Enhancing the Bilateral S&T Partnership with Ukraine*Advanced Innovative Approach

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Abstract	Based on information collected in the predecessor project BILAT-UKR and on additional new material, D1.5 takes stock of bilateral policies and programmes in the cooperation with Ukraine and identifies strengths and weaknesses including best practice of RTDI support measures. Against this background, recommendations for synergies and options for future joint actions are addressed. This contributes to creating a basis for linking programme managers/owners of the corresponding policies and programmes not only with each other and with their Ukrainian counterparts but also with the policy dialogue on EU-Ukraine level (including the JSTCC).

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Executive Summary

The present report constitutes deliverable D1.5 of the BILAT-UKR*AINA project funded under the European Union's (EU's) 7th Framework Programme (FP7) for Research and Technical Development (RTD). It is part of the activities within Task 1.2 of the project, linking programme managers and owners of national policies and programmes towards Ukraine – of EU member states (EU MS) and non-EU countries associated to the Framework Programmes (AC) and thus participating under the same conditions as EU countries – with each other and with the policy dialogue taking place on EU-Ukraine level, thereby ensuring communication, exchange of best practice on research, technical development and innovation (RTDI) or also science, technology and innovation (STI) support measures and identifying options for coordination and joint actions.

The report gives an overview over the RTDI boundary conditions in Ukraine and the bilateral RTDI and relevant aspects of regional and other multilateral programmes between EU MS/AC and Ukraine, analyses the findings against this background and formulates basic recommendations and suggestions for shaping the cooperation activities which could increase the benefit for the involved parties in the future:

- A plethora of bi- and multilateral cooperation activities of the EU MS/AC with Ukraine exists, in addition to the cooperation with Ukraine in the EU RTD Framework Programmes. Also an ongoing interest in the RTDI cooperation on the European as well as on the Ukrainian side can be observed.
- Strengths of the current cooperation situation include in particular sufficient overlap between the RTDI priorities of the EU MS/AC, EC and Ukraine, intense ongoing cooperation activities and a broad spectrum of high-reputation Ukrainian RTDI partners. Weaknesses include a lack of innovative SMEs and limitations to cooperation by the budgetary situation as well as challenges due to reorganizations in Ukraine.
- Despite all challenges, there is a huge potential for successfully enhancing the cooperation between the EU MS/AC and Ukraine. The cooperation efficiency could be increased e. g. by optimized communication; appropriate networking and twinning could follow. On a more formal level, budgets could be spent more efficiently in cooperation activities with Ukraine involving several EU MS/AC at the same time. Additional stakeholders could be involved and more emphasis could be put on market application of research results and enhancing the innovation dimension of the cooperation activities.
- Recommendations addressing communication and networking include initiating a structured stakeholder dialogue as well as networking/twinning between projects and networks. Concerning cooperation on programme and institutional level, targeted opening up of national programme lines for each other and targeted transnational joint programmes are among the recommended measures. For capacity building and policy development, organizational twinning and the realization of technology platforms are suggested.

It has to be noted in this context that the present report is based on stocktaking in the BILAT-UKR*AINA predecessor project BILAT-UKR (2008-2012), results of additional desk research and input from the BILAT-UKR*AINA consortium mainly during 2013. As it was already being finalized in early 2014, i. e. in the time of transition from FP7 to Horizon 2020 and of substantial political changes in Ukraine, these developments could not be fully taken into account. Moreover, carrying out an extensive up-to-date systematic survey of national EU MS/AC and Ukrainian programmes with the help of questionnaires and/or interviews was beyond the scope and capacity of the present activity, but might qualify as future activity for creating a more systematic basis for initiatives to shape the future European RTDI cooperation with Ukraine. Independently, it is intended to further update and adapt the report during the BILAT-UKR*AINA project runtime, taking relevant new developments into account as appropriate.

The structure of the report is as follows:
Chapter 2 gives a summary of the stocktaking of the current situation concerning policies and programmes for bilateral and regional STI cooperation between EU MS/AC and Ukraine, in this context dealing also with the European (EU-funded) and international cooperation. **Chapter 3** analyses the findings on the current cooperation situation and formulates recommendations and suggestions for specific targeted joint activities of the stakeholders from the individual EU MS/AC. The overall conclusions are given in **Chapter 4**. In addition to the bibliography in **Chapter 5**, the annexes in **Chapter 6** provide supporting information and material.

1 INTRODUCTION: RTDI COOPERATION WITH UKRAINE

When RTDI cooperation between the EU and Ukraine – or, more specifically, between (research) groups and institutions in the EU MS/AC and in Ukraine – is mentioned, it is often the **multi-partner multi-country cooperation within the EU funded Framework Programmes or within other international schemes** which comes to the mind first of all. This is even more natural in the context of BILAT-UKR*AINA, being itself an EU-funded project.

But in addition to or even at the origin of these multilateral activities exist also a wide variety of **bilateral cooperation activities** taking place between EU MS/AC and Ukraine, based on agreements on the level of governments, ministries or other administrative entities, but also public and private organizations. They are usually initiated and realised according to their benefit for all partners as measured by strategic, science policy and/or scientific criteria, depending on the individual stakeholders. They often have a long history, sometimes dating back even to the time of the Soviet Union when today's societal and administrative structures did not exist yet. These activities are shaped by the involved countries themselves according to their individual potentials, regulations and interests and are also funded from their own budgets.

Regional initiatives and activities, involving more than one EU MS/AC and Ukraine, based on national or European or mixed funding, constitute an intermediate scenario between the strictly bilateral and the EU cooperation with Ukraine referred to at the beginning. It is nevertheless obvious that the actors taking part in these categories of cooperation activities are largely the same in all cases. Furthermore, also the activities themselves are often strongly related or even formally connected like e. g. in ERA-NETs.

Against this background, it has to be stated clearly that main emphasis in the description of the status of policies and programmes in present paper is put on the **genuinely bilateral RTDI activities and cooperation programmes of EU MS/AC explicitly targeting Ukraine**. Although there are usually considered together only by the Ukrainian side, the common view provided here should allow for added insight, in particular also pointing to options for coordination and joint actions for the benefit of all involved parties. Broader national initiatives and (e. g. mobility) programmes allowing the participation of Ukraine as one of many other countries are not considered explicitly here.
Best practice examples of bi- and multilateral cooperation of the EU MS/AC as well as of Ukraine with other countries (e. g. Russia) can also be expected to give valuable additional insight in the present context, but dealing systematically with these is beyond the scope of the present report, although individual aspects might be referred to where appropriate. European, multilateral and international programmes are undoubtedly relevant in this context, too, to the extent that they provide relevant information on capacities, strengths and weaknesses for cooperation activities and there might be positive as well as negative interference effects. But it is not intended in the present context to systematically describe and evaluate the European, multilateral and international cooperation with Ukraine.

Pure academic exchange programmes for student and project-independent researcher mobility are not considered of central relevance either in the present context, although their value in supporting RTDI cooperation is undisputed, and they will be referred to as appropriate.

Also the analysis of the cooperation situation and the recommendations made will **address the national stakeholders in the first place**. Only some of the recommendations contain specific aspects with potential for being taken up by the BILAT-UKR*AINA project itself.

2 STATUS OF POLICIES AND PROGRAMMES

Section 2.1 informs about the current status of Ukrainian STI policies, programmes and stakeholders. Section 2.2 gives information on general aspects of the Ukrainian international cooperation in S&T, mainly gathered from Ukrainian sources. Sections 2.3, 2.4 and 2.5 detail and complement this by a compilation of relevant additional information on bilateral STI cooperation with Ukraine, European (EU-funded) and international cooperation activities, respectively. The contents are based on the findings of BILAT-UKR*AINA's predecessor project BILAT-UKR, additional desk research and other, largely non-Ukrainian sources.

2.1 RTDI POLICIES, PROGRAMMES AND STAKEHOLDERS IN UKRAINE

The **legal basis** of the S&T policy in Ukraine is composed of the Constitution of Ukraine and various laws (see Annex 6.2).

The S&T priorities are defined according to the National Target S&T and Innovation Development Forecast Programme of Ukraine. They are discussed by the scientific community and submitted by the Cabinet of Ministers of Ukraine to Verkhovna Rada of Ukraine for correction.

According to the a/m Law of Ukraine, on September 07, 2011, the Cabinet of Ministers of Ukraine adopted a Resolution "On Approval of the List of Priority Thematic Directions of Scientific Research and Science and Technology Designs for the period up to 2015".

The Law of Ukraine "On Priorities of Science and Technology Development" defines the following national priorities up to 2020:

- basic scientific research of the most important problems of scientific and technological, social and economic, political and human potential development to ensure Ukraine's competitiveness in the world and sustainable development of its society and state;
- information and communication technologies;
- energy and power efficiency;
- efficient nature management;
- life sciences, new technologies of prevention and treatment of the most wide-spread diseases;
- new substances and materials.

The Law of Ukraine "On Priorities in Innovation Activities in Ukraine" defines the following strategic innovation priorities for the period 2011-2021:

- assimilation of new technologies of energy transportation, putting into operation of energy-efficient and resource-saving technologies, assimilation of alternative sources of energy;
- assimilation of new technologies of high technology development of the transportation system, rocket and space field, aircraft industry and shipbuilding, armament and military technologies;

- assimilation of the new technologies of materials production, their processing and interconnection; creation of the nano-materials and nano-technologies industry;
- technological modernization and development of agro-industrial complex;
- introduction of new technologies and equipment for a quality medical service, treatment and pharmaceutics;
- wide use of technologies of cleaner manufacturing and environment protection;
- development of modern information and communication technologies and robotics.

The **administrative structure for S&T policy development and activities** in Ukraine is rather complex. The Parliament of Ukraine (Verkhovna Rada) is responsible for regulating public administration in S&T. A special Committee of Parliament is responsible for education, science and innovation. The main S&T coordinating entity in Ukraine is the **Ministry of Education and Science of Ukraine (MESU)** (for some time before 2013 Ministry of Education and Science, Youth and Sport of Ukraine), also administering public funds allocated to innovation development based on a list of innovation priorities and S&T programmes approved by Parliament. The Department of S&T Strategy and Programmes is responsible for the formulation and supervision of programmes and also for the progress of the Forecasting Programme of S&T Development. The Ministry of Economy is also responsible for the supervision of some S&T programmes. The Ministry of Industrial Policy is one of the biggest players in the area of S&T and innovation policy. The **State Agency on Science, Innovation and Informatization (SASII)** of Ukraine, established in 2010/2011, is a part of the central executive authority system to implement the state policy in the field of scientific, scientific-technological and innovation activities, informatization, formation and use of the national electronic information resources and ensuring conditions to create information society.

For a list of the most relevant national and state S&T (or S&T related) programmes of Ukraine see Annex 6.3.

In accordance with the law, **science and technology expenditure** is a secured line in the State Budget of Ukraine. Scientific studies are funded from the budget pursuant to the basic and programme-oriented procedures. Basic funding is made available to carry out:

- fundamental scientific research;
- research in the most essential for the state directions, including national security and defence RTD;
- development of S&T infrastructure;
- preservation of scientific objects of national property;
- research personnel training.
- There are the following sources of funding in Ukraine:
- state budget;
- local budgets;
- non-budget funds;
- own funds;
- final users' funds;

- other sources

As of 2011, about 40% of the RTD funding in Ukraine comes from the state budget, about 26% from other countries (grants and foreign contacts, including EU funding) and about 24% from research contracts with Ukrainian customers.

Overall R&D funding in Ukraine amounted to some 0.9bln EUR or 0.73% of the Ukrainian GDP in 2011 (0.67% in 2012 estimated based in the first 9 months of the year).

State funding for R&D is mainly institutional funding, e. g. about 64.7% of the budget go to the three biggest National Academies. The SASII is the leading stake holder for research policy in Ukraine and also responsible for the distribution of about 3.4% of the R&D state budget.

source: [BMBF/IB]

The **State Fund for Fundamental Researches (SFFR)**, presently subordinated to SASII, was the first one to start the system of grant support of scientific and scientific-technical projects of Fundamental Science of different directions on a competitive basis in Ukraine.

The SFFR is an integral component of the State mechanism for supporting the scientific-educational sphere as part of full innovative cycle of scientific-technical developments.

The SFFR funds include state budget funds and non-budget funds (voluntary contributions of legal entities and physical persons, including foreign ones). The funds are distributed in the following proportions: 38% for physics and mathematics; 22% for biology; 21% for technical sciences; 10% for chemistry and Earth sciences and 9% for social sciences and the humanities. 63% of projects are implemented by the research institutes of the National Academy of Sciences of Ukraine, 28% by the universities, and 8% by other research institutions.

The international cooperation of SFFR (more than 60% of supported projects) provides the possibility to support high quality ideas and proposals using cofinancing mechanisms of different countries, to integrate intellectual and financial resources and to evaluate proposals involving Ukrainian and foreign experts. International cooperation contributes to raise the quality of the procedure and to select priority projects. It also promotes scientific development to the interests of Ukraine and other countries.

50 different competitions have been held by the SFFR including general thematic competitions, target competitions, regional, innovative-oriented and cross-border competitions. This includes also joint international competitions with the partners in Belarus, France, Germany, Russia, the US and Japan. Since the SFFR came to existence, more than 24,000 proposals have been submitted and almost 5,500 projects been granted.

Sources:
http://www.dffd.gov.ua,
http://www.education.gov.ua/en/about-sffr/2012-07-07-09-01-42.html, [BUPB1]

The main **R&D institutions** in Ukraine belong to one of the following three groups:

- 377 institutes of the National Academies of Sciences
  (National Academy of Sciences of Ukraine, National Academy of Agrarian Sciences of Ukraine, National Academy of Medical Sciences of Ukraine, National Academy of Pedagogical Sciences of Ukraine and other Academies)
- about 130 state universities with research activities
- 744 research institutions of ministries and industry (some private)

The **academy and university sectors** are mainly funded from the state R&D budget. In 2012, the distribution was as follows:

Entity	Share of state R&D budget 2012 [%]
National Academy of Sciences of Ukraine	49
National Academy of Agrarian Sciences of Ukraine	12
National Academy of Medical Sciences of Ukraine	5
Ministry for Education and Science of Ukraine (SASII and National Shevchenko University included)	14
Ministry of Agrarian Policy of Ukraine	3
Ministry of Health of Ukraine	1
State Space Agency of Ukraine	4
Others	12
Total	*100*

source: [BMBF/IB]

The **National Academy of Sciences of Ukraine (NASU)** is the highest state-supported research organization with the right of self-governance in decision-making about its activities. In addition, the integration of research in universities with the aim to train experts to carry out competitive research has been strengthened e. g. with the Programme for Science in Universities (2008-2012).

RTD organizations associated with industry are funded subject to the agreements with the customers. Also in the case of industry sector foreign investments play a primary role.

Sources:[WP], [INEECACR], [BUPB1], [BMBF/IB]

2.2 Overview of Bilateral Ukrainian Cooperation in S&T with Other Countries

Ukraine has implemented extensive **scientific and technology cooperation with the countries of the world** to raise the quality of the national scientific research and technologies that are produced basing on this research as well as integration of the Ukrainian scientific potential into the European and world research areas.

The legislation of Ukraine provides favourable conditions for international science and technology cooperation.

Thus, in particular, the Law of Ukraine “On Science and Technology Priorities” (with amendments of 2010) defines legal and organizational principles of the complex system of formation and implementation of the science and technology priorities in Ukraine for the period up to 2020.

According to a resolution of the Cabinet of Ministers of Ukraine, the State Agency on Science, Innovation and Informatization of Ukraine (SASII) is the main administrator of the

budget funds and responsible authority for implementation of the budget programme "Fulfilment of Ukraine's Commitments in the Field of International Science and Technology Cooperation".

Source: [INEECACR]

Ukraine has **bilateral S&T cooperation agreements** with more than 50 countries, including EU MC/AC as well as EECA.

Intergovernmental/interministerial bilateral S&T agreements exist in particular between Ukraine and the following EU member states (listed in alphabetical order): Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Estonia, Finland, France, Germany, Greece, Hungary, Italy, Latvia, Lithuania, The Netherlands, Poland, Portugal, Romania, Slovak Republic, Slovenia, Spain and between Ukraine and the following countries associated to FP7: Former Yugoslav Republic of Macedonia, Moldova, Turkey.

