



IncoNet EaP: STI International Cooperation Network for the Eastern Partnership Countries

Deliverable Title	D1.2 – Final Report on the monitoring of EU-EaP cooperation
Deliverable Lead:	IPPT PAN
Related Work package:	WP1 – Coordinating activities on major Societal Challenges
Author(s):	Olga Zyrina, Zygmunt Krasiński, Marta Jurkowska
Dissemination level:	Public
Due submission date:	14/11/2016
Actual submission:	21/12/2016
Project Number	
Instrument:	Coordination and Support Action (CSA)
Start date of Project:	01/09/2013
Duration:	36 months

Abstract	This document summarises activities monitoring the cooperation of Eastern Partnership Countries in STI in the 3 Societal Challenges, namely Climate Change, Energy and Health. The report explains the methodology used for monitoring, discusses the participation of EaP partners in multilateral and bilateral programmes, and also presents conclusions and recommendations, which could be essential in planning further cooperation activities.
-----------------	---



Funded by the European Union's Seventh Framework Programme for research, technological development and demonstration

Versioning and Contribution History

Version	Date	Modification reason	Modified by
v.01	09.11.2016	1st Draft	Olga Zyrina, Zygmunt Krasinski, Marta Jurkowska
v.02	05.12.2016	2 nd Draft including comments from reviewer	Olga Zyrina

List of Abbreviations

AC	Associate Country to the Framework Programme
ANAS	Azerbaijan National Academy of Sciences
BSC	Black Sea Commission
BSEC	Black Sea Economic Cooperation Organization
CA	Central Asia
CEI	Central European Initiative
CIS	Commonwealth of Independent States
CORDIS	Community Research and Development Information Service
CSA	Cooperation and Support Action
EaP	Eastern Partnership
EBRD	European Bank for Reconstruction and Development
EC	European Commission
EECA	Eastern Europe and Central Asia
EIT	European Institute of Innovation & Technology
ENP	European Neighbourhood Policy
ENPI	European Neighbourhood and Partnership Instrument
ENVSEC	Environment and Security Initiative
ERC	European Research Council
ETP	European Technology Platform
EU	European Union
FP7	7th Framework Programme for Research and Technological Development
H2020	Horizon 2020
GDP	Gross domestic product
GEF	Global Environment Facility
GHG	Greenhouse gas
INDC	Intended Nationally Determined Contributions
INOATE	Energy Technical Assistance Programmes in Eastern Europe, Caucasus and Central Asia
ISTC	International Science and Technology Center
JPI	Joint Programming Initiatives
JTI	Joint Technology Initiatives
KIC	Knowledge Innovation Communities
MR	Mental retardation
MS	European Union Member State
NAS-RA	National Academy of Sciences of Armenia
NATO	North Atlantic Treaty Organisation
NCP	National Contact Point
OECD	Organisation for Economic Co-operation and Development
OSCE	Organization for Security and Co-operation in Europe
PEEREA	Protocol on Energy Efficiency and Related Environmental Aspects
REC	Regional Environmental Center
RTD	Research and technological development
SC	Societal Challenge
SME	Small and Medium Sized Enterprise
STI	Science Technology and Innovation
S&T	Science and Technology
STCU	Science and Technology Center in Ukraine
UN	United Nations

UNDP	United Nations Development Programme
UNECE	United Nations Economic Commission for Europe
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFCCC	United Nations Framework Convention on Climate Change
WB	World Bank
WHO	World Health Organization

Table of Contents

LIST OF ABBREVIATIONS	3
EXECUTIVE SUMMARY	6
1 METHODOLOGY OF MONITORING	8
2 EU-EAP COOPERATION WITHIN 3 SOCIETAL CHALLENGES	9
2.1 Energy.....	11
2.2 Climate change	13
2.3 Health.....	14
3 PROMOTING DELIVERABLES OF EU-EAP PROJECTS	15
4 CURRENT STI SITUATION AND PRIORITY SETTINGS	16
5 CONCLUSIONS AND RECOMMENDATIONS.....	20
ANNEX I – INCONET EAP SURVEY ON EU-EAP PROJECT DELIVERABLES	22
ANNEX II – INCONET EAP SURVEY ON MONITORING THE PROGRESS OF INTERNATIONAL COOPERATION WITH EAP COUNTRIES.....	23
ANNEX III – LIST OF PROMOTED EU-EAP PROJECT DELIVERABLES	27

Executive Summary

The IncoNet EaP project aimed at supporting the advancement of the bi-regional STI policy dialogue between the EU MS/AC and the Eastern Partnership Countries, with an explicit focus on three Societal Challenges (3SC) that have been identified to be of mutual interest for the two regions, namely Climate Change, Energy and Health. One of the project goals was to monitor the EU-EaP cooperation.

In order to achieve this goal, the project implemented several activities, which are summarised in this report. One of the first activities implemented by the project was devoted to the identification of programmes addressing the 3SC, as well as stakeholders involved in the implementation of these programmes, and also to the monitoring of the cooperation in STI in the 3SC funded by international donors. A database with 961 entries was created, including 321 projects resulting from international funding, 75 projects resulting from bilateral EU-EaP funding and 565 projects resulting from national funding. Out of the 321 projects funded by international donors almost 43% (138 projects) are related to Climate Change, 34% (110 projects) to Health and 23% (73 projects) to Energy.

The stakeholders identified above provided a basis for further analysis of EU-EaP cooperation activities and were invited to participate in project meetings. A questionnaire-based survey monitoring the EU-EaP cooperation, as well as screening of the EaP project deliverables, were implemented using the database of EaP projects and stakeholders created by the project. The deliverables of projects resulting from science and technology cooperation between the EU and EaP countries identified as part of the Task 6.3 of the IncoNet EaP project on 'Promoting deliverables' appeared in the incrEAST Newsletter as well as on IncoNet EaP and incrEAST web sites.

Another activity which provided essential information about the EU-EaP cooperation was implemented as part of the analytical evidence analysis (Task 2.1 'STI cooperation barometer'). It included the development of the "STI cooperation barometer", which was addressed to project coordinators and partners in the projects identified in the beginning of the project as well as to actors with EU-EaP cooperation experience in the STI policy from the research and innovation communities.

The results of the barometer gave an overview of the trends in STI cooperation with EU, as well as with other regions. The EU was indicated to be the most important region for science, research and technology cooperation in EaP countries. The barometer also indicated that international cooperation is very significant for all the responding organisations, while the level of cooperation both with single European countries and with more European countries in the EU programmes is showing increasing tendencies. Results from the survey provided recommendations on the ways of supporting international STI cooperation with the EaP countries. In addition to that, representatives of such projects were invited to present their projects and their results at the IncoNet EaP Policy Stakeholder Conferences, as well as to participate in project workshops and other events.

These activities indicated that projects resulting from international cooperation make a significant contribution to many important areas such as promotion of healthy lifestyle, reproductive health research, knowledge about mental retardation, study of living donation practices, diagnostic capabilities for cardiovascular diseases in elderly, developing efficient energy solutions, reduction of greenhouse gas emissions, supporting and promoting substitution of fossil fuels used for heating, restoration of degraded arable soils, integrated

water resources and coastal zone management, monitoring oxygen depletion and associated processes in aquatic systems; using earth observation data for predicting the impact of crop production on ecosystems and natural resources; as well as many others.

Although the STI cooperation between EU and EaP countries is already quite developed, there is still a strong interest by both sides in further enhancing the bilateral and multilateral STI cooperation in the 3SCs. Participation of EaP countries in FP7 and H2020 Framework Programmes remains low and there is a room for expanding the STI cooperation, which could be supported by more partnering events with EaP countries, start-up programmes, as well as providing opportunities for participation in workshops, conferences and trainings.

1 METHODOLOGY OF MONITORING

The first phase of the EU-EaP cooperation monitoring included identification and screening of programmes, projects and stakeholders/programme owners involving EaP countries in the 3SCs (Climate Change, Energy and Health) for projects which ended after 2010 or were ongoing, which received international (FP7, ISTC, STCU, ENVSEC, INOGATE, UNESCO, UNDP, WHO, NATO, WB), bilateral (i.e. bilateral EU M/S with one or more EaP country) or national funding (Task 1.1). The detailed information about the projects funded under international, bilateral and national programmes, as well as their distribution according to the societal challenges is summarised in the Deliverable 1.1 – Creation of a public database with information on actions and stakeholders¹. A large number of projects and stakeholders were identified and a database of 961 entries was established. Among them 321 projects resulted from international funding, 75 projects resulted from bilateral EU-EaP funding, and 565 projects resulted from national funding sources (<http://www.increast.eu/en/214.php>). The methodology used to set up the database involved: desk research, screening of national and international databases and websites of projects addressing the 3SC, but also direct communication with local stakeholders (national agencies, etc.).

Stakeholders and project managers identified by the project provided a basis for further study of EU-EaP monitoring, which included preparation and distribution of surveys with questions related to cooperation activities between EU and EaP institutions. A link to the first short survey on monitoring the progress of international cooperation with EaP countries (Annex II of the current report) was sent to EaP project participants (whose contact information is in the established database) in May 2015. The survey included questions related to basic information on projects implemented with EaP countries, motivational reasons for STI cooperation, estimation of project impact, difficulties, as well as possibilities for improvement of cooperation. The response rate to the monitoring survey was quite low, with only 6 surveys being filled out of more than 300 stakeholders contacted with the survey request.

