WP4/14 SEARCH WORKING PAPER

Analysis of knowledge diffusion and EU-Neighbouring Countries research networks based on the outcomes of interviews with INCO projects consortium members

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January 2013

SEARCH
SHARING KNOWLEDGE ASSETS: INTERREGIONALLY COHESIVE NEIGHBORHOODS

EUROPEAN COMMISSION
European Research Area

SEVENTH FRAMEWORK PROGRAMME

Funded under Socio-economic Sciences & Humanities

The research leading to these results has received funding from the European Community's Seventh Framework Programme (FP7/2010-2.2-1) under grant agreement n° 266834

Analysis of knowledge diffusion and EU-Neighbouring Countries research networks based on the outcomes of interviews with INCO projects' consortium members

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Abstract

Strengthening of regional and multilateral co-operation between the European Union (EU) and neighbouring countries (NC) and shaping of a framework for its further development is a core task of the European Neighbourhood Policy (ENP).

Analysis of knowledge diffusion and EU-NCs research networks helps to find out how the cross-border knowledge transfer activities affect innovation activities and thus regional economic performances, and how they should be improved to develop mutually profitable relationships among EU and neighbouring countries. The analysis of barriers hampering to knowledge spread and research networking allows to formulate policy recommendations for strengthening knowledge flows within EU territories and their wider neighbourhood regions.

A specially designed questionnaire (Annex III) was addressed to consortium members of INCO projects implemented under the EU Framework RTD Programmes. Collected data was analysed and used for development of recommendations for both the EU and the NC policymakers adequately to the SEARCH project's objective of identifying policies that will strengthen the relationship between the EU and the NCs.

The presented report contributes to implementation of Task 4.2 "Descriptive analysis of knowledge diffusion and research network" of SEARCH project and introduces results of the interviews conducted with INCO projects' consortium members. International collaboration networks initiated under EU Framework RTD Programmes ensure knowledge diffusion and research networking between the EU and NCs thus promoting innovation diffusion that is considered as a very complex phenomenon.

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Abbreviations and Definitions

AC	Associated to FP7 Country - a state which is a party of an international agreement with the European Community, under the terms or on the basis of which it makes a financial contribution to all or part of an EU framework programme for research and technological development (Albania, Bosnia & Herzegovina, Croatia, Faroe Islands, Former Yugoslav Republic of Macedonia, Iceland, Israel, Liechtenstein, Republic of Moldova, Montenegro, Norway, Serbia, Switzerland, Turkey)
EC	The European Commission
ENP	European Neighbourhood Policy
ERA	The European Research Area
ETP	European Technology Platform
EU	The European Union
EU MS	The European Union Member States
FP6/FP7	The Sixth/Seventh Framework Programme of the European Community for Research, Technological Development and Demonstration Activities
HSE	National Research University "Higher School of Economics" (Russia)
ICPC	International Cooperation Partnership Country. Countries covered by the European Neighbourhood policy and Countries with S&T Agreements
INCO	International Cooperation
IPR	Intellectual property rights
NPC (NC)	16 partners addressed by the ENP: Algeria, Armenia, Azerbaijan, Belarus, Egypt, Georgia, Israel, Jordan, Lebanon, Libya, Moldova, Morocco, Occupied Palestinian Territory, Syria, Tunisia, Ukraine
PCA	Partnership and Cooperation Agreement
RAS	Russian Academy of Sciences
R&D	Research and Development
RTDI	Research, Technology Development and Innovation
S&T	Science and Technology
SME	Small and Medium Enterprise
STI	Science, Technology and Innovation
Third country	A state that is neither a Member State nor an Associated Country

1. Introduction

Knowledge has become an increasingly decisive factor in the process of socio-economic growth and growing competition. The capacity to generate and utilise knowledge, the accessibility of information and the ability to be creative serve to give a country or a group of countries a significant comparative advantage in terms of economic competitiveness and promotion of social progress.

Globalisation of market and economy, which has become increasingly knowledge-based, has made the international dimension of science more important than ever. Since the problems have become increasingly complex and interdependent, it is quite normal that scientific cooperation should also take place on a wider and interdisciplinary scale.

Environmental, social and economic change is taking place in all the regions with which the EU is involved in scientific and technological cooperation, among others the Mediterranean countries, the Western Balkans, the developing countries, Russia and New Independent States. S&T cooperation on equitable terms can help to provide appropriate solutions to the problems they face and thus contribute to global stability and security.

Being situated in the face of the challenges many countries realised that transition to innovation-based economy is only realistic route to sustainable development. In this context pressing need for smart innovation policies and governance to support them considering much wider set of links between research and innovation has been emerged.

Knowledge and the use of knowledge are directly linked to human resources capable of creating and using it. The European Research Area intends make it possible to consolidate the intellectual, scientific and cultural community and reduce the fragmentation of research within the EU which should be able to share its expertise and know-how with other countries and other regions for the benefit of sustainable and equitable development.[1]

[1] Brochure „The international dimension of the European Research Area", European Commission Directorate-General for Research

It is in this context that the Forth Framework Programme (1994 - 1998) responded to the above mentioned needs by establishing a specific RTD International Cooperation INCO programme.

INCO was further developed in the Fifth Framework Programme (1998-2002) by strengthening systems and policy research with a view to meet demand for more integrated analyses and respond to the need to develop S&T policy dialogue with the major regions of the world.

In the Sixth Framework Programme (2002-2006) the INCO programme received impetus from the 2001 Communication on the international dimension of the European Research Area (ERA).

The Seventh Framework Programme (2007-2013) placed a new emphasis on international research cooperation, including by mainstreaming international cooperation across the entire spectrum of FP7 activities. The Seventh Framework Programme also included strategic activities underpinning the building of a European Research Area open to the world that require a policy dialogue with major regions of the world and true partnership with those countries with which an S&T Cooperation agreement has been signed.

International Cooperation in the Seventh Framework Programme (FP7) addresses three interdependent objectives:[2]

- Supporting European competitiveness through strategic partnerships with third countries[3] in selected fields of science and by engaging the best third country scientists to work in and with Europe;
- Facilitating contacts with partners in third countries with the aim of providing better access to research carried out elsewhere in the world;
- Tackling specific challenges that third countries face or having a global character on the basis of mutual interest and mutual benefit (e.g. contributing towards Millennium

[2] CORDIS portal FP7. URL: http://cordis.europa.eu/fp7/capacities/international-cooperation_en.html
[3] Third countries other than EU Member States and Associated countries to the Framework Programme

Development Goals and addressing global climate change, combating biodiversity loss, water and energy scarcity).

Reinforcing cooperation with European Neighbourhood Policy (ENP) countries on bridging the gap between research and innovation become one of the aims of the FP7 INCO Programme.

The objective of the European Neighbourhood Policy is to share the benefits of the EU's 2004 enlargement with neighbouring countries in strengthening stability, security and well-being for all concerned. It is designed to prevent the emergence of new dividing lines between the enlarged EU and its neighbours and to offer them the chance to participate in various EU activities, through greater political, security, economic and cultural co-operation.

