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National Contact Point for Research Infrastructures (RIs) in Russia

The National University of S&T MISIS

CONTENT

I. Participation of Russia in FP7. The last "FP7 Monitoring Report 2013"

According to the last "FP7 Monitoring Report 2013", Russia ranked in second place of international partner for number of applicants (**699**, after USA with 1603 applicants).

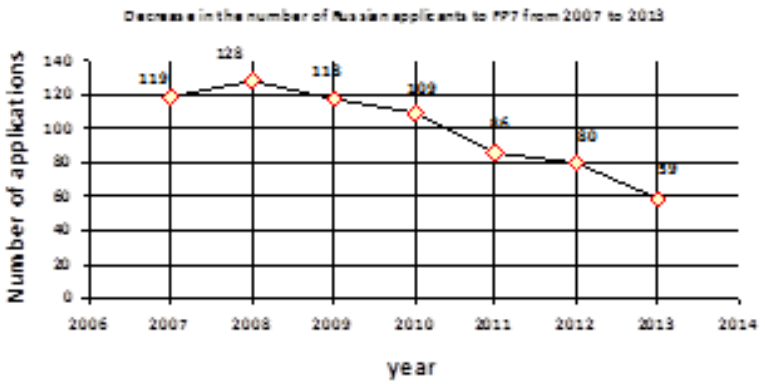
Russia was also second for requested EU contribution (**70.2 million €**; after USA with 91.67 million €).

486 Russian organizations were involved in 302 projects, receiving an EU contribution of ~ 66.46 million € (with an applicants' success rate of 23.3%).

Top **3 collaborative links** with Russia were Germany, the United Kingdom and France, followed by Italy, Spain and the Netherlands. In terms of fields, the biggest number of grant holders from Russia was in Transport (including Aeronautics), Space, Nanoscience and Nanotechnologies.

According to the FP7 monitoring report, there has been **a significant decrease** in the number of Russian applicants to FP7 calls from 2007 to 2013 (see figure).

One of the reasons for this decrease could be the establishment of new instruments supporting STI in Russia and an increased availability of financial resources for STI in Russia.



Source: "FP7 Monitoring Report 2013"

http://ec.europa.eu/research/evaluations/pdf/archive/fp7_monitoring_reports/7th_fp7_monitoring_report.pdf

II. The first results of the participation of the Russian organizations in Horizon 2020

According to new approaches to international cooperation in Horizon 2020, all calls for proposals are open to Russian participation, but minimum requirements (e.g. in terms of number of European partners when appropriate) must be respected In terms of funding, Russia is no longer being automatically funded (the same rule will apply to other similar economies, such as China, Brazil, India and Mexico) by Horizon 2020.

The CORDIS database of the Horizon 2020 projects contains 14 successful projects with Russian partners. In 10 of the 14 projects Russian organizations will receive EU funding.

For comparison, 10 of the 16 successful projects with partners from China will have EU funding. Russian participants therefore have to find their own resources (in-cash or in-kind) as contributions to their participations in H2020 projects. The aforementioned changes represent a challenge reflected in the results of the first calls of Horizon 2020.

Source: http://cordis.europa.eu/projects/home_en.html

III. Main thematic priorities in EU-Russia S&T cooperation

Thematic priorities in STI cooperation of EU with Russia cover a broad spectrum of fields.

There are, however, some thematic trends in the programs. Fields such as Health and Medicine, Biotechnologies, Nanotechnologies and Materials science, and Environment are the most recurrent. On the Russian side, while programs of the Russian Foundation of Basic Research (RFBR) normally support basic research and mobility projects in science, the Russian Foundation of Humanity (RFH) deals with humanities and social sciences. Sometimes, such situations lead to wishes or requests from EU MS/AS Program Owners to redistribute the responsibility between Russian Program Owners for some specific programs, for instance this happened in cooperation through EUREKA programs. The majority of Program Owners on the side of EU MS/AC follow a broad thematic approach, but several funding organizations have defined specific thematic priorities for their cooperation with Russia (e.g. Norway: Energy, Oceans, etc.). The most frequently cited thematic priorities in the cooperation are nanotechnologies/materials, energy, environment/climate change, socio-economic sciences and humanities, ICT, and biotechnology.

Source: http://www.eranet-rus.eu/_media/D_4.1_ERA.Net_RUS_Foresight_report_and_annex_final.pdf

IV. Russian national funding program for R&D

The most relevant Russian national funding program for R&D open to cooperation with the EU is the Federal Targeted Program (FTP) R&D in Priority Fields of the S&T Complex of Russia.

This program is managed by the Ministry of Education and Science of Russian Federation (MON).

FTP (2014-2020) is the key program for funding R&D and innovation activities in Russia and at the same time the main instrument of funding Russian organizations intended to Horizon 2020.

In focus of FTP are 6 thematic priorities: Life sciences; Nanosystems; Rational use of natural resources; Energy; ICT; Transport and space systems.

In frame of the FTP 2014-2020 (total budget: 202 228,77million RUB) all activities in the area of international research cooperation are incorporated in a special block No. 2, which consists of two sections:

•Section 2.1 “Research in the framework of international multilateral and bilateral cooperation” focuses on bilateral and multilateral cooperation with foreign countries except the EU and EU MS.

