



China, Russia and countries of Eastern Europe:

Institutions, policies for science support and perspectives of international research cooperation with the European Union in Social Sciences and Humanities

GlobalSSH Action Report

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Tartu, Estonia – 2008

Abbreviations and definitions

RTD	Research and technological development
FP6	EU Sixth RTD Framework Programme, implemented during the period of 2002 - 2006
FP7	EU Seventh RTD Framework Programme, 2007 - 2013
S&T	Science and Technology
EE	Eastern Europe. The EE region includes countries of Armenia, Azerbaijan, Belarus, Georgia, Moldova, Russia and Ukraine
EECA	Eastern Europe and Central Asia. The EECA region includes countries of Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Kyrgyzstan, Moldova, Russia, Tajikistan, Turkmenistan, Ukraine, Uzbekistan
MS	EU Member State
AC	EU Associated State - a State which is party to an international agreement with the European Community, under the terms or on the basis of which it makes a financial contribution to all or part of an EU framework programme for research and technological development ACs include three EU candidate countries - Croatia, Former Yugoslav Republic of Macedonia, Turkey; three member countries of the European Free Trade Agreement – European Economic Area – Iceland, Liechtenstein and Norway; and Israel
TC	Third country - a State that is neither a Member State nor an associated State
COST	European Cooperation in the field of Scientific and Technical Research
EUREKA	European Research Coordinating Agency
INTAS	International Association for the promotion of co-operation with scientists from the New Independent States (NIS) of the former Soviet Union
ISTC	International Science and Technology Center

Executive summary

The report is aimed to discuss perspectives of the international cooperation between Europe and selected third countries – China, Russia and countries of Eastern Europe. The discussion is based on the analysis of institutional landscapes and research policies that structure SSH development in the China, Russia and Eastern Europe as well as research cooperation of these countries with Europe.

The report's first chapter explains institutions and policies of the European Union for the international RTD cooperation with third countries. The second chapter gives a brief overview of the GlobalSSH Action study region. A comparison of the countries demonstrates the great diversity of the countries in terms of sizes, histories, cultures, research capacities as well as in their Social Sciences and Humanities policies, and institutional landscapes. The third chapter informs about the third countries' policies and institutions for the international cooperation with Europe. The fourth chapter addresses disciplinary divisions of SSH in the target countries with the viewpoint of international cooperation; since science disciplines are also institutions, the chapter discusses the process of SSH internalisation through adopting international disciplinary classifications. The report's concluding chapter formulates concrete proposals for EU international cooperation policies with third countries.

Specifically, the report recommends providing more support for transnational research communities, rather than for the establishment of and support of formal international cooperation structures. This support to research communities/networks is especially important for the cooperation with transition countries where formal institutions are still under development and constant change. The report stresses the importance of the support of the academic mobility, especially of young scientists from third countries to Europe.

According to the report, the currently used intra – European models of the international research cooperation that apply Europe disciplinary divisions and communication traditions, do not work in cooperative projects where scientists from third countries are involved. The report recommends to apply new innovative forms of organisation of international cooperation activities with scientists from third countries; those modes should involve extensive personal communication, provisions of academic literature, methodology meetings and summer schools, as well another forms of structured academic mobility.

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Introduction

International research and technological cooperation has been a vital part of the EU RTD policy from the time of its adoption: this policy was elaborated in the late 1970s in response to a growing concern about an insufficient competitiveness of the European Community's member states on the global economic arena (Nugent 1999). At the moment of the policy's establishment, possibilities for international research cooperation were limited; under pressures from globalisation, those possibilities increased significantly over the time. In the Sixth RTD Framework Programme for instance thematic priorities were already opened to all third countries, i.e. countries outside of the European Union, without any restrictions.

As the international cooperation with third countries expanded over the time, there were more questions than answers about how the EU should organise its research cooperation with third countries (i.e., countries that are not EU member – states). One illustration of the temporal structural difficulties of organising the international RTD cooperation was the situation in the FP6 where funds allocated for the international cooperation under thematic priorities remained largely underspent.

The report objectives and structure

The report is aimed to discuss perspectives of the international cooperation between Europe and selected third countries – China, Russia and four Eastern European countries - Armenia, Azerbaijan, Georgia and Ukraine. The discussion is based on the analysis of institutional landscapes and research policies that structure SSH development in the China, Russia and Eastern Europe as well as research cooperation of these countries with Europe. This synthesis report was prepared within Special Support Action “Research Collaboration in the Social and Human Sciences between Europe, Russia, other CIS countries and China” – Global SSH.

The Global SSH focuses its activities in the following areas:

1. Mapping and assessing SSH capabilities in seven Commonwealth of Independent States (CIS) countries - Armenia, Azerbaijan, Georgia, Moldova, Russia, Ukraine, Uzbekistan; and China. This includes studies of the institutional landscape (including institutional innovation and change) and the research policies that structure advances in SSH research in the region.

2. Investigating experiences and capacities in transnational SSH research in the EU, the targeted CIS countries, and China.
3. Placing the above mentioned areas in historical context by synthesising what we know about the rise and transformation of the social and human sciences, in Europe and beyond, as these were related to the emergence of modern states and universities.
4. Identifying common agendas for future transnational research and formulating policy recommendations for setting up priorities in the SSH and the designing of future research programmes within the context of the enlarged ERA, supporting the mobilisation of scientific co-operation between the EU-CIS and the EU-China research communities.

The report structure

The report's first chapter explains SSH institutions and policies of the European Union. The second chapter gives a brief overview of the GlobalSSH Action study region. A comparison of the countries demonstrates the great diversity of the countries in terms of sizes, histories, cultures, research capacities as well as in their Social Sciences and Humanities policies, and institutional landscapes. The third chapter includes summaries of national policies and institutions of Armenia, Azerbaijan, China, Georgia, Russia and Ukraine for the cooperation with Europe¹. The fourth chapter addresses disciplinary divisions of SSH in the target countries with the viewpoint of international cooperation; since science disciplines are also institutions, the chapter discusses the process of SSH internalisation through adopting international disciplinary classifications. The report's concluding chapter discusses scenarios of the future EU–Eastern Europe and China cooperation and formulates concrete proposals for EU international cooperation policies with third countries.

Previous studies on the international RTD cooperation

Several EU projects have prepared ground for the detailed investigation of the EU – third countries cooperation; however, no comprehensive studies on the international RTD cooperation patterns have been prepared so far.

Reports with the assessment of the research potential of the Black Sea countries were prepared within the FP6 funded project “Research Potential of the Black Sea Countries”

¹ Detailed descriptions of the countries' policies and institutions could be found in national reports at the GlobalSSH Action website

(<http://icbss.org/> see under BS-ResPot) and gave a detailed account of the research and technological development (RTD) institutions and policies in the countries of the Black Sea Economic Co-operation (BSEC).

The University of Manchester PREST (Policy Research in Engineering, Science and Technology) Centre generated 10-year scenarios of the RTD development (for the years 2006 – 2015) in third countries within an FP6 project SCOPE 2015, <http://prest.mbs.ac.uk/prest/scope/>. For the EECA region (excluding Russia) three scenarios of the RTD system were elaborated:

1. “Islands of excellence” as an Alpha outlook which represents a “business as usual” future;
2. “An expense that we cannot afford” as a Beta outlook which considers, in particular, some of the many things that could ‘go wrong’;
3. “Science renaissance”, a Delta outlook that considers potential changes in direction, including emergence of new goals, institutional frameworks for support of S&T.

The scenarios were formulated taking into account “key drivers” that underpin observed regional developments in RTD: governance, globalization, Soviet institutional legacy and lack of funding for S&T, economic transition and connection of S&T to the economy, education and human resources, technological opportunities, environment and sustainability, and donor strategies.

Empirical studies that addressed the international research cooperation policy implementation on the both sides - the EU and the third countries - were conducted within the FP6 project “Scenarios for a coordinated approach to sustainable S/T co-operation with the Eastern Neighbours of the EU (SCOPE-EAST)”, <http://www.scope-east.net/>. A report on the state of the art and perspectives of the bilateral S&T cooperation between EU Member States, the Russian Federation and Ukraine was prepared. The report outlined the EU cooperation instruments, bilateral S&T cooperation instruments of the EU Member States with Russia and Ukraine, and the institutions and policies of Russia and Ukraine towards the EU and the EU member states.

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Summaries of the national institutional and policy landscapes in Chapter 3 and SSH classifications presented in the Chapter 4 were compiled based on the reports prepared by:

Armenia – Prof. Gevork Poghosyan, Institute of Philosophy, Sociology and Law of the National Academy of Sciences of Armenia;

Azerbaijan –Prof. Siyavush Azakov, Institute of Physics of the National Academy of Sciences of Azerbaijan

China – Dr. Svend Otto Remoe, Procontra AS

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Georgia – Mr. Levan Tarkhnishvili and Mr. Koba Turmanidze, CRRG–Georgia

Russia – Dr. Liudmila Pipiya, ISDS RAS, Russia; Dr. Vladimir Zavarukhin, ISISEP; and the FP6 BS-ResPot Russian country report

Ukraine – Dr. Igor Yegorov, STEPS Centre.

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Chapter 1. EU policies and institutions for the international RTD cooperation

The European Union wide research and technological development policy was elaborated in response to a growing concern about an insufficient competitiveness of the European Community's member states on the global economic arena. The "Research and Technological Development" title was added to the European Economic Community Treaty through Single European Act adopted in 1986 and later developed it within the Maastricht Treaty (1992). Implementation of the EU RTD policy was organised through multiyear four to seven year long planning periods – so named framework programmes (FPs). Framework Programmes are conceived for a period of 4 years (except the final one covers 7 years). They are elaborated and proposed by the Commission and have to be adopted by European Parliament and Council.

First to third FPs – cooperation through European research and industry organisations

The international RTD cooperation was a component of the FPs from the very start of this EU policy implementation. Within the First Framework Programme (1984-87), the Second (1987 – 91) and the Third (1990 – 94²), the international research cooperation was limited to the cooperation organised through subcontracts to third countries' organisations made through European research and industry organisations – **COST, ISTC, STCU, INTAS**, and specially established international cooperation arrangements such as the European Research Coordinating Agency – **EUREKA**.

Fourth framework programme – setting up the INCO Programme

In the FP4 (1995-1999) a platform for international cooperation in research – **the INCO (INTERNATIONAL COOPERATION) programme** was introduced. The INCO programme was established on the two basic principles - of "*mutual benefit*" and of "*subsidiary*" and was structured into four "*programme cooperation areas*" to reflect the specific nature of the objectives of cooperation according to the partners:

A1. Cooperation with other European Cooperation Frameworks: support to EUREKA and COST;

² The Third FP overlapped with the Second FP

- A2. Cooperation with Central and Eastern European countries (CEC) and with the Newly Independent States (NIS) of the former Soviet Union: through the INCO - Copernicus Programme and financial assistance and EU participation in INTAS, and ISTC;
- B. Cooperation with Non-European industrialized countries by the means of Scientific and Technological cooperation agreements with Canada, Israel, Southern Africa, and USA, «project by project» participation of these countries' organisations in certain RTD strands of specific EU programs and Japan / Korea research grants;
- C. Cooperation with developing countries (DC): INCO - DC (financing and management of joint research activities and joint initiatives) «project by project» participation in certain Area 1 RTD Programmes.

