology to the nanosciences and medicine.
As already stated above, the **Agreement on Scientific and Technological Co-operation between the Russian Foundation for Basic Research (RFBR)** and **the Swiss National Science Foundation (SNSF)** was signed in 2003. The agreement between RFBR and SNF aims to promote the development of the co-operation in all fields of science and research between the two countries on the basis of equality and mutual benefit.
The SNSF provides a number of funding opportunities for cooperation with the Russian Federation over the **"SCOPES** (Eastern Europe) **funding programme for research collaboration with Eastern European Countries and the New Independent States of the former Soviet Union**". It is a joint programme of SNSF and the Swiss Agency for Development and Co-operation (SDC), implemented by SNSF since 1990. It includes different funding instruments such as Joint Research Projects, Institutional Partnerships and

[86] http://www.unige.ch/collaborateurs/recherche/STCP-CH-RU.html)
[87] http://www.unige.ch/collaborateurs/recherche/STCP-CH-RU/Objectives-Principles.html
[88] http://www.snf.ch/E/about-us/Pages/default.aspx

Conference Grants, and it aims primarily at strengthening research teams and scientific institutions in Eastern Europe and the New Independent States of the former Soviet Union. Russia has been participating in this programme since 1993.

At the end of 2008, the Swiss National Science Foundation (SNSF) and the Swiss Agency for Development and Cooperation (SDC) of the Swiss Federal Department of Foreign Affairs launched a new phase of the programme **"Scientific co-operation between Eastern Europe and Switzerland" (SCOPES 2009-2012)[89] with following objectives:**

• Capacity building: Partnerships between research institutions are not designed to produce research findings but to strengthen research institutions and the scientific community in the target countries. Other important factors are the inclusion of young scientists and a good gender balance.

• Partnership approach: Important principles in establishing partnerships are jointly established objectives, shared responsibility, accountability, transparency, non-discrimination, participation and efficiency.

• Transition relevance: Eastern European research institutions are supported in their transition process towards international standards.

6.16.4 Implementation Procedures

University of Geneva as the Leading House (LH) and the École Polytechnique Fédérale de Lausanne (EPFL) as the Associated Leading House (ALH) for the implementation of the **bilateral science and technology cooperation programme with Russia** have been designated by the State Secretariat for Education and Research.

Up to date following calls have been published:

Calls for Mobility projects (see Annex 16.1 for further information):

1. Call for Faculty Exchange projects

The Faculty Exchange grants are intended to promote activities such as teaching. Teaching in the framework of doctoral schools will be given particular attention, as for example in the form of teaching modules

2. Call Students Exchange projects

The Students Exchange grants are intended to support Master's, PhD and post doc students of Switzerland for short stays in Russia and to host Russian students for short stays in Switzerland.

[89] http://www.snf.ch/E/international/europe/scopes/Pages/default.aspx

3. Call for Utilisation of Specific Infrastructure projects

The Utilisation of specific infrastructure grants are intended to support Swiss and Russian scientists (faculty and junior staff) wishing to spend a certain time period in a laboratory, department or at an institution of the counterpart country in order to utilise specialised equipment, facilities, resources, libraries and/or databases that are not available at their home institution.

Call for Joint research projects (JRP)

Grants for Joint Research Projects are meant to promote collaborative projects with clearly defined goals involving at least one Swiss and one Russian partner.

For information about Project duration, eligible institutions and funding see Annex 16.1.4.

The received project proposals are being evaluated. The evaluation criteria are different for each funding instrument. For detailed information see Annex 16.1.

The **programme SCOPES (East Europe)** – Scientific Co-operation between Eastern Europe and Switzerland 2009 – 2012 has a total of CHF 16 million available and includes the following instruments[90]:

- **Joint Research Projects (JP)** provide funding for researchers from partner countries to carry out innovative projects with Swiss institutions on specific problems in all areas of investigator-driven research.
- **Institutional Partnerships (IP)** are intended to contribute to the development and modernisation of institutional aspects of research and teaching institutions in Eastern Europe, and to increase their attractiveness and international competitiveness by improving basic overall conditions. They do not directly fund research projects.
- **Preparatory Grants (PG)** facilitate the elaboration of proposals for JRP and IP. They provide scientists from the partner countries and from Switzerland with a financial contribution towards the costs of a meeting to prepare and elaborate a JRP or IP proposal.
- **Valorisation Grants (VG)** are designed to increase the impact and sustainability of research results generated from JRP and IP.
- **Conference Grants (CG)** provide funding for travel and accommodation for researchers from partner countries to participate in international scientific conferences held in

[90] http://www.snf.ch/E/international/europe/scopes/Pages/default.aspx

Switzerland.