Sources: [BMBF/IB], [INEECACR], [BUPB1]; for Austria, Belgium, Bulgaria, France, Germany, Hungary, Lithuania, The Netherlands, Poland, Romania, Slovak Republic, Slovenia see BILAT-UKR (as of 2012): http://archive.bilat-ukr.eu/en/185.php, a table with more detailed information on the respective agreements (type and name, purpose/principle, areas and forms of cooperation, implementing and funding instruments and programmes, on-line sources, application and financial rules, additional or general information) is available for download at http://archive.bilat-ukr.eu/_media/Inventory-Table2.1_Intergovernmentalinterministerial-agreements.pdf.

Furthermore, Ukraine concluded agreements on science and technology cooperation with the following 10 EECA countries: Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Kyrgyz Republic, Russia, Tajikistan, Turkmenistan and Uzbekistan.

In addition, bilateral cooperation agreements have been concluded between Ukraine and Russia and also countries in North and Latin America, the Asia-Pacific Region, the Middle East and Africa (in particular USA, India, China, South Korea).

The agreements usually define broad areas in which scientific potential on the bilateral level can be used most effectively, often including biotechnologies, life sciences, nanophysics and nanotechnologies, new materials, information and communication technologies, energy and environment. It has to be noted that since 2012, high energy physics or elementary particle physics has been highlighted as a new common bilateral thematic priorities in several cases.

based on: [INEECACR]

Cooperation activities, including also bilateral calls published by both sides, usually offering joint mobility support, have been most active recently between Ukraine and 10 EU MS/AC (Austria, Bulgaria, France, Germany, Lithuania, Moldova, Romania, Slovak Republic, Slovenia, Turkey) as well as with Belarus, China, Russia, India and the US.

The number of jointly supported projects for selected EU and non-EU countries as of May 2013 is summarized in the following table (order of countries within each subset according to the number of projects (descending)):

Country	Years	Number of calls	Number of joint projects
Germany	2011-2014	2	42
France	2011-2014	2	36
Austria	2011-2014	2	28
Lithuania	2012-2013	1	12
Bulgaria	2012-2013	1	9
Turkey	2012-2013	1	4

India	2012-2014	1	10
Belarus	2011-2013	1	8

Table: Number of projects jointly supported by Ukraine and selected EU MS/AC and other countries

In December 2013, **SASII** listed the following joint calls for proposals on its website (EU MS, EU AC, other countries, in alphabetic order, respectively:

Country	project duration
Bulgaria	2014-2015
Germany	2013-2014
Lithuania	2014-2015
Romania	2014-2015
Slovak Republic	2014-2015
Moldova	2014-2015
Turkey	2014-2015
Belarus	2014-2016
Kazakhstan	2014-2015
Korea	2014-2017

Table: SASII bilateral cooperation calls (December 2013)

Source: http://dknii.gov.ua/?q=node/1091, December 2013

NASU has concluded more than 110 bilateral agreements with more than 50 countries in the world. In particular, bilateral agreements of NASU exist with the following academies and other organizations of the EU MS/AC.

Country	Academy / Organization
Austria	Austrian Academy of Sciences
Bulgaria	Bulgarian Academy of Sciences
Czech Republic	Academy of Sciences of the Czech Republic
Estonia	Estonian Academy of Sciences
France	Centre national de la recherche scientifique (CNRS)
Germany	German Research Foundation (DFG)
Hungary	Hungarian Academy of Sciences
Latvia	Latvian Academy of Sciences
Lithuania	Lithuanian Academy of Sciences
Poland	Polish Academy of Sciences Polish Academy of Arts and Sciences
Romania	Romanian Academy of Sciences
Slovak Republic	Slovak Academy of Sciences

United Kingdom	The Royal Society
Former Yugoslav Republic of Macedonia	Macedonian Academy of Sciences and Arts
Montenegro	Montenegrin Academy of Sciences and Arts
Serbia	Serbian Academy of Sciences and Arts
Turkey	Scientific and Technological Research Council of Turkey (TÜBITAK)

Table: NASU bilateral agreements with academies and other organizations of the EU MS/AC

Sources: BILAT-UKR (as of 2012): http://archive.bilat-ukr.eu/en/185.php, a table with more detailed information on the above agreements (type and name, purpose/principle, areas and forms of cooperation, implementing and funding instruments and programmes, on-line sources, application and financial rules, additional or general information) is available for download at http://archive.bilat-ukr.eu/_media/Inventory-Table2.2_NASU-agreements.pdf; [BUPB1]

In 2012, more than 1000 R&D projects were carried out, among them some 300 based on bilateral agreements, usually with jointly supported research staff exchange. The following table summarizes the number of such bilateral projects with Academies of Sciences (AS) and other research and/or funding bodies from selected EU and non-EU countries:

Country	**Number of joint projects**
AS Poland	50
CNRS (France)	27
AS Hungary	24
AS Slovak Republic	22
AS Czech Republic	21
AS Bulgaria	13
AS Austria	5
AS Romania	4
Scientific and Technological Research Council of Turkey (TÜBITAK)	11
AS Serbia	4
AS Montenegro	2

Table: Number of projects jointly supported by NASU and research and/or funding bodies in selected EU MS/AC and other countries

Source: [BMBF/IB]

NASU is also a member of the International Association of Academies of Sciences (IAAS) (cf. www.iaas.nas.gov.ua), an international non-governmental organization created in 1993 in Kiev by representatives of the national academies of sciences of 15 states of Europe and Asia with the purpose of joining efforts for decision of major scientific problems and creating new

partnerships between researchers. At the moment the network is composed of the academies of sciences of Azerbaijan, Armenia, Belarus, Vietnam, Georgia, Kazakhstan, Kyrgyzstan, Moldova, Russia, Uzbekistan, Ukraine and Tajikistan. There are also several associated members, including the Belarussian Republican Foundation for Fundamental Research, and, from Russia, the Lomonosov Moscow State University, the Moscow Physics Technical Institute, the United Institute of Nuclear Research in Dubna, the Russian Humanity Scientific Foundation and the Russian Foundation for Basic Research.

Source: http://www.increast.eu/en/510.php (February 2009)

Since June 2011, **MESU** realizes a Ukrainian state mobility programme promoting the education and training of students and post-graduate students and internships for scientific and pedagogical staff. The most recent of the yearly calls for participation was published by MESU on 1 March 2013. In connection with the announcement the Ministry published a list of leading foreign universities and research institutes where studies, trainings and internships can be performed. This list includes a total of 170 universities, including 37 in France, 34 in Germany, 28 in the United States and 19 in the United Kingdom. The order stipulates that the list can be supplemented at the suggestion of Ukrainian universities, if the respective foreign College ranks high in world-wide ratings. According to the results of 2012 and 2013, Germany hosted the largest number participants, followed by United Kingdom and France. In 2013, the budget for the programme was reduced by about 20% as compared to 2012.

Subsection 2.3.1 largely based on [BMBF/IB], [BUPB4]

As to European RTDI cooperation, MESU has recently been representing Ukraine at high level European events, e. g. at EEEP in Vilnius, Lithuania (30 September – 1 October 2013) with a presentation on “Perspectives of cooperation between Ukraine and the European Union and Eastern Partnership Countries in the field of scientific researches, developments and innovations” by minister Tabachnik. The ministry has also issued the list of new Horizon 2020 National Contact Points in December 2013. On the other hand, SASII has been the only or at least dominant state administrative body visibly involved in the bilateral S&T cooperation activities as listed in the preceding chapter and also in EU networking projects like BILAT-UKR*AINA, hosting also the BILAT-UKR*AINA Horizon 2020 Launch Conference in Kiev in January 2014.

2.3 Bilateral Cooperation between Ukraine and Selected EU MS/AC

For providing the appropriate background for the analysis and recommendations presented in the next chapter, information on the bilateral cooperation between Ukraine is listed below in some detail for those EU MS/AC (in alphabetical order) for which additional specific and/or up-to-date information – complementing that mentioned above which was collected during the BILAT-UKR activities (until 2012) – has been identified. It has to be noted that information on joint participation in EU FP7 projects is not included here. Cooperation with countries other than EU MS/AC is not covered either, as it is beyond the scope and capacities of the present report, although specific aspects of it might become relevant for potential multilateral EU MS/AC initiatives (e. g. the bilateral cooperation Ukraine – Russia). For additional information on policies and programmes collected earlier by the “Mapping European Union Member States Higher Education External Cooperation Programmes and Policies” project, see also [MAP].

2.3.1 Austria

The Scientific and Technological Cooperation (Wissenschaftlich-Technische Zusammenarbeit - WTZ) is based on inter-governmental agreements regarding cooperations in the fields of science and technology. In Austria this program is financed by the **Federal Ministry of Science and Research (BMWF)**. The administrative management within the framework of these 'Agreements on Scientific and Technological Cooperation' is provided by the S&T Cooperation programme manager at the Centre for International Cooperation and Mobility (ICM) of the Austrian Exchange Service (OeAD-GmbH) and includes also Ukraine.

With the aim to intensify the international scientific cooperation of Austrian scientists with scientists from their partner countries mobility costs are financed within the framework of bilateral, trilateral and multilateral scientific cooperation projects. A specific scientific cooperation project, where scientists from their respective partner countries cooperate and basic financing is guaranteed, has to be submitted bilaterally, trilaterally or multilaterally.

cf.
http://www.oead.at/welcome_to_austria/grants_scholarships/international_cooperation_mobility_project_support/scientific_and_technological_cooperation/EN/

The Agreement on S&T cooperation between the Cabinet of Ministers of Ukraine and the Government of Austria was concluded on 6 June 2003 and it came into force in 2004. In 2012, 16 joint projects in the fields of nanotechnologies, ecology, physics and biomedicine were supported. As a result of the 5th meeting of the bilateral science and technology cooperation working group in October 2012 in Vienna, 12 joint projects in the fields of nanotechnologies, biology, physics (including the additional priority of elementary particle physics), materials and biomedicine are being jointly supported in 2013-2014.

Source: [BUPB1], http://dknii.gov.ua/?q=system/files/sites/default/files/images/30.10.12_ukr_avstr_pr.doc (list of projects)

Another bilateral call for joint proposals was published in early 2014 with the deadline 2 June 2014 and projects to be supported 2015-2016. The broad thematic priorities targeted include natural sciences, biotechnology research, ICT research, nanophysics and nanotechnology and high-energy physics.

Cf.
http://www.oead.at/willkommen_in_oesterreich/stipendien_foerderungen/internationale_kooperation_mobilitaet_projektfoerderung/wtz_wissenschaftlich_technische_zusammenarbeit/aktuelle_ausschreibungen/

2.3.2 Bulgaria

S&T cooperation between Ukraine and Bulgaria is based on the Governmental Agreement on Cultural and S&T Cooperation (1992).

In 2012, 10 joint projects in the field of biotechnology, environment and energy were supported. A call for bilateral Ukrainian-Bulgarian STC projects 2014-2015 was published in September 2013, with information and communication technologies, new materials and technologies (including bio- and nanotechnologies for life sciences, pharmacy, protection of the environment), energetics and energy efficiency as priority areas.

A bilateral agreement exists between NASU and the Bulgarian Academy of Sciences.

Sources: [BUPB1], [BMBF/IB]

2.3.3 France

The S&T cooperation between France and Ukraine has a long tradition. It is based on the Ukraine-France Agreement on cultural and S&T Cooperation of 1995.

In France, the **National Centre for Scientific Research (CNRS)**, which is under the responsibility of the Ministry of Higher Education and Research, is the main player. CNRS is the core of French fundamental research. Its research agenda covers the whole range of science. In 2010, 273 French-Ukrainian joint publications were released. 220 (80%) of them were arranged by the CNRS. The focus of CNRS in the collaboration with the Ukraine lies particularly on physics and chemistry. In 2012, 157 CNRS' missions to Ukraine took part. For the CNRS staff, Ukraine takes up the 22nd place in Europe regarding the exchange of staff to other European countries.

The cooperation between France and Ukraine is based on three main agreements:

1. CNRS with the National Academy of Sciences (NASU). This frame agreement was signed in 2004.
2. CNRS and the State Fund for Fundamental Research (SFFR) from 2007.
3. A specific agreement between CNRS, NASU, and SFFR. This specific agreement was signed in 2009 and renewed in 2012.

The French-Ukrainian cooperation is structured along three different kinds of instruments. Firstly, there are several international networks (GDRI) with Ukraine or Ukrainian participation, for example in the field of space and urban networks, geosciences, human pathology and molecular chemistry. Additionally, an International Associated Lab has been established, the LIA LICS dealing with electronics, acoustics and fluidics.

Another vibrant part of the collaboration is the instrument of International Programs for Scientific Cooperation (PICS). They are non-renewable three-year projects that particularly foster the cooperation with NASU-institutes. Adding up to this instrument there are bilateral exchanges between CNRS and NASU (11 projects in 2012/13), the Dnipro program (cf. http://www.campusfrance.org/fr/dnipro) (15-20 projects every 2 years) and there have been 10 CNRS-NASU seminars since 2010.

In 2012, 21 joint projects, in the field of environment, chemistry, physics, nanotechnology, information and communication technologies, life sciences, health were supported.

Sources:
http://www.cnrs.fr/derci/spip.php?article104&lang=fr and
CNRS & Ukraine. An overview of collaboration (Martine Husson-Bonin, CNRS, France, 2013)

During the meeting of the Ukrainian-French mixed commission for cultural and scientific-technological cooperation in November 2012 in Kiev, 15 bilateral projects were selected for funding in 2013/2014 in the areas of natural sciences, biotechnologies, information and communication technologies as well as nanophysics and nanotechnologies.

Sources: [BMBF/IB]
cf. also http://dknii.gov.ua/?q=system/files/sites/default/files/images/3.12_ukr-fr-pr.doc

In June 2013, the foreign ministers of both countries agreed on a roadmap for the French-Ukrainian relations for 2013-2105 in particular also in the area of scientific cooperation. According to this document, France and Ukraine will support the cooperation between analytical centres and research and education institutions in the field of innovation as well as the exchange of experts, students and young researchers, in particular in the EU Erasmus programme. An example for the academic exchange in 2013 are the "Days of the Ukrainian agrarian science in France" in Paris, in which about 50 rectors of education establishments in the agrarian sector took place.

Sources: [BMBF/IB]

2.3.4 Germany

Cooperation between Germany and Ukraine is based on the intergovernmental agreement on scientific and technological cooperation, which was concluded between the Federal Republic of Germany and the USSR and came into force in 1987, and on the "Joint Declaration of the Federal Ministry of Research and Technology of the Federal Republic of Germany and the State Committee for Science and Technology of Ukraine on Scientific and Technological Relations", which was signed in 1993. The Ukrainian-German Working Group on S&T Cooperation was established at its 1st meeting in Bonn in 1997, its most recent 9th meeting took place in April 2012 in Bonn.

The Ukrainian partner of the German **Federal Ministry of Education and Research (Bundesministerium für Bildung und Forschung, BMBF)** at government level are, since July 2010, have been both the State Agency for Science, Innovation and Information and the Ministry of Education and Science of the Ukraine.
In 2009, BMBF and MESU signed a Memorandum of Understanding on jointly providing funding for collaborations in science, technology and innovation (from the German side mainly mobility support) on the basis of regular calls for proposals on both sides. The last call of this kind were open in 2010 and 2012, resulting in 30 and 12 new jointly funded projects, respectively, in the fields of nanosciences, nanotechnologies, materials and new production technologies, environment, energy efficiency, biotechnology and health were supported. The next bilateral call is envisaged for the first half of 2014.

In continuation of the BMBF support for advisory services on research and technology cooperation provided in Ukraine in 2009, a contact person for research cooperations has been working in Kiev on behalf of the BMBF since early 2010. This contact person supports the BMBF and the International Bureau in shaping German-Ukrainian scientific and technological cooperation by providing information and advice and by participating in relevant events in Ukraine, by maintaining cooperation-related contacts with German and Ukrainian points of contact in public authorities and research institutions in the country, and by providing information on Ukrainian science and innovation systems and their current development.

cf. http://www.internationales-buero.de/en/1032.php

In February 2013, BMBF published a call with the aim to support German universities, research institutions and companies to establish networks with excellent researchers in the Danube States, including Ukraine, in order to develop joint cooperation strategies and projects and to encourages stronger links between the leading innovative regions upstream and the developing regions downstream, thereby contributing to the successful implementation of the Danube region strategy (cf. http://www.danube-region.eu/).

Source: http://www.internationales-buero.de/en/6174.php

The **German Academic Exchange Service (Deutscher Akademischer Austauschdienst, DAAD)**, supporting the international exchange of students and scholars and the internationalisation of German universities, runs an Information Centre in Kiev.