Due to such a low response rate and in order to reduce the load of surveys directed to STI stakeholders, further information on STI cooperation was gathered through the questionnaire of the STI cooperation barometer by incorporating into it questions from the monitoring survey. The STI cooperation barometer between EU and EaP countries was implemented through two online questionnaires addressing project coordinators and partners in the projects identified within the Task 1.1 and further actors with EU-EaP cooperation experience in the STI policy, research and innovation communities (e.g. identified through the bibliometric co-publication analysis). The results of the barometer gave an overview about tendencies in STI cooperation with EU and other regions discussed in this report, while detailed description of the barometer questions and results is presented within the Deliverable 2.2² - Analytical evidence of S&T cooperation between EU and EaP countries - STI cooperation barometer between EU and EaP countries (prepared as a separate document).

Presentation and analysis of the EU-EaP cooperation activities was also possible thanks to the various events organised during the 3 years of the IncoNet EaP project, which included three Policy Stakeholders Conferences addressing EU-EaP Energy, Climate Change and Health research and innovation cooperation, workshops as well as expert group meetings. Participants of such events both from EaP and EU countries expressed their interests and discussed further needs for cooperation activities. Thorough evaluation of the outcomes of the set of the Coordination and Support Activities (CSA) on the three SCs is presented within the

¹ http://www.inco-eap.net/_media/INCONET_EAP_D1-01-V02.pdf

² http://www.inco-eap.net/_media/INCONET_EAP_D1-01-V02.pdf

Deliverable 1.5 of the IncoNet EaP project – Evaluation report of the coordinating activities in WP1 with recommendations for future actions.

2 EU-EaP COOPERATION WITHIN 3 SOCIETAL CHALLENGES

Research cooperation between EaP countries and Europe is supported through various international, bilateral and national programmes, such as FP7, ENPI, INOGATE, ISTC, STCU, UNESCO, UNDP, ENVSEC, WHO, NATO and World Bank.

The mapping activity of the IncoNet EaP project identified a large number of projects and stakeholders (a database of 961 entries), which included 321 projects resulting from international funding, 75 projects resulting from bilateral EU – EaP funding, and 565 projects resulting from national funding. The distribution of projects by international funding programmes is presented in Table 1, while distribution of projects funded under bilateral EU-EaP programmes is given in Table 2. A full summary and analysis of this data is included in the Deliverable 1.1 of the project.

Programmes	Total
FP7	64
ENPI	74
INOGATE	11
ISTC	13
STCU	36
UNESCO	4
UNDP	58
ENVSEC	24
WHO	22
NATO	5
WORLD BANK	10
TOTAL	321

Table 1. Distribution of identified projects by international funding programmes (Source: IncoNet EaP D1.1).

Internationally funded projects often included participants from more than one EaP country. Looking at distribution of projects funded from international programmes by country and societal challenge, it could be noted that the largest number of projects was funded in Ukraine (114) and the least in Azerbaijan (43) (Table 2).

SC	Armenia	Azerbaijan	Belarus	Georgia	Moldova	Ukraine
Health	12	11	29	34	13	26
CC	17	17	26	24	22	55
Energy	15	15	21	17	15	33
Total	44	43	76	75	50	114

Table 2. Identified projects funded under international EU-EaP programmes (Source: IncoNet EaP D1.1).

The IncoNet EaP project also analysed in more detail the data obtained from the e-Corda database (v.5 for H2020 and v.20 for FP7) managed by the European Commission covering the statistical data concerning 241 calls - launched under Horizon 2020 Framework Programme and 489 launched under the 7th Framework Programme and were related to all thematic areas, among them the 3SC in question. In H2020 the first calls have been

announced on December 13, 2013 and included all the proposals and projects for which the Grant Agreements have been signed before February 25, 2015 and in the case of FP7 the presented data cover the period from the beginning of the programme in 2007 until May 31, 2016.

The data include only proposals submitted in single-stage calls (the data concerning two-stage calls were not included). Moreover, the analysis takes into account only the proposals that were eligible for funding.

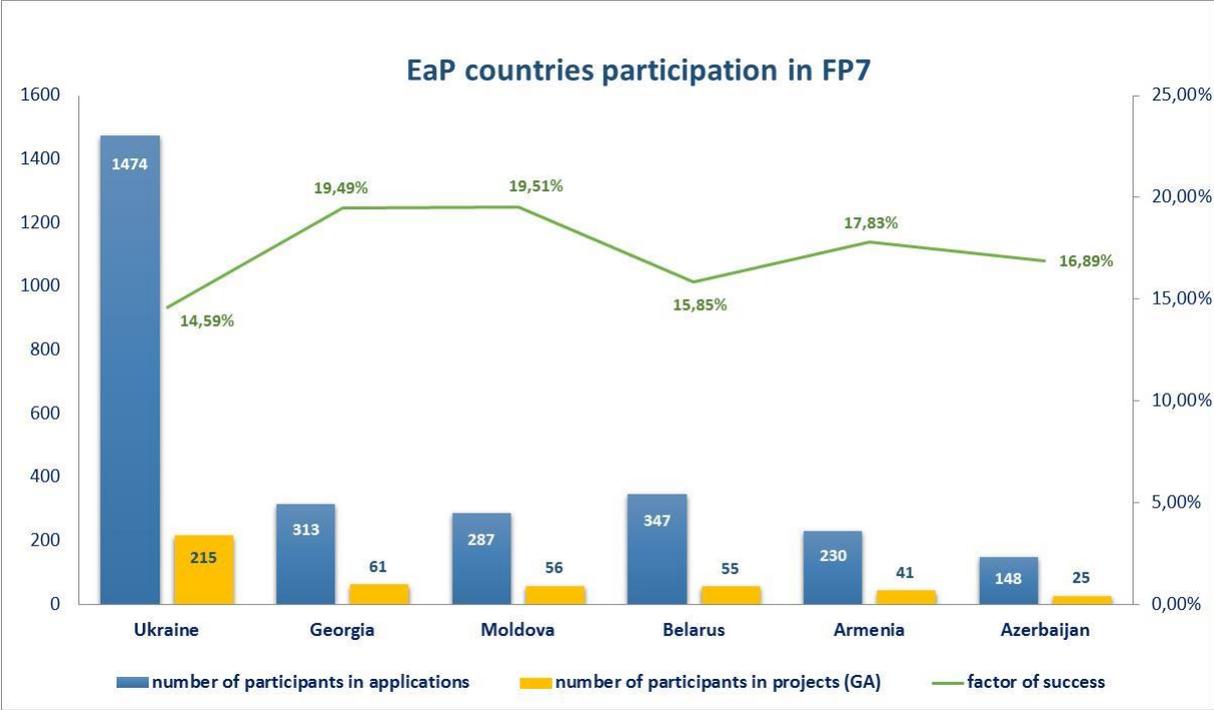


Figure 1. Participation of EaP countries in FP7 (all thematic areas).

The number of EaP participants in applications to FP7 highly varied among the EaP countries from 1474 in Ukraine to 148 in Azerbaijan. There was also a big difference between the number of participants applying for FP7 funding and the number of participants in Grant Agreements. Only 215 out of 1474 participants in Ukraine, 61 out of 313 in Georgia, 56 out of 287 in Moldova, 55 out of 347 in Belarus, 41 out of 230 in Armenia, and 25 out of 148 participants in Azerbaijan followed to the stage of signing a Grant Agreement (Figure 1).

The number of applications during the first two years of the Horizon 2020 programme varied from 32 in Azerbaijan to 609 in Ukraine (Figure 2). So far, 51 projects with participants from the EaP countries were funded. Among them there were no projects in Health thematic area, while there were 6 projects in Energy (with participants from Ukraine) and 8 projects in Environment (with participants from Ukraine and Moldova), which included projects related to the Climate Change thematic area. Although there are no projects which directly tackle the climate change issues, the activities of several projects are linked to climate change, such as utilisation of waste, environmental monitoring and Earth observation, or raising the overall quality of services provided by NCPs dealing with climate action, as well as projects from the Energy thematic area, such as alternative sources of woody biomass, energy efficiency, or bioenergy projects.