There are no specific thematic requirements. However, the JRP and IP must, besides having scientific quality, show potential for development possibilities (e.g. capacity building) for the Eastern European partner(s).

The programme foresees two categories of partner countries:

- Group 1 (West Balkan States, South Caucasus and Central Asia as well as Moldavia and the Ukraine)
- Group 2 (Eastern European members of the EU as well as Croatia and Russia).

Bilateral projects (joint research project and institutional partnerships) are possible with partners of the first group. Tri- and multilateral projects can be launched with countries from both categories, but at least half of the Eastern partners must be from the first category.

The financial means are mainly earmarked for the Eastern European partners. However, on the Swiss side, the co-ordination costs are being covered. The amount of funding per project depends on the number of Eastern European partners.

Further detailed information about funding per funding instrument and evaluation criteria is available at Annex 16.2.

6.16.5 Overall statistics Switzerland/Russia

Table X: Overview of the funded projects per funding instrument in the Bilateral S&T programme[91]

Year	Number of overall funded mobility projects	Number of funded joint research projects
2009	49	
2010	33	24
2011	24	
Total	**106**	**24**

The table above shows the number of the funded project per year for the duration of the Bilateral S&T programme (2008-2011) between Switzerland and Russia. As mentioned, there

[91] http://www.unige.ch/collaborateurs/recherche/STCP-CH-RU/fundedprojects.html

was only one call for the joint research projects in 2009. The table also shows the overall number of funded mobility projects. The separate data for the different types of mobility funding instruments are not available.

Statistical data[92] for the Russian participation within SCOPES programme shows that the number of projects differ from the programme phase, however it should be pointed out that in the current programme phase fewer projects have been funded, but the overall funding per project has increased.

Table 13: Overview of Russian participation in SCOPES per programme phase[93]

Programme Phase	Number of projects	Financial support (in CHF)
SCOPES 1993-1995	ca. 100	no figures available
SCOPES 1996-1999	68 (46 JRP, 22 IP)	3.723.368,00 CHF
SCOPES 2000-2004	73 (50 JRP, 23 IP)	4.631.970,00 CHF
SCOPES 2005-2008	37 (25 JRP, 12 IP)	2.800.187,00 CHF
SCOPES 2009-2012	17 (14 JPR, 3 IP)	3.212.450,00 CHF
Total	**295**	**14.367.975,00 CHF**

[92] http://www.snf.ch/E/international/europe/scopes/Pages/current-projects.aspx

Figure 21: Number of the approved Joint Research Project (JRP) and Institutional partnerships (IP) with Russian participation (2005-2008)

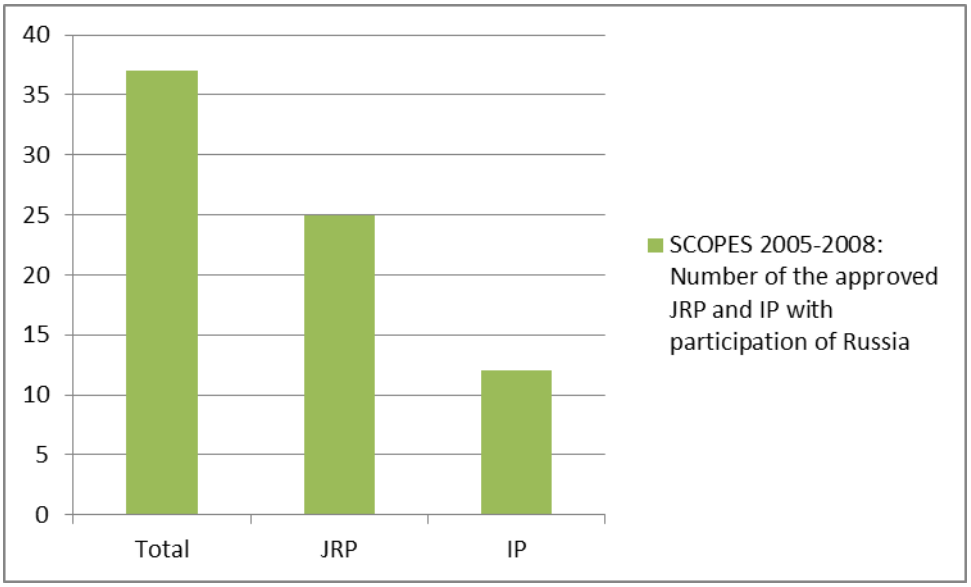


Figure 22: Number of the approved Joint Research Project (JRP) and Institutional partnerships (IP) with Russian participation (2009-2012)