FP5 – opening possibilities to third countries' scientists to participate in EU research projects

Support to international research cooperation was further expanded under **the FP5**. On the top of the FP5 INCO programme, FP5 also opened its other specific programmes that were so far closed to the international participation. Scientists from the third countries gained possibilities to participate in EU research projects (where they did not have possibilities to participate within FP4) although as a rule without EC financial contribution; the EC funding was approved to third countries' organisations on a case-by-case basis.

The FP5 INCO programme geographical focuses were established to fit better to the EU political priorities: along with the support to international cooperation with “industrialised countries” (such as Canada, Japan, Israel, Southern Africa, and USA) and developing countries (ACP (Africa, Caribbean, Pacific), ALA (Asia, Latin America)) – similarly to FP4; the FP5 INCO programme included support to developing scientific excellencies in the EU accession states; the research cooperation with emerging economies (China, others) and with countries situated on the EU current and future borders – through the cooperation areas “*NIS and Central and Eastern European Countries*” and “*Mediterranean Partner Countries*”.

FP6 – abandoning restrictions for the participation of third countries’ scientists in research projects under thematic programmes

The international research and technological development cooperation activities under the FP6 became linked directly and clearly to the EU political priorities - to the implementation of the Lisbon Strategy and the development of the European Research Area. The Lisbon Strategy is an action and development plan for the European Union adopted in March 2000 at the EU Spring Summit and aimed at making the EU “*the most competitive and dynamic knowledge-based economy in the world*”. One of the key components of the strategy launched at Lisbon is the European Research Area (ERA)³ initiative directed at a better use of European research efforts through the creation of an internal market for science and technology – the ERA. The objective of the European Research Area initiative combines three related and complementary concepts:

- *The creation of an "internal market" in Europe in research, an area of free movement of knowledge, researchers and technology, with the aim of increasing co-operation, stimulating competition and achieving a better allocation of resources;*
- A restructuring of the European research fabric, in particular by improved co-ordination of national research activities and policies, which account for most of the research carried out and financed in Europe; and
- *The development of a European research policy* which not only addresses the funding of research activities, but also takes account of all relevant aspects of other EU and national policies.
-

Types of activities. The FP6 thematic priorities were opened without any restrictions to all third countries and the so-called “INCO target countries”⁴ received an access to EU FP6 funding.

³ See more on the ERA at <http://www.cordis.lu/era/home.html>

⁴ Groups of target countries for specific measures in support of International Co-operation include

DEVELOPING COUNTRIES (ACP, ASIA, LATIN AMERICA).

ACP, including African, Caribbean and Pacific. AFRICAN: Angola, Benin, Botswana, Burkina-Faso, Burundi, Cameroon, Cape Verde, Central African Republic, Chad, Comoros, Congo (Republic), Congo (Democratic Rep. of), Côte d’Ivoire, Djibouti, Equatorial Guinea, Eritrea, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Kenya, Lesotho, Liberia, Madagascar, Malawi, Mali, Mauritania, Mauritius, Mozambique, Namibia, Niger, Nigeria, Rwanda, Sao Tome and Principe, Senegal, Seychelles, Sierra Leone, Somalia, South Africa, Sudan, Swaziland, Tanzania, Togo, Uganda, Zambia, Zimbabwe. CARIBBEAN: Antigua and Barbuda, Bahamas, Barbados, Belize*, Cuba*, Dominica, Dominican Rep., Grenada, Guyana*, Haiti, Jamaica, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and Grenadines, Suriname*, Trinidad and Tobago.

INTAS was charged by the EU to implement a wide range of activities to promote multilateral partnerships between research institutes, universities and industries in the EU Framework Programme associated countries and the NIS. INTAS launched the "INTAS FP6 NIS Information Network (ININ)" aimed to promote the involvement of the NIS in the ERA through *raising awareness, disseminating information and providing advice and training* to the NIS about the aims, opportunities and principles of the FP6.

Marie-Curie Actions Programme was launched as a researchers' mobility programme aimed at stimulating researchers' career development. The 'Marie Curie Actions' have been particularly successful in responding to the needs of Europe's scientific community in terms of training, mobility and career development. The Marie Curie Actions *international dimension* is aimed to contribute to the life-long training and career development of EU-researchers, to attract research talent from outside Europe and to foster mutually beneficial research collaboration with research actors from outside Europe. Through the FP6 Marie Curie Actions' programme, a double fellowship scheme for researchers coming from third countries to the EU and for EU researchers going to third countries was introduced; and an electronic information system on entry and residence requirements for researchers from third countries going to EU member states was created (The European Research Area, 2002).

Development of the EU RTD policy and its international component in FP7

A strategic approach to the support of the international research cooperation in FP7 is outlined in the Proposal for a Council Decision concerning Specific Programme "Cooperation" implementing the Seventh Framework Programme (2005): "*to promote European research excellence and competitiveness and to address specific global or regional issues where there is a mutual interest and benefit. ... A more targeted approach to*

PACIFIC: Cook Islands, East Timor^{1**}, Fiji, Kiribati, Marshall Islands, Federal States of Micronesia, Nauru, Niue, Palau, Papua New Guinea^{**}, Solomon Islands, Tonga, Tuvalu, Vanuatu, Western Samoa.

ASIA: Bangladesh, Bhutan, Brunei, Cambodia, China^{***}, India^{***}, Indonesia, Lao (People's Democratic Rep. of), Malaysia, Maldives, Mongolia, Nepal, Pakistan, Philippines, Singapore, Sri Lanka, Thailand, Vietnam

LATIN AMERICA: Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay, Venezuela

MEDITERRANEAN PARTNER COUNTRIES: Algeria, Egypt, Israel, Jordan, Lebanon, Morocco, Syrian Arab Rep., Tunisia, West Bank and Gaza Strip

RUSSIA AND THE OTHER NIS: Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Kyrgyzstan, Moldova, Russia, Tajikistan, Turkmenistan, Ukraine, and Uzbekistan

WESTERN BALKAN COUNTRIES: Albania, Bosnia-Herzegovina, Croatia, Former Yugoslav Republic of Macedonia (FYROM), Serbia and Montenegro, including Kosovo.

international cooperation within each theme and across themes is foreseen with specific cooperation actions to be identified in the work programmes in line with the strategic approach for international cooperation foreseen and through policy dialogues and networks with different regions of partner countries” (Proposal for a Council Decision, 2005).

Specific objectives of the EU’s international RTD cooperation policy and recommendations for the international cooperation support in FP7 were formulated in the European Commission 2005 report “*Reinforcing European Research Policy. The International Dimension ...*” as follows:

- ❖ To reinforce and enlarge European competitiveness including the creation of strategic partnerships with third countries in selected sectors, thus attracting the best third country scientists to work with Europe;
- ❖ To address common problems that are faced by third country/region partners and Europe on the basis of mutual interest and mutual benefit;
- ❖ To use S&T cooperation as a vehicle to reinforce relations with third countries, and to support the Union’s position on an array of common scientific policy issues.

According to the report, the international cooperation should be promoted through the establishment of common formal institutions for cooperation, specifically through implementation of targeted international cooperation activities (including S&T cooperation agreements and dialogues); coordination of national policies with the EU member states and third countries; and, promoting synergies with the available instruments in the framework programme or other EU policies such as RELEX, DEV, TRADE, ENV, etc.

The European Commission Green Paper (2007) “*The European Research Area: New Perspectives*” continued the discussion of the future directions for international RTD cooperation. The Green Paper proposed to establish a borderless 'broader ERA' that should entail the participation of third countries not only in the EU research Framework Programme, but also with the other dimensions of the European Research Area, such as the coordination of research programmes and infrastructures, enforcement of knowledge-sharing principles and seamless mobility of researchers. Finally, the Green Paper proposes to increase coordination between the EU and Member States. Such coordination is already taking place through the FP7 funded INCONET, ERANET and ERANET activities.

Therefore, the EU approach to promoting international RTD cooperation is focused mostly on its formal institutional approach to the cooperation, which has a strong tradition in the European Union; moreover, institutional cooperation is an inherent nature of the EU as a supranational organization⁵. The EU itself has an extensive formal institutional basis for the RTD inside Europe where all EU institutions, including the European Council, European Parliament, European Commission, Committee of European Regions and others, are involved. In addition, governments of MS and AS, multiple committees and expert groups, professional associations and networks, including the ones created with the support of FPs (such as ERANETs) are actively involved in the elaboration and implementation of EU policy on international RTD cooperation.

The formal institutional cooperation with third countries is also complex; it is organised at several governance levels –

- ❖ EU – third countries’ governments level through the involvement of European and third countries’ scientists into the pan-European projects supported by the EU RTD framework programmes or other Pan-European programmes (European Science Foundation, others);
- ❖ on a bilateral level between third countries and EU member states through signing respective conventions, agreements and establishing cooperative bodies;
- ❖ on a regional level (the Baltic Sea or Black Sea region);
- ❖ the cooperation also takes place on the level of research communities – research groups and individual scientists through research networks of scientists.

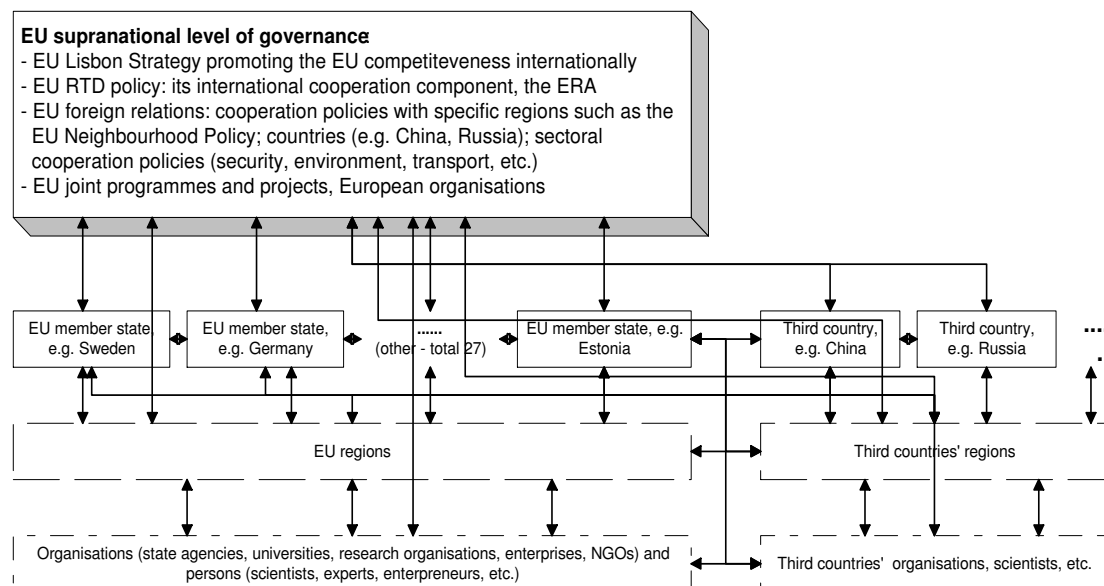
Building a common EU – third countries international cooperation regime therefore requires the development of common institutions on all the mentioned levels (see Figure 1) – from the local to the bilateral intergovernmental and the Pan-European level.