The **German Research Foundation (Deutsche Forschungsgemeinschaft, DFG)** and the SFFR support research projects based on joint calls. NASU is also a partner of DFG.

The **Alexander von Humboldt Foundation (AvH)** promotes academic cooperation between excellent scientists and scholars from abroad and from Germany mainly by research fellowships and research awards for coming to Germany to work on a research project together with a host and collaborative partner in Germany. There are 26,000 Humboldt

Foundation alumni worldwide - the Humboldtians, with more than 180 from Ukraine. The Humboldt Club Ukraine in Kiev exists since 1997, keeping contact to the Foundation and to Germany, also acquainting young researchers in Ukraine with the German research landscape.

With its existing programmes, the **Max Planck Society (Max-Planck-Gesellschaft, MPG)** supports also Ukrainian science. As of mid-2013, it funded 12 cooperation projects with Ukraine and was host for 100 young or guest scientists from Ukraine.

Source: [BMBF/IB]

In February 2014, 184 formalized cooperation relationships existed between German and Ukrainian Universities. In 1998, the **German Rectors' Conference (Hochschulrektorenkonferenz, HRK)** signed a German-Ukrainian agreement on university cooperation with the association of rectors of Ukrainian universities, which is currently being updated for renewing probably in 2014.

Source: http://www.hochschulkompass.de/internationale-kooperationen/kooperationen-nach-staaten.html (20 February 2014 with the status as of 19 February 2014)

For later reference, two additional special character German RTDI cooperation activities not related to Ukraine, joint German-Russian calls aimed specifically at SMEs and the German Houses of Research and Innovation, are described in more detail in Annex 6.4.

2.3.5 Hungary

Cooperation between scientific institutions of Ukraine and Hungary is carried out under the Agreement between the Government of Ukraine and the **Government of Hungary** on Cooperation in Science and Technology concluded in 1995. Intergovernmental Ukrainian-Hungarian Commission for Scientific and Technical Cooperation is responsible for the implementation of the Agreement.

In 2010 Plan of Scientific Cooperation between the National Academy of Sciences of Ukraine and the **Hungarian Academy of Sciences** for 2010-2012 was updated. A competition of joint research projects to be implemented under the Agreement on scientific cooperation between academies in the above mentioned time framework was conducted. In the frame of the agreement the Ukrainian-Hungarian Scientific Centre was also set up based in Kyiv.

The Eighth session of the Intergovernmental Ukrainian-Hungarian Commission for Scientific and Technical Cooperation was held in Budapest, in October of 2012.

In the frame of the S&T agreement, calls for bilateral S&T projects are launched bi-annually. An annual amount of € 85-90000 is provided for the Hungarian participants of these projects.

Subsequently, Hungarian higher education institutions and certain research (such as the Bay Zoltán Nonprofit Ltd for Applied Research) centres have vivid cooperation with some Ukrainian universities. Unfortunately no statistics are available.

source: Regional Centre for Information and Scientific Development, RCISD

2.3.6 Israel

The first meeting of the bilateral Ukrainian-Israeli working group on cooperation in science and technology took place in November 2013 in Jerusalem. It was agreed to publish the first call for joint STC projects for 2015-2016 in January 2014 with nanomaterials for industrial application as the central topic. The next working group meeting is envisaged for the second half of 2016.

Sources: [BMBF/IB]

2.3.7 Lithuania

The S&T cooperation between Ukraine and Lithuania is based on the Agreement on Cooperation in the fields of Education, Science and Culture, between the Government of Ukraine and the Government of Lithuanian Republic of August 1993 and the Agreement on Cooperation in the fields of Education and Science between the Ministry of Education and Science of Ukraine and Ministry of Education and Science of Lithuania (2003).

The Lithuanian-Ukrainian Cooperation Programme in the Fields of Research and Technologies aims to stimulate and develop bilateral cooperation between Lithuania and Ukraine in the area of research and development. The Programme is approved every five years. The last agreement on the new period was signed in November 2011.

The Programme provides funding for mobility visits (no longer than 1 month), seminars and other research events as well as preparation of collaborative research papers. Researchers or their groups, research institutions are eligible to apply for funding. The Programme is co-funded by both participating countries.

Competitive grants are administered by the **Lithuanian Research Council** (on behalf of the Republic of Lithuania) and the **SASII** (on behalf of the Ukraine). Both parties have established a Managing Commission to coordinate the Programme. Competitive grants are distributed according to the established proposals evaluation procedure. Calls for project proposals are announced once every 2 years at the same time in both countries. The Lithuanian participants submit their research or mobility visits proposals in Lithuanian to the Lithuanian Research Council, while the Ukrainian applicants submit their proposals to the Ukrainian counterparts. The proposals are peer reviewed according to the list of set criteria.

The proposals can be submitted under the following areas:

- Novel materials and energy sources
- Medicine, pharmacy, industrial biotechnologies
- Information and communication technologies
- Manufacturing, processing and storing technologies for agriculture products
- Competitive energy- and resources-efficient technologies
- Ecology and rational use of natural resources
- Social and humanitarian sciences

Evaluation criteria for the project proposals are as follows:

- Scientific quality and a nature of proposed innovation
- Competence and ability of a temporary scientific team to implement the proposed project
- Quality of the participating organizations' infrastructure
- Participation of PhD students and young scientists
- Practical applications of the proposed project results
- Validity of the proposed project budget

The funding is assigned to the projects which favourably pass all evaluation criteria, distributing the money over 2 years (a maximum project duration). At the end of each year leftover funds are taken back and can't be transferred to a second year of the project. Funding

for the second and third years is allocated depending on the implementation status and efficiency during the previous year.

In 2012, 12 joint projects in the field of new materials, ecology and efficient nature management, energy, new materials were supported.

Sources: http://www.lmt.lt/en/rnd/international/intergov/lt-ua.html, [BUPB1], [BMBF/IB]

In October 2013, the 4th meeting of the bilateral Ukrainian-Lithuanian working group on cooperation in science and technology took place in Vilnius. It approved 6 bilateral projects in the areas of information and communication technologies, life science, prevention and treatment of frequently occurring diseases, biotechnologies, bioengineering and genetics, new materials and substances and social sciences for 2014-2015. It was also decided to extend the STC programme for 2011-2015, agreed in 2011, for 5 additional years.

Source: [BMBF/IB]

2.3.8 Moldova

The 5th meeting of the bilateral Ukrainian-Moldavian working group on cooperation in science and technology took place in July 2013 in Chisinau. It approved 6 bilateral projects were approved for 2014-2015 in the areas of new materials, organic and medical chemistry, information and communication technologies, energy and energy efficiency, and protection of the environment. In addition, the Moldavian side initiated a meeting on problems of the Dniestr basin. With Moldova being associated to the European Framework Programmes from January 2012, both sides emphasized the importance of the joint participation in Horizon 2020. Furthermore, SASII signed an STC programme with the Moldovian Academy of Sciences.

Source: [BMBF/IB]

2.3.9 Poland

The Scientific and Technological Cooperation between Poland and Ukraine is based on inter-governmental agreement regarding cooperation in the field of science and technology. The agreement defines specific areas in which scientific potential on the bilateral level can be used most effectively. This agreement was concluded on the governmental level with the corresponding ministries. In addition the bilateral agreement has been concluded by the National Academy of Sciences of Ukraine with the Polish Academy of Sciences in 1997 and the Polish Academy of Arts and Sciences in 2006. Also bilateral cooperation agreements have been concluded on the University level by many Polish and Ukrainian Universities. The Polish-Ukrainian cooperation is also ensured by cross-border programme implemented within European Neighbourhood and Partnership Instrument (ENPI): Cross-border Cooperation Programme Poland-Belarus-Ukraine 2007-2013 (see section 2.4 for more details).

*Source: Polish BILAT-UKR*AINA partner and INCO NCP Poland*

The Polish Academy of Sciences runs a Scientific Center in Kiev. Its objectives are

- to popularize the achievements of Polish science in Ukraine;
- to organize conferences, lectures, seminars, exhibitions and other scientific events;
- to organize contacts between Polish and Ukrainian research institutions and researchers;
- to assist Ukrainian researchers with their contacts with Polish institutions and researchers;

- to support the publication of scientific bulletins and other publications resulting from the activities of the center;
- to realize other preparatory and support activities

It is also involved in the implementation of cooperation agreements between the Polish Academy of Sciences, other Polish scientific institutions and Ukrainian scientific institutions and issues opinions on this cooperation.

Source: http://panukraina.pl/

2.3.10 Romania

During the third meeting of the Ukrainian-Romanian joint committee for scientific-technical cooperation in June 2013 SASII and the Ministry of National Education of Romania established a bilateral programme on cooperation in science and technologies. A call for joint Ukrainian-Romanian projects to be realized in 2014- 2015 was published in August 2013 with the following thematic priorities: health care and life science, agrarian science, food safety, new materials and technologies, biotechnologies, information and communication technologies, laser physics. The Romanian side presented also the "Extreme Light Infrastructure" (ELI) project being realized in the Czech Republic, Hungary and Romania in the ESFRI context. The ELI Nuclear Physics (ELI-NP) facility in Romania will focus on laser-based nuclear physics, in which Ukraine is interested to participate. In this context, both institutions emphasized also the similarity of organization structures and directions of activity, in particular cooperation with international organizations such as JINR, EUREKA and CERN.

Sources: [BMBF/IB],
http://www.kmu.gov.ua/control/en/publish/article?art_id=246458019&cat_id=244314975,
http://en.wikipedia.org/wiki/Extreme_Light_Infrastructure

In addition, there were 4 joint projects running in 2013 between NASU and the Academy of Sciences of Romania.

2.3.11 Slovak Republic

An Agreement between the Government of the Slovak Republic and the Cabinet of Ministers of Ukraine on the Scientific and Technological Co-operation was signed on 2 December 2002 in Kiev. Based on this agreement, a call for submitting proposals for common research and development projects supporting the collaboration between organizations in the Slovak Republic and Ukraine was published in 2009 by the Slovak Research and Development Agency in cooperation with the Division of Science and Technology of the Ministry of Education of the Slovak Republic. In May 2013, SASII and the **Ministry of Education, Science, Research and Sport of the Slovak Republic** published a joint call for Ukrainian-Slovak projects for 2014-2015, targeting scientific laboratories, research teams and scientific establishments in both countries.

Cf: http://www.dknii.gov.ua/images/stories/7.03.2013_info.doc

2.3.12 Slovenia

The S&T Cooperation between Ukraine and Slovenia is based on the Agreement between the Government of the Republic of Slovenia and the Government of Ukraine on cultural, educational and scientific cooperation, signed on May 12, 1997, and on to the Working Programme on Scientific and Technological Cooperation between the Slovenian and the

Ukrainian Government for 2002-2005, signed in 2002 and amended in 2004. Every two years both countries announced a call for proposals for joint research projects and joint committee meetings approved bilateral research projects. Till the end of 2012 there were 6 joint committee meetings which approved together 52 research projects. The most recent joint board meeting took place in 2012, and 8 research projects were supported for co-financing for the period 2013-2014 in different research fields: natural, technical and social sciences. The next call for proposals will be launched in spring of 2014.

*Source: http://www.arrs.gov.si/sl/medn/dvostr/Drzave/Ukrajina/rezultati/13/rezult-razp-ukrajina-13-14.asp, communicated by the Austrian BILAT-UKR*AINA coordinator*

cf. also http://www.rtd.si/eng/dvostr/sporazumi.asp

2.3.13 Switzerland

Together with the **Swiss Agency for Development and Cooperation (SDC)**, the **Swiss National Science Foundation (Schweizerischer Nationalfonds zur Förderung der wissenschaftlichen Forschung, SNSF)** has been promoting co-operation with scientists from Eastern European countries and from the New Independent States of the former Soviet Union (NIS) since 1990 by implementing a scientific cooperation programme in six consecutive phases. The commitment, which is part of a wider effort to strengthen economic, scientific and cultural ties between Switzerland and Eastern Europe and NIS is now being renewed.

Compared with the former phases of SCOPES, the same funding instruments are offered in SCOPES 2013-2016. An overall budget of 16 million CHF will be available and a major emphasis has again been put on capacity development (young and female researchers).

In the framework of SCOPES 2013–2016, there has been a first call for proposals for Joint Research Projects (JRP) March to September 2013 and there will in addition be a second call for proposals for Institutional Partnerships (= IP, open from spring to autumn 2014).

Researchers working at research institutions in Switzerland and in countries of Eastern Europe, the Western Balkans and the New Independent States of the former Soviet Union are eligible for participation in the programme, i. e. Ukraine is included here.

2.3.14 Turkey

Turkey and Ukraine signed their cooperation agreement on 2005 however the earliest form of cooperation between the countries date back as early as 1997 when the **International Laboratory for High Technology (ILHT)** was launched in the premises of TUBITAK Marmara Research Centre. ILHT was a joint initiative of the Ministry of Science and Technology (today SASII) with the motive of cooperating in common priority fields and sharing the resulting information. Researchers from both countries conducted their work in the fields of Terahertz (THz) technologies and subsurface imaging under the supervision of Ukrainian Prof. Aleksey Vertii. The laboratory functioned within the premises of TUBITAK for more than 15 years and its activity reports were referred in the “The Joint Action Plan between the Cabinet of Ministers of Ukraine and The Government of The Republic of Turkey on Enhanced Cooperation”.

The second pillar of Turkish – Ukrainian cooperation in science and technology consist of two distinct cooperation programmes run by **TÜBİTAK** together with NASU and SASII separately. In the framework of the bilateral programme with SASII in which call for proposals are announced every other year, Turkish and Ukrainian research teams have been conducting joint projects for approximately ten years. 23 projects have been supported within this framework, of these 4 in 2012/2013. This programme has a general coverage and is not

biased towards any thematic field; yet the aggregate numbers regarding the thematic distribution of the project applications have been shaped. The most recent call of SASII and TUBITAK was published on 15 April 2013, targeting scientific laboratories, research teams and scientific establishments in both countries.

In order to diversify the cooperation scheme for the future, TUBITAK and SASII agreed to hold a joint workshop in the first half of 2013 in order to specify common research priorities and come up with some joint project ideas. TUBITAK will host the event which will cover the themes such as new materials, biotechnology and agricultural technologies.

2.4 EUROPEAN COOPERATION WITH UKRAINE

European S&T cooperation with Ukraine, in particular within the European Framework Programmes for Research and Technological Development, has already been covered extensively in other places. A systematic and complete summary is far beyond the scope and capacity of the present activity and was never intended in this context either. Rather, some aspects of the European cooperation with Ukraine are reported here which are considered relevant for its impact on and opportunities for the bilateral cooperation activities.

2.4.1 Agreements EU – Ukraine

Various bilateral policy agreements between the EU and Ukraine constitute the background for the bilateral policy dialogue (see Annex 6.5).

The Ukraine-EU Science and Technology cooperation is in particular based on the Ukraine-EU Agreement on Science and Technology Cooperation signed on 4 July 2002.

Under the terms of the Ukraine-EU Agreement on Science and Technology Cooperation of 2002 the **Joint Committee on S&T Cooperation (JSTCC)** was established. Its first meeting took place in Brussels on 23 November 2011. Both sides provided information on current developments in research and innovation policy and programs in the EU and Ukraine respectively. A review was provided on the current levels of EU-Ukraine cooperation in research and innovation, discussing activities carried out through the 7th EU Framework Program for Research and Technological Development (FP7) and through Ukrainian national programs and bilateral activities with EU Member States. Both sides shared information on the health, ICT and nanotechnology/materials research, with a view to promoting and potentially increasing future cooperation in these areas, and agreed to work to identify two to three areas of research and innovation cooperation, which will be developed, through future meetings of the Joint Committee, as strategic EU-Ukraine priorities on a bilateral or bi-regional level through the Eastern Partnership. The second JSTCC meeting was held in Kiev on 24 May 2013, determining Nanosciences, Nanotechnologies, Materials & New Production Technologies (NMP), Biotechnologies, Information and Communication Technologies (ICT) and Aeronautics as thematic priorities. The third meeting of the JSTCC is envisaged for the second half of 2014 in Brussels.