The development of a Common Knowledge and Innovation Space (CKIS) linked to smart growth and the EU's Innovation Agenda is one of the aims spelled out by the EU's new Neighbourhood Policy strategy of May 2011[4]. The CKIS is meant to cover policy dialogue, national and regional capacity-building, cooperation in research and innovation, increased mobility opportunities for students, researchers and academics.

The interviews were addressed to consortium members of INCO projects in order to analyse impact of knowledge diffusion and EU-NCs research networks on the cross-border knowledge transfer and promotion of innovation activities. The survey highlighted barriers hampering to knowledge spread and research networking. The interviews resulted in recommendations for the EU and its Neighbourhood Policy.

In total 203 consortsium members of FP6 and FP7 INCO projects from the EU and Neighbourhood Countries have been contacted by HSE with a questionnaire.

The FP6 INCO projects helped to open up the European Research Area to the world. They focused on the mutually beneficial efforts of the Community and its Member States on the one hand and INCO target countries and other third countries on the other. The major activities included third country participation in the various thematic areas such as: environmental, health

[4] Joint Communication to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions - A new response to a changing Neighbourhood, COM(2011) 303 final.

protection, food security, rational use of natural resources, adjusting the system of industrial production and communication, conservation of cultural heritage.

It is thus important that the ownership of the knowledge and technology developed in partnership under this activity of the Framework Programme is equitably shared and actively used to promote and contribute to the creation of knowledge and expertise as a basis for improved regional co-operation strategies, the elaboration of concepts aimed at sustainable development, and enable societal innovation. Links to education, training, innovation institutions, local government and other appropriate institutions and processes are actively encouraged with a view to ensure the highest positive impact possible in developing and other partner countries.

The activities under INCO support the implementation of the Community's foreign policy and development aid policy and strengthen, develop and consolidate partner countries' research systems as a means of reinforcing synergies with external policies.

Research contribute to the solution of specific problems faced by third countries through equitable partnerships and to link them to the global commitments.

The examined INCO projects comprise the following groups of FP7 projects: INCO-NET, BILAT, ERA.NET, ACCESS4EU, INCONTACT.

INCO-NET projects aim at supporting bi-regional dialogues in order to:[5]

- promote and structure the participation of third countries in the activities of FP7;
- promote regional integration as well as identification and the prioritisation of common research areas of mutual interest and benefit;
- facilitate the uptake and use of common identified research areas and the monitoring of performance and impacts of international S&T cooperation across the Specific Programmes of FP7.

[5] European Commission Research – International Cooperation portal. URL: http://ec.europa.eu/research/iscp/index.cfm?lg=en&pg=projects

The INCO-NET projects establish balanced partnerships, regrouping multiple international stakeholders (partners from research, industry, government and civil society) for research actions.

BILAT projects support the coordination for the enhancement and development of S&T Partnerships and focus on:

- improving the process of providing information on programs and funding designed to promote cooperation of third countries in the Framework Programme;
- better identifying and demonstrating mutual interest and benefit in S&T cooperation between the EU and specific third countries;
- sharing best practices via joint fora such as workshops and presenting the state of the art and the prospects for cooperation in particular fields.

These actions comprise information and awareness activities, the establishment and reinforcement of information services such as a liaison/promotion structure, a comprehensive website and a mailing database, specialised thematic workshops or special high-level events both at the scientific level in specific third countries and in Europe as well as at the political and policy-making level. The activity is restricted to third countries, which have signed an S&T cooperation agreement with the EC or are in the process of signing such an agreement.

ERA-NET: developing a European-level approach to international S&T cooperation.

ERA-NET projects aim at stepping up the cooperation and coordination of research programmes carried out at national or regional level in the Member or Associated States through the networking of research programmes, towards their mutual opening and the development and implementation of joint activities. These projects lead to a greater understanding of R&D procedures in countries outside the EU, new opportunities for collaborative research, or the development and adoption of new evaluation protocols and procedures. The launch of a joint call for proposals co-financed by national resources enhance the synergies with and the impact of the ongoing bilateral S&T cooperation between Member States and third countries.

ACCESS4EU projects aim to increase awareness among researchers in the EU Member States and Associated Countries of opportunities in research and/or innovation programmes managed by third countries with an S&T agreement. ACCESS4EU projects identify projects open to EU researchers and promote their participation, thus enhancing the reciprocity aspect of the S&T agreements. ACCESS4EU projects contribute to increasing in the number of effective collaborations of European research organisations in such research programmes as well as in the improvement in mutual understanding of respective research systems in Europe and third countries. A key element of the ACCESS4EU common dissemination strategy is the common web portal which serves as the unique access point to all eleven ACCESS4EU projects.

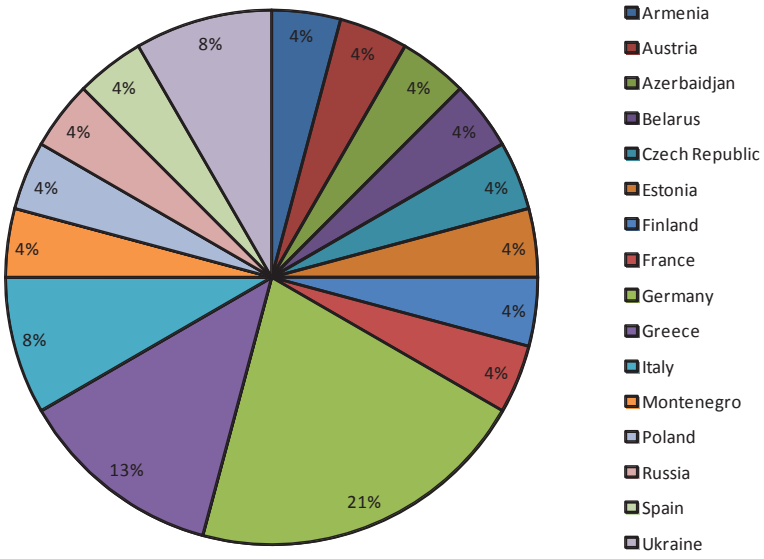
INCONTACT network of the INCO-NCPs.

The aim of this project is to reinforce the network of National Contact Points (NCP) for the FP7 under Activities of International Cooperation by promoting trans-national cooperation. The action focuses on identifying and sharing good practices. This entails various mechanisms such as benchmarking, joint workshops, training, and twinning schemes. Practical initiatives to benefit cross-border audiences are included, such as trans-national brokerage events.

Among respondent 203 consortium members of INCO projects 24 filled in questionnaires have been received (see Tab. 1). Among these amount of respondents 2 are members of FP6 projects in the areas of Health and Energy; and 22 are members of FP7 projects including 11 members of INCO-NET, 6 - BILAT, 2 - ACCESS4EU, 2 - INCONTACT projects and 1 member of Capacity - Regions of knowledge subprogramme.

This represents a response rate of about 12%. To identify interviewees CORDIS projects database with special emphasis on the involvement of participants from Neighborhood counties was used.Fig. 1 shows the distribution of the respondents by country. More than two thirds of the respondents are from Member States or Associated Countries (MS/AC). 23.8% originate from EU Neighbourhood Countries and Russia (see Tab.1).