Establishment of common institutions between the EU and third countries for the international RTD cooperation is very important to overcome the striking cultural differences that exist between different the countries. According to Fukuyama (2007), also at the global level joint institutions as common rules of the game drive the international cooperation. *“The gradual emergence of an international order is based on institutions and rules”*, stresses Fukuyama, *“... Integration in the global economy will be more durable and productive of*

⁵ The Green Paper mentions the importance to promote the cooperation also at the research communities and individual researchers’ level however does not give concrete proposals on instruments

shared prosperity to the extent that it can be based on interests rather than passions, on institutions rather than culture. This is not a Western perspective; it is a global one”.

Figure 1. EU – third countries international RTD cooperation regimes



Godelier et al (2003) argue that along with the formal arrangements more attention in organisation of the international research cooperation should be paid to informal/practical aspects of the research cooperation. Practices of conducting research, including the disciplinary divisions; forms of organization of research (if the research is conducted at university departments, non-university institutes, non-governmental organizations etc.); should be taken into account. It would seem that, especially for the cooperation with transition countries such as the ones discussed in this report – China and the EECA region countries, both the formal institutional and informal research communities' levels are important because the formal institutional frameworks in those countries are still under transition and in the short run cannot be the only basis for cooperation with the EU.

Chapter 2. Short characteristics of the region – EECA countries and China

The report discusses international S&T cooperation in the SSH of the European Union with selected third countries (i.e., countries that are not members of the EU), including the large emerging economy of China and five countries in Eastern Europe region – Armenia, Azerbaijan, Georgia, Russia and Ukraine (Figure 1).

Figure 1. Map of the EECA countries and China



The countries under discussion are very different from each other in terms of their sizes, economic development levels, political orientations and institutional and legal frameworks for the S&T support – see Figures 2 to 4 and more discussion in Roll (2007).

In terms of the economic development and infrastructure development (See Figures 2 and 3) all the third countries under discussion in this report are clearly lagging behind from the EU member states.

Figure 2. Population total in EECA and EU countries. Source: the World Bank, 2007⁶

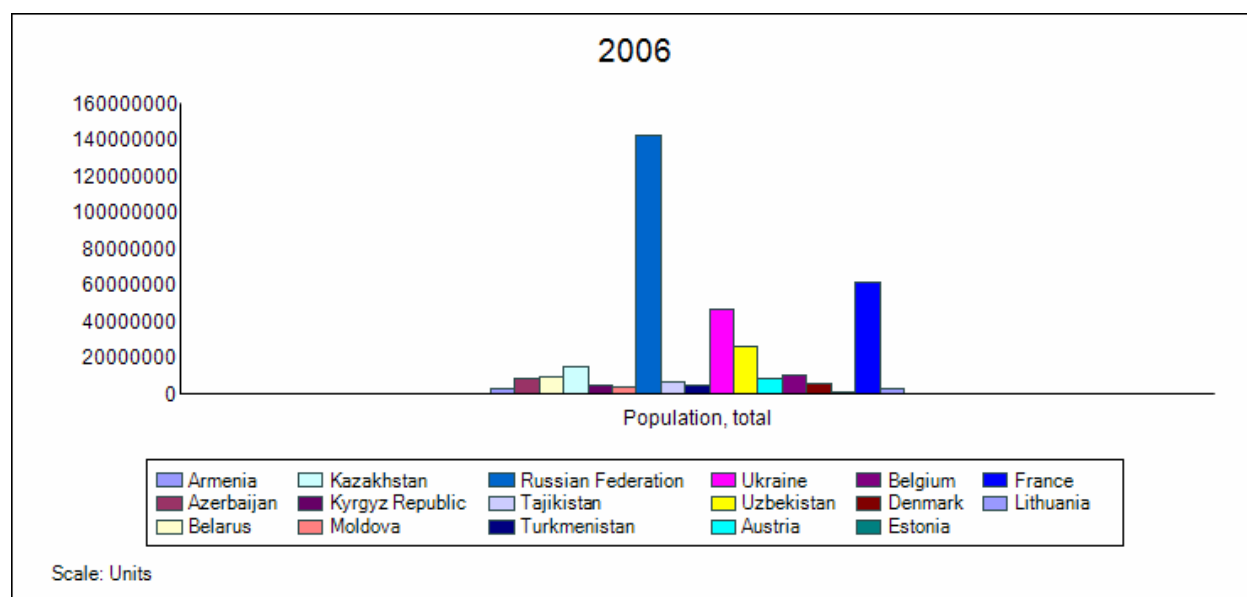
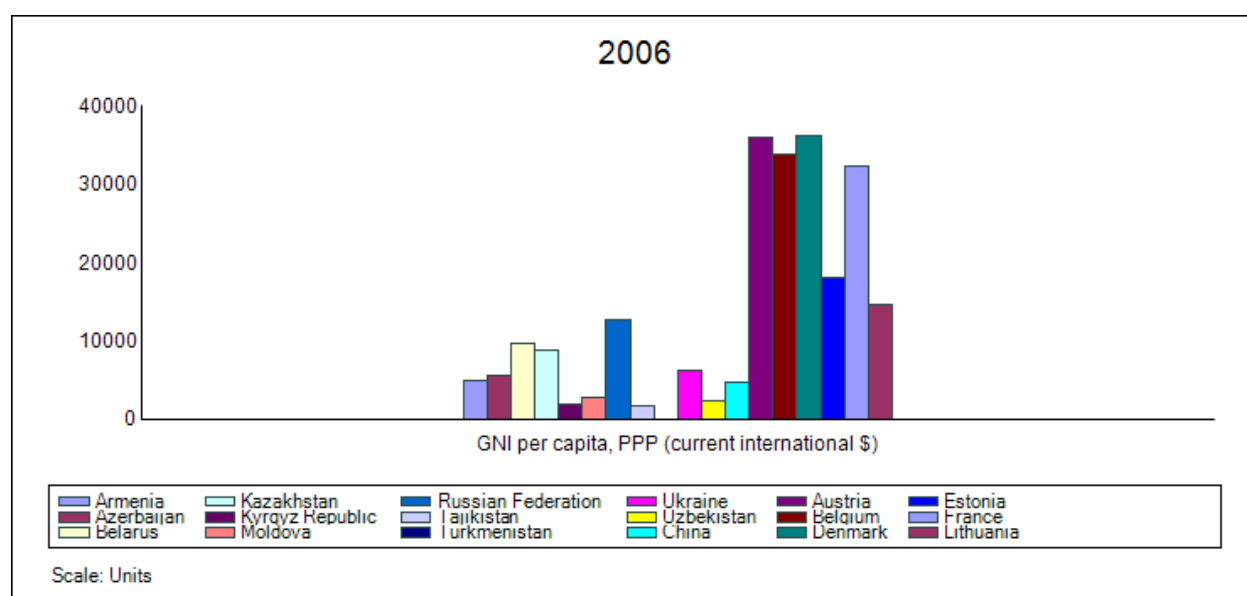


Figure 2. GNI per capita, PPP in EECA and EU countries and China

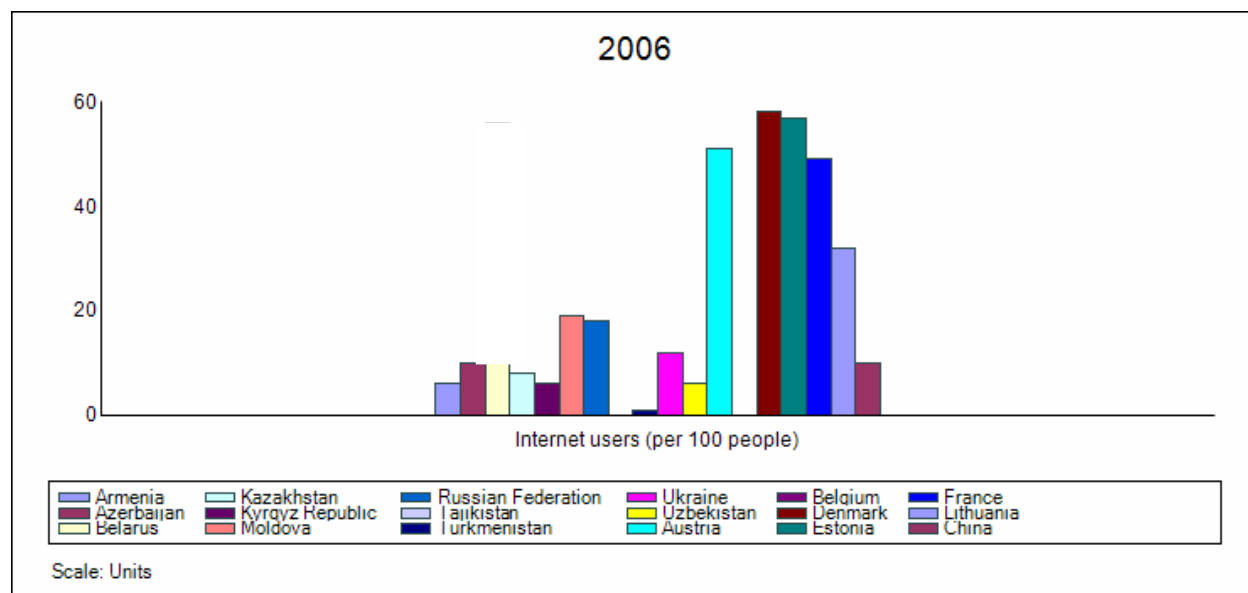
Source: the World Bank, 2007.



⁶ <http://ddp-ext.worldbank.org/ext/DDPQQ/showReport.do?method=showReport>

Figure 3. Internet use per 100 people in EECA and EU countries and China

Source: the World Bank, 2007



What joins the EE countries is common history, one of being part of the Former Soviet Union that ceased to exist in December 1991. That history also meant all the EECA countries (including Central Asian states that are not part of the GlobalSSH project study region) shared common Soviet institutions for supporting S&T. In that highly centralised system, supporting research was made available via the Academy of Science and higher education – and through the all-Soviet Union ministry of education and universities; consequently, research and education were separated from each other.