Sources: http://ec.europa.eu/research/iscp/index.cfm?lg=en&pg=ukraine (October 2013)

2.4.2 EU Programmes, Instruments and Activities – Overview

The EU programmes with options for RTD cooperation with Ukraine have been or are:

- FP7 – Seventh Framework Programme for Research and Technological Development (closing) and Horizon 2020 (starting)
- Erasmus Mundus
- Tempus
- Jean Monnet Programme under the Lifelong Learning Programme
- INSC - Instrument for Nuclear Safety Cooperation or Nuclear Safety Co-operation Instrument (NSCI) (from 2007 onward, replacing the Tacis Nuclear Safety Programme) and INOGATE – Interstate Oil and Gas Transport to Europe, both funded through ENPI European Neighbourhood and Partnership Instrument
- ENPI CBC (Cross-Border-Cooperation) Romania-Ukraine-Republic of Moldova, Poland-Belarus-Ukraine, Hungary-Slovakia-Romania and Black Sea Programme (2007-2013)
- South East Europe Programme
- Central Europe Programme

Sources: BILAT-UKR (as of 2012): http://archive.bilat-ukr.eu/en/184.php, a table with more detailed information on the respective programmes (purpose, objectives, key priorities; related sub-programmes or priority areas (if any); funding schemes and instruments; application and financial rules; projects; contacts) is available for download at http://archive.bilat-ukr.eu/_media/Inventory-Table3_EU-programmes-RTD.pdf, and http://ec.europa.eu/research/iscp/index.cfm?lg=en&pg=ukraine

2.4.3 Ukraine-related activities in FP7

Until the advent of Horizon 2020 in 2014, FP7, the Seventh Framework Programme for Research and Technological Development, has been the EU's main instrument for funding research in Europe, running from 2007-2013. FP7 was also designed to respond to Europe's employment needs, competitiveness and quality of life.

The following Specific Programmes constitute the five major building blocks of FP7: **Cooperation**, **Ideas**, **People**, **Capacities** and **Nuclear Research**.

As of February 2014, 150 Grant Agreements were signed in these five FP7 programmes with at least one participation from Ukraine and a total of 205 participations from Ukraine.

The core of FP7, representing two thirds of the overall budget, is the **Cooperation** programme. It fosters collaborative research across Europe and other partner countries through projects by transnational consortia of industry and academia. Research was and is being carried out in the following ten key thematic areas:

- Health
- Food, agriculture and fisheries, and biotechnology
- Information and communication technologies
- Nanosciences, nanotechnologies, materials and new production technologies
- Energy
- Environment (including climate change)
- Transport (including aeronautics)
- Socio-economic sciences and the humanities
- Space
- Security

As of February 2014, 99 Grant Agreements were signed in the Cooperation programme with at least one participation from Ukraine and a total of 130 participations from Ukraine.

The **Capacities** programme strengthens the research capacities that Europe needs if it is to become a thriving knowledge-based economy and covers the following activities:

- Research infrastructures
- Research for the benefit of SMEs
- Regions of Knowledge
- Research Potential
- Science in Society
- Specific activities of international cooperation

As of February 2014, 28 Grant Agreements were signed in the Capacities programme with at least one participation from Ukraine and a total of 63 participations from Ukraine.

Sources: http://ec.europa.eu/research/fp7/understanding/fp7inbrief/structure_en.html and EC (internal communication)

The dedicated **international cooperation** actions under the FP7 Capacities Specific Programme support the international cooperation strategy of FP7 through carefully designed funding modalities aimed at promoting the participation of third-country participants in FP7 and programmes of the Member States, stimulating policy dialogue with third countries/regions, and launching studies on issues relevant to international cooperation.

In this area, 15 Grant Agreements with at least one participation from Ukraine (and running after 2008) were signed as of February 2014, with a total of 23 participations from Ukraine. These are described in some detail in the following, from activities on the bi-regional level (INCO-NET, R2I) over the bilateral level (BILAT, ERA-WIDE) to the coordination level (ERA-NET).

On the bi-regional level, coordination of S&T cooperation was dealt with **INCO-NET** networks, with Ukrainian participation in the following three of them:

- IncoNet EECA – the S&T International Cooperation Network for Eastern European and Central Asian Countries (01/2008-06/2012)
  The achievements of IncoNet EECA include 5 highly acclaimed EU-EECA Policy Stakeholders' Conferences, numerous information and training events in EECA countries, analytical reports to back future policy endeavours, a White Paper on the chances and challenges of EU-EECA STI cooperation and more.
  http://www.inco-eap.net/en/99.php
- IncoNet EaP – the STI International Cooperation Network for Eastern Partnership Countries (09/2013-08/2016)
  IncoNet EaP aims to support the advancement of the bi-regional STI policy dialogue between the EU MS/AC and the Eastern Partnership countries, with an explicit focus on the Societal Challenges that have been identified to be of mutual interest for the two regions, namely Climate Change, Energy and Health. In particular the project will identify actions and stakeholders and will implement innovative pilot activities to strengthen the coordination and impact of the individual actions.
  http://www.inco-eap.net/

- Danube-INCO.NET – Cooperation in Research and Innovation in the Danube Region (01/2014-12/2016)
  Danube-INCO.NET is a FP7 funded coordination and support action for the official EU Strategy for the Danube Region (EUSDR) in the field of research and innovation (R&I). Whereas the EUSDR addresses a wide variety of priority areas (ranging from PA 1A „Mobility/Waterways" to PA 11 „Security"), Danube-INCO.NET focuses mainly on two of them: PA 7 „Knowledge Society" and PA 8 „Competitiveness".
  http://www.danube-inco.net/

On the bilateral level, there are two **BILAT** projects realized with the aim to provide a framework to foster cooperation in Research, Technological Development and Innovation between the European Union and Ukraine: the present project BILAT-UKR*AINA (09/2012-06-2015) and its predecessor project BILAT-UKR (09/2008-02/2012).

Also on the bilateral level, the **ERA-WIDE** projects promote closer cooperation with the European Neighbourhood Policy countries and prepare for their possible association with the Framework Programme by reinforcing the cooperation capacities of research centres of the highest quality in these countries. Eastern Europe is among the target regions and thus Ukraine one of the target countries.

Source: European Commission Staff Working document SWD(2012) 258 final Accompanying the document Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions on 'Enhancing and Focusing EU International Cooperation in Research and Innovation: A Strategic Approach',
http://www.google.de/url?sa=t&rct=j&q=&esrc=s&frm=1&source=web&cd=1&cad=rja&ved=0CCwQFjAA&url=http%3A%2F%2Feur-lex.europa.eu%2FLexUriServ%2FLexUriServ.do%3Furi%3DSWD%3A2012%3A0258%3AFIN%3AEN%3ADOC&ei=9swFU4OKJMmZtAaJ8IGgBQ&usg=AFQjCNERTN6eCGUW1rbNvDKYZLPU4XGxlA

These are in particular the following seven ERA-WIDE projects being realized in 2010-2014, all coordinated by the Ukrainian partner institution (listed in alphabetical order according to the project acronym):

- COMBIOM – "Strengthening cooperation in molecular biomedicine between EU and Ukraine" (12/2011-11/2014)
  Widening and deepening the existing bilateral collaboration of the Institute of Molecular Biology and Genetics of the National Academy of Sciences of Ukraine with two EU partners in France and in Poland will provide creation of a new research consortium for enhanced involvement of the Ukrainian research centre into the ERA (first objective). Supported by the EU partners, the building of international cooperation capacities of the Institute for its successful participation in European collaborative research will elucidate its potential for European community and will result in widening the ERA and engagement of new participants in increased number of successful projects (second objective).
  http://cordis.europa.eu/projects/rcn/101272_en.html
- ERAIHM – "Advancing Research and Cooperation Capacities of IHM NASU towards ERA" (11/2010-05/2013)
  The ERAIHM project was designed to reinforce the cooperation capacities of one of the leading research centres of Ukraine - Institute of Hydromechanics (IHM) of the National Academy of Sciences of Ukraine and enhancing its part participation in European Framework Programmes.
  http://cordis.europa.eu/projects/rcn/96710_en.html
- INCRIS – "Improving International Cooperation and R&D Road Infrastructure Strategy for Ukraine" (12/2011-05/2014)

The overall objective of the INCRIS coordinating action is to ensure that the cooperation capacities of Ukraines leading road research centre, the Shulgin State Road Research Institute (DNDI) are reinforced in order for it to foster its integration into the European Research Area and this improve road infrastructure in Ukraine through joint research.
http://cordis.europa.eu/projects/rcn/101273_en.html

- KhAI-ERA – "Integrating the National Aerospace University "KhAI" into ERA" (12/2011-11/2014)
  The overall aim of the KhAI-ERA project is to integrate the National Aerospace University (KhAI) into ERA, by reinforcing its cooperation capacities and twinning with European research and innovation organisations in its 3 strongest aerospace and IT research topics: Composite Materials, Advanced Manufacturing for Aircraft Assembly, and Dependable Embedded Systems.
  http://cordis.europa.eu/projects/rcn/101270_en.html
- NANOTWINNING – "Increase in opportunities for strategic collaboration in the field of nanotechnology via twinning of IOP with institutions of European Research Area" (12/2011-11/2014)
  The Nanotwinning Project is aimed at the FP7 Thematic priorities - Nanosciences, Nanotechnologies, Materials & new Production Technologies and provides a number of events, which are focused on increasing opportunities for collaboration in the field of nanotechnology via twinning of the Institute of Physics of the National Academy of Sciences of Ukraine (IOP) with institutions of ERA.
  http://cordis.europa.eu/projects/rcn/101341_en.html
- START – "Boosting EU-Ukraine cooperation in the field of Superhard Materials" (11/2011-04/2014)
  The vision of START is to reinforce the cooperation between EU and Ukraine in the field of Superhard Materials and its application areas in the various thematic priorities of FP7. Thus, START will support the Ukraines leading research institute in the field of Superhard Materials, namely V.N. Bakul Institute for Superhard Materials of the National Academy of Sciences of Ukraine, to become a flagship institute in international cooperation.
  http://cordis.europa.eu/projects/rcn/101274_en.html
- SUCCESS – "Strengthening Ukraine and EU research cooperation in the field of Material Sciences" (11/2010-10/2013)
  The SUCCESS project was based on a twinning approach between one of the leading Ukrainian scientific and educational organisations, the Institute for Scintillation Materials of Academy of Science of Ukraine, with their long term partner University Claude Bernard of Lyon. The project gave Ukraine the possibility to improve the research activities of their highest quality in the FP7 thematic priority Nanosciences, nanotechnologies, materials & new production technologies (NMP), and in particular in the field of Material Sciences.
  http://cordis.europa.eu/projects/rcn/96709_en.html

With the "Common Knowledge and Innovation Space" a new ENP political priority, in view of the transition to Horizon 2020 and based and the experience of ERA-WIDE projects, **R2I** projects have recently been invoked as international cooperation activities on the bi-regional level under the FP7 capacities programme. They aim at reinforcing cooperation with ENP countries on bridging the gap between research and innovation. Consequently, the following are central aspects of these projects concerning their technical content and scope:

- to involve different stakeholders of the "knowledge value chain" (research, industry/SMEs associations, innovation networks /agencies, public authorities, end-users…),

- to promote interaction and transfer of knowledge between academia, research organizations and industry for an effective market uptake of research results,
- to focus on only one societal challenge identified in the Commission proposal for Horizon 2020.

http://ec.europa.eu/research/iscp/pdf/fp7_infoday_2012/infoday2102_r2i.pdf

The Eastern Partnership (EaP) countries including Ukraine constitute one of the target areas. In fact, 5 of altogether 6 ongoing EaP R2I projects – running since September/October 2013 (and contained in the above statistics) or March 2014 – involve Ukrainian partners. Their general aims are, respectively:

- to enhance cooperation and to strengthen the innovation chain among the participating countries in the renewable energy sector (NoGAP) (09-2013-02/2016),
  http://www.nogap.eu
- to develop new skills and competences in innovation services and to contribute to the learning process on how to bridge knowledge and business with a direct focus on energy efficiency (INNOVER-EAST),
  http://www.secure-r2i.eu/index.php/en/8-category-eng/33-related-european-projects
- to raise awareness about efficient use of wood raw material resources, to optimize conversion pathways of wood raw materials in SMEs, to promote the competitive research potential of innovation clusters and to enhance regional to international collaboration in 'knowledge value chains (RERAM),
  http://www.secure-r2i.eu/index.php/en/8-category-eng/33-related-european-projects
  http://www.reram.eu
- to reinforce cooperation with EaP countries on bridging the gap between research and innovation for the Horizon 2020 Societal Challenge "Secure societies - protecting freedom and security of Europe and its citizens" (SECURE-R2I) (10/2013-09/2016)
  http://www.secure-r2i.eu/
- to bridge the gap between agri-food research and innovation in EaP countries by bringing together all actors of the knowledge value chain and raising their awareness on how to uptake research results into innovation. (SUAFRI-EPC)
  http://www.secure-r2i.eu/index.php/en/8-category-eng/33-related-european-projects
  http://www.suafri-epc.eu

On the international cooperation coordination level, one **ERA-NET** involved Ukraine: BS-ERA.NET (01/2009-12/2012), a networking project aimed at integrating the participating countries from the Black Sea extended region in the European Research Area by linking research activities within existing national, bilateral and regional RTD programmes.

In the context of the present report and some of the projects mentioned, the following activities are also worth mentioning for later reference:

- The **incrEAST information platform** designed to
  - help intensify international cooperation in science, technology and innovation (STI) between the European Union and the countries of Eastern Europe, Central Asia, and the South Caucasus
  - facilitate the networking of research organisations, policy stakeholders and individuals from these regions, and
  - promote scientific and research policy dialogue between countries of the target regions and EU Member States/Associated Countries.

  and providing

- detailed and up-to-date information about STI developments between the EU and the countries of Eastern Europe, Central Asia, and the South Caucasus,
- comprehensive information on the national S&T landscapes, research policies and international cooperation patterns of 12 countries in the target regions, and
- information about current cooperation projects, funding oportunities, potential partner organisations/ host institutions, and contact information of local experts.

The platform is geared towards researchers, developers and scientists who are interested in carrying out cross-border research projects, gaining experience in cooperating with the European Union, and conducting research on the results of joint projects. incrEAST is also aimed at decision-makers in politics and in the private sector.

The IncrEAST database merges comprehensive information collected and assessed by experts from running BILAT and IncoNet projects with Ukraine. It allows browsing by country, research area and/or type of organisation or a full text search with user-specific focus.

incrEAST was initiated by the EU FP7 funded project IncoNet EECA (International Cooperation Network for Eastern Europe/Central Asia) and is currently run by its successor projects IncoNet EaP and IncoNet CA (STI International Cooperation Networks for Eastern Partnership Countries/Central Asian Countries). Regional correpondents from these projects – experts for the science landscapes and research policies of their countries – regularly update the information provided here. The Central Information Office of both IncoNets has developed close links with other EU cooperation projects trageting these regions, which also contribute their expertise to this portal.

http://www.increast.eu/

- Policy Stakeholder Conferences bringing together policy makers and representatives of the research communities of both regions took place in Athens (2009), Moscow (2010) and Astana (2011) in the context of several EU-funded projects dedicated to the support of the EU-EECA policy dialogue (IncoNet EECA, IncoNet CA/SC, BILAT-RUS, BILAT-UKR, ERA.Net RUS, BS-ERA.NET). As a result of the aforementioned policy stakeholder conferences and at the same time as an input to future dialogue activities between the two regions, a **"White Paper on Opportunities and Challenges in View of Enhancing the EU Cooperation with Eastern Europe, Central Asia and South Caucasus in Science, Research and Innovation"** [WP] was jointly prepared by EU and EECA experts. It was based on a wider stakeholder consultation process involving political decision makers, representatives of the STI administration as well as of the science and innovation communities in the European Union, Countries associated to the EU RTD Framework Programme and Eastern Europe/Central Asian countries, which were explicitly consulted through missions to EECA countries or through expert workshops on subjects of relevance for the EU-EECA STI cooperation. Furthermore, the White Paper integrated extensive desk research and has been consolidated in a dedicated policy stakeholder conference in Warsaw in November 2011.

- The nine BILAT projects for the cooperation with Argentina, Australia, Brazil, Canada, China, Korea, Mexico, New Zealand, Russia, South Africa and USA have joined forces in order to undertake a survey examining the operational feasibility of establishing joint STI liaison offices of European research organisations. With this survey, they analyse the necessity of **STI Joint European Liaison Offices (STI JELOs)** jointly demonstrating European science, technology and innovation in these countries. The target group of this survey consists of, among others, STI policy-

makers, representatives of STI funding agencies, research organisations, and business organisations. BILAT-UKR*AINA is currently not involved in this activity.