Fig. 1: Distribution of responding consortium members by country



Tab. 1: Distribution of respondents between MS and NP countries

Countries	Number of responding persons	Responses in %
MS	18	75
NCs and Russia	6	25
TOTAL	24	100

The questionnaire was addressed to the participants of the EU 5th, 6th and 7th Framework Programmes for Research and Technological Development (FPs). No one FP5 INCO consortium member has responded because of the remoteness in time of the Programme's execution period. Researchers involved in the FP5 projects often changed their positions, employers, and address and it was difficult to retrieve their valid contacts. Due to this fact it was analyzed only projects under the following 6th and 7th Framework Programme (FP6 resp. FP7) (see Tab. 2).

Tab. 2: Distribution of respondents across programmes

Programme	Number of responding members of consortiums	Responses in %
FP7	21	88
FP6	3	12
TOTAL	24	100

2. Basic characteristics of the investigated sample

The respondents were at the extent of 79% engaged in international cooperation projects. 21% of interviewees were involved in projects which thematic research area could be explicitly specified (see Tab. 3).

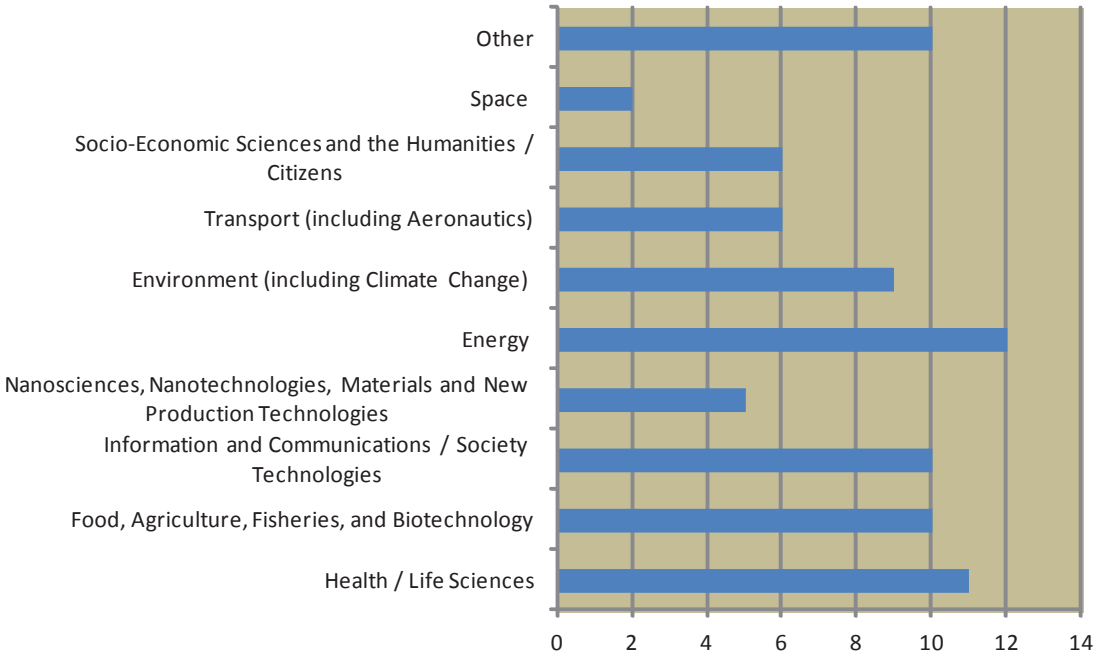
Tab. 3: Distribution of projects by scientific areas

Research area	Responses in %
One research area	21
Coordination and support actions	79

The following thematic areas were most frequently indicated by respondents as supported in the course of the projects: Energy; Health / Life Sciences; Food, Agriculture, Fisheries, and Biotechnology; Information and Communications / Society Technologies; Environment (including Climate Change); Transport (including Aeronautics) and Socio-Economic Sciences and the Humanities / Citizens (see Fig. 2).

Fig. 2: Thematic research areas

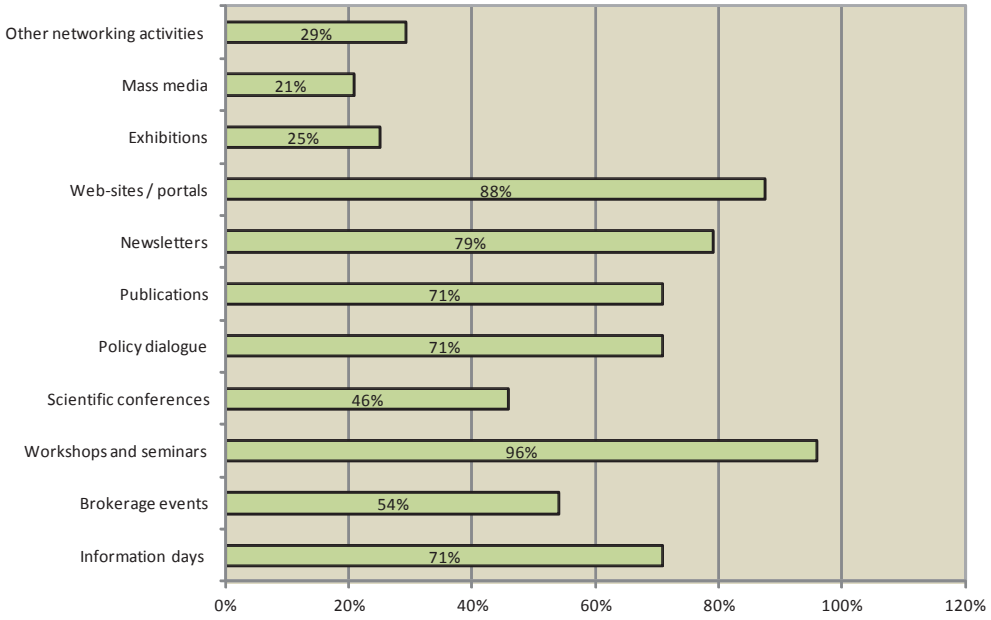
The analysis of the special international RTD cooperation programme - the INCO (International Cooperation) outcomes, which was introduced in FP4: interviews with INCO projects' consortium members



3. Activities of the INCO projects aimed at knowledge diffusion and research networking

Among activities in the project aimed at knowledge diffusion and research networking 96% of respondents specified workshops and seminars (see Fig. 3), 88% - creating specially designated web-sites and portals, 79% - newsletters' dissemination. Furthermore respondents frequently mentioned such important networking activities as policy dialogue, holding of information days and publications (71%), brokerage events (54%) and scientific conferences (46%).