•Section 2.2 “Support for research in the context of cooperation with EU countries” is directed to the cooperation with the EU and EU MS. Total federal budget for the section 2.2 is ~ 6.18 billion rubles (ca. € 85 million) for 2014-2020.

Two calls supporting Russian participation within Horizon 2020 / FP7 were announced on May 14, 2015. Co-funding mechanism of the EU-Russia cooperation in FTP (2014-2020) and Horizon 2020 has been developed by MON and will be approved in these calls.

Source: http://fcpir.ru/

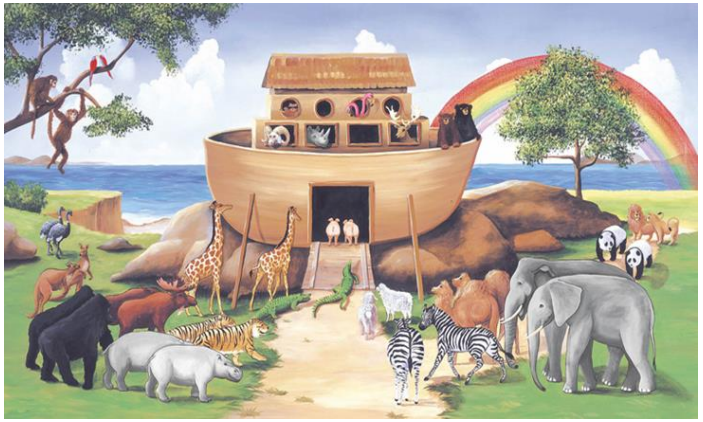
V. Noah's Ark': Russia to build world first DNA databank of all living things

Moscow State University (MSU) has been awarded Russia's largest-ever science grant for the project 'Noah's Ark' on the construction of a 166 square mile facility to hold DNA. If the project is successful it will hold DNA samples from every known species, living and extinct, by 2018.

The database will collect biomaterials from all of MSU's scientific branches including the zoological museum, botanical garden and anthropological museum. All of the universities departments will be involved in the project including research and collecting materials.

The University hopes that the 1 billion ruble ($194 million US) project funded by the Russian Science Foundation will promote participation by the University's younger generation of scientists.

RSF | Russian Science Foundation



VI. Top 100 Universities in Emerging Europe & Central Asia

QS Quacquarelli Symonds, the publisher of the QS World University Ranking, has today launched a new ranking of universities in Emerging Europe and Central Asia, with the region's top 100 universities unveiled at a launch event in Budapest. This is the first ever university ranking dedicated to the EECA region, whose institutions are "reaching out to the world, driving innovation and marketing their unique strengths like never before", said Ben Sowter, head of research at QS.

This pilot edition of the QS University Rankings: Emerging Europe and Central Asia sees Russia's Lomonosov Moscow State University take the top spot, followed by the Czech Republic's Charles University, which shares second place with another Russian representative, Novosibirsk State University. Overall, Russian universities claim the largest share of the region's top 100 universities, with 26 entries. The Czech Republic and Turkey have 10 apiece, Poland nine, Kazakhstan eight, and Hungary and Ukraine six each.

More information: http://www.iu.qs.com/eeca2014/

VII. Russia tests fast discharge resistor prototype

Fast discharge resistors are made as a set of sections consisting of a resistive element enclosed in a steel casing. A 4.5-metre-tall prototype resistor was successfully tested in Russia in December 2014.
In December Russian specialists at the Efremov Institute of Electrophysical Apparatus successfully tested a prototype of the fast discharge resistor module, designed to rapidly discharge energy stored in the coils of the ITER magnetic system. Tests results demonstrated full conformance with ITER Organization technical requirements.

The series of tests were conducted at the Efremov Institute within the framework of the Procurement Arrangement signed in 2011 for the Fast Discharge Units, Switching Networks, and the High-Current, Water-Cooled Busbars. Representatives of the ITER Organization and the Russian Domestic Agency were present.

The 4.5-ton prototype resistor module is one of the key elements of the ITER magnet system, designed to protect the superconducting coils in the case of a sudden loss of superconductivity (a quench). Fast discharge resistors are made as a set of sections consisting of a resistive element enclosed in a steel casing. All in all, the Efremov Institute specialists will manufacture and deliver 1,030 sections (weighing 1,200 tons), capable of discharging 55 GJ of energy.

Source: http://www.iter.org/newsline/-/2085

VIII. Mega-projects: on the basis of mutual interests

"International Mega-science Projects: Growth Points for Fundamental Science and Innovations. Collaboration and Perspectives of Russian and Chinese Mega-projects" - a scientific forum under this title was held on 3-4 December 2014 in Dubna.

It was attended by representatives of the Ministry of Education and Science of the Russian Federation, the Ministry of Science and Technology of China, scientific centers of Russia, China, Germany, Poland, Italy, Egypt.

