Evaluation and impact assessment of the ERA-NET scheme and the related ERA-NET actions under the 6th Framework Programme

[VOLUME 2]

Final Report

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Evaluation for the European Commission

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The opinions expressed in this document represent the authors' points of view which are not necessarily shared by the European Commission.

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Acronyms

CA	Coordination Actions
DG RTD	Directorate General Research
EC	European Commission
ERA	European Research Area
ERC	European Research Council
ESF	European Social Fund
FP	Community Framework Programme for Research
MS	Member States
SSA	Specific Support Actions
ToR	Terms of Reference
BE	Belgium
BG	Bulgaria
CZ	Czech Republic
DK	Denmark
DE	Germany
IE	Ireland
EL	Greece
ES	Spain
FR	France
IT	Italy
CY	Cyprus
LV	Latvia
LT	Lithuania
LU	Luxembourg
HU	Hungary
MT	Malta
NL	Netherlands
AT	Austria
PL	Poland
PT	Portugal
RO	Romania

SI	Slovenia
SK	Slovakia
FI	Finland
SE	Sweden
UK	United Kingdom

Synopsis and contents of this report

This report is the third volume of the FP6 ERA-NET Evaluation Draft Final report. It contains evidence and findings matching the Terms of Reference of the study as follows:

Q1-Q5: Key findings, as follows:

- Q1: Impact on National Research Landscapes
- Q2: Structuring effect across thematic areas
- Q3: Direct and Indirect Benefits
- Q4: Opening up of National Programmes
- Q5: Best practice and lessons learned

SD1-15: Country case studies and supporting annexes, as follows:

- SD1: Case study France
- SD2: Case study UK
- SD3: Case study Germany
- SD4: Case study Italy
- SD5: Case study Netherlands
- SD6: Case study Austria
- SD7: Case study Finland
- SD8: Case study Portugal
- SD9: Case study Slovenia
- SD10: Case study Poland
- SD11: Case study Romania
- SD12: Case study Norway
- SD13: Case study Turkey
- SD14: Case study Russia
- SD15: Case study Croatia

Appendix 1: List of Stakeholders

Appendix 2: Field work data collection: Interview guides

Q1: Impact on National Research Landscapes

Findings from the country case studies are in line with the evidence gathered from the participant and coordinator surveys - that is that the ERA-NET scheme did not have a major impact on national programmes and R&D policy. However, specific impacts have been evidenced from the case studies but these appear to be driven mainly by national circumstances. From a country perspective, these included:

- development of processes and procedures to enable R&D transnational activities to take place (Slovenia and Norway);
- making of a new funding instrument for R&D projects (Romania);
- better coordination of specific national programmes and research institutions (France and the Netherlands);
- improvement and expansion of transnational R&D collaboration and relationships in specific areas (Portugal and UK);
- enablement of a more rapid progress towards ambitions to have more strategic priorities by thematic area and internationalisation of R&D spending (Italy); and
- development of an embryo of common programming in an un-politicised environment (Germany).

Q2: Structuring effect across thematic areas

Findings from the country case studies are in line with the evidence gathered from the participant survey and coordinator survey, that is, that the ERA-NET scheme did not have a major structuring effect. However, the extent to which this is true varied according to countries:

- Overall, pre-existing cooperation has strengthened and enlarged across the ERA.
- A structuring effect tended to be evidenced in fields where participants had already a strong research position (e.g. Portugal in Life Sciences and Marine Sciences, Norway and Finland in Social Sciences, Astroparticle Physics in France, Life Sciences in Austria).
- A number of new research fields were invested in by specific countries (e.g Astroparticle Physics in the Netherlands).

Q3: Direct and Indirect Benefits

Findings from the country case studies are in line with the evidence gathered from the participant survey and coordinator survey, that is, that the ERA-NET scheme did deliver direct and indirect benefits. A long list of direct benefits can be drawn out of the case studies reflecting a positive attitude towards participation in the ERA-NET Scheme. Overall benefits reported by participants included:

- Networking with funding agencies and European scientific communities.
- Increased knowledge of scientific communities across Europe.
- Increased knowledge of and cooperation with funding agencies across Europe.
- New opportunities for collaborative research.
- Creating a critical mass at European level to undertake transnational R&D activities.
- Learning on the design of joint activities enabling transnational R&D cooperation.
- Creating a forum for discussing R&D Policy and priorities in specific research fields.

Main benefits reported in specific countries were as follows:

- **In Austria**, indirect benefits were the most valuable result of ERA-NET participation across all thematic areas and involved national institutional learning and cross-border networking with peers as well as development of trust and knowledge sharing. Several participants indicated that there had been significant value added in cross-border cooperation financed through the ERA-NET.
- **In Croatia**, main benefits for National Policy Stakeholders and Participants included networking with funding agencies from other countries, establishing new and stronger cooperation relationships, learning about the set up of R&D programming and funding in other countries to embed good practices in national programming system, and improved knowledge of the national and European science communities.
- **In France**, benefits reported included the increased reputation of research fields and related organisations in Europe and internationally, better understanding of other national programmes; and access to database of contacts and projects.
- **In Finland,** the direct benefits from participation in ERA-NETs were primarily the creation of new contacts and learning how other financiers in Europe operate and what their priorities were. In some instances, the ERA-NETs also enabled opening up of bilateral or regional programmes to wider collaboration and stimulated joint working between regional programmes.
- **In Germany,** most participants thought the majority of benefits from ERA-NET were at the level of programme managers. Indirect benefits were most prominent, with an emphasis on networking and the creation of a stable institutional structure for cross-border research.
- **In Italy,** ERA-NETs have allowed participants to gain practical experience of working together on the design and implementation of international activities, including joint calls; policy-level support for international R&D appears to have increased, probably because of the relatively high participation of Ministries; relationships with peers in other countries have broadened (beyond traditional cultural peers) and deepened (through investment in some Joint Calls).
- **In the Netherlands,** participants have benefited from the greater knowledge of other national research systems, enlarged and consolidated networks, new opportunities to conduct strategic discussions on policies and programmes, sharing of know-how on techniques available in other countries.
- **In Norway,** researchers have benefited from the scheme through increased access to greater transnational networks.
- **In Poland**, most of the identified benefits were benefits to ERA-NET Participants, in particular the learning about research policy management, commercialisation and technology transfer and building networks of contacts. Research beneficiaries found that not having to deal with administrative issues of their European partners allowed more focus on substantive issues.
- **In Portugal**, the main benefits include the increased cooperation and trust between funding agencies; increased participation of Portuguese beneficiaries in international consortia; learning from other participants on how to run large-scale international programmes and joint actions.
- **In Russia**, main benefit reported were the use of evaluation methods, project and financial management tools similar to those of the FP for the Russian Research Development Programme since 2007.
- **In Romania**, the main benefits included the better integration of Romanian Science Communities into the ERA, networking benefits leading to more opportunities for collaborative research and the enhanced visibility of Romanian research teams
- **In Slovenia**, a main direct benefit included the establishment of contacts to colleagues in other European countries.
- **In Turkey**, overall, indirect benefits were the most important benefits of the programme. They were primarily related to network building and learning about research policy and the procedures for implementation of research projects and programmes in other countries.
- **In the UK**, the main direct benefits of participation in the ERA-NETs included (1) networking and acquiring of new contacts in Europe; (2) learning about the funding mechanisms, operations and priorities of European countries; (3) helping to create a critical mass of knowledge.

Q4: Opening up of National Programmes

Findings from the country case studies are in line with the evidence gathered from the participant survey and coordinator survey, that is, that the ERA-NET scheme did create opportunities to undertake transnational cooperation activities in Europe and beyond. Evidence is scarce however when it comes to demonstrating that the ERA-NET scheme has influenced and or facilitated the funding of foreign researchers or their participation to national programmes.

- **In Austria,** virtual pots were preferred by Austrian participants for administrative reasons - funding of foreigners under an ERA-NET real common pot was more complex than doing so directly under Austria's national programme.
- **In Croatia,** no foreign individual or organisation was directly funded by Croatia. Croatian interviewees expressed scepticism towards a real common pot system due to already small budgets for R&D at the national level.
- **In France**, most funding contributions were made through virtual pots. Real common pots were extensively used but largely confined to Fundamental Sciences**.**
- **In Italy**, administrative procedures were modified in some cases to enable participation in joint calls. Most of the funding to joint calls was done through a virtual pot mode of financing.
- **In Germany,** BMBF developed guidelines for joint calls, as a result of its ERA-NET experience and stipulating a general preference for virtual pots. Real common pots were foreseen only on a case-by-case basis.
- **In the Netherlands**, no rule prevented the funding of non-resident researchers in the Netherlands and participants funded several joint calls through a real common pot.
- **In Norway,** participation in the ERA-NET scheme or individual ERA-NETs has opened up Norwegian funding to non-Norwegians or allowed Norwegian R&D money to be put into common pots in specific cases.
- **In Poland,** participants preferred the virtual pot mode of funding due to their mission to support Polish researchers.
- **In Romania,** under FP6, the preference and policy of the Romanian state was oriented towards virtual common pots. Real common pots, allowing for funding of foreign researchers or organisations, required specific approval from the Ministry of Finance and was hence regarded as too cumbersome.
- **Slovenia** contributed to 5 real common pots, which constitutes over a third of Slovenian financial contributions and can be seen as a step towards opening up of Slovenian R&D programming.
- **In Turkey,** National Turkish research programmes were not opened up to foreign beneficiaries. Turkish law specifically prohibits the funding of foreign researchers and organisations, and there is no indication of any changes in this respect in the foreseeable future.
- **In the UK**, there were no real common pots in the energy field and there was a sentiment that opening up had not been very successful in this area.

Q5: Best practice and lessons learned

The findings from the case studies are in line with evidence analyses from other sources.

A key driver for participating in the ERA-NET was to learn from one another and exchange good practices. This was an aspect that most interviewees reported to have materialised and added value. Examples of immediate effects of this knowledge-transfer is evidence in the number of case study countries adopting the practice of using international evaluation panels for reviewing proposals which had previous been done domestically. There are likely to be more long-term behavioural impacts originating in this knowledge-transfer which at

the point of evaluation was not possible to quantify. To ensure that any future schemes allow for sharing of knowledge would therefore seem justified.

Through the case studies it transpired that early agreement on common principles, procedures and definitions between participants on issues other than funding was paramount to the well-functioning of the ERA-NETs as well as their activities, including joint calls. Examples included joint guidelines, common evaluation procedures, and common application forms for joint calls or more generally joined up dissemination strategies or common glossaries of definitions.

Other areas of good practices included the importance of a good coordinator, ensuring national level coordination to avoid duplication, and the importance of achieving effective buy-in from senior policy-makers in the country, whilst maintaining a bottom-up approach.

Through the case studies there was evidence that the national research landscape (including the Member State's funding policies and political constraints) defined practices in regard to ability to engage in joint calls and what funding model to adopt. In the majority of cases this meant funding joint calls via virtual pots and targeting primarily participant countries' own researchers. To facilitate smoother implementation of joint calls, good practice would include ensuring that participants have an understanding of the relative autonomy over funding held by each participant before engaging in joint calls. This should be done hand in hand with the development of common principles and procedures as high-lighted above.

A more detailed summary of lessons learned and good practices can be found in Volume 4 of this report.

ERA-NET EVALUATION

SD1: Country Report on France

The following document provides the structure for the country report on ERA-NETs in France.

The content of this report has been informed by qualitative interviews and the findings of two surveys. The interviews were undertaken with ERA-NET stakeholders[1] in 15[2] of the 40 countries taking part in the scheme. The number of interviews by country ranged between handfuls in some countries to a couple of dozen in other countries. The same interviewees were chosen to represent thematic areas – the number of interview per theme ranged between 12 and 25 depending on the theme. The surveys were aimed at all ERA-NET coordinators and participants and responses were received by approximately half of these, although responses varied across themes and countries. In addition, and where relevant, the report has been informed by reviews of documents and websites.

Regarding the contents of this report it is important to remember that the findings described within cannot be regarded as a definitive or representative view of all activities within ERA-NETs in this country. Because the interviews were based on a narrow selection of countries and representing a minority of ERA-NETs in each theme, the contents of this report should very much be regarded as a case study that provides a view of the experience. This may also explain why the findings from the qualitative interviews are sometimes at odds with the findings of the surveys which were more inclusive and wide-ranging.

Where possible in the report, the source of evidence is indicated either as coming from one of the surveys or the field interviews.

[1] Stakeholders included National Policy Stakeholders, ERA-NET Coordinators and Participants, and ERA-NET beneficiaries.
[2] The countries were: Austria, Croatia, Finland, France, Germany, Italy, Netherlands, Norway, Poland, Portugal, Romania, Russia, Slovenia, Turkey, and UK,

Contents

0. Executive Summary - Overview

- France participated in more than 50 ERA-NETs with Life Sciences, Environment and Industrial technologies and SMEs thematic areas representing the vast majority of the thematic areas invested in.

- The engagement of French participants in the ERA-NET was a reflection of national R&D priorities (e.g. Life Sciences was an established key priority area, environment an emerging key topic, Fundamental Sciences a traditional strong-hold).

- France was the third largest contributor to joint calls after Germany and Austria, having contributed a total of €65m ERA-NET in joint calls.

Q1 – Impact on Research Landscapes

- Overall, impact of the ERA-NET scheme on French R&D policy has been limited. Movements in the national R&D landscape that took place during the FP6 ERA-NET period made it difficult to attribute changes in national R&D priorities or programming directly to the ERA-NET scheme. Impact on the national landscape was particularly limited in the Energy field (PV-ERA NET). However, some evidence of positive impact on the R&D landscape was found including:
    - better coordination between national programmes (EUROTRANSBIO, ERA-ARD);
    - enablement of specific research activities that would not have been possible otherwise (ECORD-NET, ASPERA); and
    - better access to funds and higher participation in transnational research projects of French SMEs (EUROTRANSBIO).

- For a majority of French participants, ERA-NET participation was the result of prior participation and engagement in transnational research schemes (e.g. ECORD, ERA-ARD, MARINERA, and ERA-CHEMISTRY).

Q2 – Structuring effect on specific research areas or fields

- Structuring effects on specific research areas or science field was relatively limited. However, the scheme played two important roles:
    - FP6 ERA-NET was seen as a vehicle to fund research excellence and strengthen relationships on a multilateral level;
    - FP6 ERA-NET was seen as a means for participant organisations to achieving critical mass in a number of science fields (Fundamental Sciences, Life Sciences, Industrial technology and SMEs) and fomenting transnational research among national beneficiaries.

- The additionality of the ERA-NET scheme appeared to have been very limited.

Q3 - Direct benefits and indirect benefits

- Overall, French participants derived direct and indirect benefits from their participation in ERA-NETs and these outweighed the cost of their participation. The only exception seemed to be in the Energy field where benefits tended to be more long term and less tangible.
- The most common benefits were reported to be:

- raised profile of research fields and related organisations in Europe and internationally (Ifremer, CIRAD, CNRS);
- better understanding of other national programmes; and
- access to database of contacts and projects.

Q4 – Opening up of national programmes

- Most French funding contributions were made through virtual common pots. Real common pots were extensively used, but largely confined to, Fundamental Sciences[3]. This is an indication of the relatively low degree of openness of French national programmes, except in the fundamental sciences thematic area.

- The policy of the two main funding agencies (ANR and OSEO) was to always fund transnational projects through Virtual Common Pots as they deemed Real Common Pots as difficult to achieve and counterproductive. The rationale was an imperative for accountability to Ministries and tax payers. Both main funding agencies deemed

- French participants in the Environment and Fundamental sciences area were more open to the idea of "opening up". A small part of their budget was and still is dedicated to the funding of foreign researchers or institute whenever the research undertaken is in line with French priorities.

Q5 – Best practice

- For some French Participants, the ERA-NET scheme was particularly suited to the funding of relatively small research projects and constituted a good alternative to EU Framework Programmes for SMEs with insufficient critical mass.

- Communicating to the regional government level was imperative in ensuring the participation of French SMEs.

- Thematic workshops with a relatively narrow focus were an innovative tool to identify and fund research excellence.

- Intellectual Property Rights remained problematic as transnational research and development activities could be blocked by unresolved IPR issues.

- The concept of joint programming seemed essential for structuring the ERA.

[3] Refer to the participant survey results in the annexes (Table 25).

1. Strategic national context underpinning the ERA-NET participation

1.1 Strategic planning and role of ERA-NETs in the country

The French research landscape went through major changes in the past decade. Before the creation of Agence Nationale de la Recherche (ANR) in 2005, several Ministries and research institutes were funding the French Research landscape. Each of them were involved in transnational cooperation to varying degrees mainly through bilateral agreements. After the creation of ANR in 2005, France was already well-engaged in the FP6 ERA-NET scheme and went through a prioritisation exercise to decide which ERA-NET calls to fund according to priority areas.

In the following section, the remit and involvement of the main French stakeholders are outlined.

Ministry and Education and Research
The policy orientation and remit of the French Ministry of Education and Research is given by its "Mission: Recherche et Enseignement Supérieur" (e.g. Research and Higher Education), organised in a consistent set of Programmes whose budget lines are reviewed and voted on an annual basis by the French Parliament. Overall, the budget for the research policy has gone up steadily over the period of the ERA-NET scheme. The following main programmes were mostly relevant to the French involvement in the ERA-NET scheme:

- The Programme of the Mission "Recherches scientifiques et technologiques pluridisciplinaires[4]"was relevant to the Life Science and Fundamental Sciences themes. In 2006, the budget for this Programme represented 17% of the overall budget of the Mission.
- The Programme of the Mission "Recherche dans le domaine de l'énergie[5]"was relevant to the Energy theme. In 2006, the budget for this Programme represented around 3% of the overall budget of the Mission (that is €657m). In 2008, the budget commitments (Autorisations d'engagement) to this thematic field amounted to €963m according to the ERAWATCH research inventory report for France.
- The Programme of the Mission "Recherche dans le domaine de la gestion des milieux et des ressources" was directly relevant to the Environment theme. In 2006, the budget for this Programme represented 3% of the overall budget of the Mission. The programme was implemented by six public, applied research institutes (INRA, IRD, Cemagref, BRGM, Cirad, Ifremer) whose resources come from the French State and own commercial activities.
- The Programme of the Mission "Recherche Industrielle" was directly relevant to the Industrial Technologies and SMEs theme. In 2006, the budget for this Programme represented around 3% of the overall budget of the Mission (that is €577m). The programme was implemented by the Ministry of Economy and Industry.
- The Programme of the Mission "Recherche dans le domaine des transports, de l'équipement et de l'habitat" was directly relevant to the Transport theme. In 2006, the budget for this Programme represented around 2% of the overall budget

[4] The definition of the research domain is quite large and includes the following : Life sciences, biotechnology et Health, Mathematics, ICT, micro and nano technologies, physics, chemistry, engineering, nuclear physics, astrophysics, large research infrastructures, Humanities.
[5] The definition of the research domain is quite large and includes the following : Life sciences, biotechnology et Health, Mathematics, ICT, micro and nano technologies, physics, chemistry, engineering, nuclear physics, astrophysics, large research infrastructures, Humanities.

of the Mission (that is €403m). The programme was implemented by the Ministry for Transport, Infrastructure, tourism and sea.

Ministry of Foreign Affairs

In France, the Ministry of Foreign Affairs was in charge of defining the strategy on International and European affairs. The Ministry of Education and Research also defined the strategy to engage in transnational research in conjunction with the Ministry of Foreign Affairs. The strategy was then implemented by Research Performing Organisations and Universities (Labs). The recently formed Agence Nationale de la Recherche (ANR – French Research Agency) was and is still very focused on key thematic programmes (see below) of which for instance INCO was not a part of. This implied that the ANR was less involved in geographic ERA-NETs. The Ministry of Foreign affairs was involved in INCO ERA-NETs along with the Ministry of Education and Research and research institutes through a joint coordination structure (EULANEST, ERA-ARD).

ANR (Founded in 2005)

The ANR is the French National Research Agency (L'Agence Nationale de la Recherche), a public institution which is a funding agency for research projects. Its aim is to increase the number of research projects issued from the entire scientific community, and to provide funding based on calls for proposals and peer review selection processes. Since its creation in 2005, its international cooperation policy has been based on bilateral contacts with funding agencies and research organisations (e.g. Germany, UK, US and Finland). In 2006, priority was given to European activities through participation in existing and forthcoming ERA-NETs. As a result, it participated in seven ERA-NETs and launched four transnational calls for proposals. ERA-NET activities and multilateral programme coordination were further developed and intensified in 2007 with the Agency joining three new ERA-NETs (e-Rare, Neuron, FENCO) and participating in the launching of two new multilateral calls through ERA-NET ETB and e-Rare.

The ANR addressed both public research institutions and industries. Through the call for proposals (CFP), projects were selected based on their scientific quality, as well as on their economic relevance for industries, when applicable and funding was generally awarded funded through a competitive process and through a virtual common pot mode of financing when undertaking transnational research. For the year 2007, the ANR had a total available budget of €825 million for research projects having a maximum duration of four years[6] to fund projects across the following thematic areas:

- Sustainable Energy & Environment.
- Sciences & Technologies for Information & Communication.
- Engineering, Processes and Security.
- Health – Biology.
- Ecosystems & sustainable development.
- Humanities & Social Sciences.

[6] http://www.agence-nationale-recherche.fr/Intl

CNRS

Before the FP6 ERA-NET scheme, the Centre National de la Recherche Scientifique (National Centre for Scientific Research) or CNRS already participated in transnational cooperation. It did so through bilateral agreements with key countries like Germany and The Netherlands. Before 2005, the French research landscape was mainly funded by CNRS and the Ministry of Education and Research. After 2005, the CNRS has seen its funding role slightly reduced (currently 30% of the funding for academia and research institutes come from CNRS). CNRS was involved in 16 ERA-NETs in total, 4 of which as a coordinator.

CNRS is a government-funded research organisation, under the administrative authority of France's Ministry of Research. CNRS main's functions can be summarised as follows:

- To evaluate and carry out research and promote research results.
- To participate in the analysis of the scientific climate in order to develop a national policy.

As the largest fundamental research organisation in Europe, CNRS carried out research in all fields of knowledge, through its seven institutes:

- Institute of Chemistry (INC).
- Institute of Ecology and Environment (INEE).
- Institute of Physics (INP).
- Institute of Biological Sciences (INSB).
- Institute for Humanities and Social Sciences (INSHS).
- Institute for Mathematical Sciences (INSMI).
- Institute of Information and Engineering Sciences and Technologies (INST2I).

and two national institutes:

- National Institute of Nuclear and Particle Physics (IN2P3).
- National Institute for Earth Sciences and Astronomy (INSU)[7].

OSEO[8] ***(Founded in 2005)***

OSEO was created in 2005, by bringing together ANVAR (French innovation agency) and BDPME (SME development bank), around a mission of general interest supporting regional and national policies. Its mission was to provide assistance and financial support to French SMEs and VSEs in the most decisive phases of their life cycle: start up, innovation, development, business transfer / buy out.

OSEO activity covers three main areas:

- Innovation support and funding: for technology transfer and innovative technology-based projects with real marketing prospects.
- Funding investments and operating cycle alongside the banks.
- Guaranteeing funding granted by banks and equity capital investors.

[7] CNRS encourages collaboration between specialists from different disciplines in particular with the university thus opening up new fields of enquiry to meet social and economic needs. CNRS has developed interdisciplinary programs which bring together various CNRS departments as well as other research institutions and industry. Interdisciplinary research is undertaken in the following domains:

- Life and its social implications
- Information, communication and knowledge
- Environment, energy and sustainable development
- Nanosciences, nanotechnologies, materials
- Astroparticles: from particles to the Universe

[8] The French Agency for Innovation - http://www.oseo.fr/oseo/oseo_in_english

OSEO legal structure is a state-owned holding. It reports to both the Ministry for Economy, Finance and Industry, and Ministry for Education and Research. In the R&D domain OSEO's partners are: research laboratories, universities, engineering schools and major companies, European structural funds and Community research programmes. Most of the projects that OSEO funded were in the Health Sector. OSEO was mainly involved in three ERA-NETs: EraSME, MNT ERA-NET, EUROTransbio.

IFREMER

Ifremer is the French National Institute for Exploitation of the sea. Its type of research mainly revolves around "societal research". Its addresses most of all the marine sciences fields : Marine Environment, Fisheries, Aquaculture, Innovation, physical oceanography, marine technology. It is also in charge of the means to go at sea (e.g. research infrastructure). The involvement in and commitment to international R&D cooperation reflected Ifremer's long term strategy. For instance, in 2008, Ifremer was involved in close to 200 EU related research projects. The Institute has been involved in transnational R&D cooperation for many years before the ERA-NET scheme[9]. It has participated in four ERA-NETs (i.e. Marinera, ECORD, Marifish, AMPERA).

ADEME

ADEME is the French Environment and Energy Management Agency. It is an industrial and commercial public agency, under the joint supervision of French Ministries for Ecology, Sustainable Development and Spatial Planning (MEDAD) and for Higher Education and Research. Its mission was about encouraging, supervising, coordinating, facilitating and undertaking operations with the aim of protecting the environment and managing energy. Main priority areas included energy, air, noise, transport, waste, polluted soil and sites, and environmental management. Its budget in 2009 amounted to €638 million (a €557-million action budget (funding) and an operating budget of €81 million).

Before FP6 ERA-NET, Ademe had no contact with a network of European countries but was engaged in funding transnational research through bilateral cooperation agreements (mainly with Germany). ADEME managed, financed and developed research and technological innovation in the fields of energy and the environment. The agency was also contributing to the establishment of a European research centre dedicated to these fields. In an expansion of its missions, ADEME is now a key player in the area of sustainable development at the European and world levels. In close collaboration with its supervisory ministers and varied network of partners (ministries and public organisations, local authorities, companies, NGOS and so on), the agency has extended its expertise to emerging and developing countries in addition to industrialised nations[10].
ADEME, as a National Contact Point (NCP), promoted the European Union's 6th Framework Programme for Research and Development amongst the French scientific community and the eco-enterprises with regards to its components on energy (sustainable energy systems 810 M€) and the environment (global climate changes and ecosystems 700 M€). The FP6 (2002-2006) ended with significant contribution from French research which was in turn allocated budgets of 80 M€ for energy and 90 M€ for the environment.[11]

[9] According to Ifremer's Marine research is not an important priority for France as opposed to Portugal, Norway, Netherlands. Priority is on Health, Energy, Agriculture.

10 The agency contributes to :

- Implementing European policy and developing the European research centre in the energy and environmental sectors.
- The En R Club, a European network of national energy agencies.
- Constructing a wider Europe (particularly with regard to Bulgaria, Romania and Turkey).
- Cooperative efforts in the Mediterranean region: ADEME has enjoyed long-term relationships with its counterparts in Algeria, Morocco, Tunisia and Lebanon, and is a member of the Mediterranean Association of National Energy Management Agencies.
- Cooperation with Southern nations (particularly those in French-speaking Africa and Asia) as part of the international framework agreements on sustainable development and the fight against climate change.

[11] http://www2.ademe.fr/servlet/getBin?name=22F870CF6433724A37EFDEFFE51E854E1227881709361.pdf

The role played by ADEME in terms of stimulating and coordinating French research in its given sectors of expertise has led it to take part in seven ERA-NET projects on the themes of photovoltaic energy (PV ERANet), innovative technologies (INNER), bioenergy research and development (BIOENERGY), biotechnology industries (ERANet IB), contaminated sites (SNOWMAN), coordination of research, technologies and environmental policies (SKEP) and climate change (CIRCLE). The topic of photovoltaic energy was one of the key R&D topics in energy law and hence one of key priorities for Ademe.

CIRAD

CIRAD played an active role in European research programmes addressing sustainable development challenges. It ensured that its target—to contribute to development in tropical and subtropical countries through agricultural, forestry and agri-food programmes—remained a European research priority. CIRAD involved its partners in developing countries in every operation undertaken in the course of its mission. The field of Agricultural Research for Development is a key field for France. Several research institutes were involved in the field such as for instance CIRAD, INRIA, IRD as well as three Ministries[12].

The Ministry of Education and Research, Ministry of Agriculture and the Ministry of Foreign Affairs were involved through the Commission for international cooperation and agricultural research, an entity that coordinates research organisations in this specific domain in France (e.g. CIRAD, INRIA, IRD) and which was especially set up 2 years ago. The French Ministry of Education and Research was involved because of its strategic interest in the field of Agriculture and International Cooperation. The CIRAD was involved as the Coordinator in this ERA-NET.

Before the start of ERA-ARD, France was already active in the EIARD[13], a political coordinating body at European level, and in the European Forum on ARD, which aims to improve the networks of the European research community in Agricultural Research for Development[14]. CIRAD has been active in the field for more than 20 years. France dedicated €217m to this field of research in 2005.

Other French participants involved in ERA-NETs included, but were not limited to, the following organisations:

- Ministries
    - Ministry of Economy, Finance and Industry.
    - Ministries for Ecology, Sustainable Development and Spatial Planning (MEDAD).

[12] Agricultural research for development is an integral part of development aid and meets political objectives. It is also dependent on the national research policy which is determined by the Ministry of Research and implemented via the ANR (the National Research Agency), along with the Ministry of Agriculture and the Ministry of Foreign Affairs. The Inter-ministerial Committee for International Cooperation and Development (CICID) gives guidance on the main political orientations and the allocation of the development aid. In 2005, CICID validated three strategies with direct relations with ARD: "water and sanitation", "agriculture and food security", "biodiversity and environmental protection". CICID favours joint research units between scientists and institutions from France and the South. Implications for international cooperation are coordinated by the Commission for International Agricultural Research (CRAI). Members of CRAI are research organizations and the Ministries of Higher Education and Research, of Agriculture and Fisheries and of Foreign Affairs. The CRAI is the official representative of France within the European Initiative for Agricultural Research for Development (EIARD) and the CGIAR bodies.

13 EIARD is a policy instrument aimed at promoting co-ordination among its 18 European members -the 15Member States of the Union, as well as Norway, Switzerland and the European Commission. It stimulates information exchange, concertation, exploratory studies for policy development: It contributes to improvements of equal partnerships between Europe and developing countries among all the actors in agricultural research for development. The purpose of EIARD is to enhance the impact of investments and to intensify co-ordination between its 18 Partners and within the States and the Commission, both at policy and operational levels. Furthermore EIARD seeks to complement Research and Development policies and their instruments. It strives to stimulate a more active European role and more prominence in the international dialogue, and aims to achieve more coherence in policies and activities as well as complementarity, synergy and cost-effectiveness.

[14] http://www.dainet.de/european-forum

    - Ministry for Transport and Infrastructure.
- Research Institutes
    - CEA – French Atomic Energy Commission (Nano-Sci-ERA).
    - CNRS - National Center for Scientific Research (ERA-Sys- BIO, Neuron, Nano-Sci ERA).
    - GIS-Institut des Maladies Rares (E-RARE).
    - INSERM - National Institute for Health and Medical Research (Neuron).
    - Institut Pasteur - a foundation for research and public health (Pathogenomics).

1.2 Motivations for joining ERA-NET and set up

Motivations for joining ERA-NET varied according to organisations and thematic areas. Overall, participants were mainly looking for operational and financial synergies as a result of their participation. Other reasons mentioned included gaining access to knowledge, good practices, increased international reputation or access to more funding. It is to be noted that for the majority of organisations, ERA-NET participation was also the result of prior participation and engagement in transnational research schemes (e.g. ECORD, ERA-ARD, MARINERA, and ERA-CHEMISTRY).

Organisational rationale

In terms of organisational rationale, ANR was very careful in deciding on whether or not to participate in an ERA-NET. In line with its overall policy, ANR only participated in ERA-NETs aiming to fund joint calls in its thematic areas as it was mainly interested in funding research projects. Other criteria for participating in the ERA-NET scheme were as follows:

- sharing best practices and networking with other agencies (especially relevant since the agency is in its infancy);
- providing an efficient framework for high level transnational project funding;
- giving access to high potential mixed cultural teams; and
- gaining access to experts in other countries and to strategic topics.

OSEO's strategy was focused on supporting innovative SMEs. Hence it did not have a strategy by thematic areas. The idea of getting involved in the ERA-NET scheme was to secure the funding for collaborative and transnational projects so as to find European partners for French SMEs. Other reasons for ERA-NET participation included:

- developing and funding collaborative projects with other agencies; and
- sharing risks and costs of innovative projects.

Rationale by thematic area

In terms of rationale relative to thematic areas we can observe the following:

INCO

France was already active in transnational cooperation research schemes through bilateral and multilateral agreements. ERA-NET participation in this field was seen as a mean to broaden transnational research networks across geographies or a specific research field.

In the specific case of ERA-ARD, the field was already well integrated and truly international, notably at a political level through EIARD, and at operational level through ECART[15] before the start of the ERA-NET. CIRAD was interested coordinating and streamlining research efforts by European countries already active in the field in order to improve the resulting impact of combined efforts. A second rationale was to promote

[15] European Economic Interest Grouping ECART was created in November 2004.

further the field of Agricultural Research for Development in Europe. A third rationale was to bring more coherence in this field of research between this ERA-NET and other initiatives (e.g. ERA-ARD was the corresponding feature at the programming level of EIARD).

As for EULANEST, it built on the achievements of the previous SSA INCONET (contract ERAS-CT-2004-011821) that created a network of EU Member States interested in coordinating their national activities on international scientific cooperation between the EU and Latin America. INCONET also identified the opportunities for further cooperation between the EU national programmes on international scientific cooperation that were deployed within the proposed Co-ordination Action EULANEST. France was already involved in the region through bilateral schemes with more than eight Latin American countries and was interested in pursuing further international cooperation research activities in this geographic area.

For the anecdote, one ERA-NET participant mentioned that "Geographic ERA-NETs" were useful to inform research institutes on specific developments and gather intelligence on what is going on".

Environment

Through its participation in Marine ERA-NETs, Ifremer was mainly interested in building capacity, pulling resources with other participants, generating more networking opportunities and promoting Marine Science research in Europe and beyond. Here again historical involvement in the field was paramount. For instance, the thematic focus of ECORD was fully aligned with the ones of the Institute and National priorities[16]. The objective for Ifremer in this ERA-NET was to establish a network of excellence for deep sea floor observatory and position itself as an Institute of reference in the field[17].

Energy

Ademe's strategy was to further engage in transnational research project in this field to reduce duplication of efforts and fragmentation. Before PV- ERA net there was a PV-EC NET which was already a network of countries interested in PV technologies. The awareness of ERA-NET scheme came from the already constituted consortium in PV-EC NET[18].

Fundamental Sciences

For CNRS, ERA-NETs were a way to formalise what was already taking place in other European / International fora and at bilateral level. For instance ERA-Chemistry was created under both the influence of CERC3[19] and the FP6 ERA-NET initiative. It offered a formal framework through which to lead on transnational and joined up research projects (the move made CERC3 evolved from a club to a specific and integrated structure). The rationale for participation in Aspera was similar with the exception that CNRS was also interest in CNRS interested in rationalising budgets allocated to research infrastructures.

[16] For evidence please refer to Contrat quadriennal Etat-Ifremer 2005-2008 – p.21

[17] NB, only Ifremer participants have been interviewed for this thematic area.

[18] PV-ERA-Net was also very much aligned to the photovoltaic programme of the ANR. The programme has been co-financed by ADEME from 2005 to 2007. Since 2005, support for energy technology has amounted to €209m, of which €121m supports new energy technologies (hydrogen, bio-energies, and photovoltaic solar). Most of the research on new technologies has been focused on hydrogen and fuel cell (€72m, that is 62% of earmarked aid).

[19] There was a pre-existing network of decision makers in the fields of chemistry in Europe called CERC3 since the 1990's. CERC3 was in charge of strategy in this thematic field. The early CERC3 initiatives have turned out to be a useful tool to foster European cooperation in chemistry research. However, mainly because of big deficits in the mutual knowledge of the different national funding systems there are still many gaps and weaknesses in the interaction between the different parties. CERC3 was welcoming a standardization of national processes and procedures at European level.

2. Overview of participation

2.1 Extent of involvement in the ERA-NET scheme

France participated in more than 50 ERA-NETs with Life Sciences, Environment and Industrial technologies and SMEs thematic areas representing the vast majority of the thematic areas invested in. The engagement of French participant seemed to be determined by the national R&D priorities for instance Life Sciences was a key priority area for France whereas Environment was an emerging topic where France was willing to engage in internationally. Last Fundamental Sciences is a research field where France has a strong position and this was also in reflected the extent to which France participated in the ERA-NET scheme.

In terms of contribution to joint calls or joint programmes, France was the third contributor to joint calls after Germany and Austria. France contributed to more than €65m to joint calls in total[20].

[20] Refer to Coordinator survey results in the Annexes (Tables 23 to 25).

3. ERA-NET processes and positioning

3.1 Inputs into the ERA-NET scheme

The participant survey highlights that a short majority of French participants (52%) reported that EC funding did not cover all the time and resources their organisation invested in participating in the ERA-NET[21].

This is somewhat consistent with the evidence gathered through the fieldwork. Overall, French participants did have to recruit or invest in additional resources to engage in ERA-NET activities. Most participants tended to rely on additional HR resources to go through their work programmes. However, the costs of these additional resources tended to be covered by EC funding.

- ANR for instance, relied on one FTE to handle its participation in multiple ERA-NETs.
- OSEO had to recruit especially to handle their participations in various ERA-NETs (e.g. 1 ½ FTE for EUROTRANSBIO).
- Research Institutes like Ifremer[22] and CNRS hired one Programme Manager per ERA-NETs to manage their participation in operational activities and tended to involve another FTE to coordinate ERA-NETs.
- French participants in ERA-ARD relied on their existing human resources already in place in the Ministries and CIRAD. Intra-national coordination was difficult for this specific theme due to the broad nature of the theme: Agriculture and international development and the different remits of the Ministries in charge of this subject (Foreign Affairs, Agriculture, Cooperation, international development).
- Ademe did not put additional resources to participate in PV ERA-NET other than the 4 FTE per year involved in the related national programme.

In terms of joint calls, France invested more than €65m in total in the ERA-NET scheme, as already stated. More than half of the overall contributions went to the Life Sciences thematic area (e.g. €37m) while the other half was more or less distributed across the three main thematic areas France invested in: Fundamental Sciences, Environment and Industrial Technologies and SMEs.

Specific feedback from the interviewees is as follows:

- In the Life Sciences field ANR participated in all joint calls organised by the ERA-NET it participated in (NanoSci-ERA, Pathogenomics, ERAsysBIO, E-Rare, EUROTRANSBIO[23], NEURON). The financing mode was a "Virtual Common Pot". Real common Pots were not an option because of legal reasons and past experience[24].

- In the Industrial technology and SMEs field, OSEO contributed to joint calls in all the ERA-NETs it was involved in EraSME, MNT ERA-NET, EUROTRANSBIO, and INMARTECH. This was coherent with its remit that is to fund French SMEs.

- In the fundamental Sciences field, CNRS had more flexibility in funding joint calls. For instance it funded calls in ERA-CHEMISTRY via a mixed mode of Virtual Common Pot and Real Common Pot (respectively 66% and 33%). French

[21] Refer to participant survey results in the Annexes (Table 3).
[22] In the specific case of ECORD funding covered the cost of participation.
[23] Note that OSEO was also involved in funding joint calls in this ERA-NET.
[24] CNRS funded a project under NanoSci-ERA via a Common Pot model. Funds did not benefit directly to French Research Institutes / researchers and this was seen as negative experience.

researchers were successful in 3 of the 9 projects funded under the first call in ERA-CHEMISTRY. In Aspera, a pilot called was scheduled to take place in 2009. The financing mode was a virtual common pot and overall contributions were estimated to €5 m in total. The French participant mentioned that a real common pot would have led to less funding contributions since national budgets were earmarked for the national use.

- In the Environment thematic area, Ifremer did not contribute to joint calls organised in Marinera due to changes in the research funding landscape in 2005 and the subsequent redefinition of the funding policy at national level. However, for ECORD Ifremer participated in the joint programme and contributed to calls with resources in kind.

- In the International cooperation field, CIRAD did not participate in joint calls in this area although it was the coordination of ERA-ARD. The reason for this non-participation is due to changes in the research funding landscape and the subsequent redefinition of the funding policy at national level. The participant also mentioned legal problems to fund research outside France, where Virtual Common Pots are the only viable option for research institutes in this field.

- In the Energy thematic field, Ademe did not contributed to joint calls in PV ERA-NET [25].

3.2 Participation in joint activities, calls or programming

According to the participant survey, more than half of French participants took part in an action plan taking up common strategic issues and preparing for joint activities (86%), coordination/clustering of ongoing nationally funded research projects (57%), and benchmarking and common schemes for monitoring and evaluation (51%). Percentages for these joint activities differ slightly when compared to country grouping average[26].

Joint activities also differed according to the thematic field of the ERA-NETs. Some issues highlighted by interviewees will be explored in the following sections.

Fundamental Sciences

The French coordinator and participant in ERA-CHEMISTRY were involved in setting and designing workshops around hot topics. The goal was to pinpoint research excellence in Europe in this field by inviting junior and senior researchers. These workshops generated the subjects of joint calls organised in the ERA-NET and allowed to the identification of constraints relating to procedures and processes. The French participant participated in three calls: two thematic calls, and one open call. A conference was also organized "flash conferences" across four different themes to discuss specific topics in this science field. Joint calls were also launched under this ERA-NET in which the CNRS participated (see previous section).

The French coordinator and participant in ASPERA were involved in investigating on the status of astroparticle physics in Europe, establish a roadmap and action plan and establish a scheme to share and manage research infrastructures across the participant countries. This was in line with intended rationale for participation of CNRS in this ERA-NET.

Life Sciences

[25] Two agencies in France are funding PV research, Ademe (traditional funder) and since 2005 ANR funding the aspects of basic research in the photovoltaic field.
[26] Refer participant survey result in the annexes (Table 4).

ANR was involved in the activities of the ERA-NETs it participated in to a large extent. Although ANR benefited from joint activities, its rationale for participating in ERA-NET was to fund research projects based on excellence. In EUROTRANSBIO the participants built a common programme drawing on national programme and national procedures in existence where a national process was kept to engage with the network of SMEs and other national stakeholders. They have also built a funding tool which was regarded as a factor of success in the ERA-NET. As stated above OSEO participated in joint calls organised by EUROTRANSBIO.

INCO

IN ERA-ARD, French participants took part in a mapping exercise, designing the web site, running surveys to find out more about the science field. They were also involved in the identification of common issues through a strategic document, planning monitoring and evaluation for ARD, developing methodologies and conducting a foresight study on what could be the role of ARD. Last, a large conference in Brussels was organised to bring attention to this theme at ERA-Level.

Environment

In Marinera, Ifremer coordinated and participated in the following activities around infrastructure funding mechanisms, mapping of research objectives, gap analysis between research objectives and processes for funding infrastructures and joint calls. In ECORD Ifremer participated in workshops and strategy exercises to set the overall direction of research field[27].

3.3 Lessons learnt and best practice

Via the participant survey, French participants generally reported that the Barcelona 3% targets and more strategic R&D programming helped the effects of their organisations' participation in the ERA-NET.[28] In addition, the majority of French participants reported that national thematic programming priorities and perceptions of benefits were not a problem in exploiting the full potential of their organisation's participation in the ERA-NET while a strong minority of them thought that National legal programme conditions were a problem that was not overcome. Percentages for these factors differ slightly when compared to country grouping averages[29].

Lessons learned and best practices from interviewees are summarised as follows:

- For ANR, Intellectual Property Rights remained an issue. Transnational research and development activities could be blocked by IPR issues. For instance some private companies were not willing to participate because of complex IPR issues. The participant survey showed that 23% of French participant thought that this was a problem that was not overcome[30].

- For ANR, common legal framework for patents and licenses was and is still problematic.

- For OSEO briefing the regional government level was key to ensuring the participation of SMEs. FP6 ERA-NET was also a very good alternative to Framework Programmes since not all the SMEs were and are able to join the consortia because of the size required and competitive criteria.

[27] NB, only Ifremer participants have been interviewed for this thematic area.

[28] Refer to participant survey results in the annexes (Table 19).
[29] Refer to participant survey results in the annexes (Table 22).
[30] Refer to participant survey results in the annexes (Table 22).

- Some participants needed time to digest the wealth of information generated and had difficulties to devise a common strategy / identify common issues (EULANEST).

- Future EU instruments could build on existing bilateral agreements.

- The concept of joint programming is essential for structuring the ERA.

- One participant especially mentioned that "The National Science Foundation in the US could be a model to shape a transnational research organisation at European level bringing together the landscape of EU's RFO and RPO as well as national systems."

- For INCO ERA-NETs, a few leading EU countries could take the lead to engage with specific regions / countries and coordinate efforts.

Interestingly, one French participant mentioned that good practices may not be transferable to other national contexts.

4. ERA-NET benefits

4.1 Direct and indirect benefits to ERA-NET national policy stakeholders and participants

Overall, French participants derived direct and indirect benefits from ERA-NET participation. The only exception seemed to be in the Energy field where benefits tended to be more long term and less tangible.

The direct and indirect benefits of ERA-NETs for ANR are as follows:

- ERA-NETs were a good tool to finding partnerships, networking with funding agencies and experts as well as for launching calls. Note that ANR did not have the budget to conduct an extensive amount of networking activities across Europe.
- ERA-NETs were a good tool to fund excellent research projects and find common areas where to collaborate.
- The Agency learnt about new practices on how to fund transnational call and perform benchmarking activities.
- The agency increased the portfolio of transnational research project funded.
- FP6 ERA NET participation has Increased ANR visibility.

The direct and indirect benefits of ERA-Nets for OSEO could be found in:

- The ability to build a network of EU agencies (e.g. ways of working, building partnerships).
- Exploiting the network to find opportunity for SMEs and get their partners funded.
- Exploiting the network to find research project opportunities close to the market (e.g. dedicated to small consortia).
- Develop managerial skills of the SMEs to undertake transnational research project (Participation in ERA-NETs mean that these SMEs could be participating in FP7 projects with greater confidence and apply to funding with a much higher success rate).

Direct and indirect benefits of ERA-Nets in the international cooperation thematic area for French participants included:

- The role ERA-NETs played in the recognition of certain research field at European and International level (ERA-ARD, EULANEST).
- The role ERA-NETs played in being a "stairway to joint programming" (ERA-ARD).
- Methodological developments (planning, monitoring, evaluation for international research) that could be applied to the whole thematic area.
- Knowledge of funding and policy instruments in other countries (ERA-ARD).
- Connecting national programmes (ERA-ARD).

Direct and indirect benefits of ERA-Nets in the energy thematic area for French participants included:

- Benefits appeared to be for the whole community as Ademe did not experience direct benefits.
- In the field of PV, the benefits were on the long term rather than on the short term.
- Ademe gained a good understanding of what was happening in neighbouring countries (e.g. through discussion fora, exchange of information, database of contacts, current research projects).

- Benchmarking benefits[31].
- The absence of DG Research in workshops was regrettable. PV ERA-NET participants were not consulted with regard to defining FP7 priorities in the field
- Multiple ERA-NET participation did not bring particular benefit to Ademe.
- The benefits are not strong enough to justify continuing transnational activities around this ERA-NET without EC funding.