Fig. 3: Activities of the INCO projects aimed at knowledge diffusion and research networking

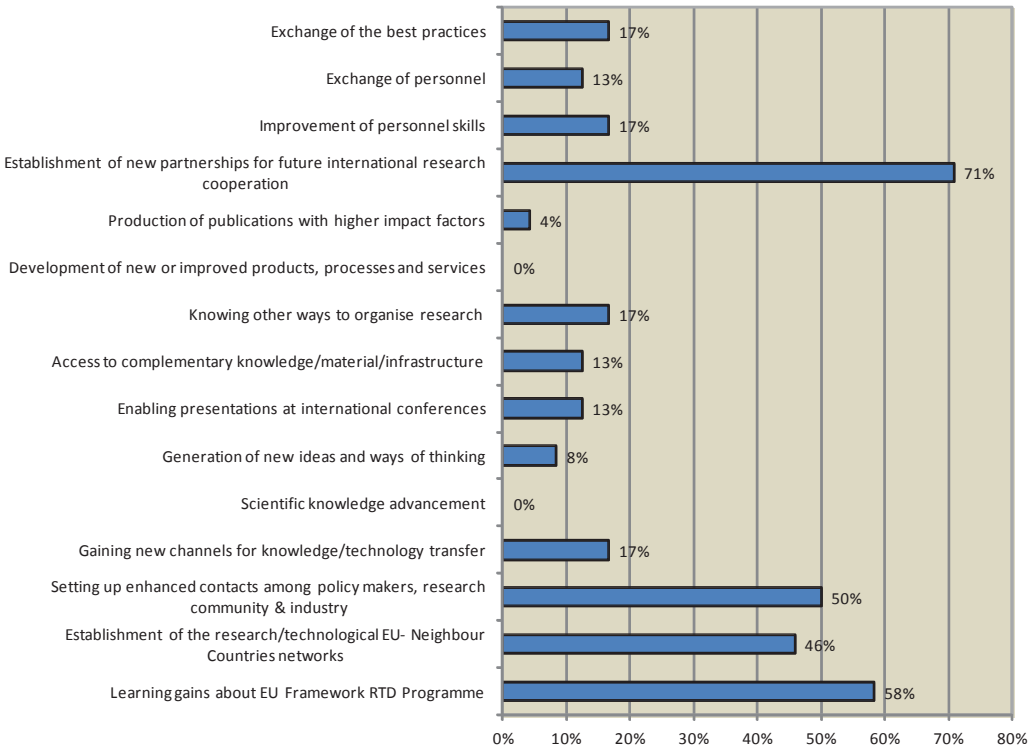


As other networking activities carried out during project implementation the interviewees added trainings' organisation (including project managers trainings), webinars, direct networking of people via e-mail (introducing people to each other), Summer Schools for young scientists, twinning activities and use of social media: facebook and linked-in.

4. Benefits and effects of the INCO projects activities

4.1 The most important benefits

Among the three most important benefits of the INCO projects for most of the respondents (71%) indicated the establishment of new partnerships for future international research cooperation (see Fig. 4). 58% of the respondents distinguished the learning gains about EU Framework RTD Programme of the conducted collaborative projects, 50% and 46% respectively considered the importance of the setting up enhanced contacts among policy

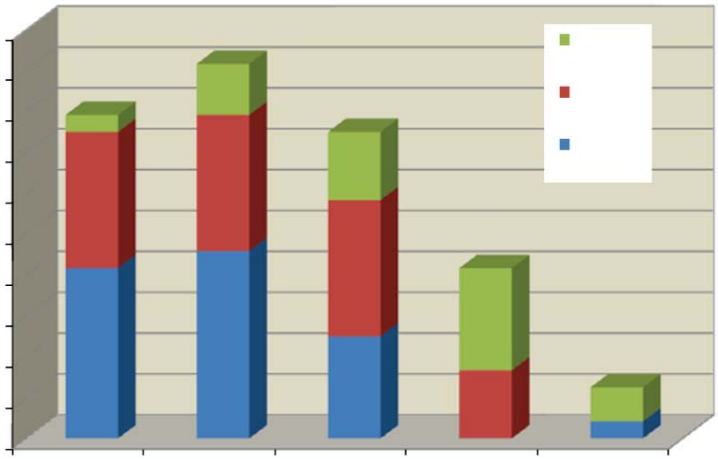


Gaining new channels for knowledge and technological transfer as well as exchange of best practices, improvement of personnel skills and knowing other ways to organise research were perceived by respondents a little less important (17%).

4.2 Main beneficiaries

Between main beneficiaries of the project activities respondents noticed as the most benefited researchers (46% - *the most* and 33% - *the second most* benefited), policymakers (42% - *the most* and 33% - *the second most* benefited), and managers of research organisations and universities (25% - *the most* and 33% - *the second most* benefited) (see Fig.5).

Fig. 5: Main beneficiaries of the project activities

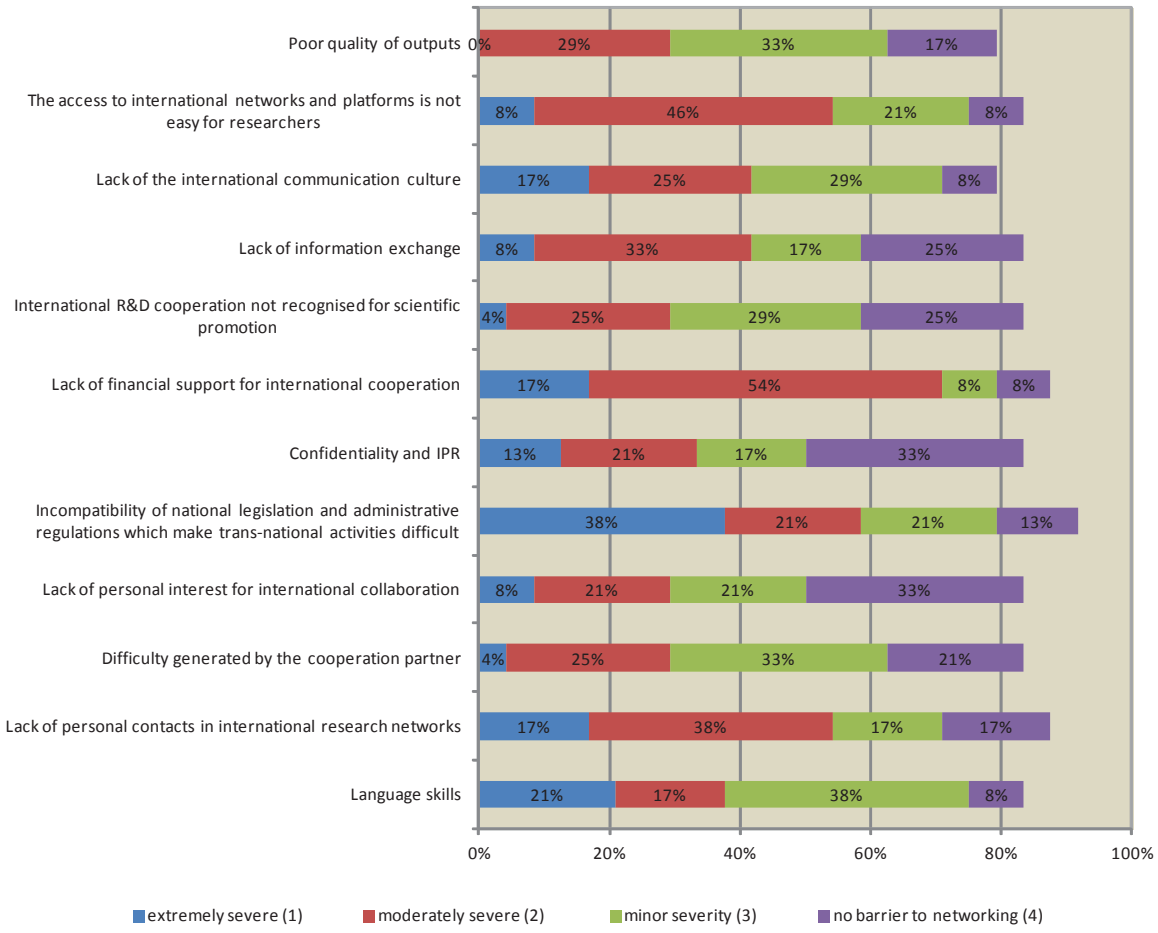


Another group that was addressed INCO projects and noticed by respondents as *other* beneficiaries are innovation support structures (e.g. cluster managers, managers of technology parks, etc.) and National Contact Points of EU Framework Programme for Research and Innovation - the main provider of advice and individual assistance in all Member States, Associated States and third countries.