Mostly non-ideological fields of study received development during the Soviet time – archaeology, ethnography, linguistics, based on quantitative methods sociology and economics, etc. Sociology based on qualitative methods or political sciences remained for decades methodologically handicapped. With the absence of access to libraries and other research infrastructure on one hand, and of a sound and evolving system that motivated scientists to study foreign languages or publish internationally on the other, the result was a situation where majority of SSH scientists in the EECA countries use research methodologies incoherent with the ones of the West. Furthermore, those scientists would have limited skills and experience in publishing in the international peer-reviewed journals. And finally the

language barrier was another impediment to the international S&T cooperation with European scientists.

The collapse of the Soviet Union in 1991 gave more freedom to scientists in conducting research and opened possibilities for the international S&T cooperation. Common features of the transition period in the EECA countries included a severe underfunding of research in the 1990s that resulted in many scientists leaving their jobs to non-research sectors. Another common tendency connected with the process of the dissolution of the USSR was using SSH, especially Humanities, as a tool of newly revived nationalist ideologies.

Chapter 3. Policies and institutions of SSH support in the GlobalSSH project target region countries

The Soviet system of S&T support ceased to exist with the dissolution of the USSR and the EECA countries are still undergoing a transition to overcome the heritage of almost fifty years of existence of the Soviet Union. The situation is gradually changing – the cooperation with scientists in the West, in fact much more with the scientists in the US rather than with scientists in Europe, is being established.

There are dramatic differences between the EE countries in terms of their research capacities as well as in their policies and institutional arrangements for the support of the Social Sciences and Humanities. The EE countries today differ considerably from each other in terms of their political orientations, economic development levels and institutional landscapes of their S&T. As of August 2008, Georgia has ended its membership in the Commonwealth of Independent States. Therefore, there is no one institution that would include all the 12 countries of the former Soviet Union. There is only one purely geographical definition of the group – Eastern Europe and Central Asia. Cooperation with each country has to be developed on the bilateral level; at the moment a regional approach to all those countries will not work anymore.

To demonstrate differences in the development of institutional landscapes in Eastern European countries, we use a scenario approach developed in 2005 by the University of Manchester PREST Centre for the EECA countries⁷. The mentioned scenarios were elaborated in 2005 by PREST. The presented below scenarios are based on the updated data of years 2002 – 2007; it also includes Russia that was not in a focus of the PREST study.

Russia

National policies and institutions

Russia has developed by now an extensive institutional and legal basis for the support of RTD. One of the major policy documents, the Federal targeted programme “R&D in Priority Areas of Development of S&T in Russia in 2007–2012”, outlines major government priority

⁷ See description of the approach at <http://prest.mbs.ac.uk/prest/scope/>

areas in the development of science Russia, which are life sciences, nanotechnologies and materials, information and communication technologies, rational nature management, and power engineering and energy efficiency. SSH are not among government priorities for RTD in the Russian Federation. Russia is still an economy in transition and numerous reforms and changes take place constantly in various areas, including the RTD. Some of those changes occur as a result of the implementation of the sector development vision by the governmental S&T policy-making body, but some are results of reform activities of other multiple administrative bodies and can hardly be influenced by the S&T policy-making body (for example, the tax reform that led to changes in indirect incentives for science, budget reform and the adoption of the Budget Code that led to changes in the system of budget financing of scientific organisations). This dual path of reform is the cause of many current problems in the scientific sector.

International cooperation patterns

Due to the size and the geographical proximity of Russia to the EU, Russia is undoubtedly a key partner in the international research cooperation. Russia is one of the most actively involved countries in the EU FP6 and FP7. Among priority directions supported by the Russian government are participation of Russian research institutes in Joint Technological Initiatives and European Technology Platforms of the FP7 “Cooperation” Programme (this includes mostly natural sciences) and the international mobility of researchers programmes. International S&T cooperation is also taking place within EU – Russia programmes supported by EU TACIS programme (existed until 2007); since 2007 the financial support is provided by the European Neighbourhood Policy Instrument.

A legal basis of the cooperation with the EU includes a number of documents including an Agreement on Cooperation in Science and Technology between the European Community and the Government of the Russian Federation (until 2008); the Roadmap for the Common Space on Research and Education, including Cultural Aspects; and Russia’s Middle Term Strategy towards the EU (2000 – 2010). Coordination of implementation of the mentioned agreements is organised by steering bodies including, Joint EC – Russia S&T Cooperation Committee, Permanent Partnership Council in Science and Joint EU – Russia Thematic Working Groups in Priority Areas which include topics of Nanotechnology; Health; Food, Agriculture and Biotechnology; Sustainable Energy; Aeronautics; Space; Nuclear Energy

Fusion Research; Information and Communication Technologies. At the 21st EU – Russia Summit, the European Union and Russia launched negotiations for a new EU – Russia Agreement that is to provide a comprehensive framework for the EU – Russia relations in the future. However, negotiations on the agreement were frozen due to the aggravation of the EU – Russian relations in connections with the Russian – Georgian military conflict.

Scenario for international cooperation

An analysis of Russian policies and institutions for the support of its RTD show that Russia clearly follows the scenario of “islands of excellence”. Rapid economic growth, high oil revenues and availability of the national science priorities, made it possible to provide support to RTD development. Another side of the coin though is that the government support is mostly provided to elite research institutions in Moscow and St. Petersburg; therefore, only these strong, elite institutions are able to apply for international support. Consequently, it is only through elite status and such funding that the islands of excellence appear. Little attention to supporting regional institutions leaves the peripheral universities in a difficult financial situation; this results in a decline of their already limited research capacities in Russian regions. Bureaucracy, overlapping and unclear responsibilities of different agencies dealing with the S&T support (which often change their status due to government system restructuring) and a renewed ideological pressure to scientists limit possibilities for the development of the strong SSH capacity for the international cooperation in Russia.

Georgia

National policies and institutions

After the 2003, radical reforms of the RTD sector have been undertaken by the Ministry of Education and Science of Georgia; the reform rests on the following basic ideas: identification of national scientific priorities; establishment of a competitive mechanism for the distribution of state research funds; institutional integration of higher education and research; development of the knowledge-based economy. There is the political will of the new Georgian government to target long-term goals in higher education and research. Among policy strengths, there is goodwill to attract younger generation of scholars both to universities, as well as to the research community in general and support them. Openness towards international collaboration and technical assistance can qualify as strength of

Georgian national policy with the promotion of SSH research and capacity-building. Openness and fairness of competition in the process of awarding scientific grants is also a positive side of the institutional framework of research capability development.

International cooperation with the EU

The proposed policy is in line with the EU policies for the enlargement of the European Research Area to third countries such as Georgia. New higher education institutions and programmes are being established in Georgia with the support of international organisations (US government, the World Bank, UNDP, British Petroleum) mostly in the field of economics so there is a hope in the future there will be more well educated young scientists. There is a number of international RTD networks, also European ones, where Georgia participates. Created in 2005, the Development and Reform Fund (sponsored by UNDP) was one of the most prominent funding programmes for the science and higher education. It started awarding scholarships (Professional Development Study Grants Program) for the study abroad to graduate students (both Master's and PhD), mostly for studying at European and American universities. A portion of those scholarship fields are at least partly in the Social Sciences, including economics, and also in journalism, public policy, law and business administration.

Scenario for international cooperation

There is a potential in the future that Georgia would also follow the “island of excellence” scenario – a transparent institutional structure for the support of the S&T that is being built by the Georgian government would allow it to develop the necessary scientific future capacity. Due to its small size, however, Georgia does not have resources to develop all directions of science, so it will need to establish priorities. This is the reason for the “islands of excellence” scenario. One of the risks of the development of an effective RTD system is possible political instabilities due to internal or otherwise external factors. Undoubtedly the damage made to the Georgian economy by the Russian troops during the August 2008 Georgia – Russia military conflict will have a very serious negative impact also to the RTD capacity of Georgia.

Ukraine

National policies and institutions

Ukrainian authorities have elaborated state priorities for the RTD development in Ukraine, adopted laws and created needed institutional arrangements. Governmental strategic directions for the support of science in Ukraine include fundamental studies in SSH as well as demography. However, implementation of the adopted strategic documents and policies remain a challenge in Ukraine.

International cooperation with the EU

The participation of Ukrainian researchers in projects, initiatives and measures related to noted programmes is regulated by the Partnership and Collaboration Agreement between European Union and its member-states on one side, and Ukraine – on the other. The agreement was entered into force on March 1, 1998 after ratification by the Supreme Council of Ukraine. This document legally substantiates expansion of co-operation in trade, industrial, scientific and administrative areas. In particular, article 58 of the Agreement provides for collaboration in the area of science and technology.

The Ministry of Education and Science of Ukraine and its educational establishments cooperate particularly with the European Union within the framework of the Programme of Trans-European Co-operation in Higher Education - Tempus (TACIS), and with EU member-states on a bilateral basis (specifically with their Central state authorities responsible for education and educational establishments) , and according to the Agreement on Partnership and Co-operation between Ukraine and European Union signed on June, 16, 1994. Accordingly, SSH within projects implement these major priorities: introduction of state-of-the-art educational technologies, development and application of the advanced methods of educational process management, and facilitation of close co-operation between universities and industries, which provides for stimulation of innovation activity.

The framework programmes that unite EU member-states are one of form of co-operation that became available to Ukraine starting in 1994, during the Third Framework Programme (FP 3) when Ukraine signed the European Union Agreement about Partnership and Collaboration.

Scenario for international cooperation

Ukraine is between the two scenarios “islands of excellence” and “an expense we cannot afford”, although being more close to the Alfa scenario of the “islands of excellence”. Ukraine is the second largest EECA country and is also a neighbour to the EU, so the cooperation on topics of common interest with Ukraine is very important for Europe. Thanks to the political changes in Ukraine the ideological function of science has been seriously weakened, which gives more intellectual freedom to scientists. With the breakdown of the Soviet Union, Ukraine inherited a comparatively large part of the research infrastructure, although mostly in natural sciences (but also some in SSH) – a number of Pan – Soviet Union research institutes had their headquarters in Russia and Ukraine. After gaining independence Ukrainian government adopted many new laws aimed toward supporting S&T development on the governmental level. However, the laws adopted have often not been coordinated between themselves; texts of laws are not always specific enough and this leaves lots of room to interpretation, resulting in non-implementation and bureaucratic manoeuvres. The reform of the S&T institutions was left half-way due to the domestic funding to research being extremely limited; many institutions that existed during the Soviet time were preserved while new structures were established as well. This effectively has created even more contradictions in the RTD management system.

Armenia

National policies and institutions

The Armenian government resolution "On Priority of S&T Trends in Armenia" was adopted in 2002 and established the following strategic directions of the S&T development: Armenian Studies, Information Technologies, Special Purpose Investigations, High-tech including Biotechnology and Nanotechnology, New Energy Sources, Risk Factors and Human Health, New Materials and Basic Research having crucial importance for applied sciences. SSH, with the exception of Armenian Studies, is not a government S&T priority development field.