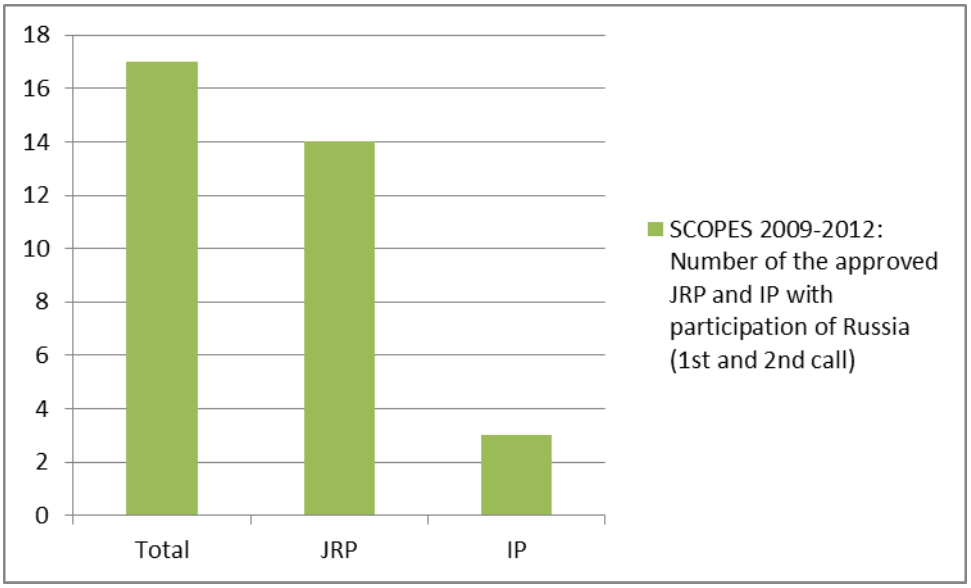
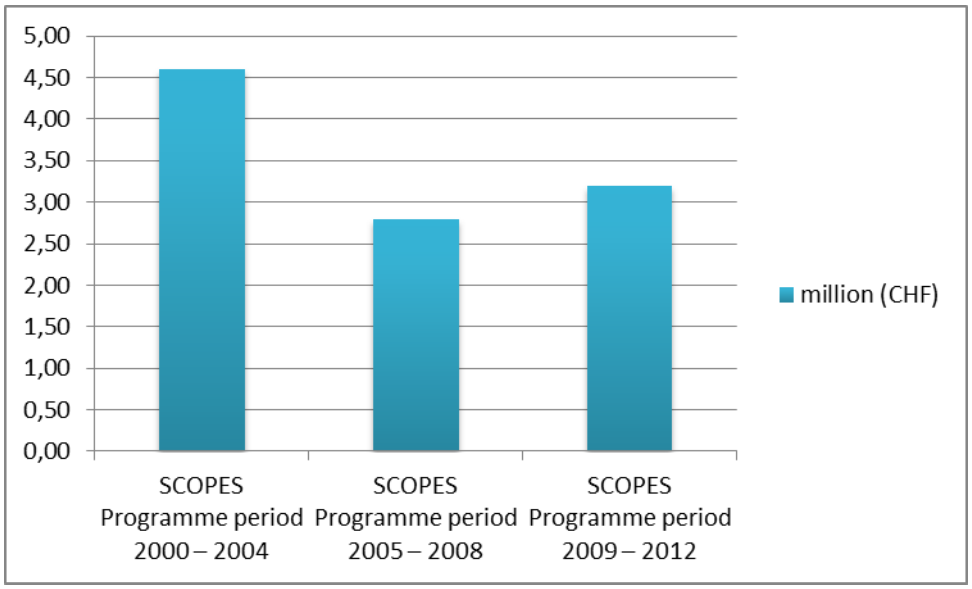


Figure 23: Funding (in CHF) of the approved Joint Research Project and Institutional partnerships with Russian participation (2009-2012)



6.16.6 Future Perspectives and Opportunities for Russian - Swiss Cooperation

In 2011 the funding of the bilateral programme has been extended to the year 2012[94]. The calls for the mobility funding instruments will be announced by the middle of 2012. For the joint research projects' funding instrument, no call is foreseen in 2012.

The structure and contents of the bilateral programme for the years 2013-2016 will be defined in 2012.[95]

For the current phase of the programme **SCOPES 2009-2012,** the following instruments are open (until 31.12.2012).[96]

• Valorisation Grants (VG)

• Conference Grants (CG)

Apart from the programme SCOPES, the SNSF is constantly funding many activities that include a Russian "dimension". These include mainly fellowships of Russian researchers performing research in a Swiss institution and vice versa, as well as research projects in free research and within the National Centres of Competence in Research (NCCR). The intensity

[94] http://www.unige.ch/collaborateurs/recherche/STCP-CH-RU.html)
[95] http://www.unige.ch/collaborateurs/recherche/STCP-CH-RU.html)
[96] http://www.snf.ch/E/international/europe/scopes/Pages/call-for-proposals.aspx

of co-operation within these projects has not been assessed. It may vary considerably from very loose to very intense co-operation.