5. Barriers to research networking and knowledge diffusion

Among the factors impeding a more smooth and fruitful research networking and knowledge diffusion between EU and NCs, the most influential factors seems to be the lack of financial support for international cooperation (17% of the respondents considered it *extremely severe* and 54% *moderately severe*), incompatibility of national legislation and administrative regulations which make trans-national activities difficult (38% *extremely severe* and 21% *moderately severe*), the hampered access to international networks and platforms for researchers (8% *extremely severe* and 46% *moderately severe*) and the lack of personal contacts in international research networks (17% *extremely severe* and 38% *moderately severe*).

Fig. 6: Barriers to research networking and knowledge diffusion



Other *extremely severe* or at least *moderately severe* barriers to research networking and knowledge diffusion were (see Fig. 6) among personal factors - language skills of participants (38%) and of administrative factors - confidentiality and IPR (34%). As to capacities of involved institutions, the lack of the international communication culture and the lack of information exchange were for 42% and 41% respectively of the respondents *extremely* or *moderately severe.*

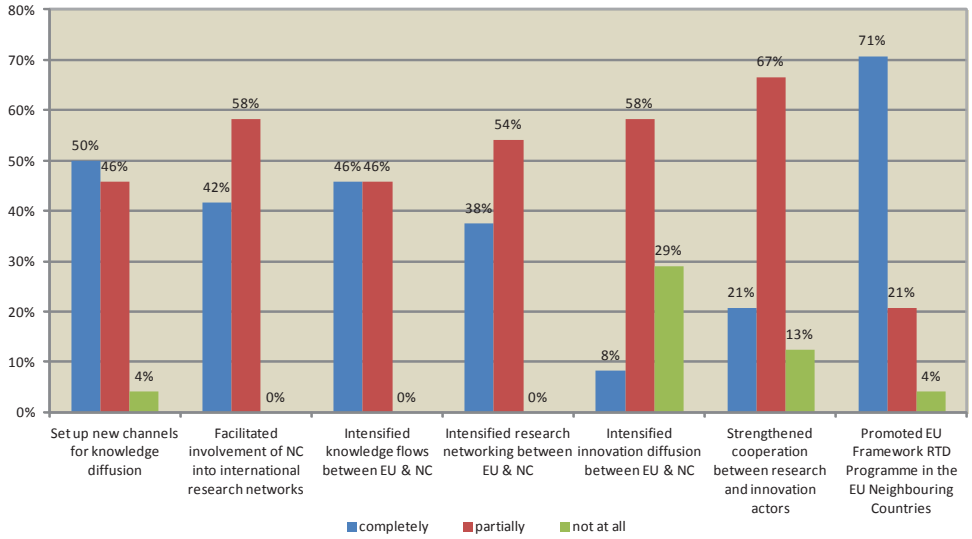
On the other hand, other potentially problematic issues, like difficulties generated by the cooperation partner, lack of personal interest for international collaboration, non-recognition of

international R&D cooperation for scientific promotion and the quality of the outputs caused - at average - comparatively little difficulties.

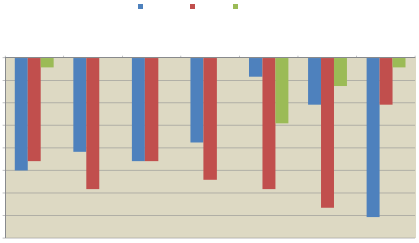
6. Main lessons learnt about knowledge diffusion and research networking

71% of respondents considered that during the INCO projects' implementation partners has *completely* and 21% *partially* managed to promote EU Framework RTD Programme in the EU Neighbouring Countries and 50% *completely* 46% *partially* set up new channels for knowledge diffusion. 58% and 67% respectively of INCO projects *partially* intensified innovation diffusion between EU and MS and strengthened cooperation between research and innovation actors (see Fig.7).

Fig. 7: Main lessons learnt about knowledge diffusion / research networking



In general, INCO projects' participants accomplished important objectives of their projects in terms of knowledge diffusion and research networking and succeeded in intensifying innovation diffusion and research networking between EU and NCs, facilitating involvement of Neighbourhood countries into international research networks.



7. Conclusions and recommendations to improve the support of international research and innovation cooperation, knowledge diffusion between EU and Neighbour Countries

International collaboration in STI mostly occurs among actors with equivalent capacities and shared interest in avoiding duplication. This means that actors with lower research capabilities may be excluded from the collaboration process. However, the inclusion and integration of EU neighbouring countries with weaker STI capacities is indispensable to achieve the goal of such collaboration – to find and implement solutions to challenges that affect the nations of the world, regardless of their STI capacities. Indeed, these countries may be those most affected by certain global challenges. Their integration can allow them to contribute their specific knowledge and expertise and can help build their STI capacities. Furthermore, their integration should not be viewed as an accessory to economic development and their active engagement should be sought as one of objective of European Neighbourhood Policy.

The results of survey demonstrated that INCO projects contribute to the knowledge diffusion and research networking between EU and NCs, facilitating involvement of Neighbourhood countries into international research networks. Respondents noticed as the most benefited group of project activities researchers and policymakers. However the forthcoming EU Framework Programme for Research and Innovation Horizon 2020 places much emphasis on innovation, to underpin competitiveness across a range of existing and emerging industries and sectors. This raises the need to shift the focus of INCO projects on innovation.

Based on the responses of 24 participants of the INCO projects several conclusions concerning the state-of-art of knowledge diffusion and EU-Neighbouring Countries research networking activities can be generated.

One of the findings of the present analysis is that the INCO projects is one of the effective instruments to promote FP programmes participation in neighbour regions of the European Union and to spur cross-border STI cooperation between EU and neighbouring countries (NCs). Knowledge diffusion and research networking are carried out through

conferences, workshops, seminars and information days, specially designated web-sites and portals, dissemination of newsletters and other networking activities. It also can be concluded that INCO projects promote policy dialogue, setting up of new partnerships for future international research cooperation and the research or technological EU-Neighbouring Countries networks as well as enhanced contacts among policy makers, research community & industry.

The following recommendations to overcome obstacles identified in the analysis of INCO projects' consortium members are proposed.