The Direct benefits of ERA-Nets in the Environment thematic area for French participants can be summarised as follows[32]:

- The fact that Ifremer was chosen to represent the French Ministry of Education and Research has increased Ifremer's standing and reputation in Europe.
- Ifremer has demonstrated that it was and is able to operate at all levels of government and as well as internationally.
- Ifremer is now very successful in bidding for EU calls since it has acquired a good reputation with regard to the ERA-NET – approached by multiple consortium in order to take part in EU funded projects.

The Direct benefits of ERA-Nets in the Fundamental Science thematic area for French participants can be summarised as follows:

- ERA-NET participation generated innovation / inventiveness with regard to collaboration actions: the focus was on scientific excellence as well as tangible actions that added value.

- Sharing of expertise and know how.

- ERA-Chemistry has been taken as a model to coordinate actions in the Chemistry domain at International level (IUPAC).

- In the US the National Science Foundation applied the ERA-NET model. It is a concept that works to identify excellence.

[31] For instance participants realised that Denmark had no programme per se but that it was funding a similar number of projects than its European counterparts. This was due to their definition of programmes and projects.

[32] This is based on interviews of Ifremer participants (i.e. Ifremer was involved in 4 FP6 Environment ERA-NETs out of 15).

4.2 Direct and indirect benefits to ERA-NET beneficiaries

French participants were on average more prone than both other large EU-15 countries and the average participant across all themes to claim that ERA_NET participation had allowed new groups of national researchers to take part in transnational projects[33].

Little evidence has been gathered on benefits to ERA-NET beneficiaries. However, interviewees mentioned the following benefits:

- Expanded personal contacts with network of researchers in Europe.
- Joint calls under the ERA-NET scheme addressed a real need for funding transnational collaborative research at smaller scale (there is no other tool to do that).
- Managed to create a long lasting collaboration between researchers.
- The ERA-NET scheme created a window of opportunity to collaborate with another country.

[33] Refer to participant survey results in the annexes (Table 21).

5. Impacts on national and international R&D policy and programming

5.1 Impact on national R&D policy

The impact of ERA-NET on the French R&D policy has been relatively limited. Landscape changes that took place during the FP6 ERA-NET period make it difficult to attribute a direct effect of ERA-NET on national R&D priorities and programmes.

This is reflected in the results of the participant survey: Participants were split on the issue of whether their organisation's involvement in the ERA-Net influenced national research policy beyond the theme of the ERA-NET[34]. However French participants were less likely to report an influence on national research policy than their counterparts in EU 15 large country grouping. In addition, one interviewee mentioned that as far as France is concerned the number of coordination actions and the volume of contributions were too small to have had a major impact on the French R&D policy.

However, the ERA-NET scheme has had small impacts on R&D policy level worth mentioning:

- FP6 ERA-NET was seen as a vehicle to fund research excellence and strengthen relationships on a multilateral level.
- FP6 ERA-NET was seen as a mean for participant organisations to achieve critical mass in a number of science fields (Fundamental Sciences, Life Sciences, Industrial technology and SMEs) in order to take part in transnational research.

5.2 Impact on national R&D programming

A distinctive feature of the influence of ERA-NET on French National Programmes is that it had lesser impact than for other EU 15 large countries. This is demonstrated by the percentages for "influence" being systematically below the averages of other countries (EU 15 and overall)[35].As for other countries, the scheme had most influence when it comes to generating new opportunity to enable transnational R&D activities in the theme of the ERA-NET.

Impact reported by thematic areas varied along the following lines:

In the Environment theme, Ifremer discovered itself very well suited to the joint programming concept as a result of multiple participations in ERA-NETs. This was particularly the case in MariFish and ECORD where Ifremer promoted joint calls and joint programming actions. The consequence of coordinated research efforts was that it led Ifremer and its partners to achieve a higher utilisation of their research infrastructure. It also enabled the Institute to enter into new fields of Research. For instance, ECORD played a major part in providing access to new fields of research in ice-covered areas and shallow waters.

In fundamental sciences and according to a French participant, the impact of the FP6 ERA-NET Scheme on national procedures has been limited, at least not as important as initially desired or envisaged. This was due to national customs, structures, and legal frameworks. The speed at which the procedures and processes were changing was extremely slow. Evidence of this is that issues related to national procedures have been worked around rather than properly addressed. At the level of CNRS, ERA- chemistry has become the

[34] Refer to the participant survey results (Table 18).
[35] Refer to the participant survey results (Table 7)

biggest action of the chemistry department. ERA chemistry is a key vector of essential actions and hence in the French research policy.

In the thematic field of International cooperation, one national stakeholder was of the view that the impact of ERA-NETs at national level is too soon to be evaluated. However there was still significant room for improvement to coordinate national efforts in the thematic area. However, in the area of Agricultural Research for Development, some evidence of a structuring effect were given by the fact that the coordination of existing national programmes had taken place through joint activities. More specifically common approaches and programmes have been made more coherent with relation to:

- Capacity development of human resources
- Agri-food-chain safety
- The development of a new monitoring and evaluation system for international research

In the thematic area of Life Sciences, the impact of ERA-NET was tangible. On one side there was evidence that coordination across national programmes took place in the domain of the ERA-NET (EUROTRANSBIO). On the other side, on OSEO's partners are now more aware of the opportunities for collaboration at European level and are increasingly seeking for funding opportunities outside France.

5.3 Opening up on national R&D programming

In France most of the funding contributions were made through virtual common pots. Interestingly, real common pots were extensively used in the Fundamental Sciences thematic area but hardly anywhere else[36]. This is an indicator of the relatively low degree of openness of French national programmes, except in the fundamental sciences field.

OSEO and ANR's policy was to always fund transnational projects in a Virtual Common Pots mode of financing. The rationale being this policy was the imperative of accountability to their Ministries and to tax payers. However, both organisations were actively looking for opportunities to fund transnational projects whenever they saw some value in them. When it comes to funding of foreign national researchers or Institutes both research funding organisations deemed Common Pots as difficult to achieve and counterproductive

French participants in the Environment and Fundamental sciences were more open to the idea of "opening up".

- Ifremer's guiding principles in terms of undertaking joint research was to use the scientific capacity of other institutes or universities which contribute to Ifremer priorities[37]. In 2005, Ifremer proposed to extend this principle to non-French institutes and universities. In 2008, €3m (out of a total budget of c. €160m) were earmarked for funding foreign researchers or foreign institutes. The type of project funded are typically 4-year research projects funded through common pots with funding contribution ranging from €30.000 to €100.000 max per project.

[36] Refer to the participant survey results in the annexes (Table 25).

[37] Ifremer was more open to coordinate national programme budgets to undertake scientific explorations for the benefit of the whole scientific activity (e.g. in ECORD). Ifremer was and is still keen on combining national budgets (i.e. basic research funding) to fund Research Performing Organisations at European level. The core reason of this being that Marine Science is a strategic topic for Ifremer and that the Institute cannot meet the demands of all stakeholders in the area with a limited budget at national level.

- The CNRS applied the same principle than Ifremer at national and international level. As previously mentioned it contributed to joint calls financed through a mixed mode of Virtual Common Pot and Common Pot (respectively 66% and 33%) in ERA-CHEMISTRY.

In the International Cooperation thematic, the view from the French participant was that "in theory research performing organisation can fund research projects using Common Pots. However in practice this is not easy due to national science strategies". Furthermore "one needs a sustainable policy instrument and mechanism to organise this". "Funding research projects through Real Common Pots could be best achieved through intergovernmental mechanisms, open method of coordination (CREST, INTAS)???? as well as smaller initiatives (EFS- EURYI)".

In the Energy thematic area, the French participant was of the view that "real Common pot were too early to use and difficult to achieve, each country wanting to use public money in their own countries". The concept of "Just return" applied since there was a fear that national money would be diverted away from the national research community.

5.4 Impact on the structuring of national or international research fields

Evidence of the structuring of national or international research field is scarce. In certain areas (e.g. Fundamental Sciences, Environment, International cooperation) may have strengthened existing research networks and extent trilateral, quadrilateral cooperation to a multilateral one. Some evidence has been gathered through interviewed participant involved in ERA-ARD, ERA-CHEMISTRY, and Marine ERA-NETs where, for instance, ERA-NETs have enabled the participation of New Member States which had not established bilateral agreements in these areas with France before FP6 ERA-NET.

6. European Added Value, relevance and efficiency

6.1 Additionality of the ERA-NET scheme

The participant survey report on the additionality of the ERA-NET scheme in three instances:

- The majority of French participants reported that the ERA-NET experience led to no change in the programme budget that has been invested in transnational R&D projects outside of the ERA-NET, which is slightly above the country grouping averages[38].
- The majority of participants reported that the change in the importance of the theme was not at all due to the ERA-NET, which is below the country grouping average[39].
- The French participants were split on the issue whether their organisation's involvement in the ERA-NET influenced national research policy beyond the theme of the ERA-NET, compared to a strong minority in comparable EU 15 large country grouping and a majority of participants overall[40].

Hence according to the participant survey, the additionality of the ERA-NET scheme appears to be very limited. This is consistent with what the French interviewee reported:

ANR's perception on additionality is rather mixed. In some instances ERA-NETs demonstrated elements of additionality (e.g. e-RARE) and some where ERA-NETs did not (NEURON)[41].

OSEO mentioned that although ERA-NET had been "the" tool for funding French SMEs in the past, OSEO recently seemed to have preferred engaging with EUREKA's EUROSTARS programme. Eureka's EUROSTARS programme had a big impact at national level. There were clear similarities between the ERA-NET scheme and Eureka's EUROSTARS programme (e.g. the same kind of projects were financed through the ERA-NET scheme were funded through the EUROSTARS programme).

One positive example on additionality was reported by one ECORD participant who argued that coordinating national programme budget created synergies which have enabled them to fund specific activities that would not have taken place otherwise (e.g. deep sea drilling[42]).

6.2 Economic efficiency and relevance

The economic efficiency of the ERA-NET was well regarded as evidenced by participant survey results. For instance:

[38] Refer to the participant survey result (Table 11).
[39] Refer to the participant survey result (Table 17).
[40] Refer to the participant survey results (Table 18).
[41] Refer to next section for further information.
[42] ECORD is all about deep sea drilling and the European participation in the International Ocean Drilling Programme (IODP).

- The majority of French participants (89%) did find their participation in FP6 ERA-NET worthwhile, which is slightly under the averages for country grouping and the overall population of participants.

- The majority of French participants (56%) believed they got more out of it than expected, which is slightly above the averages for the country grouping and overall population of participants.

- The majority of French participants were satisfied with the overall level of transnational cooperation within the ERA-NET, which is above the country grouping averages.

OSEO and ANR were very careful in their approach to funding transnational cooperation. Their initial ambitions have been matched with regard to the overall of effort put in. For both funding agencies the benefits were higher than the cost of participation.

ANR is very positive overall about the cost/benefit ratio. For instance, with e-RARE, ANR's view is that Funding Agencies were able to fund research in a new domain, bring national communities together in this field of research and reduce the duplication of efforts. However, with NEURON the perception is that the added value of collaboration at European level did not materialise (i.e. this ERA-NET made no difference that if this would have been done at national level).

For OSEO, although the benefits were higher than the cost of participation, there is still room for improvement. For instance OSEO was very positive with regards to EUROTRANSBIO in terms of results but it considered that it would not have been worth it without EC funding. National funding could have targeted French SMEs at lower costs without EC participation. In the future, OSEO wishes to engage with other countries through the next generation of ERA-NET or similar European scheme[43].

In fundamental Sciences, CNRS was positive about their experience in ERA-CHEMISTRY. ERA-CHEMISTRY will continue thanks to the funding of associated partners. The model of ERA-NET has been replicated at International level[44]. Room for improvement could be found in the creation of European procedures linking to existing national procedures. However, procedure to simplify documents should be built on consensus rather than imposed on Member States by the Commission.

In the International Cooperation theme, French participants (CIRAD, Ministries) wished to remain involved in similar schemes in the future (e.g. INCO-NET and ERA-NET+ under FP7). Specifically, ERA-ARD participants have expressed a desire for ERA-ARD to continue under FP7. However, absence of funding from the EC might affect the extent of the joint activities undertaken.

The French participants in INCO ERA-NETs also mentioned that the remit of the ERA-NET scheme overlapped with the one of the INCO NET scheme and that the Commission should bring more coherence to its policy instruments to reduce potential duplication. The participants view was that research projects in this field could be best funded via Top-Down schemes like in FP7. In addition funding research projects through Common Pots could be best achieved through intergovernmental mechanisms, open method of coordination (CREST, INTAS) as well as smaller initiatives (EFS- EURYI). Last, global approaches in ERA-NETs would bring benefits especially in the field of International

[43] OSEO will be part of the next generation of ERA-NET – EUROTRANSBIO will continue for 4 years. The impact of the ERA-NET scheme has been positive overall. It is a tool tailored to small collaborative projects where SMEs can have a leading role.
[44] ERA-Chemistry has been taken as a model to coordinate actions in the Chemistry domain at International level (IUPAC). In the US the National Science Foundation applied the ERA-NET model. Quote: "It is a concept that works to identify excellence."

Cooperation where non EU countries cannot be financed by Commission earmarked funding.

In the Energy thematic area, Ademe considered the economic efficiency of PV-ERA-NET as limited. In the participant's view, bilateral or trilateral cooperation seemed to be Ademe's preferred option.

In the Environment thematic area, Ifremer participants thought that the benefits of participating in ECORD-NET have outweighed the costs (e.g. in ECORD and MArinera). The role of the ERA-NET scheme was of complementary nature in comparison to other international schemes (e.g. IODP). Last, the ESF – EUROCORES programme is very similar in nature to the ERA-NET scheme[45].

[45] Quote: "the same conflict of interest can arise between RFO and RPO when deciding which project to fund and how to fund it".

7. Annexes: Stakeholders and materials consulted

Agencies' web sites:

- French Agency for Research - http://www.agence-nationale-recherche.fr/Intl
- The French Agency for Innovation - http://www.oseo.fr/oseo/oseo_in_english

Research institutes websites:

- CNRS, http://www.CNRS.fr
- ADEME, http://www.ademe.fr
- IFREMER website, www.ifremer.fr
- CIRAD (French agricultural research centre working for international development) http://www.cirad.fr/

ERA-NET Web sites:

- http://www.nanoscience-europe.org
- http://www.erasysbio.net/
- http://www.e-rare.eu
- http://www.pathogenomics-era.net/index.php
- http://www.eurotransbio.net
- http://www.neuron-eranet.eu/
- http://www.era-ard.org
- http://www.era-neteulanest.com
- http://www.ecord.org/enet
- http://www.marinera.net

Other

- EUROSTARS - http://www.eurostars-eureka.eu/what.do
- EIARD website, http://www.eiard.org
- ECART website, http://www.ecart-eeig.org
- French Ministry of Economics and Finance: http://www.finances.gouv.fr/lolf/5_1_145.htm

8. Annexes: Participant survey results

The figures below show responses to the participant questionnaire, completed by 41 French participants.

Table 1 - What was your organisation's main rationale for participating in this ERA-NET?

	France	EU 15 - large	Overall
Benchmarking of research funding against other countries	0%	1%	**1%**
Creating and supporting transnational projects in a field which requires transnational cooperation	31%	33%	**38%**
Improving own (national) R&D programme/s	20%	10%	**7%**
Learning from funders and sharing of information between funders in other countries	15%	16%	**10%**
Networking and building new relationships with funders from other countries	25%	29%	**35%**
Not Answered	6%	3%	**1%**
Opening up of national programmes in existing or new areas of research	0%	4%	**5%**
Other	3%	5%	**2%**

The most commonly cited rationales for ERA-NET participation were creating and supporting transnational projects in a field which requires transnational cooperation (31%), networking and building new relationships with funders from other countries (25%), and improving own R&D programmes (20%), which is broadly in line with the country grouping averages reported.

Table 2 - What was the original overall amount of EC funding allocated to your organisation in your contract to participate in this ERA-NET?

	France	EU 15 - large	Overall
0 - 9999	3%	4%	**4%**
10000 - 19999	5%	1%	**2%**
20000 - 29999	14%	5%	**3%**
30000 - 39999	11%	6%	**2%**
40000 - 49999	0%	3%	**2%**
50000 - 59999	0%	4%	**2%**
60000 - 69999	0%	3%	**1%**
70000 - 79999	3%	1%	**6%**
80000 +	58%	68%	**71%**
Not Answered	6%	6%	**6%**

The majority of French organisations (58%) were allocated over €80,000 in funding to participate in the ERA-NET, which is under the country grouping and overall participant averages.

Table 3 - Did the EC funding cover all the time and resources your organisation invested in participating in this ERA-NET?

	France	EU 15 - large	Overall
Yes	41%	45%	**49%**
No	52%	49%	**43%**
Don't Know	6%	3%	**4%**
Not Answered	2%	4%	**4%**

The majority of French participants (52%) reported that EC funding did not cover all the time and resources their organisation invested in participating in the ERA-NET, which is broadly in line with the country grouping average.

Table 4 - In which ERA-NET joint activities other than joint calls did you participate?

	France			EU 15 - large			Overall		
	Yes	No	Other	Yes	No	Other	Yes	No	Other
Coordination/clustering of ongoing nationally funded research projects	57%	26%	17%	55%	24%	21%	**59%**	**19%**	**23%**
Benchmarking and common schemes for monitoring and evaluation	51%	23%	26%	62%	16%	23%	**67%**	**13%**	**19%**
Multinational evaluation procedures (common evaluation criteria and methods of implementation	59%	23%	17%	57%	20%	23%	**55%**	**25%**	**20%**
Schemes for joint training activities (so-supervised theses or common PhD schemes)	8%	48%	44%	15%	42%	43%	**12%**	**49%**	**39%**
Schemes for personnel exchange	20%	41%	39%	20%	39%	41%	**14%**	**47%**	**39%**
Schemes for mutual opening of facilities or laboratories	15%	46%	38%	18%	41%	41%	**15%**	**44%**	**41%**
Specific cooperation agreements or arrangements	40%	28%	32%	34%	33%	33%	**43%**	**24%**	**33%**
Action plan taking up common strategic issues and preparing for joint activities	86%	6%	8%	74%	13%	13%	**75%**	**11%**	**13%**

More than half of French participants took part in an action plan taking up common strategic issues and preparing for joint activities (86%), coordination/clustering of ongoing nationally funded research projects (57%), and benchmarking and common schemes for

monitoring and evaluation (51%). Percentages for these joint activities differ slightly when compared to country grouping average.

Table 5 - Overall would you say that your participation in the FP6 ERA-NET has been worthwhile?

	France	EU 15 - large	Overall
Yes	89%	93%	**95%**
No	3%	5%	**4%**
Not Answered	8%	2%	**1%**

The majority of French participants (89%) did find their participation in FP6 ERA-NET worthwhile, which is slightly under the averages for country grouping and the overall population of participants.

Table 6 - Which of the three following statements best describes your personal experience of this ERA-NET?

	France	EU 15 - large	Overall
I got more out of it than I expected	56%	50%	**41%**
I got out of it what I expected	26%	43%	**51%**
I got less out of it than I expected	11%	5%	**6%**
Not Answered	8%	3%	**1%**

The majority of French participants (56%) believed they got more out of it than expected, which is above the averages for the country grouping and overall population of participants.

Table 7 - To what degree has your participation in this ERA-NET influenced your country's national programme(s)?

	France			EU 15 - large			Overall		
	No influence	Influence	Other	No influence	Influence	Other	No influence	Influence	Other
Discontinuation of existing programme(s) in some theme(s)	50%	26%	24%	50%	35%	15%	**53%**	**34%**	**12%**
Reducing duplication between National programmes in your country	51%	25%	25%	49%	30%	21%	**46%**	**37%**	**16%**
Design of programmes with longer time horizon	47%	35%	18%	43%	45%	12%	**42%**	**49%**	**10%**
Design of programmes with shorter time horizon	52%	28%	20%	45%	39%	16%	**51%**	**38%**	**11%**
Bigger programme budgets for the theme	48%	27%	24%	39%	44%	17%	**42%**	**46%**	**12%**
Smaller programme budgets for the theme	53%	2%	45%	58%	10%	32%	**63%**	**13%**	**23%**
New programme assessment/evaluation criteria	46%	37%	17%	43%	44%	13%	**40%**	**50%**	**10%**

New opportunities to enable transnational R&D activities in the theme of the ERA-NET	12%	75%	12%	6%	87%	7%	**8%**	**85%**	**6%**
New eligibility criteria allowing funding of foreign researchers in the area	48%	24%	27%	44%	34%	22%	**43%**	**42%**	**15%**
Existing programme(s) now covering new theme(s)	48%	32%	20%	48%	36%	16%	**48%**	**39%**	**13%**
New programme(s) put in place in response to new theme(s) identified	34%	34%	32%	47%	34%	19%	**51%**	**34%**	**15%**

A distinctive feature of the influence of ERA-NET on French National Programmes is that it has lesser impact than for other EU 15 large countries. This is demonstrated by the percentages for "influence" being systematically below the averages of other countries (EU 15 and overall).

Table 8 - To what extent did your organisation have pre-existing relationships with participants in this ERA-NET prior to FP6?

	France	EU 15 - large	Overall
Prior relationships	56%	66%	**66%**
No prior relationships	30%	21%	**26%**
No answer	14%	13%	**8%**

The majority of French participants (56%) reported that they had pre-existing relationships with participants in the ERA-NET, which is significantly below the averages reported for other countries (EU 15 and overall).

Table 9 - If there were prior relationships which of the following 6 statements best describes how these relationships evolved during your participation in this ERA-NET?

	France	EU 15 - large	Overall
Strengthened	51%	63%	**63%**
Weakened	0%	1%	**1%**
No change	5%	4%	**4%**
No answer	45%	32%	**33%**

The majority of French participants (51%) believed that the relationship strengthened during the participation in this ERA-NET, which is significantly below the averages reported for other countries (EU15 and overall)

Table 10 - Has your participation in this ERA-NET triggered transnational cooperation outside of the ERA-NET?

	France	EU 15 - large	Overall
Yes	31%	32%	**31%**
No	58%	56%	**47%**

Not Answered	6%	6%	**5%**
Not applicable	5%	6%	**16%**

The majority of French participants (58%) reported that participation in the ERA-NET did not trigger transnational cooperation outside of the ERA-NET, which is broadly in line with the country grouping average (EU 15).

Table 11 - Has the ERA-NET experience led to an increase in the amount of your programme budget that has been invested in transnational R&D projects outside of the ERA-NET?

	France	EU 15 - large	Overall
Yes	9%	15%	**13%**
No change	63%	61%	**63%**
No answer	28%	24%	**23%**

The majority of French participants (63%) reported that the ERA-NET experience lead to no change of the programme budget that has been invested in transnational R&D projects outside of the ERA-NET, which is broadly in line with country grouping averages (EU 15 and overall).

Table 12 - If yes, roughly what proportion of your programme budget was transnational before your involvement in ERA-NET?

	France	EU 15 - large	Overall
0-25%	11%	17%	**15%**
26 to 50%	0%	0%	**0%**
51 to 75%	0%	0%	**0%**
76 to 100%	0%	0%	**1%**
Not answered	89%	83%	**84%**

The majority of French participants who answered this question (11%) reported that 0-25% of the budget was transnational before their involvement in the ERA-NET, which is above the country grouping average (EU 15).

Table 13 - If yes, roughly what proportion of your programme budget is transnational now?

	France	EU 15 - large	Overall
0-25%	14%	15%	**13%**
26 to 50%	0%	0%	**1%**
51 to 75%	0%	0%	**0%**
76 to 100%	0%	0%	**1%**
Not answered	86%	85%	**84%**

The majority of French participants who answered this question (14%) reported that 0-25% of the budget was transnational at the time of the survey, which is broadly in line with the country grouping averages (EU 15 and overall).

Table 14 - What provisions have been made in your country to coordinate participation in ERA-NETs under FP6? - Single national coordinator for all ERA-NETs

	France			EU 15 - large			
	Yes	No	No answer	Yes	No	No answer	Yes
Single national coordinator for all ERA-NETs	18%	53%	29%	14%	60%	26%	15%
Team of several coordinators at national level	22%	45%	34%	25%	43%	32%	24%
Coordination meetings for all national participants	27%	56%	17%	34%	41%	26%	37%
Organisation-specific coordination meetings	60%	26%	14%	50%	27%	24%	50%

The majority of French participants (60%) reported that the provision made to coordinate ERA-NET participation were organisation-specific coordination meetings, which is significantly above the country grouping average (EU 15).

Table 15 - Earlier we asked you to state your ERA-NET's theme. How important was this theme in your country's research programme before your organisation joined this ERA-NET?

	France	EU 15 - large	Overall
Very Important	48%	29%	**21%**
Fairly Important	35%	39%	**48%**
Not very important	5%	12%	**16%**
Not at all important	0%	5%	**5%**
Don't Know	3%	6%	**4%**
Not Answered	5%	6%	**5%**
Not Applicable	5%	3%	**2%**

Most French participants reported that the ERA-NET's theme was very important (48%), significantly above the country grouping average (EU 15) or fairly important (35%), slightly above the country grouping average (EU 15) in their country's research programme before their organisation joined the ERA-NET.

Table 16 - How important is this theme in your country's research programme now?

	France	EU 15 - large	Overall
Very important	48%	31%	**24%**
Fairly important	33%	43%	**56%**
Not very important	5%	11%	**11%**
Not at all important	0%	1%	**1%**
Don't know	5%	5%	**3%**
Not Answered	5%	6%	**4%**
Not applicable	5%	4%	**2%**

Most French participants (48%) reported that the ERA-NET's theme was very important to their country's research programme at the time of the survey, which is significantly above the country grouping average (EU 15).

Table 17 - If there has been a change in the importance of the theme to what extent do you think this was due to the ERA-NET?

	France	EU 15 - large	Overall
To some extent	12%	24%	**29%**
Not at all	14%	12%	**11%**
No answer	74%	64%	**60%**

The majority of French participants who answered this question (14%) reported that the change in the importance of the theme was not at all due to the ERA-NET, which is in line with the country grouping average (EU 15).

Table 18 - Has your organisation's involvement in this ERA-NET influenced national research policy beyond the theme of this ERA-NET?

	France	EU 15 - large	Overall
Influence	37%	47%	**63%**
No influence	38%	25%	**18%**
No answer	25%	28%	**19%**

French participants who answered this question were split on the issue of whether their organisation's involvement in the ERA-Net influenced national research policy beyond the theme of the ERA-NET. The percentages cited for both "influence" and "no influence" differ significantly to the country grouping average (EU 15).

Table 19 - Have any of the following external factors helped or hindered the effects of your organisation's participation in this ERA-NET?

	France					EU 15 - large					Overall				
	Helped	Hindered	No effect	Not Answered	Not applicable	Helped	Hindered	No effect	Not Answered	Not applicable	Helped	Hindered	No effect	Not Answered	
Change in programme management agency	23%	6%	23%	5%	44%	12%	7%	28%	6%	48%	**7%**	**6%**	**36%**	**4%**	
New R&D management structure	15%	3%	30%	5%	47%	14%	9%	27%	6%	44%	**11%**	**7%**	**35%**	**5%**	
For existing programmes, more strategic R&D programming/planning	30%	0%	32%	9%	29%	34%	0%	27%	9%	30%	**29%**	**0%**	**36%**	**7%**	
Externalisation of R&D programmes into agency/agencies	11%	6%	21%	5%	58%	9%	3%	29%	7%	52%	**8%**	**4%**	**33%**	**6%**	
Setting up of new types of R&D programmes	23%	3%	26%	5%	44%	29%	5%	28%	6%	33%	**24%**	**7%**	**33%**	**5%**	
Barcelona 3% targets	37%	0%	32%	6%	25%	22%	0%	38%	10%	30%	**16%**	**0%**	**39%**	**9%**	

Most French participants (37%) reported that the Barcelona 3% targets, helped the effects of their organisations' participation in the ERA-NET, which is significantly above the country grouping average (EU 15).

Table 20 - How satisfied are you with the overall level of transnational cooperation within this ERA-NET?

	France	EU 15 - large	Overall
Satisfied	92%	85%	**88%**
Unsatisfied	2%	8%	**7%**
No answer	6%	7%	**4%**

The majority of French participants (92%) were satisfied with the overall level of transnational cooperation within the ERA-NET, which is above the country grouping average (EU 15).

Table 21 - Have you seen evidence of the following effects at national level as a result of this ERA-NETs joint calls joint programming or other joint activities?

	France			EU 15 - large			Overall		
	Some evidence	No evidence	No answer	Some evidence	No evidence	No answer	Some evidence	No evidence	No answer
Higher quality projects generated at national level (i.e. higher quality proposals)	50 %	30 %	20 %	41 %	36 %	24 %	**39%**	**44 %**	**17 %**
Higher quality projects funded at national level (through joint calls/programmes)	44 %	28 %	28 %	38 %	33 %	29 %	**35%**	**42 %**	**23 %**
New types of research projects generated (i.e. reflected in proposals received)	32 %	43 %	25 %	36 %	36 %	28 %	**38%**	**42 %**	**20 %**
New types of research projects funded (through joint calls/programmes)	42 %	31 %	28 %	45 %	26 %	30 %	**46%**	**32 %**	**22 %**
New researchers (with no prior international or European experience) benefiting from joint activities	46 %	14 %	40 %	49 %	22 %	29 %	**40%**	**27 %**	**33 %**
New researchers (with no prior international or European experience) benefiting from joint calls/programmes	55 %	18 %	27 %	50 %	22 %	28 %	**41%**	**34 %**	**25 %**
Access to foreign research communities/groups not present in my country	62 %	21 %	17 %	62 %	17 %	21 %	**54%**	**28 %**	**18 %**

The majority of French participants (59%) reported evidence of access to foreign research communities or groups not present in their country, as a result of this ERA-NET, joint programming, or other activities, which is significantly above the country grouping average (EU 15).

Table 22 - Did any of the following factors either help or hinder your organisation to exploit the full potential of its participation in this ERA-NET?

	France					EU 15 - large					Overall			
	Aid to success	No problem	Problem but overcome	Problem still not overcome	No answer	Aid to success	No problem	Problem but overcome	Problem still not overcome	No answer	Aid to success	No problem	Problem but overcome	
National thematic programme priorities	20%	43%	14%	9%	14%	14%	46%	10%	15%	15%	**16%**	**46%**	**13%**	**1**
National cultures or research traditions	17%	32%	20%	14%	18%	11%	42%	15%	13%	19%	**10%**	**46%**	**15%**	**1**
National resources (staff time finances)	14%	9%	43%	17%	17%	12%	13%	33%	27%	15%	**17%**	**35%**	**26%**	**1**
National administrative procedures (e.g. evaluation rules)	11%	26%	28%	17%	18%	11%	32%	31%	12%	15%	**6%**	**25%**	**29%**	**2**
National legal programme conditions (e.g. funding of non-residents IPR)	2%	41%	15%	23%	20%	2%	44%	15%	19%	20%	**4%**	**35%**	**19%**	**2**
EC administrative procedures or legal requirements	0%	32%	30%	17%	21%	0%	45%	21%	13%	21%	**1%**	**34%**	**36%**	**1**
Perceptions of benefits	5%	42%	6%	11%	37%	14%	30%	12%	10%	34%	**15%**	**28%**	**16%**	**1**
Engagement in other transnational initiatives (e.g. COST EUREKA)	18%	32%	12%	0%	37%	18%	33%	6%	5%	38%	**12%**	**46%**	**4%**	

Most French participants reported that national thematic programming priorities (47%) and engagement in other transnational initiatives (44%) were no problem in exploiting the full potential of their organisation's participation in the ERA-NET, while most reported national resources (35%) as a problem that was still not overcome.

9. Annexes: Coordinator survey results[46]

The following tables show information from the coordinator questionnaire.

Table 23 - ERA-NET participation by theme

Theme	Number	Percentage
Transport	3	5.2%
Life Sciences	15	25.9%
Environment	14	24.1%
Fundamental Sciences	3	5.2%
INCO	4	6.9%
Industrial Technologies and SMEs	13	22.4%
Energy	4	6.9%
Social Sciences and Humanities	2	3.4%
Total	**58**	**100%**

Life Sciences, Environment and Industrial technologies and SMEs thematic areas attracted most of the French participants.

Table 24 - Joint call participation by theme

Theme	Number	Percentage
Transport	4	10.0%
Life Sciences	9	22.5%
Environment	6	15.0%
Fundamental Sciences	5	12.5%
INCO	3	7.5%
Industrial Technologies and SMEs	13	32.5%
Energy	0	0.0%
Social Sciences and Humanities	0	0.0%
Total	**40**	**100%**

Industrial technologies and SMEs, Life Sciences and Environment thematic areas channelled most of the contributions to joint calls.

[46] The Coordinator survey covered all 71 ERA-NETs - although in case of 7 ERA-NETs, the information collected dates back from the 2006 survey. 59 ERA-NETs provided information about the calls they have done over the period (NB: it is likely that not all ERA-NETs have reported call information in an exhaustive way). 49 ERA-NETs provided a breakdown of funding contributions at country level for calls (NB: this is likely to be an underestimate as not all ERA-NET coordinators knew this information)

Table 25 - Financial contribution to joint calls by theme

Theme	No contributions	€ virtual	€ common	€ mixed	Total
Transport	6	934,000	-	-	934,000
Life Sciences	15	37,058,435	-	20,000	37,078,435
Environment	9	8,921,000	-	-	8,921,000
Fundamental Sciences	5	-	9,200,000	840,000	10,040,000
INCO	4	400,000	-	100,000	500,000
Industrial Technologies and SMEs	18	5,414,000	12,643	2,371,000	7,797,643
Energy	0	-	-	-	0
Social Sciences and Humanities	0	-	-	-	0
Total	**57**	**52,727,435**	**9,212,643**	**3,331,000**	**65,271,078**

Most of the funding contributions were made through virtual common pots, real common pots were extensively used in the Fundamental Sciences thematic area but hardly anywhere else.

ERA-NET EVALUATION

SD2: Country Report on the UK

The following document provides the structure for the country report on ERA-NETs in the UK.

The content of this report has been informed by qualitative interviews and the findings of two surveys. The interviews were undertaken with ERA-NET stakeholders[47] in 15[48] of the 40 countries taking part in the scheme. The number of interviews by country ranged between handfuls in some countries to a couple of dozen in other countries. The same interviewees were chosen to represent thematic areas – the number of interview per theme ranged between 12 and 25 depending on the theme. The surveys were aimed at all ERA-NET coordinators and participants and responses were received by approximately half of these, although responses varied across themes and countries. In addition, and where relevant, the report has been informed by reviews of documents and websites.

Regarding the contents of this report it is important to remember that the findings described within cannot be regarded as a definitive or representative view of all activities within ERA-NETs in this country. Because the interviews were based on a narrow selection of countries and representing a minority of ERA-NETs in each theme, the contents of this report should very much be regarded as a case study that provides a view of the experience. This may also explain why the findings from the qualitative interviews are sometimes at odds with the findings of the surveys which were more inclusive and wide-ranging.

Where possible in the report, the source of evidence is indicated either as coming from one of the surveys or the field interviews.

[47] Stakeholders included National Policy Stakeholders, ERA-NET Coordinators and Participants, and ERA-NET beneficiaries.

[48] The countries were: Austria, Croatia, Finland, France, Germany, Italy, Netherlands, Norway, Poland, Portugal, Romania, Russia, Slovenia, Turkey, and UK,

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0. Executive Summary

Impact on Research Landscapes

- There was little evidence that UK R&D policy changed as a result of participation in the ERA-NET Scheme. Instead it has been influenced by other external and internal drivers.
- Although the impact on national R&D programming had been modest overall, the formation of some ERA-NETs (e.g. particle physics and complexity science) allowed "a European home" for these areas which had been an outcome of participation in the ERA-NET.
- Where ERA-NET participation had been aligned with national priorities, it had improved and expanded transnational collaboration and ties.

Structuring effect on specific research areas or fields

- There had been no tangible effect of structuring of research fields because the ERA-NETs largely mirrored existing programmes at national level.
- Framework Programmes overall are viewed collectively as a "bolt on" to national research priorities.

Direct benefits and indirect benefits

- The long list of direct benefits was impressive and reflected a positive attitude toward participation in the ERA-NET Scheme.
- Participants derived more benefit than policy-makers.
- Main direct benefits of participation in the ERA-NETs included (1) networking and acquiring of new contacts in Europe; (2) learning about the funding mechanisms, operations and priorities of European countries; (3) helping to create a critical mass of knowledge.
- There were fewer indirect benefits. The main one was the potential application of lessons relating to the design of work programmes and number of deliverables learnt from the current ERA-NET to the next ERA-NET.

Opening up of national programmes

- Although UK Research Councils are beginning to fund non-UK resident researchers under a set of conditions, this is not a result from involvement in the ERA-NET Scheme.
- The prevalent view among policy-makers is that "UK money is mainly for UK researchers."

Good practice

- Good practice was divided into (1) good practice in current ERA-NETs; (2) suggested good practice.
- Good practice stemming from involvement in current ERA-NETs included (1) increased willingness to cooperate and work well together; (2) the introduction of a peer review process; (3) the benefits of the high level of expertise of participants; (4) a scheme for staff visits to other agencies; and (5) outsourcing.
- Suggested good practice for current ERA-NETs was divided into (1) for improving the operation of the ERA-NET; and (2) for improving the joint call process.

- For improving the operation of the current ERA-NETs, these included (1) establishing an agreed funding model – true common pot or virtual pot? (2) ensuring timely delivery of tasks by all participants; (3) willingness to be open and clear about activities as some partners did not seem to providing full information; (4) continuing a scheme for staff visits to other agencies.
- For improving the joint call process, these included (1) establishing a criterion for drafting joint calls and to be clear about their objectives and terms of reference; (2) simplifying the information on application forms; (3) building a realistic time table for delivery; (4) providing more feedback to unsuccessful applicants.

1. Overview of participation

UK participation in the ERA-NET scheme was high with participation in about 70% of existing ERA-NETs.[49] Interviews with British participants and policy makers confirmed this view. The overall enthusiasm for participating and the benefits derived from ERA-NETs are testimony to the high rate of participation. UK contribution to the ERA-NET Scheme was estimated at about €42 million (about €25 million to a virtual pot; €15 million to a common pot, mainly contributed by Research Councils, and about €2 million to a mixed pot.)

1.1 Extent of participation[50]

For the purposes of this Report, 10 ERA-NETs in which the UK participated were sampled and the participants interviewed. Out of the 10 ERA-NETs, nine were participants with one as a coordinator (see Annex.) Four of the current participants were involved in the formation of their corresponding ERA-NET.

The ERA-NETs in question covered a spectrum of themes, including:

1. Fundamental Science
2. Energy
3. International Cooperation
4. Life Sciences)
5. Social Sciences
6. Transport

In addition to the participants of the ERA-NETs, interviews were also conducted with four selected senior policy-makers. Three were from the Department of Innovation, Universities and Skills, and one from the Department of the Environment, Food and Rural Affairs.

The participants came from a mix of Government departments and Research Councils. Participants in the ERA-NET scheme were mainly from middle to upper management in each of the Departments or organisations. The majority of participants from Government departments have PhDs and they are experts in the corresponding areas. For instance, the participant in ERA ARD is involved in several national initiatives in agricultural research for development, and sits on a number of international committees, such as of the World Bank, for promoting this area of activity.

Similarly, the participant in AirTN is a high level member in the Group on Aerospace and Technology Research in Europe, which is a Memorandum of Understanding between seven European Countries to promote collaboration in military and civil aerospace research. The same participant is also involved in the European Aeronautics Technology Platform initiative and is a committee member of the FP7 Transport Program Committee. This level of expertise involved in participation reflected a certain degree of "seriousness" in participating in the ERA-

[49] See http://cordis.europa.eu/coordination/era-net.htm

[50] See Table 23.

NETs, despite the rather low level of time allocated to the tasks of each ERA-NET (more below on this).

Similarly all participants from the Research Councils involved have PhDs and are specialists. However, given the staff rotation policy in the Research Councils, stability of Research Council participation was somewhat an issue. The Research Councils have a policy to rotate or reassign their staff to new tasks. As a result, the participants who were interviewed were either relatively newcomers to the ERA-NET, taking over from the predecessor, or had left the ERA-NET to take up other responsibilities in the Research Council. This problem notwithstanding, the interviewees provided well-considered views on the problems and benefits of the ERA-NET initiative.

In sum, the expertise of participants deserves mention as it shows a careful selection for participation. It also shows a high degree of interest. The extent of UK ERA-NET participation is outlined in Table 23.

1.2 Landscape and legal entities participating in the Scheme[51]

In terms of the national R&D landscape, UK Government is increasingly emphasising more work to be done on (1) the environment; (2) climate change; and (3) energy. These three foci are not surprising and will continue, for the foreseeable future, according to participants and policy-makers. It has to be noted, however, that these three research domains have been national R&D interests, so in this sense, there has not been a distinct shift or addition to the national R&D landscape. Therefore in answer to any impact of ERA-NET on national R&D programmes, there "has been no impact" according to the majority of participants.

According to one senior policy-maker what does change the national R&D priorities when "a new Prime Minister who has his own interests, and in breaking up or setting up new ministries or departments, can influence the R&D priority" There are also other external drivers, such as the environment, climate change and, in the light of the perceived increasing threat from terrorism, national security.

Where there has been a significant shift in orientation in the UK it seems to have had little to do with ERA-NET. As an example, in 2005 when the focus of one specific Department was on industry support for certain commodities, in 2008 its focus changed to one on cross-cutting areas, such as climate change, water resources management and sustainable farming. This change resulted from a change of the previous Department to its current one. This Department was a participant in one of the ERA-NETs.

Participation in ERA-NET had not significantly affected the R&D programming of Research Councils as they have the latitude to set their research programmes. Particle physics and complexity science (both part of fundamental science, for instance, have long been research themes in the Research Council dealing with these themes. However, participation in ERA-NET had found "a European home" for these areas and this in itself was an important benefit from participation in ERA-NET. One interviewee suggested that "insofar as his participation is aligned with national priorities, it may only be said in terms of improving international collaboration."

[51] See Table 19.

Regarding an emphasis on transnational R&D collaboration, the UK Government and Research Councils have had a long history in international and bilateral R&D collaborative activities. While not funding non-resident researchers, Government departments have facilitated engagement of UK researchers in extensive joint research with countries, such as with the U.S., India, and several Commonwealth countries. As one participant noted "we are very outward looking as we need to consider our research community's interests."

Regarding the funding of non-resident researchers, the UK Government policy does not, as a rule, provide such funds. They provide financial assistance on a government to government level, such as the Framework Programme and financial aid to developing countries. Such assistance is hardly ever done on an individual basis outside international agreements.

The Research Councils, on the other hand, as shown above, had contributed to a common pot for joint calls. This is indeed a promising trend toward international collaboration.

In summary, regarding the national R&D landscape with respect to funding, one has to understand and make the distinction between the policies and corresponding activities undertaken by Government Departments and Research Councils. As we have seen, their practices vary.

2. Strategic national context underpinning the ERA-NET participation

UK policy-makers, in particular, perceived participation in the ERA-NET initiative less in strategic terms, in the sense of the initiative having a potential role in the UK's setting of its R&D priorities, than in an interest to participate in European initiatives. Participants held a similar view.

2.1 Strategic planning and role of ERA-NETs in the country[52]

According to policy-makers, FP6 themes, and in general the themes of Framework Programmes, were "a bolt on to UK national R&D programmes." ERA-NETs themes were perceived the same way and so it was not possible to see how the ERA-NET themes would have had any discernible impact on UK R&D programmes or research themes.

Although there was no strategic planning for ERA-NETs in the UK national R&D planning process and priorities, UK policy makers nonetheless attested that there are indeed benefits to be gained from participation. UK participation was said to have created a "warm feeling" among relevant UK policy-makers as they perceived the participation as an important indication of UK interest in European initiatives. In more practical terms, UK participants provided ample examples of the benefits of getting together and sharing knowledge.

Input from interviewed participants also did not suggest any strategic planning underpinning their participation. But as many noted "it was better to be in than out" as they expected that in most cases, the potential benefits from "being in than out" would offset the cost of participation.

Only in one case did a participant express that the benefits of participation did not outweigh the cost. This was because the participant argued that while he had initial misgivings about ERA-NET being the right mechanism for that particular theme, given the highly "national orientation and specificity" and contextuality of the theme, he was persuaded to participate. Moreover the UK was (and still is) acknowledged to be the vanguard in this particular theme of activity. So the participant felt that it "would not hurt" to join the ERA-NET, but "limitations for my participation were clearly identified and accepted by my Head of Unit." Essentially this involved minimal participation over the life of this ERA-NET.

The participating Research Councils, on the whole, could be said to have been more strategic in their motivations for joining the ERA-NET. For instance, one participant explained that joining the ERA-NET was "strategic - as a way of concerted action [and] tactical - as a way to be involved in more transnational collaboration." Another said that "participating in the ERA-NET scheme was a strategic decision based on UK research and its collaboration with the European Union. Such participation and collaboration are seen as good for UK researchers."

[52] See Table 14 and Table 19.

Strategic planning, however, for ERA-NET participation as an **embedded element** of the overall Research Councils' programmes of activity, was less evident. All the Research Council participants claimed that there were many benefits, and as with the view of the policy-makers, also noted that the research themes of their ERA-NETs were already in their research programmes. The main difference was that some of these research themes now "have a home" in European specific collaborative projects (outside the FPs). This in itself is a positive outcome from participation. However, it is worth highlighting that participation was "a strategic decision," only when the Research Council had a similar theme in its programmes of activity.

In sum, no strategic planning before or during the ERA-NET Scheme was considered or undertaken by UK policy-makers and participants. Instead, the ERA-NET themes were already reflected in the national R&D programmes both at Departmental and Research Councils' level. In a sense, then, ERA-NET themes can be seen to have been aligned with national priorities. Hence participation had been perceived positively.

2.2 Motivations for joining ERA-NET and set up[53]

If there was a perceived need that the ERA-NET scheme was envisaged to fill, this was not largely apparent from the interviewees' comments. Most felt that participation could benefit their networking activities but this was not specifically argued to be a need as all participants were already extensively involved in international collaboration and cooperation. Still another avenue for furthering networking activities is always viewed as an opportunity to exploit. Table 1 shows the main motivations for joining the ERA-NET.

One participant explained that joining the ERA-NET was a result of "moral blackmail." This respondent explained that his "Department could not NOT join" as the UK is acknowledged to be a leading country in this particular area of research.

According to another participant, informal collaboration with several members of a particular ERA-NET had already started prior to the ERA-NET, so the Scheme provided a means to formalising the collaboration. Another claimed that the Research Council "has always been on the look-out for international R&D that can help UK research. So the ERA-NET is a logical route to more transnational R&D collaboration."

Another said that the ERA-NET's theme has been complementary to the participant's organisation. Participating was thus both a channel and an opportunity to learn more about the activities of the partners in this area of interest, thereby increasing the participating organisation's knowledge base and contacts.

There was evidence that the ERA-NET had filled one "gap," from the response of one Research Council participant. The respondent asserted that ERA-NET had become a new funding scheme for collaborative R&D, and equally importantly, was a route to enabling the formation of a European strategy for this particular research theme.