While the S&T strategy has been adopted by the Armenian government, its implementation remains weak. The government funding of science is low; moreover, the institutional structures for the management of S&T requires a reform. - Most of scientific work conducted

in the system of the National Academy of Sciences takes place in more than 30 public scientific organizations, councils, and societies. The Academy of Sciences was established during the Soviet times and it was in place across the Soviet Union. That funding was discontinued within the dissolution of the Soviet Union; expenses connected to the support of the Academy of Science were assumed by the national Armenian government. As a result, the Armenian NAS has shrunk at least twice in number of personnel since beginning 1990s; today it still experiences serious financial difficulties and attempts to fund itself by international and national grants and projects.

International cooperation patterns

Armenian SSHs are international; the majority of international connections are on the account of contacts with the Armenian Diaspora in the USA, Canada, France, Iran, Russia, Lebanon, Syria and many other countries. There are eight million Armenians living outside Armenian borders and usually foreign Armenians are very active in communication and supporting Armenia, including its sciences. Armenian diaspora is an Armenian “oil” also for the international RTD cooperation – thanks to the diaspora Armenian scientists are among highly published authors among all the EECA countries.

The EU cooperation with Armenia is organized through the formerly EU TACIS Programme (currently the European Neighbourhood Policy Instrument), EU COPERNICUS, INTAS, TEMPUS, FP6 and FP7 programmes. However, to compare to other international cooperation programmes, a share of the EU programmes in the international S&T cooperation is modest.

Scenario for international cooperation

In context of the absence of government policy on the S&T, and of the overall degradation of science in Azerbaijan, it is literally impossible to develop a long term international S&T cooperation with Azerbaijan on the institutional level. The only possibility is to cooperate with individual scientists on the “pockets” of excellence information such as history or Iranian Studies. Armenia follows the “An expense we cannot afford” scenario.

Azerbaijan

National policies and institutions

While a proposal for a law on science and S&T policy was submitted a few years ago to the Parliament but never adopted, there are no S&T state priorities in Azerbaijan. Members of the Azerbaijani Parliament⁸ justify this lack of adaptation as a matter of a decision of the President of the Republic. Until now, no decision has been taken by the President. Most of Azerbaijani scientific work is conducted at institutes of the Azerbaijani National Academy of Science (ANAS), which is severely underfunded. As large oil revenues are coming into Azerbaijan, on the political level, the promotion of science is not of major importance. At the same time, as the economic development based on the oil money has continued, good quality education has been called for by the elite class, and some actions towards strengthening the research capacity were taken.

Cooperation with the EU

Research cooperation with organisations in Europe is extremely low; there are a few projects supported by the FP6 and FP7, but they are implemented by the few people who have personal contacts, speak English and understand the rules of cooperation with the EU. There are very few such people; those persons are mostly affiliated with the international NGOs and foundations.

An important institutional structure for promoting the cooperation with Azerbaijani scientists is the 'BSEC Working Group on Cooperation in S&T'. This is information a policy dialogue platform that joins representatives of Academies of Sciences and other S&T organisations from the countries in the Black Sea Basin; those countries also include EU Member States.

Scenario for international cooperation

In context of the absence of government policy on the S&T, and of the overall degradation of science in Azerbaijan, it is literally impossible to develop a long term international S&T cooperation with Azerbaijan on the institutional level. The only possibility is to cooperate

⁸ An informal discussion of the report authors with a member of the Parliament and a member of the Parliamentary group on science.

with individual scientists on the “pockets” of excellence information such as history or Iranian Studies.

Azerbaijan has fallen into the “An expense we cannot afford” scenario. If the support to science and higher education will not be re-established to the level of the governments’ priorities, there is a risk that Azerbaijan will be left behind in the development of the international scientific cooperation. Then current forms of cooperation will be possible then only on the individual researcher – to researcher level on the topics of the “pockets” of excellence such as Iranian studies.

China

National policies and institutions

Over the past 3 decades, China has seen a tremendous growth and structural change in the science and technology system. The economic turnaround during this period has been coupled with a view that science and technology should be seen as a key driver in the modernisation programme. Investments in science and technology have risen fast, even as the average economic growth rate has been around 10-11% over the past decade.

The SSH in China is developing: research activities in China expand and become more international due to more active participation of Chinese scientists in international collaboration.

Cooperation with the EU

The results and lessons of Chinese organisations participation in FP6 may be summarised as follows. So far in the FP6, there are 157 Chinese partners in all together 134 research projects. This aggregates to 227 Chinese participations, of which 20% are from CAS and 7% from Tsinghua University. Research institutes are most active participants, accounting for 41% of the participations, followed by universities (34%) and private partners (18%). European participation in the Chinese programmes is very small, in fact negligible.

The bottom line of the participation pattern under the EU-China agreement is that it is extremely skewed in many ways: There is now broad Chinese participation in the FP, but very little European participation in the Chinese programmes, and the EU FP funds a great

part of the Chinese costs for the participation in FP, but there are no funds on either side for European participation in Chinese programmes. China has access to much research, counting the total value of the projects, but the Chinese programmes remain closed to Europe. On the other hand, the Chinese have shown great willingness to co-fund projects and programmes in which they have strategic interest, e.g. GALILEO and ITER.

There are some wider concerns coming out of the EU-China collaboration pattern: China and its S&T community are on a fast track of expansion and represent a bridgehead for learning on issues and areas that are important to address at home. Seen from their perspective it is pertinent to relate strategically to the opportunities globally for learning and obtaining knowledge. Hence, one can also observe a selective approach in which China selectively aims at maximising the benefits from collaborations in principle. China engages in collaboration with individual countries, with groups or regions (like the Nordic region recently on welfare state research) and attempts to exploit the opportunities offered them in the FP. These opportunities are abundant as China is defined both as a developing country and an equal S&T partner.

Scenario for international cooperation

The S&T agreement between China and EU was evaluated in the form of an impact assessment in 2004 (European Commission 2004). This agreement provided the reciprocal opening up of the programmes on both sides. One conclusion is standing out as important: The fostering, emphasis and communication of mobility schemes is a crucial prerequisite for fruitful cooperation between EU and China. Mobility and exchange with great visibility may therefore be seen as preparing the ground for more substantial collaboration in research. It was suggested that dedicated funds were made available for this. But there is little attention to the lack of reciprocity in the agreement and how European participation in China can be increased.

Conclusions

There are dramatic differences between the countries in the GlobalSSH study region in terms of their sizes (territory and population), histories, cultures, research capacities as well as in

their policies and institutional arrangements for the support of the Social Sciences and Humanities.

China is undoubtedly a strategic partner for Europe. With the science system given a key role in the modernisation of China, the China research potential, but also in its social sciences and humanities, presents an increasing interest to European scientists. European scientists need to learn how to work in a completely different administrative and disciplinary context in China from in Europe.

EECA countries, despite the shared history of being in the former Soviet Union until 1991, today differ considerably from each other in terms of their political orientations, economic development levels and institutional landscapes of their S&T. As of August 2008, Georgia has ended its membership in the Commonwealth of Independent States. Therefore, there is no one institution that would include all the 12 countries of the former Soviet Union. There is only one purely geographical definition of the group – Eastern Europe and Central Asia region.

Given the diversity of policies and institutions in different countries, it is important that the EU develops a tailored approach to the international cooperation with each third country. This is understood in the European Union. The EU international research cooperation policy that is outlined in the EC 2007 Green Paper stresses that the international research cooperation shall “address common problems that are faced by third country/region partners and Europe on the basis of mutual interest and mutual benefit”. This direction should be pursued also in the future.

Chapter 4. International classifications of SSH and use of the international classifications by EE countries and China

It is recognised among scholars (Kohler 1981, Lenoir 1997, Bourdieu 2001, Heilbron, 2003, Wittrock, 2001) that scientific disciplines are institutions consisting of “fairly coherent sets of concepts, questions, references and methods” (Heilbron, 2003) which “demarcate areas of academic territory, allocate privileges and responsibilities of expertise, and structure claims on resources” (Bourdieu 2001, 128-41). Wagner describes the formation of the SSH in Europe where at the beginning the SSH disciplines were bound to the development of nation-states and further were gaining international links in Europe and the USA (Wagner, 2001). Heilbron and Goudsblom (2001) examined the history of Western sociology – starting from a pre-disciplinary stage up to 1830; formation of an academic discipline with diverging national traditions in Europe and the USA until 1930; establishing a full fledged academic discipline and an emerging international hierarchy in 1930 – 1970,; and finally a period of crisis, fragmentation and attempts at new synthesis in 1970 - 2000. According to Heilbron (2003), also inter- or multidisciplinary work inevitably depends on the disciplinary structure it seeks to transcend. The mentioned studies of the SSH history demonstrated that the systems of international SSH research cooperation in Europe are usually organised on the disciplinary basis - through international organisations and professional research associations and networks.

Such an informal institutional cooperation based on common disciplines does not exist in the cooperation between scientists in Europe and the third countries under discussion in this report – China, Russia and other EECA region countries. A reason for that is the “historically and politically constituted territorial divide in the reproduction of social knowledge between West and East” (Wagner 2005). Social and human scientists in the project target countries – China, Russia and other CIS countries – were isolated for a long period of time from the European SSH. China was isolated due to its geographical remoteness, cultural and language differences; Russia and other EECA countries despite their geographical proximity to Europe were isolated from Europe by the walls of the Cold War. Until recently (up to the end of 1980s) there was very little exchange of scientific ideas and discussions between scientists in China, Russia and other CIS countries and Europe.

This chapter explores the use of international science classifications in the selected third countries – Armenia, Azerbaijan, China, Georgia, Russia and Ukraine. For a comparison, a case study of Estonia, an EU member state is added to the analysis. Detailed descriptions of the international and national classifications of SSH are given in Annex 1. (see below) to the report.

Most known international classifications of the scientific fields are

- The Frascati Manual (FOS) for classification of research and development expenditures developed by the Organisation for the Economic Cooperation and Development (OECD);
- The International Standard Classification of Education (ISCED) developed by the United Nations Educational, Scientific and Cultural Organisation (UNESCO).
- SSH classification of the European Science Foundation and
- The Common European Research Information Format (CERIF) - a tool developed by the European Commission with the aim to harmonise databases on EU research projects and to ease exchange of comparable project information.

A distinction should be made between national and international classifications. The international classifications do not aim at harmonizing data classified by field of science and technology for national purposes; rather they aim at achieving a minimum level of comparability of R&D and education data at the international level. Most of the countries may use the international classifications that allow them to develop the cooperation internationally; for the management of the national RTD system most of the countries also establish national systems that reflect the specifics of the countries' RTD systems. The international classifications are institutions, common rules that support the international S&T cooperation.