6.17 TURKEY

6.17.1 General Overview

Turkish – Russian S&T cooperation is based on cooperation agreements signed between the two countries. The following agreements are in place:

- Cultural and Scientific Cooperation Agreement (19 July 1994);
- Memorandum of Understanding on Scientific Cooperation signed between TÜBITAK (The Scientific and Technological Research Council of Turkey) and the Russian Foundation for Basic Research (RFBR) (10 December 2007);
- Protocol for the Unification of the Turkish and Russian "Scientific Cooperation" working groups (5 August 2009);
- Memorandum of Understanding between TÜBITAK and the Russian Federal Space Agency (ROSCOSMOS) on cooperation on outer-space exploration and peaceful use (6 August 2009);
- Memorandum of Understanding between the Council of Higher Education of Turkey (YÖK) and the Ministry of Education and Science of the Russian Federation (11-12 May 2010.

The major objectives of S&T cooperation of the Turkish government with the Russian Federation are:

- To create common calls for proposals.
- To gain complementary skills and benefit of existing knowledge and technology developed abroad.
- To establish long term partnership between researchers and research institutions.
- To enhance joint participation to multilateral programmes such as FP7, COST, etc.

There is a general tendency of the Turkish government to enhance S&T cooperation with the Russian Federation. Turkey aims to establish a long-lasting R&D cooperation both at individual level among researchers and at institutional level, including cooperation between industrial organisations for the mutual benefit of both countries. The Russian Federation has in general been considered an important cooperation partner in the last years, which was mentioned, for example, in the "International STI Strategy for Turkey - 2009/2010 Action

Plan". A well-educated human resource potential in Russia should be considered as one of the driving forces for the cooperation between EU Member States, countries associated to the FP7 (including Turkey) and the Russian Federation. Russia has high rates of tertiary education attainment among its labour force. Most of the graduates are theoretically well educated and have finished studies in sciences and engineering.

The main instruments to promote and support S&T cooperation with the Russian Federation (including mobility, project support, and framework setting) are financial support to joint research projects and joint workshops.

6.17.2 Thematic Priorities for S&T cooperation Austria/Russia

RTD thematic areas between Turkey and the Russian Federation have been agreed in the framework of the signed "Memorandum of Understanding on Scientific Cooperation" between TÜBITAK and RFBR. These areas are:

- Mathematics, Mechanics and Informatics
- Physics and Astronomy
- Chemistry
- Biology and Medical Sciences
- Earth Sciences
- Humanities and Social Sciences
- Telecommunications and Information
- Fundamentals of Engineering Sciences

Due to the fact that RFBR covers only fundamental sciences the cooperation is limited to the support of basic research.

Besides the above mentioned areas, TÜBITAK has also concluded an agreement with the Space Research Institute of The Russian Academy of Sciences in the field of space research.

6.17.3 Forms of Co-operation

TÜBITAK – The Scientific and Technological Research Council of Turkey - is the leading agency for the management of research in Turkey and is responsible for promoting, organizing, coordinating, conducting, and of funding research and development in line with the national targets. TÜBITAK is an autonomous governmental institution and is the responsible body for programme management in Turkey. As for the bilateral S&T cooperation between Turkey and the Russian Federation, TÜBITAK supports *large-scale*

cooperation programmes as well as *small project funding programmes* in various scientific fields.

Already in 1998, an attempt to implement and manage a joint call with the Russian Federation was made within the context of the "Agreement between the Government of the Republic of Turkey and the Government of the Russian Federation". But projects were ended, because of the insufficiency of financial resources allocated by the counterpart in the Russian Federation.

TÜBITAK signed in 2007 a bilateral Memorandum with the **RFBR**, aforementioned in the General Overview section, for the small-scale project programmes, and in 1995 with **Russian Academy of Sciences** (RAS) for the cooperation in the S&T thematic area of space research for the large-scale cooperation programmes.

I. THE LARGE SCALE COOPERATION PROGRAMMES

1. "Spectrum X-Gamma High Energy Astrophysics Satellite"

An agreement was signed in 1993 with the Space Research Institute of the Russian Academy of Sciences (RAS) for collaboration in observation during the operational life cycle of the satellite "Spectrum X-Gamma" and it also involved other participants such as the UK, Italy, Germany, Denmark, the USA, Finland, Hungary, Israel. The project was cancelled in 1997 by the Space Research Institute.