The forum was organized to discuss possibilities of mutually beneficial and mutually enriching ways and methods of implementation of large-scale research projects in Russia, China, the European Union. The plenary part of the forum included reports on plans, course of work, prospects and international experience, collaborative efforts in developing of facilities as well as in solutions of technical problems, exchange of technology, specialists and practical knowledge.

"The issue of implementation of mega-science projects in the world is one of top priority issues - JINR Director Matveev said to reporters in an interview, - because such projects are points of growth, and in addition, they are of such scale that they cannot be implemented without broad international cooperation. That is why it requires concentration of top class specialists whose amount in the world in this area is not so large".

More information: http://www.jinr.ru/news_article.asp?n_id=2356

IX. Results of the "Controlled Nuclear Fusion Year" Were Drawn Up in the Press-Center of International News Agency "Russia Today"

Press-conference dedicated to the progress in implementation of the International ITER Project, summing up of the results of Controlled Nuclear Fusion (CNF) Year, and the prospects for further development of this branch in Russia was hosted December 22 2014 by the news agency "Russia Today".

Representatives of Russian mass media were interested in the issues related to compliance with obligations by RF organizations in the framework of joint implementation of the ITER project, as well as current projects for further development of the CNF branch in the country.

One of the questions was about tension encountered in the world arena and of its influence onto implementation of the project. Academician Evgeny Velikhov believes that "complication of relationship between the West and Russia that begins to show recently has almost no impact onto construction of experimental thermonuclear reactor". At that President of NRC "Kurchatov Institute" noted that "ITER is a very important and necessary project, as we all witness global energy consumption growth". He explained that "ITER Project is comprised of seven equal member-partners – Russia, China, European Union, India, Japan, Republic of Korea, and USA. The reactor site is already prepared; building construction, designing and manufacture of equipment is in progress".

Anatoly Krasilnikov, director of the Institution "Project Center ITER" noted that peak of the Russian equipment supplies for the ITER reactor according to the schedule will start at the end of 2016 and continue through 2017 – 2020.

Source: http://iterrf.ru/en/news/index.php?id=280&year=

VII. JINR joined the Medipix-4 collaboration (CERN)

In early March, the European Organization for Nuclear Research (CERN, Geneva, Switzerland) signed an agreement on the establishment of an international research organization Medipix-4 and JINR became a member of it.

The goal of Medipix is chips family development to create the pixel detectors of ionizing radiation. Such detectors are called “smart”, because they are not just registering radiation, but also making signal preprocessing, which might be sometimes quite complicated.

Medipix main feature is that its detectors not only fix the presence of certain radiation sources, but also determine the energy of the particles produced by them. This allows X-ray images of ultrahigh quality, as well as to determine the chemical composition of the samples on the tomograms. It also helps to examine the microstructure of tissues of living organisms and to determine the fraction of different materials in them.

Meanwhile, this area is not new to the JINR, which carries out research with Medipix detectors since 2008. One of the products of these developments became a system for monitoring the state of the background radiation in the ATLAS detector, operating within the framework of the Large Hadron Collider.

More information: http://www.jinr.ru/posts/jinr-joined-the-medipix-4-collaboration-cern-2/

VIII. Pre-announcement: Joint Call for German-Russian Project Proposals in Life Sciences, Social Sciences and Humanities

The German Research Foundation (DFG) and the Russian Science Foundation (RSF) will launch a new call for proposals in the fields of Life Sciences, Social Sciences and Humanities **on 15 September 2016. The submission deadline will be 12 December 2016.**

Following up on a successful first round in Physics and Mathematics in 2015 DFG and RSF now want to extend their common activities to cover new disciplines.

The aims of the call are:

- to support research in the above mentioned disciplines carried out by German-Russian teams
- to strengthen cooperation between Russian and German researchers in basic (knowledge-oriented) research

All proposals will be reviewed by both organizations separately. The results of the review process will be shared between the agencies. Support will be granted for those proposals where both DFG and RSF recommend funding.

Further information on this call will be made available on 15 September 2016. A next round including all fields of science (Social Sciences and Humanities, Life Sciences, Natural Sciences and Engineering) is foreseen for 2017.

More information:
http://www.dfg.de/en/research_funding/announcements_proposals/info_wissenschaft_16_53/index.html

IX. International Events in R&I in Russia in 2016

I. Open innovation, Forum, Moscow, 22-29 October 2016: http://forinnovations.ru/en/

II. 2-nd International scientific conference “Science of the future”, Kazan, September 20—23: http://sf-conf.com/

III. International Conference on new educational technologies #EdCrunch, Moscow, MISIS, 12-14 September 2016: http://edcrunch.ru/en/

IV. The 3-d International conference "EU-Russia S&T cooperation. Related support instruments and future opportunities“, the St.Petersburg State Polytechnic University, Saint-Petersburg, October 7-8, 2016: http://h2020-infra.misis.ru/en/

V. BarCamp St. Petersburg: Alternative Event Formats of Science Communication

Start date: 19.10.2016, End date: 23.10.2016, Location: St. Petersburg

http://www.st-gaterus.eu/en/112.php?vnr=1430

OPEN INNOVATIONS

STARTUP VILLAGE

IASP International Association of Science Parks and Areas of Innovation

ED CRUNCH

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