- An ongoing IncoNet EaP and IncoNet CA joint activity identifies **actions and stakeholders for the societal challenges climate change, energy, and health**. The results of the mapping will form a database that will serve, among others, as a basis for the following tasks twinning of projects and benchmarking of research institutes.

2.4.4 Horizon 2020 and Ukraine

Ukraine is a part of the Eastern Partnership region of the European Neighbourhood. With this region a development towards a "Common Knowledge and Innovation Space" is envisaged. To achieve that the Commission will intensify cooperation with Ukraine and will support better networking and co-ordination between Ukraine and the EU in the setting and synchronisation of research priorities. Ukraine is one of the International Cooperation Partner Countries (ICPC), entitled for funding in the EU Framework Programmes according to the relevant rules. With a view to promoting preparation of Ukraine's research community for the Horizon 2020, the Commission will support Ukraine in building up research capacity, promote the increased collaboration between Ukraine's and EU researchers and research organisations and strengthen the dissemination of information on Horizon 2020 to Ukraine. The Commission will also support special information events on Horizon 2020. A Launch Conference on Horizon 2020 organised by BILAT UKR*AINA took already place in January 2014 supported by SASII.

The network of National Contact Points (NCPs) for Horizon 2020 is the main structure in each country to provide guidance, practical information and assistance on all aspects of participation in this EU Research and Innovation programme. The list of Ukrainian Horizon 2020 NCPs was approved by the Ministry of Education and Science of Ukraine at the end of 2013. It comprises 30 entries for the various Horizon 2020 programme sections, areas and functions. The NCPs are based at Ukrainian universities, institutes of the National Academy of Sciences of Ukraine and other organisations. The NCP list is accessible via the European Commission website (Research and Innovation Participant Portal) at http://ec.europa.eu/research/participants/portal/desktop/en/support/national_contact_points.html#c,contact=country/sbg/Ukraine/1/1/0&function_details..function_abbr/sbg//1/1/0&+contact_name/asc.

2.4.5 Other Ukraine-related EU activities

The **European Neighbourhood Policy (ENP)** is a broad political strategy which has as the ambitious objective of strengthening the prosperity, stability and security of Europe's neighbourhood in order to avoid any dividing lines between the enlarged EU and its direct neighbours. The **European Neighbourhood and Partnership Instrument (ENPI)** is the financial instrument which supports the ENP through concrete assistance actions. It has been operational since 1 January 2007 and is the main source of funding for the 17 partner countries (ten Mediterranean and six Eastern European countries including Ukraine, plus Russia). The ENPI replaces the co-operation programmes TACIS (for the Eastern European countries) and MEDA (for the Mediterranean countries). In this light, the ENPI appears as the strategic continuity with enlarged objectives of the former TACIS and MEDA programmes. The main purpose is to create an area of shared values, stability and prosperity, enhanced co-operation and deeper economic and regional integration by covering a wide range of cooperation areas. The overall allocation for the ENPI instrument amounts to almost €12 billion for the seven-year period 2007-2013. This represents an increase of 32%, in real terms,

compared with the amount available over the period 2000-2006 for the MEDA and TACIS programmes.

Source: http://ec.europa.eu/europeaid/where/neighbourhood/overview/

The **Cross-border Cooperation Programme Poland-Belarus-Ukraine 2007-2013** implemented within ENPI continues and broadens the cooperation in the border zone areas of the three countries, which was previously developed by the Neighbourhood Programme Poland-Belarus-Ukraine INTERREG III A/Tacis CBC 2004–2006 (Neighbourhood Programme). The Polish-Ukrainian cooperation has also been ensured by these programmes. The Polish ministry responsible for regional development managed the Neighbourhood Programme. All stages of the management and implementation of the Neighbourhood Programme were conducted in close cooperation with the Belarusian and Ukrainian partners and number of joint activities and enterprises of a visibly cross-border character were undertaken successfully in the Programme area. The Neighbourhood Programme supported joint activities in numerous fields under three priorities: competitiveness of the border area through the modernization and development of the cross-border infrastructure, human capital and institutional cross-border cooperation including security at the European Union's borders. In total, 158 projects were fully implemented. The largest group of beneficiaries consisted of local authorities, but also research centres and school were present among the Programme beneficiaries.

*Source: Polish BILAT-UKR*AINA partner and INCO NCP Poland*

In 2009-2011, the EU-funded **Joint Support Office for Enhancing Ukraine's Integration into the European Research Area (JSO-ERA)** supported Ukraine's integration into the ERA. Its specific objectives were

- to establish a sustainable operational structure strengthening the capacity of the Ministry of Education & Science of Ukraine and of the National Information Centre for Ukraine-EU Scientific & Technological Cooperation (NIP-Ukraine),

and

- to support Ukraine's S&T communities, including academia and businesses, more particularly innovative SMEs, in submitting more competitive proposals to the EUfunded FP7 on Research & Technological Development in order to intensify Ukraine's participation in this FP.

Until recently, JSO-ERA presented in particular the Ukrainian RTD potential in 10 priority areas of FP7 and a comprehensive, searchable database with 275 profiles of Ukrainian research teams, including contact details, descriptions of the institutes, and research fields according to the Frascati classification and FP7 priorities area. The database allowed also predefined search and sort options as well as a full text search for selected fields. The information is no longer available online.

2.5 OTHER MULTILATERAL COOPERATION INITIATIVES AND SCENARIOS INCLUDING UKRAINE

2.5.1 STCU

The **Science and Technology Centre in Ukraine (STCU)** is the first intergovernmental organization in Ukraine and was established by an Agreement signed in 1993 by the four founding Parties Ukraine, Canada, Sweden and the USA (Donor Countries). The Agreement

was put into force by a decree by Ukrainian President Kravchuk in 1994. The STCU began its first organizational steps in end of 1994 and was fully registered in Ukraine early in 1995. The European Union acceded to the STCU agreement in 1998, replacing Sweden as a Party to the STCU agreement.

The STCU's main purpose is: "To support research and development activities for peaceful applications by Ukrainian, Georgian, Uzbekistani, Azerbaijani, and Moldovan scientists and engineers (Recipients), formerly involved with development of weapons of mass destruction and their means of delivery, as part of the general process of conversion to a civilian, market-oriented environment."

The Funding Parties of STCU projects include the signatories to the STCU agreement (Donor Countries), Japan as a sponsor of the STCU agreement, and Partners (government and non-government) approved by the Board of Governors of the STCU.

The traditional „regular projects funded by the STCU party countries were discontinued in 2013. About 85% of the yearly funding budget are now spent via partner projects and projects with co-financing (before: targeted R&D initiatives. This change resulted even in an increase of the yearly funding volume (13m USD in 2010, more than 20m USD in 2013).

STCU participates in the EU CBRN (chemical, biological, radiological or nuclear) Risk Mitigation Centre of Excellence Initiative as a consultant.

The STCU and the National Academy of Science of Ukraine (NASU) issued their most recent Call for Proposals within the framework of the Targeted Research & Development Initiatives (TRDI) Programme in February 2014 in the following priority areas:

1. Nanotechnology for public health, creating new materials and devices creation
2. Molecular and cellular biotechnology for the diagnosis and treatment of diseases
3. Plasma physics and controlled thermonuclear fusion, plasma technologies, energy saving technologies, nuclear medicine
4. Information technology for space and environment research

For comparison, the priority areas of the 2013 joint call were:

1. New information technologies for Human-Computer commutation facilitation, energy saving, supercomputing and grid-technologies;
2. Secure and ecologically rational technologies of power supply;
3. Up-to-date functional and construction materials, methods of obtaining, processing and combining.
4. Molecular and cellular biotechnologies, biosensor and new methods of illnesses diagnosing

A strict requirement for all project submissions is the involvement of at least one scientific collaborator from any of the three western funding parties: the United States, Canada, the European Union. Furthermore, in accordance with STCU policy, no less than 50% of project participants should be scientists with prior experience in the development of weapons of mass destruction.

The STCU Technologies & Institutes section is intended to help scientists promote their technology developments for licensing and partnering with Western Companies and Governmental Organizations. To this aim, STCU offers, on its website, a Thematic Projects Database covering the following 9 subject areas and containing related Technology Descriptions and Institute Profile Forms:

- Aerospace & Aeronautics

- Industrial Technologies
- Environmental & Non-Nuclear Energy Research
- Biotechnologies, Agriculture & Medicine
- Chemistry
- Sensors
- Nuclear Energy & Safety
- Physics
- Material Sciences

Cf. http://www.stcu.int/

In 2014, STCU sponsors again a mission to HANNOVER MESSE for 13 participants from the target countries, including Ukraine.

2.5.2 Visegrad 4 Eastern Partnership Program

The main aim of the Visegrad 4 Eastern Partnership Program (V4EaP), initiated in 2011 by the governments of the Visegrad Group countries (Czech Republic, Poland, Hungary, Slovakia) to enhance the cooperation between the Visegrad region and the countries of the Eastern Partnership (EaP), Armenia, Azerbaijan, Belarus, Georgia, Moldova and Ukraine, is to facilitate the unique know-how of the Visegrad countries with social and economic transformation, democratization and regional cooperation particularly through the development of civil society and support of cooperation among local governments, universities and individual citizens.

It includes in particular Visegrad Scholarships for EaP, an extension of the existing In-Coming scheme within scholarships targeting scholars who are citizens of Armenia, Azerbaijan, Belarus, Georgia, Moldova or Ukraine coming to study at any public or private university accredited in the V4 countries.

Cf. http://visegradfund.org/v4eap/

2.5.3 NATO SPS

The Science for Peace and Security (SPS) Programme is a policy tool that enhances cooperation and dialogue between NATO and its partners. It is based on security-related civil science and technology. It also aims to promote regional cooperation through scientific projects and activities.

The overarching framework for political and security-related consultations in NATO, including collaboration within the NATO SPS Programme, is the Euro-Atlantic Partnership Council (EAPC) inaugurated in May 1997. It is a cooperative mechanism, which builds upon the political and military cooperation under NATO's Partnership for Peace programme. Ukraine belongs to the partner countries eligible for funding under SPS.

Ukraine's participation in NATO science programmes began in 1991 and intensified following an exchange of letters on cooperation in the area of science and the environment in 1999. Over the years, Ukraine has been second only to Russia in terms of NATO grants for scientific collaboration. Until 2010 scientists and experts from Ukraine have had leading roles in 721 activities, and more joined various cooperative activities as participants and key speakers. Grant applications for cooperative activities between scientists from Ukraine and

scientists from NATO countries can be submitted to the SPS Programme. The SPS programme supports technical workshops, training courses and multi-year projects.

In addition to applying science to defence against terrorism and new threats, Ukraine's priority areas for cooperation include information technologies, cell biology and biotechnology, new materials, the rational use of natural resources and cooperation focused on defence-related environmental problems.

NATO has also sponsored several projects to provide basic infrastructure for computer networking among Ukrainian research communities and to facilitate their access to the internet. Although the focus of past collaboration has been in the area of physical sciences, project proposals are now also being considered which deal with security issues from a social science perspective. For example, a new Trust Fund is being considered that will help remove and decontaminate military sites with stored radioactive waste.

A Joint Working Group on Scientific and Environmental Cooperation is supporting the further development of cooperation in this area. It meets once a year and ensures that mutually beneficial cooperation between NATO and Ukraine is continued according to the NATO-Ukraine Annual National Plan (ANP). On its meeting in November 2012 in Charkiv it reviewed progress on key projects and identified areas for further work. On this occasion the SPS and Partnership Cooperation Advisor stressed the importance of Ukraine continuing to provide funding to Ukrainian institutes and their scientists working on multi-year SPS projects to ensure sustainability.

Recent SPS-funded activities include an international conference in Lviv, Ukraine, to discuss emerging security challenges, including energy security, counter terrorism and cyber defence; a joint Ukraine-Belarus flood-risk monitoring and forecast project in the Pripyat River Basin; and the NESTOR project, which aims to improve high resolution image detection for use in medicine, identifying illicit trafficking, explosion detection, forensics and environmental security.

Sources:
http://www.nato.int/science/about_sps/nato_ukr.htm
http://www.nato.int/cps/en/natolive/news.htm?query=&date_from=&date_to=&sort=date:D:R:d1&keywordquery=Science&start=10
http://www.nato.int/science/about_sps/introduction.htm
http://www.nato.int/cps/en/natolive/88011.htm
http://www.nato.int/cps/en/natolive/78209.htm
http://www.nato.int/cps/en/natolive/topics_37750.htm
http://ukrainebusiness.com.ua/news/6351.html

2.5.4 CERN

On 3 October 2013, CERN Director General Rolf Heuer and Mr. Kostyantyn Ivanovych Gryschenko, Vice Prime Minister of Ukraine signed a document admitting Ukraine to **CERN Associate Membership**, subject to ratification by Ukraine's Parliament, the Verkhovna Rada.

Ukraine and CERN signed a Co-operation Agreement in 1993, and a Joint Declaration in 2011, setting priorities in scientific-technical cooperation. In reality, Ukraine's relationship with CERN dates back much further, principally through CERN's cooperation with the Joint Institute of Nuclear Research (JINR) in Dubna, Russia, of which Ukraine is a member. CERN-JINR co-operation in the field of high-energy accelerators started in the early 1960s and ever since, the two institutions have formed a bridge between East and West that has made important contributions to the development of global, peaceful scientific co-operation.

Beyond its participation through JINR, Ukraine has been a long-time contributor to the ALICE, CMS and LHCb experiments at the LHC, and to research and development on new

accelerator technologies. Ukraine also operates a Tier-2 computing centre in the World-wide LHC Computing Grid (WLCG) that federates globally distributed resources to process and analyse the massive amounts of data generated by the LHC experiments.

The Associate Membership of Ukraine will open a new era of cooperation that will strengthen the long-term partnership between CERN and the Ukrainian scientific community. Associate Membership will allow Ukraine to participate in the governance of CERN, through attending the meetings of the CERN Council. Moreover, it will allow Ukrainian scientists to become members of the CERN staff, and to participate in CERN's training and career development programs. Finally, it will allow Ukrainian industry to bid for CERN contracts, thus opening up opportunities for industrial collaboration in areas of advanced technology.

Source: http://press.web.cern.ch/press-releases/2013/10/ukraine-become-associate-member-state-cern

2.5.5 CIS countries

The first agreements on **cooperation in science and technology of the CIS (Commonwealth of Independent States) countries** were signed in 1992. In 2011, a programme of intergovernmental cooperation in the innovation sphere until 2020 was agreed in this context. In May 2013, a coordination center for realization of this programme was set up in Ukraine, for more effective cooperation within the frame of the innovation project with the Skolkovo Foundation, and the council of heads of CIS states confirmed a list of 11 innovative intergovernmental pilot projects of the programme, according to which the participation of Ukrainian research and education institutions is planned in 6 of these projects. At the end of 2013, a draft law securing the financial support for this participation, communicated to the Ukrainian parliament on 27 November 2013, is being discussed in the relevant parliamentary committees.

Sources:
http://www.ukrinform.ua/eng/news/coordination_center_for_more_effective_cooperation_with_skolkovo_set_up_in_ukraine_303882, [BMBF/IB]

3 ANALYSIS AND RECOMMENDATIONS

This Chapter presents an analysis of the information described in Chapter 2 and formulates recommendations for shaping the future cooperation between the EU MS/AC and Ukraine. The driving idea behind this is always the aim to create win-win situations, providing benefit to all involved parties (and, at least in case of the research related to global challenges, society and the global community, too).

Section 3.1 lists strengths and weaknesses of the existing situation. In Section 3.2, the potential for developing the future cooperation is described. Section 3.3 gives recommendations for specific targeted joint activities with strong bilateral or regional elements which might be initiated by EU MS/AC and Ukrainian programme owners, thereby complementing EC initiatives and programmes.

3.1 ANALYSIS: STRENGTHS, WEAKNESSES AND ADDITIONAL RELEVANT BOUNDARY CONDITIONS

The analysis of the descriptions in Chapter 2 shows the following aspects and factors as **strengths** of the bi- and multilateral cooperation with Ukraine, supporting the future development of both:

- There is sufficient overlap between the RTDI priorities of the EU MS/AC as well as the EC on the one hand and Ukraine on the other for identifying fields for fruitful cooperation. The recent increase in importance of the innovation idea in Ukraine broadens the cooperation basis.
- High-reputation research entities in the EU MS/AC as well as in Ukraine with well-educated young as well as experienced scientists constitute a valuable potential for bi- and multilateral cooperation for the benefit of all parties involved.
- Based on various agreements, a plethora of cooperation activities on bilateral, European and international level has taken place during the last two decades, constituting a sound basis for an enhanced cooperation in the future.
- There are quite a few EU MS/AC which have been most actively cooperating with Ukraine since 2011 with bilateral calls and jointly funded projects (even if only mobility support is granted from the side of the EU MS/AC). This includes in particular Austria, France, Germany, Lithuania and Bulgaria.
- In these activities, several Ukrainian institutions have played leading roles, as to their research contributions and also e. g. by acting as coordinators of EU-funded projects, proving their expertise and capacity to act as leading partners when measured according to EU MS/AC and European standards.
- Various academic mobility schemes, initiated by the EU MS/AC side as well as by Ukraine, bring together students and scientists and thereby pave the way for deepening future RTDI cooperation.
- There have been several stocktaking activities resulting in English-language collections and databases of Ukrainian RTDI programmes, institutions and projects.