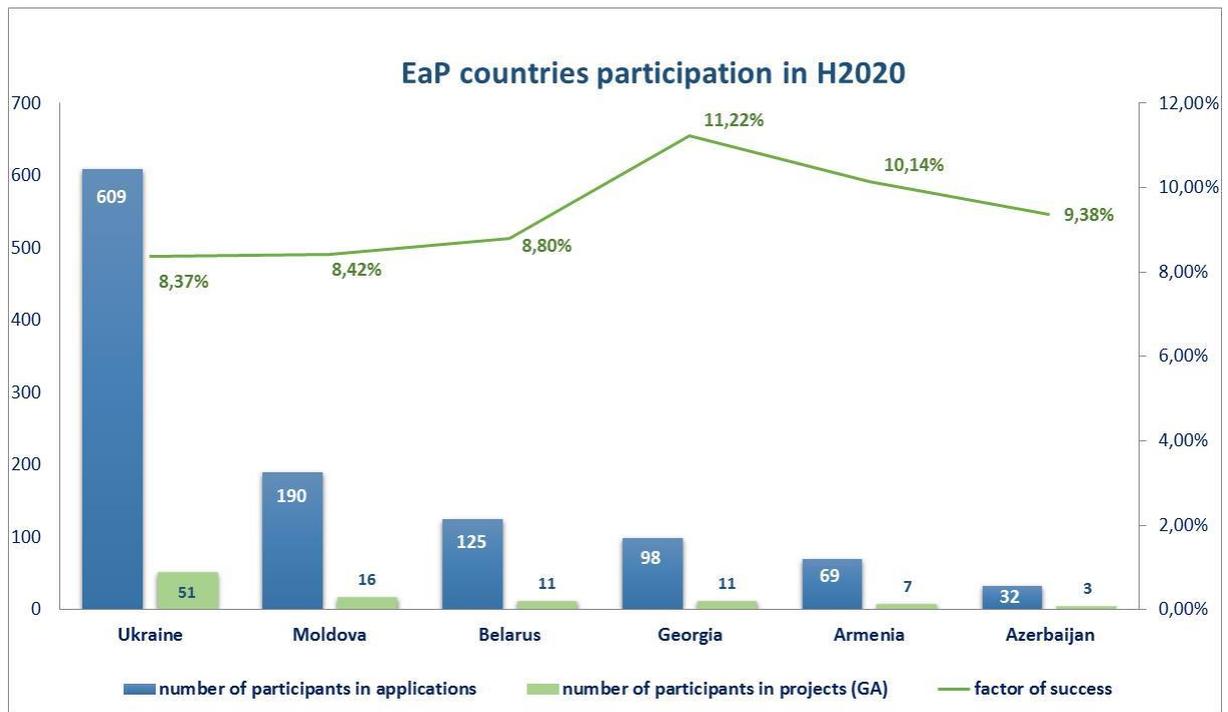


Figure 2. Participation of EaP countries in H2020 (all thematic areas).

2.1 Energy

Cooperation with the EaP is one of the key objectives of the EU's foreign policy. The EU is present through several programmes and projects providing funding for research and capacity building, as well as technical aid on Energy. More than 70 projects addressing Energy from 2010 and onwards were funded by international programmes in the EaP region. International organisations such as Central European Initiative (CEI), the Energy Charter, the European Bank for Reconstruction and Development (EBRD), the United Nations Development Programme (UNDP), as well as United Nations Economic Commission (UNECE) provide support to Eastern Partnership in fields of energy through their dedicated initiatives and programmes, which contribute to policy development, promotion of energy efficiency, sustainable and reviewable energy.

The European Strategic Energy Technology Plan (SET-Plan) aims to accelerate the development and deployment of low-carbon technologies. It is an integrated R&I and competitiveness strategy, which has a more targeted focus, more integrated approach, new management and increased accountability. The Horizon Prizes in Energy reward innovative approaches to integrating solar energy into historical buildings, using renewable energy in hospitals, and developing products that help cut emissions by reusing carbon dioxide (CO₂). It is a new instrument to generate breakthroughs and induce innovation in low carbon energy technologies. Another good opportunity for EaP countries to participate in STI international cooperation in the field of Energy is through the COST framework, which supports trans-national cooperation among researchers, engineers and scholars across Europe.

UNDP supports principles of achieving a sustainable and reliable energy infrastructure through increased support for cooperation. The main targets of its work include solving the lack of sufficient reliable energy; ensuring access to affordable, reliable, sustainable and modern energy, as well as energy efficiency. It also encourages the innovation, building resilient infrastructure, and promotes inclusive and sustainable industrialisation.

UNECE implements several projects in the EaP region. Through its work it promotes international policy dialogue and cooperation among governments, energy industries and other stakeholders. Its work focuses on energy efficiency, cleaner electricity production from fossil fuels, renewable energy, coal mine methane, natural gas, classification of energy and mineral reserves and resources, and energy security. The project on “Enhancing Synergies in the CIS National Programmes on Energy Efficiency and Energy Saving for Greater Energy Security” analysed existing national energy programmes and their application in CIS countries in the context of potential mutual cooperation, main shortcomings of the regulatory framework, and also barriers to implementation of energy efficiency measures. One of the project goals was to improve capacity of CIS countries to implement policies and practices on energy efficiency and energy saving improvements and to enhance regional energy cooperation.

The Protocol on Energy Efficiency and Related Environmental Aspects (PEEREA) requires its participating states to formulate clear policy aims for improving energy efficiency and reducing the energy cycle’s negative environmental impact. Armenia, Azerbaijan, Belarus, Georgia, Moldova and Ukraine are among the Signatories / Contracting Parties to the Protocol. The Energy Charter conducts energy efficiency reviews, which rely on two major complementary components: regular monitoring based on a standard review format and in-depth energy efficiency reviews. The reviews assess country performances and level of energy efficiency implementation, explore main challenges to energy efficiency and provide policy and legislative framework recommendations. Some of the challenges in EaP countries are that national policy goals and objectives do not reflect the potential for energy efficiency, legal framework is under-developed, and national institutions for energy efficiency are lacking or under-resourced.

The European Bank for Reconstruction and Development (EBRD) invests in several EaP projects, supports private investors in fields of power and energy sector by loans, equity and experiences. EBRD finances renewable energy, power transmission distribution, power generation and hydro sector. Besides, it provides advises on privatisation and attracts foreign investors to the countries of operation.

International institutions, such as the KIC InnoEnergy European Company, organise educational trainings and also support ventures, start-ups, industry partners that invest in smart ideas in energy. Participating in these trainings is a good opportunity for researchers and innovators from the EU Eastern Partnership region to learn from the best European experience in energy, to network, and also to search for partners and technology transfer. Most of these institutions also offer opportunities for EaP countries to fund projects in the field of Energy.

Central Europe Initiative (CEI) promotes regional cooperation for European integration and is committed to support the implementation of macro-regional strategies as well as the neighbourhood dialogue and enlargement. It offers know-how exchange programmes, cooperation fund for small activities, and trust fund at EBRD. The CEI Plan of Action 2014-2016 prioritises energy efficiency and renewable energy, with a focus on advanced biofuels and the bio-economy, like the European Biofuels Technology Platform.

National Energy Authority of Iceland actively and successfully develops the geothermal energy, which is the least expensive district heating system in the world and considerably reduces the CO₂ emission. The experience of Iceland on using the geothermal energy with high awareness at policy-making level and good coordination of the stakeholders could be applied for Eastern Partnership countries as well. Furthermore, EaP countries could participate in Geothermal ERA NET project and future calls in the field.

SMARTCATS COST Action is aimed to setting-up a Europe-wide network of leading academic and research institutions and key industries to promote the use of smart energy carriers on a large scale in order to increase fuel flexibility and carbon efficiency of energy production and to support distributed energy generation strategies. It presents a wide potential for EU-EaP cooperation, which should be supported by common goals shared by EU-EaP countries in energy policy; safe, secure and environmentally-friendly energy supply; sustainable combustion of conventional and renewable fuels.

2.2 Climate change

Climate Change is addressed through a large number of policies, initiatives and programmes implemented in the EaP region. The EU provides funding for research, capacity-building, as well as technical aid, through various programmes and projects dealing with Climate Change issues, in particular via the FP and H2020 as well as the European Neighbourhood and Partnership Instrument (ENPI). More than 20 FP7 projects involving the EaP region and addressing Climate/Environment are ongoing or have been recently completed. ENPI has a dedicated policy support project addressing the issues of mitigation and adaptation in the ENP East countries (Clima East) and is also funding ecosystem based pilot projects (pastures, forestry, and peatland management) in the recipient countries. In addition there are other sectoral ENPI programmes with clear climate action focus.

Other international donor organisations (the UN institutional family, the WB, the OECD, etc.) provide support through their dedicated initiatives. More than 130 UN funded projects are ongoing (or have been recently completed) providing assistance to the EaP countries on Climate Change related issues.

In the EaP region the UNDP supports countries in preparing Intended Nationally Determined Contributions (INDCs), provides policy advice and capacity building support on the UNFCCC negotiations via training, workshops and technical papers. It also helps to improve knowledge base and demonstrates innovative ecosystem-based approaches to climate change mitigation and adaptation. In partnership with the Global Environment Facility (GEF) and EC, the UNDP helps to strengthen the resilience of local communities and ecosystems and enhancing rural livelihoods in Armenia, Azerbaijan, Belarus, Georgia, Moldova and Ukraine via integrated, ecosystem-based climate change adaptation and mitigation solutions.

Supporting climate change and green economy policy development on the regional level through partnering with the Black Sea Economic Cooperation Organization (BSEC) and the Black Sea Commission (BSC), and strengthening the multi-stakeholder dialogue on climate change and green economy, as well as promotion of green entrepreneurship, competitiveness, trade, financing and investment opportunities in the Black Sea region are among the objectives of the Black Sea Climate and Business Initiative (CLIMBIZ) funded by the Project Development Fund of the Black Sea Economic Cooperation Organization and the Austrian Development Agency, and carried out by the UNDP Regional Bureau for Europe and CIS.