[53] See Table 1.

A participant from a Government Department explained that given the Department's history in international R&D, "ERA-NET was another route to international cooperation." Another Government participant admitted that while there was "absolutely no hope of using the ERA-NET to fund R&D collaboration [in this particular field], especially as "in this field, Government does not drive R&D, industry drives it." But it was "better to be in than out" and volunteered a catalogue of benefits from ERA-NET participation.

Another respondent volunteered the explanation for joining a particular ERA-NET: "The mission of [this ERA-NET] is to carry out activities towards networking and integration of national and regional programmes in this field in the ERA. The overall strategic objective of this ERA-NET was to strengthen Europe's position in [this area of technology] by improving the cooperation and coordination of [this technology] RTD programming efforts across Europe, supporting long-term perspectives in European research policies as well as supporting related policies in order to establish a strong European Research Area and to creating impact in terms of coherence, innovation and economic growth."

While aware of the potential contribution of the ERA-NET Scheme toward the formation of the ERA, the above participant stated that his Department had not contributed monies to a joint call because of Government regulations (more below). He also said "UK money is for UK researchers."

Policy-makers on the whole were less articulate about motivations for participating in the ERA-NET scheme. In the main they suggested two principal reasons: (1) The additional knowledge and information that could be obtained about the research interests and programmes of other Member States, and (2) the opportunity of making more personal contacts in the various fields of research would be increased through participation. In addition, it was made clear by policy-makers and all participants that Government Departments and Research Councils have a clear mandate to improve and strengthen the research capability of the UK research community, either through national or international R&D programmes.

3. ERA-NET processes and positioning

3.1 Inputs into the ERA-NET scheme[54]

There had been three dimensions of UK inputs into the ERA-NET Scheme: (1) time and resources allocated to performance of the required tasks (level of involvement); (2) internal restructuring to accommodate the performance of tasks; and (3) monies planned or contributed to joint calls. The level of involvement will be addressed separately below.

In the Government departments, there had been no internal restructuring to facilitate for participation in the ERA-NET. Instead, as will be discussed below, participants allocated a minimum of time to their involvement, reserving such time for more urgent ERA-NET tasks such as discussions on work programmes, meetings, workshops, other events, and particularly for the preparation of the final reports and audits to the Commission.

In a few cases, the management of the ERA-NET had been sub-contracted to third parties (as noted above), thus also allowing the ERA-NET Government participants to spend a minimal f time in the ERA-NET on important tasks, as described above. The effort spent, however, on seeking approval and the processes involved for sub-contracting was described as "requiring so much work."

The situation is different in Research Councils. Apart from the staff rotation policy as noted above, the participant when assuming the tasks of the ERA-NET, spent a large part of his/her time in it. No special restructuring in the sense of hiring new personnel was undertaken; instead, the Research Council participant was either assigned or "rotated" to the ERA-NET (more below.)

As noted above, the UK had contributed about €41 million to ERA-NET, with the detailed breakdown of this amount shown in Table 25. Also noted above, Government Departments generally do not contribute **directly** to international collaborative programmes to fund non-UK resident researchers, unless these are arranged on a government-to-government basis. The common reason was (and will continue to be so) "national money for national researchers" as suggested by several participants. This is not an uncommon policy position in other Member States. UK Government, however, does contribute monies to a relevant UK Research Council for participation in an international collaborative programme or when a compelling case may be made for direct contribution.

As noted above, Research Councils have contributed "real money" to a common pot for joint calls. For instance, one ERA-NET on fundamental science expected to launch a joint call in mid-2009, the contribution to the real common pot was not known at this point of writing. However, here too, the interviewee unequivocally suggested that "we remember that the money is targeted for UK researchers who respond to the call." Another Research Council committed about €4 million to an ERA-NET and a joint call already issued. Final applications were expected to be received by the end of January 2009.

3.2 Degree of involvement by national participants

Regarding the level of involvement in the ERA-NETs, all the participants from Government Departments responded that they had spent no more than "5 per cent" of their time each

[54] See Table 2

month per year over the life of the ERA-NET on participation. Another respondent was more specific: "only 25 days over the 3-year life of [the ERA-NET]." One reason for this is that British civil servants may not supplement their salaries from governmental initiatives, the ERA-NET Scheme being one such. Consequently, the monies received from the ERA-NET Scheme was either spent on a sub-contractor to run and manage the ERA-NET or returned to the Commission, retaining only what had been incurred from travel and subsistence for the ERA-NET meetings, etc. In other words no additional resources had been allocated to the performance of ERA-NET tasks.

Another reason for the low levels of involvement and resources lay in the rather ambiguous situation, as explained by one respondent. "It is helpful to be in an ERA-NET but I cannot spend too much time on it because I'm not sure exactly if the objectives can be achieved at the end." All this had meant that the ERA-NET participants in effect incorporated the (minimum) tasks required by the ERA-NET, such as meetings, workshops and the preparation of end-of-ERA-NET reports to the Commission, into the routine. A number of respondents admitted that the bulk of their time in ERA-NET had been spent on the preparation of these reports, which, according to one who specifically described reporting as "very time consuming and quite a nightmare" because of the bureaucratic requirements.

The situation was different in the Research Councils. Here participants spent more than 50 per cent of their time with ERA-NET activities, and in some cases, spent nearly 100 per cent of their time in the development and management of the ERA-NETs.

3.3 Participation in joint activities, calls or programming[55]

A majority of participants had been engaged in discussions and meetings for the design of the work programmes and work packages for the joint calls. They perceived setting the objectives as a vital part of the ERA-NET. Those who did not participate were successors to the incumbents who were involved in the outset of the ERA-NET. The UK participation in joint calls is shown in Table 24 and participation in other ERA-NET activities in Table 4.

In one case the participant/coordinator was the representative of his organisation for the ERA-NET. He was responsible for ensuring the quality and delivery of all work packages with which his organised was tasked.

All participants were assigned work packages. In some ERA-NETs UK participants had been apparently instrumental in establishing processes and guidelines for peer review of proposals and helping member participants to understand what a peer review process entailed. All participants had contributed to the benchmarking work package; some had led it and some others had helped draw up road maps for the particular theme. One participant had introduced the idea of an "Ideas Lab," which was adopted by the ERA-NET and a small joint call was launched (this was more a pilot call than a full fledged joint call.) The Ideas Lab was based on the belief that mining scientific information is a difficult task. So the Ideas Lab was used to identify new ideas and approaches to bridge the gap between advances in basic science and new research for that particular research theme.

As seven out of the 10 ERA-NETs sampled had yet to launch joint calls during the interview period for this Report, the activities of the majority of UK participants involved here had been

[55] See Table 4 and Table 24.

minimal. However in the case of one joint call that had been launched, there were protracted discussions preceding the call and much time was spent in "hammering out exactly what the joint call should be about." In the other two, there appeared to have been a consensus of what the calls should be about. On the whole, all participants maintained that all members worked well together.

3.4 Lessons learnt and good practice[56]

There were a number of lessons learnt, according to the majority of participants. However none of them had been reported to the corresponding organisation. Participants also testified that none of the lessons had any effect on national R&D policy and on programming. Instead, as will be seen below, most of these lessons were targeted at future participation of ERA-NETs.

The **lessons** learnt were:

1. the need to ensure full buy-in from all potential national participants and European partners so that everyone has a full understanding of objectives and potential outcomes of the ERA-NET scheme (at organisational, national and European level);
2. the importance of understanding funding mechanisms and national priorities;
3. how to deal with European Commission initiatives, particularly with the administrative processes;
4. national representatives (including the national point of contact) should promote ERA-NET more vigorously to funding bodies;
5. one can participate in an ERA-NET with minimum effort. (As discussed above, in most cases reported by UK participants, the effort has been generally less than 5%);
6. the advantage of holding national open days in which each partner country presents to the rest of the consortium their national funding schemes and this has proved to be useful in knowledge exchange. It has also helped to increase the confidence and links between the participating agencies.

Good practices can be divided into (1) those already in effect; and (2) suggested good practices.

Good practices in effect include:

1. the production of good roadmaps for future research;
2. the production of databases of current research programmes across several themes and the researchers involved in such research;
3. cooperation, adequate commitment of and goodwill among partners;
4. high level of expertise of partners;
5. the introduction of a peer review process with a well established criterion.

Suggested good practices can be divided into (1) the future of the ERA-NET Scheme; (2) improving the operation of the ERA-NET; and (3) improving the joint call process.

Future of the ERA-NET scheme

[56] See Table 18, Table 20, and Table 22.

1. to ensure that the objectives of the ERA-NET scheme are not too ambitious.
2. to maintain links between ERA-NETs for awareness of practices and processes, but on an informal and not mandatory basis;
3. to maintain thematic areas of current ERA-NETs for future ERA-NETs;
4. to reduce significantly the bureaucratic procedures required for reporting and auditing.

Improving the operation of the ERA-NET

1. to develop clear work plans for incorporating ERA-NET activities into responsibilities of the ERA-NET participant so that more time can be allocated to the participant by the Department/organization;
2. to be willing to be open and clear about activities as some partners do not seem to be giving full information;
3. to implement the pooling of REAL funding for truly competitive OPEN biddings by European research councils. Under the ERA-NET Scheme, joint calls are geared to fund each member's own researchers. ("The problem with ERA-NET is that the members' research councils agencies have ring fenced programmes for R&D and will not contribute to a common pot, and thus have not allocated any ADDITIONAL funds to joint calls");
4. To establish an agreed funding model for the joint calls – should it be a TRUE COMMON POT or VIRTUAL POT?
5. to outsource to ensure proper running/management of the ERA-NET if the participating organisation is constrained from doing it;
6. to ensure that all participants take responsibility for their own task and commit themselves to doing them well;
7. to ensure timely delivery of tasks by all participants;
8. to receive timely delivery of information from the ERA-NET Secretariat;
9. to introduce a scheme for staff visits of the different agencies to meet with each other to learn how the corresponding agency/organisation operates.

Improving the joint call process

1. to ensure that there is a criterion for writing up of joint calls to ensure that the call for proposals is clear about its objectives and terms of reference;
2. to develop a simple outline for a joint call proposal, for example, coordination mechanisms for the joint call should be clear and straightforward. ("Right now the joint call proposal is written in horrible and long-winded language");
3. to simplify the information on application forms. Currently they are hard to understand and the use of different languages complicates the clarity of the information;
4. to build into the joint call a realistic time table and objectives, and to allow flexibility to alter objectives when the call is ultimately launched. As the external environment may change, or new developments may occur that affect the objectives, such flexibility facilitates "useful" or "realistic" objectives that may differ from the time the call and its objectives were discussed;
5. to provide more feedback to unsuccessful applicants;
6. to consider a prioritisation of calls by very large consortia, for instance, should it consider sub-calls with each member funding them? Sub calls could help engage new partners who are just setting up their research area for that particular theme.

4. ERA-NET benefits

4.1 Direct and indirect benefits to ERA-NET national policy stakeholders and participants[57]

National policy-makers did not offer any particular benefit that impacted on UK policy or R&D programming activities. However, they noted that participation in the ERA-NET Scheme was important to reflect UK's interest in European initiatives. They also suggested that participation would help increase the research networks of UK researchers.

Participants, on the other hand, expressed that despite the limited time involved in the ERA-NETs, there were clear benefits from their participation. The key **direct benefits** were:

1. networking and acquiring new contacts. This had resulted in establishing good personal contacts with European colleagues in the same area of interest;
2. learning about the funding mechanisms, operations and priorities of other European countries, and building links with funding agencies;
3. providing the introduction of new themes of research, such as in migration, which are usually national priority-driven areas of research. This benefit however was limited to one organisation;
4. the common criterion for reviewing proposals and a list of referees for assessing proposals;
5. a database for all key researchers and projects in the various themes, and their outputs. This had allowed the funding agencies to access detailed project information, both for running projects, current projects and future projects. This also helped to raise awareness of the kind of research being undertaken in other European countries;
6. the mapping of expertise in the diverse themes helped to identify the resources and expertise for funding. These expertise maps formed a good basis for informal contacts and awareness of co-funding possibilities for the future;
7. the enhanced publicity of various themes of research through the websites and "ERA-NET national open days." (One applicant noted that as attendees of the national open day, representatives from countries such as China, India, Japan and the U.S. had suggested to members of that ERA-NET that global cooperation in that particular theme of research should be considered as a long term activity with possible participation from these countries.)
8. providing an opportunity for the participating country to be involved in "new thinking" which helped to stimulate participants, for instance the new Member States, to thinking about the potential value of some research themes;
9. providing an opportunity for countries with a particular expertise to shape the ERA-NET with the aim of making its work programmes relevant to national policy as well as foster leading edge R&D;
10. ERA-NET helped to create critical mass of knowledge;
11. in one case the ERA-NET had helped to reduce duplication of common interests in one research area;
12. ERA-NET provided a longer time frame to encourage transnational R&D and this longer term has allowed new researchers to "join the club";
13. the bottom up process of ERA-NET seemed to have worked well for determining work programmes;

[57] See Table 5 and Table 6.

Respondents found it a little more difficult to suggest indirect benefits. However the limited number that was offered included:

1. reduction of duplication of national data collection of what other countries were conducting in a particular area of research;
2. potential application of lessons learnt from the current ERA-NET to the next ERA-NET.

Table 5 and Table 6 show the general satisfaction of the participant with their ERA-NET participation.

As for the impact of participation, interviewees responded in terms of the **impact on their own organisation**.

Participants in the main suggested that ERA-NET had helped to increase awareness of similar research that was being undertaken outside the UK. Associated with this was that ERA-NET had provided an opportunity to show their corresponding organisation that common research issues could be pursued productively with non-UK researchers.

Similar to a benefit, a respondent suggested that an impact had been the insights and knowledge gained on the cultural differences between the research councils. This had helped the Research Council's dealings with equivalent members of the ERA-NET.

As for **impact at the national** policy makers' level, policy makers surmised that in terms of research design, Government may consider contributing additional monies for ERA-NETs via Research Councils or other European collaborative R&D programmes. They also suggested that there may be new themes for 2009 for UK R&D programmes, but were then not in a position to think what these may be. The responding policy-makers suggested that they would continue monitoring if European collaboration would be a good route for these new themes. They were, however, quick to point out there will be no or little restructuring of national R&D programmes as a result of the ERA-NET Scheme.

5. Impacts on national R&D policy and programming

5.1 Impact on national R&D policy[58]

As already discussed throughout this Report the ERA-NET Scheme has had little or no impact on UK national R&D policy and programming. Though they admitted that they were not in a position to speak for other countries some participants conjectured that the Scheme could have had an impact on other countries. The impact here would be a consideration by some countries to be more about increased transnational or international orientation in their R&D activities.

The UK has a long history of international collaboration and participation in a range of R&D activities, as can be seen in Table 8. Therefore it was expected that the ERA-NET, which was aimed at fostering international collaboration, would have had a rather limited impact. As seen from above, however, a benefit from UK participation was that the ERA-NET was another mechanism for such collaboration, and therefore participation in itself, was seen to be worth the effort.

Also discussed above, UK participants experienced several benefits. Yet upon scrutiny of these benefits, one quickly observes that the benefits were targeted at an organisational level, rather than on a national level.

It is important to understand how national policy, including R&D policy, is made in countries as a context/background for evaluation purposes. Already alluded to above, among a range of other factors, in the UK, policy on R&D could be driven by a new Prime Minister, external drivers and of course the commitment and determination of Ministers.

UK policy also adopts an "evidence-based" approach. In other words, there has to be robust evidence before a new measure, or area of research in the case of R&D policy, may be introduced. A few participants raised the concern about the quality of the ERA-NET joint calls' research outputs. Therefore evidence of the utility and value of collaborative R&D as judged by the quality of the research outputs will be **a** requirement before consideration of any new measure may be introduced. Finally and importantly, it is necessary and essential to know the objectives of a specific policy in order to assess impact of any initiative.

Furthermore, note that the policy makers interviewed hold the view that the Framework Programmes are a "bolt on" to the UK national R&D priorities. This in itself speaks to how "difficult" it will be to have the ERA-NET impact the UK national R&D policy and programmes. The Framework Programme, after all, is an important avenue for European collaboration.

In sum, the ERA-NET has had very limited impact on UK national policy. This however may not reflect the lack of success or the Scheme. Instead the catalogue of benefits expressed by the participants is testimony to the value of the ERA-NET scheme. These benefits cannot be underestimated.

5.2 Impact on national R&D programming[59]

ERA-NET has had a limited impact on national R&D programming. Again, as explained above, national R&D programming is much an outcome of policy-making. So if there is a perceived

[58] See Table 7 and Table 18.
[59] See Table 7 and Table 18.

need for the UK to dedicate more resources to a certain area of research, this affects the R&D programming. For instance, research on climate change, sustainable farming, security and energy are the current dominant themes for research.

Budgets for national R&D programming are decided by Parliament. While there could be shifting priorities within each budget, for instance, for a Research Council, the R&D interests for Research Councils remain in the main aligned with national priorities. The monies, however, dedicated to each priority within such a budget may change or vary over time. Obviously, the R&D programmes within the different Departments always reflect national policy.

In sum, there had been very limited impact of the ERA-NET Scheme on UK national R&D programming. Again here, one must consider the benefits gained by organisations from their participation in the Scheme.

The perceived influence of the scheme on national programmes is outlined in Table 7.

5.3 Opening up of national R&D programming[60]

International collaboration, as has become evident from this exercise, does not necessarily mean that governments will readily fund non-resident researchers from their national R&D programmes. Governments, however, do fund the mobility of international scholars from their national R&D activities in the conviction that visiting experts and scientists to the host country will benefit the host country's academic community.

On the other hand, governments do contribute to international R&D programmes, such as the Framework Programme and others. These arrangements are decided at the country level. Furthermore, the Framework Programme is in many ways an "open tender." Anyone in the EU or other countries approved by the European Commission to participate can bid for the calls. This model is distinctly different from that of the ERA-NET Scheme.

The ERA-NET Scheme has not been decided between the European Commission and the individual governments of the European Union. Instead, participation in this Scheme only has been supported by the governments. Unlike the Framework Programme, the ERA-NET was solely a European Commission initiative. Therefore participation was voluntary. Moreover, only ERA-NET members could bid for the joint calls. Against this context, it was highly unlikely that the UK, according to all respondents, would open up its national R&D programmes to fund non-resident researchers.

Research Councils, however, operated differently under ERA-NET. Their mandate is to foster international collaboration. As independent bodies, they have the latitude to determine their research agenda, although the research domains are often aligned with UK national priorities. They also have the "freedom" to contribute real money to the ERA-NET "common pot," as we have noted above, although the underlying aim for this contribution was to fund UK researchers, but not restricted to them, in the joint calls.[61]

[60] See Tab le 10 and Table 11.

[61] It is useful to note that Research Councils have started funding non-resident researchers in their own programmes.

In sum, UK Government Departments are unlikely to open their R&D programmes to non-resident researchers for the foreseeable future despite participating in the ERA-NET Scheme. Research Councils however have already begun funding non-resident researchers.

6. Impact on the structuring of national or international research fields

6.1 Impact on national research fields[62]

Following from the above discussion on the limited impact of ERA-NET on the UK national research programmes, it is unsurprising that the impact on restructuring national research fields has also been very limited. Throughout this Report, it has been demonstrated that ERA-NET themes were already reflected in the UK research agenda.

Since national policy makers regard the Framework Programme as a "bolt on" to UK national research themes, this implies that even the Framework Programme, discussed and decided at governmental level, has little impact on UK national research areas. With this underpinning attitude, it is perhaps not surprising that ERA-NET has had hardly any impact on the structuring of UK national research fields.

Moreover, participation in the ERA-NET Scheme was voluntary and this further signalled why little national impact could have been anticipated. This of course must be distinguished from the benefits derived from participation in this Scheme. As one participant responded, "if UK had not participated then [our Department's] reputation may have declined." He explained that his Department has a distinct expertise in this field of research; non-participation would have been perceived negatively.

Associated with the structuring impact, several participants from Government Departments appeared to be sceptical about the ERA. To quote one, "we will need to know what ERA is for and how it will work. For instance, what is it for beyond helping cooperation between EU Member States? What is the long term objective of ERA?"

They, however, agreed that ERA-NET could be a stepping stone toward reducing duplication and fragmentation, and through this, could help shape the ERA. Still they reminded us that at the end of the day, national priorities would hold sway. Many also said that ERA could help increase researcher mobility. Importantly, some suggested that ERA-NETs could "provide an opportunity to show that common research issues may be pursued collaboratively."

Policy makers also did not appear to be convinced about ERA. They, however, accepted the possibility of reducing duplication and fragmentation of common research domains, but were uncertain about how ERA would work. However they admitted that they were keeping an open mind about it.

Where there had been some impact on structuring, this could be found in a Research Council that was interviewed, which contributed real money to the joint call on migration as already noted above. According to this participant, research on migration is normally undertaken at national level. Thus the joint call on migration could be shown to have some form of structuring of this specific Research Council's research theme, that is, it was moved from a national to an international research level.

In sum, there was no tangible impact of ERA-NET on structuring of national research areas. There appeared, however, the beginnings of a potential step toward such structuring in Research Councils.

[62] See Table 17 and Table 21.

7. European Added Value, relevance and efficiency

7.1 Additionality of the ERA-NET scheme[63]

In the absence of ERA-NET, UK's transnational and collaborative R&D activities would not have been affected. This is because as noted throughout this report, the UK has had long international and collaborative R&D activities. Hence participants observed little additionality from participation in the ERA-NET Scheme.

Additionality, however, has to be distinguished from the added value that participants have derived from their participation. The long list of benefits presented above, and which will not be rehearsed here, can be said to reflect a high degree of **added value at the individual level**. For instance, increased knowledge of funding mechanisms, new and important contacts made, all of which would have been difficult to obtain on an individual basis, had been better facilitated through participation in the Scheme.

The observation made about benefits outweighing the cost of involvement, in spite of the heavy bureaucracy that participants complained about, in particular the nettlesome audit issue of Form E (certificate of methodology), there had been added value. For Research Councils, the added value seemed to be in the provision of another route to international collaboration.

As for **added value of the research** from the joint calls, this is too early to comment as the sampled 10 ERA-NETs have not yet produced any research outputs from their joint calls. Moreover, only three of these 10 ERA-NETs had only recently launched calls. Some participants did, however, as noted above express some concern with the potential quality of the ERA-NETs' projects results.

7.2 Economic efficiency and relevance[64]

As noted above, but for one participant, the benefits had outweighed the cost of involvement. As one enthusiastic participant responded, "O yes" (to the question if the benefits had outweighed the cost of participation.), which is also reflected in Table 5.

These views of UK participants must be weighed against the fact that the majority of them had spent only a limited amount of time (about 5% in the majority of cases). Yet this commitment of time had yielded positive feedback. Furthermore, despite frustration with and disgruntlement over the heavy bureaucratic procedures especially during the preparation of reports and invoices, they insisted that participation had been beneficial.

Accommodating ERA-NET tasks to the participants' routine, on the whole had not been disruptive either. Also, the opportunities for travel to European countries, the U.S and Canada on information-gathering trips for ERA-NET work packages had been not only useful, they had also fitted into their normal tasks, which in many cases also included such trips.

"Economic efficiency" may also be argued in the outsourcing of the operation of the ERA-NET (through use of the ERA-NET funds entitled to each participant). This in turn, had freed up

[63] See Table 11.

[64] See Table 5.

the participant to engage in the necessary "high level" meetings and discussions for work programmes, work packages and joint calls.

In summary, participants were not inconvenienced by participation. No additional resources had been required internally to deal with the tasks and participants had been able to manage their time gainfully.

8. Annexes: Stakeholders and materials consulted

Stakeholders

Interviews were conducted with the following ERA-NET participants:

1. ASPERA 1 (Fundamental Science; **participant** is from the Science and Technology Facilities)
2. PV ERA-NET (Energy, **participant** is from the Department of Energy and Climate Change, formerly part of Business, Enterprise and Regulatory Reform)
3. ERA-ARD (International Cooperation, **participant** is from the Department for International Development)
4. CORE-ORGANIC (Life Sciences, **participant** is from the Department of the Environment, Food and Rural Affairs)
5. NORFACE (Social Sciences, **participant** is from the Economic and Social Sciences Research Council)
6. INNER (Energy, **participant** is from the Engineering and Physical Sciences Research Council)
7. CO-REACH (International Cooperation, **participant** is from the Royal Society)
8. COMPLEXITY NET (Fundamental Science, **coordinator** is from the Engineering and Physical Sciences Research Council)
9. AirTN (Transport, **participant** is from the Department of Business, Enterprise and Regulatory Reform)
10. FORSOCIETY (Social Sciences, **participant** was from the Department for Innovation, University and Skills but has since been reassigned to another Government department).

All participants are in middle to upper management in the corresponding Departments or organisations. All of them are either in advisory roles to the Heads of units within the Departments or involved in high level committees at national and European Commission level.

It is worth noting that in four cases, participants interviewed were not the original participants of the ERA-NETs. This however did not detract, in most cases, from their knowledge of how the corresponding ERA-NET started, and their relatively new participation certainly did not appear to affect their views of the Scheme, the motivations for and perceived benefits from UK participation in ERA-NETs.

In addition, interviews were held with three senior policy makers from the Department of Innovation, Universities and Skills. All three have international collaborative and innovation activities in their remits. Two of the three sit on Framework Program Committees. The fourth interview is also a senior policy maker from the Department of Environment, Food and Rural Affairs. This policy maker is also a member of the European Commission Standing Committee on agricultural research.

Materials consulted

Summary of benefits presented by participants at the ERA-NET Forum, organised by the UK National Point of Contact, London, October, 2008. This was provided by the UK National Point of Contact.

All websites of the 10 ERA-NETs

http://cordis.europa.eu/coordination/era-net.htm

9. Annexes: Participant survey results

The figures below show responses to the participant questionnaire, completed by 20 UK participants.

Table 1 - What was your organisation's main rationale for participating in this ERA-NET?

	United Kingdom	EU 15 - large	Overall
Benchmarking of research funding against other countries	0%	1%	**1%**
Creating and supporting transnational projects in a field which requires transnational cooperation	32%	33%	**38%**
Improving own (national) R&D programme/s	0%	10%	**7%**
Learning from funders and sharing of information between funders in other countries	11%	16%	**10%**
Networking and building new relationships with funders from other countries	39%	29%	**35%**
Not Answered	0%	3%	**1%**
Opening up of national programmes in existing or new areas of research	13%	4%	**5%**
Other	5%	5%	**2%**

The most commonly cited rationales for ERA-NET participation were networking and building new relationships with funders from other countries (39%), which is significantly above the country grouping average (EU 15 - large) and creating and supporting transnational projects in a field which requires transnational cooperation (32%), which is broadly in line with the country grouping average (EU 15 – large).

Table 2 - What was the original overall amount of EC funding allocated to your organisation in your contract to participate in this ERA-NET?

	United Kingdom	EU 15 - large	Overall
0 - 9999	11%	4%	**4%**
10000 - 19999	0%	1%	**2%**
20000 - 29999	0%	5%	**3%**
30000 - 39999	8%	6%	**2%**
40000 - 49999	0%	3%	**2%**
50000 - 59999	14%	4%	**2%**
60000 - 69999	8%	3%	**1%**
70000 - 79999	0%	1%	**6%**
80000 +	58%	68%	**71%**
Not Answered	0%	6%	**6%**

The majority of British organisations (58%) were allocated over €80,000 in funding to participate in the ERA-NET, which is significantly below the country grouping average (EU 15 - large).

Table 326 - Did the EC funding cover all the time and resources your organisation invested in participating in this ERA-NET?

	United Kingdom	EU 15 - large	Overall
Yes	49%	45%	**49%**
No	51%	49%	**43%**
Don't Know	0%	3%	**4%**
Not Answered	0%	4%	**4%**

British participants were close to being split as to whether EC funding did cover all the time and resources their organisation invested in participating in the ERA-NET (49%), which is slightly above the country grouping average (EU 15 – large) or did not cover all the time and resources their organisation invested in participating in the ERA-NET (51%), which is broadly in line with the country grouping average (EU 15 - large).

Table 4 - In which ERA-NET joint activities other than joint calls did you participate?

	United Kingdom			EU 15 - large			Overall		
	Yes	No	Other	Yes	No	Other	Yes	No	Other

Coordination/clustering of ongoing nationally funded research projects	59 %	19 %	23%	55 %	24 %	21%	**59 %**	**19 %**	**23 %**
Benchmarking and common schemes for monitoring and evaluation	67 %	14 %	19%	62 %	16 %	23%	**67 %**	**13 %**	**19 %**
Multinational evaluation procedures (common evaluation criteria and methods of implementation	61 %	24 %	16%	57 %	20 %	23%	**55 %**	**25 %**	**20 %**
Schemes for joint training activities (so-supervised theses or common PhD schemes)	22 %	51 %	27%	15 %	42 %	43%	**12 %**	**49 %**	**39 %**
Schemes for personnel exchange	11 %	54 %	35%	20 %	39 %	41%	**14 %**	**47 %**	**39 %**
Schemes for mutual opening of facilities or laboratories	26 %	53 %	21%	18 %	41 %	41%	**15 %**	**44 %**	**41 %**
Specific cooperation agreements or arrangements	16 %	74 %	11%	34 %	33 %	33%	**43 %**	**24 %**	**33 %**
Action plan taking up common strategic issues and preparing for joint activities	78 %	22 %	0%	74 %	13 %	13%	**75 %**	**11 %**	**13 %**

The majority of British participants took part in an action plan taking up common strategic issues and preparing for joint activities (78%), benchmarking and common schemes for monitoring and evaluation (67%) and multinational evaluation procedures (61%). In all cases the percentages for these joint activities are slightly above the country grouping average (EU 15 - large).

Table 5 - Overall would you say that your participation in the FP6 ERA-NET has been worthwhile?

	United Kingdom	EU 15 - large	Overall
Yes	92%	93%	**95%**
No	8%	5%	**4%**
Not Answered	0%	2%	**1%**

The majority of British participants (92%) did find their participation in FP6 ERA-NET worthwhile, which is broadly in line the country grouping average (EU 15 - large).

Table 6 - Which of the three following statements best describes your personal experience of this ERA-NET?

	United Kingdom	EU 15 - large	Overall
I got more out of it than I expected	62%	50%	**41%**
I got out of it what I expected	32%	43%	**51%**
I got less out of it than I expected	3%	5%	**6%**
Not Answered	3%	3%	**1%**

The majority of British participants (62%) believed they got more out of it than they expected, which is significantly above the country grouping average (EU 15 - large).

Table 7 - To what degree has your participation in this ERA-NET influenced your country's national programme(s)?

	United Kingdom			EU 15 - large			Overall		
	No influence	Influence	Other	No influence	Influence	Other	No influence	Influence	Other
Discontinuation of existing programme(s) in some theme(s)	66%	26 %	8%	50 %	35 %	15 %	**53 %**	**34 %**	**12 %**
Reducing duplication between National programmes in your country	50%	32 %	18 %	49 %	30 %	21 %	**46 %**	**37 %**	**16 %**
Design of programmes with longer time horizon	51%	35 %	14 %	43 %	45 %	12 %	**42 %**	**49 %**	**10 %**
Design of programmes with shorter time horizon	57%	30 %	14 %	45 %	39 %	16 %	**51 %**	**38 %**	**11 %**
Bigger programme budgets for the theme	24%	68 %	8%	39 %	44 %	17 %	**42 %**	**46 %**	**12 %**
Smaller programme budgets for the theme	65%	8%	27 %	58 %	10 %	32 %	**63 %**	**13 %**	**23 %**
New programme assessment/evaluation criteria	51%	35 %	14 %	43 %	44 %	13 %	**40 %**	**50 %**	**10 %**
New opportunities to enable transnational R&D activities in the theme of the ERA-NET	8%	84 %	8%	6%	87 %	7%	**8 %**	**85 %**	**6%**
New eligibility criteria allowing funding of foreign researchers in the area	58%	34 %	8%	44 %	34 %	22 %	**43 %**	**42 %**	**15 %**
Existing programme(s) now covering new theme(s)	57%	35 %	8%	48 %	36 %	16 %	**48 %**	**39 %**	**13 %**
New programme(s) put in place in response to new theme(s) identified	63%	29 %	8%	47 %	34 %	19 %	**51 %**	**34 %**	**15 %**

A distinctive feature of the influence of ERA-NET on British National Programmes is that the impact is broadly in line the country grouping average (EU 15 - large). This is demonstrated by the total percentage for "influence" being broadly in line with the total percentage for "influence" in the country grouping average (EU 15 - large).

Table 8 - To what extent did your organisation have pre-existing relationships with participants in this ERA-NET prior to FP6?

	United Kingdom	EU 15 - large	Overall
Prior relationships	53%	66%	**66%**
No prior relationships	16%	21%	**26%**
No answer	32%	13%	**8%**

The majority of British participants who answered this question (53%) reported that they had pre-existing relationships with participants in the ERA-NET, which is significantly below the country grouping average (EU 15 - large).

Table 9 - If there were prior relationships which of the following 6 statements best describes how these relationships evolved during your participation in this ERA-NET?

	United Kingdom	EU 15 - large	Overall
Strengthened	62%	63%	**63%**
Weakened	0%	1%	**1%**
No change	0%	4%	**4%**
No answer	38%	32%	**33%**

The majority of British participants who answered this question believed that the relationship strengthened during the participation in this ERA-NET (62%), which is broadly in line with the country grouping average (EU 15 - large).

Table 10 - Has your participation in this ERA-NET triggered transnational cooperation outside of the ERA-NET?

	United Kingdom	EU 15 - large	Overall
Yes	19%	32%	**31%**
No	57%	56%	**47%**
Not Answered	19%	6%	**5%**
Not applicable	5%	6%	**16%**

The majority of British participants who answered this question reported that participation in the ERA-NET did not trigger transnational cooperation outside of the ERA-NET (57%), which is broadly in line with the country grouping average (EU 15 - large).

Table 11 - Has the ERA-NET experience led to an increase in the amount of your programme budget that has been invested in transnational R&D projects outside of the ERA-NET?

	United Kingdom	EU 15 - large	Overall
Yes	16%	15%	**13%**
No change	57%	61%	**63%**
No answer	27%	24%	**23%**

The majority of British participants who answered this question reported that the ERA-NET experience lead to no change to the amount of the programme budget that has been invested in transnational R&D projects outside of the ERA-NET (57%), which is slightly below the country grouping average (EU 15 - large).

Table 27 - If yes, roughly what proportion of your programme budget was transnational before your involvement in ERA-NET?

	United Kingdom	EU 15 - large	Overall
0-25%	22%	17%	**15%**
26 to 50%	0%	0%	**0%**
51 to 75%	0%	0%	**0%**
76 to 100%	0%	0%	**1%**
Not answered	78%	83%	**84%**

The majority of British participants who answered this question reported that 0-25% of the budget was transnational before their involvement in the ERA-NET (22%), which is slightly above the country grouping average (EU 15 - large).

Table 13 - If yes, roughly what proportion of your programme budget is transnational now?

	United Kingdom	EU 15 - large	Overall
0-25%	22%	15%	**13%**
26 to 50%	0%	0%	**1%**
51 to 75%	0%	0%	**0%**
76 to 100%	0%	0%	**1%**
Not answered	78%	85%	**84%**

The majority of British participants who answered this question reported that 0-25% of the budget was transnational at the time of the survey (22%), which is above the country grouping average (EU 15 - large).

Table 14 - What provisions have been made in your country to coordinate participation in ERA-NETs under FP6? - Single national coordinator for all ERA-NETs

	United Kingdom			EU 15 - large			Overall		
	Yes	No	No answer	Yes	No	No answer	Yes	No	No answer
Single national coordinator for all ERA-NETs	5%	59 %	35 %	14 %	60 %	26 %	15 %	66 %	19 %
Team of several coordinators at national level	24 %	43 %	32 %	25 %	43 %	32 %	24 %	51 %	24 %
Coordination meetings for all national participants	32 %	42 %	26 %	34 %	41 %	26 %	37 %	41 %	22 %
Organisation-specific coordination meetings	39 %	37 %	24 %	50 %	27 %	24 %	50 %	31 %	19 %

Most British participants reported that the provision made to coordinate ERA-NET participation were organisation-specific coordination meetings (39%), which is significantly below the country grouping average (EU 15 - large).

Table 15 - Earlier we asked you to state your ERA-NET's theme. How important was this theme in your country's research programme before your organisation joined this ERA-NET?

	United Kingdom	EU 15 - large	Overall
Very Important	38%	29%	**21%**
Fairly Important	22%	39%	**48%**
Not very important	16%	12%	**16%**
Not at all important	0%	5%	**5%**
Don't Know	22%	6%	**4%**
Not Answered	3%	6%	**5%**
Not Applicable	0%	3%	**2%**

Most British participants reported that the ERA-NET's theme was very important in their country's research programme before their organisation joined the ERA-NET (38%), which is above the country grouping average (EU 15 - large).

Table 16 - How important is this theme in your country's research programme now?

	United Kingdom	EU 15 - large	Overall
Very important	38%	31%	**24%**
Fairly important	27%	43%	**56%**
Not very important	11%	11%	**11%**
Not at all important	0%	1%	**1%**
Don't know	14%	5%	**3%**
Not Answered	3%	6%	**4%**
Not applicable	8%	4%	**2%**

Most British participants (38%) reported that the ERA-NET's theme was very important to their country's research programme at the time of the survey, which is above the country grouping average (EU 15 - large).

Table 17 - If there has been a change in the importance of the theme to what extent do you think this was due to the ERA-NET?

	United Kingdom	EU 15 - large	Overall
To some extent	11%	24%	**29%**
Not at all	19%	12%	**11%**
No answer	70%	64%	**60%**

Most British participants who answered this question reported that the change in the importance of the theme was not at all due to the ERA-NET (19%), which is above the country grouping average (EU 15 - large).

Table 18 - Has your organisation's involvement in this ERA-NET influenced national research policy beyond the theme of this ERA-NET?

	United Kingdom	EU 15 - large	Overall
Influence	54%	47%	**63%**
No influence	19%	25%	**18%**
No answer	27%	28%	**19%**

The majority of British participants who answered this question (54%) reported that their involvement in the ERA-NET influenced national research policy beyond the theme of the ERA-NET, which is above the country grouping average (EU 15 - large).

Table 19 - Have any of the following external factors helped or hindered the effects of your organisation's participation in this ERA-NET?

	United Kingdom					EU 15 - large					Overall				
	Helped	Hindered	No effect	Not Answered	Not applicable	Helped	Hindered	No effect	Not Answered	Not applicable	Helped	Hindered	No effect	Not Answered	
Change in programme management agency	0%	8%	38%	14%	41%	12%	7%	28%	6%	48%	**7%**	**6%**	**36%**	**4%**	4
New R&D management structure	11%	22%	14%	14%	41%	14%	9%	27%	6%	44%	**11%**	**7%**	**35%**	**5%**	4
For existing programmes, more strategic R&D programming/planning	30%	0%	16%	14%	41%	34%	0%	27%	9%	30%	**29%**	**0%**	**36%**	**7%**	2
Externalisation of R&D programmes into agency/agencies	8%	0%	27%	14%	51%	9%	3%	29%	7%	52%	**8%**	**4%**	**33%**	**6%**	4
Setting up of new types of R&D programmes	22%	11%	24%	14%	30%	29%	5%	28%	6%	33%	**24%**	**7%**	**33%**	**5%**	3
Barcelona 3% targets	11%	0%	38%	14%	38%	22%	0%	38%	10%	30%	**16%**	**0%**	**39%**	**9%**	3

Most British participants (30%) reported that existing programmes, more strategic R&D programming/planning, helped the effects of their organisations' participation in the ERA-NET, which is slightly below the country grouping average (EU 15 - large).

Table 20 - How satisfied are you with the overall level of transnational cooperation within this ERA-NET?

	United Kingdom	EU 15 - large	Overall
Satisfied	70%	85%	**88%**
Unsatisfied	8%	8%	**7%**
No answer	22%	7%	**4%**

The majority of British participants who answered this question (70%) were satisfied with the overall level of transnational cooperation within the ERA-NET, which is significantly below the country grouping average (EU 15 - large).

Table 21 - Have you seen evidence of the following effects at national level as a result of this ERA-NETs joint calls joint programming or other joint activities?

	United Kingdom			EU 15 - large			Overall		
	Some evidence	No evidence	No answer	Some evidence	No evidence	No answer	Some evidence	No evidence	No answer
Higher quality projects generated at national level (i.e. higher quality proposals)	42%	34%	24%	41%	36%	24%	**39%**	**44%**	**17%**
Higher quality projects funded at national level (through joint calls/programmes)	32%	45%	24%	38%	33%	29%	**35%**	**42%**	**23%**
New types of research projects generated (i.e. reflected in proposals received)	37%	34%	29%	36%	36%	28%	**38%**	**42%**	**20%**
New types of research projects funded (through joint calls/programmes)	37%	34%	29%	45%	26%	30%	**46%**	**32%**	**22%**
New researchers (with no prior international or European experience) benefiting from joint activities	45%	32%	24%	49%	22%	29%	**40%**	**27%**	**33%**
New researchers (with no prior international or European experience) benefiting from joint calls/programmes	34%	42%	24%	50%	22%	28%	**41%**	**34%**	**25%**
Access to foreign research communities/groups not present in my country	47%	29%	24%	62%	17%	21%	**54%**	**28%**	**18%**

Most British participants reported evidence of access to foreign research communities/groups not present in my country (47%), which is significantly below the country grouping average (EU 15 - large), and new researchers benefiting from joint activities (45%), which is slightly below the country grouping average (EU 15 - large).

Table 22 - Did any of the following factors either help or hinder your organisation to exploit the full potential of its participation in this ERA-NET?

	United Kingdom					EU 15 - large					Overall			
	Aid to success	No problem	Problem but overcome	Problem still not overcome	No answer	Aid to success	No problem	Problem but overcome	Problem still not overcome	No answer	Aid to success	No problem	Problem but overcome	Problem still not
National thematic programme priorities	11%	43%	0%	22%	24%	14%	46%	10%	15%	15%	**16%**	**46%**	**13%**	
National cultures or research traditions	11%	38%	14%	19%	19%	11%	42%	15%	13%	19%	**10%**	**46%**	**15%**	
National resources (staff time finances)	0%	24%	19%	43%	14%	12%	13%	33%	27%	15%	**17%**	**35%**	**26%**	
National administrative procedures (e.g. evaluation rules)	16%	24%	29%	11%	21%	11%	32%	31%	12%	15%	**6%**	**25%**	**29%**	
National legal programme conditions (e.g. funding of non-residents IPR)	0%	57%	5%	11%	27%	2%	44%	15%	19%	20%	**4%**	**35%**	**19%**	
EC administrative procedures or legal requirements	0%	57%	5%	16%	22%	0%	45%	21%	13%	21%	**1%**	**34%**	**36%**	

Perceptions of benefits	8%	31%	17%	19%	25%	14%	30%	12%	10%	34%	**15%**	**28%**	**16%**	
Engagement in other transnational initiatives (e.g. COST EUREKA)	19%	32%	5%	16%	27%	18%	33%	6%	5%	38%	**12%**	**46%**	**4%**	

The majority of British participants reported that national legal programme conditions (57%) and EC administrative procedures or legal requirements (57%) were no problem in exploiting the full potential of their organisation's participation in the ERA-NET, while most reported national resources (43%) as a problem that was still not overcome.

10. Annexes: Coordinator survey results[65]

The following tables show information from the coordinator questionnaire.

Table 23 - ERA-NET participation by theme

Theme	Number	Percentage
Transport	3	6.1%
Life Sciences	11	22.4%
Environment	14	28.6%
Fundamental Sciences	1	2.0%
INCO	2	4.1%
Industrial Technologies and SMEs	9	18.4%
Energy	4	8.2%
Social Sciences and Humanities	5	10.2%
Total	**49**	**100%**

Environment and Life Sciences thematic areas attracted most of the British participants.

Table 24 - Joint call participation by theme

Theme	Number	Percentage
Transport	3	8.8%
Life Sciences	5	14.7%
Environment	8	23.5%
Fundamental Sciences	3	8.8%
INCO	1	2.9%
Industrial Technologies and SMEs	6	17.6%
Energy	3	8.8%
Social Sciences and Humanities	5	14.7%
Total	**34**	**100%**

Environment and Industrial Technologies and SME's thematic areas channelled most of the contributions to joint calls.

[65] The Coordinator survey covered all 71 ERA-NETs - although in case of 7 ERA-NETs, the information collected dates back from the 2006 survey. 59 ERA-NETs provided information about the calls they have done over the period (NB: it is likely that not all ERA-NETs have reported call information in an exhaustive way). 49 ERA-NETs provided a breakdown of funding contributions at country level for calls (NB: this is likely to be an underestimate as not all ERA-NET coordinators knew this information)

Table 25 - Financial contribution to joint calls by theme

Theme	Number of contributions	€ virtual pot	€ common pot	€ mixed mode	Total
Transport	3	-	72,000	-	72,000
Life Sciences	5	15,742,662	106,000	-	15,848,662
Environment	10	4,787,542	122,500	-	4,910,042
Fundamental Sciences	3	-	7,200,000	650,000	7,850,000
INCO	3	282,500	-	-	282,500
Industrial Technologies and SMEs	7	3,077,000	27,643	1,115,000	4,219,643
Energy	3	767,000	-	-	767,000
Social Sciences and Humanities	6	-	7,130,175	-	7,130,175
Total	**40**	**24,656,704**	**14,658,318**	**1,765,000**	**41,080,022**

Most of the funding contributions were made through virtual common pots, Fundamental Sciences and Social Sciences and Humanities thematic areas contained the largest real common pot contribution by far.

ERA-NET EVALUATION

SD3: Country Report on Germany

The following document provides the structure for the country report on ERA-NETs in Germany.

The content of this report has been informed by qualitative interviews and the findings of two surveys. The interviews were undertaken with ERA-NET stakeholders[66] in 15[67] of the 40 countries taking part in the scheme. The number of interviews by country ranged between handfuls in some countries to a couple of dozen in other countries. The same interviewees were chosen to represent thematic areas – the number of interview per theme ranged between 12 and 25 depending on the theme. The surveys were aimed at all ERA-NET coordinators and participants and responses were received by approximately half of these, although responses varied across themes and countries. In addition, and where relevant, the report has been informed by reviews of documents and websites.

Regarding the contents of this report it is important to remember that the findings described within cannot be regarded as a definitive or representative view of all activities within ERA-NETs in this country. Because the interviews were based on a narrow selection of countries and representing a minority of ERA-NETs in each theme, the contents of this report should very much be regarded as a case study that provides a view of the experience. This may also explain why the findings from the qualitative interviews are sometimes at odds with the findings of the surveys which were more inclusive and wide-ranging.

Where possible in the report, the source of evidence is indicated either as coming from one of the surveys or the field interviews.

[66] Stakeholders included National Policy Stakeholders, ERA-NET Coordinators and Participants, and ERA-NET beneficiaries.
[67] The countries were: Austria, Croatia, Finland, France, Germany, Italy, Netherlands, Norway, Poland, Portugal, Romania, Russia, Slovenia, Turkey, and UK,

Contents

0. Executive Summary - Overview

- Germany is one of the countries that were most involved in ERA-NET under FP6, both in terms of the number of ERA-NETs (61) and in terms of financial commitments (EUR 26.9m). German partners played a significant role in their ERA-NETs given the country's importance in research across a wide range of thematic areas. Germany coordinated 15 ERA-NETs.