Administrative barriers

With regard to raising awareness and communicating good practice of regulatory frameworks encouraging international STI cooperation and fostering ethical standards for conducting research at a national level it could be advised that national policy stakeholders responsible for setting legal and regulatory frameworks within the EU and NCs raise the awareness of the political decision makers of the need to stimulate regulatory frameworks for STI cooperation as well as of existing barriers and threats which require urgent action.

To reduce legal constraints such as IPR and licensing barriers hindering cooperation need to be removed (e.g. for international mobility, protection and utilization of intellectual property, transfer of funds as well as scientific equipment, shipping of scientific material and samples etc.) and appropriate national legal frames should be designed according to international standards. Emphasis should be put on both the protection of each other's knowledge and on the trans-national access to it allowing international exchange of scientific data and results while guaranteeing the rights of individual partners.

National rules for import and export of scientific material are one of the significant issues hampering international S&T cooperation with NCs. It could be recommended to simplify juridical procedures and to bring national regulation in accordance with international law.

To increase capacities of National Information Points and National Contact Points for the EU RTD Framework Programme and for international cooperation in general terms it could be recommended to national policy stakeholders in the EU and NCs to assess and advance the

support structures for European and international STI cooperation, building on existing good practice. In order to allow the STI community to make the best use of European and international STI cooperation efforts need to be undertaken at a national level to provide professional and easily accessible services in terms of information dissemination and consultancy.

To improve financial support for international cooperation can be used the following joint initiatives involving the European Union and NCs partners:

- coordinated calls: launched and evaluated in parallel in the EU and neighbouring country;
- joint calls: launched, evaluated, selected and funded jointly by the EU and the NC;
- contributions from the Union to programmes of international organisations to cover the participation of the Union's entities in those programmes.

The 7th Framework Cooperation Programme (FP7) has been launched the coordinated calls EU-Russia. They foresee twin projects to be financed by the European Union and the Russian funding agency respectively. Two calls are published – one by the European Commission according to European rules and the other by the Russian Authorities under its own rules.

It could be recommended to the national policy stakeholders and to the EC to set up collaborative EU-NCs competitive innovation funding programmes as an indirect or explicit means to stimulate the development of innovative companies. Such collaborative competitive innovation funding programmes should financially support joint R&D projects designed to lead in the mid-term to innovative products, services or processes of significant economic and/or societal value. Such programmes constitute a valuable incentive that could either explicitly require or indirectly stimulate the creation of innovative companies.

EU-funded FP7 Coordination and Support Activities such as ERA-NETs stimulating the coordination of programme owners, or INCO-NETs and BILATs fostering stakeholder dialogues for the benefit of bilateral/regional STI-cooperation can be utilized to design and test joint activities for national EU and NCs owners/ managers of innovation programmes. Such competitive innovation funding scheme is already under implementation in the context of the ERA.NET project for Russia (www.eranet-rus.eu).

Insufficient capacity of involved institutions

The full openness of EU Framework Programmes for participation of NCs could encourage cooperation with European research networks and simplify access to international networks and platforms for researchers.

Setting up the contacts with some national authorities and institutions in EU MS that possess considerable experience and worldwide recognition in innovation management activities and in entrepreneurship development could be beneficial in order to increase competences of innovative companies in the Neighbourhood countries. Therefore, training courses on innovation management and entrepreneurship could be set up within academic or innovation related institutions in NCs, involving experts from both EU MS and Neighbourhood countries, with financial or indirect support (e.g. incentives) from the national authorities.

It would be recommended to the national policy stakeholders to initiate demand driven mutual learning activities on a framework setting for investments in innovation through a dialogue with representatives of the science community as well as the business and financial sectors in both the EU and NCs.

Such mutual learning activities should focus on legislative, tax and IPR issues, as well as on the coherence and coordination of the whole framework, in order to identify good practices, success stories but also barriers and failures in both EU Member States and Neighbourhood countries. To implement such international exercises, joint workshops or even smaller conferences could be proposed, which could be organised in the scope of INCO activities funded within the EU RTD Framework Programme or at a bilateral level, based on the partnership of individual EU Member States and Neighbourhood countries.

Basing on the experience of INCO projects participants it could be recommended to the EU and NCs stakeholders to encourage joint twinning activities between research centres, institutes, European and national technological platforms and other national/regional technology networks in NCs and the EU providing the appropriate framework conditions and incentives or

seed money for launching them. The European Technology Platforms (ETPs) experience and the best practice can be replicable into the activities of their NC's partners to organise Technology Platforms and initiate cooperation among them. Such platforms provide a framework for stakeholders led by industry to define research priorities and action plans on a number of technological areas where achieving growth, competitiveness and sustainability.

Available innovation stimulation instruments at the EU level should be used more intensively for the cooperation. Appropriate stimulation measures and sufficient financial resources should be made available to take maximum advantage of the EUREKA and EUROSTARS programmes for the EU-NCs innovation cooperation.

Personnel factors

To increase personnel skills of researchers national policy stakeholders should set up joint EU-NCs training activities in science management as a mutual learning exercise and as a way to share the good practices already in place in several EU Member States.

The linguistic barriers could be reduced through promotion of more knowledge of foreign languages, also through modules and disciplines taught in a foreign language in universities.

It could be recommended to set up incentives for twinning arrangements for training young researchers such as joint graduation programmes like international sandwich fellowship programmes, cosupervising PhD theses ('these en co-tutelle'), etc., between Higher Education or Research Centres in EU and Neighbouring countries. It would be useful to establish EU-Neighbouring countries a joint mobility programme for researchers (including pre-docs) based on university networks operating joint programmes, especially Joint Doctoral Programmes, ideally leading to Joint PhDs.

SEARCH
SHARING KNOWLEDGE ASSETS: INTERREGIONALLY COHESIVE NEIGHBORHOODS

Sharing KnowledgE Assets: InteRregionally Cohesive NeigHborhoods (SEARCH) Project

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Analysis of knowledge diffusion and EU-Neighbouring Countries research networks based on the outcomes of interviews with INCO projects' consortium members

Annex I LIST OF PROJECTS IN WHICH PARTICIPATED RESPONDENTS

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1. **Trans-national co-operation among NCPs for International Cooperation (INCONTACT)**

The INCONTACT FP7 project aims at the development of a platform for stimulating closer cooperation among INCO National Contact Points. Within the framework, INCO NCPs are working together to effect a substantial improvement in the overall quality of NCP services in the field of International Cooperation. The positive effect of these efforts is not limited to the NCP network alone. The international research community ultimately benefits from the heightened level of service offered by the network.

Participating countries: Germany, Greece, Italy, Sweden, Turkey, Russian Federation

2. **Supporting EU access to Canadian research and innovation programmes (Access2Canada)**

The Access2Canada project is based on the need to solve the lack of awareness among EU researchers about the opportunities and obstacles for European researchers to access Canadian research and innovation programmes. The objective of this project is therefore to strengthen and increase EU-Canada S&T cooperation by supporting the access to these programmes for EU researchers.

Participating countries: Italy, France, Germany

3. Western Balkan Countries INCO-NET (WBC-INCO.NET)

WBC-INCO.NETs core objectives are to support the bi-regional dialogue between the EU, associated FP7 countries and the West Balkan Countries (WBC) and to enhance the participation of WBC researchers in European RTD projects by structural measures.