2. RTT150 Telescope Agreement

An agreement was signed in 1995 with the Space Research Institute of the Russian Academy of Sciences (RAS) and the Kazan State University to install a middle sized optical telescope at the Turkish National Observatory in Antalya. The main objective is to execute ground-based observation of cosmic x-ray sources.

II. SMALL PROJECT FUNDING PROGRAMME

The joint activities between Turkish and Russian scientists and exchange of scientists between the two countries have been supported within the framework of the "Memorandum of Understanding on Scientific Cooperation" between TÜBITAK and RFBR and an "Implementation Guideline" thereof, signed in Ankara on 10 December 2007. Validity of the signed Agreement is 5 years.[97] The Memorandum foresees several mechanisms of cooperation, such as:

- Joint research projects;
- Joint workshops; and

[97] See the Memorandum of Understanding on Scientific Cooperation between TÜBITAK and RFBR: http://www.tubitak.gov.tr/tubitak_content_files/ICIM/icim/anlasmalar/Rusya_Anlasma.pdf

- Other joint activities (open to receive funding upon consultation).

6.17.4 Implementation Procedures

Project proposals **submitted** to the –TÜBITAK-RFBR calls must provide detailed information on the objectives and justification of the planned research work, the methodology, composition of the research team, intended timetable, and proposed budgets. Proposals have to be prepared in English and are submitted simultaneously to TÜBİTAK and RFBR. The submitted proposals should of course match.

Project Proposals are **evaluated** independently and are approved by each of the parties following their own rules and regulations, which are left as unaffected as possible for both institutions. However, the funding partners have agreed to align the procedures with a joint application form. The parties make joint decisions based on the evaluation results, and only projects, which are positively evaluated by both institutions, are accepted and implemented. For the evaluation on TÜBITAK´s side, the EU evaluation procedures are used. In this respect the panel review system is used. Panels are composed of independent national researchers who have expertise in the relevant fields. Each project proposal is evaluated by 5 independent researchers.

Evaluation criteria are:

- Scientific and technical merits of the proposal
- Suitability of applicants and feasibility of the project
- Requested budget
- National priorities
- Participation of young researchers

The evaluation procedure takes usually 4-6 months.

TÜBITAK can provide in its bilateral cooperation programmes support for public research organisations, public and private universities, enterprises, and individual researchers. **Costs** which may be covered are personnel, equipment, consumables, travel costs and daily allowances. **Duration** of the approved joint research projects is two years. Annual funding for each project is up to 15,000 Euros from TÜBITAK and 500,000 Roubles from RFBR. TÜBITAK bears the cost of the Turkish project team and RFBR the costs of the Russian project team.

What concerns **Intellectual Property Rights (IPR)**, in Article V of the Memorandum of Understanding it is stated that "scientific and technological results and any other information

derived from the cooperation activities under this Memorandum of Understanding, will be announced, published, or commercially exploited with the consent of both Parties and according to international agreements concerning Intellectual Property Rights to which both Parties are Parties".

Projects have to **report** on their activities and achievements after one year of project duration (intermediate report) and at the end of the project (final report).

An **impact assessment** of the bilateral calls has not yet been performed, as the cooperation is rather recent and the first projects started only in 2009.

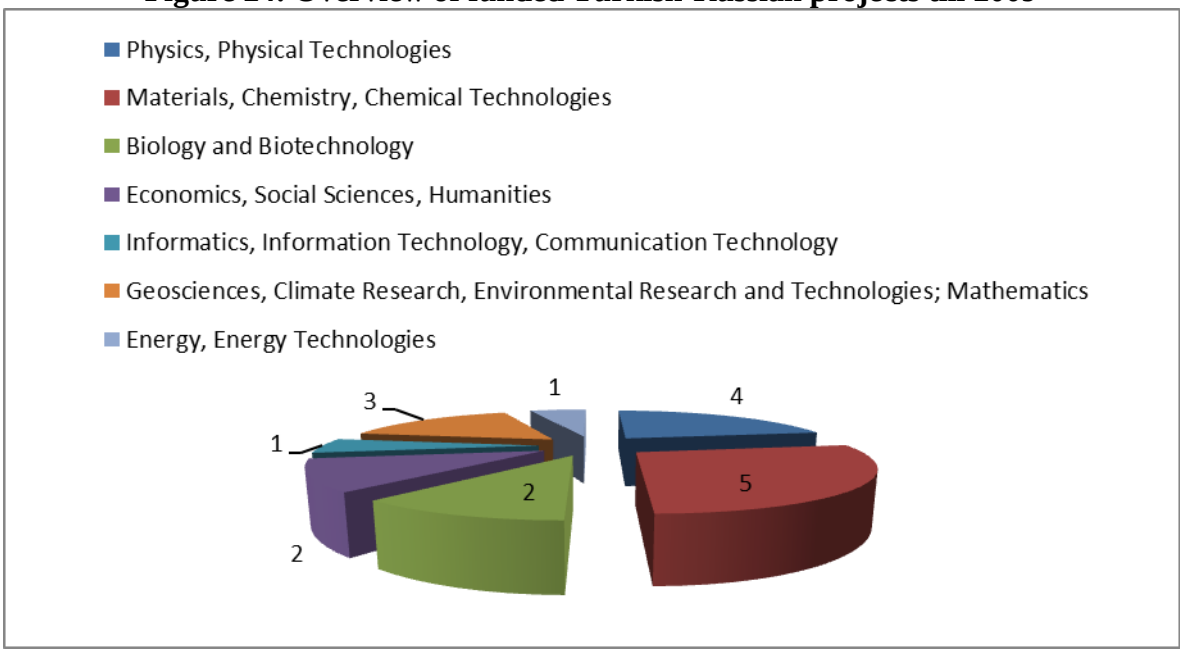
For further details see Annex 17.