Q1 – Impact on Research Landscapes

- ERA-NET was part of a wider initiative to internationalise R&D in Germany. It was seen as the first step in the development of common programming in an unpoliticised environment (because of the bottom-up nature of the scheme).
- Following early experience with ERA-NET, Germany developed guidelines for participation in joint calls and cross-border research to be followed by the relevant German ministries.
- ERA-NET results fed directly into the ministry of education and research's (BMBF) internationalization strategy.

Q2 – Structuring effect on specific research areas or fields

- ERA-NETS had the role of complementing national programmes in order to provide incentives for domestic companies and beneficiaries to look at cross-border opportunities.

Q3 - Direct benefits and indirect benefits

- Most German participants thought the majority of benefits from ERA-NET were at the level of programme managers.
- Indirect benefits were most prominent, with an emphasis on networking and the creation of a stable institutional structure for cross-border research.

Q4 – Opening up of national programmes

- BMBF guidelines for joint calls, developed as a result of its ERA-NET experience stipulate a general preference for virtual common pots. Real Common pots were foreseen only on a case by case basis.
- A common pot was used in the social sciences (NORFACE) and, partly, in the fundamental sciences. In the field of chemistry in particular, the coordinators felt that significant progress had been made in terms of opening up research programmes, including an Open Initiative and bi and tri-lateral cooperation which would not have occurred as quickly without ERA-Chemistry.

Q5 – Best practice

- One of the main advantages of ERA-NET was its bottom-up nature which provided an apolitical platform to accumulate evidence of valuable research cooperation across borders.
- Meetings between coordinators involved in different ERA-NETs were very helpful in exchanging good practices and providing a support structure
- Good Practice guidelines were considered helpful in addressing conflicts of interest, given the diversity of actors in research funding across Europe.
- Generally it was found that impacts and benefits were greater where the focus was on setting up common procedures and engaging in common activities early on, with operational details (e.g. IPR) addressed on a more ad hoc basis as they arose.

1. Strategic national context underpinning the ERA-NET participation

1.1 Strategic planning and role of ERA-NETs in the country[68]

Germany had a relatively well developed system and a **long tradition in bilateral international cooperation before ERA-NET**. For instance, Germany took an active part in all European framework programmes, COST, EUREKA and collaboration at funding agency level through TAFTIE. In addition, Germany was already at the forefront of bilateral collaboration outside Europe (e.g. Japan, US) before ERA-NET.

However, because it helped structure cooperation in Germany and between German institutions and organisations in other Member States, ERA-NET was the **first step in the development of common programming** in an unpoliticised (because bottom-up) environment that was not driven by national priorities. The role of ERA-NET was to **help operationalise Germany's strategy for internationalisation** and ERA-NET results fed directly into the ministry of education and research's (BMBF) internationalization strategy. As Table 19 shows, 26% of German participants thought their organisation's ERA-NET participation had been helped by greater strategic planning/programming around existing R&D programmes.

The objectives and priorities of German research policy have not changed significantly over the last five years. The "High-tech Strategy for Germany", the federal government's research and innovation strategy, presented in August 2006, reflects some shifts in the way policy is delivered with particular emphasis on the link between research results and market success.
In addition to the federal level, each of the 16 Federal States in Germany run its own R&D programmes which vary considerably in terms of volume, scope, funding mechanisms, eligibility criteria and target groups.

In terms of thematic priorities, the HighTech strategies focus on 17 fields. These are health research and medical technology; Security technologies; new paths for agriculture and industry; Energy technologies; Reliable, efficient, sustainable environmental technologies; Information and communications technologies; Automotive and transport; Aviation technologies; Space technology; Maritime technologies; knowledge society; Nanotechnologies; Biotechnology; Microsystems technology; Optical technologies; Materials technologies; Production technologies

As a result of its early experience with ERA-NET, Germany **developed guidelines** for participation in joint calls and cross-border research to be followed by the Ministry of Education and Research. While participation in ERA-NET did not change focus and scope of the national research landscape, it did lead to wider European collaboration than before.

1.2 Motivations for joining ERA-NET and set up[69]

Table 1 shows the main motivations for joining the ERA-NET scheme. About one third of participants cited creating and supporting transnational projects in fields that require transnational cooperation, followed by 30% who saw the main motivation in terms of networking and building relationships with funders from other countries.

However, motivations for joining ERA-NET also **differed across thematic areas** as evidenced by the specific examples below:

For instance, in life sciences, the initial motivation was to **collaborate with strategic partners** in the main European countries to fund projects of the best quality and to exchange ideas and best practises. Similarly, in astrophysics, the main motivation for the

[68] See Table 14 and Table 19..
[69] See Table 1.

German participant was the creation of a stable institutional layer with sufficient capacity for **strategy development** across borders, particularly on research infrastructures.

In the area of energy, one participant noted that the main objective for participating in ERA-NET was the need to **develop standards** at European level to facilitate more effective competition with the US, Japan and other economic areas. In addition, **developing an expertise** in areas where Germany did not already have this at national level was cited as another motivation for ERA-NETs in the area[70]. Building on existing networks in the energy field, was cited by the INNER participant as a reason in order to revive cross-border cooperation initiated in the 1980s and 90s.

In fundamental sciences, **participation grew out of previously existing cross border cooperation** since the 1980s. For instance, in chemistry, ERA-NET was a direct result of transnational cooperation arrangements under CERC3, which was set up in the 1980s. While CERC3 had experimented with joint proposals between France and Germany, ERA-Chemistry could employ staff, professionalise the process and increase budget and funding.

By comparison, the main motivation for German participants in ERASME, a horizontal ERA-NET bringing together SMEs, funding agencies and research organizations, was to **organize joint calls** from the very beginning

Finally, in the social sciences, participants thought the main motivation for German participation was a **desire not to be "left out"** of a European development – though there was no clear conception of the value of participating in an ERA-NET for the German partners.

In most cases and across all thematic areas, decisions to participate in ERA-NET were taken by participants and coordinators – not at the level of policy stakeholders.

2. Overview of participation

2.1 Extent of involvement in the ERA-NET scheme[71]

Germany is one of the countries that were most involved in ERA-NET, both in terms of the number of ERA-NETs and in terms of their financial commitment to the scheme. In many of these ERA-NETs, Germany played a driving role across all thematic areas. The table below presents an overview of German ERA-NET participations.

	Total	Germany	% of total
Number of Contracts	71	61	86%
Partners	1,048	110	10%
Overall Budget	EUR 190m	EUR 26.9m	14%

Table 23 shows the breakdown of Germany's ERA-NET **participation by theme**. Overall, coordinators indicated that Germany had participated in 60 ERA-NETs. 25% of German participations were in the field of industrial technologies and SMEs, 22% in the environment, and 20% in the life sciences. The lowest participation was in the fundamental sciences with only 2 ERA-NETs with German involvement in this area.

Generally, **German partners played a significant role in their ERA-NETs** owing to the country's importance in research across a wide range of thematic areas. As a result, Germany assumed the coordination of a large number of ERA-NETs and there was a feeling among German participants and coordinators that the scheme would have been much less active without German participation.

[70] For instance in the field of hydrogen fuel cells
[71] See Table 23.

The **intensity of relationships with other participants was highest during** joint calls. The table below provides an overview of German participants in ERA-NET by institution, including their funding contributions.

Organisation	Type	Participations	Total Budget (EUR)
BMBF	Ministry	20	752,349
BMVBW	Ministry	1	253,940
BMVEL	Ministry	5	730,428
BMWI	Ministry	8	246,564
BMAS	Ministry	1	0
Ministries at Land level	Ministry	7	118,720
DFG	Funding / programme management agency	6	1,951,342
PTJ	Funding / programme management agency	16	7,763,763
FZK (PT)	Funding / programme management agency	5	990,449
MVBW (TÜV)	Funding / programme management agency	3	2,394,403
PT-DLR	Funding / programme management agency	11	4,323,246
PT VDI (TZ and IT)	Funding / programme management agency	5	1,808,882
PT-Various	Funding / programme management agency	5	1,679,476
Others	-	17	3,850,635
Total	**-**	**110**	**26,864,197**

Generally, participants thought that most ERA-NETs in which they were involved **included the main players and the appropriate people** within the consortium. However, some participants pointed out that cross-cutting political competencies at national level in some thematic areas (e.g. energy) meant that not all relevant players had been involved scheme. For instance, one participant mentioned that energy research was divided across research, economics, environment, and other political portfolios and that it was therefore difficult to agree priorities at national or European level.

3. ERA-NET processes and positioning

3.1 Inputs into the ERA-NET scheme[72]

In terms of **costs of participation,** respondents in Germany indicated that these were covered by contribution from the European Commission without the need for further national resources. As Table 3 shows, 53% of participants indicated that EC funding had covered all time and resources that their organization had invested in participating in their ERA-NET.

However, in most ERA-NETs where joint calls were carried out, **there were additional national funding contributions at project level.** Table 25 shows that, in joint calls, Germany contributed about EUR 78m to virtual pots, EUR 36m to common pots and EUR

[72] See Table 2, Table 3, , Table 14, and , and Table 25.

5.6m to mixed pots. By far the largest contribution was in the life sciences with EUR 50m and the lowest contributions were in transport (EUR 0.23m) and energy (EUR 2.6m).

This breakdown is confirmed by interview responses. For instance, under HY-CO, an energy ERA-NET, no national funds were set aside specifically at project level, which meant that Germany would use its national resources to fund good quality projects irrespective of whether the application was made through ERA-NET. At the same time, the coordinator of life sciences ERA-NETs in Germany was very positive about the extent of financial leverage that ERA-NETs in this area had achieved in Germany.

3.2 Participation in joint activities, calls or programming[73]

A significant set of activities took place under the FP6 ERA-NET scheme in Germany. In ERA-NETs across all thematic areas, Germany was one of the driving countries in terms of participation in joint activities and calls.

As Table 4 shows, the majority (58%) of German participants indicated that they had participated in benchmarking and common schemes for monitoring and evaluation. This was followed by 47% of German participant who had engaged in coordination/clustering of ongoing nationally funded research projects and 46% who had worked on multinational evacuation procedures. The least popular joint activity for German participants were schemes for joint training activities which only 8% of participants had engaged in, compared with an average 15% across the EU-15.

In terms of themes, the extent and nature of participation in ERA-NET also differed substantially:

Fundamental Sciences

For instance, in ERA Chemistry, there were three joint calls which sped up the process of cross-border research significantly. Other activities included an overview of funding arrangements which pointed to significant differences in perceptions about conflicts of interest (i.e. in some countries researchers were in involved in funding decisions in others this could not be the case). In ERASME there were 12 joint calls over the course of FP6. In comparison, in astrophysics, where there was only one relatively small joint call, most activities revolved around common activities in developing funding strategies across borders.

Energy

However, in the **energy** ERA-NET INNER, one participant noted that there had been fewer activities than originally planned and that the size of the joint call had been too small, given the funding requirements of the field. Under HY-CO, another energy ERA-NET, one participant noted that joint calls had been very successful from a technical point of view but that the administrative burden had been about three times higher than for purely national calls. In terms of participation in these calls, both the excellence of the proposal and the benefit to German participants were the main criteria.

In terms of IPR, most ERA-NETs left this issue to the level of individual projects and in most cases IPR-related issues were not very prominent. For instance, in ERASME, one participant felt that IPR issues were generally over-estimated. Similarly in the life sciences, participants were not aware of any IPR related problems at project level despite initial scepticism. In the field of energy, one of the participants in HY-CO noted that German rules required property rights and commercial exploitation to remain in Germany with an exclusive right to exploitation for German companies. As a result of this, most HY-CO projects focused on basic research where IPR tended to be less of an issue.

3.3 Lessons learnt and best practice[74]

[73] See Table 4 and Table 24.

[74] See Table 19, Table 20, and Table 22.

According to German respondents, **one of the main advantages of ERA-NET was its bottom-up nature which provided an apolitical platform** to show that research cooperation across borders could be valuable. In order to build on ERA-NET results and lessons, the German policy stakeholder suggested that all new cross-border cooperation initiatives should consider integration with the ERA-NET scheme. Furthermore, ERA-NET could be used specifically for lead market identification in the thematic areas that are closest to market.

Several participants noted that, given the diversity of actors in research funding across Europe, good practice guidelines to address conflicts of interest should be developed. At the same time, the importance of involving political decision-makers and strategic partners in the consortium to maximize influence and impact was highlighted.

Several participants mentioned that time needed to be set aside for setting up common procedures and engaging in common activities early on, with details (e.g. IPR) left to be addressed as they arise.

Respondents also noted that meetings between German coordinators involved in different ERA-NETs were very helpful in exchanging good practices and providing a support structure for the coordinators.

4. ERA-NET benefits

4.1 Direct and indirect benefits to ERA-NET national policy stakeholders and participants[75]

Overall, Table 5 shows that the vast majority (93%) of participants thought their ERA-NET participation had been worthwhile, with 59% stating that they had got out of the scheme what they'd expected (Table 6). The benefits of ERA-NET participation were primarily **in terms of networking and the creation of a stable interface for cross-border research.**

For instance, in **energy**, for participants main benefits of HY-CO was the network itself and the knowledge sharing and information exchange that it enabled. However, the network did not lead to significant joint activities.

In **astrophysics** (ASPERA and ASTRONET), the main benefit of ERA-NET was that it set up a stable institutional framework for international cooperation compared with other international ventures which tended to be on more ad hoc. As a result, ERA-NET enabled the development of a roadmap for research infrastructures.

In the **life science**s, in one particular instance funding agencies had started to collaborate under ERA-NET when they had primarily been competing with one another before. Cooperation between funders and the larger size of calls were directly attributable to ERA-NETs. This was due to the fact that ERA-NETs helped build trust and develop process that enabled cooperation.

4.2 Direct and indirect benefits to ERA-NET beneficiaries

Many German respondents thought that **ERA-NET had been very beneficial for research beneficiaries**, partly because of the additional funding that was made available nationally and partly because ERA-NET joint calls had reached a wider range of people across Europe than other international initiatives.

In particular, in **basic research,** ERA-NET had allowed researchers from across Europe to apply for funding which had fostered an exchange of ideas among beneficiaries and learning about the activities of researchers in other countries.

In addition, financial leverage which defines benefits at researcher level was highlighted as a specific benefit to German researchers in some thematic areas, particularly as a result of **ERASME** and in the **life sciences**.

In the area of **energy**, INNER had contributed to researcher mobility by bringing together beneficiaries in countries that would not otherwise have cooperated. On HY-CO, the project partnership with Norway was highlighted as mutually beneficial because German researchers could use Norwegian neutron spectroscopy facilities and Norway benefited from German know-how.

[75] See Table 5 and Table 6.

5. Impacts on national R&D policy and programming

5.1 Impact on national R&D policy[76]

Many respondents at policy and participant/coordinator level suggested that ERA-NET had been part of a wider initiative to internationalise R&D in Germany and that it was difficult to attribute impacts directly to the scheme. As Table 18 shows, 50% of German participants thought their organisation's participation in ERA-NET had influenced national research policy beyond the ERA-NET theme. As one policy stakeholder pointed out, some ERA-NETs could eventually become part of thematic "high tech strategies" at the national level. In addition, 50% of participations indicated that ERA-NET had led to a new programme assessment / evaluation criteria (Table 7)

From a thematic perspective, in **astrophysics**, ERA-NET had a structuring effect in the sense that ASPERA and ASTRONET both helped with strategy development which policy stakeholders took into account in setting national priorities and funding decisions. Before ERA-NET, input into national priorities had been more limited.

Similarly, the **WOODWISDOM** ERA-NET had led to changes in national forestry policy as a result of expertise and experience shared with the UK and Northern Europe.

In the field of **energy**, impacts at national level were judged to have been more limited. For instance, one respondent in this field mentioned that political stakeholders at national level had not been 'interested' in changes to energy policy. As a result, there had been little alignment between energy ERA-NETs and national priorities in Germany.

In the **social sciences**, one of the participants voiced concern that national level impacts had not been very significant because of the risk that best practice recommendations developed under the ERA-NET would not be implemented.

5.2 Impact on national R&D programming[77]

Impacts on national R&D programming appeared to have been more significant than impacts on R&D policy. Fully 93% of German respondents indicated that ERA-NET had led to new opportunities to enable transnational R&D activities in the theme of the ERA-NET compared with 87% across the EU-15 (Table 7).

From a thematic perspective, in ERA **Chemistry** a process for joint calls between Germany, Switzerland and Austria outside ERA-NET was being set up and, this could be seen as a logical consequence of ERA-Chemistry.

In the **life sciences**, one participant mentioned that there were very few international programmes before ERA-NET compared with the large number of current parallel international initiatives. Whereas other European countries were previously seen primarily as competitors, ERA-NET had effected a change in perception and led to a more cooperative approach among funding agencies and policy stakeholders.

Similarly, **ERASME** had helped widen cooperation between SMEs and research and technology organisations to cover a larger part of the SME value chain. ERASME showed that the real economy was already working across borders and that funding programming therefore needed to facilitate cross-national projects.

In the field of **astrophysics**, ERA-NET was used to communicate the funding requests of the German research community to political stakeholders so that they could feed into political priorities at national level.

[76] See Table 7 and Table 18.
[77] See Table 7 and Table 18.

However, in energy, one participant in HY-CO noted that none of the Member States had changed their national procedures in response to ERA-NET. This was partly attributed to the fact that energy per se did not fit into a specific research theme.

5.3 Opening up on national R&D programming[78]

In terms of opening up, policy stakeholders thought that **ERA-NETs had acted as an intermediate step between purely national programmes and joint programming** – though the feeling was that in most thematic areas the time for joint programming had probably not yet come. Table 10 shows that 28% of respondents thought their participation in ERA-NET had triggered transnational cooperation outside the scheme and only 15% thought it had led to changes in the allocation of their programme budgets.

In the field of **chemistry**, for instance, the coordinators felt that significant progress had been made in terms of opening up research programmes. Specifically, ERA Chemistry had facilitated other bi- and trilateral initiatives and it had led to the launch of an Open Initiative. Also, for the third call under ERA-Chemistry, 50% of the budget was put in a real common pot and 50% in a virtual common pot. In contrast for **energy**, opening up had not been very successful, though it should be pointed out that for some schemes, this had not been the main initial motivation for participation (e.g. HY-CO).

In terms of **common pots**, over the course of Germany's ERA-NET experience, the BMBF developed a set of guidelines for participation in different funding arrangements. As one policy stakeholder pointed out, as a federal country Germany is used to pooling financial resources under a common pot system. The **social sciences** are one of the few areas where a common pot was set up - though the German partners negotiated an exemption because of concerns that the common pot made it impossible for German project managers to ensure equal treatment of all researchers. In the life sciences, common pots were perceived to be administratively burdensome.

As some German participants pointed out, common pots would require the **funding ratios** of consortium partners to be broadly similar. As a result of these concerns, the BMBF guidelines state that real common pots should be entered into only where there is an interest in research results to be exploited in Germany but which can be generated more efficiently abroad. In order to safeguard the interests of German taxpayers, there was a general preference for a virtual common pot system (such as under EUREKA) with common pots possible only on a case by case basis.

[78] See Table 10 and Table 11.

5.4 Impact on the structuring of national or international research fields

Impact on national research fields[79]

At the level of policy stakeholders, it was pointed out that most people with a thematic focus in research still tended to hold "national mindsets" and not consider funding of foreign researchers. Similarly, at participant level, it was pointed out by a majority of interviewees that the impact on the national research field had been limited. However, Table 21 indicates that 53% of respondents thought ERA-NET had led to researchers with no prior international or European experience benefiting from joint calls and programmes.

In the life sciences, however, the participant highlighted that ERA-NETs had the role of complementing national programmes and provide incentives for domestic companies and beneficiaries to look beyond national boundaries in carrying out their research. According to this participant, the impact of ERA-NET on the national research field had been significant with German scientists gaining access to new ventures across borders.

Impact on international research fields

On the whole, German participants and policy stakeholders thought ERA-NET had had an impact on international research fields, though the extent of that impact differed significantly across thematic areas.

At policy level in Germany, there was a realization that **the ERA-NETs with the biggest impact were in thematic areas where there was value in international cooperation but where this had not yet materialised**. For instance, WOODWISDOM in the field of forestry helped speed up the process of internationalisation and influenced the mindset of participants in terms of recognizing the value of cross-border research.

In terms of German participants and coordinators, most agreed that **differences in the structure of funding** across Europe were the biggest obstacle to the success of their ERA-NETs.

However, ERA-Chemistry had led to wider cross-border cooperation incorporating a larger number of partners and it was beginning to foster integration with other related areas of science. The German coordinator thought ERA-Chemistry was a success, partly because there was little need for expensive infrastructure in this field.

In contrast, in the field of **astrophysics**, where large infrastructures were more dominant, ERA-NET had little impact due to the small size of its joint calls. According to one respondent, internationalization was not due to ERA-NET but to increases in the costs of conducting research and the international distribution of expertise.

In contrast, in the **life sciences** thematic field where considerable sums had been raised as part of the joint calls it appeared not to be the case. Here the impact of the ERA-NET on the research field was linked to the fact that there was little need for infrastructure but that the costs of conducting research were very high and the field was very inter-disciplinary.

In **energy**, there had been little impact on the research field at international level partly because the thematic area was very broad and not focused enough on particular research questions. In the **social sciences**, it is unclear whether growing internationalization and researcher mobility could be attributed to ERA-NET.

[79] See Table 17 and Table 21.

6. European Added Value, relevance and efficiency

6.1 Additionality of the ERA-NET scheme[80]

At the level of policy stakeholders, ERA-NET was seen as an instrument to re-launch multilateral and transnational cooperation without necessarily focusing on European added value to the same extent as in the framework programme. Accordingly, Table 11 shows that 61% of respondents thought there had been no change in the amount of their programme budget invested in transnational R&D projects outside of ERA-NET.

Nevertheless, most participants thought that the additionality of projects funded under ERA-NET was good. For instance, in ERA Chemistry and in INNER most projects supported by the ERA-NET would not have received funding otherwise. However, for projects above a certain size, other support schemes such as the ESF would make more sense. In the social sciences, the decision to set up a common pot had led to added value over other schemes such as the ESF.

At a more strategic level, participants were also positive about the additionality of ERA-NET. ERASME, for instance, was seen as "groundbreaking" in terms of internationalizing cooperation between SMEs and funding agents. In astrophysics, the added value of ERA-NET was that it could help develop a general astronomy strategy, unlike other schemes such as ESO.

However, in the field of energy and, to a lesser extent, in the social sciences, **the additionality of ERA-NET was questioned.** For instance, for INNER, one of the participants deplored that project ideas had not been born within the ERA-NET itself but imported from other multilateral initiatives and that some of these projects did therefore not necessarily respond to INNER's priorities. In the social sciences, one participant noted that NORFACE needed to focus on cross-national databases or other "research infrastructures" on topics of European-wide interest which the ESF did not also provide.

6.2 Economic efficiency and relevance81

The economic efficiency and relevance of the ERA-NET scheme were varied according to thematic areas. While the majority of interview participants suggested that ERA-NET had been very worthwhile, a minority of them (primarily in the energy field) claimed that their involvement had not been worthwhile.

For instance, in **astrophysics**, ASPERA and ASTRONET have increased international cooperation and have generated sufficient impact to be worthwhile. In the **life sciences**, participants were very positive about the overall value of ERA-NETs in the field with most international programmes now channelled through ERA-NET because of the savings associated with the Commission's financial support.

In the **fundamental sciences**, ERA-Chemistry has been very worthwhile because it had significantly sped up the growth of cross-border cooperation. Over time, as the partners in the consortium "graduated" from the scheme, they became more independent of Commission support.

However, in the **energy** field, the overall assessment of participants was more negative. For instance, HY-CO was discontinued because it was regarded as not worthwhile by the consortium partners. Similarly, the participants thought INNER was too expensive from an

[80] See Table 11.
[81] See Table 5.

administrative perspective and most cooperation across borders happened outside the ERA-NET scheme because this was considered more efficient.

Variation in the assessment of participants and coordinators across thematic areas could be explained by differences in the research landscape in these areas. For instance, the wide range of actors at different levels across Member States in energy may have reduced the efficiency of cross-border cooperation. In contrast, ERA-NET as in the life sciences or in chemistry were more focused on particular research strands with well established research communities in the Member States and an existing interest in cross-border projects which ERA-NET could build on.

7. Annexes: Stakeholders and materials consulted

1. Stakeholders consulted

   BMBF

   DFG

   VDI (PT)

   PTJ

   PT-DLR

   BMWI

2. Additional Material consulted

   Federal Ministry of Education and Research (BMBF), Draft Guide for the participation of the BMBF in the preparation and implementation of transnational calls for proposals, February 2008

   Federal Ministry of Education and Research: The High-tech Strategy for Germany, Berlin, (http://www.bmbf.de/pub/bmbf_hts_lang_eng.pdf)

8. Annexes: Participant survey results

The figures below show responses to the participant questionnaire, completed by 32 German participants.

Table 1 - What was your organisation's main rationale for participating in this ERA-NET?

	Germany	EU 15 - large	Overall
Benchmarking of research funding against other countries	4%	1%	**1%**
Creating and supporting transnational projects in a field which requires transnational cooperation	34%	33%	**38%**
Improving own (national) R&D programme/s	5%	10%	**7%**
Learning from funders and sharing of information between funders in other countries	18%	16%	**10%**
Networking and building new relationships with funders from other countries	30%	29%	**35%**
Not Answered	4%	3%	**1%**
Opening up of national programmes in existing or new areas of research	3%	4%	**5%**
Other	1%	5%	**2%**

The most commonly cited rationales for ERA-NET participation were creating and supporting transnational projects in a field which requires transnational cooperation (34%) and networking and building new relationships with funders from other countries (30%). Percentages are broadly in line compared to country grouping average (EU 15 large).

Table 2 - What was the original overall amount of EC funding allocated to your organisation in your contract to participate in this ERA-NET?

	Germany	EU 15 - large	Overall
0 - 9999	3%	4%	**4%**
10000 - 19999	0%	1%	**2%**
20000 - 29999	1%	5%	**3%**
30000 - 39999	4%	6%	**2%**
40000 - 49999	3%	3%	**2%**
50000 - 59999	4%	4%	**2%**
60000 - 69999	1%	3%	**1%**
70000 - 79999	0%	1%	**6%**
80000 +	80%	68%	**71%**
Not Answered	3%	6%	**6%**

The majority of German organizations were allocated over €80,000 in funding to participate in the ERA-NET, which is significantly above the country grouping average (EU 15 large).

Table 3 - Did the EC funding cover all the time and resources your organisation invested in participating in this ERA-NET?

	Germany	EU 15 - large	Overall
Yes	53%	45%	**49%**
No	43%	49%	**43%**
Don't Know	4%	3%	**4%**
Not Answered	0%	4%	**4%**

The majority of German participants (53%) reported that EC funding did cover all the time and resources their organisation invested in participating in the ERA-NET, which is above the country grouping average (EU 15 large).

Table 4 - In which ERA-NET joint activities other than joint calls did you participate?

	Germany			EU 15 - large			Overall		
	Yes	No	Other	Yes	No	Other	Yes	No	Other
Coordination/clustering of ongoing nationally funded research projects	47 %	18 %	36%	55 %	24 %	21%	**59 %**	**19 %**	**23%**
Benchmarking and common schemes for monitoring and evaluation	58 %	14 %	28%	62 %	16 %	23%	**67 %**	**13 %**	**19%**
Multinational evaluation procedures (common evaluation criteria and methods of implementation	46 %	20 %	34%	57 %	20 %	23%	**55 %**	**25 %**	**20%**
Schemes for joint training activities (so-supervised theses or common PhD schemes)	8%	34 %	58%	15 %	42 %	43%	**12 %**	**49 %**	**39%**
Schemes for personnel exchange	20 %	27 %	53%	20 %	39 %	41%	**14 %**	**47 %**	**39%**
Schemes for mutual opening of facilities or laboratories	11 %	31 %	58%	18 %	41 %	41%	**15 %**	**44 %**	**41%**
Specific cooperation agreements or arrangements	24 %	22 %	54%	34 %	33 %	33%	**43 %**	**24 %**	**33%**
Action plan taking up common strategic issues and preparing for joint activities	73 %	16 %	11%	74 %	13 %	13%	**75 %**	**11 %**	**13%**

The majority of German participants took part in action planning taking up common strategic issues and preparing for joint activities (73%), which is broadly in line with the country grouping average (EU 15 large), and benchmarking and common schemes for monitoring and evaluation (58%), which is slightly above the country grouping average (EU 15 large).

Table 5 - Overall would you say that your participation in the FP6 ERA-NET has been worthwhile?

	Germany	EU 15 - large	Overall
Yes	93%	93%	**95%**

No	7%	5%	**4%**
Not Answered	0%	2%	**1%**

The majority of German participants (93%) did find their participation in FP6 ERA-NET worthwhile, which is broadly in line with the country grouping average (EU 15 large).

Table 6 - Which of the three following statements best describes your personal experience of this ERA-NET?

	Germany	EU 15 - large	Overall
I got more out of it than I expected	38%	50%	**41%**
I got out of it what I expected	59%	43%	**51%**
I got less out of it than I expected	3%	5%	**6%**
Not Answered	0%	3%	**1%**

The majority of German participants (59%) believed they got out of it what they expected, which is significantly above the country grouping average (EU 15 large).

Table 7 - To what degree has your participation in this ERA-NET influenced your country's national programme(s)?

	Germany			EU 15 - large			Overall		
	No influence	Influence	Other	No influence	Influence	Other	No influence	Influence	Other
Discontinuation of existing programme(s) in some theme(s)	47 %	36 %	16 %	50%	35 %	15 %	**53 %**	**34 %**	**12 %**
Reducing duplication between National programmes in your country	46 %	31 %	23 %	49%	30 %	21 %	**46 %**	**37 %**	**16 %**
Design of programmes with longer time horizon	48 %	42 %	10 %	43%	45 %	12 %	**42 %**	**49 %**	**10 %**
Design of programmes with shorter time horizon	40 %	42 %	18 %	45%	39 %	16 %	**51 %**	**38 %**	**11 %**
Bigger programme budgets for the theme	39 %	41 %	20 %	39%	44 %	17 %	**42 %**	**46 %**	**12 %**
Smaller programme budgets for the theme	56 %	5%	38 %	58%	10 %	32 %	**63 %**	**13 %**	**23 %**
New programme assessment/evaluation criteria	35 %	50 %	15 %	43%	44 %	13 %	**40 %**	**50 %**	**10 %**
New opportunities to enable transnational R&D activities in the theme of the ERA-NET	4%	93 %	3%	6%	87 %	7%	**8 %**	**85 %**	**6%**
New eligibility criteria allowing funding of foreign researchers in the area	42 %	31 %	27 %	44%	34 %	22 %	**43 %**	**42 %**	**15 %**
Existing programme(s) now covering new theme(s)	47 %	34 %	19 %	48%	36 %	16 %	**48 %**	**39 %**	**13 %**
New programme(s) put in place in response to new theme(s) identified	53 %	34 %	12 %	47%	34 %	19 %	**51 %**	**34 %**	**15 %**

A distinctive feature of the influence of ERA-NET on German National Programmes is that the impact is broadly in line with the country grouping average (EU 15 large). This is demonstrated by the total percentage for "influence" being broadly in line with the total percentage for "influence" in the country grouping average (EU 15 large).

Table 8 - To what extent did your organisation have pre-existing relationships with participants in this ERA-NET prior to FP6?

	Germany	EU 15 - large	Overall
Prior relationships	70%	66%	**66%**
No prior relationships	24%	21%	**26%**
No answer	5%	13%	**8%**

The majority of German participants (70%) reported that they had pre-existing relationships with participants in the ERA-NET, which is slightly above the country grouping average (EU 15 large).

Table 9 - If there were prior relationships which of the following 6 statements best describes how these relationships evolved during your participation in this ERA-NET?

	Germany	EU 15 - large	Overall
Strengthened	66%	63%	**63%**
Weakened	3%	1%	**1%**
No change	1%	4%	**4%**
No answer	30%	32%	**33%**

The majority of German participants who answered this question believed that the relationship strengthened during the participation in this ERA-NET (66%), which is slightly above the country grouping average (EU 15 large).

Table 10 - Has your participation in this ERA-NET triggered transnational cooperation outside of the ERA-NET?

	Germany	EU 15 - large	Overall
Yes	28%	32%	**31%**
No	59%	56%	**47%**
Not Answered	1%	6%	**5%**
Not applicable	11%	6%	**16%**

The majority of German participants reported that participation in the ERA-NET did not trigger transnational cooperation outside of the ERA-NET (59%), which is slightly above the country grouping average (EU 15 large).

Table 11 - Has the ERA-NET experience led to an increase in the amount of your programme budget that has been invested in transnational R&D projects outside of the ERA-NET?

	Germany	EU 15 - large	Overall
Yes	15%	15%	**13%**

No change	61%	61%	**63%**
No answer	24%	24%	**23%**

The majority of German participants reported that the ERA-NET experience lead to no change to the amount of the programme budget that has been invested in transnational R&D projects outside of the ERA-NET (61%), which is in line with the country grouping average (EU 15 large).

Table 12 - If yes, roughly what proportion of your programme budget was transnational before your involvement in ERA-NET?

	Germany	EU 15 - large	Overall
0-25%	20%	17%	**15%**
26 to 50%	0%	0%	**0%**
51 to 75%	0%	0%	**0%**
76 to 100%	0%	0%	**1%**
Not answered	80%	83%	**84%**

The majority of German participants who answered this question reported that 0-25% of the budget was transnational before their involvement in the ERA-NET (20%), which is slightly above the country grouping average (EU 15 large).

Table 13 - If yes, roughly what proportion of your programme budget is transnational now?

	Germany	EU 15 - large	Overall
0-25%	12%	15%	**13%**
26 to 50%	0%	0%	**1%**
51 to 75%	0%	0%	**0%**
76 to 100%	0%	0%	**1%**
Not answered	88%	85%	**84%**

The majority of German participants who answered this question reported that 0-25% of the budget was transnational at the time of the survey (12%), which is slightly below the country grouping average (EU 15 large).

Table 14 - What provisions have been made in your country to coordinate participation in ERA-NETs under FP6? - Single national coordinator for all ERA-NETs

	Germany			EU 15 - large			Overall		
	Yes	No	No answer	Yes	No	No answer	Yes	No	No answer
Single national coordinator for all ERA-NETs	11 %	64 %	25%	14 %	60 %	26%	**15 %**	**66 %**	**19%**
Team of several coordinators at national level	27 %	41 %	32%	25 %	43 %	32%	**24 %**	**51 %**	**24%**
Coordination meetings for all national participants	35 %	27 %	38%	34 %	41 %	26%	**37 %**	**41 %**	**22%**

Organisation-specific coordination meetings	45 %	21 %	34%	50 %	27 %	24%	**50 %**	**31 %**	**19%**

Most German participants reported that the provision made to coordinate ERA-NET participation were organisation-specific coordination meetings (45%), which is slightly below the country grouping average (EU 15 large).

Table 15 - Earlier we asked you to state your ERA-NET's theme. How important was this theme in your country's research programme before your organisation joined this ERA-NET?

	Germany	EU 15 - large	Overall
Very Important	17%	29%	**21%**
Fairly Important	44%	39%	**48%**
Not very important	17%	12%	**16%**
Not at all important	11%	5%	**5%**
Don't Know	1%	6%	**4%**
Not Answered	6%	6%	**5%**
Not Applicable	4%	3%	**2%**

Most German participants reported that the ERA-NET's theme was fairly important in their country's research programme before their organisation joined the ERA-NET (44%), which is slightly above the country grouping average (EU 15 large).

Table 16 - How important is this theme in your country's research programme now?

	Germany	EU 15 - large	Overall
Very important	19%	31%	**24%**
Fairly important	53%	43%	**56%**
Not very important	15%	11%	**11%**
Not at all important	3%	1%	**1%**
Don't know	1%	5%	**3%**
Not Answered	4%	6%	**4%**
Not applicable	4%	4%	**2%**

The majority of German participants (53%) reported that the ERA-NET's theme was fairly important to their country's research programme at the time of the survey, which is significantly above the country grouping average (EU 15 large).

Table 17 - If there has been a change in the importance of the theme to what extent do you think this was due to the ERA-NET?

	Germany	EU 15 - large	Overall
To some extent	37%	24%	**29%**
Not at all	10%	12%	**11%**
No answer	53%	64%	**60%**

Most German participants who answered this question reported that the change in the importance of the theme was to some extent due to the ERA-NET (37%), which is significantly above the country grouping average (EU 15 large).

Table 18 - Has your organisation's involvement in this ERA-NET influenced national research policy beyond the theme of this ERA-NET?

	Germany	EU 15 - large	Overall
Influence	50%	47%	**63%**
No influence	28%	25%	**18%**
No answer	22%	28%	**19%**

Half of German participants (50%) who answered this question reported that their involvement in the ERA-NET influenced national research policy beyond the theme of the ERA-NET, which is slightly above the country grouping average (EU 15 large).

Table 19 - Have any of the following external factors helped or hindered the effects of your organisation's participation in this ERA-NET?

	Germany					EU 15 - large					Overall				
	Helped	Hindered	No effect	Not Answered	Not applicable	Helped	Hindered	No effect	Not Answered	Not applicable	Helped	Hindered	No effect	Not Answered	Not applicable
Change in programme management agency	8%	5 %	27 %	1 %	58 %	12 %	7 %	28 %	6%	48 %	**7 %**	**6 %**	**36 %**	**4 %**	**47 %**
New R&D management structure	12 %	9 %	31 %	1 %	46 %	14 %	9 %	27 %	6%	44 %	**11 %**	**7 %**	**35 %**	**5 %**	**41 %**
For existing programmes, more strategic R&D programming/planning	26 %	0 %	35 %	7 %	32 %	34 %	0 %	27 %	9%	30 %	**29 %**	**0 %**	**36 %**	**7 %**	**28 %**
Externalisation of R&D programmes into agency/agencies	7%	1 %	33 %	7 %	52 %	9%	3 %	29 %	7%	52 %	**8 %**	**4 %**	**33 %**	**6 %**	**49 %**
Setting up of new types of R&D programmes	24 %	4 %	36 %	4 %	31 %	29 %	5 %	28 %	6%	33 %	**24 %**	**7 %**	**33 %**	**5 %**	**30 %**
Barcelona 3% targets	19 %	1 %	37 %	7 %	36 %	22 %	0 %	38 %	10 %	30 %	**16 %**	**0 %**	**39 %**	**9 %**	**36 %**

Most German participants (26%) reported that existing programmes, more strategic R&D programming, helped the effects of their organisations' participation in the ERA-NET, which is below the country grouping average (EU 15 large).

Table 20 - How satisfied are you with the overall level of transnational cooperation within this ERA-NET?

	Germany	EU 15 - large	Overall
Satisfied	92%	85%	**88%**
Unsatisfied	7%	8%	**7%**
No answer	1%	7%	**4%**

The majority of German participants (92%) were satisfied with the overall level of transnational cooperation within the ERA-NET, which is above the country grouping average (EU 15 large).

Table 21 - Have you seen evidence of the following effects at national level as a result of this ERA-NETs joint calls joint programming or other joint activities?

	Germany			EU 15 - large			Overall		
	Some evidence	No evidence	No answer	Some evidence	No evidence	No answer	Some evidence	No evidence	No answer
Higher quality projects generated at national level (i.e. higher quality proposals)	34%	38%	28%	41%	36%	24%	**39%**	**44%**	**17%**
Higher quality projects funded at national level (through joint calls/programmes)	36%	34%	30%	38%	33%	29%	**35%**	**42%**	**23%**
New types of research projects generated (i.e. reflected in proposals received)	38%	32%	30%	36%	36%	28%	**38%**	**42%**	**20%**
New types of research projects funded (through joint calls/programmes)	44%	23%	33%	45%	26%	30%	**46%**	**32%**	**22%**
New researchers (with no prior international or European experience) benefiting from joint activities	48%	29%	23%	49%	22%	29%	**40%**	**27%**	**33%**
New researchers (with no prior international or European experience) benefiting from joint calls/programmes	53%	24%	23%	50%	22%	28%	**41%**	**34%**	**25%**
Access to foreign research communities/groups not present in my country	56%	21%	23%	62%	17%	21%	**54%**	**28%**	**18%**

Most German participants reported evidence of access to foreign research communities/groups not present in my country (56%), which is below the country grouping average (EU 15 large), and new researchers benefiting from joint calls/programmes (53%), which is slightly above the country grouping average (EU 15 large).

Table 22 - Did any of the following factors either help or hinder your organisation to exploit the full potential of its participation in this ERA-NET?

	Germany					EU 15 - large					Overall				
	Aid to success	No problem	Problem but overcome	Problem still not overcome	No answer	Aid to success	No problem	Problem but overcome	Problem still not overcome	No answer	Aid to success	No problem	Problem but overcome	Problem still not overcome	No answer
National thematic programme priorities	18%	44%	11%	18%	10%	14%	46%	10%	15%	15%	**16%**	**46%**	**13%**	**12%**	**13**
National cultures or research traditions	8%	53%	12%	16%	10%	11%	42%	15%	13%	19%	**10%**	**46%**	**15%**	**14%**	**15**
National resources (staff time finances)	4%	11%	38%	38%	8%	12%	13%	33%	27%	15%	**17%**	**35%**	**26%**	**15%**	**7**
National administrative procedures (e.g. evaluation rules)	4%	39%	36%	11%	9%	11%	32%	31%	12%	15%	**6%**	**25%**	**29%**	**28%**	**12**
National legal programme conditions (e.g. funding of non-residents IPR)	1%	35%	20%	23%	20%	2%	44%	15%	19%	20%	**4%**	**35%**	**19%**	**25%**	**17**
EC administrative procedures or legal requirements	0%	53%	20%	8%	19%	0%	45%	21%	13%	21%	**1%**	**34%**	**36%**	**12%**	**18**
Perceptions of benefits	12%	33%	14%	7%	34%	14%	30%	12%	10%	34%	**15%**	**28%**	**16%**	**13%**	**28**
Engagement in other transnational initiatives (e.g. COST EUREKA)	20%	34%	4%	4%	38%	18%	33%	6%	5%	38%	**12%**	**46%**	**4%**	**4%**	**34**

The majority of German participants reported that national cultures or research traditions (53%) and EC administrative procedures or legal requirements (53%) were no problem in exploiting the full potential of their organisation's participation in the ERA-NET, while most reported national resources (38%) as a problem that was still not overcome.

9. Annexes: Coordinator survey results[82]

The following tables show information from the coordinator questionnaire.

Table 23 - ERA-NET participation by theme

Theme	Number	Percentage
Transport	4	6.7%
Life Sciences	12	20.0%
Environment	13	21.7%
Fundamental Sciences	2	3.3%
INCO	4	6.7%
Industrial Technologies and SMEs	15	25.0%
Energy	5	8.3%
Social Sciences and Humanities	5	8.3%
Total	**60**	**100%**

Industrial Technologies and SME's and Life Sciences thematic areas attracted most of the German participants.

Table 24 - Joint call participation by theme

Theme	Number	Percentage
Transport	1	2.0%
Life Sciences	12	23.5%
Environment	8	15.7%
Fundamental Sciences	7	13.7%
INCO	3	5.9%
Industrial Technologies and SMEs	13	25.5%
Energy	3	5.9%
Social Sciences and Humanities	4	7.8%
Total	**51**	**100%**

Industrial Technologies and SME's and Life Sciences thematic areas channeled most of the contributions to joint calls.

[82] The Coordinator survey covered all 71 ERA-NETs - although in case of 7 ERA-NETs, the information collected dates back from the 2006 survey. 59 ERA-NETs provided information about the calls they have done over the period (NB: it is likely that not all ERA-NETs have reported call information in an exhaustive way). 49 ERA-NETs provided a breakdown of funding contributions at country level for calls (NB: this is likely to be an underestimate as not all ERA-NET coordinators knew this information)

Table 25 - Financial contributions to joint calls by theme

Theme	No contributions	€ virtual	€ common	€ mixed	Total
Transport	3	230,000	-	-	230,000
Life Sciences	18	50,082,070	150,000	-	50,232,070
Environment	10	6,198,648	-	3,000,000	9,198,648
Fundamental Sciences	8	900,000	28,200,000	2,500,000	31,600,000
INCO	4	800,000	-	100,000	900,000
Industrial Technologies and SMEs	18	17,611,000	-	-	17,611,000
Energy	3	2,574,518	-	-	2,574,518
Social Sciences and Humanities	4	-	7,489,110	-	7,489,110
Total	**68**	**78,396,236**	**35,839,110**	**5,600,000**	**119,835,346**

Most of the funding contributions were made through virtual common pots, Fundamental Sciences thematic area contained the largest real common pot contribution by far.

ERA-NET EVALUATION

Country Report on Italy

The following document provides the structure for the country report on ERA-NETs in Italy.

The content of this report has been informed by qualitative interviews and the findings of two surveys. The interviews were undertaken with ERA-NET stakeholders[83] in 15[84] of the 40 countries taking part in the scheme. The number of interviews by country ranged between handfuls in some countries to a couple of dozen in other countries. The same interviewees were chosen to represent thematic areas – the number of interview per theme ranged between 12 and 25 depending on the theme. The surveys were aimed at all ERA-NET coordinators and participants and responses were received by approximately half of these, although responses varied across themes and countries. In addition, and where relevant, the report has been informed by reviews of documents and websites.

Regarding the contents of this report it is important to remember that the findings described within cannot be regarded as a definitive or representative view of all activities within ERA-NETs in this country. Because the interviews were based on a narrow selection of countries and representing a minority of ERA-NETs in each theme, the contents of this report should very much be regarded as a case study that provides a view of the experience. This may also explain why the findings from the qualitative interviews are sometimes at odds with the findings of the surveys which were more inclusive and wide-ranging.

Where possible in the report, the source of evidence is indicated either as coming from one of the surveys or the field interviews.

[83] Stakeholders included National Policy Stakeholders, ERA-NET Coordinators and Participants, and ERA-NET beneficiaries.
[84] The countries were: Austria, Croatia, Finland, France, Germany, Italy, Netherlands, Norway, Poland, Portugal, Romania, Russia, Slovenia, Turkey, and UK,

Contents

0. Executive Summary - Overview

Q1 – Impact on Research Landscapes

- Italy did not get involved in the first two years of the FP6 ERA-NET Scheme, because its national R&D programme did not have the objective, flexibility or discretionary budget to support international projects. This changed with the 2nd Triennial Research Plan (2005-2007), which included an objective to "support active EU/international R&D participation". The ERA-NET Scheme therefore offered a wide range of practical opportunities to test the feasibility of opening up national R&D activities to international cooperation but their late entry meant that Italian participants were very much the followers in FP6 consortia. This experience is expected to influence the 3rd Triennial Research Plan and it is already clear that Italy is now both willing and able to play a more strategic role in selected FP7 ERA-NET projects.
- The regions achieved more operational autonomy for industrial R&D in 2004 and the more advanced have been investing in technology infrastructure and networks to support the development of knowledge-based industries. The ERA-NET Scheme complements these strategies by allowing innovative companies in the region to develop R&D partnerships with leading edge companies and R&D centres in other European countries. This is helping to accelerate the development of these high growth industries.
- The ERA-NET Scheme has allowed Italy to make more rapid progress towards its ambition to be more strategic (thematic priorities) and international about its investment in R&D. There are still many financial and administrative constraints that are inhibiting the achievement of this ambition but the ERA-NETs are creating the bottom-up momentum to overcome administrative constraints and help to influence funding policy.