Participating countries: Austria, Montenegro, Bulgaria, Slovenia, The Former Yugoslav Republic of Macedonia, Greece, Germany, Turkey, Italy, Belgium, Serbia, Albania, Bosnia and Herzegovina, the Nederland

4. Enhancing the bilateral S&T partnership with Ukraine (BILAT-UKR)

The main objectives of BILAT-UKR are: - to strengthen the S&T cooperation between the EU and Ukraine in particular through a stronger participation of Ukraine in FP7 and other Community programmes and initiatives. - to further improve the framework for enhanced future and sustainable S&T cooperation, especially regarding legal and funding issues. - to provide a knowledge base for new cooperation themes and priority areas, and for emerging horizontal issues of sustainable cooperation, especially in the fields of scientific mobility, innovation and infrastructure. - to provide support for the working groups set up to organize a thematic and high level policy dialogue between the Ministry of Education and Science of Ukraine and the European Commission.

Participating countries: France, Germany, Ukraine, Austria, Romania, Poland

5. Psychological network support to violence traumatized children: disasters, conflicts (Child Trauma Network)

The objectives of the project are to conceive, to carry out and to have the experience of a euro Mediterranean network for the consultation and help when intervening to give medico psychological help to children traumatized by violence during disasters or wars.

Participating countries: Spain, Morocco, Italy, Algeria, Tunisia, Lebanon, France, Belgium, San Marino

6. Mediterranean innovation and research coordination action (MIRA)

The present Coordination Action aims at developing the objectives of the INCO-Net MPC action as described in the Call for proposals, to further enhance regional S&T dialogue in the Mediterranean Region and the complementarities with activities carried out by other European Policy instruments, notably the Union for the Mediterranean (UfM).

Participating countries: Spain, Israel, Lebanon, Tunisia, Germany, Malta, Morocco, Egypt, West Bank and Gaza Strip, France, Algeria, Portugal, Bosnia And Herzegovina, Jordan, United Kingdom, Greece, Turkey, Cyprus, Montenegro

7. **European Tunisian Cooperation (ETC)**

The overall objective is to foster and build a network between Scientific and Technological community and enterprises, which are involved in research and development activities, belonging to the European Community and Tunisia, to better share scientific and technological information and knowledge between the two Areas.

Participating countries: Tunisia, Italy, Belgium

8. **Co-ordination action for autonomous desalination units based on renewable energy systems (ADU-RES)**

The Coordination Action ADU-RES will achieve two main objectives: 1) Further development of integrated plant designs for mature and cost efficient autonomous desalination units (ADUs) which are based on renewable energy sources (RES) 2) Formulation of poli tical strategies for boosting ADU-RES implementation within the existing political and legislative frameworks in the Mediterranean.

Participating countries: Germany, United Kingdom, Belgium, Italy, Egypt, West Bank and Gaza Strip, Tunisia, Lebanon, Greece, Algeria, Germany, Morocco, Spain, Jordan

9. **Enhancing the Bilateral S&T Partnership with the Russian Federation (BILAT-RUS)**

BILAT-RUS focuses on enhancing the bilateral S&T Partnership between Russia and the EU. The project aims at contributing to the implementation of the Common Space on Research between the EU and Russia. It ensures coherence and coordination of various activities under the umbrella of the EU-Russian S&T agreement and contributes to a stronger coordination of bilateral activities with Russia at EU and Member State level.

Participating countries: Germany, Russia, France, Austria

10. **S&T international cooperation network for Eastern European and Central Asian countries (INCONET EECA)**

The projects aim is to strengthen the Scientific and Technological cooperation between the EU Member States (and Associated Countries) and the Eastern European and Central Asian countries. To achieve its goals, the IncoNet EECA project will implement activities at both the policy and operational level.

Participating countries: Greece, Armenia, Belarus, Ukraine, Germany, Turkey, Finland, Estonia, Norway, Austria, Poland, Kazakhstan, Azerbaijan, Uzbekistan, Romania, Moldova, Sweden, Belgium, Georgia, Russia, Bulgaria

11. Improving capacity of Jordanian Research in Integrated Renewable Energy and Water supply (JORIEW)

The objective of the JoRIEW project is to reinforce the cooperation capacities of Jordanian research centres by promoting closer scientific collaboration with a number of ERA located research centres and universities.

Participating countries: Jordan, Hungary, Croatia, Denmark, Greece, Serbia

12. Strengthening EU-Russia sciences and technology cooperation and EU access to Russian national funding programmes (ACCESSRU)

The overall aim of the ACCESSRU project is to stimulate S&T cooperation between Europe and Russian Federation by providing better access to the European researchers for the Russian research and innovation programmes. Firstly, the project will map and analyze research & innovation programmes and initiatives managed by the Russians Federation to identify access opportunities to researchers from the Member States and Associated Countries.

Participating countries: Germany, Russia, France, Luxembourg

13. Euro-Algerian Research Networking (EARN)

This project aim is to strengthen the bilateral dialogue between Algeria and the EU Member States, which is the explicit will of the FP7 BILAT calls. Furthermore EARN aims at providing information about the S&T systems both in Algeria and in Europe. EARN thus will enhance information collection and dissemination as regards Science, Technology and Innovation cooperation between Algeria and the EU.

Participating countries: Germany, Algeria, France, Belgium

14. Centre of Excellence for the Design of Efficient and Safe Aircraft (CEDESA)

The overall aim of the CEDESA project is to upgrade the existing research capacity in aerodynamics and aircraft structures at the Institute of Aerospace Engineering, Brno University of Technology (IAE-BUT) to the highest European level and create a Centre of Excellence for the Design of Efficient and Safe Aircraft. IAE-BUT is a very promising major European research organisation as demonstrated by its participation in four FP6-AEROSPACE and one FP7

Aeronautics R&D project. The Centre of Excellence will be developed through a range of activities derived from IAE-BUT's SWOT analysis.
Participating countries: Czech Republic, Germany, Sweden, United Kingdom, Ireland.
Researchers from Russia, Ukraine, Nigeria take part in the project activities (conferences, workshops).

Sharing KnowledgE Assets: InteRregionally Cohesive NeigHborhoods (SEARCH) Project

Analysis of knowledge diffusion and EU-Neighbouring Countries research networks based on the outcomes of interviews with INCO projects' consortium members

Annex II QUESTIONNAIRE ADDRESSED TO CONSORTIUM MEMBERS OF INCO PROJECTS OF THE EU FRAMEWORK RTD PROGRAMMES

INTERVIEW

ON KNOWLEDGE DIFFUSION AND RESEARCH NETWORKING

addressed to consortium members of INCO projects of the EU Framework RTD Programmes

Strengthening of regional and multilateral co-operation between the European Union (EU) and neighbouring countries (NC) and shaping of a framework for its further development is a core task of the European Neighbourhood Policy (ENP)[6].