On the other hand, there are several factors which can be considered as **weaknesses** leading to uncertainties for or even risks to the bilateral and European cooperation with Ukraine and its enhancement in the future:

- The repeated reorganization processes in the Ukrainian RTDI administration and resulting changes in contacts as a consequence of political changes in Ukraine, have often posed challenges for building a stable enhanced RTDI cooperation environment. Following the political developments in February 2014, more changes can be expected.
- The strong dependence of potential joint activities on Ukrainian laws and formal regulations reduces the flexibility sometimes needed for planning and making progress in reasonable time intervals.
- The budgetary situation in Ukraine makes it often difficult to initiate new activities and sometimes even jeopardizes existing good practice. This applies on the programme level as well as on the project level (lack of national co-financing or contribution in kind to bi- and multilateral projects, announcement of restrictions to foreign business trips as of early 2014, seemingly applying also to RTDI cooperation activities, luckily enough abolished in the second half of February 2014). Budget restrictions have been experienced also in some EU MS/AC, but these are generally not the main limiting factor for cooperation.
- There are only few Ukrainian funding bodies systematically taking part in international RTDI cooperation (SASII, NASU, SFFS); it has generally proven difficult to involve other stakeholders like additional ministries and National Academies.
- There is no established strong community of innovative SMEs doing research in Ukraine, which could be application oriented partners in joint-activities. There is no Ukrainian foundation either with a potential similar to the Russian Foundation for Assistance to Small Innovative Enterprises (FASIE) either, which could be a partner for joint calls and funding.
- Lacking familiarity with the European and international cooperation environment and lack of experience with project proposal writing, management and administration including IPR handling often constitute also significant obstacles to the enhancement of bilateral and European high-quality cooperation. Like the question of language and visa, they are not specific to Ukraine, but have still to be taken into account as limiting factors as well.
- Even in periods without significant personnel changes, cooperation responsibilities have not always been clear recently, in particular on the European level, regarding MESU and SASII (example: Horizon 2020 NCP list).
- Some aspects of national policies might be an obstacle for specific broader cooperation and coordination measures on regional or international level.

Other aspects, to be kept in mind because they constitute **additional relevant boundary conditions** for the future development of bi- and multilateral cooperation, are:

- In the EU programmes, the cooperation between the EU MS/AC and Ukraine is coherent in the sense that well-defined common rules apply for all participants and there is a non-restricted (at least the general) visibility of the activities (programmes, calls, projects). The bilateral cooperation with Ukraine, on the other hand, is shaped

by the individual countries and partners involved (including Ukraine itself) according to their policies and interests. There might even be a *de facto* competition for bilateral projects and Ukrainian funding for theses between the individual EU MS/AC themselves as well as between the individual EU MS/AC on the one hand and other bilateral cooperation partners of Ukraine (e. g. Russia, US, India, China, Japan, Korea) on the other, without the non-Ukrainian stakeholders being fully aware of this.

- Information allowing for a comparison has until now not been collected systematically in spite of the fact that, at least for groups of similar partners, it can be assumed that also the cooperation character is similar because of the common partner Ukraine, but further clarification could help in future planning.
- The current period of transition from FP7 to Horizon 2020 makes it difficult to anticipate in detail potential synergies between future bilateral and regional on the one hand and European initiatives and programmes on the other.
- In shaping the future RTDI cooperation between the EU MS/AC and Ukraine, it has to be taken into account that Ukraine as well as the EU MS/AC have well-developed bilateral cooperation activities with other established and emerging partners like Russia, the US, India and China. The competition scenarios (e. g. for access to know-how, limited personnel capacity, limited funding earmarked for international cooperation) resulting from this must therefore always be kept in mind.

3.2 ANALYSIS: COOPERATION DEVELOPMENT POTENTIAL

From policy texts, statements by stakeholders and various cooperation experiences, it can be concluded that the criteria applied by EU MS/AC as well as Ukrainian stakeholders (programme owners and managers as well as research entities) in developing their RTDI cooperation activities include in particular:

- Making progress in (applied) research by pooling expertise of different origin, thereby increasing the knowledge base and the scientific reputation of the parties involved
- Initiating know-how and/or technology transfer for the benefit (in the first place) of the receiving party
- Opening up innovation potential on the international level
- Gaining access to specific RTDI communities and/or large-scale RTDI structures
- Gaining access to unique geographical areas
- Achieving capacity building in European and international research policy and funding
- Making specific research possible by pooling resources
- Jointly acquiring 3rd party funding support (in particular important for the Ukrainian side)
- Creating synergies between national funding schemes or between national and European/multinational funding schemes
- Securing or creating workplaces and/or gaining market access in one or more participating countries

- Creating added value with respect to individual (national) policies which in first approximation might even be completely independent of the subjects of RTDI
- Keeping the necessary independence in shaping the processes according to the national interests and policies

With these criteria in mind, there are various aspects showing a huge **potential for developing the cooperation** between the EU MS/AC and Ukraine:

- Cooperation between EU MS/AC and Ukraine could quite generally be made more efficient by optimizing the communication of information on strategies, stakeholders, programmes, calls, projects, events to the policy makers as well as the R/D community.
- There are good reasons for basically independent bilateral cooperation activities between individual EU MS/AC and Ukraine, which often have developed historically and allow for independent and quick national decisions with high flexibility. On the other hand, sharing, in a first step, information on cooperation procedures, successes, challenges and other experiences could help increase the cooperation efficiency at the overall system's level e. g. by taking advantage of best practice scenarios and joint solutions of problems and avoiding undesired doubling of efforts. It has to be kept in mind, though, that there are various aspects which might limit open exchange like e. g. the desire to stay independent in policy development, competition between individual EU MS/AC, IPR questions.
- With budgets for RTDI cooperation more and more limited in the EU MS/AC as well as in Ukraine, synergies might be sought between two or more bilateral programmes or projects with the aim of increased efficiency of spending, e. g. via networking and/or via twinning.
- Considering the latest policy developments in particular in the EU MS/AC, there is increasing readiness for the cooperation with Ukraine in the field of inherently application orientated research as compared to basic research.
- Communication between the EU MS/AC stakeholders of bilateral programmes themselves and with the Ukrainian counterparts might increase mutual understanding as to administrative structures and boundary conditions and streamline negotiation procedures.
- By joint meetings of programme managers and owners of several EU MS/AC with Ukrainian stakeholders, it might be easier to interest new Ukrainian partners (additional ministries and agencies, National Academies and funding bodies) in bi- or multilateral cooperation activities.
- In a later stage, even joint research programmes of funding bodies in individual EU MS/AC and in Ukraine with substantial funding including personnel costs on both sides (as already realized between Ukraine and the Russian Federation) could be envisaged, e. g. in the area of new materials.
- Capacity building measures for Ukrainian stakeholders in the field of international cooperation and project management/administration could be offered by the EU MS/AC in a coherent way according to their respective interests and potentials, e. g. twinning or study visits, possibly supported by appropriate European instruments (e. g. TAIEX). Care should of course be taken in this case not to double similar initiatives already being realized with EU funding e. g. in BILAT or IncoNet projects (e. g. NCP twinning).

- Under specific circumstances, joint activities involving several countries in a specific region might be invoked as a national or multinational initiative, without or with EC support (cf. the German BMBF Danube States call and the EU Strategy for the Danube Region, http://www.danube-region.eu/), or also e. g. taking advantage of the established ERA-NET instrument. It can be assumed that a "variable geometry" principle will govern corresponding measures in order to orient activities along the lines of scientific, economic or political relevance for the participating countries.

- In view of the fact that modern policies consider the transfer of research results into applications and marketable products crucial for all RTD activities to be supported, the innovation dimension is ever more important.

  A modern enhanced S&T cooperation between the EU and Ukraine must therefore definitely take into account the issue of innovation. Both, the predecessor project BILAT-UKR and the present project BILAT-UKR*AINA aim at providing input to the policy discussions between Ukraine and EU in this field. From the bilateral perspective, two issues are of high priority:
  - Linking innovation activities between the EU and the Ukraine;
  - Providing support for the development of a Ukrainian innovation system.

  In BILAT-UKR, two Ukrainian innovation programmes were identified as offering the general option for EU-UA cooperation: the „Innovative Infrastructure in Ukraine" programme (for obvious reasons focussing more on Ukrainian than on the cooperation needs and therefore only with limited relevance, after all) and the „Innovative Programme of Science Park Kiev". Together with similar activities they offer a starting point for linking with the Ukrainian side in this field.

  based on: [BUD3.3]

Quite generally, Ukraine as well as EU may also take advantage of better RTDI cooperation on binational, regional and European level for strengthening the general EU – Ukraine connection. Moreover, by initiating additional Russian participation in one or the other initiative or activity to be realized, additional stabilization might be provided for the overall situation after the developments in Ukraine in February 2014.

3.3 RECOMMENDATIONS AND SUGGESTIONS FOR SHAPING THE FUTURE COOPERATION

Against this background, several recommendations how to make use of the described potential by dedicated specific measures are put to discussion below for future joint activities with strong bilateral or regional elements. They might be initiated by national programme stakeholders, thereby complementing EC initiatives and programmes. Some of them are of a largely organizational nature and would not need substantial funding, some would have to be funded jointly from the EU MS/AC and Ukraine budgets, and some would have to be (co-)funded by EC or other funding bodies.

It is proposed that all stakeholders discuss the recommended measures, on occasion of BILAT-UKR*AINA meetings as well as on other occasions and decide on appropriate actions to be taken. Direct feedback to BILAT-UKR*AINA is also strongly encouraged.

3.3.1 Communication and networking

- More than ever before (given the political situation as of February 2014), it is strongly recommended to initiate a structured dialogue (the Steering Platform on Research in West Balkan Countries might serve as inspiration, see http://wbc-inco.net/usefultool/16) between the national stakeholders on relevant cooperation policies, programmes, projects and other activities based on and in continuation of the 1st BILAT-UKR*AINA Stakeholder Forum in May 2013 in Kiev, thus enhancing the systematic knowledge of the activities with Ukraine. The most active EU MS/AC are addressed here in the first place in view of potential synergies (also on the European level). Relevant information may be made available in a database and other formats on www.bilat-ukraina.eu and in updated versions of the present report as well as on appropriate national websites and web portals.

- It should be considered to enhance the material on which the present document is based by systematically gathering up-to-date information and data with the help of separate questionnaires to be filled in by programme owners in the EU MS/AC and Ukraine and additional interviews with selected stakeholders in the EU MS/AC and in Ukraine. This activity could constitute part of BILAT-UKR*AINA T1.2 and be modelled after a corresponding activity of ERA.Net RUS (cf. Annex 6.6).

  cf. [ENR-AR3]

- Efforts are suggested not only to enhance the joint communication between interested EU MS/AC stakeholders and the Ukrainian stakeholders already involved, in particular SASII, SFFR and NASU, e. g. by dedicated meetings and exchange, but also to initiate communication with other stakeholders in Ukraine, in particular additional relevant ministries, National Academies and funding bodies (ideally also involving innovative SMEs in Ukraine like FASIE in Russia). BILAT-UKR*AINA should accompany this process.

- It is recommended to support networking/twinning between thematic national projects or networks in EU MS/AC and in Ukraine in order to exchange best practice, e. g. by targeted communication on the national as well as BILAT-UKRA*INA level and also by including such measures as eligible in national or European calls. This could even be the topic of dedicated (multi-)national calls (best practice example: German BMBF call for funding an ideas competition for the establishment and development of innovative R&D networks with partners in the Danube States). The realization of a Ukrainian advanced material technology platform (TP) as a specific Pilot Activity as part of the BILAT-UKR*AINA WP3 activities, Task 3.2 (and thus partially supported with EU-funding) could be an example, at the same time also promoting a stronger involvement of private companies from Ukraine.

  cf. recommendation 33 of [WP]

- It is suggested to invite the science attaches at the EU MS/AC embassies in Kiev, other EU MS/AC national representatives or organizations in the field of RTDI present in Kiev and the Delegation of the European Union to Ukraine to contribute to the enhanced communication process.

- The idea of joint Houses of Research and Innovation, as realized by Germany, or, similarly, the results of the STI Joint European Liaison Offices of nine BILAT projects should be checked for applicability also in the cooperation with Ukraine.

Most of these recommendations could best be taken up by BILAT-UKR*AINA (if amendments to the contract are implemented) and its environment as the stakeholder communication has already been started in this context. It would nevertheless be highly

desirable that they are also taken up independently (possibly by the most active national stakeholders in close communication with BILAT-UKR*AINA).

3.3.2 Cooperation on activity, programme and institutional level

- It is suggested to consider enhancing bilateral activities of one EU MS/AC partner with Ukraine by inclusion of other EU MS/AC. This could be applied to bilateral (thematic) workshops and other events. Also, joint participation in Ukrainian Science Days/Night or the yearly International Science and Technology Forum «Science, Innovations, Technologies" in Kiev could be envisaged.

- It is recommended that Ukraine on one side and the individual EU MS/AC RTDI programme owners on the other side consider in a first step targeted opening up of national programme lines for each other without the provision of funds to participants from the partner country. This could include earmarking part of the respective budgets for topics of highest relevance for bilateral cooperation and might also imply the necessity of adjusting national legislation accordingly. Participation opportunities would best be widely promoted in Ukraine and the participating EU MS/AC and also via www.bilat-ukraina.eu and www.bilat.eu.

  cf. [BUD3.3] and recommendation 16 of [WP] (1st part)

- It is recommended that Ukrainian as well as the EU MS/AC RTDI programme owners consider creating targeted transnational (bilateral or regional) joint programmes, taking into account experiences already made with national and regional activities (German call on ideas competition with partners in the Danube States 2013, Joint Operational Programme Romania-Ukraine-Republic of Moldova 2007-2013, ERA-NET activities). For larger activities of this kind, it is suggested to exploit options for complementing national financial contributions by dedicated funds from the EU and other international financial institutions.

  cf. recommendation 16 of [WP] (2nd part)

- It is suggested that national policy stakeholders in EU MS/AC and Ukraine encourage and provide the necessary framework conditions and possibly incentives for twinning arrangements between research centres or institutes in Ukraine and the EU. The ERA-WIDE projects involving Ukrainian institutions constitute already best practice examples. Such twinning could take the form of memoranda or agreements between the respective research entities and could include a large variety of activities, possibly leading on the long run to the creation of joint laboratories or institutes. Experiences with the International Laboratory for High Technology (ILHT) as a joint Ukraine – Turkey initiative should be taken into account in this context.

  cf. recommendation 18 of [WP]

3.3.3 Capacity building and policy development

- It is suggested to develop scenarios for bilateral twinning between similar entities (ministries, funding agencies, RTDI organizations, interest groups) in one or more EU MS/AC with the aim for the stakeholders involved to better understand legal and other boundary conditions and mechanisms in the partner countries and exchanging best practice, in order to better adjust preconditions for cooperation enhancement. TAIEX twinning and similar EU-funded institutional building tools should be taken advantage of in this context.

- It is pointed out that the realization of Technology Platforms, in particular a "Ukrainian National Technology Platform for Advanced Materials – UNTPAM" as a specific Pilot Activity in BILAT-UKR*AINA WP3 under Task 3.2 (and thus be supported with EU-funding) must be carried out in such a way as to contribute to policy development in Ukraine in the specific thematic area of the TP and also to be sustainable in the sense that it continues to work after the period of support by BILAT-UKR*AINA.
- It is proposed that BILAT-UKR*AINA should thoroughly evaluate the experiences gained during the realization of cooperation enhancement measures and communicate them to national and European policy stakeholders, including in particular the JSTCC EU – Ukraine, so that they can be taken into account in future policy and programme development.
- The opportunity for a new BILAT activity targeting Ukraine in Horizon 2020 should not be missed, but will not only need dedicated EU MS/AC partners, but also committed Ukrainian decision makers and administrative partners with clear responsibilities and relevant expertise.