6.17.5 Overall statistics Turkey/Russia

Till 2009 **two large-scale projects** and **18 joint research projects** have been supported and implemented in the framework of the S&T cooperation between Turkey and the Russian Federation. The funded projects were distributed among thematic fields as follows:

- Materials, Chemistry, Chemical Technologies (5)
- Physics, Physical Technologies (4)
- Geosciences, Climate Research, Environmental Research and Technologies; Mathematics (3)
- Biology and Biotechnology (2)
- Economics, Social Sciences, Humanities (2)
- Informatics, Information Technology, Communication Technology (1)
- Energy, Energy Technologies (1)

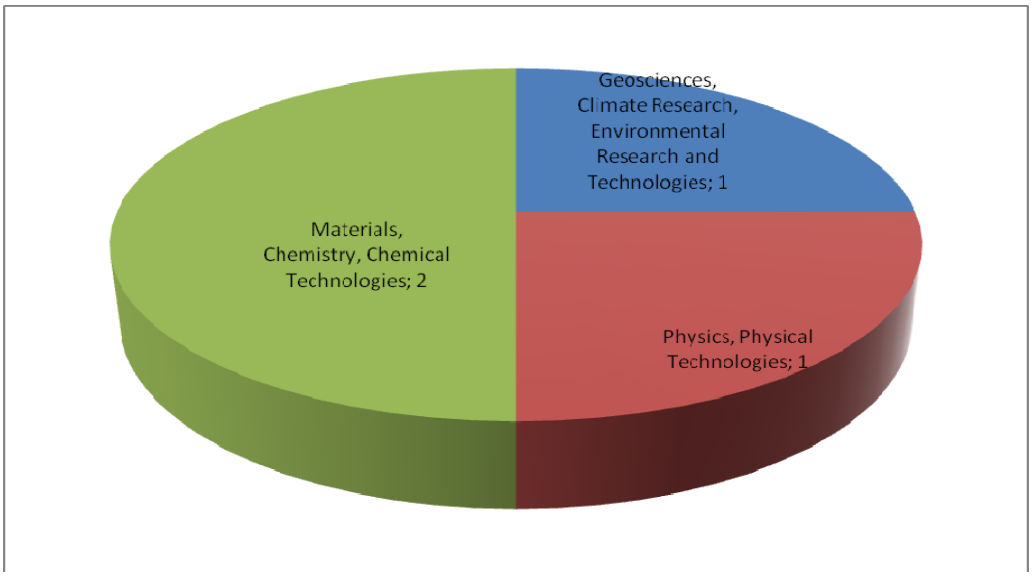
Figure 24: Overview of funded Turkish-Russian projects till 2009



In 2011 another joint call between TÜBITAK and RFBR was implemented. In this call only 4 projects were supported, out of a number of 29 submitted project proposals. The success rate was therefore only 14% in this second call. Other funding mechanisms, e.g. joint workshop or other joint activities, have not been implemented yet.

In 2011 overall only 4 projects were supported: 2 in the field of Materials, Chemistry, Chemical Technologies, 1 project in Physics, Physical Technologies, and 1project in the field of Geosciences, Climate Research, Environmental Research and Technologies.

Figure 25: Overview of funded Turkish-Russian projects till 2009



6.17.6 Future Perspectives and Opportunities for Russian -Turkish Cooperation

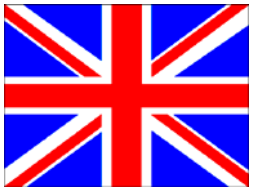
The most important challenges with regard to S&T cooperation with the Russian Federation from the point of view of Turkey are:

- The insufficiency of financial resources for cooperation on the side of the counterpart.
- General bureaucratic and administrative problems as regards visa regulations, intellectual property rights and exchange of scientific and biological material across borders.
- Language barriers.