Analysis of knowledge diffusion and EU-NCs research networks shall help to find out how the cross-border knowledge transfer activities affect innovation activities and thus regional economic performances, and how they should be improved to develop mutually profitable relationships among EU and neighbouring countries. The analysis of barriers hampering to knowledge spread and research networking shall allow to formulate policy recommendations for strengthening knowledge flows within EU territories and their wider neighbourhood regions.

[6] ENP: 16 of EU's closest neighbours – Algeria, Armenia, Azerbaijan, Belarus, Egypt, Georgia, Israel, Jordan, Lebanon, Libya, Moldova, Morocco, Occupied Palestinian Territory, Syria, Tunisia and Ukraine.

The presented questionnaire is addressed to consortium members INCO projects implemented under the EU Framework RTD Programmes. Collected data will be analysed and used for development of recommendations for both the EU and the NC policymakers.

The interview is implemented under FP7 SEARCH "The Sharing KnowledgE Assets: InteRregionally Cohesive NeigHborhoods" project http://www.ub.edu/searchproject/).

You are kindly requested to answer the questions provided below. Thank you.

QUESTIONNAIRE

Interviewee data	
Name	
Organisation (name & type*)	
Position in the organisation	
E-mail	
Telephone	
Post address	
Do you agree with Internet access to the filled in questionnaire?	Yes ☐ No ☐

*Type of organization: **HE** (Higher educational institution); **RES** (Research organization); **ENT** (Enterprise); **SME** (Small and medium-sized enterprise); **NGO** (Non-Government organization); **GOV** (Governmental body); **IO** (International organization); **OTHER**

Project identification data	
Name of project[7]	
Project acronym	
The EU Framework Programme (5-7)	FP5 ☐ FP6 ☐ FP7 ☐

Please indicate *thematic research area*(s) that was (were) supported in the course of the project	
Health / Life Sciences	☐
Food, Agriculture, Fisheries, and Biotechnology	☐
Information and Communications / Society Technologies	☐
Nanosciences, Nanotechnologies, Materials and New Production Technologies	☐
Energy	☐
Environment (including Climate Change)	☐
Transport (including Aeronautics)	☐
Socio-Economic Sciences and the Humanities / Citizens	☐
Space	☐
Others research areas (please specify)	☐

Please indicate which *activities* in the project were specifically *aimed at knowledge diffusion / research networking* (multiple answers available)	
Information days	☐
Brokerage events	☐

[7] Optional: If you have been involved in several INCO projects and would like to present information for more than one project, you are kindly asked to fill in the questionnaire for each project in separated file.

Workshops and seminars	☐
Scientific conferences	☐
Policy dialogue	☐
Publications	☐
Newsletters	☐
Web-sites / portals	☐
Exhibitions	☐
Mass media	☐
Other networking activities (please specify)	☐

Which are the *top 3 groups* that benefited most of the project activities?			
Main beneficiaries of the project activities	**Please rank which group received**		
	most benefits	**second most**	**least benefits**
Policymakers	☐	☐	☐
Researchers	☐	☐	☐
Managers of research organisations / universities	☐	☐	☐
Entrepreneurs	☐	☐	☐
Other (please specify)	☐	☐	☐
Main *benefits*, please check *only* 3 the most important benefits			
Learning gains about EU Framework RTD Programme			☐
Establishment of the research/technological EU- Neighbour Countries networks			☐
Setting up enhanced contacts among policy makers, research community & industry			☐

Gaining new channels for knowledge/technology transfer	☐
Scientific knowledge advancement	☐
Generation of new ideas and ways of thinking	☐
Enabling presentations at international conferences	☐
Access to complementary knowledge/material/infrastructure	☐
Knowing other ways to organise research	☐
Development of new or improved products, processes and services	☐
Production of publications with higher impact factors	☐
Establishment of new partnerships for future international research cooperation	☐
Improvement of personnel skills	☐
Exchange of personnel	☐
Exchange of the best practices	☐
Others (please specify)	☐

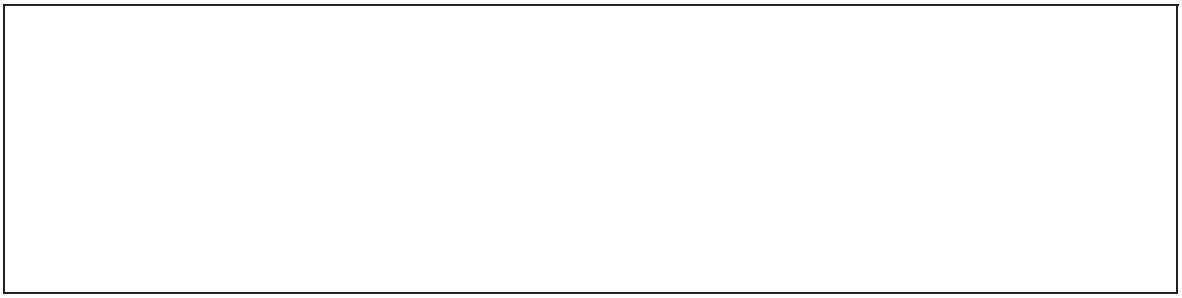
***Barriers* to research networking and knowledge diffusion, please rank their severity: 1) extremely severe, 2) moderately severe, 3) minor severity, 4) no barrier to networking**		
Personal factors	Language skills	
	Lack of personal contacts in international research networks	
	Difficulty generated by the cooperation partner	
	Lack of personal interest for international collaboration	
Administrative factors	Incompatibility of national legislation and administrative regulations which make trans-national activities difficult	
	Confidentiality and IPR	
	Lack of financial support for international cooperation	
Capacity of involved institutions	International R&D cooperation not recognised for scientific promotion	
	Lack of information exchange	
	Lack of the international communication culture	

	The access to international networks and platforms is not easy for researchers	
	Poor quality of outputs	
Other factors, please specify		

Main *lessons learnt* about knowledge diffusion / research networking, please clarify			
The INCO project:	completely	partially	not at all
Set up new channels for knowledge diffusion	☐	☐	☐
Facilitated involvement of NC into international research networks	☐	☐	☐
Intensified knowledge flows between EU & NC	☐	☐	☐
Intensified research networking between EU & NC	☐	☐	☐
Intensified innovation diffusion between EU & NC	☐	☐	☐
Strengthened cooperation between research and innovation actors	☐	☐	☐
Promoted EU Framework RTD Programme in the EU Neighbouring Countries	☐	☐	☐
Others, please specify:	☐	☐	☐

Most important *recommendations* on how to improve the support of international research and innovation cooperation, knowledge diffusion between the EU and Neighbour Countries

The analysis of the special international RTD cooperation programme - the INCO (International Cooperation) outcomes, which was introduced in FP4: interviews with INCO projects' consortium members




AQR
IREA

Utrecht University

SEED CENTER
SOUTH & EAST EUROPEAN DEVELOPMENT CENTER

CRENoS

LSE

WU

Brunel
UNIVERSITY
LONDON

Université
Jean
Monnet
SAINT•ETIENNE

UNIVERSITAS
QUINQUEECCLESIENSIS

Leibniz
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UNIVERSITY OF TARTU

STATE UNIVERSITY
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Cadi Ayyad University

ICBSS
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The Hebrew University of Jerusalem

TÜBİTAK