Q2 – Structuring effect on specific research areas or fields

- In the past the national and regional R&D programmes in Italy used to define thematic priorities only at general level and the specific instruments were opened to any thematic topic.. Participation in ERA-NETs, especially related to the definition of a common R&D agenda, appears to be having a consequential structuring and alignment effect on the prioritisation of the research activities of these public R&D performing organisations.
- There is no indication that the FP6 ERA-NETs have had any top-down thematic structuring effect but there is more commitment to ERA-NETs and emerging FP7 initiatives that have a good policy fit. This is particularly obvious in areas like environment and health.

Q3 - Direct benefits and indirect benefits

- ERA-NETs have allowed participants to gain practical experience of working together on the design and implementation of international activities, including joint calls
- Policy-level support for international R&D appears to have increased, probably because of the relatively high participation of Ministries.
- Relationships with peers in other countries have broadened (beyond traditional cultural peers) and deepened (through investment in some Joint Calls)

Q4 – Opening up of national programmes

- Administration systems have been modified in some cases to enable participation in Joint Calls
- Investment in Joint Calls so far has been via the Virtual Common Pot model. The legal framework appears to make it impossible for Ministries to provide direct R&D project funding to non-residents. The barrier in the agencies seems to be more related to a lack of policy and inflexible administrative systems, which are difficult to change. Some progress appears to have been made on adapting administrative systems in those organisations that have provided funding to Joint Calls.

Q5 – Best practice

- Working together on Joint Activities has allowed participants to achieve practical learning about other national systems
- Joint Call projects have allowed some beneficiaries in public research institutes to learn about best practice R&D management from their peers in countries that have a more competitive R&D funding system

1. Strategic national context underpinning the ERA-NET participation

1.1 Strategic planning and role of ERA-NETs in the country[85]

The recent evolution of the R&D landscape in Italy has been influenced by two important decisions in 2001. Firstly, a process of triennial National Research Plans (PNR) was introduced. This is coordinated by MIUR (Ministry of Education, University and Research) with inputs from other Ministries. Secondly, responsibility for industrial innovation was delegated to the Regions.

When the 2nd PNR was published in 2004, there was the political ambition to be more strategic, thematic and international about investment in R&D but this has not been properly carried through to the operational level because of frequent changes in Government. We understand that there are still no thematic priorities although some societal ministries have R&D budgets, albeit relatively small. This more strategic ambition, however, clearly made the ERA-NET Scheme more interesting than it had been in 2003/4 when Italy was an obvious omission from the first batches of ERA-NET's.

At a Regional level, the situation has also evolved in a way that is favourable to ERA-NET participation. Initially, the strategy of the regional authorities was similar to the generic national approach. Since then, the more advanced Regions (e.g. Piemonte) have developed R&D policies and made major investments in research infrastructure and large-scale projects for specific sectors and/or technologies. A new Law was also introduced in 2004 that gave more delegated authority for R&D policy from the political level to the executive function within the Regional Government organisations. This increased autonomy has given a much higher degree of flexibility to align with ERA-NET priorities.

It would appear therefore that the political decisions in 2004 have been favourable to the participation of Italy in the ERA-NET Scheme. This, and the continuing lack of a thematic R&D structure, has meant that Italy was very much a follower rather than a leader in the FP6 ERA-NET Scheme. The strategy in the 3rd PNR (not yet published) and the evolution of the regional R&D activities should mean that Italy deepens its participation in both ERA-NET's and also joint programming in FP7.

1.2 Motivations for joining ERA-NET and set up[86]

Italy has been a follower in the ERA-NET's and has generally responded to invitations from coordinators. As a large country, it was also being lobbied to participate by other countries through intergovernmental networks like CREST and EUREKA. In at least one case, there was also pressure from the Italian academic sector that felt excluded from ERA-NET funding opportunities. The 'internationalisation' objectives in the 2005-2007 PNR (i.e. support active EU/international R&D participation) and increased regional autonomy from 2004 seemed to create the conditions to join lots of ongoing ERA-NETs. This partly explains why Italy did not take the coordination role in any of the FP6 ERA-NETs (n.b. Italy is the coordinator of a new FP7 ERA-NET on Cultural Heritage).

2. Overview of participation

2.1 Extent of involvement in the ERA-NET scheme[87]

[85] See Table 14 and Table 19.
[86] See Table 1.
[87] See Table 23.

Italy is involved in 35 FP6 ERA-NET's. These are listed and classified in the Annex and Table 23. Key points of note are:

- Relatively high level of participation by national Ministries (c.50% of total)
  - Ministry of Research (MIUR) is in seven
  - Ministry of Environment is in three
  - Ministry of Agriculture, Forestry and Fisheries is in two
  - Ministry of Health is in two
  - Ministries of Foreign Affairs, Interior and Productive Activities (now Economic Development) are in one each
- Six regions involved
  - Emilia Romagna
  - Liguria
  - Lombardia
  - Piemonte
  - Toscana
  - Trento
- Broad thematic involvement
  - Life Sciences (12)
  - Industrial technologies and SMEs(8)
  - Environment (7)
  - Fundamental Sciences (3)
  - Social Science and Humanities (2)
  - Transport (2)
  - Energy(1)
  - INCO (1)

None of the FP6 ERA-NETs are coordinated by Italy.

3. ERA-NET processes and positioning

3.1 Inputs into the ERA-NET scheme[88]

In general, Italian participants appeared to be attracted to ERA-NET's because of the Joint Activities and Calls. Some (e.g. MIUR) were already well networked into the EU RTD community because their ERA-NETs are coordinated by the International team. Most of the others had the same interest but were also attracted by the opportunity to learn about good R&D programme practice in other countries and/or broaden and deepen their European relationships.

Mutual opening and participation in Common Pot Calls is not yet seen as a practical objective because of political as well as legal and administrative barriers. MIUR advised that direct funding could not be given to non-residents and this could only happen through subcontract from an Italian-based beneficiary. The Environment Ministry did not participate in the 2nd SKEP Call (Common Pot) because it was incompatible with existing administrative systems (the 1st Call was Virtual Common Pot). Others are operating on the basis that the Virtual Common Pot is the only practical mechanism for them. The extent of Italian financial contributions to ERA-NET joint calls is shown in

As mentioned in Section 2.1 above, there is a relatively high participation of National Ministries and Regional Government bodies in the portfolio of ERA-NETs with Italian partners. They have generally integrated the ERA-NET functions into their day-to-day activities and used experts from their universities or institutes for technical support including evaluation of Joint Call applications (most of the EC funding has been used to cover the costs of these national experts). In some cases the work is shared by a small team. In others, there is an individual who is perhaps 50% dedicated to the ERA-NET. This appears to work well and implies a commitment to the long term sustainability of certain ERA-NETs. There was no indication of any horizontal coordination of ERA-NET activities across Italy and in one case (ISS) there was no apparent coordination within the same organisation that participates in five ERA-NETs. It appears that the main opportunity to influence national policy from the ERA-NET level is via the bottom-up inputs to the process of developing the triennial National Research Plan.

3.2 Participation in joint activities, calls or programming[89]

The generally open nature of the national R&D programmes in Italy has meant that it has been practical to participate in some, but not all, Joint Calls. For example:

- The Research Ministry has participated in two Joint Calls so far (ERA-PG and Biodiversity) but couldn't participate in the Joint Calls of Hy-Co and Matera because of unfavourable budget timing
- The Environment Ministry participated in the 1st Joint Calls of CIRCLE and SKEP. It is unlikely to participate in 2nd SKEP Call (too general) but will continue with CIRCLE as it is a good fit with a high priority policy area (Climate Change)
- Regione Piemonte has participated in both the 1st and 2nd Calls of MANUNET
- The National Metrology Institute has participated in the iMERA Plus (n.b. this was an FP7 project)
- The Environment Agency did not participate in the 1st Joint Call of CRUE but expects to participate in the forthcoming 2nd Call

[88] See Table3, table 14 and Table 25

[89] See Table 4.

- The National Institute for Biomedical Research (ISS) hopes to participate in the 1st Joint Call of PRIOMEDCHILD in January 2009 (intention is common pot model)

All of these have been enabled so far through the Virtual Common Pot funding model. It remains to be seen whether ISS will be able to participate in a real Common Pot model. The joint call participation is shown in more detail in Table 24.

Regione Piemonte has invested between €4-6 million per Call and has the largest budget within the MANUNET consortium. The iMERA project is also moving towards an Article 169 that will require major coordinated investment. Other participation in Joint Calls has been relatively small and experimental in most cases. Also, as a follower, Italy has not normally taken a strong leadership role in the ERA-NETs.

Italy's involvement in the FP7 agenda related to joint programming (e.g. Joint Technology Initiatives) appears likely to be more coordinated and strategic than was the case at the beginning of the FP6 ERA-NET Scheme. MIUR has set aside budgets to participate in the JTIs, the Article 169 programmes on Ambient Assisted Living and Eurostars and the ERA-NET Plus for MATERA.

Italy's participation in activities other than joint calls is outlined in Table 4.

3.3 Lessons learnt and best practice[90]

The overwhelming message from both policy makers and participants in Italy is that the main lesson from the ERA-NETs so far is to find out what is practical and what is not in supporting trans-national research activities. Many operational lessons have been learned and this seems to have reinforced the aspiration to support the internationalisation of public funded research activities. Participation in Joint Calls has meant that administration systems can now cope better with funding of international activities. The learning does seem to be limited to a small number of people who are directly involved in the ERA-NETs as there was no indication of any formal dissemination activities. We believe, however, that some of the positive lessons are being fed into the triennial National Research Planning process.

The often raised issue of achieving a funding balance in Virtual Common Pot funding models is generally regarded as a theoretical problem that is resolved in an iterative manner during the normal two stage evaluation process. As a latecomer to ERA-NETs it seemed to some Italian participants that much resource had been spent on developing web-based information exchange tools and databases at the individual ERA-NET level rather than creating a standard framework for all.

[90] See Table 19, Table 20, and Table 22.

4. ERA-NET benefits

4.1 Direct and indirect benefits to ERA-NET national policy stakeholders and participants[91]

Some of the benefits that were commonly mentioned included:

- Operational experience of Joint Calls has helped to justify budgets for the more strategic Joint Programming initiatives (including JTI's, Article 169's and FP7 ERA-NET Plus) to come
- Working together on Joint Activities (not just calls) has a high learning benefit (even for those that are already involved in international networks) as it gives everyone a practical appreciation of other national systems, the real difficulties of working together and how to overcome these difficulties
- ERA-NET provides a user-friendly funding option between the national programmes and EU programmes
- Joint activities like research foresight and technology roadmapping in the ERA-NET domain has an added value for informing national policy
- Some have started to apply lessons learned in how to select and manage research projects
- Has encouraged national funding organisations and the research community to open their mind to working with others in Europe

One interesting benefit that was highlighted from two ERA-NETs (CRUE and PRIOMEDCHILD) was the synergy with a parallel process related to EU Directives. In CRUE, the policy level stakeholders (Environmental Ministries) and the participants (Environment Agencies) are both involved in a Working Group on the EU Flood Directive. The parallel activities for the EU Directive and the ERA-NET are proving to be mutually supportive and relationships have deepened.

4.2 Direct and indirect benefits to ERA-NET beneficiaries

- Could not have secured support for such a large R&D company-led project in Italy (MANUNET)
- Enabled access to a Spanish research institute that had the perfect blend of expertise in two key disciplines required for the project (MANUNET)
- Has allowed our researchers (public research institute) to learn about best practice in research management from their peers who operate in more commercial markets (iMERA)

[91] See Table 5 and Table 6.

5. Impacts on national and international R&D policy and programming

5.1 Impact on national R&D policy[92]

- Operational experience has helped to support the case for more investment in internationalisation of R&D activities
- Appears to be stronger impact on regional than national policy level (acceleration of internationalisation processes through practical learning)

  "MANUNET was a train that came along at the right time"

5.2 Impact on national R&D programming[93]

- Lessons from other countries has enabled operational improvements to be made in current programmes

  "Research staff have learned about best practice research management via iMERA Plus projects"
- Has encouraged national R&D players to be more open to European collaboration and in some cases (e.g. PRIOMEDCHILD) has enabled much broader engagement with national stakeholders than before

5.3 Opening up on national R&D programming[94]

- Administration systems have been modified in some cases to enable participation in ERA-NET Joint Calls (Italy has relatively complex administration systems that are difficult to change)
- Participants have generated a bottom up policy debate on the legal aspects of co-funding trans-national R&D projects and related activities

5.4 Impact on the structuring of national or international research fields[95]

- Limited impact, but has allowed lots of people to get some practical experience of joint programming
- Has nurtured the growing aspiration to be international in research & innovation strategies
- Some have developed a common approach to future research priorities and these should influence future national and international activities
- Relationships have broadened and deepened through working together in a new way

  "CRUE is influencing EU Flood Directive and vice versa"

[92] See Table 7 and Table 18.
[93] See Table 7 and Table 18.
[94] See Table 10 and Table 11.
[95] See Table 17 and Table 21.

6. European Added Value, relevance and efficiency

6.1 Additionality of the ERA-NET scheme[96]

- ERA-NET has provided a more solid platform of experience, and some administrative tools, for international collaboration in the future
- Viewed by many as a practical and complementary alternative to the EU RTD Framework Programme, which requires large consortia and has heavy administration procedures
- Appears to be providing the tools to accelerate the process of becoming more open to European collaboration

6.2 Economic efficiency and relevance[97]

- General feedback is that the benefits (especially the learning benefits) have far exceeded the disadvantages, as can be seen in Table 5.
- Italian Ministries have made their participation more efficient by using the EC funding to support the costs of using experts from their institutes or universities

[96] See Table 11.
[97] See Table 5.

7. Annexes: Stakeholders and materials consulted

Stakeholders consulted

- Finpiemonte
- Istituto Nazionale di Ricerca Metrologica
- Istituto Superiore di Sanità
- Istituto Superiore per la Protezione e la Ricerca Ambientale
- Ministero dellìIstruzione, dell'Università e della Ricerca
- Ministero dell'Ambiente e della Tutela del Territorio e del Mare
- NTplast srl
- Proplast (Plastics Innovation Pole)
- Regione Piemonte
- UNICRI

Materials consulted

- ERAWATCH Research Inventory for Italy, 2008
- Country Review Italy, Monitoring and analysis of policies and public financing instruments conducive to higher levels of R&D investments (The Policy Mix Project), Innova SpA and ZEW, March 2007
- INNO Policy Trend Chart – Policy Trends and Appraisal Report – Italy, 2007

Overview of Italian participation in FP6 ERA-NETs

An overview of the 35 ERA-NETs with Italian participation is show in the table below.

ERA-NET	Topic	FP6 Thematic	Government Participants	Other Italy Participants
ACENET ERA-NET	Applied Catalysis	Industrial Technologies and SMEs	Ministry of Research	Conzorzio Reattivita e Catalisi
AirTN	Air Transport	Transport	Ministry of Research	Italian Aerospace Research Centre (CIRA)
ALLIANCE-O	Organ Donation and Transplantation	Life Sciences		Istituto Superiore di Santa (ISS)
ASPERA	Astroparticle Physics	Fundamental Sciences		Istituto Nationale di Fisica Nucleare (INFN)
ASTRONET	Astronomy	Fundamental Sciences		Instituto Nazionale di Astrofisica
BiodivERsA	Boidiversity	Environment	Ministry of Research	
CIRCLE	Climate Impact	Environment	Ministry of Environment	
CoCanCPG	Cancer Clinical Practice	Life Sciences	Regione Emilia Romagna	Agenzia Sanitaria Regionale
COMPLEXITY-NET	Complexity	Fundamental Sciences		National Research Council (CNR)
Core Organic	Organic Food and Farming	Life Sciences	Ministry of Agriculture and Forestry	
CORNET	SME Collective Research	Industrial Technologies and SMEs	Ministry of Productive Activities	Institute for the Promotion of Industry (IPI)
CRUE	Flood Management	Environment		Agency for Environmental Protection and Engineering Services
ERA-AGE	Ageing	Life Sciences		Istituto Superiore di Santa (ISS)
ERA-ARD	Agricultural	INCO	Ministry of Foreign Affairs	
ERA-PG	Plant Genomics	Life Sciences	Ministry of Research	
EraSME	SMEs and research organisations	Industrial Technologies and SMEs	Regione Lombardia	Sviluppo Italia Toscana
ERA-STAR REGIONS	Space Technologies	Transport	Regione Toscana	Navigate Consortium (Lombardia)
ERASysBio	Systems Biology	Life Sciences	Autonomous Province of Trento	
E-RARE	Rare Diseases	Life Sciences		Istituto Superiore di Santa (ISS)
EUPHRESCO	Phytosanitary (quarantine plant health)	Life Sciences	Ministry of Agriculture and Fisheries	Agricultural Research Council
EUROPOLAR	The European polar consortium	Environment	Ministry of Research	
EU-SEC	Security during major events	Social Science and Humanities	Ministry of Interior	
EUWI	Water Science and Technology (developing world)	Environment	Ministry of Environment	EuroMediterranean Center for Climate Change
HESCULAEP	Health Emergency	Life Sciences	Regione Liguria	Azienda Ospedale San Martino and Cliniche Universitarie Convenzionate
HY-CO	Hydrogen and Fuel Cell	Energy	Ministry of Research	
iMERA	Metrology	Industrial Technologies and SMEs		Institute di Metrologia "G Colonetti"
MANUNET	Manufacturing	Industrial Technologies and SMEs	Regione Lombardia, Regione Piemonte	ASTERS Cons.p.a, Sviluppo Italia Toscana SCPA
MATERA	Materials	Industrial Technologies and SMEs	Ministry of Research	
NanoSci-ERA	Nanoscience	Industrial Technologies and SMEs		Instituto Nazionale per la Fisica della Materia
NEURON	Neuroscience	Life Sciences	Ministry of Health	
NEW-OSH-ERA	Occupational Safety and Health	Industrial Technologies and SMEs	Ministry of Health	Istituto Superiore per la Prevenzione e la Sicurezza del Lavoro
PRIOMEDCHILD	Priority Medicines for Children	Life Sciences		Istituto Superiore di Santa (ISS)
SAFEFOODERA	Food Safety	Life Sciences		Istituto Superiore di Santa (ISS)
SKEP	Environmental Protection	Environment	Ministry of Environment	
WORK-IN-NET	Labour and Innovation	Social Science and Humanities		Instituto per il Lavoro

8. Annexes: Participant survey results

The figures below show responses to the participant questionnaire, completed by 20 Italian participants.

Table 1 - What was your organisation's main rationale for participating in this ERA-NET?

	Italy	EU 15 - large	Overall
Benchmarking of research funding against other countries	0%	1%	**1%**
Creating and supporting transnational projects in a field which requires transnational cooperation	19%	33%	**38%**
Improving own (national) R&D programme/s	10%	10%	**7%**
Learning from funders and sharing of information between funders in other countries	23%	16%	**10%**
Networking and building new relationships with funders from other countries	29%	29%	**35%**
Not Answered	0%	3%	**1%**
Opening up of national programmes in existing or new areas of research	10%	4%	**5%**
Other	10%	5%	**2%**

The most commonly cited rationales for ERA-NET participation were networking and building new relationships with funders from other countries (29%), which is broadly in line with the country grouping average (EU 15 large) and learning from funders and sharing of information between funders in other countries (23%), which is above the country grouping average (EU 15 large).

Table 2- What was the original overall amount of EC funding allocated to your organisation in your contract to participate in this ERA-NET?

	Italy	EU 15 - large	Overall
0 - 9999	3%	4%	**4%**
10000 - 19999	0%	1%	**2%**
20000 - 29999	0%	5%	**3%**
30000 - 39999	0%	6%	**2%**
40000 - 49999	13%	3%	**2%**
50000 - 59999	3%	4%	**2%**
60000 - 69999	6%	3%	**1%**
70000 - 79999	0%	1%	**6%**
80000 +	65%	68%	**71%**
Not Answered	10%	6%	**6%**

The majority of Italian organisations (65%) were allocated over €80,000 in funding to participate in the ERA-NET, which is slightly below with the country grouping average (EU 15 large).

Table 28 - Did the EC funding cover all the time and resources your organisation invested in participating in this ERA-NET?

	Italy	EU 15 - large	Overall
Yes	50%	45%	**49%**
No	40%	49%	**43%**
Don't Know	0%	3%	**4%**
Not Answered	10%	4%	**4%**

Half of the Italian participants (50%) reported that EC funding did cover all the time and resources their organisation invested in participating in the ERA-NET, which is slightly above the country grouping average (EU 15 large).

Table 4 - In which ERA-NET joint activities other than joint calls did you participate?

	Italy			EU 15 - large			Overall		
	Yes	No	Other	Yes	No	Other	Yes	No	Other
Coordination/clustering of ongoing nationally funded research projects	66%	17%	17%	55%	24%	21%	**59%**	**19%**	**23%**
Benchmarking and common schemes for monitoring and evaluation	70%	17%	13%	62%	16%	23%	**67%**	**13%**	**19%**
Multinational evaluation procedures (common evaluation criteria and methods of implementation	69%	14%	17%	57%	20%	23%	**55%**	**25%**	**20%**
Schemes for joint training activities (so-supervised theses or common PhD schemes)	30%	33%	37%	15%	42%	43%	**12%**	**49%**	**39%**
Schemes for personnel exchange	28%	38%	34%	20%	39%	41%	**14%**	**47%**	**39%**
Schemes for mutual opening of facilities or laboratories	23%	40%	37%	18%	41%	41%	**15%**	**44%**	**41%**
Specific cooperation agreements or arrangements	43%	33%	23%	34%	33%	33%	**43%**	**24%**	**33%**
Action plan taking up common strategic issues and preparing for joint activities	43%	23%	33%	74%	13%	13%	**75%**	**11%**	**13%**

The majority of Italian participants took part in benchmarking and common schemes for monitoring and evaluation (70%), multinational evaluation procedures (69%) and coordination/clustering of ongoing nationally funded research projects (66%). In all cases the percentages for these joint activities are significantly above or above the country grouping average (EU 15 large).

Table 5 - Overall would you say that your participation in the FP6 ERA-NET has been worthwhile?

	Italy	EU 15 - large	Overall
Yes	100%	93%	**95%**
No	0%	5%	**4%**
Not Answered	0%	2%	**1%**

All Italian participants (100%) found their participation in FP6 ERA-NET worthwhile, which is above the country grouping average (EU 15 large).

Table 6 - Which of the three following statements best describes your personal experience of this ERA-NET?

	Italy	EU 15 - large	Overall
I got more out of it than I expected	40%	50%	**41%**
I got out of it what I expected	60%	43%	**51%**
I got less out of it than I expected	0%	5%	**6%**
Not Answered	0%	3%	**1%**

The majority of Italian participants (60%) believed they got out of it what they expected, which is significantly above the country grouping average (EU 15 large).

Table 7 - To what degree has your participation in this ERA-NET influenced your country's national programme(s)?

	Italy			EU 15 - large			Overall		
	No influence	Influence	Other	No influence	Influence	Other	No influence	Influence	Other
Discontinuation of existing programme(s) in some theme(s)	33%	53%	13%	50%	35%	15%	**53%**	**34%**	**12%**
Reducing duplication between National programmes in your country	52%	31%	17%	49%	30%	21%	**46%**	**37%**	**16%**
Design of programmes with longer time horizon	30%	57%	13%	43%	45%	12%	**42%**	**49%**	**10%**
Design of programmes with shorter time horizon	40%	47%	13%	45%	39%	16%	**51%**	**38%**	**11%**
Bigger programme budgets for the theme	47%	40%	13%	39%	44%	17%	**42%**	**46%**	**12%**
Smaller programme budgets for the theme	70%	7%	23%	58%	10%	32%	**63%**	**13%**	**23%**
New programme assessment/evaluation criteria	33%	53%	13%	43%	44%	13%	**40%**	**50%**	**10%**
New opportunities to enable transnational R&D activities in the theme of the ERA-NET	0%	93%	7%	6%	87%	7%	**8%**	**85%**	**6%**
New eligibility criteria allowing funding of foreign researchers in the area	34%	52%	14%	44%	34%	22%	**43%**	**42%**	**15%**

Existing programme(s) now covering new theme(s)	47%	40%	13%	48%	36%	16%	**48%**	**39%**	**13%**
New programme(s) put in place in response to new theme(s) identified	41%	45%	14%	47%	34%	19%	**51%**	**34%**	**15%**

A distinctive feature of the influence of ERA-NET on Italian National Programmes is that the impact is above the country grouping average (EU 15 large). This is demonstrated by the total percentage for "influence" being above the total percentage for "influence" in the country grouping average (EU 15 large).

Table 8- To what extent did your organisation have pre-existing relationships with participants in this ERA-NET prior to FP6?

	Italy	EU 15 - large	Overall
Prior relationships	70%	66%	**66%**
No prior relationships	10%	21%	**26%**
No answer	20%	13%	**8%**

The majority of Italian participants (70%) reported that they had pre-existing relationships with participants in the ERA-NET, which is slightly above the country grouping average (EU 15 large).

Table 9 - If there were prior relationships which of the following 6 statements best describes how these relationships evolved during your participation in this ERA-NET?

	Italy	EU 15 - large	Overall
Strengthened	65%	63%	**63%**
Weakened	6%	1%	**1%**
No change	0%	4%	**4%**
No answer	29%	32%	**33%**

The majority of Italian participants who answered this question believed that the relationship strengthened during the participation in this ERA-NET (65%), which is broadly in line the country grouping average (EU 15 large).

Table 10 - Has your participation in this ERA-NET triggered transnational cooperation outside of the ERA-NET?

	Italy	EU 15 - large	Overall
Yes	48%	32%	**31%**
No	48%	56%	**47%**
Not Answered	0%	6%	**5%**
Not applicable	3%	6%	**16%**

Italian participants were split as to whether or not participation in the ERA-NET did trigger transnational cooperation outside of the ERA-NET (48%), in both cases percentages differed to the country grouping average (EU 15 large).

Table 11 - Has the ERA-NET experience led to an increase in the amount of your programme budget that has been invested in transnational R&D projects outside of the ERA-NET?

	Italy	EU 15 - large	Overall
Yes	14%	15%	**13%**
No change	69%	61%	**63%**
No answer	17%	24%	**23%**

The majority of Italian participants who answered this question reported that the ERA-NET experience lead to no change to the amount of the programme budget that has been invested in transnational R&D projects outside of the ERA-NET (69%), which is above the country grouping average (EU 15 large).

Table 12 - If yes, roughly what proportion of your programme budget was transnational before your involvement in ERA-NET?

	Italy	EU 15 - large	Overall
0-25%	20%	17%	**15%**
26 to 50%	0%	0%	**0%**
51 to 75%	0%	0%	**0%**
76 to 100%	0%	0%	**1%**
Not answered	80%	83%	**84%**

The majority of Italian participants who answered this question reported that 0-25% of the budget was transnational before their involvement in the ERA-NET (20%), which is slightly above the country grouping average (EU 15 large).

Table 13 - If yes, roughly what proportion of your programme budget is transnational now?

	Italy	EU 15 - large	Overall
0-25%	20%	15%	**13%**
26 to 50%	0%	0%	**1%**
51 to 75%	0%	0%	**0%**
76 to 100%	0%	0%	**1%**
Not answered	80%	85%	**84%**

The majority of Italian participants who answered this question reported that 0-25% of the budget was transnational at the time of the survey (20%), which is slightly above the country grouping average (EU 15 large).

Table 14 - What provisions have been made in your country to coordinate participation in ERA-NETs under FP6? - Single national coordinator for all ERA-NETs

	Italy			EU 15 - large			Overall		
	Yes	No	No answer	Yes	No	No answer	Yes	No	No answer

Single national coordinator for all ERA-NETs	10 %	69 %	21%	14 %	60 %	26%	15 %	66 %	19%
Team of several coordinators at national level	27 %	47 %	27%	25 %	43 %	32%	24 %	51 %	24%
Coordination meetings for all national participants	41 %	38 %	21%	34 %	41 %	26%	37 %	41 %	22%
Organisation-specific coordination meetings	43 %	30 %	27%	50 %	27 %	24%	50 %	31 %	19%

Most Italian participants reported that the provision made to coordinate ERA-NET participation were organisation-specific coordination meetings (43%), which is below the country grouping average (EU 15 large).

Table 15 - Earlier we asked you to state your ERA-NET's theme. How important was this theme in your country's research programme before your organisation joined this ERA-NET?

	Italy	EU 15 - large	Overall
Very Important	21%	29%	**21%**
Fairly Important	59%	39%	**48%**
Not very important	7%	12%	**16%**
Not at all important	0%	5%	**5%**
Don't Know	7%	6%	**4%**
Not Answered	7%	6%	**5%**
Not Applicable	0%	3%	**2%**

The majority of Italian participants reported that the ERA-NET's theme was fairly important in their country's research programme before their organisation joined the ERA-NET (59%), which is significantly above the country grouping average (EU 15 large).

Table 16 - How important is this theme in your country's research programme now?

	Italy	EU 15 - large	Overall
Very important	28%	31%	**24%**
Fairly important	52%	43%	**56%**
Not very important	7%	11%	**11%**
Not at all important	0%	1%	**1%**
Don't know	7%	5%	**3%**
Not Answered	7%	6%	**4%**
Not applicable	0%	4%	**2%**

Most Italian participants (52%) reported that the ERA-NET's theme was fairly important to their country's research programme at the time of the survey, which is above the country grouping average (EU 15 large).

Table 17 - If there has been a change in the importance of the theme to what extent do you think this was due to the ERA-NET?

	Italy	EU 15 - large	Overall
To some extent	21%	24%	**29%**
Not at all	17%	12%	**11%**
No answer	62%	64%	**60%**

Most Italian participants who answered this question reported that the change in the importance of the theme was to some extent due to the ERA-NET (21%), which is slightly below the country grouping average (EU 15 large).

Table 18 - Has your organisation's involvement in this ERA-NET influenced national research policy beyond the theme of this ERA-NET?

	Italy	EU 15 - large	Overall
Influence	40%	47%	**63%**
No influence	23%	25%	**18%**
No answer	37%	28%	**19%**

Most Italian participants who answered this question (40%) reported that their involvement in the ERA-NET influenced national research policy beyond the theme of the ERA-NET, which is below the country grouping average (EU 15 large).

Table 19 - Have any of the following external factors helped or hindered the effects of your organisation's participation in this ERA-NET?

	Italy					EU 15 - large					Overall			
	Helped	Hindered	No effect	Not Answered	Not applicable	Helped	Hindered	No effect	Not Answered	Not applicable	Helped	Hindered	No effect	Not Answered
Change in programme management agency	10%	13%	13%	10%	53%	12%	7%	28%	6%	48%	**7%**	**6%**	**36%**	**4%**
New R&D management structure	17%	13%	13%	10%	47%	14%	9%	27%	6%	44%	**11%**	**7%**	**35%**	**5%**
For existing programmes, more strategic R&D programming/planning	53%	0%	17%	10%	20%	34%	0%	27%	9%	30%	**29%**	**0%**	**36%**	**7%**
Externalisation of R&D programmes into agency/agencies	7%	0%	37%	10%	47%	9%	3%	29%	7%	52%	**8%**	**4%**	**33%**	**6%**
Setting up of new types of R&D programmes	58%	10%	3%	10%	19%	29%	5%	28%	6%	33%	**24%**	**7%**	**33%**	**5%**
Barcelona 3% targets	23%	0%	33%	10%	33%	22%	0%	38%	10%	30%	**16%**	**0%**	**39%**	**9%**

The majority of Italian participants (58%) reported that setting up new types of R&D programmes helped the effects of their organisations' participation in the ERA-NET, which is significantly above the country grouping average (EU 15 large).

Table 20 - How satisfied are you with the overall level of transnational cooperation within this ERA-NET?

	Italy	EU 15 - large	Overall
Satisfied	87%	85%	**88%**
Unsatisfied	10%	8%	**7%**
No answer	3%	7%	**4%**

The majority of Italian participants (87%) were satisfied with the overall level of transnational cooperation within the ERA-NET, which is broadly in line with the country grouping average (EU 15 large).

Table 21- Have you seen evidence of the following effects at national level as a result of this ERA-NETs joint calls joint programming or other joint activities?

	Italy			EU 15 - large			Overall		
	Some evidence	No evidence	No answer	Some evidence	No evidence	No answer	Some evidence	No evidence	No answer
Higher quality projects generated at national level (i.e. higher quality proposals)	41 %	34 %	24 %	41 %	36 %	24 %	**39 %**	**44 %**	**17 %**
Higher quality projects funded at national level (through joint calls/programmes)	52 %	24 %	24 %	38 %	33 %	29 %	**35 %**	**42 %**	**23 %**
New types of research projects generated (i.e. reflected in proposals received)	37 %	40 %	23 %	36 %	36 %	28 %	**38 %**	**42 %**	**20 %**
New types of research projects funded (through joint calls/programmes)	60 %	20 %	20 %	45 %	26 %	30 %	**46 %**	**32 %**	**22 %**
New researchers (with no prior international or European experience) benefiting from joint activities	48 %	21 %	31 %	49 %	22 %	29 %	**40 %**	**27 %**	**33 %**
New researchers (with no prior international or European experience) benefiting from joint calls/programmes	62 %	7%	31 %	50 %	22 %	28 %	**41 %**	**34 %**	**25 %**
Access to foreign research communities/groups not present in my country	80 %	7%	13 %	62 %	17 %	21 %	**54 %**	**28 %**	**18 %**

Most Italian participants reported evidence of access to foreign research communities/groups not present in my country (80%), which is significantly above the country grouping average (EU 15 large), and new researchers benefiting from joint calls/programmes (62%), which is significantly above the country grouping average (EU 15 large).

Table 22 - Did any of the following factors either help or hinder your organisation to exploit the full potential of its participation in this ERA-NET?

	Italy					EU 15 - large					Overall				
	Aid to success	No problem	Problem but overcome	Problem still not overcome	No answer	Aid to success	No problem	Problem but overcome	Problem still not overcome	No answer	Aid to success	No problem	Problem but overcome	Problem still not overcome	
National thematic programme priorities	0%	60%	17%	13%	10%	14%	46%	10%	15%	15%	**16%**	**46%**	**13%**	**12%**	**1**
National cultures or research traditions	0%	57%	17%	0%	27%	11%	42%	15%	13%	19%	**10%**	**46%**	**15%**	**14%**	**1**
National resources (staff time finances)	31%	17%	31%	10%	10%	12%	13%	33%	27%	15%	**17%**	**35%**	**26%**	**15%**	
National administrative procedures (e.g. evaluation rules)	10%	27%	47%	13%	3%	11%	32%	31%	12%	15%	**6%**	**25%**	**29%**	**28%**	**1**
National legal programme conditions (e.g. funding of non-residents IPR)	6%	52%	23%	10%	10%	2%	44%	15%	19%	20%	**4%**	**35%**	**19%**	**25%**	**1**
EC administrative procedures or legal requirements	0%	41%	28%	14%	17%	0%	45%	21%	13%	21%	**1%**	**34%**	**36%**	**12%**	**1**
Perceptions of benefits	31%	14%	17%	3%	34%	14%	30%	12%	10%	34%	**15%**	**28%**	**16%**	**13%**	**2**
Engagement in other transnational initiatives (e.g. COST EUREKA)	13%	32%	6%	10%	39%	18%	33%	6%	5%	38%	**12%**	**46%**	**4%**	**4%**	**3**

The majority of Italian participants reported that national thematic programme priorities (60%) and national cultures or research traditions (57%) were no problem in exploiting the full potential of their organisation's participation in the ERA-NET, while most reported EC administrative procedures or legal requirements (14%) as a problem that was still not overcome.

9. Annexes: Coordinator survey results[98]

The following tables show information from the coordinator questionnaire.

Table 23 - ERA-NET participation by theme

Theme	Number	Percentage
Transport	2	5.9%
Life Sciences	12	35.3%
Environment	6	17.6%
Fundamental Sciences	2	5.9%
INCO	1	2.9%
Industrial Technologies and SMEs	8	23.5%
Energy	1	2.9%
Social Sciences and Humanities	2	5.9%
Total	34	**100%**

Life Sciences and Industrial Technologies and SME's thematic areas attracted most of the Italian participants.

Table 24 - Joint call participation by theme

Theme	Number	Percentage
Transport	1	6.3%
Life Sciences	5	31.3%
Environment	2	12.5%
Fundamental Sciences	4	25.0%
INCO	0	0.0%
Industrial Technologies and SMEs	4	25.0%
Energy	0	0.0%
Social Sciences and Humanities	0	0.0%
Total	**16**	**100%**

Life Sciences, Fundamental Sciences and Industrial Technologies and SME's thematic areas channelled most of the contributions to joint calls.

[98] The Coordinator survey covered all 71 ERA-NETs - although in case of 7 ERA-NETs, the information collected dates back from the 2006 survey. 59 ERA-NETs provided information about the calls they have done over the period (NB: it is likely that not all ERA-NETs have reported call information in an exhaustive way). 49 ERA-NETs provided a breakdown of funding contributions at country level for calls (NB: this is likely to be an underestimate as not all ERA-NET coordinators knew this information)

Table 25 - Financial contribution to joint calls by theme

Theme	No contributions	€ virtual	€ common	€ mixed	Total
Transport	1	198,000	-	-	198,000
Life Sciences	7	14,529,340	-	-	14,529,340
Environment	2	1,050,000	-	-	1,050,000
Fundamental Sciences	4	-	3,850,000	300,000	4,150,000
INCO	0	-	-	-	0
Industrial Technologies and SMEs	6	11,412,000	-	600,000	12,012,000
Energy	0	-	-	-	0
Social Sciences and Humanities	0	-	-	-	0
Total	**20**	**27,189,340**	**3,850,000**	**900,000**	**31,939,340**

Most of the funding contributions were made through virtual common pots, Fundamental Sciences thematic area contained the only real common pot contribution.

SD5: Country Report on the Netherlands

The following document provides the structure for the country report on ERA-NETs in the Netherlands.

The content of this report has been informed by qualitative interviews and the findings of two surveys. The interviews were undertaken with ERA-NET stakeholders[99] in 15[100] of the 40 countries taking part in the scheme. The number of interviews by country ranged between handfuls in some countries to a couple of dozen in other countries. The same interviewees were chosen to represent thematic areas – the number of interview per theme ranged between 12 and 25 depending on the theme. The surveys were aimed at all ERA-NET coordinators and participants and responses were received by approximately half of these, although responses varied across themes and countries. In addition, and where relevant, the report has been informed by reviews of documents and websites.

Regarding the contents of this report it is important to remember that the findings described within cannot be regarded as a definitive or representative view of all activities within ERA-NETs in this country. Because the interviews were based on a narrow selection of countries and representing a minority of ERA-NETs in each theme, the contents of this report should very much be regarded as a case study that provides a view of the experience. This may also explain why the findings from the qualitative interviews are sometimes at odds with the findings of the surveys which were more inclusive and wide-ranging.

Where possible in the report, the source of evidence is indicated either as coming from one of the surveys or the field interviews.

[99] Stakeholders included National Policy Stakeholders, ERA-NET Coordinators and Participants, and ERA-NET beneficiaries.
[100] The countries were: Austria, Croatia, Finland, France, Germany, Italy, Netherlands, Norway, Poland, Portugal, Romania, Russia, Slovenia, Turkey, and UK,

Contents

0. Executive Summary – Overview

Q1 – Impact on Research Landscapes

- No direct impact was observed on the research landscape at large.
- Evidence of better cooperation between NWO (Nerherlands Organisation for Scientific Research), KNAW (Royal Academy of Arts and Sciences) and the Ministry of Education, Culture and Science) regarding cooperation with 3rd countries

Q2 – Structuring effect on specific research areas or fields

- Pre-existing cooperation reinforced, enlarged and more focused on strategy planning.
- Significant structuring effect in the field of astroparticle physics both in the Netherlands and in Europe.
- Bilateral cooperation in preparation between the Netherlands and Flanders (Belgium) following SUSPRISE.

Q3 - Direct benefits and indirect benefits

- Greater knowledge of other national research systems.
- Better awareness of the diversity of national research systems: one realises that there is a need for flexibility and, when possible, harmonisation.
- Enlarged and consolidated networks.
- ERA-NET filled a gap by providing a forum for strategic discussions on policies and programmes.
- Sharing of know-how on techniques available in other countries.

Q4 – Opening up of national programmes

- No rule prevented the funding of non-resident researchers in the Netherlands.
- SenterNovem (research agency in technology and innovation) was more reluctant to fund non-resident/national researchers as innovation programmes involved the private sector and had an impact on IPR; following the ERA-NET, participants from SenterNovem admitted that there was a need for flexibility as virtual joint calls were not a satisfactory solution.
- NWO coordinated a joint call with a real common pot (HERA).

Q5 – Best practice

- ERA-NET revealed how important barriers were, which prevented common strategies in research to take place. SUSPRISE, coordinated by SenterNovem, published a handbook on mutual opening up of research and innovation programmes.
- Participants learned that in international cooperation in research, flexibility is a key factor of success. In order to accommodate diverging priorities between participants, some ERA-NETs split into sub-groups and sub-calls (SUSPRISE, CO-REACH, and ERA-NET IB).
- There is a need to ensure that the right persons are involved in discussions when defining common strategies, agreeing on spending money on joint calls etc. It requires ensuring that meetings are really useful, well prepared and strategic enough in order to keep the management staff involved. HERA performed well in doing this.

- The Dutch participant in AIRTN used the ERA-NET to enhance the suppliers' participation in research activities in the field of aircraft technologies.
- HERA succeeded in organising a joint call with a real common pot.

1. Strategic national context underpinning the ERA-NET participation

1.1 Strategic planning and role of ERA-NETs in the country[101]

With its knowledge economy, the Netherlands is, in economic terms, among the better performing countries in the world. According to the European Innovation Scoreboard 2007, the Netherlands scores below those of the innovation leaders but equal to or above that of the EU27. The expenditures on R&D in terms of GERD per GDP amounted to 1.72% in 2006, which is relatively low compared to EU27 average (1.84%). With regard to the funding of R&D, the Netherlands is characterised by a relatively low share of the business sector (51%) and relatively high shares of the government sector (36%) and abroad (11%)[102].

In the Netherlands, almost all national ministries engage in funding of certain R&D activities, and some ministries have a special department or unit concerning relevant technologies and research. In terms of budget the two most important ministries with regard to Research and Development activities are the Ministry of Education, Culture and Science (OCW) and the Ministry of Economic Affairs (EZ). Historically, a strong division of labour has existed between science and basic research (i.e. OCW) on the one hand and technology and innovation (i.e. EZ) on the other, both in terms of policy design, funding and research performers. As a result, two different governance cultures in the science and innovation parts of the system have emerged. While EZ's approach is characterized by an active role in policy design, programme design and programme management, OCW's approach is more decentralised, delegating more responsibilities to the research council NWO and the various organisations in the science and research system.

Main public policy instruments in research were as follows[103]:

- University research channels most of the research policy budget in the Netherlands. The 14 Dutch universities are financed through the budget of the Ministry of OCW.
- NWO, the Netherlands Organisation for Scientific Research, is the Dutch research council. It receives funding from OCW (institutional and project funding) but also from the ministry of Economic Affairs and other ministries.
- The Royal Dutch Academy of Science's research institutes (KNAW) is active in the field of fundamental research. The KNAW funds the research in its own research institutes. It also awards grants for research, conference visits or periods of residence abroad. The research institutes of the Academy carry out basic and strategic research in the life sciences, humanities and social sciences.
- SenterNovem is an agency of the Ministry of Economic Affairs (EZ). The organisation offers services and runs research programmes in three areas: innovation, energy and climate change, and environment and spatial planning.

One R&D policy which fully integrates both the aspects of science and innovation does not exist in the Netherlands. As in most countries there are many ministries involved. In this respect the R&D policy at national level clearly differs between the Ministries. So it no surprise that the Dutch ERA-NET participants largely shared the view that the Netherlands had lacked a systematic strategic approach to participating in the ERA-NET scheme. Participant very much seized opportunities for participation in a bottom-up, case-by-case basis. However the division of labour that exists in the Netherlands between science and basic research on the one hand, and technology and innovation on the other hand, did

[101] See Table 14 and Table 19.

[102] ERAWATCH Research Inventory Report For Netherlands, European Communities, 2008

[103] Country review : the Netherlands, Monitoring and analysis of policies and public financing instruments conducive to higher levels of R&D investments: The "Policy Mix" project, 2007

have an impact on decisions associated with participation in ERA-NETs. In areas under the responsibility of the Ministry for Education, Culture and Science (OCW), decisions were taken at an executive level. NWO, the research council that has a great degree of responsibility for designing policies and programmes, could decide rather independently whether or not to participate. Within NWO participation was driven bottom-up by programme managers who advocated their participation to the management board. In research areas under the responsibility of the Ministry for Economic Affairs (EZ), SenterNovem (innovation agency) sometimes initiated and always managed ERA-NETs activities. Yet, the ministry (the programme owner) was cautious to keep participation to ERA-NETs in line with research areas of priority.

The Netherlands took part in over 50 ERA-NETs and was the third participating country just behind Germany and France. This illustrates the dynamism of the research field in the Netherlands but also reflects, according to stakeholders, a lack of strategy and focus. The extent of Dutch ERA-NET participation is shown in Table 23.

1.2 Motivations for joining ERA-NET and set up[104]

While being aware of their high performing research system, Dutch participants pointed out that the Netherlands is a "small" country that needs cooperation in research. Interviewees acknowledged that the Netherlands had opened up to Europe with FP5 and FP6, and was strongly represented in programmes such as Eureka and Eurocores.

ERA-NET was widely seen by the Dutch participants as an opportunity to go beyond existing cooperation and to coordinate national policies and programmes, along with the Framework Programme. While the academic world was highly internationalised, policy makers and programme owners hardly cooperated. This is reflected in Table 1.

As a prerequisite to further international cooperation, ERA-NET was unanimously seen as an opportunity to know more about research policies and programmes in other EU countries.

In research fields where policy platforms preceded the ERA-NET, the Dutch participation was seeking to reinforce this cooperation. For example, in the Astroparticles area the ERA-NET scheme provided to ApPEc (Astroparticle Physics European Coordination) the means to cooperate that had previously been lacking. Moreover, in the field of Humanities, ERA-NET complemented the activities of the European Science Foundation's Standing Committee for Humanities and in areas such as eco technologies in industry and industrial biotechnologies, ERA-NET reinforced pre-existing networks i.e. PREPARE and SUSCHEM.

[104] See Table 1.