The Regional Environmental Centre for the Caucasus (REC Caucasus), funded by EC, Global Environment Facility (GEF), Eurasian Partnership Foundation, OSCE, United States Agency for International Development (USAID), and others, assists in solving environmental problems in the countries of the South Caucasus through the promotion of co-operation at national and regional level among environmental stakeholders, as well as promoting free exchange of information in line with Aarhus convention.

The Environment and Security Initiative (ENVSEC) provides an integrated response to environment and security challenges. The mission of ENVSEC is to contribute to the reduction of environment and security risks through strengthened cooperation among and within countries. ENVSEC provided financial and technical support for implementation of Regional Climate Change Impacts Study for the South Caucasus; assisted in development of scenarios for different OSCE regions in order to assess the impact of climate change on natural resources, energy and food availability, and their repercussions on security; and also supported the study of climate change impacts in Belarus, Moldova and Ukraine.

Several projects related to climate change issues were financed with the help of the International Science and Technology Center (ISTC). These projects provided assistance on such issues as creating risk assessment tools and GIS model for studying and modelling climate change influence on hydrological, hydromorphological and biological processes in the river and riverine ecosystems, or monitoring aerosols and study their effect on climate change.

2.3 Health

In the EaP countries the EU is present through several programmes and projects providing health research and innovation opportunities. EaP region is also covered by health related strategies, initiatives and programmes of various international organisations such as World Health Organization, UNDP, World Bank, ISTC, Science and Technology Center in Ukraine, and others.

The Horizon 2020 Work Programme 2016-2017 on Health welcomes proposals from all EaP countries in several topics, such as personalised medicine, healthy ageing, health ICT, infectious diseases, human biomonitoring, maternal and child health. The European Region adopted a comprehensive policy framework like Health 2020, which serves as a platform for national health strategies and programmes of the EaP countries. The EU also has a significant role in strengthening medical research for a better health system.

World Health Organization (WHO) supports more than 20 projects in the EaP region focused on institutional and capacity development, research and eHealth. WHO's "Health 2020" European policy framework and strategy for the 21st century aims to support actions across governments and society, shaping future cooperative initiatives, common strategies and objectives on Health Research and Innovation. WHO also provides independent advice and assistance to countries towards the long-term development of sustainable national eHealth in relation to strengthening health system performance and the capacity for countries to gather and analyse health information. WHO delivers support for eHealth through sharing global best practices and standards arising from successful eHealth implementations, by fostering partnerships with major international stakeholders who work to advance eHealth and by working directly with governments to address their technical and strategic needs for eHealth and health information.

The European Neighbourhood and Partnership Instrument (ENPI) provides assistance to European Neighbourhood Policy (ENP) countries by funding projects which help to develop cooperation of medical institutions, trans-border cooperation, or promoting healthy lifestyle. More than 20 projects were funded by ENPI in the region.

The Stop TB Partnership is a unique international body aligning actors all over the world in the fight against tuberculosis (TB), including institutions from the EaP countries. The Partnership works to accelerate progress on access to TB diagnosis and treatment; research and development for new TB diagnostics, drugs and vaccines; and tackling drug resistant- and

HIV-associated TB. Partners contribute to the Stop TB Partnership activities by sharing new ideas, data, best practices and other resources. Resources can include funding, technical expertise, staff time, and assistance with marketing, media or networking. The Partnership works with the Global Fund to ensure efficiency investments in fighting against tuberculosis. It also provides national platform that aims at strengthening tuberculosis prevention and achieve targets of the Global Plan to Stop TB in close collaboration with the National TB Control Programme. One of the Partnership initiatives is TB REACH, which is a multi-lateral funding mechanism primarily supported by Global Affairs Canada, with additional funding from the Bill and Melinda Gates Foundation. TB REACH provides grants to partners for testing innovative approaches and technologies aimed at increasing the number of people diagnosed and treated for TB, decreasing the time to appropriate treatment and improving treatment success rates.

Institute Pasteur is a successful outcome of an international fundraising project that is a mixture of biomedical research center, technology transfer, center for sharing knowledge and monitoring of the infectious diseases. The strategy of the institute is a good example of how to adapt to the changing ecosystem that is an emerging problem in case of several EU-EaP institutes. The Institute Pasteur is successfully involved in Horizon 2020 through the European Research Council and Marie Skłodowska Curie Actions. It also aims to establish new models of collaboration between academic research and industry and support fundamental and clinical research that will accelerate the translation of scientific breakthroughs into improved human health.

Another important healthcare initiative is EIT Health. Its goal is to sustainably advance the foundations of healthcare and thus promote the future conditions for healthier living and wellbeing of people across Europe. The consortium offers best-in-class research capabilities, higher education and business expertise.

3 PROMOTING DELIVERABLES OF EU-EAP PROJECTS

One of the final IncoNet EaP project activities (Task 6.3) was devoted to screening of projects through various programmes (multilateral, bilateral) targeting EaP, as well as promotion of project deliverables. Identification and screening of a large number of multilateral, bilateral and national programmes, projects and stakeholders, related to EaP countries addressing the 3 Societal Challenges, was implemented by the IncoNet EaP project in the beginning of the project. The Public Database, created as part of this task, was used as a basis for further studies. In one of them, stakeholders included into the database have been contacted by the project team members, who carried out a short survey (Annex I) in order to provide the stakeholders with the opportunity to promote their deliverables. They were invited to share the outputs and deliverables of their projects, which they consider particularly notable and important. In the next step, based on the information available through the CORDIS portal of the European Commission, the IncoNet EaP project has identified additional projects funded by the 7th Framework Programme where partners from the EaP countries have participated.

Moreover, there are already some results received by projects funded by the Horizon 2020. At the moment of writing up this report, there were 51 projects funded by H2020 with 91 participants from the EaP countries in general agreements. These projects include 6 projects in the energy thematic area and 8 in environment, with several of the projects touching the climate change issues.

The IncoNet EaP project partners have prepared a review of selected outcomes of international STI cooperation projects with the participation of EU and EaP partners. They have compiled a list of the noteworthy deliverables from EU-EaP cooperation projects that are available to the public (Annex III).

Some of the examples of EU-EaP projects outputs include:

in **Energy**: developing efficient energy solutions; reducing greenhouse gas (GHG) emissions; supporting and promoting substitution of fossil fuels used for heating;

in **Environment**: restoring degraded arable soils; integrated water resources and coastal zone management; monitor oxygen depletion and associated processes in aquatic systems; using earth observation data for predicting the impact of crop production on ecosystems and natural resources;

in **Health**: healthy lifestyle promotion; investigating the possible impacts of global climate change on reproductive health; generate knowledge about mental retardation (MR) and the structure and dynamics of the brain; inventorying living donation practices as well as developing tools that improve the quality and safety of living organ donations in Europe; improving diagnostic capabilities for cardiovascular diseases in the elderly;

as well as **reinforcing RTD and cooperation capacities of EaP institutes**; supporting the policy dialogue, the creation of networks, and providing analyses and support to R&I activities, fostering development of innovative and export oriented SMEs in the Danube and Black Sea Regions; and also analysing the potential impact of trade agreements between EU, Russia, EaP and CA countries.

The deliverables and results of the above projects have been promoted on the IncoNet EaP project web site as a special issue of the 'Project of the Month – November 2016' (http://www.increast.eu/en/214.php#Projects_of_the_Month) as well as in the 33rd issue of the incrEAST newsletter (<http://www.increast.eu/en/113.php>) in order to underline the importance of the activities implemented by these projects and to allow for wider dissemination of these projects' results.

4 CURRENT STI SITUATION AND PRIORITY SETTINGS

In **Belarus**, the international STI cooperation is supported by the state: annually, 3-5% of budget allocations for science and technology are targeted to serve this purpose (Belarus country report <http://www.increast.eu/en/131.php>). Budget support is provided for Belarusian partners in international R&D projects, hospitality for foreign delegations and payment of the country's contributions to international organisations - all these activities are carried out within the framework of international treaties of the Republic of Belarus. Also, Belarusian research centres and universities are granted support for organising international conferences and seminars and participating in international exhibitions and fairs in Belarus and abroad. More than 1000 international research projects are implemented in Belarus every year. In the past seven years their number grew by 2.5 times.

In general, Belarus S&T potential has not been approached yet. The key obstacle for increasing participation in the FPs is the lack of a legal basis for EU-Belarus cooperation, e.g. Partnership and Cooperation Agreement and/or S&T Agreement. This situation results in the lack of specific EC actions focused on Belarus. Another issue is the absence of national programmes to support international mobility of researchers and, therefore, the lack of a "critical mass of mobility" to Belarusian research community.

In **Moldova** the adoption of the “Code on Science and Innovation” in 2004 marked a pivotal year in the development of science and innovation and brought about a qualitative advance of the Moldovan R&D sector (Country report of Moldova <http://www.increast.eu/en/135.php>). However, it can be observed that research and innovation in the Republic of Moldova is challenged by the issue of the efficient application of some scarce budgetary resources in order to ensure an excellence-based research process that is integrated in the international research circuit and focused on satisfying the ever growing demands of society and the national economy. Thus, while the financing of science and innovation activities from budgetary sources rose considerably in 2004-2008, the share of GDP allocated to science has decreased over the last few years due to the widespread economic and financial crisis that has affected the Moldovan economy, among others.