4 CONCLUSIONS

A **plethora of bi- and multilateral cooperation activities of the EU MS/AC with Ukraine**, in addition to the cooperation with Ukraine in the EU RTD Framework Programmes exists, all based on common RTD objectives and priorities and there exists ongoing interest in the RTDI cooperation on the European as well as on the Ukrainian side. Bilateral calls and jointly funded projects (even if only mobility support is granted) are a standard instrument, most actively in the cooperation between Ukraine and Austria, France, Germany, Lithuania and Bulgaria.

The simultaneous consideration of the various activities allows identifying **strengths and weaknesses of the current cooperation situation**. In particular, there is sufficient overlap between the RTDI priorities of the EU MS/AC as well as the EC on the one hand and Ukraine on the other, there are intense ongoing cooperation activities, and there is a broad spectrum of high-reputation Ukrainian RTDI partners from Academies and universities, although information about these could be more systematic with better accessibility. At the same time, the country lacks a strong community of innovative SMEs. Furthermore, the budgetary situation puts limitations to the Ukrainian financial and in-kind contributions. In addition, administrative reorganizations and unclear (at least as seen from outside) responsibilities and the difficult overall political situation have been the origin of various challenges for cooperation initiatives already in recent years and even more since November 2013.

Despite all challenges, there is a **huge potential for successfully enhancing the cooperation between the EU MS/AC and Ukraine**. It should first of all be possible to increase the cooperation efficiency by optimizing the communication on general cooperation boundary conditions as well as on national and individual cooperation experiences, i. e. by sharing information on cooperation stakeholders, procedures, successes and challenges, by taking advantage of best practice scenarios. This could help increase mutual understanding and streamline negotiation procedures. Appropriate networking and twinning could follow in a next step. On a more formal level, budgets could be spent more efficiently in activities involving several EU MS/AC at the same time (possibly even including third parties like Russia) in addition to Ukraine, with the side effect of avoiding undesired doubling of efforts. Additional stakeholders (ministries, academies, application-related entities) on all sides could be involved. Independently, more emphasis could definitely be put on market application of research results and enhancing the innovation dimension of the cooperation activities. Finally, all this could be complemented by dedicated capacity building on various levels.

Measures recommended for consideration against this background address **communication and networking** (e. g. initiating a structured dialogue between the national stakeholders on relevant cooperation policies, programmes, projects and other activities; networking/twinning between thematic national projects and networks), **cooperation on programme and institutional level** (targeted opening up of national programme lines for each other; targeted transnational (bilateral or regional) joint programmes; twinning arrangements between research centres or institutes and **capacity building and policy development** (e. g. twinning between EU MS/AC and Ukrainian administrative bodies and other organizations; realization of technology platforms)

Each successful step made in the above sense will contribute to the **creation of a more sustainable and Ukraine-related RTDI cooperation landscape** in a stronger, politically and economically more stable broader European research and innovation area and at the same time also allow to jointly address global challenges more efficiently.

5 BIBLIOGRAPHY

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[BMBF/IB] Bundesministerium für Bildung und Forschung (Federal Ministry of Education and Research, Germany) / International Bureau http://www.bmbf.de, http://www.internationales-buero.de, http://www.kooperation-international.de

[BMBF-DS] Call for proposals of the Federal Ministry of Education and Research under the Federal Government's Strategy for the Internationalization of Science and Research for Regulations for funding an ideas competition for the establishment and development of innovative R&D networks with partners in the Danube States http://www.internationales-buero.de/en/6174.php

[BUDI] BILAT-UKR inventories http://archive.bilat-ukr.eu/en/180.php

[BUD2.6] BILAT-UKR Deliverable 2.6 "Discussion Paper on the prospects of S&T in the future EU – Ukrainian ENPI Action Plans including concrete proposals for specific EU-Ukraine related projects and recommendations for a possible association of Ukraine to FP7", http://archive.bilat-ukr.eu/_media/D2.6_Discussion-Paper_Prospects-SandT-ENPI-Action-Plans.pdf

[BUD2.7] BILAT-UKR Deliverable 2.7 "Inventory of opportunities for collaboration between Romania, Ukraine and Poland", http://archive.bilat-ukr.eu/_media/D2.7_PartA_Inventory-of-opportunities-collaboration-RO-UA-PL.pdf

[BUD2.8] BILAT-UKR Deliverable 2.8 "Proposal for a joint funding mechanism (Policy Brief about the FP7 "Twinning" scheme in INCO)", http://archive.bilat-ukr.eu/_media/D_2-8_Policy_Brief_joint_funding_mechanisms_Twinning.pdf

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[BUPB1] BILAT-UKR*AINA Policy Brief 1: "Overview of the internationalisation of Ukraine in RTDI including recent trends and developments", http://www.bilat-ukraina.eu/_media/BILATUKRAINA_PolicyBrief1_Internationalisationv04.pdf

[BUPB2] BILAT-UKR*AINA Policy Brief 2: "Take-up of the EU-Ukrainian JSTCC Thematic Priorities in FP7 (2007-2013)", http://www.bilat-ukraina.eu/_media/BILATUKRAINA_PolicyBrief2_Take-

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[ERAW] ERAWATCH Analytical country report 2010: Ukraine
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[INEaPCA] IncoNet EaP and IncoNet CA Activity "Identification of actions and stakeholders" for the societal challenges climate change, energy, and health (in progress)

[INEECACR] UKRAINE - Country Report (partly updated 15 March 2012, source:NIP Ukraine) IncoNet EECA, http://www.increast.eu/_media/Ukraine_Country_Report_EN_March2012.pdf

[MAP] "Mapping European Union Member States Higher Education External Cooperation Programmes and Policies", project launched in 2008 by the EC Directorate-General for Education and Culture (DG EAC), 2nd phase started in January 2010 http://www.mapping-he.eu/

[UNECE-IPRU] UNECE Innovation Performance Review of Ukraine, May 2013 http://www.unece.org/index.php?id=32861

[WP] White Paper on Opportunities and Challenges in View of Enhancing the EU Cooperation with Eastern Europe, Central Asia, and South Caucasus in Science, Research, and Innovation http://www.increast.eu/_media/White_Paper_on_EU-EECA_Cooperation_in_STI_final_April2012.pdf

6 ANNEXES

6.1 ABBREVIATIONS AND ACRONYMS

- AC Associated Country/Countries [to FP7]
- AS Academy of Sciences
- CERN European Organization for Nuclear Research
- CIS Commonwealth of Independent States
- CN Concept Note
- CNRS National Centre for Scientific Research [France]
- EaP Eastern Partnership
- EECA Eastern Europe and Central Asia
- EC European Commission
- ENP European Neighbourhood Policy
- ENPI European Neighbourhood and Partnership Instrument
- ERA European Research Area
- EU European Union
- FP7 7th Framework Programme
- IAAS International Association of Academies of Sciences
- ICPC International Cooperation Partner Countries
- ICT Information and Communication Technologies
- JSTCC Joint Science and Technology Cooperation Committee [EU – Ukraine]
- MESU Ministry of Education and Science of Ukraine
- MS Member State(s)
- NASU National Academy of Sciences of Ukraine
- NATO North Atlantic Treaty Organization
- NMP Nanosciences, Nanotechnologies, Materials & New Production Technologies
- RTD Research and Technological Development
- RTDI Research, Technological Development and Innovation
- S&T Science and Technology
- SASII State Agency on Science, Innovation and Informatization [of Ukraine]
- SPS Science for Peace and Security [NATO]

- STCU Science & Technology Center in Ukraine
- SFFR State Fund for Fundamental Research
- STI Science, Technology and Innovation
- TAIEX Technical Assistance and Information Exchange
- TP Technology Platform
- TÜBITAK Scientific and Technological Research Council of Turkey
- V4EaP Visegrad 4 Eastern Partnership Program

6.2 UKRAINIAN LAWS ON S&T POLICY

The legal basis of the S&T policy in Ukraine is composed of the Constitution of Ukraine and the following laws

- "On Scientific and Scientific and Technological Activities"
  (adopted in 1991, the last amendments introduced in 2011);
- "On the Public Forecasting and Development of the Economic and Social Development Programmes of Ukraine"
  (adopted in 2000);
- "On Priorities of Science and Technology Development"
  (adopted in 2001, last amendments introduced in 2010);
- "On Scientific and Scientific & Technological Examination"
  (adopted in 1995, last amendments introduced in 2006);
- "On Scientific and Technological Information"
  (adopted in 1993, last amendments introduced in 2011);
- "On Legal Specifics of Functioning of the National Academy of Sciences of Ukraine, Field Academies of Sciences and Their Property Complex"
  (adopted in 2002, last amendments introduced in 2010);
- "On Innovation"
  (adopted in 2002, last amendments introduced in 2011);
- "On Scientific Parks"
  (adopted in 2009, last amendments introduced in 2010);
- "On the National Programme of Information"
  (adopted in 1998, last amendments introduced in 2010);
- "On State Regulation of Actions in the Technology Transfer Field"
  (adopted in 2006, last amendments introduced in 2011);
- "On Priorities in Innovation Activities in Ukraine"
  (adopted in 2011).

source: [INEECACR]

6.3 S&T (OR S&T RELATED) NATIONAL AND STATE PROGRAMMES OF UKRAINE

The national and state S&T (or S&T related) programmes of Ukraine include:

- National Programme of Information
  (started in 1998; end year not specified);
- National Programme of SME Support in Ukraine
  (started in 1998; end year not specified);
- National Programme "The Future of Ukraine"
  (2009-2012);
- National Programme of Establishing of the National Ecology Network
  (2000-2015);
- National Target S&T Space Programme of Ukraine
  (2008-2012);
- State Programme on S&T Development Forecast
  (2008-2012);
- State Target Programme "Science in Universities"
  (2008-2012);
- State Programme "Drinking Water of Ukraine"
  (2006-2020);
- State Target S&T Programme "Development and Putting into Operation Energy Saving Light-Emitting Diode Sources of Lighting and Lighting Systems Based on Them"
  (2009-2013);
- State Scientific Programme "Development of the Human Resources of Ukraine"
  (2010-2013?);
- State Scientific Programme "Economic Problems of Development of the State"
  (2010-2013?);
- State Scientific Programme "Strategic Ways of S&T Potential Development in Ukraine"
  (2010-2013?);
- State Target Social Programme "Transplantation"
  (2008-2012);
- State Target Economic Programme of Power Efficiency
  (2010-2015);
- State Target S&T Programme "Nanotechnologies and Nanomaterials"
  (2010-2014);
- State Target S&T Programme "Development and Putting into Operation of GRID Technologies"
  (2009-2013);
- State Target S&T Programme on Manufacturing of Medical Facilities
  (2009-2013);

- State Target Programme “Diabetes”
  (2009-2013);
- State Target Economic Programme “Nuclear Fuel of Ukraine”
  (2009-2013);
- State Target Ecological Programme On Developing Secure Conditions at the Uranium Objects of the Production Enterprise “Pre-Dnipro Chemical Plant”
  (2010-2014);
- State Target Ecological Programme On Monitoring of Natural Habitat for 2008-2012;
- State Target Programme on Closing Production and Use of the Ozone Depleting Substances for 2004-2030;
- State Target Programme on Utilization of the Liquid Missile Fuel for 2010-2014;
- State Target Programme “Forests of Ukraine” for 2010-2015;
- State Target Economic Programme “Creation of Innovative Infrastructure in Ukraine” for 2009-2013;
- State Target S&T Programme on Research in Antarctic for 2011-2020;
- State Target S&T Programme on Development of Sensor Knowledge-Based Products for 2008-2012;
- State Target S&T Programme “Creation of Chemical and Metallurgical Production Field of Virgin Silicon” for 2009-2012.

source: [INEECACR]

6.4 SPECIAL CHARACTER GERMAN RTDI COOPERATION ACTIVITIES

This Annex describes in some detail two running special character German RTDI cooperation activities not related to Ukraine, which nevertheless might have the potential to inspire similar future initiatives targeting Ukraine:

- Against the background of the "Strategic Partnership in Education, Research and Innovation" between Germany and Russia, the support of German-Russian collaborations in the area of applied, industry-related, innovative research and development plays a particularly important role. In this context, the International Bureau (IB) – on behalf of the BMBF – and the Russian Foundation for Assistance to Small Innovative Enterprises (FASIE) concluded an agreement in December 2007 to jointly support future German-Russian cooperation projects. In this context, five joint **calls for proposals mainly aimed at innovative small and medium-sized enterprises (SMEs)** in Germany and Russia which are active in the field of research have been published and the next one is planned for 2014. On the German side, German research institutions that conduct application-oriented research are also eligible to apply. The aim of the funding measures is to promote German-Russian collaborative projects focusing on emerging technologies that have a high priority for both Germany and Russia.

- By establishing **German Houses of Research and Innovation (Deutsche Wissenschafts- und Innovationshäuser, DWIHs)**, e. g. in Moscow, Germany provides a platform for the German science, research and innovation landscape at selected locations and a platform for showcasing the accomplishments of German science, research and research-based companies at selected locations and promoting collaboration with Germany and innovative German organizations. The goal is to present a united presence of German scientific and research organizations abroad under the banner of the DWIHs for Germany to maintain its strength in innovation and to apply it internationally in order to stay competitive in the global market. The DWIHs are part of the Federal Foreign Office's 2009 Research and Academic Relations Initiative which, in turn, is the Federal Foreign Office's contribution to the internationalization of science and research. The Federal Foreign Office is implementing this project in cooperation with the Federal Ministry for Education and Research and in close collaboration with the alliance of German science organizations, which includes AvH, DAAD, DFG, the Fraunhofer-Gesellschaft, the Helmholtz Association, HRK, MPG, and the Association of German Chambers of Industry and Commerce (DIHK).The functional duties of the DWIHs are

  - to promote Germany as a research location („showcase" Germany as a center for research and innovation),
  - to provide a forum for international dialogue and scientific exchange,
  - to provide support and services (advising international researchers; consultation for foreign researchers, a „bridgehead" for German research, educational events).

  Participation is open to all innovative German organizations and companies that are either already present at the particular location or who are interested in establishing a presence there.

  Source: http://www.germaninnovation.org/about-us/german-houses-of-science-and-innovation#sthash.mHzuICjA.dpuf

6.5 BILATERAL POLICY AGREEMENTS BETWEEN THE EU AND UKRAINE CONSTITUTING THE BACKGROUND FOR THE BILATERAL POLICY DIALOGUE

- Partnership and cooperation agreement between the European Communities and their member states, and Ukraine (1994) (came into force: 1998);
- Protocol to the Partnership and Cooperation Agreement establishing a partnership between the European Communities and their Member States, of the one Part, and Ukraine, of the other part (1 January 1995);
- Protocol to the Partnership and Cooperation Agreement between the European Communities and their Member States, of the one part, and Ukraine, of the other part, on a Framework Agreement between the European Union and Ukraine on the general principles for the participation of Ukraine in Union programmes;
- Agreement on cooperation in S&T between the EC and Ukraine (into force from 11/02/2003 and renewed on 8/11/2004);
- Agreement on renewing the Agreement on Cooperation in Science and Technology between the European Community and Ukraine (first renewal came into force as of 8/11/2004);
- Agreement for Cooperation between the European Atomic Energy Community and the Cabinet of Ministers of Ukraine in the field of controlled nuclear fusion (in force from 13/11/2002);
- Agreement for Cooperation between the European Atomic Energy Community and the Cabinet of Ministers of Ukraine in the field of nuclear safety (in force from 13/11/2002) ;
- European Atomic Energy Community (EURATOM) and the Cabinet of Ministers of Ukraine for Co-operation in the Peaceful Uses of Nuclear Energy;
- ENP European Neighbourhood Policy - EU-UKR Action Plan;
- Agreement between EC and Ukraine on GALILEO and Air Transportation (June 2005);
- Agreement to Establish a Science and Technology Center in Ukraine (STCU) - 1998. .