Classification of research areas in the EU member and associated states – an example of Estonia

In 2006, a classification system of research fields and areas was adopted by the Estonian Ministry of Science and Education (Table 4 in Annex 1), and remains the basis for organisation of the data on research activities nationally through the Estonian Research

Information System, www.etis.ee. This classification is also used for the organisation of grant application evaluation for funding by the Estonian Science Foundation and other Estonian government research funding programmes. The system reflects the specifics of the Estonian research system, including the historically developed research thematic with a focus on linguistics, cultural and environmental studies, and the fact that the Estonian research community is small compared to in other countries. The SSH research areas are represented in two large research fields – “Culture and Society” and “Biosciences and Environment”.

A classification of fields and disciplines of studies in the Estonian higher education (adopted by the Estonian Ministry of Science and Education in 2002) follows the ISCED international classification.

The Statistical Office of Estonia collects the R&T statistics according to the international Frascati Manual. Estonia is actively involved in the international research cooperation through the ESF, and is using the ESF classification for organisation of the cooperation within the ESF network.

Thus, Estonia uses its national classification of scientific disciplines as a part of its national RTD management system; the national classification reflects the specifics of the sciences in Estonia connected to its history of developing sciences within the Estonian socio-economic context. At the same time, Estonia is actively using the major international classification which allows active participation in the international research cooperation on the European and global levels.

Classification of SSH research areas in the GlobalSSH Action target countries

Armenia

In the Republic of Armenia the Soviet model for R&D organisation remains in existence; this includes the use of the classification system of scientific disciplines. - In it the disciplinary division of sciences under the Soviet Union classification of sciences differs from the one used by the European countries; overall, they are less detailed with regard to the policy oriented areas and more detailed with technical and descriptive disciplines. In 2002, after the Armenian Government adoption of the resolution "On priority of S&T trends in Armenia", Armenian Studies were added as a separate scientific field.

As of today there is no consistent and comprehensive science policy in Armenia, the existing classification of disciplines is not actively used as an instrument in science policy development and implementation. Therefore, the historically developed distribution of scientific disciplines that is not reflected in the officially adopted classification, nor is it used in the everyday management of science in scientific and higher education institutions. Traditionally in Armenia historical science, philosophy, linguistics, law and theology were well-developed. In different historical time periods, the study of literature and arts, law, linguistics, oriental studies, ethnography and archaeology were ranked among humanities; social studies, economics, demography, pedagogy, social philosophy, sociology and political science were ranked among social sciences. This identifies that there historically was no hard division between the humanities and social sciences. In the post-Soviet period, however, such SSH fields have been identified as sociology, law and legal studies, political science, psychology, management, economics, history and philosophy have been experiencing particularly rapid development (See Table 5 in Annex 1).

Armenia due to the absence of the consistent national science policy does not officially use the international classifications of science; although some exercises have been conducted within INTAS and EU funded projects.

Azerbaijan

A disciplinary division and classification has been established yet during the Soviet times by the Highest Certifying Commission of Azerbaijan of dissertations defended on the graduate student's level; it follows the classification that was used throughout the Former Soviet Union.

A classification of the fields of sciences was established by the Azerbaijan National Academy of Sciences (ANAS) in accord to the UNESCO ISCED international standard classification model (See Table 6 in Annex 1). However, it should be mentioned that the Academy of Science is an independent research entity in Azerbaijan, not connected institutionally to the government.

Thus, on the state level Azerbaijan is not engaged in international S&T cooperation – except with the UNESCO ISCED classification adopted for use by the Azerbaijan Academy of Sciences, no international classification are used. Similarly to Armenia, as well as other EECA countries, there were exercises attempting to apply international classifications within the Azerbaijani EU funded projects. These attempts, however, were made by individual researchers within those projects

China

CASS is the major research organisation for SSH in China. Today, CASS is made up of 32 research institutes, three institute-level research centres and a graduate school covering altogether 99 disciplines (Table 7 in Annex 1). CASS is seen as the “major think tank” of the CPC Central Committee and the State Council on the basis of China’s development needs in undertaking social modernization. The notion of disciplines reflecting areas of research in CASS is somewhat contradictory. On the one hand, official information from CASS states that the institution covers 6 disciplines: Economics, philosophy, historical science, literature and linguistics, political science, law, sociology and ethnology, and international studies: while on the other, these disciplines seem more like umbrellas for organising research. In this case, disciplines are typically the result of politically defined specification of research areas.

Georgia

The Georgian Ministry of Education and Science adopted the classification for the higher education based on the ISCED. The following disciplinary division is envisaged by the Ministry of Education and Science for the undergraduate register of disciplines in institutions of higher education in Georgia (See Table 8 in Annex 1). The Georgian National Science Foundation (Table 6) detailed classifier divides the SSH into two “Scientific Directions”: (1) Georgian Studies, and (2) Humanities, Economic and Social Sciences.

The Russian Federation

The Russian Federation state classificatory of scientific and technical information (GRNTI) establishes classification of the fields of knowledge (Table 9 in Annex 1); this delineation

includes all streams of the scientific and technical information. All types of knowledge are conditionally divided into 4 subclasses:

- Social studies (codes from 00 up to 26);
- Natural and exact sciences (codes from 27 up to 43);
- Technical and applied sciences. Branches of economy (codes from 44 up to 81);
- Intersectoral and multidisciplinary problems (codes from 82 up to 90).

In 2007, the Russian Federation was accepted into the OECD as a member country; the collection of the data is conducted by the Russian statistical office of the data according to the Frascati Manual.

Conclusions

The EECA countries and China use different disciplinary divisions of sciences from the ones used in Europe and real cooperation on the disciplinary basis is not possible at the moment. It could be assumed the disciplinary cooperation may be established in a long run as links between as young scientists in the East and the West will develop.

The EECA countries and China do not yet use actively the international classification systems (see a summary of results in Table 1 below) and this creates an impediment to the international cooperation - use of those international classifications is an important pre-requisite for the international S&T cooperation.

Table 1. Use of international classifications in selected countries – Estonia, Armenia, Azerbaijan, Georgia, China, Russia and Ukraine

Classifications	National classification reflecting national specifics	International Standard Classification of Education - ISCED	Frascati Manual for classification of research and development expenditures	European Science Foundation classification
Countries				
Estonia	Yes, adopted in	In use – Ministry	In use – the national	In use – Estonian

	2006 by the Ministry of Science & Education	of Science and Education	statistical office. Estonia was accepted in 2007 into the OECD as a member	National Science Foundation is a member
Armenia	Classification developed during the Soviet time by a certification commission of graduate students' dissertations	-	-	-
Azerbaijan	Classification developed during the Soviet time by a certification commission of graduate students' dissertations	Yes, for the higher education developed by the Academy of Science	-	-
China	Classification includes 260 second and third grade disciplines	-	-	-
Georgia	Established in post-Soviet time by Georgian National Science Foundation	In use - Georgian Ministry of Education and Science	-	-
Russia	Yes – state classificatory of scientific and technical information	-	In use – the statistics office. Russia was accepted in 2007 into the OECD as a member	-

	(GRNTI)			
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On a positive note, the process of the developing the cooperation is ongoing - all the countries are members of the UNESCO; Russia was accepted as a member of the OECD in 2007; Armenia, Azerbaijan, Georgia, Russia and Ukraine, are currently actively involved in the Bologna process⁹ aimed at the development of the European Higher Education Area. More compatible with international classifications, national classifications are emerging - see for instance Georgia, Azerbaijan at the level of the Academy of Sciences, and Russia.

Among major bottlenecks to introducing the international classifications in the are

- ❖ National disciplinary divisions of sciences in the target third countries are rooted in national systems of RTD management. This is especially the case for large countries such as China, Russia, and Ukraine where due to the countries' large sizes and that institutional inertia preserve a rather rigid centralised RTD administration systems, and the disciplinary division of SSH remains track-dependent on the previously used rules.
- ❖ Partly as a result of the inertia, and partly to the lack of appropriate contacts and capacity of officials in third countries, there is insufficient involvement of China, Russia and other EECA region countries in the work of international, including European, organisations and networks including the OECD, ESF and other European research networks that support development of common rules of the international RTD cooperation within common fields of research.
- ❖ A weakness of the capacities of relevant state organizations, including national statistical offices, in the above countries for the collection of the data according to international classifications.

⁹ Although the Bologna process does not focus on the development of common classifications of fields of sciences, still it does support the development of shared areas of knowledge between Europe and the third countries involved in this process.

Conclusions and recommendations

China, Russia and other countries of Eastern Europe and Central Asia (EECA) are rapidly developing transition economies and key international research and economic cooperation partners for the EU. Knowledge about the research capacities and institutions in the mentioned countries is still largely missing in Europe. To bridge this knowledge gap for China and five Eastern European countries (Armenia, Azerbaijan, Georgia, Russia and Ukraine), participants of the GlobalSSH Action conducted an analysis of Social Sciences and Humanities institutional landscapes, policies and practices of organising research in those countries. Outcomes of the studies are presented in this newsletter.

China – a strategic partner for the EU international research cooperation on global issues

China has a special place in the international cooperation with the EU; this giant partner with the population of 1.3 billion people experienced over the past three decades a tremendous economic growth and structural change in the science and technology system. The economic turnaround during this period has been coupled with a view that science and technology should be seen as a key driver in the modernisation programme. As a result, investments in science and technology have risen fast.

With the science system given a key role in the modernisation of China, the China research potential, but also in its social sciences and humanities, presents an increasing interest to European scientists. China is proactive in developing its international RTD cooperation with the EU and there is an increasing participation of Chinese scientists in EU programmes. European scientists still need to learn how to work in a completely different administrative and disciplinary context in China from in Europe.

China and Eastern Europe - two different economic development trajectories

As the target countries in this study include China as well as the former Soviet states, the economic development and hence the framework conditions for the SSH systems could not be more different (Remoe 2007). China had embarked upon its dramatic rise as an economic power after Mao's death in 1976 and the rehabilitation of Deng Xiaoping in 1978. The sustained support for science in China after this initiation of reforms was laid down in the four modernisations, implying that China was to modernise after the Cultural Revolution

through four areas: Agriculture, industry, defence, and science and technology. All countries except China experienced a dramatic downturn of economic conditions which also had significant impacts on the science systems of these countries.

Similar to what China had experienced during the Cultural Revolution of 1966-1976, the former Soviet countries, now independent or struggling to become so, saw a drastic deterioration of science resources. This resulted in stagnation or in some cases to a virtual full stop in science activities, leading to a loss of scientists in the form of two types of brain drain: Firstly, scientists, in particular within hard sciences, moved abroad as the borders were now open and they could find job opportunities that had vanished at home. Secondly, scientists, most notably within SSH, moved to other occupations in their own countries. As illustrated in the figure, growth picked up again after some 10 years of downturn, leading to a gradual rebuilding of science resources.