2. Overview of participation

2.1 Extent of involvement in the ERA-NET scheme[105]

As pointed out before, the Netherlands is and has been involved in European cooperation in research for some time. In most thematic fields, the Netherlands had taken part in cross-border cooperation prior to the ERA-NET scheme, but cooperation at policy level had been loose, participation narrow (few participants) and financially modest. It is therefore perhaps not surprising that Dutch participation in the ERA-NET scheme was wide ranging: 69 participants (6.7%) participated in 56 ERA-NETs (79%).

A majority of the ERA-NETs participants interviewed were ERA-NET coordinators. This may explain why Dutch participants appeared to have been strongly involved in their ERA-NETs.

Dutch participants were generally unhappy with the fact that the right persons with the necessary level of responsibilities were not always seated around the ERA-NET table to take decisions. On the contrary, most of the Dutch participants were satisfied with the degree of involvement of their managerial staff.

[105] See Table 1.

3. ERA-NET processes and positioning

3.1 Inputs into the ERA-NET scheme[106]

As pointed out before, there were no pre-set rules for or restrictions to Dutch participation in the ERA-NETs and initiatives developed rather bottom-up.

The main constraint was being able to channel Dutch funds into the ERA-NETs in order to participate in joint calls. In order to release agreement of the programme owner was generally needed, especially in the field of innovation. Participation in HESCULAEP was initially prevented as the Ministry of Health considered that pre-hospital care was not a priority. GHOR Netherlands finally ensured its participation via own-resources and synergies found with another international programme (Targeted Agenda Programme). NWO, on the contrary, benefited from a high degree of flexibility and programme managers willing to participate had to convince the internal management. They were usually successful. Table 25 shows the financial contributions to joint calls by the Netherlands.

The EC contribution usually covered personnel costs, although the eligible overhead costs to EC funding were significantly lower than in the Netherlands. Table 3 in the annex of this report shows the extent to which EC funding covered all the time and resources needed for participation.

While no extra money was needed to finance joint calls, a lot of effort was put into getting the joint calls to fit into existing programmes. In terms of thematic focus, this was not an issue as the Dutch research programmes are quite flexible meaning that priorities are broadly defined. In the ERA-NETs joint calls had to be more specific in order to accommodate all of the participants' priorities.

Extra money was sometimes needed in order to launch an ERA-NET as a coordinator. It was the case in SUSPRISE: the Ministry of Housing, Spatial Planning and Environment (programme owner) agreed to allocate extra-money to SenterNovem in order to enable the agency to set up a consortium and to apply for EU funding.

3.2 Participation in joint activities, calls or programming[107]

Dutch participation was generally ensured by the two main research agencies in the Netherlands: NWO and SenterNovem. Project management is their main activity and participating to ERA-NET was not a major organisational challenge, though these organisations had very little experience in managing European projects. In general, their participation in ERA-NETs was made easier compared than for the ministries who struggled to allocate time to extra projects. This may explain why, compared to other countries, the Dutch participants were highly involved in their ERA-NET.

In terms of participation in joint calls, no rules prevented the funding of non-resident researchers. However, approaches diverged between NWO and SenterNovem: SenterNovem was more reluctant to fund non-resident/national researchers since innovation programmes involved the private sector and had an impact on IPR. It was a commonly agreed principle in SenterNovem that national funding should go to national researchers.

[106] See Table 2, Table 3, Table 14, and Table 25.

[107] See Table 4, and Table 24.

NWO was not reluctant to funding non-resident researchers and even coordinated setting up a real common pot for the HERA's joint call (humanities), even though that some countries were unable or unwilling to participate.

Due to diverging rules among European countries, national rules usually applied to Dutch participants and national funding was targeted to Dutch beneficiaries: most of the joint calls were virtual ones. Participants, including those from SenterNovem, agreed that this approach generated burden and made little sense in terms of efficiency. Even participants from SenterNovem agreed that more flexibility was needed in this area.

It seems that the commitment of the Netherlands to joint activities was high, and the country participated in a large majority of ERA-NETs. In the ERA-NETs analysed, the Netherlands always took part in joint calls when the opportunity was offered. However, stakeholders and programme owners agreed that there was a need to focus more on national priorities, and called for a higher commitment to joint strategies and/or joint calls from their partners. Dutch joint call participation by theme is shown in Table 24 in the annex of this report.

3.3 Lessons learnt and best practice[108]

Most of the ERA-NETs interviewed built on previous cooperation, and participants were enthusiastic to be given an opportunity to strengthen it via the ERA-NET scheme. The majority of participants also agreed in saying that ERA-NET was a highly ambitious scheme, which went far beyond previous cooperation.

One of the most commonly quoted lessons learnt lay in the barriers, which prevented the setting up a common strategy in research. ERA-NET revealed how important these barriers were. It included changing research priorities, selection criteria of research projects, eligibility rules, IPR, etc. Difficulties met in organising joint calls were the best examples to this. In most ERA-NETs, virtual joint calls proved to be tremendously complex and burdensome, though participants proved to be creative enough to overcome these problems. SUSPRISE, coordinated by SenterNovem published a handbook on mutual opening up of research and innovation programmes. The perceived effect of some of these barriers is outlined in Table 22.

Dutch participants did not agree on whether the focus of ERA-NETs should be on joint calls, but all agreed in saying that flexibility of funding rules in research systems to facilitate cross-border cooperation should be a first step.

Through ERA-NET Dutch participants learnt that in transnational cooperation in research, flexibility is a key factor of success. For instance, in order to accommodate diverging priorities between participants, SUSPRISE decided to split activities into two sub-calls, one in water technologies and another one in resource efficiency. CO-REACH, coordinated by KNAW (Royal Academy of Arts and Science), had a similar approach. In ERA-NET Transports, the work was divided into 16 sub-themes and sub-groups for cooperation. The lessons learn was that transnational cooperation in research should not necessarily involve all European players, but should build on small communities of interest, on a case-by-case basis.

Often mentioned by Dutch participants, another major lesson learned was that in such a scheme as ERA-NET, it is tremendously important to have the right persons involved in discussions. It is necessary for defining common strategies, agreeing on spending money

[108] See Table 19, Table 20, and Table 22.

on joint calls, which sometime requires accommodating the diverging national systems, where responsibilities do not necessarily lie at the same level. It also requires ensuring that meetings are really useful, well-prepared and strategic enough, in order to keep the decision-makers involved. HERA performed well in doing this.

Dutch participants mentioned several times that schemes like the ERA-NETs should focus more on disseminating lessons learned in view of future cooperation. For Instance, CO-REACH was the first participation of KNAW (Royal Academy of Arts and Sciences) in the Framework Programme. As KNAW is in charge of international cooperation programmes with 3rd countries, it would have been useful to involve other programme managers in the ERA-NET in order to ensure the uptake of lessons learned in view of future cooperation. In a way, ERA-NETs focused too much on achieving the project operational objectives (in most cases, organising a joint call) and may, as a result, have lost touch with the fact that it is a learning process which should benefit others more widely.

The Dutch participants in AIRTN who claimed a stronger involvement of suppliers (usually SMEs) in research activities is a good practice example. ERA-NET offered a forum to talk about important issues, but usually these discussions tended to be avoided in order to facilitate the project development. On the contrary, the Dutch participants decided to advocate their cause, which led to intense discussions and finally produced good results: for instance, it was agreed, to involve more suppliers in the "clean sky" JTI (Joint Technology Initiatives).

Another example worth mentioning is HERA, who succeeded in organising a joint call with a real common pot. As participants realised how difficult it was to coordinate existing programmes and find "opportunity windows" which would allow a "virtual common call", it was agreed that a real new joint programme was an easier way to achieve the objective. So, each partners' financial contribution was decided based on a common criteria (% of national public R&D expenditure, based on Eurostat figures, which in the end appeared to be seemed to be unfavourable for bigger countries) and then only best projects would be selected (at the of interview the joint call was not yet launched). In order to keep it simple and clear to beneficiaries, national eligibility criteria were used.

4. ERA-NET benefits

4.1 Direct and indirect benefits to ERA-NET national policy stakeholders and participants[109]

The most often quoted direct benefit was the knowledge acquired among Dutch participants about other national research systems. Most of the ERA-NETs included a screening phase of research systems to identify commonalities and discrepancies facilitating or hindering cooperation (e.g. SUSPRISE, CO-REACH). This information was deemed useful for further cooperation. It also enabled to identify practices and knowledge that could be transferred from one country to another. For instance, NWO learned from its partners in HERA how to conduct ex-post evaluation of projects and better evaluate their impact.

Another direct benefit was a better awareness of the diversity of national research systems. This was an important step towards further cooperation: helping participants to realise the need for flexibility and, when possible, harmonization. This was if anything a first step towards possible change.

Enlarged and consolidated networks were another direct benefit of the ERA-NET. ERA-NETs usually built on pre-existing cooperation, but provided an opportunity to enlarge existing networks and conduct more programme/policy-focused discussions. Here one can mention HESCULAEP, which was an opportunity for the Dutch participants to join a pre-existing initiative in pre-hospital care and develop together with other participants a common strategy. In the field of industrial biotechnologies, ERA-NET IB provided a platform to policy-makers, along with the pre-existing cooperation, which previously involved mostly industrial partners. Finally in the field of astroparticle physics, ASPERA complemented at the policy level the work carried out so far by ApPEC, which involved coordination of research organisations.

Dutch participants agreed that ERA-NET filled a gap by enhancing the work of existing forum for strategic discussions on policies and programmes. The academic world and researchers were already widely open to cross-border cooperation; this was less the case of programme owners and policy makers before the start of the ERA-NET scheme. The scheme provided specific funding to strategic cooperation. However, according to participants, the scheme does not necessarily provide participant with a long term perspective.

A few participants deemed that joints calls constituted direct benefits which justified cooperation as it have access to more funding. However, the view was also that joint calls should be bigger in order to become more cost-effective.

For a few participants, taking part in ERA-NET and setting the ground for European cooperation gave them credit for reinforcing their field of research on the national arena. Participation in ASPERA had a positive influence on the structuring of the astroparticle physics field in the Netherlands. NICKEF's participation in an ERA-NET had a catalytic affect and contributed to getting FOM (Institute for Plasma Physics Rijnhuizen, the funding agency) to include astroparticle physics into its strategy.

4.2 Direct and indirect benefits to ERA-NET beneficiaries

At the time when interviews were conducted, only the joint call organised by SUSPRISE was sufficiently advanced to gauge relevant feedback from beneficiaries. As part of an

[109] See Table 5 and Table 6.

independent evaluation of the joint call, SUSPRISE beneficiaries were interviewed. Most of them were either satisfied or very satisfied with the opportunity offered to them. One particular benefit highlighted as a result of participating in a joint call was, according to research beneficiaries, the opportunity to share know-how on a special technique available in other countries.

Although the small size of project seems to have been a weakness of the SUSPRISE call, beneficiaries deemed that the non-bureaucratic approach was suitable to SMEs.

Participants deplored the lack of harmonised rules and the "virtual joint call approach", which led to different situations for partners working in the same project.

5. Impacts on national and international R&D policy and programming

5.1 Impact on national R&D policy[110]

It was not possible to identify an impact on national R&D policy in the Netherlands. The strategy consisted in identifying common fields of interests and similarities in programmes in order to find the basis for common activities. However, ERA-NET was an opportunity to highlight the extreme diversity of national systems, and increased the awareness that flexibility and/or harmonisation was needed to facilitate transnational cooperation. Change, however, was not expected in the short term.

The Netherlands was already strongly involved in transnational cooperation, and ERA-NET did not change this position. However, the ERA-NET scheme was launched at a time where the Ministry of Education, Culture and Science put the emphasis on European cooperation rather than bilateral agreements. ERA-NET came in support of this national strategy.

5.2 Impact on national R&D programming[111]

There was no general impact on national R&D programming. However, CO-REACH had some impact on the Dutch approach towards China. Indeed, the ERA-NET was launched in a context when the added value of the bilateral agreement with China was put into question by the Ministry of Education, Culture and Science. In addition to this, cooperation between KNAW (The Royal Academy of Arts and Sciences), NWO and the ministry was not satisfactory and all three had competing approaches towards China.

So, CO-REACH was initiated by the Netherlands as an attempt to develop synergy and improve cooperation with China as a whole. The ERA-NET project, launched by KNAW, was a good opportunity to cooperate with NWO, who joined the consortium.

Since then, the three organisations have built trust between each other and adopted a concerted approach towards China. A joint strategy was set up, a new memorandum of understanding was agreed upon by the three organisations and the Chinese counterpart, and a first joint programme was launched recently.

According to the CO-REACH coordinator, this new approach towards China was a direct outcome of the ERA-NET, and will most probably be extended to other 3rd countries in the future.

5.3 Opening up on national R&D programming[112]

In the Netherlands, no rule prevents the opening up of programmes to non-resident researchers. However this is neither publicised nor encouraged, and there is no evidence that the ERA-NET has had an impact on this.

As an outcome of SUSPRISE, the Netherlands is seeking reinforced cooperation with its Flemish (Belgian) counterpart. This bilateral cooperation in eco-technologies will be one of the pillars of the future international strategy in the thematic area. Both country and region share a common language, and non-national participants are eligible for funding (under certain conditions in Flanders: it should be based on subcontracting, so that IPR benefits to the Flemish side). If needed, rules will be revised for more flexibility. This cooperation's driving force is to avoid double-funding: the two programmes are very

[110] See Table 7 and Table 18,
[111] See Table 7 and Table 18,
[112] See Table 10 and Table 11.

similar. Germany also showed an interest in cooperating as well, but difficulties there are higher, pertaining to the eligibility issue of non-resident participants.

5.4 Impact on the structuring of national or international research fields[113]

Again, Dutch ERA-NET participants acknowledged that the usual approach was based on what national programmes already had in common rather than aiming at real common new strategies. This potentially undermined the structuring effect of ERA-NET on international research fields.

Another element, which potentially undermined the structuring effect of ERA-NET, lied in the constraints pertaining to EU projects (deliverables, reporting etc.) and the importance given to joint calls, which prevented participants to spend more time on 'imagining the future'. This was the case in SUSPRISE, for instance, where the coordinator deemed that not enough was made to prepare the follow-up of the project.

However, all participants praised the fact that the ERA-NET scheme offered a good opportunity for policy-makers and programme managers to cooperate more. Transnational cooperation in parallel to EU efforts is said to be very important, especially in a context when competition in FP7 increases. It is important to find complementarities and synergies, and give researchers more opportunities to cooperate at the European and international level. ERA-NET set the ground for this, but impacts remain rather difficult to identify.

On a thematic basis, a clear structuring effect could be identified in the field of astroparticle physics both in the NL and in the European arena. In 2002-2003, the Dutch research institute NIKEF started to develop a strategy for astroparticle physics. Back then, no funding was available in the field. When NIKHEF started to discuss with the funding agency FOM (Institute for Plasma Physics Rijnhuizen) and the Dutch universities about how to join efforts and develop a national strategy, the institute engaged European cooperation as a partner in the ASPERA ERA-NET. The objective of this ERA-NET was to structure the field and contribute to organising financial flows for joint calls in view of developing techniques for building a new infrastructure (back then, European researchers and programme owners were trying to organise themselves for designing a telescope). This intense European coordination was used as a leverage to convince stakeholders to structure the research field at national level and spend resources on it. In the end of this process, the Dutch participant to ASPERA believes that the Netherlands is now well structured in the field of astroparticle physics (FOM has included astroparticle physics in its strategy and programmes), and that the country is a key player in a better structured European arena. All these processes developed in parallel and ERA-NET strongly contributed to this.

[113] See Table 17 and Table 21.

6. European Added Value, relevance and efficiency

6.1 Additionality of the ERA-NET scheme[114]

Two instruments were mentioned as being used by the Dutch authorities before ERA-NET launched: Bilateral agreements and EUROCORES.

EUROCORES is said not to have been a tool of benefit to policy planners and programme owners: they cannot take part in funded activities and they are not involved in setting priorities as much as they would like to. In addition to this, it was said to be expensive. On the contrary, ERA-NET empowered policy planners and programme owners who could take part in all the process from network building to joint calls, ensuring more direct and indirect benefits to them.

Bilateral agreements were seen to have benefited ministries and funding agencies more, but they do not offer much flexibility and, above all, do not reach the critical mass that is necessary to structure a research field at European level. For instance, bilateral cooperation in astroparticle physics would make little sense as the major challenge is to build up research infrastructures.

Finally, when talking about multilateral cooperation in thematic areas, means are usually lacking and EC funding is necessary. For instance, the PREPARE network in eco-technologies had no own resources to finance activities before the ERA-NET scheme was set up. This was the same for ApPEC in astroparticle physics. In general, no funding was available in the Netherlands for such multilateral cooperation.

From the beneficiaries' point of view, relative faster and less bureaucratic approach was praised in SUSPRISE. They also underlined that the scheme was more suitable to SMEs. Finally, transnational cooperation between funders was said to be useful to access knowledge available elsewhere.

Yet, a few participants called for more guidelines from the Commission towards harmonisation of procedures. Participants fear that the diversity of systems between Member States will be transformed into a diversity of systems between thematic areas.

6.2 Economic efficiency and relevance[115]

There was no consensus between interviewees on whether the ERA-NET scheme has been efficient of not. Those who said it is efficient usually expressed an overall satisfaction of the project results.

Those who were more sceptical have precise reasons:

- ERA-NETs had a slow start; some put too many resources into organising the consortium and benchmarking research systems.
- The joint calls did not reach a critical mass, which would have enabled cost efficiency; this was the case in research fields such as bio-energy and eco-technologies. This was less an issue in areas such humanities (HERA, CO-REACH). Finally, it was commonly agreed that virtual joint calls were rather burdensome and required too much energy.
- In general, a stronger focus should be put on concrete activities and outputs, such as defining common strategies and road maps for the future, as well as organising joint calls.

[114] See Table 11.

[115] See Table 5.

The participant survey results in Table 5 and Table 6 however show that ERA-NET participation appears to have been considered worthwhile by the participants.

7. Annexes: Stakeholders and materials consulted

Interviews

Interviews have been carried out with eight ERA-NET participants and coordinators of the following ERA-NETs:

- HERA, social sciences and humanities
- ERA-NET BIOENERGY, energy
- ASPERA, fundamental science
- CO-REACH, INCO
- SUSPRISE, industrial technologies and SMEs
- ERA-IB and HESCULAEP, life science
- AirTN and ERA-NET TRANSPORT, transport

In addition, four policy stakeholders at ministries and Senternovem were also consulted.

Organisation	ERA-NET	Theme	Role
Ministry of economic affairs	ERA-NET BIOENERGY	Energy	Participant
Nikhef	ASPERA	Fundamental Sciences	Participant
The Royal Netherlands Academy of Arts and Sciences	CO-REACH	INCO	Coordinator
SenterNovem	SUSPRISE	Industrial Technologies and SMEs	Coordinator
Ministry of Housing, Spatial Planning and the Environment	SUSPRISE	Industrial Technologies and SMEs	Programme owner
NWO	ERA-IB	Life Sciences	Coordinator
NWO	ERA-IB	Life Sciences	Coordinator
VU University Medical Center + GHOR Nederland (Medical Assistance in Accidents and Disasters)	HESCULAEP	Life Sciences	Participant
NWO	HERA	Social Sciences and Humanities	Coordinator
Ministerie van Economische Zaken	AirTN	Transport	Programme Owner
SenterNovem (EG Liaison)			NCP
Ministry of Transport	ERA-NET Transport	Transport	Programme Owner

Other sources of information:

ERAWATCH Research Inventory Report For Netherlands, European Communities, 2008

"Country review: the Netherlands", Monitoring and analysis of policies and public financing instruments conducive to higher levels of R&D investments: The "Policy Mix" project, 2007

INNO-Policy TrendChart - Policy Trends and Appraisal Report: The Netherlands, European Commission, 2007

ERA-NET websites

8. Annexes: Participant survey results

The figures below show responses to the participant questionnaire, completed by 24 Dutch participants.

Table 1 - What was your organisation's main rationale for participating in this ERA-NET?

	Netherlands	EU 15 - small	Overall
Benchmarking of research funding against other countries	10%	2%	**1%**
Creating and supporting transnational projects in a field which requires transnational cooperation	35%	46%	**38%**
Improving own (national) R&D programme/s	0%	4%	**7%**
Learning from funders and sharing of information between funders in other countries	5%	10%	**10%**
Networking and building new relationships with funders from other countries	45%	35%	**35%**
Not Answered	0%	1%	**1%**
Opening up of national programmes in existing or new areas of research	5%	2%	**5%**
Other	0%	0%	**2%**

The most commonly cited rationales for ERA-NET participation were networking and building new relationships with funders from other countries (45%), which is significantly above with the country grouping average (EU 15 - small) and creating and supporting transnational projects in a field which requires transnational cooperation (35%) which is significantly below the country grouping average (EU 15 - small).

Table 2 - What was the original overall amount of EC funding allocated to your organisation in your contract to participate in this ERA-NET?

	Netherlands	EU 15 - small	Overall
0 - 9999	5%	4%	**4%**
10000 - 19999	5%	3%	**2%**
20000 - 29999	0%	4%	**3%**
30000 - 39999	0%	1%	**2%**
40000 - 49999	0%	2%	**2%**
50000 - 59999	0%	1%	**2%**
60000 - 69999	5%	2%	**1%**
70000 - 79999	0%	0%	**6%**
80000 +	83%	75%	**71%**
Not Answered	2%	8%	**6%**

The majority of Dutch organisations (83%) were allocated over €80,000 in funding to participate in the ERA-NET, which is above the country grouping average (EU 15 - small).

Table 3 - Did the EC funding cover all the time and resources your organisation invested in participating in this ERA-NET?

	Netherlands	EU 15 - small	Overall
Yes	40%	52%	**49%**
No	55%	40%	**43%**
Don't Know	5%	5%	**4%**
Not Answered	0%	4%	**4%**

The majority of Dutch participants (55%) reported that EC funding did not cover all the time and resources their organisation invested in participating in the ERA-NET, which is significantly above the country grouping average (EU 15 - small).

Table 4 - In which ERA-NET joint activities other than joint calls did you participate?

	Netherlands			EU 15 - small			Overall		
	Yes	No	Other	Yes	No	Other	Yes	No	Other
Coordination/clustering of ongoing nationally funded research projects	76%	20%	5%	62%	19%	19%	**59%**	**19%**	**23%**
Benchmarking and common schemes for monitoring and evaluation	55%	18%	28%	66%	16%	17%	**67%**	**13%**	**19%**
Multinational evaluation procedures (common evaluation criteria and methods of implementation	60%	20%	20%	60%	17%	23%	**55%**	**25%**	**20%**
Schemes for joint training activities (so-supervised theses or common PhD schemes)	8%	54%	38%	11%	47%	42%	**12%**	**49%**	**39%**
Schemes for personnel exchange	13%	40%	48%	12%	47%	41%	**14%**	**47%**	**39%**
Schemes for mutual opening of facilities or laboratories	13%	40%	48%	20%	35%	45%	**15%**	**44%**	**41%**
Specific cooperation agreements or arrangements	53%	23%	25%	40%	25%	35%	**43%**	**24%**	**33%**
Action plan taking up common strategic issues and preparing for joint activities	88%	8%	5%	71%	14%	15%	**75%**	**11%**	**13%**

The majority of Dutch participants took part in an action plan taking up common strategic issues and preparing for joint activities (88%), coordination/clustering of ongoing nationally funded research projects (76%) and multinational evaluation procedures (60%). In two cases the percentages for these joint activities were significantly above the country grouping average (EU 15 - small).

Table 5 - Overall would you say that your participation in the FP6 ERA-NET has been worthwhile?

	Netherlands	EU 15 - small	Overall
Yes	100%	95%	**95%**
No	0%	4%	**4%**
Not Answered	0%	1%	**1%**

All Dutch participants (100%) did find their participation in FP6 ERA-NET worthwhile, which is slightly above the country grouping average (EU 15 - small).

Table 6 - Which of the three following statements best describes your personal experience of this ERA-NET?

	Netherlands	EU 15 - small	Overall
I got more out of it than I expected	60%	41%	**41%**
I got out of it what I expected	40%	50%	**51%**
I got less out of it than I expected	0%	8%	**6%**
Not Answered	0%	1%	**1%**

The majority of Dutch participants (60%) believed they got more out of it than they expected, which is significantly above the country grouping average (EU 15 - small).

Table 7 - To what degree has your participation in this ERA-NET influenced your country's national programme(s)?

	Netherlands			EU 15 - small			Overall		
	No influence	Influence	Other	No influence	Influence	Other	No influence	Influence	Other
Discontinuation of existing programme(s) in some theme(s)	18%	75%	8%	52%	36%	12%	**53%**	**34%**	**12%**
Reducing duplication between National programmes in your country	25%	68%	8%	46%	40%	15%	**46%**	**37%**	**16%**
Design of programmes with longer time horizon	8%	88%	5%	29%	58%	13%	**42%**	**49%**	**10%**
Design of programmes with shorter time horizon	17%	76%	7%	43%	46%	11%	**51%**	**38%**	**11%**
Bigger programme budgets for the theme	30%	63%	8%	40%	47%	13%	**42%**	**46%**	**12%**
Smaller programme budgets for the theme	62%	21%	18%	66%	11%	24%	**63%**	**13%**	**23%**
New programme assessment/evaluation criteria	45%	50%	5%	48%	42%	10%	**40%**	**50%**	**10%**
New opportunities to enable transnational R&D activities in the theme of the ERA-NET	13%	88%	0%	9%	83%	8%	**8%**	**85%**	**6%**
New eligibility criteria allowing funding of	58%	35%	8%	53%	32%	15%	**43%**	**42%**	**15%**

foreign researchers in the area									
Existing programme(s) now covering new theme(s)	41%	44%	15%	45%	40%	15%	**48%**	**39%**	**13%**
New programme(s) put in place in response to new theme(s) identified	58%	23%	20%	46%	38%	17%	**51%**	**34%**	**15%**

A distinctive feature of the influence of ERA-NET on the Dutch National Programmes is that the impact is above the country grouping average (EU 15 - small). This is demonstrated by the total percentage for "influence" being significantly above the total percentage for "influence" in the country grouping average (EU 15 - small).

Table 8 - To what extent did your organisation have pre-existing relationships with participants in this ERA-NET prior to FP6?

	Netherlands	EU 15 - small	Overall
Prior relationships	93%	60%	**66%**
No prior relationships	8%	34%	**26%**
No answer	0%	7%	**8%**

The majority of Dutch participants (93%) reported that they had pre-existing relationships with participants in the ERA-NET, which is significantly above the country grouping average (EU 15 - small).

Table 9 - If there were prior relationships which of the following 6 statements best describes how these relationships evolved during your participation in this ERA-NET?

	Netherlands	EU 15 - small	Overall
Strengthened	93%	55%	**63%**
Weakened	0%	0%	**1%**
No change	0%	4%	**4%**
No answer	8%	42%	**33%**

The majority of Dutch participants who answered this question believed that the relationship strengthened during the participation in this ERA-NET (93%), which is significantly above the country grouping average (EU 15 - small).

Table 10 - Has your participation in this ERA-NET triggered transnational cooperation outside of the ERA-NET?

	Netherlands	EU 15 - small	Overall
Yes	58%	28%	**31%**
No	30%	59%	**47%**
Not Answered	8%	6%	**5%**
Not applicable	5%	7%	**16%**

The majority of Dutch participants who answered this question reported that participation in the ERA-NET did trigger transnational cooperation outside of the ERA-NET (58%), which is significantly above the country grouping average (EU 15 - small).

Table 11 - Has the ERA-NET experience led to an increase in the amount of your programme budget that has been invested in transnational R&D projects outside of the ERA-NET?

	Netherlands	EU 15 - small	Overall
Yes	15%	11%	**13%**
No change	59%	64%	**63%**
No answer	27%	25%	**23%**

The majority of Dutch participants who answered reported that the ERA-NET experience lead to no change to the amount of the programme budget that has been invested in transnational R&D projects outside of the ERA-NET (59%), which is slightly below the country grouping average (EU 15 - small).

Table 12 - If yes, roughly what proportion of your programme budget was transnational before your involvement in ERA-NET?

	Netherlands	EU 15 - small	Overall
0-25%	25%	16%	**15%**
26 to 50%	0%	0%	**0%**
51 to 75%	0%	0%	**0%**
76 to 100%	0%	1%	**1%**
Not answered	75%	83%	**84%**

The majority of Dutch participants who answered this question reported that 0-25% of the budget was transnational before their involvement in the ERA-NET (25%), which is above the country grouping average (EU 15 - small).

Table 13 - If yes, roughly what proportion of your programme budget is transnational now?

	Netherlands	EU 15 - small	Overall
0-25%	18%	14%	**13%**
26 to 50%	5%	2%	**1%**
51 to 75%	0%	0%	**0%**
76 to 100%	0%	2%	**1%**
Not answered	78%	82%	**84%**

The majority of Dutch participants who answered this question reported that 0-25% of the budget was transnational at the time of the survey (18%), which is slightly above the country grouping average (EU 15 - small).

Table 14 - What provisions have been made in your country to coordinate participation in ERA-NETs under FP6? - Single national coordinator for all ERA-NETs

	Netherlands			EU 15 - small			Overall		
	Yes	No	No answer	Yes	No	No answer	Yes	No	No answer
Single national coordinator for all ERA-NETs	20 %	48 %	33%	17 %	62 %	21%	15 %	66 %	19%
Team of several coordinators at national level	18 %	53 %	30%	21 %	53 %	26%	24 %	51 %	24%
Coordination meetings for all national participants	35 %	30 %	35%	37 %	36 %	27%	37 %	41 %	22%
Organisation-specific coordination meetings	73 %	3%	25%	59 %	19 %	22%	50 %	31 %	19%

The majority of Dutch participants reported that the provision made to coordinate ERA-NET participation were organisation-specific coordination meetings (73%), which is significantly above the country grouping average (EU 15 - small).

Table 15 - Earlier we asked you to state your ERA-NET's theme. How important was this theme in your country's research programme before your organisation joined this ERA-NET?

	Netherlands	EU 15 - small	Overall
Very Important	20%	21%	**21%**
Fairly Important	56%	44%	**48%**
Not very important	15%	20%	**16%**
Not at all important	5%	6%	**5%**
Don't Know	0%	3%	**4%**
Not Answered	0%	3%	**5%**
Not Applicable	5%	3%	**2%**

The majority of Dutch participants reported that the ERA-NET's theme was fairly important in their country's research programme before their organisation joined the ERA-NET (56%), which is significantly above the country grouping average (EU 15 - small).

Table 16 - How important is this theme in your country's research programme now?

	Netherlands	EU 15 - small	Overall
Very important	33%	25%	**24%**
Fairly important	64%	53%	**56%**
Not very important	3%	14%	**11%**
Not at all important	0%	0%	**1%**
Don't know	0%	3%	**3%**
Not Answered	0%	3%	**4%**

Not applicable	0%	2%	**2%**

The majority of Dutch participants (64%) reported that the ERA-NET's theme was fairly important to their country's research programme at the time of the survey, which is significantly above the country grouping average (EU 15 - small).

Table 17 - If there has been a change in the importance of the theme to what extent do you think this was due to the ERA-NET?

	Netherlands	EU 15 - small	Overall
To some extent	38%	43%	**29%**
Not at all	0%	10%	**11%**
No answer	63%	47%	**60%**

Most Dutch participants who answered this question reported that the change in the importance of the theme was to some extent due to the ERA-NET (38%), which is slightly below the country grouping average (EU 15 - small).

Table 18 - Has your organisation's involvement in this ERA-NET influenced national research policy beyond the theme of this ERA-NET?

	Netherlands	EU 15 - small	Overall
Influence	68%	62%	**63%**
No influence	15%	19%	**18%**
No answer	18%	19%	**19%**

The majority of Dutch participants who answered this question (68%) reported that their involvement in the ERA-NET influenced national research policy beyond the theme of the ERA-NET, which is above the country grouping average (EU 15 - small).

Table 19 - Have any of the following external factors helped or hindered the effects of your organisation's participation in this ERA-NET?

	Netherlands					EU 15 - small					Overall				
	Helped	Hindered	No effect	Not Answered	Not applicable	Helped	Hindered	No effect	Not Answered	Not applicable	Helped	Hindered	No effect	Not Answered	Not
Change in programme management agency	18%	5%	3%	0%	74%	8%	4%	29%	3%	55%	**7%**	**6%**	**36%**	**4%**	**4**
New R&D management structure	12%	7%	7%	0%	73%	16%	4%	25%	6%	49%	**11%**	**7%**	**35%**	**5%**	**4**
For existing programmes, more strategic R&D programming/planning	44%	0%	10%	0%	46%	30%	0%	37%	6%	27%	**29%**	**0%**	**36%**	**7%**	**2**
Externalisation of R&D programmes into agency/agencies	10%	5%	3%	3%	79%	10%	4%	19%	5%	63%	**8%**	**4%**	**33%**	**6%**	**4**
Setting up of new types of R&D programmes	20%	0%	8%	0%	73%	25%	1%	31%	5%	39%	**24%**	**7%**	**33%**	**5%**	**3**
Barcelona 3% targets	20%	0%	25%	3%	53%	19%	0%	43%	8%	30%	**16%**	**0%**	**39%**	**9%**	**3**

Most Dutch participants (44%) reported that for existing programmes, more strategic R&D programming/planning, helped the effects of their organisations' participation in the ERA-NET, which is significantly above the country grouping average (EU 15 - small).

Table 20 - How satisfied are you with the overall level of transnational cooperation within this ERA-NET?

	Netherlands	EU 15 - small	Overall
Satisfied	100%	88%	**88%**
Unsatisfied	0%	8%	**7%**
No answer	0%	4%	**4%**

All Dutch participants (100%) were satisfied with the overall level of transnational cooperation within the ERA-NET, which is significantly above the country grouping average (EU 15 - small).

Table 21 - Have you seen evidence of the following effects at national level as a result of this ERA-NETs joint calls joint programming or other joint activities?

	Netherlands			EU 15 - small			Overall		
	Some evidence	No evidence	No answer	Some evidence	No evidence	No answer	Some evidence	No evidence	No answer
Higher quality projects generated at national level (i.e. higher quality proposals)	48%	48%	5%	44%	40%	17%	**39%**	**44%**	**17%**
Higher quality projects funded at national level (through joint calls/programmes)	35%	48%	18%	44%	31%	25%	**35%**	**42%**	**23%**
New types of research projects generated (i.e. reflected in proposals received)	46%	46%	8%	44%	38%	19%	**38%**	**42%**	**20%**
New types of research projects funded (through joint calls/programmes)	50%	45%	5%	51%	25%	23%	**46%**	**32%**	**22%**
New researchers (with no prior international or European experience) benefiting from joint activities	55%	43%	3%	43%	34%	23%	**40%**	**27%**	**33%**
New researchers (with no prior international or European experience) benefiting from joint calls/programmes	65%	23%	13%	46%	28%	25%	**41%**	**34%**	**25%**
Access to foreign research communities/groups not present in my country	53%	28%	20%	59%	21%	21%	**54%**	**28%**	**18%**

Most Dutch participants reported evidence of new researchers benefiting from joint calls/programmes (65%), which is significantly above the country grouping average (EU 15 - small), and new researchers benefiting from joint activities (55%), which is significantly above the country grouping average (EU 15 - small).

Table 22 - Did any of the following factors either help or hinder your organisation to exploit the full potential of its participation in this ERA-NET?

	Netherlands					EU 15 - small					Overall				
	Aid to success	No problem	Problem but overcome	Problem still not overcome	No answer	Aid to success	No problem	Problem but overcome	Problem still not overcome	No answer	Aid to success	No problem	Problem but overcome	Problem still not overcome	No answer
National thematic programme priorities	20%	60%	5%	5%	10%	15%	42%	19%	10%	15%	**16%**	**46%**	**13%**	**12%**	**13**
National cultures or research traditions	25%	28%	28%	0%	20%	13%	43%	16%	12%	17%	**10%**	**46%**	**15%**	**14%**	**15**
National resources (staff time finances)	21%	5%	41%	15%	18%	13%	17%	34%	23%	13%	**17%**	**35%**	**26%**	**15%**	**7**
National administrative procedures (e.g. evaluation rules)	13%	18%	38%	15%	15%	5%	26%	38%	18%	13%	**6%**	**25%**	**29%**	**28%**	**12**
National legal programme conditions (e.g. funding of non-residents IPR)	18%	13%	46%	8%	15%	6%	27%	33%	17%	18%	**4%**	**35%**	**19%**	**25%**	**17**
EC administrative procedures or legal requirements	8%	30%	43%	5%	15%	2%	36%	26%	14%	23%	**1%**	**34%**	**36%**	**12%**	**18**
Perceptions of benefits	41%	3%	15%	18%	23%	24%	13%	22%	15%	26%	**15%**	**28%**	**16%**	**13%**	**28**
Engagement in other transnational initiatives (e.g. COST EUREKA)	15%	50%	8%	0%	28%	12%	45%	3%	4%	36%	**12%**	**46%**	**4%**	**4%**	**34**

Most Dutch participants reported that national thematic programme priorities (60%) and engagement in other transnational initiatives (50%) were no problem in exploiting the full potential of their organisation's participation in the ERA-NET, while most reported perception of benefits (18%) as a problem that was still not overcome.

9. Annexes: Coordinator survey results[116]

The following tables show information from the coordinator questionnaire.

Table 23 - ERA-NET participation by theme

Theme	Number	Percentage
Transport	4	7.4%
Life Sciences	11	20.4%
Environment	13	24.1%
Fundamental Sciences	2	3.7%
INCO	2	3.7%
Industrial Technologies and SMEs	12	22.2%
Energy	5	9.3%
Social Sciences and Humanities	5	9.3%
Total	**54**	**100%**

Environment and Industrial Technologies and SME's thematic areas attracted most of the Dutch participants.

Table 24 - Joint call participation by theme

Theme	Number	Percentage
Transport	4	9.8%
Life Sciences	9	22.0%
Environment	7	17.1%
Fundamental Sciences	6	14.6%
INCO	2	4.9%
Industrial Technologies and SMEs	7	17.1%
Energy	2	4.9%
Social Sciences and Humanities	4	9.8%
Total	**41**	**100%**

Life Sciences, Environment and Industrial Technologies and SME's thematic areas channelled most of the contributions to joint calls.

[116] The Coordinator survey covered all 71 ERA-NETs - although in case of 7 ERA-NETs, the information collected dates back from the 2006 survey. 59 ERA-NETs provided information about the calls they have done over the period (NB: it is likely that not all ERA-NETs have reported call information in an exhaustive way). 49 ERA-NETs provided a breakdown of funding contributions at country level for calls (NB: this is likely to be an underestimate as not all ERA-NET coordinators knew this information)

Table 25 - Financial contribution to joint calls by theme

Theme	No contributions	€ virtual	€ common	€ mixed	Total
Transport	6	98,000	74,000	-	172,000
Life Sciences	9	19,656,660	200,000	-	19,856,660
Environment	8	1,500,000	50,000	-	1,550,000
Fundamental Sciences	6	500,000	11,000,000	300,000	11,800,000
INCO	3	450,000	-	-	450,000
Industrial Technologies and SMEs	9	2,617,000	37,643	600,000	3,254,643
Energy	2	800,000	-	-	800,000
Social Sciences and Humanities	4	-	3,441,687	-	3,441,687
Total	**47**	**25,621,660**	**14,803,330**	**900,000**	**41,324,990**

Most of the funding contributions were made through virtual common pots, Fundamental Sciences thematic area contained the largest real common pot contribution by far.

SD6: Country Report on Austria

The following document provides the structure for the country report on ERA-NETs in Austria.

The content of this report has been informed by qualitative interviews and the findings of two surveys. The interviews were undertaken with ERA-NET stakeholders[117] in 15[118] of the 40 countries taking part in the scheme. The number of interviews by country ranged between handfuls in some countries to a couple of dozen in other countries. The same interviewees were chosen to represent thematic areas – the number of interview per theme ranged between 12 and 25 depending on the theme. The surveys were aimed at all ERA-NET coordinators and participants and responses were received by approximately half of these, although responses varied across themes and countries. In addition, and where relevant, the report has been informed by reviews of documents and websites.

Regarding the contents of this report it is important to remember that the findings described within cannot be regarded as a definitive or representative view of all activities within ERA-NETs in this country. Because the interviews were based on a narrow selection of countries and representing a minority of ERA-NETs in each theme, the contents of this report should very much be regarded as a case study that provides a view of the experience. This may also explain why the findings from the qualitative interviews are sometimes at odds with the findings of the surveys which were more inclusive and wide-ranging.

Where possible in the report, the source of evidence is indicated either as coming from one of the surveys or the field interviews.

[117] Stakeholders included National Policy Stakeholders, ERA-NET Coordinators and Participants, and ERA-NET beneficiaries.
[118] The countries were: Austria, Croatia, Finland, France, Germany, Italy, Netherlands, Norway, Poland, Portugal, Romania, Russia, Slovenia, Turkey, and UK,

Contents

0. Executive Summary - Overview

- Austria was one of the countries with the greatest involvement in the scheme in terms of the number of ERA-NETs they participated in (i.e. 50+ ERA-NETs).
- Austrian participation was generally driven by bottom-up initiatives on the part of programme management organizations such as FFG and FWF.

Q1 – Impact on Research Landscapes

- The impact of the ERA-NET scheme on national R&D policy and programming in Austria has been minimal, especially in areas where there was no existing programme at national level. This is explained by the bottom-up nature of the scheme i.e. low buy-in at the policy-level.
- Some new procedures were developed specifically to allow Austrian participants to engage in joint calls. These changes did not apply more widely to other national programmes.
- The bottom-up nature of the scheme in Austria meant that participants developed guidelines for participation largely in isolation of one another. Sharing of knowledge and a more strategic view of ERA-NET participation only emerged several years into implementation.
- A lack of strategic thinking and planning upfront combined with limited expectations vis-a-vis the scheme help to explain why the impact of the scheme on R&D policy at national level has been minimal in Austria despite wide-spread participation.

Q2 – Structuring effect on specific research areas or fields

- The response from the Austrian research communities varied according to the theme with some evidence of structuring effect for life sciences but more limited in other themes.
- Joint calls were more likely to take place in areas where national programmes already existed.
- In thematic areas where there were changes in responsibilities and reorganization of priorities at national level during implementation (e.g. energy), the impact of the scheme was reduced because these changes were not reflected in the composition of the Austrian consortia. This was less of an issue in more clearly defined thematic areas covered by a single policy stakeholder.

Q3 - Direct benefits and indirect benefits

- Indirect benefits were the most valuable result of ERA-NET participation across all thematic areas and involved national institutional learning and cross-border networking with peers as well as development of trust and knowledge sharing.
- There was general satisfaction with and support for the scheme among the beneficiaries who received funding.
- Several participants indicated that there had been significant value added in cross-border cooperation financed through the ERA-NET.
- There was some evidence that Austrian participants had benefited from prior experience of other countries in the ERA-NET which they could benefit from in making own funding decisions.

Q4 – Opening up of national programmes

- Virtual common pots were preferred by Austrian participants due to administrative reasons. Funding of foreigners under an ERA-NET common pot was more complex than doing so directly under Austria's national programme.

- Several respondents pointed out that, in most cases, obstacles to funding foreign researchers were not legal but politically sensitive.

Q5 – Best practice

- Similar criteria for participating in the ERA-NET scheme were developed separately by the two main programme management agencies. Their criteria differed with regards to whether adequate funding, or Commission strategic interest in an area, should be included or not.
- Over time, the Austrian participants came to the conclusion that a more strategic approach was needed to ensure that the right type of players were brought together in an effective decision-making structure to maximize their participation in the scheme.

1. Overview of participation

1.1 Extent of involvement in the ERA-NET scheme[119]

In an evaluation of its ERA-NET participation, the country's ministry for transport, innovation and technology (BMVIT) stated that the Commission supported more than 50 Austrian participations in ERA-NET under FP6, though Austria coordinated less than 10% of these ERA-NETs. The coordinators were based in one of the funding agencies, ministries or civil society organizations.

Austrian participants did not refuse many invitations to participate with Commission financing of administrative costs acting as the main driver for participation. In most cases Austria was not the driving force behind these ERA-NETs.

Austrian ERA-NET participation is outlined in Table 23.

1.2 Landscape and legal entities participating in the scheme120

In the early days of Austrian ERA-NET participation, decisions about who should participate were **driven by bottom-up initiatives on the part of programme management organizations** such as FFG and FWF.

From the beginning of Austria's ERA-NET experience, there was **close albeit non-strategic cooperation between ministry and funding agencies**, especially FFG and BMVIT. Both institutions appeared as partners in a large number of ERA-NETs and it can be difficult to draw a clear dividing line between programme owners and programme managers. Whereas in some ERA-NETs, one of the two institutions took a clear lead, in other cases there was intense cooperation between the two organizations, to the extent that the FFG participant was sometimes even based within the ministry itself.

Despite close internal cooperation between Austrian institutions, it became clear to participants and policy stakeholders across the thematic areas that the **diversity of participants** in ERA-NET consortia would render decision-making and priority setting very complex, especially in thematic areas that cut across the competencies of several ministries. As one participant in the energy field noted for instance,

> *"at the beginning, the national programme included only the BMVIT. This was followed by a successor programme involving two ministries and another successor programme with four ministries. Because the Austrian ERA-NET consortium did not reflect these changes, its influence on national policy in the energy field was greatly reduced."*

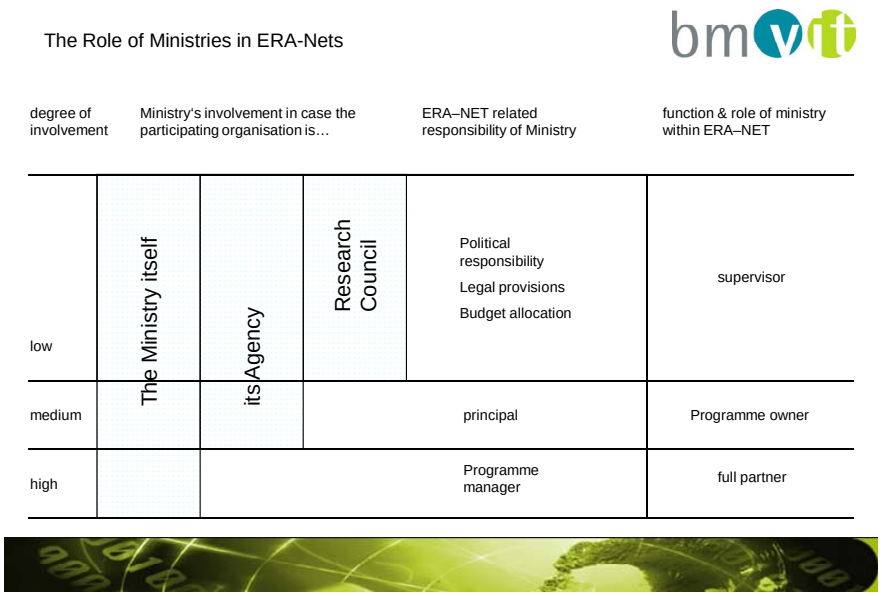
Similarly, the BMVIT, environment, science and economics ministries (among others) had some involvement in environment policy and each institution developed its own guidelines for participation in ERA-NET. This problem was less acute in more clearly defined thematic areas covered by a single policy stakeholder, such as construction, chemistry or the life sciences.