There are plans to implement the second mechanism (joint workshops) foreseen in the TÜBITAK-RFBR Memorandum in the near future.

From the Turkish perspective, further bilateral cooperation should focus on inclusion of the third countries' Programme Owners into bilateral programmes. This could create an opportunity for continued cooperation. In addition to this, complementarities between bilateral and multilateral cooperation (e.g. multilateral ERA.Net RUS call, etc.) shall be sought.

6.18 UNITED KINGDOM



6.18.1 General Overview

Conform with its "Strategy for International Engagement in Research and Development" of 2006, the British government intents to improve the support for excellence through international S&T cooperation and to create incentives for leading scientists world-wide to do research in the UK. The current government supports this strategy. Amongst the various international partners in S&T cooperation, Russia is an important player. For Russia, in turn, the UK is the 4th most frequent partner after the US, Germany, and France.

Russia and the UK have signed an agreement on S&T cooperation in 1996. A new Science and Innovation section was opened at the British embassy in Moscow[98] in 2010 which is part of the UK's global Science and Innovation Network [99]. Mutual cooperation is also managed by the UK Russia Joint Committee on Science & Technology Co-operation [100]. Its activities have lead, amongst other things, to the following results:

- **The Royal Society (RS) and the Russian Foundation for Basic Research (RFBR) have created a bilateral fund for basic research**: Since 2007, the bilateral fund has offered UK and Russian scientists grants lasting two years for mobility and research expenses. Up to eleven grants are awarded annually.
- **The Newton International Fellowships** enable overseas postdoctoral researchers to undertake research in UK research institutions. They are administered by the British Academy, the Royal Society and the Royal Academy of Engineering. Four Russian fellowships have been awarded since 2008.
- **The UK Russia Year of Space 2011** celebrated the 50th anniversary of Yuri Gagarin's space flight and work towards enhancing collaboration in space science between UK and Russia, by building on the existing memorandum of Understanding between the UK Space Agency and Roscosmos signed in July 2010.

[98] http://ukinrussia.fco.gov.uk/en/
[99] http://www.bis.gov.uk/sin
[100] http://ukinrussia.fco.gov.uk/en/about-us/working-with-russia/004-embassy-departments/015-science-innovation/002-joint-committee

The UK and Russia are focused on enhancing existing partnerships under the UK-Russia Knowledge Partnership, launched by Foreign Secretary William Hague during his visit to Moscow in October 2010.Under the Knowledge Partnership, Russian partners are working with UK Trade & Investment Russia[101], the Climate Security section at the British Embassy Moscow and the British Council[102] in seeking to engage UK companies in harnessing Russia's scientific strengths in pharmaceuticals, energy, aviation, materials science and space science. Minister for Universities and Science, David Willetts launched two S&I Russia initiatives in 2011: Expert Innovation Roundtables and Space Science Café lecture series.

Programme Owners:

An important UK programme owner and player for international S&T relations is the **Royal Society**[103]. The Royal Society is a Fellowship of the world's most eminent scientists and is the oldest scientific academy in continuous existence. The Society has three roles: it is the UK academy of science promoting the natural and applied sciences, a learned society, and a funding agency.

Research Councils UK (RCUK)[104] is the strategic partnership of the UK's seven Research Councils. The primary role of Research Councils UK is to fund research. Each year a total of around £3 billion is invested in research conducted at UK universities, Research Council Institutes, and in securing access to international facilities for UK researchers. This money is used to fund the very best world-class research as judged by independent, expert peer review. Together the Research Councils cover the full spectrum of academic disciplines from the medical and biological sciences to astronomy, physics, chemistry and engineering, social sciences, economics, and the arts and humanities.

The Leverhulme Trust[105] makes awards for the support of research and education. The Trust emphasises individuals and encompasses all subject areas. Their International Networks enable a Principal Investigator to lead a research programme to stimulate an international exchange of ideas between UK universities and overseas institutions.

The Royal Academy of Engineering (RAEng)[106] is Britain's national academy for engineering. Their Global Research Award scheme is intended to help Engineering

[101] http://www.ukti.gov.uk/de_de/export/countries/europe/easterneurope/russia.html?null
[102] http://www.britishcouncil.org/new/
[103] http://royalsociety.org/
[104] http://www.rcuk.ac.uk/Pages/Home.aspx
[105] http://www.leverhulme.ac.uk/
[106] http://raeng.org.uk/

Researchers employed in the UK to travel and work overseas for periods between three months and one full year with a view to establishing long-term collaborations.