Sources: BILAT-UKR (as of 2012): http://archive.bilat-ukr.eu/en/186.php, a table with more detailed information on the above agreements (type and name, purpose/principle, areas and forms of cooperation, implementing and funding Instruments, terms of funding, connected programmes, on-line sources, additional or general information) is available for download at http://archive.bilat-ukr.eu/_media/Inventory-Table1_EU-UKR-policy-agreements.pdf; and http://ec.europa.eu/research/iscp/index.cfm?lg=en&pg=ukraine#policydialogue

6.6 ERA.NET RUS QUESTIONNAIRES FOR EU MS/AC AND RUSSIAN PROGRAMME OWNERS

7 ANNEXES

7.1 Annex A: Survey questionnaire for EU MS/AC Programme Owners

QUESTIONNAIRE REGARDING COOPERATION IN SCIENCE, RESEARCH, TECHNOLOGICAL DEVELOPMENT AND/OR INNOVATION
addressed to
governmental and non-governmental programme owners

This is a joint survey of the ERA Net project for the Black Sea region (BS-ERA.NET) and the ERA Net project for Russia (ERA.Net RUS). Both ERA Net projects are funded by the European Communities 7th Framework Programme for Research and Technological Development (FP7).

This questionnaire shall support analysis of ongoing S&T cooperation programmes between EU Member States (MS)[1] and Associated Countries to the FP7 (AC)[2] on the one hand and countries of the Former Soviet Union (FSU) located in the Black Sea region on the other hand: Armenia, Azerbaijan, Georgia, Moldova, Russia, and Ukraine.

The questionnaire is addressed to governmental and non-governmental S&T funding programme owners in both regions, EU MS/AC as well as FSU countries. Collected data will be analysed and used for preparing a report on these funding programmes. Results of the survey shall help identifying areas of future S&T cooperation and support the formulation of policy recommendations for furthering this cooperation.

Your institution is kindly requested to answer the questions provided below. The questionnaire is divided into the following sections:

- **Section A** General information about your Organisation
- **Section B** Information about your Cooperation programmes
- **Section C** Evaluation Procedures
- **Section D1** Target Region specific questions (Armenia, Azerbaijan, Bulgaria, Georgia, Moldova, Romania, Turkey, Ukraine)
- **Section D2** Target Region specific questions (Russia)

[1] Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxemburg, Malta, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, United Kingdom
[2] Albania, Bosnia and Herzegovina, Croatia, FYR of Macedonia, Iceland, Israel, Liechtenstein, Montenegro, Norway, Serbia, Switzerland, Turkey

1

SECTION A – ORGANISATION DETAILS

A.1. Organisation Legal Name	
A.1.1 Street №	
A.1.2 Street	
A.1.3 P.O. Box	
A.1.4 City	
A.1.5 Post code	
A.1.6 Country	
A.1.7 Tel and fax number	
A.1.8 E-mail	
A.1.9 website	
A.2. Organisation short name	
A.3. Department responsible for cooperation programme	
A.3.1. Address (if different from above)	

A.4. Type of Organisation (please tick only one answer)

1. ☐ Governmental Organisation (GOV)
2. ☐ Nongovernmental organisation (NGO)
3. ☐ University and Higher Education Institution (HE)
4. ☐ Research Institution (RES)
5. ☐ Industry (IND)

A.5. Name of contact person:

.....

2

SECTION B – COOPERATION DETAILS

B.1 WITH WHICH OF THE FOLLOWING COUNTRIES DOES YOUR ORGANISATION HAVE AN S&T COOPERATION PROGRAMME?

	S&T cooperation
Armenia	☐
Azerbaijan	☐
Bulgaria	☐
Georgia	☐
Moldova	☐
Romania	☐
Russia	☐
Turkey	☐
Ukraine	☐

B.2 WHICH OF THE FOLLOWING INSTRUMENTS DOES YOUR ORGANISATION APPLY IN ORDER TO SUPPORT INTERNATIONAL S&T COOPERATION?

☐ *S&T agreements with foreign organisations*
☐ *Mobility of researchers*
  ☐ *Both sides*
  ☐ *Only one side* *your country-partner or* ☐
  partner -your country ☐
  Please specify usual time period of researcher mobility:
☐ *Exchange of know-how*
☐ *Joint implementation of RTDI projects*
☐ *Access to infrastructure*
☐ *Technical support/ provision of equipment*
☐ *Dissemination of RTDI results and accompanying measures (conferences, workshops, publications, brokerage events, etc.)*
☐ *Joint laboratories*
☐ *Joint funding programmes*
☐ *Other (please specify)*

.....

B.2 WHO ARE BENEFICIARIES OF YOUR S&T COOPERATION SUPPORT?

☐ *Public research organisations*
☐ *Private non - profit research organisations*
☐ *Enterprises*
☐ *Individual researchers*
☐ *Other (please specify)*

.....

B.3 BUDGETARY ASPECTS

Total budget for international S&T cooperation/year of your organisation in national currency:

3

Year 2006:

Year 2007:

Year 2008:

B.4 ELIGIBLE COSTS, WHICH CAN BE SUPPORTED BY YOUR ORGANISATION IN THE FRAME OF INTERNATIONAL S&T COOPERATION?

- ☐ ***Travel costs:***
  - *sending party paying model* ☐
  - *receiving party paying model* ☐
  - *other (please specify)*
- ☐ ***Personnel costs:***
  - *salary* ☐
  - *scholarships for young researchers (up to 35 years)* ☐
  - *PhD scholarships* ☐
  - *grants for researchers at post doctoral level* ☐
  - *awards* ☐
  - *other (please specify)*
- ☐ ***Consumables***
- ☐ ***Equipment***
- ☐ ***Conferences, Exhibitions***
- ☐ ***Dissemination*** *(Publications, patents, etc.)*
- ☐ ***Other*** *(please specify)*

.....

B.5 PROGRAMME MANAGEMENT *(i.e. practical aspects such as launching a call, etc)*

Which and what kind of organisation deals with the programme management in your country?

- ☐ ***The ministry***
- ☐ ***An agency***
- ☐ ***Partly the ministry, partly a separate agency***
  (Name and type of the agency)

.....

- ☐ ***Other*** *(please specify)*

.....

What are the tasks of your organisation?

- ☐ ***Drafting and publishing a call***
- ☐ ***Organising the evaluation of proposals***
- ☐ ***Decision taking on projects to be funded***
- ☐ ***Establishing project contracts***
- ☐ ***Supervision of implementation of funded projects***
- ☐ ***Evaluation of periodical project reporting***
- ☐ ***Payment***
- ☐ ***Other*** *(please specify)*

.....

4

Procedure of submission of the project-proposals *(please provide a short description e.g.: joint calls, specific deadline, specific forms, language, other important administrative provisions)**:***

.....

Administrative conditions:

☐ ***The project must be submitted in both countries***
☐ ***The proposal must be signed by an authorised person and by the project leaders of both countries***
☐ ***A final report must be submitted after the completion of the project***
☐ ***Project Duration***
☐ ***Other*** *(please specify)*

.....

Project duration: *(Please specify per funding instrument, which you apply, i.e. mobility programme, research projects and per country, if different. Add lines, if necessary. Press enter in any field to write another line.)*

Average

Maximum

Minimum

6

B.6 OBSTACLES / BARRIERS TO S&T COOPERATION

What are the main problems of your S&T collaboration with the countries listed below?
Please comment for each S&T partner country separately. Please tick the appropriate box(es).

S&T collaboration with	Legal problems (e.g. bilateral agreements)	Budget problems (limited funding)	Lack of information on financial tools for cooperation	Agreements on IPR	Language or cultural barriers	Obtaining VISA	Other factors
Armenia	☐	☐	☐	☐	☐	☐	
Azerbaijan	☐	☐	☐	☐	☐	☐	
Bulgaria	☐	☐	☐	☐	☐	☐	
Georgia	☐	☐	☐	☐	☐	☐	
Moldova	☐	☐	☐	☐	☐	☐	
Romania	☐	☐	☐	☐	☐	☐	
Russia	☐	☐	☐	☐	☐	☐	
Turkey	☐	☐	☐	☐	☐	☐	
Ukraine	☐	☐	☐	☐	☐	☐	

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B7 EXISTING BILATERAL AND MULTILATERAL S&T PROGRAMMES

WHAT ARE RESEARCH PRIORITIES SUPPORTED UNDER YOUR S&T COOPERATION WITH COUNTRIES LISTED BELOW? Please tick the appropriate box and differentiate between established cooperation and programmes under preparation

a) General horizontal

	Armenia	Azerbaijan	Bulgaria	Georgia	Moldova	Romania	Russia	Turkey	Ukraine	Comments (e.g. please state S&T cooperation under preparation, etc.)
Basic Research	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Applied Research	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Technology development	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Innovation	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Other	☐	☐	☐	☐	☐	☐	☐	☐	☐	

b) Thematic field of cooperation

	Armenia	Azerbaijan	Bulgaria	Georgia	Moldova	Romania	Russia	Turkey	Ukraine	Comments (e.g. please state S&T cooperation under preparation, etc.)
Health	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Food, agriculture and fisheries	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Biotechnology	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Nanotechnologies/Materials	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Energy	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Environment (incl. climate change)	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Transport and Aeronautics	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Socio-economic sciences and humanities	☐	☐	☐	☐	☐	☐	☐	☐	☐	

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Security	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Space	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Information and Communication Technologies (ICT)	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Other	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Estimated funding 2006 – 2008 in national currency										

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SECTION C - EVALUATION PROCEDURES

C1 ARE PROJECT PROPOSALS IN THE FRAME OF YOUR BILATERAL OR MULTILATERAL S&T COOPERATION PROGRAMMES BEING EVALUATED?

☐ Yes, ☐ No

C2 PRACTICAL ASPECTS OF EVALUATION OF PROJECT PROPOSALS

Are the project proposals evaluated separately in each country or do you apply a joint review procedure?

☐ ***Separate evaluation procedure***
☐ ***Joint evaluation procedure***
☐ ***Both procedures are applied (two stage evaluation procedure)***
☐ ***Other (please comment)***

.....

Who evaluates the proposals?

☐ ***Experts of the ministry***
☐ ***Experts of the agency***
☐ ***Independent researchers***
☐ ***Other*** *(please specify)*

.....

How do experts evaluate?

☐ ***Remote***
☐ ***In situ/committee meeting***
☐ ***Other*** *(please specify)*

.....

How many experts evaluate normally one project proposal?

How long does the evaluation procedure usually take? *(Evaluation procedure is understood here in a broad sense, as time period from submission deadline of project proposals until decision on project proposals to be funded.)*

C2 DO YOU HAVE SOME OPTIONAL EVALUATION CRITERIA THAT CAN POSITIVELY INFLUENCE THE FUNDING DECISION?

☐ ***Participation of young researchers***
☐ ***Links to industry***
☐ ***Participation of SMEs***
☐ ***Other*** *(please specify)*

.....

C3 WHICH EVALUATION CRITERIA DO YOU USE?

☐ ***Scientific and technical merits of the proposals***

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- ☐ ***Suitability of applicants and feasibility of the projects***
- ☐ ***Significance of the research regarding international co-operation***
- ☐ ***Requested budget***
- ☐ ***National priorities***
- ☐ Added value of the bi -(or multi-) lateral collaboration
- ☐ ***Other*** *(please specify)*

.....

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SECTION D1 – REGION SPECIFIC COOPERATION DETAILS: BLACK SEA

Please provide in this section only details on your cooperation with: Armenia, Azerbaijan, Bulgaria, Georgia, Moldova, Romania, Turkey, Ukraine. Details on your cooperation with Russia will be asked in the following section

D1.1 BI-LATERAL PROGRAMS: FOR WHICH COUNTRIES DO YOU HAVE CURRENT ESTABLISHED PROGRAMMES/AGREEMENTS OR SUCH UNDER PREPARATION?

Program reference	Country	Status		Thematic Fields	Validity period	Estimated funding
		established	Under preparation			
		☐	☐			
		☐	☐			
		☐	☐			
		☐	☐			

D1.2 MULTI-LATERAL AND (INTER)-REGIONAL PROGRAMS: FOR WHICH COUNTRIES/REGIONS DO YOU HAVE CURRENT ESTABLISHED MULTI-LATERAL PROGRAMMES/AGREEMENTS OR SUCH UNDER PREPARATION?

Program reference	Region(s)/ list of countries	Status		Thematic Fields	Validity period	Estimated funding
		established	Under preparation			
		☐	☐			
		☐	☐			
		☐	☐			
		☐	☐			

D1.3 THE BLACK SEA ERA NET AIMS TO ESTABLISH A JOINT CALL FOR SUPPORTING MULTILATERAL SCIENTIFIC PROJECTS IN THE BLACK SEA REGION.

IS YOUR ORGANIZATION INTERESTED IN DISCUSSING A PARTICIPATION IN A JOINT CALL TARGETING THE BLACK SEA REGION?

☐ Yes, ☐ No

IF NO, WHICH ORGANIZATION COULD BE ADDRESSED IN YOUR OPINION IN YOUR COUNTRY?

.....

D1.4 PLEASE GIVE INFORMATION ABOUT SCIENTIFIC NETWORKS YOU KNOW IN THE BLACK SEA REGION

Name:

Contact information (e.g website):

Comments (e.g. thematic field):

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(Please add lines, if there are more than one. Press enter in any field to write another line.)

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SECTION D2 – REGION SPECIFIC COOPERATION DETAILS: RUSSIA

D2.1 DOES YOUR COUNTRY/ORGANISATION HAVE AN S&T AGREEMENT WITH RUSSIA/RUSSIAN ORGANISATION(S)?

☐ Yes

If Yes:

Title of the agreement:

Date of Signature:

Date of entry into force:

Partner in Russia:

(Please add lines, if there are more than one. Press enter in any field to write another line.)

☐ No

If you do not have an official agreement with Russia/Russian organisations, but substantial cooperation with funding exists, please indicate:

Partner in Russia:

Mechanism for guaranteeing funding *(e.g. Memorandum of Understanding, etc.):*

D2.2 HAS THERE BEEN AN ACTIVE S&T COOPERATION PROGRAMME WITH RUSSIA/WITH A RUSSIAN PARTNER ORGANISATION DURING THE LAST FIVE YEARS IN THE FRAMEWORK OF THE S&T AGREEMENT?

☐ Yes

☐ No

If No:

It existed in the past and stopped ☐

When?

.....

What was the reason?

.....

Are there plans to reactivate it?

☐ Yes, ☐ No

Are there plans to promote cooperation in the near future?

☐ Yes, ☐ No

What would be the scope of future S&T cooperation?

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.....

If Yes:

Does your organisation implement the S&T cooperation programme?

☐ Yes, ☐ No

If no, which organisation is responsible for the implementation?

.....

D2.3 WHICH OF THE FOLLOWING PROJECTS/ACTIVITIES DOES YOUR ORGANISATION SUPPORT IN ITS COOPERATION WITH RUSSIA/RUSSIAN ORGANISATIONS?

☐ Mobility projects
☐ Research projects
☐ Other (conferences, etc.)

.....

D2.4 BUDGETARY ASPECTS - RUSSIA

Budget for bilateral S&T cooperation/year of your country/organisation with Russia in national currency:

Per year *(for the last 3 years):*

2006:
2007:
2008:

Per project *(current project size; please differentiate for mobility projects, research projects and other activities – e.g. conferences, etc. – if applicable. Press enter in any field to write another line.):*

Average

Maximum

Minimum

D2.5 N^{O} OF PROJECTS (ACTIVITIES) FUNDED DURING THE LAST 3 YEARS IN THE FRAME OF YOUR COOPERATION WITH RUSSIA/RUSSIAN ORGANISATIONS? *(Please differentiate for mobility projects, research projects and other activities – e.g. conferences, etc. – if applicable. Press enter in any field to write another line.)*

2006:
2007:
2008:

Is information on these projects publicly available and accessible?

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☐ Yes, ☐ No

If yes, please specify how, where and in which language.

.....

D2.6 IPR FRAMEWORK

Is there a specific Intellectual Property Rights (IPR) regime set up in the context of your S&T cooperation with Russia? *(please specify)*

.....

D2.7 WHAT ARE YOUR PLANS FOR FUTURE S&T COOPERATION WITH RUSSIA?

(Please provide short description for time frame of the next 3 years on e.g. new funding programmes, scientific priorities, etc.)

.....

D2.8 GOOD PRACTICE: PLEASE PROVIDE GOOD PRACTICE EXAMPLES OF YOUR S&T COOPERATION WITH RUSSIA.

.....

D2.9 IMPACT ASSESSMENT/EVALUATION

Has an impact assessment/evaluation of your S&t cooperation with Russia/Russian organisations been performed during the last 5 years?

☐ Yes, ☐ No

If Yes,

Is a Report on this impact assessment/evaluation available?

☐ Yes, ☐ No

How regularly are impact assessments/evaluations performed? *(every year, two years, etc.)*

.....

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Source: *[ENR-AR3]*