On July 1st 2014, the Agreement between the Republic of Moldova and European Union on the participation of the Republic of Moldova within the European Union Research and Innovation Programme "Horizon 2014-2020" (H2020) was signed in Brussels, together with similar agreements for the five Western Balkan countries. The Academy of Sciences of Moldova developed the necessary institutional framework for assuring a proper participation of Moldovan institutions within H2020 calls.

Ukraine has intensified the scientific and technology cooperation with countries from different parts of the world in order to raise the quality of the national scientific research and technologies that are produced based on this research, as well as integration of the Ukrainian scientific potential into the European and world research areas (Ukraine country report <http://www.increast.eu/en/139.php>). The Agreement on Association of Ukraine to Horizon 2020 was signed in Kyiv, Ukraine, on 20 March 2015. Horizon 2020 is the first EU programme in which Ukraine has chosen to participate following the beginning of provisional application of the EU-Ukraine Association Agreement. This Agreement was also ratified by the Ukrainian Parliament and entered into force.

Ukrainian STI system was, however, continuously shrinking since independence, especially in terms of general expenditures on R&D in % of GDP, the number of institutions and R&D personnel. The situation nowadays is characterised by limited public budget allocations and an economic structure, whose demand for R&D is unassertive (“Background Report Peer Review of the Ukrainian Research and Innovation system”³).

In **Armenia** the last decade was marked by a shrinking of the R&D system accompanied by the outflow of personnel and overall marginalisation of R&D activities (Country report of Armenia <http://www.increast.eu/en/129.php>). The institutes of the National Academy of Sciences (NAS RA) remain to be the main R&D performers in the country. Integration into international scientific and technological system is one of the priorities of Armenia. S&T and/or cultural cooperation agreements were signed with around 20 EECA and EU-member states. The agreement associating Armenia to Horizon 2020 was signed on May 19, 2016. Researchers and innovators from Armenia will now have full access to Horizon 2020 under the same conditions as their counterparts from EU Member States and other associated countries.

In **Azerbaijan**, the lack of a clear science policy is the reason for the continuous marginalisation of research and development work (Azerbaijan country report <http://www.increast.eu/en/130.php>). The research and development organisations, primarily the Azerbaijan National Academy of Sciences (ANAS), branch institutes and high educational

³ “Background Report - Peer Review of The Ukrainian Research and Innovation System” under the Horizon 2020 Policy Support Facility <https://rio.jrc.ec.europa.eu/en/library/background-report-peer-review-ukrainian-research-and-innovation-system-under-horizon-2020>

centres, reflect the organisational dichotomy in Soviet science. The major problems in the development of international RTD co-operation concerns the marginal position of the Azeri scientific community vis-à-vis other international scientific communities in terms of RTD funding and research output. Despite a large dependency on foreign funds for international RTD collaboration, the Azeri government is not always able to provide its own legal and economic incentives for RTD organisations to take part in international research and innovation programmes on an equal financial footing, as well as to remove obstacles such as tax and customs barriers, etc.

New prospects for a closer EU-Azerbaijan cooperation were opened after the inclusion of Azerbaijan in the European New Neighbourhood Policy (ENP) Initiative while the ENP Action Plan aims at contributing to sustainable economic development of the country.

Georgia's research system has gone through major restructuring in the last years, yet the process is far from being completed (Country report of Georgia <http://www.increast.eu/en/132.php>). The continuing changes encompass: optimisation of the number and the profile of scientific-research institutes and their integration into the university system, elaboration of new funding models of S&T (including cooperative granting of international programmes and projects), support of young scientists, etc.

On 29 April 2016, the agreement associating Georgia to Horizon 2020 was signed in Brussels. This agreement allows for Georgia's enhanced cooperation with the EU in research and innovation, which are vital for successful and modern economies. Additionally, in order to bolster national support to potential ERC applicants in the ERC programme under Horizon 2020, representatives of the Shota Rustaveli National Science Foundation have been officially nominated by the Ministry of Education and Science of Georgia as NCPs for ERC in Horizon 2020.

Based on the results of the surveys implemented by the IncoNet EaP project, the EU was indicated as the most important region for cooperation for all EaP countries. Within the EU, Germany was indicated as the most important country among all EaP countries, while other countries mentioned by the survey participants as being important for STI cooperation included the United Kingdom, Italy, France, Romania (mostly for Moldova), Poland (for Belarus and Ukraine), Austria, Spain, Sweden, and Greece. The survey results showed the increasing trend in cooperation with European countries and all EaP respondents were interested in establishing enhanced cooperation in applied research, technology development and innovation.

The survey on monitoring EU-EaP cooperation showed that the main motivations for the STI cooperation with EU/international or EaP partners included networking with EaP or EU research/ industrial/ policy actors; developing new strategic STI cooperation; access to relevant research infrastructures, as well as better access to grants because of international dimension of on-going research (Figure 3).

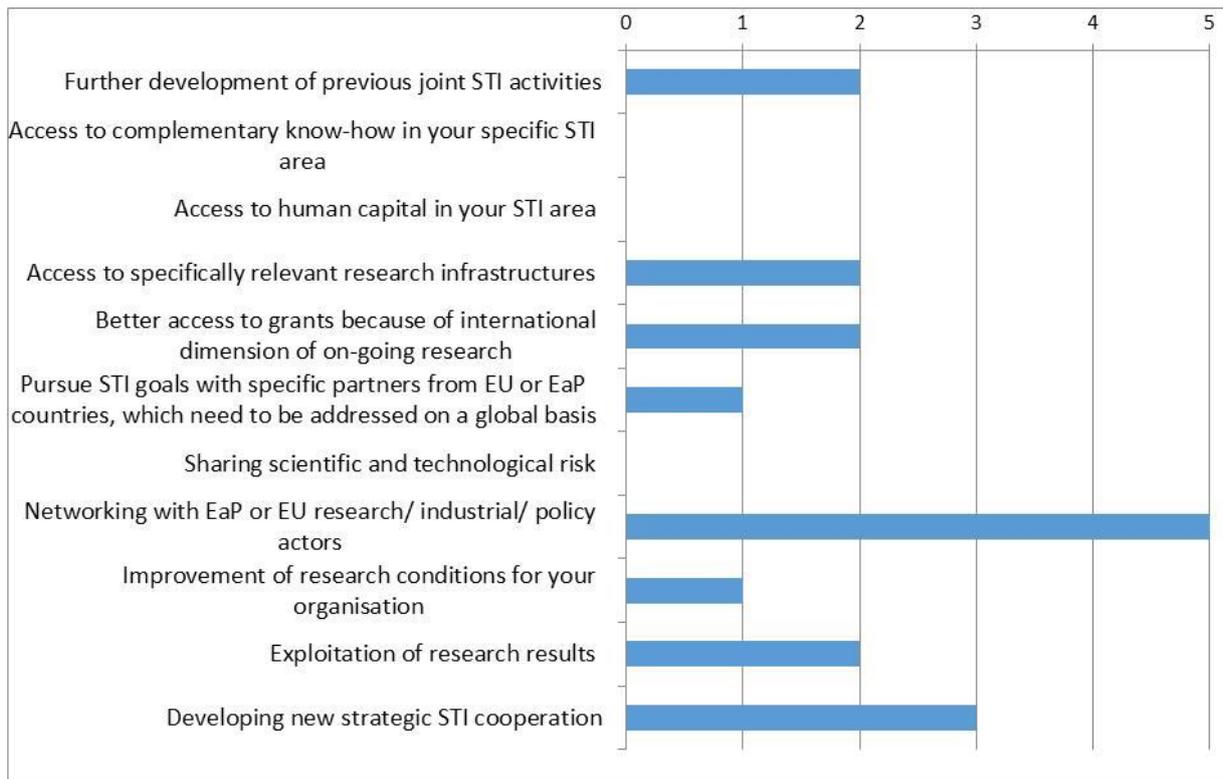


Figure 3. Main motivations for the STI cooperation with EU/international or EaP partners (according to given votes).

The Policy Stakeholder Conferences, workshops, expert group meetings and discussions conducted by the IncoNet EaP project allowed to identify topics of mutual interest for the EU-EaP cooperation. In more detail, topics of mutual EU-EaP interest are presented in the IncoNet EaP Deliverable 1.5⁴. These topics illustrate thematic research trends related to the 3SC in question over the last years based on the analysis of EU-EaP co-publications, multilateral, bilateral and national research projects or conclusions of expert group meetings and PSCs.

The IncoNet EaP project conducted 3 Policy Stakeholder Conferences (on Climate Change in Yerevan, Armenia on 15-16 May 2014; on Energy in Minsk, Belarus on 12-13 October 2015; and on Health in Budapest, Hungary on 19-20 April 2016), 3 expert group meetings (on Energy in Athens on 26 April 2016, on Climate Change in Bonn on 18 May 2016 and on Health in Bonn on 19 May 2016) as well as various workshops, where experts and project partners provided recommendations for future activities and actions addressing the EU-EaP STI cooperation on the three SCs, as well as discussed relevant cooperation topics, priorities and gaps. Potential topics for EU-EaP cooperation in energy, health and climate change thematic areas are shown in detail in the “Evaluation report of the coordinating activities” of the IncoNet EaP project (Deliverable 1.5).