6.18.2 Thematic Priorities for S&T cooperation UK/Russia

- Natural Sciences
- Life Sciences
- IT / Engineering
- Social sciences and the humanities (Mobility grants)

6.18.3 Forms of Cooperation

- Joint (bilateral and multilateral) programmes for project and mobility costs.
- Mobility grants.

6.18.4 Implementation Procedures

Royal Society

In view of the Comprehensive Spending Review in 2010, the Royal Society has unfortunately had to streamline its mobility grant portfolio. The International Travel Grants and International Joint Projects schemes are no longer active and have now been replaced by the International Exchanges Scheme. This is a new and more flexible travel scheme, which combines elements of both former programmes (see Annex 18.1)

The evaluation procedure at the Royal Society is managed by the Grant Scheme Manager and the proposals are evaluated by a panel of scientists. The evaluation duration is usually 12 weeks long and is done by 2 or 3 experts, relevant to the field of the proposal. The panel of experts comprise RS fellows, fellows of other UK scientific institutions, and UK and internationally based scientists.

The evaluation criteria are: the scientific and technical merits of the proposal, suitability of applicants, significance and added value of research regarding international cooperation, the impact of the collaboration on UK science and the mutual benefit of the collaboration. The participation of additional team members such as PhD students is an additional consideration.

RS is not involved in IPR agreements. It is up to the partners to resolve this. There are no instances of the use of IPR in international bilateral projects, or of the involvement of companies in IPR issues.

Research Councils:

The G8 Research Councils Initiative on Multilateral Research Funding is a coordinated effort to support multilateral research partnerships. The programme aims to support excellent research on topics of global relevance which can best be tackled by a multinational approach. Funding should help researchers to cooperate in consortia consisting of partners from at least three of the participating countries.

The initiative is supported by the Natural Sciences and Engineering Research Council of Canada (NSERC), the French National Research Agency (ANR), the German Research Foundation (DFG), the Japan Society for the Promotion of Science (JSPS), the Russian Foundation for Basic Research (RFBR), the Research Councils of the United Kingdom (RCUK), and the U.S. National Science Foundation (NSF), referred to as the Funding Organisations.

Under the G8 Research Councils Initiative one Funding Organisation acts as the Call Secretariat but the processing of applications and peer review is shared between the Funding Organisations.

The selection of projects to be funded follows a two-step procedure:

Preliminary proposals: Consortia, consisting of partners from at least three of the participating countries, submit a Preliminary Proposal to the Call Secretariat. Applications are checked by relevant Funding Organisations. Preliminary proposals evaluated by a Panel of Experts (PoE) who decide which consortia should be invited to submit Full Proposals. The PoE consists of researchers encompassing the necessary expertise to cover the call theme and includes representatives from each of the participating countries.

Full Proposals: Full Proposals are submitted to the relevant Funding Organisation, who undertakes the peer review. Each proposal is peer reviewed by at least three experts, none of which are a member of the PoE. Full Proposals are discussed and recommended for funding by the PoE based on the agreed selection criteria the assessments of the external reviewers. The final funding decision resides with the Funding Organisations. Funding of the participating researchers is provided by their respective national Funding Organisation according to their normal terms and conditions.

For futher detailes see Annex 18.

6.18.5 Overall statistics UK/Russia

The Royal Society's Grant for mobility and research expenses (bilateral cost-share programme) finances up to 11 grants annually. Between 2006 and 2009, 56 projects were funded.

Research Councils funded two Projects with Russian participation within the first call of the G8 Research Councils Initiative on Multilateral Research Funding.

Four Russian fellowships have been awarded since 2008 within the Newton International Fellowships Scheme of The Royal Society / The British Academy / The Royal Academy of Engineering.

6.18.6 Future Perspectives and Opportunities for Russian - UK Cooperation

RFBR and Royal Society would like to increase the number of projects funded, but the fact is that the resources of Royal Society funds are stable (parliamentary funding, private downers). Even though Royal Society is willing to try, it is difficult to enhance cooperation with Russia in the short term.

The Royal Society has been engaged in ERA-Nets in the past, notably CO-REACH. However, this programme did not lead to the launch of a joint call for proposals of the CO-REACH partners within the natural sciences arena. There were multiple reasons but this was mainly due to differing funding priorities and the mismatch of the partners involved (e.g. niche players such as academies vs. mainstream national funding bodies). This is the main reason for preferring autonomy and that's why ERA.Net concept has little relevance for the Royal Society.

7 Annex

For the Annex, see the specific document with the overview of bilateral programmes in table form.