This means that while Chinese research organisations can already today participate on equal footing with European organisations in the European programmes, this is not the case with organisations in the Eastern European countries. On exception of elite research institutions in Russia, the rest due to the low economic support, need support in developing the research infrastructure, capacity of the research personnel before they can be equal partners to the European organisations in European research programmes.

Cooperation with Europe's Eastern neighbours on issues of common interest

Cooperation with Russia and countries of the European Neighbourhood Policy region that includes Ukraine, and the three Caucasus republics of Armenia, Azerbaijan and Georgia; is important for the EU politically and economically. Due to the proximity to the EU, many of developments in both Russia and countries of the ENPI region have an immediate impact on the EU. Contributions of the Eastern European countries to such issues as illegal migration, inter-confessional and ethnic conflict and adaptation, energy, environmental issues, demographic pressures, have a direct effect on the research agenda that the FP7 sets out to implement.

What joins the EECA countries is common history, one of being part of the Former Soviet Union that ceased to exist in December 1991. That history also meant all the EECA countries shared common Soviet institutions for supporting S&T. In that highly centralised system,

supporting research was made available via the Academy of Science and higher education – through the all-Soviet Union ministry of education and universities; consequently, research and education were separated from each other.

Scientists worked in a complete isolation from the scientific community in the West. Mostly non-ideological fields of study received development during the Soviet time – archaeology, ethnography, linguistics, based on quantitative methods sociology and economics, etc. Sociology based on qualitative methods or political sciences remained for decades methodologically handicapped. With the absence of access to libraries and other research infrastructure on one hand, and of a sound and evolving system that motivated scientists to study foreign languages or publish internationally on the other, the result was a situation where majority of SSH scientists in the EECA countries use research methodologies incoherent with the ones of the West. Furthermore, those scientists would have limited skills and experience in publishing in the international peer-reviewed journals. And finally the language barrier was another impediment to the international S&T cooperation with European scientists.

The Soviet system of S&T support ceased to exist with the dissolution of the USSR and the EECA countries are still undergoing a transition to overcome the heritage of almost fifty years of existence of the Soviet Union. The situation is gradually changing – the cooperation with scientists in the West, in fact much more with the scientists in the US rather than with scientists in Europe, is being established. However, there are dramatic differences between the EE countries in terms of their research capacities as well as in their policies and institutional arrangements for the support of the Social Sciences and Humanities.

The EECA countries today differ considerably from each other in terms of their political orientations, economic development levels and institutional landscapes of their S&T. As of August 2008, Georgia has ended its membership in the Commonwealth of Independent States. Therefore, there is no one institution that would include all the 12 countries of the former Soviet Union. There is only one purely geographical definition of the group – Eastern Europe and Central Asia. Cooperation with each country has to be developed on the bilateral level; at the moment a regional approach to all those countries will not work anymore. To demonstrate differences in the development of institutional landscapes in Eastern European countries, we use a scenario approach developed in 2005 by the University of

Manchester PREST Centre for the EECA countries¹⁰. The mentioned scenarios were elaborated in 2005 by PREST. The presented below scenarios are based on the updated data of years 2002 – 2007; it also includes Russia that was not in a focus of the PREST study.

Of the countries under analysis in this report (Russia, Ukraine, Armenia, Azerbaijan and Georgia), it could be said that Russia clearly follows the scenario of “islands of excellence”. Rapid economic growth, high oil revenues and availability of the national science priorities, made it possible to provide support to RTD development. Another side of the coin though is that the government support is mostly provided to elite research institutions in Moscow and St. Petersburg; therefore, only these strong, elite institutions are able to apply for international support. Consequently, it is only through elite status and such funding that the islands of excellence appear. Little attention to supporting regional institutions leaves the peripheral universities in a difficult financial situation; this results in a decline of their already limited research capacities in Russian regions. Bureaucracy, overlapping and unclear responsibilities of different agencies dealing with the S&T support (which often change their status due to government system restructuring) and a renewed ideological pressure to scientists limit possibilities for the development of the strong SSH capacity for the international cooperation in Russia.

There is a potential in the future that Georgia would also follow the “island of excellence” scenario – a transparent institutional structure for the support of the S&T that is being built by the Georgian government would allow it to develop the necessary scientific future capacity. Due to its small size, however, Georgia does not have resources to develop all directions of science, so it will need to establish priorities. This is the reason for the “islands of excellence” scenario. One of the risks of the development of an effective RTD system is possible political instabilities due to internal or otherwise external factors. Undoubtedly the damage made to the Georgian economy by the Russian troops during the August 2008 Georgia – Russia military conflict will have a very serious negative impact also to the RTD capacity of Georgia.

Ukraine is between the two scenarios “islands of excellence” and “an expense we cannot afford”, although being more close to the Alfa scenario of the “islands of excellence”.

¹⁰ See description of the approach at <http://prest.mbs.ac.uk/prest/scope/>

Ukraine is the second largest EECA country and is also a neighbour to the EU, so the cooperation on topics of common interest with Ukraine is very important for Europe. Thanks to the political changes in Ukraine the ideological function of science has been seriously weakened, which gives more intellectual freedom to scientists. With the breakdown of the Soviet Union, Ukraine inherited a comparatively large part of the research infrastructure, although mostly in natural sciences (but also some in SSH) – a number of Pan – Soviet Union research institutes had their headquarters in Russia and Ukraine. After gaining independence Ukrainian government adopted many new laws aimed toward supporting S&T development on the governmental level. However, the laws adopted have often not been coordinated between themselves; texts of laws are not always specific enough and this leaves lots of room to interpretation, resulting in non-implementation and bureaucratic manoeuvres. The reform of the S&T institutions was left half-way due to the domestic funding to research being extremely limited; many institutions that existed during the Soviet time were preserved while new structures were established as well. This effectively has created even more contradictions in the RTD management system.

Armenia and especially Azerbaijan have fallen into the “An expense we cannot afford” scenario. If the support to science and higher education will not be re-established in those countries to the level of the governments’ priorities, there is a risk that these countries will be left behind in the development of the international scientific cooperation. Then current forms of cooperation will be possible then only on the individual researcher – to researcher level on the topics of the “pockets” of excellence such as Iranian studies in Azerbaijan or Armenian studies or migration in Armenia.

Overall conclusions

Given the diversity of policies and institutions in different countries, it is important that the EU develops a tailored approach to the international cooperation with each third country. This is well understood in the European Union. The EU international research cooperation policy that is outlined the EC 2007 Green Paper stresses that the international research cooperation shall “address common problems that are faced by third country/region partners and Europe on the basis of mutual interest and mutual benefit”. Overall, the EU international RTD cooperation policy could be considered successful as the statistics of the third

countries' participation in the EU projects shows an increase. However, there is room for improvements in the EU cooperation policies.

Firstly, due to the very institutional nature of the EU, not only the cooperation within the EU but also beyond its borders is organised mostly through construction of formal institutions - signing agreements and cooperative programmes, etc. The formal institutional cooperation with third countries is very important as it ensures stability in the relations with governments of third countries. However, what was largely forgotten in this rapidly expanding cooperation process is that the cooperation takes place with transition countries where formal institutions are still unstable and changing frequently – ministries and other agencies are being established and then dissolved as a new government is elected and come into power. Also often overlooked is the process of the democratization is still ongoing and the wide involvement of scientists through formal structures is not something which is taking place in reality. Instability of the formal institutions may also be connected to the very financial support to both science and science administration.

Even when cooperative rules are adopted, their implementation is often a big challenge in transition countries as recently established agencies and organisations do not have sufficient human resources and expertise for implementation of taken commitments. It is often taken for granted that administrative tasks can be easily implemented by an agency in Moldova or Ukraine with the same ease they are implemented in Germany or France, a fact that is often mistaken. Countries need support in developing their research and research administration capacities. The support could be provided through better coordination of the EU RTD policy with the EU development cooperation policies or European Neighbourhood Policy Instrument. In fact, this proposal is mentioned in the EC Green Paper; as yet, however, there are no concrete examples of such coordination efforts.

Therefore, the EU shall provide much more support not to formal cooperative institutions but to research communities: to joint research teams comprising scientists both from Europe and third countries, and for the creation and development of research networks. Mobility of scientists, especially of young scientists, is a key instrument to support the establishment of such international research networks. Hosting EE scientists at Institutes of Advanced Studies,

at doctoral and postdoctoral programmes in Western universities are some examples of possible instruments for the mobility.

Secondly, the intra – European models of the international research cooperation according to the common Europe disciplinary divisions and traditions of communication do not work in cooperative projects where scientists from third countries are involved. The practice of the international research cooperation has shown the process of developing such cooperation between the research communities in the East and West is slow and sometimes frustrating. Scientists in the transitioning countries often do not have sufficient information about opportunities to participate in FPs' activities, nor do they have practical experiences with preparation of FP project applications. European scientists consider the cooperation amongst different academic traditions and cultures in research a major difficulty, especially reflected in publishing, language differences, and minimal experience of Eastern European scientists in managing projects and reporting on them. Also obstacles are economic problems of social scientists in the CIS countries where those scientists received very small salaries and have had to be involved in other activities, such as consulting or small business to make the ends meet, which have not allow those scientists to concentrate on science. Innovative forms of involving third countries' scientists should be adopted; those forms should involve extensive personal communication, slower pace and longer term span of implementing such international projects, provisions of academic literature, methodology meetings and summer schools as well as other forms of the academic mobility.

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Annex 1. International and national classifications of scientific disciplines

Frascati Manual FOS for classification of research and development expenditures

The OECD is an intergovernmental organisation with 30 member countries¹¹; OECD promotes the market economy and sustainable economic growth. The developed by the OECD Frascati Manual FOS (Frascati Manual 1980) classification is used to classify R&D expenditure by functional fields, notably public sector R&D. The OECD member states and other countries, with which the OECD cooperates, use the Frascati Manual as a basis for the collection of the statistics on the RTD and innovation; the data collection is performed usually by national statistical offices¹². The Frascati Manual that was elaborated in 1993; it was updated in 2002 and 2006 to reflect the changes in the science and technology. The 2006 classification that concerns the SSH is presented in Table 2.

Table 1. The Frascati Manual (2006) – Social Sciences and Humanities

Source: OECD, 2007

5. Social Sciences	6. Humanities
5.1 Psychology	6.1 History and archaeology
5.2 Economics and business	6.2 Languages and literature
5.3 Educational sciences	6.3 Philosophy, ethics and religion
5.3 Sociology	6.4 Art (arts, history of arts, performing arts, music)
5.5 Law	6.5 Other humanities
5.6 Political Science	
5.7 Social and economic geography	
5.8 Media and communications	
5.7 Other social sciences	

International Standard Classification of Education - ISCED

The UNESCO – an international organisation¹³ that aims at developing the education system, promoting research and innovation globally; has developed the ISCED as a classification of the fields of education. The classification has been developed initially in 1988 and contained 21 fields of education; an updated in 1997 classification contains 25 fields. The ISCED classification is widely accepted internationally in the education and higher education research. The ISCED groups of fields of education that concern the SSH are “Humanities and Arts” and “Social sciences, business and law” (see Table 2).