In terms of Climate Change, priority issues included monitoring climate change, air quality and pollution effects, effects of climate change on environment, water and soil resources, and health, climate change adaptation and mitigation, management of climate data and observation technology development.

The three most important topics mentioned in Health included cardio-vascular diseases, brain research and neuro-degenerative diseases. Other health topics in EaP countries requiring a

⁴ <http://www.inco-eap.net/en/390.php>

special attention included ageing society, maternal health, tuberculosis, as well as quality of healthcare.

In the field of Energy, priority topics included renewable energy sources, energy consumption and energy security, such as green technologies, alternative energy of transport, environmentally sustainable solutions to strategic energy security, as well as topics related to water management, hydropower rehabilitation, safety in electricity transmission and energy markets.

The main difficulties in preparing cooperation projects as identified by the project survey respondents included finding and identifying partners from EU countries, structuring a consortium, poor infrastructure and financial support, as well as lack of experience in writing project proposals.

In order to facilitate the participation of EaP partners in H2020, survey respondents underlined the importance of participation in scientific conferences, partner search support and mobility schemes for ad-hoc visits to other research organisations in other countries to discuss and prepare joint Horizon 2020 proposals. Other mentioned important tools included trainings in project management, brokerage events, as well as “twinning” schemes.

5 CONCLUSIONS AND RECOMMENDATIONS

International STI cooperation is very crucial for the countries in the EaP region. Although the level of cooperation with European countries shows increasing tendency, overall it remains low for all thematic fields and thus the high need to increase the participation of EaP countries in H2020 has been recognised by various stakeholders from both regions.

EaP partners show significant interest in further developing STI cooperation with international counterparts. There are, however, difficulties which hinder such development. Among them are the lack of proper infrastructure and personnel capacities, differences in institutional structure and financing systems, different approaches to problem solving as well as in the use of current technologies.

The overall success rate of EaP countries in Horizon 2020 is quite low and it would be crucial to create opportunities for more partnering events in order to raise acquaintance on needs, capacity and expertise of EaP countries, for better cooperation with industry and SMEs, creation of more SMEs from EaP through spin-offs, start-up programmes with more emphasis on innovation and market research. Strengthening cooperation between EU and EaP is of equal importance for both regions. For mutually beneficial future cooperation, both regions should engage in intense information exchange, partners search, self-presentation and visibility.

There is also a need for technical assistance and investment in innovation activities. Besides providing funds, there is a demand for practical guidance and advice. Regionally and thematically targeted calls are needed in order to encourage scientific and economic relations between the EU and the EaP region.

Activities such as better awareness and engagement with other instruments and initiatives, including JPIs, JTIs, ETP, and EIT, enhancement of existing bilateral cooperation networks and collaborations into multilateral projects, as well as higher involvement of industry, SMEs and private companies in H2020 calls could support and facilitate the development of STI cooperation with the EaP countries. Besides that, it is also important to include cooperation with stakeholders beyond the STI sector, such as the national sectorial ministries, the civil

society and the international donor organisations. Also, ERANETs can play an important role as they have a pre-requirement of long-term commitment on behalf of the involved countries.

Annex I – IncoNet EaP survey on EU-EaP project deliverables

1. Description of the Project in the framework of which the deliverable was developed. (Programme Name, Sub-programme, Project Acronym, Project Name, duration)
2. Type of the Deliverable: a) Report b) Database c) Publication d) Patent e) Other (please explain)
3. Title of the Deliverable
4. Available source to be found (website, other)
5. Thematic field a) Health b) Climate Change c) Energy d) Other
6. Country
7. Institution
8. Contact Person
9. Email

Annex II – IncoNet EaP survey on monitoring the progress of international cooperation with EaP countries



Monitoring the progress of International Cooperation with Eastern Partnership Countries

This questionnaire is addressed to international coordinators and partners of projects focused on Eastern Partnership (EaP) Countries (Armenia, Azerbaijan, Belarus, Georgia, Moldova, Ukraine) in the framework of the project IncoNet EaP funded by the European Union's 7th Framework Programme for Research, Technological Development and Demonstration.

Please, indicate the main research disciplines of your cooperation in projects with EU or EaP Countries.

Have you got experience as an international coordinator or as a partner of EaP projects?

Indicate up to 3 EU or Eastern Partnership Countries and organisations with which you have the most advanced STI cooperation in the EaP region.

What were your main 3 motivations for the STI cooperation with EU/international or EaP partners?

- Further development of previous joint STI activities
- Access to complementary know-how in your specific STI area
- Access to human capital in your STI area
- Access to specifically relevant research infrastructures
- Better access to grants because of international dimension of on-going research

- Pursue STI goals with specific partners from EU or EaP countries, which need to be addressed on a global basis
- Sharing scientific and technological risk
- Networking with EaP or EU research/ industrial/ policy actors
- Improvement of research conditions for your organisation
- Exploitation of research results
- Developing new strategic STI cooperation

Select any of the following statements related to the impact of your international project on your organisation's strategies

- We have created theme-specific knowledge within the integrated S&T and research network
- We have improved our reputation and country-specific references
- We have integrated the R&D organisation's international strategy
- We have changed the organisation's strategic S&T priorities
- We enhanced the ability to disseminate and exploit technological knowledge

[Coordinators] Please, assess the outputs of the participation of EaP country partners regarding impacts

This question is addressed only to coordinators of projects

	Very low	Low	Neutral	High	Very High
Peer reviewed publications	<input type="radio"/>				
Other scientific publications (books/chapters, conference presentations)	<input type="radio"/>				
Completion of PhD theses in your organisation	<input type="radio"/>				
New or improved products/ processes/ services	<input type="radio"/>				
Organisational innovations in your organisation	<input type="radio"/>				
Patents, licences, copyrights and other IPRs	<input type="radio"/>				
New software or algorithms	<input type="radio"/>				
New business start-ups or spin-offs	<input type="radio"/>				

What were the main cross-cutting issues to address in order to improve the cooperation framework conditions with EU/international donors or EaP countries?

- Sharing best practices in research and innovation management
- Providing technical assistance and training to EaP countries for improving their national research and innovation systems
- Promoting researchers mobility
- Common use of research infrastructures
- Promoting the link with EU innovation platforms

What difficulties did you face when preparing and implementing projects with EU or EaP countries?

(up to 150 words)

Have you ever used the National Contact Points (NCPs)?

NCPs are national structures established and financed by governments of the 28 EU member states and the states associated to the framework programme. NCPs give personalised support on the spot and in applicants' own languages

http://ec.europa.eu/research/participants/portal/desktop/en/support/national_contact_points.html

How do you evaluate the actual role of the National Contact Points (NCPs)?

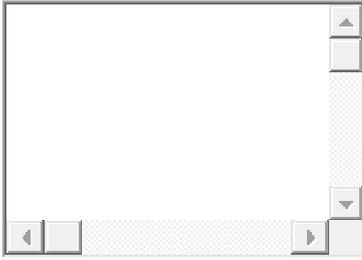
	1	2	3	4	5	
Not important	<input type="radio"/>	Very important				

Assess the following statements related to the overall sustainability of the project activities:

- There is a formal commitment of current partners to further develop research
- The project consortium has identified a clear commercial potential for application which will be carried on beyond the duration of the project
- The application developed within the specific project is likely to have a further deployment potential in the near future
- The sustainability will depend on financial and funding opportunities beyond project completion
- The sustainability will depend on the commitment of the current partners to sustain the project
- Project partners, including our organisation, have induced a follow-up project in order to further develop project activities

Please, indicate niche areas, possible future priorities and gaps in current cooperation with EU/ international donors / EaP countries.

(up to 200 words)



Are you available for an interview over your experience with EU/international or EaP cooperation?

- Yes
- No

If yes, please provide your contact details.

contact details: name, surname, country, institution, position, email, telephone, skype

Annex III – List of promoted EU-EaP project deliverables

H2ESOT

Source of funding: FP7-ENERGY

Project title: Waste Heat to Electrical Energy via Sustainable Organic Thermoelectric Devices. 2013 – 2015

EaP countries involved: Moldova

The overall goal of the H2ESOT project is to develop materials and technologies for thermal-to-electric energy conversion aimed at a wide temperature range. The development of efficient, thermoelectric modules using only low-cost, readily available, renewable and sustainable organic materials would address a range of major transnational FET challenges impacting energy efficiency, climate change, resources depletion and ‘personalised electricity generation/use’ that will arise within the next decade.

Project deliverables:

[One-Pot Cannizzaro Cascade Synthesis of ortho-Fused Cycloocta-2,5-dien-1-ones from 2-Bromo\(hetero\)aryl Aldehydes.](#) Burroughs, Laurence; Eccleshare, Lee; Ritchie, John; Kulkarni, Omkar; Lygo, Barry; Woodward, Simon; Lewis, William. WILEY-VCH Verlag Angewandte Chemie (International Ed. in English) 2015

A.I. Casian, I.I. Sanduleac, Organic thermoelectric materials: new opportunities, J. of Thermoelectricity, No. 3, 11- 20, 2013.