As a result, the Austrian participants gradually came to the conclusion that **a more strategic approach was needed** to ensure that the right type of players were brought together in an effective decision-making structure. As part of this reflection, one of

[119] See Table 23.

[120] See Table 19.

Austria's main policy stakeholders, the ministry for transport, innovation and technology (BMVIT) produced the diagram below to describe how ministerial involvement in ERA-NET can change in relation to the level of involvement of other participants, such as funding agencies and research councils.



2. Strategic national context underpinning the ERA-NET participation

2.1 Strategic planning and role of ERA-NETs in the country[121]

At the beginning of the ERA-NET experience, there was little strategic, upfront planning for the implementation of the ERA-NET scheme in Austria. As mentioned in the previous section, according to the BMVIT, initially participation decisions for ERA-NET emanated from programme managers for whom the proposed financing of the network through the European Commission was a particular incentive. This financial set up meant that national resources required for participation would be kept minimal. The opportunity to participate in a transnational network was often grounds enough to join a thematic ERA-NET.

However, as ERA-NETs began to engage in joint activities and joint calls, transnational cooperation started requiring a significant amount of time and the need for increased strategic planning in relation to ERA-NET participation became apparent. As mentioned above, the Ministry for transport, innovation and technology (BMVIT) felt there was a lack of coordination between ERA-NET and national R&D policy because participation decisions were bottom-up at the level of programme managers rather than political stakeholders. As a result, BMVIT developed a set of basic strategic questions that should be considered before participating in individual ERA-NETs (see Whitelegg, 2007).

- Is there a **national programme** or initiative in the thematic area of the ERA-NET?
- What could be the **positive impact** of ERA-NET participation for this national programme or for the development of research policy objectives in the area?
- Is there already a **research community** to benefit from the ERA-NET?
- What is the **benefit** of ERA-NET for the research community?
- Are there **compatible and similar partners** in the consortium, especially the coordinator?
- What is the **benefit** of ERA-NET participation for the development of the BMVIT's instruments?

2.2 Motivations for joining ERA-NET and set up122

As a Technopolis assessment of the Austrian ERA-NET participation found, there were generally three types of expectations from the scheme: a) **facilitate learning and knowledge build-up**, b) to **engage in benchmarking** against partners in Europe and c) to **network**. This is broadly reflected in Table 1. However, there were differences in the relative importance of these three stages across individual ERA-NETs.

First, for many participants and coordinators, the main motivation for joining ERA-NET in the first place lay in the **desire not to be "left out"** of a European initiative. As one participant put it, "the motivation at the beginning not to miss the boat, to join and see what people are up to in ERA-NETs".

A second reason was that ERA-NET could help **raise the profile** of the participant and of the country's research programme more generally. As one participant stated, the Austrian government tried to join every possible ERA-NET because internationalizing programmes was one of the ways for Austria to raise its profile. Similarly, in aeronautics, "the motivation was to develop the relative position of the country, raise our profile and find out what is going on elsewhere." As the participant acknowledges, this was particularly useful for smaller countries like Austria.

Third, in many cases, the main objective of ERA-NET was to **learn how other countries worked**. For instance, in several ERA-NETs in Austria it was discovered that the word "proposal" meant very different things in for example Germany.

[121] See Table 14 and table 19.
[122] See Table 1.

Finally, **building partnerships** was seen as a strong motivation for participation. As one participant pointed out, the BMVIT covers a large range of thematic areas and is governed by competing priorities, which made networking and partnerships across borders difficult.

While there was relatively little guidance for participation at the outset of the scheme, over time the two main programme management agencies in Austria (FFG and FWF) developed participation criteria to manage their ERA-NET involvement.[123]

First, the FFG identified four participation criteria:

- **Value added**, especially for the Community;
- **Commitment** and cooperation in the ERA-NET consortium;
- **Resources** and cooperation with the national programme;
- Sufficiently large **pool of potential applicants in Austria**.

Second, the FWF developed a set of eight participation criteria, each of which was assigned a different weight depending on its perceived importance to the success of an ERA-NET:

- **Thematic area strengths in Austria** - assessed through existing funding volumes in the area, and a general evaluation of the potential for future activity in Austria in the thematic area. The criterion was given the highest weight because this was one of the primary motivations for participation in ERA-NET.
- **Need for transnational cooperation** – much lower weight, complemented the first criterion.
- **Experience of the consortium** – greater consortium experience with transnational projects, in particular the coordinator, would increase the likelihood that the project be granted. Relevant experience would include previous participation in EU projects and existing contacts with the Commission. This was seen as a necessary condition for participation in the ERA-NET.
- **Composition of the consortium** – included geographic distribution and type of organisation in the consortium. Emphasis was on participation of the big players and cooperation among similar organisations. Again, this was a necessary condition for participating in the ERA-NET.
- **Objectives of ERA-NET** – priority for ERA-NETs with direct transnational research plans.
- **Active interest from the Commission** – related to the importance of the thematic area within the Commission based on informal contacts between the consortium and the Commission. This criterion was necessary for participation due to the political nature of the Commission's evaluation procedure for ERA-NETs.
- **Importance for FWF** – this was defined in terms of the agency's international profile, organisational development and creation of sustainable cooperation structures. It was given the highest possible weight.
- **Partners in Austria** – this was defined as the support and interest of national players outside the consortium.

While some of these criteria overlapped considerably, it is interesting to highlight differences in emphasis between FFG and FWF. For instance, the availability of adequate resources was one of the four FFG participation criteria but it did not figure in any of the eight criteria specified by the FWF. This may be due to the fact that FWF has operated primarily in the fundamental sciences area where resource requirements are often less demanding. Similarly, demonstrable interest from the Commission in the ERA-NET was seen as a necessary condition for FWF but it did not figure in FFG's list of participation criteria.

[123] It should be pointed out that there are additional guidelines which have been developed at political level in other thematic areas, such as in Environment. However, these guidelines were not made available to the research team.

3. ERA-NET processes and positioning

3.1 Inputs into the ERA-NET scheme[124]

In terms of financial inputs, an investigation by the ministry of transport, innovation and technology (BMVIT) found that Austrian participation in joint calls (21 out of a total of 33 at the time of the study) tended to vary between 5% and 14% of the total value of the joint call with the notable exception of two CORNET calls (21% and 31%) and a lower participation in ERA-NET Transport. In the field of the environment, Austria participated with a contribution of EUR 50,000 which was considered "too low a contribution to have any impact" by the relevant Austrian participant. However, the participant explained this low contribution by the timing of the call at end of Austria's financial year when little resources were available. Austrian financial contributions are shown in more detail in

In interviews with participants and coordinators it transpired that the **additionality of the scheme differed between thematic areas** and depended upon whether there were already national programmes in place or not. In some of the environmental ERA-NETs for instance, additional funds were made available because there were no real programmes in some of the ERA-NET topics in Austria. By contrast, participants in the area of bioenergy, where Austria has a very developed national research programme, stated that no additional funds were made available beyond the existing programme.

In terms of other inputs, in most cases the Commission contribution was sufficient to cover administrative expenses. Indeed, as mentioned above, Commission coverage of administrative expenses was one of the primary incentives for programme managers to participate in the ERA-NET scheme. However, it should be noted that additional staff were recruited specifically for some ERA-NETs, in many cases on a part-time basis. The EC funding received by Austrian organisations and its adequacy is reported on in Table 2 and Table 3.

3.2 Degree of involvement by national participants

In most cases, the Austrian participants had a good experience in terms of **cooperation between consortia partners**. Most participants attributed a major role in the success of ERA-NETS to the **role of the coordinator**. For instance in ERA-CHEMISTRY and in Pathogenomics, it was felt that this was done very well by the German partners. Conversely, Austrian participants attributed some of the problems encountered in relatively less successful ERA-NETs (e.g. Plantgenomics, BIODIVERSA) to coordination issues. The degree of satisfaction with transnational cooperation within ERA-NET is outlined in Table 20.

In terms of **patterns of involvement across countries**, some of the participants partly attributed the success and popularity of the ERA-NET to the fact that it did not require partners to participate in all joint calls. For instance, one participant in the fundamental sciences pointed out, Austria was generally quite passive because it was not desperately keen on the ERA-NET scheme but did not want to be left out. Similarly, one participant in aeronautics noted that all work packages in their ERA-NET were led by large countries except one which was led by Austria on the comparison of aerospace programmes across Europe.

Nevertheless, concerns in terms of cross-country participation focused largely on the **size of the consortia**. For instance, in the fundamental sciences, consortium partners tended to have different priorities and approaches to research funding, which, according to one Austrian participant, led to attempts to "wallpaper over wider and wider cracks" in the

[124] See Table 2, Table 3, Table 14, and Table 25.

network. Across other thematic areas, participants confirmed that "it is easier to work in smaller groups and that the level of complexity of the internal organisation of an ERA-NET might become an issue if 27 Member States should try to be involved equally".

As a result of these size considerations, most participants indicated that their consortium gradually developed into **a set of core and peripheral partners**. For instance, in aeronautics about 2/3 of the consortium were "passive partners" and only 1/3 were active. Where the participating agencies in a consortium were most dissimilar, the possibility of variable levels of engagement and parallel activities/calls was particularly helpful. In the environmental field, for instance, one participant stated that the core group of partners tended to be defined by the personalities and type of participants and by national priorities in their respective countries. Researchers, tended to be more engaged in the ERA-NET than more political organisations.

In terms of cooperation between national partners in the same ERA-NET, participants made similar observations. In the energy field, for instance, it was felt that the number of national players with a stake in energy policy hampered effective Austrian participation in the scheme and, in some cases, prevented Austria from participating in joint calls due to complex internal decision-making in the country. At the same time, because not all ministries with a stake in energy policy were involved in the ERA-NET consortium, this affected its national priority status negatively. Over time, this became more complex as consortium partners drew different lessons from each ERA-NET in which they were involved.

In terms of IPR, most ERA-NETs left this aspect for beneficiaries at project level to address. For instance, in the energy field, the ERA-NET organized a few workshops on IPR but ended up applying national rules and national IPR standards with a consortium agreement required in addition to individual agreements between the partners. In the fundamental sciences, IPR was also a big issue though this was not recognized at the outset. Specifically, one Austrian participant mentioned that the UK's position on IPR led to concrete problems, e.g. in Pathogenomics where the country could not agree to fund a reduced consortium after one of the partners had dropped out.[125] In contrast to this, there were no problems with IPR in most other ERA-NETs in with Austria participated. In the field of construction (ERABUILD), this could be explained by the fact that companies specialized in different aspects of a construction project and were therefore used to cooperate with one another without worrying about IPR.

3.3 Participation in joint activities, calls or programming[126]

In most ERA-NETs, **joint calls were decided at participant level and validated by political decision-makers.** As a result, in some cases, topic selection for joint calls in Austria was considerably influenced by individuals who were not always programme managers or owners. In Austria, most participants thought this process was relatively "bottom-up" because the participants were well aware of the research landscape and the interests of "their" national researchers. At the same time, some respondents deplored that a process steered by participants meant that there was relatively little innovation in terms of the topics that were addressed in joint calls.

ERA-NETs with Austrian participation adopted **different methods to determine the topics of joint calls**, including foresight methods and priority lists. Other ERA-NETS opted for very broad topics to allow for greater flexibility in funding decisions depending on the proposals that were submitted. This latter approach was particularly prominent for ERA-

[125] The UK position was that where one country had to drop out of a partnership (e.g. because of lack of financial resources), the entire project had to be stopped to avoid breaching IPR.
[126] See Table 4 and Table 24.

NETs in well-defined thematic areas e.g. in the fundamental sciences. Where ERA-NETs included partners with very different strategic national programmes, some consortia split into smaller groups of similar organisations to organise parallel joint calls.

In terms of the **evaluation of project proposals,** some interviewees reported differences among consortium partners about the strategic importance of project proposals (though not their scientific quality). These differences were more marked in ERA-NETS where projects were evaluated by national experts before decisions at the level of the ERA-NET itself could be made. Often these final funding decisions involved a considerable amount of "horse trading" between ERA-NET partners. According to some policy stakeholders, this led to sub-optimal funding decisions, especially where consortium partners were not sufficiently involved in relevant national R&D programmes. For instance, in the area of the environment, one of the Austrian ERA-NETs felt compelled to fund the lowest quality project on the ranking list in one of its calls because it involved a partner from a country where funding was still available.

From the perspective of participants and coordinators, there were a number of **criteria for participation in joint calls**. In the field of bioenergy for instance, these included a conception of the value added of cooperation between Austria and other countries, availability of resources and national interest in the topic. For instance, Austria did not participate in the 3rd bioenergy call, partly because of a lack of funds and partly because the topic of the call was not as interesting to Austria as the first two.

Finally, some Austrian participants mentioned a set of **procedural obstacles to their participation in joint calls**. For fundamental sciences, for instance, one of the participants noted that the lack of call deadlines in Austria made it difficult to work with ERA-NET where approved projects could sometimes not go ahead because partners were out of money. However, it was also noted that ERA Chemistry's on-going Open Initiative, which did not have any deadlines on its calls, was one way of avoiding this type of problem with 50% of pre-proposals receiving funded at the end.

Table 24 outlines Austrian joint call participation.

3.4 Lessons learnt and best practice[127]

As a result of their ERA-NET experience, Austrian participants, coordinators and policy stakeholders derived a number of lessons and good practices.

The programme owner BMVIT seems to have recognized that **the bottom-up structure of ERA-NET** led to speed, enthusiasm and commitment on the part of programme managers and other consortium partners in Austria but it also prevented institutional change and impact on national R&D policy. While a single strategy for all ERA-NETs was judged to be impossible, a coherent national strategy was seen as important for Austria to remain one step ahead of the developments within its ERA-NETs.

The BMVIT experience suggests that Austrian ERA-NET partners should have **developed a strategy** to set out how their participation could benefit the country more explicitly. At the same time, Austrian policymakers should have ensured that ERA-NET participation was in the national interest. In Austria, despite a certain amount of ERA-NET overload at political and funding agency level, this was helped through a programme of interlinkages between ERA-NETs (e.g. in the area of the environment) where ministries organised workshops to exchange experiences and good practice.

[127] See Table 19, Table 20, and Table 22.

The programme management agency FFG fed back that broader ERA-NETs with the **flexibility to organize parallel calls in specific sub-themes and with variable partnerships** would have increased the effectiveness of Austrian participation by reducing the number of ERA-NETs in which the country was involved.

At programme management level, several lessons were identified based on past experience with ERA-NETs:

- ERA-NETs with attractive partners tended to be more active and fund a greater number of projects;
- Evaluation and decision-making within ERA-NETs has been slow and should be sped up considerably;
- The low level of some budget contributions had led to disappointment with the ERA-NET and the size of calls in some ERA-NETs was too small to recover the initial Commission contribution;
- There were too many ERA-NETs and too few project proposals from beneficiaries;
- Call deadlines of national programmes, ERA-NETs and the EC framework programmes could have been better coordinated;
- Programme management agency could have provided advice to national participants via a central contact point;

4. ERA-NET benefits

4.1 Direct and indirect benefits to ERA-NET national policy stakeholders and participants[128]

For many participants the **main benefit at programme owner/management level laid in networking and generation of trust** among Europeans partners.
Similarly, at participant level, indirect benefits were the most valuable result of ERA-NET participation across all thematic areas. This includes building up trust, networking and the development of contacts databases. In aeronautics, for instance, one of the participants stated clearly that "the main positive impact is that we have built up some trust. But it is more difficult to say what the direct benefit for industry is". Similarly in energy, the main benefit for the respondent was the **institutional learning** that ERA-NET had enabled. In the environmental field, most benefits were also at agency level and not so much at the level of researchers. Again, benefits included learning how others work and assembling contacts for other cross-border projects outside ERA-NET. In the basic sciences, one of the benefits was to improve connections at working level for the funding agency.

The general satisfaction of Austrian ERA-NET participants is reported on in Table 6.

4.2 Direct and indirect benefits to ERA-NET beneficiaries

By far the biggest recurring theme in relation to benefits for researchers was that ERA-NET allowed beneficiaries to apply for EU funding and engage in transnational cooperation **without the administrative burden of the framework programmes**. For instance, ERA Chemistry helped structure collaboration among researchers in chemistry across Europe and ERA-NET made it easier for researchers in small countries like Austria to approach third countries such as the US or Japan.

In an evaluation of its activities, the programme management agency FFG noted that ERA-NET joint calls were an **adequate instrument to help SMEs build new international cooperation** networks that would not have happened at the national level. For instance, one participant in Bioenergy pointed out that about 15 projects (and 3-4 Austrian projects) would not have been supported without ERA-NET because there were no real Austrian experts in the field and transnational cooperation made a qualitative difference to the project.

On the other side, in the basic sciences, it was felt that top scientists did not want to participate in ERA-NET because they could get funding from the Austrian Science Fund or from other sources. Instead, it was felt that the less good scientists in Austria used ERA-NET as a way of accessing international networks.

[128] See Table 5 and Table 6.

5. Impacts on national R&D policy and programming

5.1 Impact on national R&D policy[129]

Most participants, coordinators and policy stakeholders thought that the **impact of ERA-NET on national R&D policy had been minimal**. At the level of programme managers, there was a broad consensus that where national programmes did exist, these were quite well aligned with the respective ERA-NETs. For instance, in aeronautics, the internationalisation of Austrian industry had been a national political priority. Similarly, 70% of Austrian renewables spending had been on bioenergy and as a result, the corresponding ERA-NET was very aligned with national priorities.

Partly as a result of Austria's early ERA-NET experience, attempts were made at national level to **move transnational programmes closer to project management agencies**, such as FFG, which were in charge of managing basic science and thematic programmes including HY-CO, PV and the Bioenergy ERA-NET. This system was somewhat similar to the German concept of the *Projekttraeger*.

At policy level, there were only **very few examples of impacts that could be directly attributed to Austria's participation in ERA-NET**. For instance, the ministry of transport, innovation and technology (BMVIT) started a project to establish systematic links between ERA-NETs and national R&D policy. Similarly, ERA-NET AirTN results were used as feedback for the national R&D strategy which, in turn led to an overhaul of the national programme. In other ERA-NETs little impact on national R&D policy transpired, especially in thematic areas where there was no corresponding national programme.

Table 18 shows the perceived influence of ERA-NET on R&D policy compared to other European countries.

5.2 Impact on national R&D programming130

Evidence collected suggests that **impact on national programmes had been subtle,** partly due to the number of actors at national level in some thematic areas (e.g. energy) and partly due to low budgets. The ministry of transport, innovation and technology found it **easier to participate in ERA-NETs in areas where there was no programme at national level** because the bottom-up nature of ERA-NET did not facilitate thematic coordination with national programmes. Also, longer term budgetary commitments to ERA-NET in some thematic areas were difficult because many strategic programmes could only access annual budgets at national level. Table 7 reflects this relatively low influence of ERA-NET on national programmes.

Participants identified some **efforts among policy stakeholders to develop new procedures** to facilitate participation in ERA-NET. For instance, national projects undertaken as part of ERA-NET had led to a set of lessons which fed into national programmes e.g. through workshops. Also, awareness of what other countries had done before meant their lessons could be taken on board to avoid duplication. For instance, Austria could learn directly from Northern European countries that had already worked on 'IT in the construction sector' when contemplating investment in its own research funding in this area.

In the energy field the goal of improving the national programmes was not achieved because the composition of the ERA-NET consortium did not reflect decision makers at national level and there was no flexibility in the actors that could be involved over the course of the FP6 ERA.

5.3 Opening up on national R&D programming131

[129] See Table 7 and Table 18.
[130] See Table 7 and Table 18.
[131] See Table 10 and Table 11.

Most respondents noted that **some degree of opening up** had happened and that ERA-NET had played a significant role in speeding up this process, especially in areas where there was little previous transnational cooperation. As one policy stakeholder noted, "ERA-NET changed a lot in terms of opening up European cooperation and in terms of the number of people involved – though not in terms of funding."

The **funding** by Austrian funders **of foreign researchers** based outside of Austria currently amounts to around 5% of national funding irrespective of the country's ERA-NET participation. This indicates a small level of opening but was unrelated to the ERA-NET scheme. Almost all Austrian ERA-NETs used virtual common pots, partly because anything else was not acceptable to Austria and partly to reduce administrative expenses. For instance, the BMVIT pointed out that the use of a common pot would require participation strategies well beyond the networking activities that were the focus of many ERA-NETs they participated in. Similarly, the programme management agency for the fundamental sciences (FWF) preferred national financing of project partners because the risk of "losing" was higher in smaller Member States like Austria due to having small scientific communities.

Many respondents pointed out that, in most cases, **obstacles to funding foreign researchers** had not been legal rather political. For instance one participant pointed out that "the ministry would be criticised if there were no Austrian researchers participating in an ERA-NET where Austrian taxpayers' money was involved".
Table 10 and Table 11 show the relatively low perceived effect of ERA-NET on the extent to which Austrian research is becoming transnational.

5.4 Impact on the structuring of national or international research fields

Impact on national research fields[132]

Most respondents across thematic areas and policy and participant/coordinator level thought that there had been **very limited impact** on national research fields. This is shown in Table 17 and Table 21.

Specifically, at policy level, there was a certain amount of disappointment that ERA-NET **had not led to the creation of new national programmes** as initially intended due to a lack of critical mass. In the basic sciences, ERA-NET served as an eye opener for Austria because it provided a yard stick for national researchers to measure themselves against other countries. For instance, there were few applications in neurosciences, a field where Austria was through to be quite strong.

Impact on international research fields

At policy level, most interviewees did not see any shifts in priorities as a result of ERA-NET (though other European programmes had significantly affected thematic priorities) and in some cases the focus of the ERA-NET was not what was anticipated.

At participant level, Bioenergy was discontinued partly because a number of countries did not want to deal with the Commission's administrative requirements and partly due to what they regarded as a 'lack of interest from the Commission in energy ERA-NETs'. The division of ERA-NET into different technologies precluded energy ERA-NETs from analyzing "energy systems" as a whole, a disadvantage compared with Smartgrids – the European technology platform. Finally, in the basic sciences, though one participant thought that ERA-NET was as an instrument that could be used to exploit existing research fields, without however being truly innovative.

[132] See Table 17 and Table 21.

6. European Added Value, relevance and efficiency

6.1 Additionality of the ERA-NET scheme[133]

Most participants saw some additionality in the ERA-NET scheme – though not necessarily at the research level. There were large differences in the type of additionality across thematic areas.

For instance, **in the fundamental sciences,** the FWF pointed out that about half of its research projects involved foreign partners anyway and two thirds of these included more than one foreign partner. The additionality of ERA-NET in this area was therefore minimal.

In aeronautics, where cooperation had previously been close to non-existent, the additionality of ERA-NET was regarded as quite high, even though there was no joint call in the first round.

In energy, the main added value of ERA-NET was the strategic element that it added to ad hoc cross-border cooperation and its variable geometry. Joint calls were of significant added value because the projects that were funded were too small for the framework programme and there was not enough expertise for funding through purely national programmes. However, the ERA-NET HY-CO was primarily used to set up a secretariat for the joint technology initiative (JTI) which was probably not of sufficient added value.

In the environmental area, the added value for the ministry was to have a platform and to pool resources with other countries to take advantage of economies of scale. On the whole, there was little added value for Austria because scientists are networked anyway and institutional learning at ministry has now happened. The next step must be to move on from ERA-NET and implement some of the lessons in our national programme to facilitate cross-border cooperation.

In the regional transport ERA-NET, there was a lot of cross- border cooperation before the scheme including ESA and other FP6 projects but the ERA-NET had a regional element which enabled cooperation with Bavaria and Slovenia. Thus, ERA-NET's main added value was to help find regional partners for cooperation.

For ERABUILD, one of the participants points out that the small size of calls had added value vis-a-vis the larger framework programmes

6.2 Economic efficiency and relevance134

At the FFG, participants pointed out that there had been strong competition for funding at national level for transnational projects and it had not always easy to demonstrate the benefits of ERA-NET to funders. The impression within FFG was that perhaps 1/3 ERA-NETs were worth continued participation, 1/3 would need to be reformed and 1/3 should be discontinued.

As can be seen in Table 5 **most participants thought their involvement had been worthwhile** though there were some questions about efficiency. For instance, as one aeronautics participant put it, "building up trust requires a lot of discussions and networking but ERA-NET could be twice as efficient." This feeling was shared among participants whose ERA-NET will not be continued. In bioenergy for instance, one participant stated that it was worth it because ERA-NET built up a network and it

[133] See Table 11.
[134] See Table 5.

demonstrated that there was a demand for it among the research community (i.e. a wealth of proposals in response to joint calls).

In the environmental field, Austrian participants contributed very small amounts of funding to joint calls. Despite receiving proposals and interest from the research community, these could not be funded due to the low financial commitment. This was also an area where the amount of funding being put into joint calls were overall lower than the Commission contribution to the running of the ERA-NET. This produced a situation in which beneficiaries ultimately lost out, had the money been invested in for instance the **framework programme** directly.

7. Annexes: Stakeholders and materials consulted

Stakeholders consulted

- FFG
- FWF
- BMVIT
- BMWF
- Umweltbundesamt
- Energy Agency

Material consulted

- Manfred Horvat, Entscheidungsgrundlagen für Beteiligungen an ERA-NETs, February 2008.
- Rupert Pichler, The Role of Ministries in ERA-NETs, not dated.
- Technopolis, Perspektiven der österreichischen Beteiligung an ERA-NET, February 2006.
- Katy Whitelegg, ERA-NET: Sinn und Zweck für die nationale Forschungs- und Technologiepolitik - Entwicklung einer kohärenten Vorgehensweise für ERA-NET Beteiligungen des BMVIT, September 2007.
- FWF, Strategie des FWF zur Beteiligung am ERA-NET Programm der Europäischen Kommission, February 2006.
- FFG, Empfehlungen zur Neupositionierung der FFG in der Teilnahme an ERA-NET, July 2007.
- FFG, FFG Review - Bestandsaufnahme ERA-NET Beteiligungen, November 2007.

8. Annexes: Participant survey results

The figures below show responses to the participant questionnaire, completed by 24 Austrian participants.

Table 1 - What was your organisation's main rationale for participating in this ERA-NET?

	Austria	EU 15 - small	Overall
Benchmarking of research funding against other countries	0%	2%	**1%**
Creating and supporting transnational projects in a field which requires transnational cooperation	55%	46%	**38%**
Improving own (national) R&D programme/s	0%	4%	**7%**
Learning from funders and sharing of information between funders in other countries	11%	10%	**10%**
Networking and building new relationships with funders from other countries	29%	35%	**35%**
Not Answered	0%	1%	**1%**
Opening up of national programmes in existing or new areas of research	5%	2%	**5%**
Other	0%	0%	**2%**

The most commonly cited rationales for ERA-NET participation were creating and supporting transnational projects in a field which requires transnational cooperation (55%) and networking and building new relationships with funders from other countries (29%). Percentages differ when compared to country grouping average (EU 15 - small).

Table 2 - What was the original overall amount of EC funding allocated to your organisation in your contract to participate in this ERA-NET?

	Austria	EU 15 - small	Overall
0 - 9999	0%	4%	**4%**
10000 - 19999	12%	3%	**2%**
20000 - 29999	12%	4%	**3%**
30000 - 39999	2%	1%	**2%**
40000 - 49999	5%	2%	**2%**
50000 - 59999	0%	1%	**2%**
60000 - 69999	5%	2%	**1%**
70000 - 79999	0%	0%	**6%**
80000 +	51%	75%	**71%**
Not Answered	12%	8%	**6%**

The majority of Austrian organizations were allocated over €80,000 in funding to participate in the ERA-NET, which is significantly below the country grouping average (EU 15 - small).

Table 3 - Did the EC funding cover all the time and resources your organisation invested in participating in this ERA-NET?

	Austria	EU 15 - small	Overall
Yes	46%	52%	**49%**
No	46%	40%	**43%**
Don't Know	5%	5%	**4%**
Not Answered	3%	4%	**4%**

Austrian participants were split as to whether or not EC funding covered all the time and resources their organization invested in participating in the ERA-NET (46%), those who reported 'yes' were part of a group below the country grouping average (EU 15 - small).

Table 4 - In which ERA-NET joint activities other than joint calls did you participate?

	Austria			EU 15 - small			Overall		
	Yes	No	Other	Yes	No	Other	Yes	No	Other
Coordination/clustering of ongoing nationally funded research projects	46%	41%	13%	62%	19%	19%	**59%**	**19%**	**23%**
Benchmarking and common schemes for monitoring and evaluation	74%	18%	8%	66%	16%	17%	**67%**	**13%**	**19%**
Multinational evaluation procedures (common evaluation criteria and methods of implementation	58%	13%	29%	60%	17%	23%	**55%**	**25%**	**20%**
Schemes for joint training activities (so-supervised theses or common PhD schemes)	5%	51%	44%	11%	47%	42%	**12%**	**49%**	**39%**
Schemes for personnel exchange	0%	54%	46%	12%	47%	41%	**14%**	**47%**	**39%**
Schemes for mutual opening of facilities or laboratories	8%	46%	46%	20%	35%	45%	**15%**	**44%**	**41%**
Specific cooperation agreements or arrangements	29%	42%	29%	40%	25%	35%	**43%**	**24%**	**33%**
Action plan taking up common strategic issues and preparing for joint activities	79%	5%	16%	71%	14%	15%	**75%**	**11%**	**13%**

The majority of Austrian participants took part in an action plan taking up common strategic issues and preparing for joint activities (79%), which is above country grouping average (EU 15 - small), and benchmarking and common schemes for monitoring and evaluation (74%), which is significantly above country grouping average (EU 15 - small).

Table 5 - Overall would you say that your participation in the FP6 ERA-NET has been worthwhile?

	Austria	EU 15 - small	Overall
Yes	87%	95%	**95%**
No	13%	4%	**4%**
Not Answered	0%	1%	**1%**

The majority of Austrian participants (87%) did find their participation in FP6 ERA-NET worthwhile, which is below country grouping average (EU15).

Table 6 - Which of the three following statements best describes your personal experience of this ERA-NET?

	Austria	EU 15 - small	Overall
I got more out of it than I expected	51%	41%	**41%**
I got out of it what I expected	28%	50%	**51%**
I got less out of it than I expected	21%	8%	**6%**
Not Answered	0%	1%	**1%**

The majority of Austrian participants (51%) believed they got more out of it than expected, which is significantly above country grouping average (EU15).

Table 7 - To what degree has your participation in this ERA-NET influenced your country's national programme(s)?

	Austria			EU 15 - small			Overall		
	No influence	Influence	Other	No influence	Influence	Other	No influence	Influence	Other
Discontinuation of existing programme(s) in some theme(s)	51%	38%	10%	52%	36%	12%	**53%**	**34%**	**12%**
Reducing duplication between National programmes in your country	49%	38%	13%	46%	40%	15%	**46%**	**37%**	**16%**
Design of programmes with longer time horizon	47%	37%	16%	29%	58%	13%	**42%**	**49%**	**10%**
Design of programmes with shorter time horizon	62%	31%	8%	43%	46%	11%	**51%**	**38%**	**11%**
Bigger programme budgets for the theme	55%	42%	3%	40%	47%	13%	**42%**	**46%**	**12%**
Smaller programme budgets for the theme	67%	13%	21%	66%	11%	24%	**63%**	**13%**	**23%**
New programme assessment/evaluation criteria	54%	38%	8%	48%	42%	10%	**40%**	**50%**	**10%**
New opportunities to enable transnational R&D activities in the theme of the ERA-NET	13%	79%	8%	9%	83%	8%	**8%**	**85%**	**6%**

New eligibility criteria allowing funding of foreign researchers in the area	54%	38%	8%	53%	32%	15%	**43%**	**42%**	**15%**
Existing programme(s) now covering new theme(s)	67%	33%	0%	45%	40%	15%	**48%**	**39%**	**13%**
New programme(s) put in place in response to new theme(s) identified	56%	38%	5%	46%	38%	17%	**51%**	**34%**	**15%**

A distinctive feature of the ERA-NET on Austrian National Programmes is that the impact is slightly below the country grouping average (EU 15 - small). This is demonstrated by the total percentage for "influence" being slightly below the total percentages for "influence" in the country grouping average (EU 15 - small).

Table 8 - To what extent did your organisation have pre-existing relationships with participants in this ERA-NET prior to FP6?

	Austria	EU 15 - small	Overall
Prior relationships	77%	60%	**66%**
No prior relationships	18%	34%	**26%**
No answer	5%	7%	**8%**

The majority of Austrian participants (77%) reported that they had pre-existing relationships with participants in the ERA-NET, which is significantly below the country grouping average (EU 15 - small).

Table 9 - If there were prior relationships which of the following 6 statements best describes how these relationships evolved during your participation in this ERA-NET?

	Austria	EU 15 - small	Overall
Strengthened	56%	55%	**63%**
Weakened	0%	0%	**1%**
No change	21%	4%	**4%**
No answer	23%	42%	**33%**

The majority of Austrian participants (56%) believed that the relationship strengthened during the participation in this ERA-NET, which is broadly in line with the country grouping average (EU 15 - small).

Table 10 - Has your participation in this ERA-NET triggered transnational cooperation outside of the ERA-NET?

	Austria	EU 15 - small	Overall
Yes	15%	28%	**31%**
No	77%	59%	**47%**
Not Answered	3%	6%	**5%**
Not applicable	5%	7%	**16%**

The majority of Austrian participants reported that participation in the ERA-NET did not trigger transnational cooperation outside of the ERA-NET (77%), which is significantly above the country grouping average (EU 15 - small).

Table 11 - Has the ERA-NET experience led to an increase in the amount of your programme budget that has been invested in transnational R&D projects outside of the ERA-NET?

	Austria	EU 15 - small	Overall
Yes	26%	11%	**13%**
No change	51%	64%	**63%**
No answer	23%	25%	**23%**

The majority of Austrian participants (51%) reported that the ERA-NET experience lead to no change to the amount of the programme budget that has been invested in transnational R&D projects outside of the ERA-NET, which is significantly below the country grouping average (EU 15 - small).

Table 12 - If yes, roughly what proportion of your programme budget was transnational before your involvement in ERA-NET?

	Austria	EU 15 - small	Overall
0-25%	28%	16%	**15%**
26 to 50%	0%	0%	**0%**
51 to 75%	3%	0%	**0%**
76 to 100%	8%	1%	**1%**
Not answered	62%	83%	**84%**

Most Austrian participants who answered this question reported that 0-25% of the budget was transnational before their involvement in the ERA-NET (28%), which is significantly above the country grouping average.

Table 13 - If yes, roughly what proportion of your programme budget is transnational now?

	Austria	EU 15 - small	Overall
0-25%	26%	14%	**13%**
26 to 50%	3%	2%	**1%**
51 to 75%	0%	0%	**0%**
76 to 100%	13%	2%	**1%**
Not answered	59%	82%	**84%**

Most Austrian participants who answered this question reported that 0-25% of the budget was transnational at the time of the survey (26%), which is significantly above the country grouping average (EU 15 - small).

Table 14 - What provisions have been made in your country to coordinate participation in ERA-NETs under FP6? - Single national coordinator for all ERA-NETs

	Austria			EU 15 - small			Overall		
	Yes	No	No answer	Yes	No	No answer	Yes	No	No answer
Single national coordinator for all ERA-NETs	5%	74 %	21%	17 %	62 %	21%	15 %	66 %	19%
Team of several coordinators at national level	11 %	63 %	26%	21 %	53 %	26%	24 %	51 %	24%
Coordination meetings for all national participants	23 %	41 %	36%	37 %	36 %	27%	37 %	41 %	22%
Organisation-specific coordination meetings	42 %	29 %	29%	59 %	19 %	22%	50 %	31 %	19%

Most Austrian participants reported that the provision made to coordinate ERA-NET participation were organization-specific coordination meetings (42%), which is significantly below the country grouping average (EU 15 - small).

Table 15 - Earlier we asked you to state your ERA-NET's theme. How important was this theme in your country's research programme before your organisation joined this ERA-NET?

	Austria	EU 15 - small	Overall
Very Important	21%	21%	**21%**
Fairly Important	24%	44%	**48%**
Not very important	34%	20%	**16%**
Not at all important	5%	6%	**5%**
Don't Know	0%	3%	**4%**
Not Answered	13%	3%	**5%**
Not Applicable	3%	3%	**2%**

Most Austrian participants (34%) reported that the ERA-NET's theme was not very important in their country's research programme before their organization joined the ERA-NET, which is significantly above the country grouping average (EU 15 - small).

Table 16 - How important is this theme in your country's research programme now?

	Austria	EU 15 - small	Overall
Very important	26%	25%	**24%**
Fairly important	41%	53%	**56%**
Not very important	18%	14%	**11%**
Not at all important	0%	0%	**1%**
Don't know	0%	3%	**3%**
Not Answered	13%	3%	**4%**
Not applicable	3%	2%	**2%**

Most Austrian participants (41%) reported that the ERA-NET's theme was fairly important to their country's research programme at the time of the survey, which is significantly below the country grouping average (EU 15 - small).

Table 17 - If there has been a change in the importance of the theme to what extent do you think this was due to the ERA-NET?

	Austria	EU 15 - small	Overall
To some extent	41%	43%	**29%**
Not at all	8%	10%	**11%**
No answer	51%	47%	**60%**

Most Austrian participants who answered this question reported that the change in the importance of the theme was to some extent due to the ERA-NET (41%), which is broadly in line with the country grouping average (EU 15 - small).

Table 18 - Has your organisation's involvement in this ERA-NET influenced national research policy beyond the theme of this ERA-NET?

	Austria	EU 15 - small	Overall
Influence	54%	62%	**63%**
No influence	26%	19%	**18%**
No answer	21%	19%	**19%**

The majority of Austrian participants (54%) reported that their involvement in the ERA-NET influenced national research policy beyond the theme of the ERA-NET, which is below the country grouping average (EU 15 - small).

Table 19 - Have any of the following external factors helped or hindered the effects of your organisation's participation in this ERA-NET?

	Austria					EU 15 - small					Overal		
	Helped	Hindered	No effect	Not Answered	Not applicable	Helped	Hindered	No effect	Not Answered	Not applicable	Helped	Hindered	No effect
Change in programme management agency	3%	0%	23%	3%	72%	8%	4%	29%	3%	55%	**7%**	**6%**	**36%**
New R&D management structure	0%	0%	33%	15%	51%	16%	4%	25%	6%	49%	**11%**	**7%**	**35%**
For existing programmes, more strategic R&D programming/planning	20%	0%	55%	8%	18%	30%	0%	37%	6%	27%	**29%**	**0%**	**36%**
Externalisation of R&D programmes into agency/agencies	10%	0%	28%	3%	59%	10%	4%	19%	5%	63%	**8%**	**4%**	**33%**
Setting up of new types of R&D programmes	8%	0%	51%	3%	38%	25%	1%	31%	5%	39%	**24%**	**7%**	**33%**
Barcelona 3% targets	8%	0%	67%	10%	15%	19%	0%	43%	8%	30%	**16%**	**0%**	**39%**

Most Austrian participants (20%) reported that existing programmes, more strategic R&D programming, helped the effects of their organisations' participation in the ERA-NET, which is significantly below the country grouping average (EU 15 - small).

Table 20 - How satisfied are you with the overall level of transnational cooperation within this ERA-NET?

	Austria	EU 15 - small	Overall
Satisfied	72%	88%	**88%**
Unsatisfied	21%	8%	**7%**
No answer	8%	4%	**4%**

The majority of Austrian participants (72%) were satisfied with the overall level of transnational cooperation within the ERA-NET, which is significantly below the country grouping average (EU 15 - small).

Table 21 - Have you seen evidence of the following effects at national level as a result of this ERA-NETs joint calls joint programming or other joint activities?

	Austria			EU 15 - small			Overall		
	Some evidence	No evidence	No answer	Some evidence	No evidence	No answer	Some evidence	No evidence	No answer
Higher quality projects generated at national level (i.e. higher quality proposals)	43%	48%	10%	44%	40%	17%	**39%**	**44%**	**17%**
Higher quality projects funded at national level (through joint calls/programmes)	38%	36%	26%	44%	31%	25%	**35%**	**42%**	**23%**
New types of research projects generated (i.e. reflected in proposals received)	31%	56%	13%	44%	38%	19%	**38%**	**42%**	**20%**
New types of research projects funded (through joint calls/programmes)	23%	36%	41%	51%	25%	23%	**46%**	**32%**	**22%**
New researchers (with no prior international or European experience) benefiting from joint activities	11%	50%	39%	43%	34%	23%	**40%**	**27%**	**33%**
New researchers (with no prior international or European experience) benefiting from joint calls/programmes	8%	49%	44%	46%	28%	25%	**41%**	**34%**	**25%**
Access to foreign research communities/groups not present in my country	41%	38%	21%	59%	21%	21%	**54%**	**28%**	**18%**

Most Austrian participants reported evidence of higher quality projects generated at national level (43%), which is broadly in line with the country grouping average (EU 15 - small), and access to foreign research communities or groups not present in their country (41%), which is significantly below the country grouping average (EU 15 - small), as a result of the ERA-NET.

Table 22 - Did any of the following factors either help or hinder your organisation to exploit the full potential of its participation in this ERA-NET?

	Austria	EU 15 - small	Over

	Aid to success	No problem	Problem but overcome	Problem still not overcome	No answer	Aid to success	No problem	Problem but overcome	Problem still not overcome	No answer	Aid to success	No problem	Problem but overcome	Problem still not overcome	No answer
National thematic programme priorities	18%	23%	15%	33%	10%	15%	42%	19%	10%	15%	**16%**	**46%**	**13%**	**12%**	**13**
National cultures or research traditions	3%	46%	13%	15%	23%	13%	43%	16%	12%	17%	**10%**	**46%**	**15%**	**14%**	**15**
National resources (staff time finances)	5%	31%	10%	44%	10%	13%	17%	34%	23%	13%	**17%**	**35%**	**26%**	**15%**	**7**
National administrative procedures (e.g. evaluation rules)	8%	42%	16%	24%	11%	5%	26%	38%	18%	13%	**6%**	**25%**	**29%**	**28%**	**12**
National legal programme conditions (e.g. funding of non-residents IPR)	0%	55%	11%	16%	18%	6%	27%	33%	17%	18%	**4%**	**35%**	**19%**	**25%**	**17**
EC administrative procedures or legal requirements	0%	24%	37%	24%	16%	2%	36%	26%	14%	23%	**1%**	**34%**	**36%**	**12%**	**18**
Perceptions of benefits	29%	18%	8%	32%	13%	24%	13%	22%	15%	26%	**15%**	**28%**	**16%**	**13%**	**28**
Engagement in other transnational initiatives (e.g. COST EUREKA)	10%	44%	0%	13%	33%	12%	45%	3%	4%	36%	**12%**	**46%**	**4%**	**4%**	**34**

Most Austrian participants reported that national legal programme conditions (55%) and national cultures or research traditions (46%) were no problem in exploiting the full potential of their organisation's participation in the ERA-NET, while most reported national resources (44%) as a problem that was still not overcome.

9. Annexes: Coordinator survey results[135]

The following tables show information from the coordinator questionnaire.

Table 23 - ERA-NET participation by theme

Theme	Number	Percentage
Transport	4	9.5%
Life Sciences	8	19.0%
Environment	10	23.8%
Fundamental Sciences	1	2.4%
INCO	2	4.8%
Industrial Technologies and SMEs	10	23.8%
Energy	4	9.5%
Social Sciences and Humanities	3	7.1%
Total	**42**	**100%**

Environment and Industrial Technologies and SME's thematic areas attracted the most Austrian participants.

Table 24 - Joint call participation by theme

Theme	Number	Percentage
Life Sciences	7	15.2%
Environment	4	8.7%
Fundamental Sciences	7	15.2%
INCO	3	6.5%
Industrial Technologies and SMEs	17	37.0%
Energy	3	6.5%
Social Sciences and Humanities	1	2.2%
Total	**46**	**100%**

Industrial Technologies and SME's, Life Sciences and Fundamental Sciences thematic areas channelled most of the contributions to joint calls.

[135] The Coordinator survey covered all 71 ERA-NETs - although in case of 7 ERA-NETs, the information collected dates back from the 2006 survey. 59 ERA-NETs provided information about the calls they have done over the period (NB: it is likely that not all ERA-NETs have reported call information in an exhaustive way). 49 ERA-NETs provided a breakdown of funding contributions at country level for calls (NB: this is likely to be an underestimate as not all ERA-NET coordinators knew this information)

Table 25 - Financial contribution to joint calls by theme

Theme	No contributions	€ virtual	€ common	€ mixed	Total
Transport	6	5,098,734	18,000	-	5,116,734
Life Sciences	16	71,183,000	-	-	71,183,000
Environment	7	2,609,000	-	-	2,609,000
Fundamental Sciences	8	800,000	3,800,000	430,000	5,030,000
INCO	5	400,000	-	125,000	525,000
Industrial Technologies and SMEs	22	7,881,000	22,643	2,733,000	10,636,643
Energy	4	749,000	-	-	749,000
Social Sciences and Humanities	1	-	1,230,000	-	1,230,000
Total	**69**	**88,720,734**	**5,070,643**	**3,288,000**	**97,079,377**

Most of the funding contributions were made through virtual common pots, the largest real common pot contribution by far were in the Fundamental Sciences thematic area.

ERA-NET EVALUATION

SD7: Country Report on Finland

The following document provides the structure for the country report on ERA-NETs in Finland.

The content of this report has been informed by qualitative interviews and the findings of two surveys. The interviews were undertaken with ERA-NET stakeholders[136] in 15[137] of the 40 countries taking part in the scheme. The number of interviews by country ranged between handfuls in some countries to a couple of dozen in other countries. The same interviewees were chosen to represent thematic areas – the number of interview per theme ranged between 12 and 25 depending on the theme. The surveys were aimed at all ERA-NET coordinators and participants and responses were received by approximately half of these, although responses varied across themes and countries. In addition, and where relevant, the report has been informed by reviews of documents and websites.

Regarding the contents of this report it is important to remember that the findings described within cannot be regarded as a definitive or representative view of all activities within ERA-NETs in this country. Because the interviews were based on a narrow selection of countries and representing a minority of ERA-NETs in each theme, the contents of this report should very much be regarded as a case study that provides a view of the experience. This may also explain why the findings from the qualitative interviews are sometimes at odds with the findings of the surveys which were more inclusive and wide-ranging.

Where possible in the report, the source of evidence is indicated either as coming from one of the surveys or the field interviews.

[136] Stakeholders included National Policy Stakeholders, ERA-NET Coordinators and Participants, and ERA-NET beneficiaries.
[137] The countries were: Austria, Croatia, Finland, France, Germany, Italy, Netherlands, Norway, Poland, Portugal, Romania, Russia, Slovenia, Turkey, and UK,

Contents

0. Executive Summary - Overview

The findings indicate that:

- ERA-NETs have had an impact on the Finnish research landscape to the extent that they allowed the opportunity for increased and wider transnational collaboration in Europe.

- It is too early to say whether ERA-NETs have had a structuring effect in certain research fields in Finland but some indication of this in specific areas exist.