¹¹ OECD founding members (1961): Austria, Belgium, Canada, Denmark, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, United Kingdom, United States. Joined later (listed chronologically with year of admission): Japan (1964), Finland (1969), Australia (1971), New Zealand (1973), Mexico (1994), Czech Republic (1995), South Korea (1996), Hungary (1996), Poland (1996), Slovakia (2000). The European Commission participates in the work of the OECD, alongside the EU Member States. On 16 May 2007, the OECD Ministerial Council decided to open accession discussions with Chile, Estonia, Israel, the Russian Federation and Slovenia. Source: www.oecd.org

¹² See information on the responsible institutions in the EU member and associated states for the collection of the data at http://ec.europa.eu/research/science-society/women/wssi/pdf/research_staff.pdf

¹³ UNESCO has 193 Member States and 6 Associate Members.

Table 2. ISCED fields of education in the SSH. Source: UNESCO, 1997

Humanities and Arts	Social sciences, business and law
<p>21 Arts</p> <ul style="list-style-type: none"> ❖ Fine arts: drawing, painting, sculpture; ❖ Performing arts: music, drama, dance, circus; ❖ Graphic and audio-visual arts: photography, cinematography, music production, radio and TV production, printing and publishing; ❖ Design; Craft skills 	<p>31 Social and behavioural science</p> <ul style="list-style-type: none"> ❖ Economics, economic history, political science, sociology, demography, anthropology (except physical anthropology), ethnology, futurology, psychology, geography (except physical geography), peace and conflict studies, human rights
<p>22 Humanities</p> <ul style="list-style-type: none"> ❖ Religion and theology; ❖ Foreign languages and cultures: living or ‘dead’ languages and their literature, area studies; ❖ Native languages: current or vernacular language and its literature; ❖ Other humanities: interpretation and translation, linguistics, comparative literature, history, archaeology, philosophy, ethics. 	<p>32 Journalism and information</p> <ul style="list-style-type: none"> ❖ Journalism; library technician and science; technicians in museums and similar repositories; ❖ Documentation techniques; ❖ Archival sciences
	<p>34 Business and administration</p> <ul style="list-style-type: none"> ❖ Retailing, marketing, sales, public relations, real estate; ❖ Finance, banking, insurance, investment analysis; ❖ Accounting, auditing, bookkeeping; ❖ Management, public administration, institutional administration, personnel administration; ❖ Secretarial and office work.
	<p>38 Law</p> <ul style="list-style-type: none"> ❖ Local magistrates, ‘notaires’, law (general, international, labour, maritime, etc.), jurisprudence, history of law.

Social Sciences and Humanities at the European Science Foundation (ESF)

The European Science Foundation (ESF), www.esf.org, is an association of 75 member organizations devoted to scientific research in 30 European countries. The member organizations are national research councils, research societies and networks. The ESF coordinates a wide range of pan-European scientific initiatives in different research fields including humanities and social sciences. Within the ESF, social sciences and humanities include the following research areas (Table 3):

Table 3. The European Science Foundation classification of the SSH

Source: the ESF website www.esf.org

Social Sciences	Humanities
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<ul style="list-style-type: none"> ❖ Business and Administrative Sciences ❖ Communication Sciences ❖ Demography ❖ Economics ❖ Environmental Sciences ❖ Geography ❖ International Relations ❖ Law ❖ Pedagogy and Education Research ❖ Political Sciences ❖ Psychology and Cognitive Sciences ❖ Social Anthropology ❖ Social Statistics and Informatics ❖ Sociology ❖ Women's studies 	<ul style="list-style-type: none"> ❖ Anthropology, Ethnology and Folklore ❖ Archaeology ❖ Art & Art History ❖ Classical Studies ❖ Cognitive Science ❖ Gender Studies ❖ Heritage Studies ❖ History ❖ History & Philosophy of Science ❖ Literature ❖ Linguistics ❖ Oriental & African Studies ❖ Pedagogical & Educational Research ❖ Media Studies ❖ Music & Musicology ❖ Philosophy ❖ Psychology ❖ Religion and Theology
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Common European Research Information Format – CERIF

It should be also mentioned that there were attempts in Europe to establish the Common European Research Information Format (CERIF) as a tool to harmonize databases on research projects in order to ease exchange of comparable information on the one hand, and in order to have guidelines for building research databases. CERIF was developed in 1991 and updated in 2000 by a group of experts from the EU Member States and Associated Member states, under the co-ordination of the European Commission. Due to lack of funding this initiative did not continue the way it was planned; information on CERIF is available at <http://cordis.europa.eu/cerif/>.

Table 4. SSH research areas classification in Estonia.

Source: the Estonian Ministry of Education and Science, 2006

Culture and Society	Biosciences and Environment
1. Philosophy 2. Theology 3. History and Archaeology 4. Cultures Research 5. Aesthetics and Arts Research 6. Philology and Linguistics 7. Law 8. Psychology 9. Logopedics 10. Education 11. Social Sciences 12. Economics 13. Political Science and Administration 8. Research relating to the State of the Environment and to Environmental Protection 10. Geography and Regional Studies 11. Research relating to Environmental Policy, Environmental Economy and Environmental Law

14. Communication and Information Sciences	
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Table 5. Enrolment of Students for Obtaining a Degree of the Candidate of Sciences by the SSH Disciplines in 1998-2002 in Armenia

Source: FP6 BS-ResPot project Country Report 2 on Armenia, 2005.

Discipline	1998	1999	2000	2001	2002
Economics	31	37	33	59	63
Philology	17	13	28	20	28
History	12	8	8	14	26
Art	9	11	39	11	21
Law	5	8	12	8	19
Architecture	20	8	7	11	9
Sociology	1	4	3	7	4
Psychology	5	3	7	2	3
Geography	5	2	5	3	1
Philosophy	4	10	51	3	1
Political sciences	1	-	-	3	-
TOTAL	121	111	216	152	180

Table 6. Classification of the SSH of the Azerbaijani National Academy of Sciences

Humanities and Arts	Social sciences, business and law
History Archaeology Art Studies Oriental Studies Philosophy Theology Philology (including Azerbaijani language and literature; and foreign languages and literature)	Economics Geography Psychology Sociology Political Science International Relations Societal Relations Journalism Library Work Archival Work Information Work

Table 7. SSH research areas classification in Azerbaijan

07.00.00historical sciences
08.00.00economics
09.00.00philosophical sciences
10.00.00philological sciences
10.01.00study of literature, includes Azerbaijan, Turkic literature, world literature
10.02.00linguistics
11.00.00geographical sciences
12.00.00law
13.00.00pedagogy
17.00.00art studies
18.00.00architecture
19.00.00psychological sciences
22.00.00social sciences

23.00.00 political sciences 24.00.00 culture studies

Table 8. Chinese priorities of SSH in CASS (based on institutes). Source: Remøe, 2007

<p>Institute of Economics, Institute of Industrial Economics, Institute of Rural Development, Institute of Finance and Trade Economics, Institute of Finance and Banking, Institute of Quantitative and Technical Economics, Institute of Population and Labour Economics, Centre for Urban Development and Environment, Institute of Archaeology, Institute of History (The Guo Moruo Museum), Institute of Modern History, Institute of World History, Center for Chinese Borderland History and Geography, Institute of Taiwan Studies, Institute of Literature, Institute of Ethnic Literature, Institute of Foreign Literature, Institute of Linguistics, Institute of Philosophy, Institute of Marxism-Leninism and Mao Zedong Thought, Institute of World Religions, Institute of Law, Center for International Law, Institute of Political Science, Institute of Ethnology and Anthropology, Institute of Sociology, Institute of Journalism and Media, Institute of World Economics and Politics, Institute of Russian, East European and Central Asian Studies, Institute of European Studies, Institute of West Asian and African Studies, Institute of Latin-American Studies, Institute of Asia-Pacific Studies, Institute of American Studies and Institute of Japanese Studies.</p>
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Table 9. Disciplinary division for fields of studies in education, Georgian Ministry of Education and Science

Humanities and Arts	Social Sciences, Business, and Legal Studies
History	Economics
Archaeology	Geography
Art Studies	Psychology
Oriental Studies	Sociology

Philosophy Theology Philology (including Georgian language and literature; and foreign languages and literature)	Political Science International Relations Societal Relations Journalism Library Work Archival Work Information Work
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Table 10. The Georgian National Science Foundation detailed SSH classification

Georgian Studies	Humanities, Economic and Social Sciences
History of Georgia, Source Study and Historiography of the History of Georgia Georgian Literature Kartvelian Languages Art Criticism Ethnography	Ontology and Theory of Knowledge History of Philosophy Aesthetics Ethics Philosophy of Religion Philosophy of Science and Technology Philosophy of Politics and Law Logics Philosophy of Culture Social Philosophy Study of Literature Linguistics World History, Source Study and Historiography of World History Archaeology Ethnography, Ethnology, and Anthropology Theatre Science Musical Science Screen Arts Study Fine Arts and Decorative-Applied Arts Theory and History of Art Technical Aesthetics and Design Restoration and Reconstruction of Historical Architecture Monuments Architecture Theory and History General Psychology, History of Psychology Human Psychology Differential Psychology, Psychodiagnostics Corrective Psychology Social Psychology Pedagogical Psychology Macroeconomics Econometrics Finance, Banking, Monetary Economics Statistics, Accounting International Economics Regional Economics Environmental Economics Labour Economics Microeconomics, Marketing Industrial Economics Agricultural Economics Construction Economics Transportation Economics Communication Economics Trade Economics Social Infrastructure Economics

	Sociology Social Institutions and Structures Demography Cultural and Social Anthropology Sociology and History of Religion Urban and Regional Planning Political Sociology Public Opinion and Media Studies Sociology of Culture, Education and Knowledge Management Sociology Political Science Jurisprudence and Theory of Law History of Law, Legal Systems, Constitutional Law International Law Sectoral Law Studies (Public, Private, Criminal, Financial, Fiscal, etc.).
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Table 11. The classification summary of the Russian Federation GRNTI for social sciences

00.00.00 Social sciences in general 02.00.00 Philosophy 03.00.00 History. Historical sciences 04.00.00 Sociology 05.00.00 Demography 06.00.00 Economics. Economic sciences 10.00.00 State and law. Jurisprudence 11.00.00 Politics. Political sciences 12.00.00 Science of science 13.00.00 Culture. Culture studies 14.00.00 Education. Pedagogics 15.00.00 Psychology 16.00.00 Linguistics 17.00.00 Literature. Literature studies. Oral and poetic folklore 18.00.00 Art. Study of art 19.00.00 Mass communication. Journalism. Mass media 20.00.00 Informatics 21.00.00 Religion. Atheism 23.00.00 Interdisciplinary study of particular countries and regions 26.00.00 Interdisciplinary problems of social sciences.