A.I. Casian, I.I. Sanduleac, Thermoelectric properties of tetrathiotetracene iodide crystals: modeling and experiment, J. of Electronic Materials, 43, 3740, 2014. (IF 1.635).

DANUBE-INCO.NET

Source of funding: FP7, Coordination and support action

Project title: Danube Region INCO-NET

EaP countries involved: Ukraine, Moldova

DANUBE-INCO.NET is a coordination and support action funded under the 7th Framework Programme and addresses the official EU Strategy for the Danube Region (EUSDR) in the field of research and innovation (R&I). Whereas the EUSDR concerns a wide variety of priority areas, the project focuses mainly on two of them: PA 7 „Knowledge Society“ and PA 8 „Competitiveness“ while also supporting the policy dialogue, the creation of networks, and providing analyses and support to R&I activities.

Project deliverables:

[Database of stakeholders](#) tackling societal challenges: energy efficiency, renewable energy and bio-economy (D3.7)

[Policy recommendations:](#) Performance-based research funding – Towards more effective national research and innovation systems in the Danube region.

BS-ERA.NET

Source of funding: FP7

Project title: Networking on science and technology in the Black Sea Region

EaP countries involved: Azerbaijan, Armenia, Ukraine, Moldova, Georgia

BS-ERA.NET is 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.

Project deliverables:

G. Melikadze, N. Kapanadze, M. Todadze, Z. Machaidze, A. Chankvetadze, Ch. Tsabaris, E. Androulakaki, F. Pappa, G. Eleftheriou, D. Patiris, M. Schubert, K. Knoeller, R. Stollberg, U. Mallast. "Using Environment Tracers for Investigation of Black Sea Pollution". Complex Research of Earthquake's Forecasting Possibilities, Seismicity and Climate Change Correlations, BlackSeaHazNet Workshop, Sofia, Bulgaria; 12/2013, http://217.147.230.60/bitstream/123456789/4823/1/Sofia_Workshop_07.pdf

G. Melikadze, M. Schubert, Ch. Tsabaris, N. Kapanadze, M. Todadze, Z. Machaidze, A.Chankvetadze, "Using Environment Tracers for Investigation of Submarin Groundwater Discharge", Journal of Georgian Geophysical Society, Issue A. Physics of Solid Earth, vol. 16A 2013. <http://dspace.gela.org.ge/handle/123456789/4823>

Healthy Lifestyle

Source of funding: ENPI Cross Border Cooperation Programme

Project title: Healthy Lifestyle Promotion in Educational Institutions in Lithuania and Belarus Cross-border

EaP countries involved: Belarus

The overall goal of "Healthy lifestyle" project is to propagate pupils' healthy lifestyle through sports aiming at reducing health problems and to strengthen the experience share and cooperation of Lithuanian and Belarusian schools.

Project deliverables:

Lithuanian and Belarusian educational institutions have made sport a popular everyday activity of the schoolchildren. Joint tournaments, competitions and seminars were organised in Alytus and Grodno. A new complex of sports fields was built in the Lithuanian Gymnasium and a new stadium was opened in the Belarusian Gymnasium.

BY-NanoERA

Source of funding: FP7-INCO

Project title: Institutional Development of Applied Nanoelectromagnetics: Belarus in ERA Widening

EaP countries involved: Belarus

The project aims at reinforcing RTD and cooperation capacities of the Institute for Nuclear Problems of Belarusian State University in the area of applied nanoelectromagnetics. This new research discipline comprising the classical electrodynamics of microwaves and present-day concepts of condensed matter physics is covered by the FP7 Theme 4 'Nanosciences, Nanotechnologies, Materials and new Production Technologies – NMP'.

Project deliverables:

- [Prognosis](#) of NEM development and practical implementation – Analytical review;
- [Strategy](#) of the Institute of Nuclear Problems of the Belarusian State University long-term development in the area of NanoElectroMagnetics;
- [Ultra-fast efficient synthesis of one-dimensional nanostructures](#). Dabrowska, Agnieszka; Huczko, Andrzej; Soszynski, Michal; Bendjemil, Badis; Micciulla, Federico; Sacco, Immacolata; Coderoni, Laura; Bellucci, Stefano. WILEY-V C H VERLAG GMBH 2011

[ACL](#)

Source of funding: co-financed by the EU European Regional Development Fund and European Neighbourhood and Partnership Instrument (ENPI)

Project title: Amber Coast Logistics

EaP countries involved: Belarus

The overall goal of Amber Coast Logistics project is to support the development of multimodal logistics centres in the southern and eastern Baltic Sea region and thereby improve the accessibility of remote areas.

Project deliverables:

- Connecting Remote Areas of the Southern and Eastern Baltic Sea Region – [Results and Recommendations](#).

[IBI Net](#)

Source of funding: co-financed by the EU European Regional Development Fund and European Neighbourhood and Partnership Instrument (ENPI)

Project title: Intercountry Business Incubator Network (IBI Net)

EaP countries involved: Belarus

Project aims at establishment and strengthening a transnational business incubator network – the platform for continuous exchange of information, know-how and technologies among its members in order to foster development of innovative and export oriented SMEs in the Baltic Sea Region.

Project deliverables:

“[Business Incubators in the Baltic Sea Region](#) – ways to increase quality and effectiveness” – the analyses about business incubators in BSR;

IBI NET Association – a network for establishing and strengthening the transnational business incubator network and for technology and knowledge transfer within Europe;

[IBI Net Portal](#) – information about partner business incubators, incumbent companies – their products, services, cooperation offers, business proposals and contact information;

[ICT Tool](#) – monitoring development of BI companies.

[EcoArm2ERA](#)

Source of funding: FP7-INCO

Project title: EU Cooperation Capacity Building of Center for Ecological-Noosphere Studies of National Academy of Sciences of Armenia: Towards Armenia's integration into the ERA

EaP countries involved: Armenia

The central goal of EcoArm2ERA is to reinforce the international research cooperation between Armenian leading institute in environmental and ecological studies CENS and ERA in the critically important areas, specifically FP7 Themes as Environment, KBBE and Space (e.g. GIS technologies for environment)).

Project deliverables:

- Strategic development agenda for CENS
- "A new era for cooperation. The greening of science in Armenia".

RECOVER

Source of funding: AŞM (Academy of Science of Moldova) and BMBF (Federal Ministry for Education and Research of Germany)

Project title: Restoration of soil structure, physical properties and soil carbon conservation in arable soils by use of green manure in crop rotation

EaP countries involved: Moldova

The aim of this study was to remediate degraded arable soils and promote carbon sequestration by implementation of cover cropping and green manuring in Moldova.

Project deliverables:

- Report "The research results generalization and systematization for the 2013-2014 years and soil quality state changes assessment in common chernozem after 2 vetch green mass incorporation into the soil";
- [Remediation of degraded arable steppe soils in Moldova using vetch as green manure.](#) Wiesmeier, M., Lungu, M., Hübner, R., and Cerbari, V. Solid Earth, 6, 609-620, doi:10.5194/se-6-609-2015, 2015.

[LAGOONS](#)

Source of funding: FP7-ENVIRONMENT

Project title: Integrated water resources and coastal zone management in European lagoons in the context of climate change

EaP countries involved: Ukraine

The main objective of the LAGOONS project is to contribute to a science-based seamless strategy - in an integrated and coordinated fashion - of the management of lagoons seen under the land-sea and science-policy-stakeholder interface; i.e., the project seek to underpin the integration of the EU Water Framework Directive, Habitat Directive, the EU's ICZM Recommendation, and the EU Marine Strategy Directive.

Project deliverables:

- The Tyligulskyi Lagoon: [Current knowledge base and knowledge gaps](#);

- The Tyligulskiy Lagoon: [Results of the problem based science analysis](#);
- The Vistula Lagoon, the Ria de Aveiro Lagoon, the Mar Menor Lagoon and the Tyligulskiy Lagoon [Results of combined climate and ecosystem processes](#): Report describing results of combined climate and ecosystem processes.

CoMeth

Source of funding: FP7-ENERGY

Project title: Coal mine methane new solutions for use of CMM- reduction of GHG emissions

EaP countries involved: Ukraine

The project aims at reducing green-house gas (GHG) emissions caused by the uncontrolled exhausting of coal mine methane (CMM) to atmosphere and to explore suitable economically interesting schemes for its energetic use by the development of an universal decision guidance for optimal use of CMM under varying conditions, an analysis and comparison of the current legal and administrative situation in countries with big coal deposits.

Project deliverables:

Report: “[Coal Mine Methane – New Solutions for Use of CMM – Reduction of GHG Emissions](#)”.

HYPOX

Source of funding: FP7-ENVIRONMENT

Project title: In situ monitoring of oxygen depletion in hypoxic ecosystems of coastal and open seas, and land-locked water bodies

EaP countries involved: Ukraine

The overall goal of HYPOX project is to monitor oxygen depletion and associated processes in aquatic systems that differ in oxygen status or sensitivity towards change: open ocean, oxic with high sensitivity to global warming (Arctic), semi-enclosed with permanent anoxia (Black Sea, Baltic Sea) and seasonally or locally anoxic land-locked systems (fjords, lagoons, lakes) subject to eutrophication.

Project deliverables:

- [Report on future impacts of hypoxia](#) on ecosystems and their goods and services;
- [Seasonal and inter-annual temperature variability](#) in the bottom waters over the western Black Sea shelf. G. I. Shapiro; F. Wobus; D. L. Aleynik. COPERNICUS GESELLSCHAFT MBH Ocean Science 2011
- [Black Sea biogeochemistry](#): Response to decadal atmospheric variability during 1960–2000 inferred from numerical modelling. He, Yunchang; Stanev, Emil V.; Yakushev, Evgeniy; Staneva, Joanna. Marine Environmental Research 2012
- [Investigating hypoxia in aquatic environments](#): diverse approaches to addressing a complex phenomenon. Friedrich et al. Copernicus Publications Biogeosciences, Vol 11, Iss 4, Pp 1215-1259 (2014) 2014

CLEAR

Source of funding: FP7-ENVIRONMENT

Project title: Climate change, Environmental contaminants and Reproductive health

EaP countries involved: Ukraine

The overall goal of the CLEAR project is to investigate the possible impact of global climate change on reproductive health in one Arctic and two European populations.

Project deliverables:

[Motor development following in utero exposure to organochlorines](#): a follow-up study of children aged 5-9 years in Greenland, Ukraine and Poland. Høyer, Birgit Bjerre; Ramlau-Hansen, Cecilia Høst; Pedersen, Henning Sloth; Góralczyk, Katarzyna; Chumak, Lyubov; Jönsson, Bo A; Bonde, Jens Peter; Toft, Gunnar. BioMed Central BMC Public Health 2015

[SIGMA](#)

Source of funding: FP7-ENVIRONMENT

Project title: Stimulating Innovation for Global Monitoring of Agriculture and its Impact on the Environment in support of GEOGLAM (SIGMA)

EaP countries involved: Ukraine

SIGMA presents a global partnership of expert institutes in agricultural monitoring, with a strong involvement in GEO and the Global Agricultural Geo-Monitoring (GEO-GLAM) initiative. SIGMA aims to develop innovative methods, based upon the integration of in-situ and earth observation data, to enable the prediction of the impact of crop production on ecosystems and natural resources.

Project deliverables:

[Mapping priorities to focus cropland mapping activities](#): Fitness assessment of existing global, regional and national cropland maps. François Waldner; Steffen Fritz; Antonio Di Gregorio; Pierre Defourny. Molecular Diversity Preservation International (MDPI) Remote Sensing 2015.

[SIGMA GeoPortal](#)

[EFENIS](#)

Source of funding: FP7-ENERGY

Project title: Efficient Energy Integrated Solutions for Manufacturing Industries

EaP countries involved: Ukraine

The overall objective of EFENIS is to facilitate and accelerate a move to low carbon manufacturing processes and site management by deployment and demonstration of innovative energy management systems and enabling efficiency technologies, which extend the scope of energy management outside the boundaries of a single plant to total site and then beyond the total site to district heating/cooling systems.

Project deliverables:

[Energy efficiency of complex technologies of phosphogypsum conversion](#). Tovazhnyansky, L. L.; Meshalkin, V. P.; Kapustenko, P. O.; Bukhhalo, S. I.; Arsenyeva, O. P.; Perevertaylenko, O. Yu. MAIK NAUKA/INTERPERIODICA/SPRINGER 2013

CHERISH

Source of funding: FP7-HEALTH

Project title: Improving Diagnoses of Mental Retardation in Children in Central Eastern Europe and Central Asia through Genetic Characterisation and Bioinformatics/-Statistics

EaP countries involved: Armenia, Ukraine

The overall goal of the CHERISH project is to establish an interdisciplinary Eastern Europe and Central Asia (EECA) consortium of experts with a joint programme of activities to generate knowledge about mental retardation (MR) and the structure and dynamics of the brain as such, as well as to study in depth the prevalence and incidence of MR in EECA .

Project deliverables:

[CHERISH Final Report](#) on Improving diagnoses of mental retardation in children in Central Eastern Europe and Central Asia through genetic characterisation and bioinformatics

[Severe manifestation of Leber's hereditary optic neuropathy](#) due to 11778G > A mtDNA mutation in a female with hypoestrogenism due to Perrault syndrome. Badura-Stronka, Magdalena; Wawrocka, Anna; Zawieja, Krzysztof; Silska, Sylwia; Krawczyński, Maciej Robert. ELSEVIER SCI LTD Mitochondrion; Vol 13 2013

Living Donation

Source of funding: FP7-HEALTH

Project title: Living Organ Donation in Europe

EaP countries involved: Moldova

The project on living organ donation in Europe is a coordination action that aims to 1) establish an inventory of living donation practices in Europe, 2) explore and promote living donation as a way to increase organ availability and 3) develop tools that improve the quality and safety of living organ donations in Europe.

Project deliverables:

[Living organ donation practices in Europe](#) - results from an online survey. Lennerling, Annette; Lovén, Charlotte; Dor, Frank JMF; Ambagtsheer, Frederike; Duerinckx, Nathalie; Frunza, Mihaela; Pascalev, Assya; Zuidema, Willij; Weimar, Willem; Dobbels, Fabienne. WILEY-BLACKWELL Transplant International; Vol 26 2013

[Cross-Border Quest: The Reality and Legality of Transplant Tourism](#). Frederike Ambagtsheer; Damián Zaitch; René van Swaaningen; Wilma Duijst; Willij Zuidema; Willem Weimar. Hindawi Publishing Corporation. Journal of Transplantation 2012

BESTAGEING

Source of funding: FP7-HEALTH

Project title: Biomarker Research Alliance for Diagnosing Heart Disease in the Ageing European Population

EaP countries involved: Ukraine

The BestAgeing consortium aims to improve the lack of diagnostic capabilities for both acute and chronic cardiovascular diseases in the elderly by developing and validating innovative omics-based biomarkers particularly for elderly patients – supporting healthy ageing in Europe.

Project deliverables:

[BALL-SNP: combining genetic and structural information](#) to identify candidate non-synonymous single nucleotide polymorphisms. Mueller, S.; Backes, C.; Kalinina, O; Meder, B.; Stöckel, D.; Lenhof, H.; Meese, E.; Keller, A. BioMed Central Genome Medicine 2015.

[Towards Personalized Cardiology: Multi-Scale Modelling of the Failing Heart](#). Elham Kayvanpour et al. Public Library of Science PLoS ONE, Vol 10, Iss 7, p e0134869 (2015) 2015

AGRICISTRADO

Source of funding: Exploring the potential for agricultural and biomass trade in the Commonwealth of Independent States

Project title: FP7-KBBE

EaP countries involved: Armenia, Azerbaijan, Georgia, Belarus, Moldova, Ukraine

The aim of AGRICISTRADO project is to accompany new trade agreements between EU, Russia, EaP and CA countries by analysing the potential impact of these trade agreements and by delivering insights on the potential developments of the food, feed and biomass sectors in those countries.

Project deliverables:

[Consolidated database on support to agriculture](#).

[EU agricultural trade relations with Eastern Neighbours](#): current state and future perspectives in a changing policy framework. Siemen van Berkum, LEI Wageningen UR1. Paper in the framework of the AGRICISTRADO project, 01/09/2014.

[Building a hybrid land cover map with crowdsourcing and geographically weighted regression](#). L. See, D. Schepaschenko, M.Lesiv, et al. 2014, ISPRS Journal of Photogrammetry and Remote Sensing, Vol. 103, May 2015

EnPC-INTRANS

Source of funding: H2020

Project title: Capacity Building on Energy Performance Contracting in European Markets in Transition

EaP countries involved: Ukraine

The objective of EnPC-INTRANS project is to increase the market uptake of technologies for the improvement of energy efficiency (EE) in public buildings and services by means of fostering private sector participation in innovative financing schemes for EE investments.

Project deliverables:

[Business Models for energy performance contracting](#) (EPC). Issued by the consortium formed for the implementation of the EPC-INTRANS project.

[Bioenergy4Business](#)

Source of funding: H2020

Project title: Uptake of Solid Bioenergy in European Commercial Sectors (Industry, Trade, Agricultural and Service Sectors) – Bioenergy for Business

EaP countries involved: Ukraine

The goal of the Bioenergy4Business project is to support and promote the (partial) substitution of fossil fuels (coal, oil, gas) used for heating, by available bioenergy sources (industrial wastes, forest biomass, straw and other agricultural biomass) in the partner countries and beyond.

Project deliverables:

[Report on bioenergy business models and financing conditions for selected countries.](#) Prepared as part of the Bioenergy4Business project.

[Comparative analysis of barriers, opportunities and needs of promising market segments.](#) Report prepared as part of the Bioenergy4Business project

[FREEWAT](#)

Source of funding: H2020

Project title: FREE and open source software tools for WATER resource management

EaP countries involved: Ukraine

The FREEWAT aims at promoting water management and planning by simplifying the application of the Water Framework Directive and other EU water related Directives.

Project deliverables:

[FREEWAT: FREE and open source software tools for WATER resource management.](#) Rudy Rossetto, Iacopo Borsi & Laura Foglia. Rendiconti Online Societa Geologica Italiana, Vol. 35, April 2015