- ERA-NETs have had little if any impacts on national R&D policy focus in Finland. Given that Finland had had an internationalisation strategy in place over a decade ERA-NET had not changed its focus. However, Finland is involved with a wider a consortium of partners. This collaboration has not changed the balance of which research fields Finland are invested in but decisions are now more focussed on where the value to Finnish researchers and companies is the greatest.
- Main benefits to Finnish participants included new contacts and knowledge of other R&D funders and their systems. It has also allowed the two main Finnish players, AKA and Tekes, to work more closely together.

- National programmes have opened up to the extent that Finland is linked to a larger consortium of countries in Europe than before. AKA has also opened the use of common pot to the ERA-NETs

- Various mapping and benchmarking exercises were regarded by Finnish participants to have added value to joint collaboration and were identified as good practice.

Q1 – Impact on Research Landscapes

Finland has a strong internationalisation strategy for research in place and has actively been involved in transnational collaboration prior to ERA-NETs. However, the previous collaborations were mainly undertaken with bilateral agreements. Finland had strong links with other Nordic countries in particular and some R&D links with countries such as Russia, Japan, China and the US. Finland has also taken part in many European collaborative schemes and platforms such as FP, EUREKA, COST, ESF and most of the previous collaborative actions have been with European counterparts.[138] ERA-NET scheme opened transnational collaboration between lower ranking civil servants of national (and regional) ministries and funding agencies. ERA-NETs also fostered the opportunity to increase multilateral collaboration within Europe, including establishing cooperation with countries that Finland had not collaborated with previously in a given topic.[139]

ERA-NETs have had little if any impacts on national R&D policy focus in Finland. Given that Finland had had an internationalisation strategy in place over a decade ERA-NETs had not changed its focus. However, Finland is involved with a wider a consortium of partners. This collaboration has not changed the balance of which research fields Finland are invested in

[138] Please also note that AKA is a member of the European Science Foundation (ESF) and Tekes is a member of the Association for Technology Implementation in Europe (TAFTIE).

[139] Please note that the European countries were not new partners per se, but new partners within a specific topic area and/or at funding organisation level.

but decisions are now more focussed on where the value to Finnish researchers and companies is the greatest.

Q2 – Structuring effect on specific research areas or fields

It is too early to say if ERA-NETs have had structuring effects in certain research fields in Finland. In addition, thematic focus has never been the guiding principle as Finland's decision to participate in ERA-NETs was driven by the needs of Finnish researchers and utility to business and industry rather than by thematic priorities. However, there is an indication that international collaboration in social sciences has intensified due to international joint programming elements that have been rare in Social Sciences in the past. In addition, investment in a regional research programme for the Baltic Sea reached a high degree of strategic buy-in at national level for years to come.

Q3 - Direct benefits and indirect benefits

The direct benefits from participation in ERA-NETs were primarily the creation of new contacts and learning how other financiers in Europe operate and what their priorities are. In some instances, the ERA-NETs also enabled opening up of bilateral or regional programmes to wider collaboration and stimulated joint working between regional programmes as is exemplified by the Bonus ERA-NET. Other examples include:

- closer links between AKA and Tekes;
- larger collaboration than national project would enable but yet smaller and less bureaucratic that FP projects;
- the results of the Bio-Energy ERA-NET call fed back into national programme.

Q4 – Opening up of national programmes

National programmes have opened to the extent that Finland is linked to a larger consortium of countries in Europe. Finland has also been active participating in joint calls covering all the thematic areas. In addition, AKA has used the common pot for ERA-NETs which diverted funding to non-resident researchers. This was not possible for Tekes due to the involvement of private companies and resulting IPR issues.

Q5 – Best practice

Interviewees found that learning about potential legal barriers in different countries had helped to understand how to best collaborate. Visits to partner countries were also found particularly useful as they helped to understand different organisations' procedures and built trust between the partners. Various mapping exercises had added value to joint collaboration, these included:

- survey of networking landscape in the thematic area;
- directory of national activities in participant countries; and
- comparative analysis of partner organisations.

These aspects were applicable to most of the ERA-NETs interviewed during the field visit.

1. Strategic national context underpinning the ERA-NET participation

1.1 Strategic planning and role of ERA-NETs in the country[140]

Finland has had a strong internationalisation strategy for research in place and has actively been involved in transnational collaboration. At the time of the ERA-NET scheme launch Finland had already been involved in transnational R&D collaboration for some time. Finland has taken part in previous FP programmes, programmes like COST and EUREKA, and has had bilateral agreements with countries within and outside of Europe. The collaboration between Nordic countries has been strong for decades. In addition, Finland has been involved in transnational collaboration outside of Europe, particularly with North America, Russia, China and Japan. These previous collaborations were undertaken mainly with bilateral agreements. The ERA-NETs allowed Finland the opportunity to increase its multilateral collaboration within Europe across research funding agencies.

According to the project participants, Finland initially joined the ERA-NET scheme because it was a new good tool for networking and for, potentially, increasing the mobility of Finnish researchers. ERA-NET participation was often aligned with wider national priorities. Some ERA-NETs were related to national programmes but the purpose in other instances was to find partners in Europe. In some cases Finland wanted to intensify collaboration in a certain field or with certain countries. For example, within CO-REACH the objective was to intensify collaboration with China and within NORFACE and HERA to intensify collaboration in the Social Sciences and Humanities field. Within ERA-Chemistry and Matera the objective was to find partners in Europe. Within MNT ERA-NET the objective was to increase networking in Europe that would benefit the national programme and increase Finnish visibility in nanotechnology.

Overall, participation in ERA-NETs has not changed the national research programming landscape. The focus and scope already existed. However, the change that ERA-NETs brought was a wider European collaboration across research funding agencies than before.

1.2 Motivations for joining ERA-NET and set up[141]

Overall, Finland joined ERA-NETs for strategic reasons exemplified as the "internationalisation of research", which was the driving force that had been developing in Finland for some years prior to that.

For policy stakeholders ERA-NETs were considered as a good mechanism to extend interagency collaboration with European counterparts. Finland was keen to broaden its networks with European counterparts. ERA-NETs were seen as a good tool for fulfilling this aim and they provided a structure for collaboration. ERA-NETs started a new activity effect in that before ERA-NETs Europe did not have activity where financing organisations would work together. ERA-NET was seen as a learning platform for joint working with a large consortium. Both AKA and Tekes received information about ERA-NETs from the Commission and when the programme started Finland was well-informed.

AKA and Tekes wanted to expand links and undertake more transnational activities with European counterparts based on the broad principles of:

[140] See Table 14 and Table 15.
[141] See Table 1.

- promoting international collaboration;
- providing opportunities for Finnish researchers (AKA) and utility for business and industry (Tekes); and
- building relationships and personal contacts in European context.

These motivations are shown in Table 1.

Research beneficiaries applied for funding from ERA-NETs because they were considered as good platforms for initiating a project with a transnational group of research centres. One research beneficiary commented that in his social science project it was important that the participant countries had the same research platform so that comparison across countries was possible. With national funding it would have been difficult to coordinate the research with similar schedules. The expectation was to increase international collaboration, exchange ideas and gain further funding in the future to expand the project. Finland partnered with Germany and Slovenia who had the same interest. This collaboration was new. A research beneficiary from a material science project commented that ERA-NETs were considered to have a simpler process than the FP and that they enabled innovative projects. A beneficiary also perceived that there was less competition in the ERA-NET in the material science field than at the FP level. Within the beneficiary's material science project partners collaborated with research centres that had a good idea what ERA-NETs were and most of these partners were good partners from previous projects.

2. Overview of participation

2.1 Extent of involvement in the ERA-NET scheme[142]

Finland has two main funding organisations that participated to the ERA-NET scheme. Together they acted as national contact point responsible for the ERA-NET instrument.

- The Academy of Finland (AKA) operates under the Ministry of education. Its focus is on high level research and scientific quality is the criteria for its funding decisions.
- The Finnish Funding Agency for Technology and Innovation (Tekes) operates under the Ministry of Employment and Economy. Its focus is on funding projects whose outputs can be applied and benefit industry. 55% of funding is given to companies.

These organisations are relatively autonomous in deciding about funding priorities. The Academy of Finland has research programmes whereas Tekes have their own programmes. In addition, other organisations have participated in ERA-NETs but on a much more limited capacity. For example, the Ministry of Transport and Communication was involved as it is the main financier of transport programmes in Finland. The Finnish Environment Institute (SYKE) was involved by invitation from AKA to undertake research on mapping the priorities in the field of climate change and provided an overall advisory role.

Overall, Finland took part in 40 ERA-NETs and coordinated five of them. The ten ERA-NETs covered during the field work thus represented 25% of all the ERA-NETs Finland participated in. Finnish ERA-NET participation is outlined in Table 23.

AKA participated in 16 ERA-NETs and coordinated two of them in the fields of Social Sciences and Humanities and Environment. Tekes participated in 17 ERA-NETs and coordinated 3 of them, all of which were Industrial technologies and SMEs oriented.

Overall, the Finnish participation covered all the eight ERA-NET themes. The fields where Finland was most active were[143]:

- Industrial Technologies and SMEs (11, 28%);
- Life Sciences (9, 23%); and
- Environment (8, 20%).

The above fields were also the ones where most of the ERA-NETs operated. Interestingly, Finland was also part of all the six Social Sciences and Humanities projects that were available via ERA-NETs. In the other thematic fields, Finland participated in one to two projects in the field.

Finland was an active partner in many of the ERA-NETs it participated in. Finland participated in at least 51 calls covering all thematic fields. However, a large proportion of these calls (41%) were in the field of Industrial technologies and SMEs. AKA participated in at least 18 calls and Tekes in at least 19 calls.[144]

Overall, the focus of Finnish thematic research policy and programming has not changed as a result of the ERA-NET programme. Thematic focus has never been a guiding principle

[142] See Table 23.

[143] The number in brackets indicated number of ERA-NETs Finland participated in and the percentage indicates the proportion of all Finnish ERA-NETs this represents.

[144] Please note that this figure is likely to be slightly higher as the research team has information on joint calls for 90% of all the ERA-NETs.

as Finland’s decision to participate was based on the needs of Finnish researchers and utility for business and industry rather than driven by thematic priorities. Likewise, there have been no changes in thematic research policy; the focus has rather been on finding new ways to collaborate.

3. ERA-NET processes and positioning

3.1 Inputs into the ERA-NET scheme[145]

Finland had a commitment to joint activities up front and wanted to be an active member in the ERA-NETs it participated in, including participation in joint calls and programming. Both Tekes and AKA were flexible in organising their participation in ERA-NETs. However, the participation was perceived to be more resource-intensive than expected by all the interviewees consulted as part of the field work.

In order to participate, AKA had to change its procedures slightly as most ERA-NETs were thematic and AKA has four research councils. This meant that research councils had to make a decision that the focus of each ERA-NET was important for Finland and therefore AKA should take part. The decision was based on the principles of serving the science community, serving the interests of AKA and providing benefits to Finland. AKA also established a group that coordinated ERA-NET activities in-house with the purpose of disseminating information on the latest calls in AKA and beyond.

Tekes used the existing national procedures when it participated in ERA-NETs and has not made major changes to them as a result of participation. The decision to participate was made based on the utility ERA-NET participation could bring to business and industry in Finland. One of the Matera calls used external evaluators which is not a procedure in Tekes so an exception to national procedure was made on this one occasion.

Both AKA and Tekes set resources aside to support the ERA-NET scheme but it took more resources than expected. Overall, ERA-NETs were more expensive to manage and participate in than the funding received from the Commission. Additional investment included hiring full and part-time staff to support the running of joint projects whose time on ERA-NETs was not fully covered by the EC contribution. The extent to which the EC funding covered all necessary time and resources is reported on in Table 3, while the Finnish financial contribution to ERA-NET joint calls is shown in Table 25.

3.2 Participation in joint activities, calls or programming[146]

The Finnish organisations have been flexible and receptive in participation in joint activities under the ERA-NETs. They have all been involved in activities such as exchange of information, exchange of best practises, mapping of other organisations' activities and assessing barriers for collaboration, as shown in Table 4Table 4. The main ERA-NET actors AKA and Tekes have also been involved in joint calls and programmes. The process for participation in calls varied between the two organisations reflecting their focus, which is explained below.

Within AKA the decision to take part in joint calls lay within the Research Councils part of AKA. They decided about involvement based on the impact on Finnish researchers, available funding and ensuring that equality between disciplines was maintained. The research councils were then able to decide if to fund a national or transnational call. In general, AKA favoured joint research projects. In many fields Finnish researchers were expected to benefit from a more structured collaboration. AKA was also open to implement joint research projects with a common pot because legal obstacles, obstacles in funding decisions and monitoring were smaller. Normally however, virtual pots were used and AKA made the decision who to fund.

[145] See Table 2, Table 3, Table 14, and Table 25.

[146] See Table 4 and Table 24.

In contrast, Tekes only funded joint calls via virtual pots. The reason was that once companies were involved, the focus was on virtual pots, otherwise juridical problems became apparent over who had the right to utilise the outcomes. This would have been very difficult to resolve via a common pot. Tekes funded applied research and its industrial application was the key criterion for funding decisions. All funding was allocated via national budgets using national decision criterion. The criteria included mostly that at least two companies had to be involved in the project and research and companies had also to be able to utilise the results. ERA-NET calls did not compete against national applications. Under ERA-NET, for calls to get funded, other partners had to secure their funding as well and Tekes, on occasion, showed "good will" in raising funds if other partners were interested so that the project could be funded.

According to the policy stakeholders interviewed in principle there were no barriers to opening up of Finnish R&D programmes to non-resident researchers but the position varied between AKA and Tekes. AKA, who funds basic research, supported the idea of a common pot and had used it in the past within collaborations with Nordic counties. As part of ERA-Chemistry a foreign national was funded because Finnish researchers were not successful in their applications. Tekes on the other hand, whilst there were no restrictions in principle for them funding foreign nationals as part of their projects (they provide funding to universities and companies) in practice they cannot participate to common pot.

The research beneficiaries were asked how the ERA-NET funding compared to other sources of funding. They felt it was a good alternative because it enabled innovative projects with a limited number of partners. The beneficiaries mentioned that the proposal application process was straightforward and relatively fast. However, the decision process could be made more transparent to the proposal partners so that one negative funding decision does not kill the whole process. One problem perceived by the Finnish beneficiaries was the need to make a proposal to two categories: to the ERA-NET board and to the national funding agency that acted independently. In Finland it worked excellently but Norway for example had a problem when their funding agency rejected the proposal. In general, the average duration of the 'proposal to funding' period was perceived as longer than the national process but not as long as for FP projects. One of the research beneficiaries commented that the two-step procedure, pre-proposal and then full proposal, worked very well. Overall, the ERA-NET instrument was built so that it could enable enforced close transnational collaboration, which was viewed positively.

3.3 Lessons learnt and best practice[147]

The view from the policy stakeholders was that in retrospect Finland participated in too many ERA-NETs. The programme was resource intensive and the achieved benefits did not reach their full potential. In future, Finland will be involved in fewer ERA-NETs and will be more strategic about where it will participate. As an aftermath of the significant investment in the ERA-NETs under FP6, both AKA and Tekes have reviewed their strategy for future participation. The focus for the future is that ERA-NETs have to deliver clear benefits. According to policy stakeholders, Finland will be part of ERA-NET plus but will be selective about where it participates.

From all the interviews it was evident that lessons learnt via ERA-NET had been taken into account at national policy and programming level to a certain extent. The challenge had been to find a balance between national and European benefits. There was a feeling that

[147] See Table 19, Table 20, and Table 22.

the benefit to Europe had been greater than the benefit to Finland. The realisation to address this balance came from the ERA-NET experience. The sections below discuss the lessons learnt and provide good practice examples.

The interviewees mentioned several factors that hindered progress being made within the ERA-NETs. Principally these included legal regulations in some countries that prevented them from participating in common pots and slow decision-making processes in particular. For example, it was a slow process to decide topics for collaboration. Countries meant different things within the same subject, or some countries were ahead or were novices in certain thematic areas. In some areas it was hard to find common subjects altogether. One of the interviewees mentioned that resources were not well-defined for all the participant organisations whereas another interviewee mentioned that in their ERA-NET too many bodies were involved and it was not clear at what level decisions were 'final'. With respect to joint calls, Finnish participants pointed to were several issues that could be improved in the future such as:

- Currently there are different schedules for calls between countries and it is difficult to match ERA-NET call schedules to national call schedules;
- Different ERA-NETs have different procedures and application forms which is confusing;
- Reaching agreement on IPR issues is difficult, given that no guidelines existed on what issues applicants should consider in the application;
- How ERA-NETs dealt with IPR issues varied between ERA-NETs. For example, in Matera the decisions were made between the funding organisations whereas Bio-Energy and MNT ERA-NETs demanded from the research partners that they produced an agreement, which was a condition to get the funding; and
- Because of different practices of organisation involved it was difficult to decide on funding modalities and what funding instruments to use.

In addition, one interviewee mentioned that because the transport research landscape in Europe was dispersed, ERA-NET Transport had had difficulties in finding its place in the landscape. Table 22 shows how some of these issues affected ERANET participation, according to some participants.

Several good practice examples were prompted from the lessons learnt from ERA-NET participation. Interviewees found that learning about potential legal barriers in different countries had helped to understand how best collaborate. Visits to partner countries were found particularly useful which helped to understand different organisations' procedures and built trust between the partners. It appeared that ERA-NETs which had been built on pre-existing collaboration had been particularly successful, these included ERA-NETs such as Bonus, NORFACE and WoodWisdom Net.

Other good practice examples included:

- In-house discussions between national participants about other ERA-NETs. For example, topics in Matera and MNT ERA-NET were overlapping and in a third call a joint procedure was implemented for calls in these ERA-NETs.
- NORFACE created a new method for allocating funding for common pots that moderated the GDP and population factors that had been previously used to define each country's contribution.

- Within virtual modes, a good process for allocating funding was to use national processes in every country and then to add to the common process i.e. running them in parallel but not integrate them.

- MNT ERA-NET developed a system to inform other participants if a funding decision was positive or negative. In some cases this worked at a trust level and some countries issued official letters. This however was an aspect that the Finnish participant felt needed to be developed further.

- In two of the ERA-NETs, knowledge sharing between funding agencies and researchers helped to define key future research topics.

- Mapping and benchmarking exercises such as a survey of the networking landscape (e.g. ERA-NET Transport), comparative analyses of partner organisations (several ERA-NETs) and a directory of national activities in each country (e.g. CO-REACH) were identified as good practices.

4 ERA-NET benefits

4.1 Direct and indirect benefits to ERA-NET national policy stakeholders and participants[148]

The view from policy makers was that the benefits of ERA-NETs had been indirect rather than direct. From their perspective ERA-NETs have been a means to enable joint working within Europe and a means to incorporate aspects of ERA-NETs into national programmes. As a result, different types of funding organisations found a joint platform and there was greater openness and willingness to work with different organisations. In Finland collaboration between AKA and Tekes intensified. For example, in the Matera ERA-NET AKA funded the fundamental science part of the research and Tekes the applied, which was beneficial for the research beneficiaries in Finland. Furthermore, in some instances, ERA-NETs enabled opening up of bilateral or regional programmes to the wider consortium meaning that ERA-NETs stimulated joint working between regional programmes such as is exemplified by the Bonus ERA-NET.

According to ERA-NET participants, the direct benefits from participation ERA-NETs were primarily new contacts and learning how other funders in Europe operated and what their priorities were. In the future it will be easier to undertake joint activities because key players and their rules, guidelines and processes are known. In addition, knowledge increased about which countries were strong in certain areas. There were also some more concrete benefits such as:

- When a national call and ERA-NET call in Bio-Energy were run at the same time, the ERA-NET call provided a better project. The topic was more demanding and larger compared to the national call.
- When Tekes planned a national programme on functional materials, they considered how international collaboration would be run, and experiences in ERA-NET helped to consider this aspect.
- As a result of the Bonus ERA-NET a new organisation was established to oversee its further development. Bonus is in the process of becoming an article 169 programme and the R&D sector has become more integrated. This is also the first Baltic Sea research programme in Finland in which all Baltic Sea countries have participated in.
- Programmes developed under ERA-NETs: for example, in social sciences it is rare to have an international programme and this has been successful under NORFACE which Finland coordinated.
- Both AKA and Tekes are working with countries they did not collaborate with before at public financier level and accordingly ERA-NETs have strengthened international collaboration.

As Table 6 6 shows, most participants believed that they got out of their participation at least what the expected.

4.2 Direct and indirect benefits to ERA-NET beneficiaries

The research beneficiaries felt that the benefit of the ERA-NETs was that national projects could not have sustained the same type of collaboration. The only alternative would have been FP projects but they could not have been launched with small consortia as bigger projects tended to get funded. Individual people could be invited to national projects but not whole research groups. In a way, ERA-NETs added a new research scheme that filled the gap between national/bilateral projects and large international projects.

As a result of being part of the ERA-NETs the beneficiaries had exchanged ideas, expertise, knowledge and information. For one of the beneficiaries the biggest benefit was that the

[148] See Table 5 and Table 6.

research topic and methods used were cutting edge, and this was also the first international project that he had personally participated in. He felt that research was of good quality, implemented fast and new types of research had been enabled by the funding. According to the beneficiaries, in the future there was an expectation that the results would lead to further research or they would get involved in R&D projects for companies. The ERA-NET funding had encouraged intensive coordination and the work had developed faster because of the clear funding.

5 Impacts on national and international R&D policy and programming

5.1 Impact on national R&D policy[149]

According to policy stakeholders, ERA-NETs have had little if any impacts on national R&D policy focus in Finland. Given that Finland had had an internationalisation strategy in place over a decade ERA-NETs had not changed its focus. However, Finland is involved with a wider a consortium of partners. This collaboration has not changed the balance of which research fields Finland are invested in but decisions are now more focussed on where the value to Finnish researchers and companies is the greatest.

The participant and coordinators interviewers could not point to impacts on national R&D policy, apart from one of the interviewees that commented that the Bonus programme was considered by the Finnish government in moving its Baltic Sea strategy forward. However, the interviewee was unsure of the level of direct policy influence it had had.

5.2 Impact on national R&D programming[150]

According to policy stakeholders ERA-NETs had had no direct impact on national R&D programming for Tekes or AKA. There had been no impact on internal strategies of funding organisations but the participation had prompted them in taking lessons learned on board when developing future strategies around international collaboration under the ERA-NETs. Both AKA and Tekes developed guidelines for participation in ERA-NETs. The purpose was to carefully weigh the advantages of participation in ERA-NETs and be clear of the objectives and expected additionality of participation. The administrative capability to commit resources plays a key role beside science policy assessment in deciding whether to participate.

Project participants were of the view that ERA-NETs had had some level of impact on national R&D programming. Some of the interviewees felt that national programmes had more international calls than before – prior to the ERA-NETs it was less frequent that all projects had an international side to them. Other examples from specific projects included:

- As a result of NORFACE having a programme on migration, this topic became more influential in Finland and as a result AKA will organise a follow-up for Finnish researchers.
- Results from one of the Bio-Energy calls on health effects of small particle emissions have been taken into account in the national programme.
- Matera ERA-NET helped to identify which topics would be most interesting, which has been fed back into national projects.
- Being part of CIRCLE ERA-NET may have influenced to some extent AKA planning to launch an adaptation programme in 2010.
- Previously Finland was unable to participate in transnational calls under ERA-NET Transport as funding was only allocated at national level. Now this has been changed and Finland will take part in transnational calls in this field.

Table 7 shows some of the perceived influences of ERA-NET participation on national programmes.

[149] See Table 7 and Table 18.

[150] See Table 7 and Table 18.

5.3 Opening up of national R&D programming[151]

It is difficult to infer the influence that the ERA-NETs have had on guiding principles in opening up of national R&D programmes. The outcomes however are evident in that Finland is linked to a larger consortium of countries.

Overall, ERA-NETs have increased international activities. Projects funded via ERA-NETs would have been funded bilaterally or multilaterally given that connections exited but ERA-NETs made it easier to fund and launch joint activities. Effectively, funding agencies could have funded same Finns with same plan but not with such a large collaboration.

AKA has used a common pot in ERA-NETs, which however Finland had used previously in collaboration with other Nordic countries. On the other hand, Tekes was not open to common pots but for example funded projects that would not have been funded nationally. In ERA-NETs they funded study type projects (not R&D only), which is not nationally done in Tekes programmes.

5.4 Impact on the structuring of national or international research fields[152]

The interviewees felt that the ERA-NETs had influenced the structuring of the European Research Area. In particular, ERA-NETs influenced joint working in Europe and organisations in different countries and helped Finnish participants realise that they have similar ambitions to other countries. Some of the examples of structuring effect included:

- A Matera call had 170 research groups who applied for funding. Even if they did not get funded, collaboration at European level occurred and networks increased.
- ERA-Chemistry calls were open to all countries in Europe. Participants needed to sign a consortium agreement that enabled them to join the calls. This opened the possibilities to all interested partners in Europe.
- Bio-Energy topics were well integrated into the research field in Europe. The topics selected were such that they supported larger topics under FP.
- Bonus ERA-NET has a European dimension –it also communicated with the research projects that covered the Mediterranean Sea to transfer learning.
- Some of the countries that could not participate in HERA Joint Research Programme because of the use of a common pot are now changing regulations so that they can be involved in the future.

Overall, the ERA-NETs have been able to attract relevant partners but not all countries could participate for different reasons such as no appropriate funding agency existed in that country or they could not use a common pot. On the other hand some countries or regions participated because they wanted to increase their visibility but did not necessarily deliver for the benefit of the ERA-NET consortium.

[151] See Table 10 and Table 11.
[152] See Table 17 and Table 21.

6 European Added Value, relevance and efficiency

6.1 Additionality of the ERA-NET scheme[153]

ERA-NETs have enabled funding agencies among the Member States to get to know each other and each others' procedures better. ERA-NET was the first instrument that enabled funders to engage in such collaboration. As a result, it was easier to find mutual interests and launch activities because of awareness of potential obstacles that could impact the success of international collaboration. This would have been more difficult without the Commission funding which involved strict guidelines from the EC and a clear framework to follow. In addition, it is evident that collaboration with such a large consortium would have been difficult without the ERA-NETs. The additionality with regards to achieving specific outcomes has been less direct. Potentially they could have been achieved with other form of collaboration. A few strong examples however can be found:

- As a result of ERA-NET, the Bonus programme, which was initially separate from national activities in the countries involved, has since got funders to invest in this programme whose strategy is planned for a further seven years.
- Involvement in ERA-NETs led AKA to engage in transnational collaboration separate to ERA-NETs. For example, the British Research Council has lateral treaties with the NORFACE programme and as a result Finnish and British researchers work together. This is expected to be fully realised in the future

Feedback from researchers was that they were able to undertake smaller projects than under the FPs with less bureaucracy. They could apply for funding nationally and still have international collaboration which was valued.

6.2 Economic efficiency and relevance[154]

The view on economic efficiency of the ERA-NETs was rather negative in Finland. ERA-NETs have been unexpectedly resource intensive and they delivered less than expected. In monetary terms it was not clear if benefits outweighed the costs in some of the ERA-NETs. The progress made was slow in many of the ERA-NETs and the experience was viewed more as a learning process rather than as an activity that delivered several benefits to Finland. However, as shown in Table 5, the participation was still been considered worthwhile and there was hope and expectation that greater benefits would be delivered in the future. ERA-NETs have largely been about learning and building a foundation for future collaboration.

[153] See Table 11

[154] See Table 5.

7 Annexes: Stakeholders and materials consulted

This section will feature the outline of stakeholders consulted in given country.

List of stakeholders consulted:

- Two policy stakeholders, Tekes (Finnish Funding Agency for Technology and Innovation)
- Two policy stakeholders, The Academy of Finland (AKA)
- Participant, Bio-Energy, Tekes
- Coordinator, Bonus, Bonus EEIG
- Participant, CIRCLE, The Finnish Environment Institute (SYKE)
- Participant, ERA-Chemistry, AKA
- Participant, CO-REACH, AKA
- Coordinator, Matera, Tekes
- Participant, MNT ERA-NET, Tekes
- Participant, HERA, AKA
- Coordinator, NORFACE, Tekes
- Participant, ERA-NET Transport, Ministry of Transport and Communication
- Research beneficiary, Matera, Technical research Centre of Finland
- Research beneficiary, NORFACE, Church Research Institute, Finland

Other material consulted:

- Academy of Finland (2008) Guidelines for ERA-NETs
- Pulkkinen, R and Pentti, V (2006)[155] Utility of ERA-NET activities in strategic collaboration between national programmes
- The Association for Technology Implementation in Europe (2005) Framing Collaboration Models between National Research and Technological Development Programmes (http://www.taftie.org/Files/PDF/TAFTIE_eBook.pdf)

[155] Original title: "ERA-NET projectitoiminnan hyodynnettävyys kansallisten ohjelmien välisessä strategisessa yhteistyossä". This is a Tekes report in Finnish.

8 Annexes: Participant survey results

The figures below show responses to the participant questionnaire, completed by 28 Finnish participants.

Table 1 - What was your organisation's main rationale for participating in this ERA-NET?

	Finland	EU 15 - small	Overall
Benchmarking of research funding against other countries	6%	2%	**1%**
Creating and supporting transnational projects in a field which requires transnational cooperation	44%	46%	**38%**
Improving own (national) R&D programme/s	16%	4%	**7%**
Learning from funders and sharing of information between funders in other countries	9%	10%	**10%**
Networking and building new relationships with funders from other countries	25%	35%	**35%**
Not Answered	0%	1%	**1%**
Opening up of national programmes in existing or new areas of research	0%	2%	**5%**
Other	0%	0%	**2%**

The most commonly cited rationales for ERA-NET participation were creating and supporting transnational projects in a field which requires transnational cooperation (44%), which is broadly in line with the country grouping average (EU 15 - small) and networking and building new relationships with funders from other countries (25%) which is significantly below the country grouping average (EU 15 - small).

Table 2 - What was the original overall amount of EC funding allocated to your organisation in your contract to participate in this ERA-NET?

	Finland	EU 15 - small	Overall
0 - 9999	3%	4%	**4%**
10000 - 19999	0%	3%	**2%**
20000 - 29999	7%	4%	**3%**
30000 - 39999	3%	1%	**2%**
40000 - 49999	0%	2%	**2%**
50000 - 59999	3%	1%	**2%**
60000 - 69999	0%	2%	**1%**
70000 - 79999	3%	0%	**6%**
80000 +	76%	75%	**71%**
Not Answered	3%	8%	**6%**

The majority of Finnish organisations (76%) were allocated over €80,000 in funding to participate in the ERA-NET, which is broadly in line with the country grouping average (EU 15 - small).

Table 3 - Did the EC funding cover all the time and resources your organisation invested in participating in this ERA-NET?

	Finland	EU 15 - small	Overall
Yes	47%	52%	**49%**
No	41%	40%	**43%**
Don't Know	9%	5%	**4%**
Not Answered	3%	4%	**4%**

Most Finnish participants (47%) reported that EC funding did cover all the time and resources their organisation invested in participating in the ERA-NET, which is slightly below the country grouping average (EU 15 - small).

Table 4 - In which ERA-NET joint activities other than joint calls did you participate?

	Finland			EU 15 - small			Overall		
	Yes	No	Other	Yes	No	Other	Yes	No	Other
Coordination/clustering of ongoing nationally funded research projects	71%	13%	16%	62%	19%	19%	**59%**	**19%**	**23%**
Benchmarking and common schemes for monitoring and evaluation	88%	3%	9%	66%	16%	17%	**67%**	**13%**	**19%**
Multinational evaluation procedures (common evaluation criteria and methods of implementation	78%	13%	9%	60%	17%	23%	**55%**	**25%**	**20%**
Schemes for joint training activities (so-supervised theses or common PhD schemes)	19%	39%	42%	11%	47%	42%	**12%**	**49%**	**39%**
Schemes for personnel exchange	16%	47%	38%	12%	47%	41%	**14%**	**47%**	**39%**
Schemes for mutual opening of facilities or laboratories	3%	47%	50%	20%	35%	45%	**15%**	**44%**	**41%**
Specific cooperation agreements or arrangements	34%	28%	38%	40%	25%	35%	**43%**	**24%**	**33%**
Action plan taking up common strategic issues and preparing for joint activities	56%	6%	38%	71%	14%	15%	**75%**	**11%**	**13%**

The majority of Finnish participants took part in benchmarking and common schemes for monitoring and evaluation (88%), multinational evaluation procedures (78%) and coordination/clustering of ongoing nationally funded research projects (71%). In all cases the percentages for these joint activities are significantly above the country grouping average (EU 15 - small).

Table 5 - Overall would you say that your participation in the FP6 ERA-NET has been worthwhile?

	Finland	EU 15 - small	Overall
Yes	100%	95%	**95%**
No	0%	4%	**4%**
Not Answered	0%	1%	**1%**

All Finnish participants (100%) did find their participation in FP6 ERA-NET worthwhile, which is slightly above the country grouping average (EU 15 - small).

Table 6 - Which of the three following statements best describes your personal experience of this ERA-NET?

	Finland	EU 15 - small	Overall
I got more out of it than I expected	34%	41%	**41%**
I got out of it what I expected	56%	50%	**51%**
I got less out of it than I expected	9%	8%	**6%**
Not Answered	0%	1%	**1%**

The majority of Finnish participants (56%) believed they got out of it what they expected, which is above the country grouping average (EU 15 - small).

Table 7 - To what degree has your participation in this ERA-NET influenced your country's national programme(s)?

	Finland			EU 15 - small			Overall		
	No influence	Influence	Other	No influence	Influence	Other	No influence	Influence	Other
Discontinuation of existing programme(s) in some theme(s)	33%	55%	12%	52%	36%	12%	**53%**	**34%**	**12%**
Reducing duplication between National programmes in your country	50%	28%	22%	46%	40%	15%	**46%**	**37%**	**16%**
Design of programmes with longer time horizon	25%	63%	13%	29%	58%	13%	**42%**	**49%**	**10%**
Design of programmes with shorter time horizon	39%	42%	18%	43%	46%	11%	**51%**	**38%**	**11%**
Bigger programme budgets for the theme	31%	50%	19%	40%	47%	13%	**42%**	**46%**	**12%**
Smaller programme budgets for the theme	63%	9%	28%	66%	11%	24%	**63%**	**13%**	**23%**
New programme assessment/evaluation criteria	34%	50%	16%	48%	42%	10%	**40%**	**50%**	**10%**
New opportunities to enable transnational R&D activities in the theme of the ERA-NET	3%	97%	0%	9%	83%	8%	**8%**	**85%**	**6%**

New eligibility criteria allowing funding of foreign researchers in the area	63%	28%	9%	53%	32%	15%	**43%**	**42%**	**15%**
Existing programme(s) now covering new theme(s)	41%	44%	16%	45%	40%	15%	**48%**	**39%**	**13%**
New programme(s) put in place in response to new theme(s) identified	31%	50%	19%	46%	38%	17%	**51%**	**34%**	**15%**

A distinctive feature of the influence of ERA-NET on Finnish National Programmes is that the impact is slightly below the country grouping average (EU 15 - small). This is demonstrated by the total percentage for "influence" being slightly below the total percentage for "influence" in the country grouping average (EU 15 - small).

Table 8 - To what extent did your organisation have pre-existing relationships with participants in this ERA-NET prior to FP6?

	Finland	EU 15 - small	Overall
Prior relationships	53%	60%	**66%**
No prior relationships	47%	34%	**26%**
No answer	0%	7%	**8%**

The majority of Finnish participants (53%) reported that they had pre-existing relationships with participants in the ERA-NET, which is below the country grouping average (EU 15 - small).

Table 9 - If there were prior relationships which of the following 6 statements best describes how these relationships evolved during your participation in this ERA-NET?

	Finland	EU 15 - small	Overall
Strengthened	47%	55%	**63%**
Weakened	0%	0%	**1%**
No change	3%	4%	**4%**
No answer	50%	42%	**33%**

Most Finnish participants who answered this question believed that the relationship strengthened during the participation in this ERA-NET (47%), which is below the country grouping average (EU 15 - small).

Table 10 - Has your participation in this ERA-NET triggered transnational cooperation outside of the ERA-NET?

	Finland	EU 15 - small	Overall
Yes	16%	28%	**31%**
No	72%	59%	**47%**
Not Answered	3%	6%	**5%**
Not applicable	9%	7%	**16%**

The majority of Finnish participants reported that participation in the ERA-NET did not trigger transnational cooperation outside of the ERA-NET (72%), which is significantly above the country grouping average (EU 15 - small).

Table 11 - Has the ERA-NET experience led to an increase in the amount of your programme budget that has been invested in transnational R&D projects outside of the ERA-NET?

	Finland	EU 15 - small	Overall
Yes	10%	11%	**13%**
No change	68%	64%	**63%**
No answer	23%	25%	**23%**

The majority of Finnish participants reported that the ERA-NET experience lead to no change to the amount of the programme budget that has been invested in transnational R&D projects outside of the ERA-NET (68%), which is slightly above the country grouping average (EU 15 - small).

Table 12 - If yes, roughly what proportion of your programme budget was transnational before your involvement in ERA-NET?

	Finland	EU 15 - small	Overall
0-25%	19%	16%	**15%**
26 to 50%	0%	0%	**0%**
51 to 75%	0%	0%	**0%**
76 to 100%	0%	1%	**1%**
Not answered	81%	83%	**84%**

The majority of Finnish participants who answered this question reported that 0-25% of the budget was transnational before their involvement in the ERA-NET (19%), which is slightly above the country grouping average (EU 15 - small).

Table 13 - If yes, roughly what proportion of your programme budget is transnational now?

	Finland	EU 15 - small	Overall
0-25%	13%	14%	**13%**
26 to 50%	3%	2%	**1%**
51 to 75%	0%	0%	**0%**
76 to 100%	0%	2%	**1%**
Not answered	84%	82%	**84%**

The majority of Finnish participants who answered this question reported that 0-25% of the budget was transnational at the time of the survey (13%), which is broadly in line with the country grouping average (EU 15 - small).

Table 14 - What provisions have been made in your country to coordinate participation in ERA-NETs under FP6? - Single national coordinator for all ERA-NETs

	Finland			EU 15 - small			Overall		
	Yes	No	No answer	Yes	No	No answer	Yes	No	No answer
Single national coordinator for all ERA-NETs	31 %	53 %	16%	17 %	62 %	21%	15 %	66 %	19%
Team of several coordinators at national level	38 %	47 %	16%	21 %	53 %	26%	24 %	51 %	24%
Coordination meetings for all national participants	31 %	38 %	31%	37 %	36 %	27%	37 %	41 %	22%
Organisation-specific coordination meetings	72 %	13 %	16%	59 %	19 %	22%	50 %	31 %	19%

The majority of Finnish participants reported that the provision made to coordinate ERA-NET participation were organisation-specific coordination meetings (72%), which is significantly above the country grouping average (EU 15 - small).

Table 15 - Earlier we asked you to state your ERA-NET's theme. How important was this theme in your country's research programme before your organisation joined this ERA-NET?

	Finland	EU 15 - small	Overall
Very Important	9%	21%	**21%**
Fairly Important	38%	44%	**48%**
Not very important	34%	20%	**16%**
Not at all important	13%	6%	**5%**
Don't Know	3%	3%	**4%**
Not Answered	0%	3%	**5%**
Not Applicable	3%	3%	**2%**

Most Finnish participants reported that the ERA-NET's theme was fairly important in their country's research programme before their organisation joined the ERA-NET (38%), which is below the country grouping average (EU 15 - small).

Table 16 - How important is this theme in your country's research programme now?

	Finland	EU 15 - small	Overall
Very important	13%	25%	**24%**
Fairly important	56%	53%	**56%**
Not very important	28%	14%	**11%**
Not at all important	0%	0%	**1%**
Don't know	0%	3%	**3%**
Not Answered	0%	3%	**4%**
Not applicable	3%	2%	**2%**

The majority of Finnish participants (56%) reported that the ERA-NET's theme was fairly important to their country's research programme at the time of the survey, which is slightly above the country grouping average (EU 15 - small).

Table 17 - If there has been a change in the importance of the theme to what extent do you think this was due to the ERA-NET?

	Finland	EU 15 - small	Overall
To some extent	44%	43%	**29%**
Not at all	13%	10%	**11%**
No answer	44%	47%	**60%**

Most Finnish participants who answered this question reported that the change in the importance of the theme was to some extent due to the ERA-NET (44%), which is broadly in line with the country grouping average (EU 15 - small).

Table 18 - Has your organisation's involvement in this ERA-NET influenced national research policy beyond the theme of this ERA-NET?

	Finland	EU 15 - small	Overall
Influence	53%	62%	**63%**
No influence	38%	19%	**18%**
No answer	9%	19%	**19%**

The majority of Finnish participants (53%) reported that their involvement in the ERA-NET influenced national research policy beyond the theme of the ERA-NET, which is below the country grouping average (EU 15 - small).

Table 19 - Have any of the following external factors helped or hindered the effects of your organisation's participation in this ERA-NET?

	Finland					EU 15 - small					Overall		
	Helped	Hindered	No effect	Not Answered	Not applicable	Helped	Hindered	No effect	Not Answered	Not applicable	Helped	Hindered	No effect
Change in programme management agency	9%	0%	28%	0%	63%	8%	4%	29%	3%	55%	**7%**	**6%**	**36%**
New R&D management structure	3%	0%	34%	0%	63%	16%	4%	25%	6%	49%	**11%**	**7%**	**35%**
For existing programmes, more strategic R&D programming/planning	59%	3%	16%	0%	22%	30%	0%	37%	6%	27%	**29%**	**0%**	**36%**
Externalisation of R&D programmes into agency/agencies	0%	3%	28%	0%	69%	10%	4%	19%	5%	63%	**8%**	**4%**	**33%**
Setting up of new types of R&D programmes	16%	3%	53%	0%	28%	25%	1%	31%	5%	39%	**24%**	**7%**	**33%**
Barcelona 3% targets	0%	3%	72%	3%	22%	19%	0%	43%	8%	30%	**16%**	**0%**	**39%**

The majority of Finnish participants (59%) reported that existing programmes, more strategic R&D programming/planning, helped the effects of their organisations' participation in the ERA-NET, which is significantly above the country grouping average (EU 15 - small).

Table 20 - How satisfied are you with the overall level of transnational cooperation within this ERA-NET?

	Finland	EU 15 - small	Overall
Satisfied	81%	88%	**88%**
Unsatisfied	13%	8%	**7%**
No answer	6%	4%	**4%**

The majority of Finnish participants (81%) were satisfied with the overall level of transnational cooperation within the ERA-NET, which is below the country grouping average (EU 15 - small).

Table 21 - Have you seen evidence of the following effects at national level as a result of this ERA-NETs joint calls joint programming or other joint activities?

	Finland			EU 15 - small			Overall		
	Some evidence	No evidence	No answer	Some evidence	No evidence	No answer	Some evidence	No evidence	No answer
Higher quality projects generated at national level (i.e. higher quality proposals)	28%	53%	19%	44%	40%	17%	**39%**	**44%**	**17%**
Higher quality projects funded at national level (through joint calls/programmes)	38%	38%	25%	44%	31%	25%	**35%**	**42%**	**23%**
New types of research projects generated (i.e. reflected in proposals received)	34%	47%	19%	44%	38%	19%	**38%**	**42%**	**20%**
New types of research projects funded (through joint calls/programmes)	48%	30%	21%	51%	25%	23%	**46%**	**32%**	**22%**
New researchers (with no prior international or European experience) benefiting from joint activities	53%	25%	22%	43%	34%	23%	**40%**	**27%**	**33%**
New researchers (with no prior international or European experience) benefiting from joint calls/programmes	59%	16%	25%	46%	28%	25%	**41%**	**34%**	**25%**
Access to foreign research communities/groups not present in my country	50%	22%	28%	59%	21%	21%	**54%**	**28%**	**18%**

Most Finnish participants reported evidence of new researchers benefiting from joint calls/programmes (59%), which is significantly above the country grouping average (EU 15 - small), and new researchers benefiting from joint activities (53%), which is significantly above the country grouping average (EU 15 - small).

Table 22 - Did any of the following factors either help or hinder your organisation to exploit the full potential of its participation in this ERA-NET?

	Finland					EU 15 - small					Overall			
	Aid to success	No problem	Problem but overcome	Problem still not overcome	No answer	Aid to success	No problem	Problem but overcome	Problem still not overcome	No answer	Aid to success	No problem	Problem but overcome	
National thematic programme priorities	3%	47%	25%	6%	19%	15%	42%	19%	10%	15%	**16%**	**46%**	**13%**	**1**
National cultures or research traditions	13%	38%	9%	22%	19%	13%	43%	16%	12%	17%	**10%**	**46%**	**15%**	**1**
National resources (staff time finances)	13%	23%	19%	35%	10%	13%	17%	34%	23%	13%	**17%**	**35%**	**26%**	**1**
National administrative procedures (e.g. evaluation rules)	9%	6%	44%	31%	9%	5%	26%	38%	18%	13%	**6%**	**25%**	**29%**	**2**
National legal programme conditions (e.g. funding of non-residents IPR)	3%	13%	34%	28%	22%	6%	27%	33%	17%	18%	**4%**	**35%**	**19%**	**2**
EC administrative procedures or legal requirements	3%	38%	19%	6%	34%	2%	36%	26%	14%	23%	**1%**	**34%**	**36%**	**1**
Perceptions of benefits	42%	10%	10%	13%	26%	24%	13%	22%	15%	26%	**15%**	**28%**	**16%**	**1**
Engagement in other transnational initiatives (e.g. COST EUREKA)	19%	44%	0%	0%	38%	12%	45%	3%	4%	36%	**12%**	**46%**	**4%**	

Most Finnish participants reported that national thematic programme priorities (47%) and engagement in other transnational initiatives (44%) were no problem in exploiting the full potential of their organisation's participation in the ERA-NET, while most reported national resources (35%) as a problem that was still not overcome.

9 Annexes: Coordinator survey results[156]

The following tables show information from the coordinator questionnaire.

Table 23 - ERA-NET participation by theme

Theme	Number	Percentage
Transport	2	5.0%
Life Sciences	9	22.5%
Environment	8	20.0%
Fundamental Sciences	1	2.5%
INCO	1	2.5%
Industrial Technologies and SMEs	11	27.5%
Energy	2	5.0%
Social Sciences and Humanities	6	15.0%
Total	**40**	**100%**

Industrial Technologies and SME's and Life Sciences thematic areas attracted most of the Finnish participants.

Table 24 - Joint call participation by theme

Theme	Number	Percentage
Transport	2	4.7%
Life Sciences	8	18.6%
Environment	4	9.3%
Fundamental Sciences	5	11.6%
INCO	1	2.3%
Industrial Technologies and SMEs	16	37.2%
Energy	2	4.7%
Social Sciences and Humanities	5	11.6%
Total	**43**	**100%**

Industrial Technologies and SME's and Life Sciences thematic areas channelled most of the contributions to joint calls.

[156] The Coordinator survey covered all 71 ERA-NETs - although in case of 7 ERA-NETs, the information collected dates back from the 2006 survey. 59 ERA-NETs provided information about the calls they have done over the period (NB: it is likely that not all ERA-NETs have reported call information in an exhaustive way). 49 ERA-NETs provided a breakdown of funding contributions at country level for calls (NB: this is likely to be an underestimate as not all ERA-NET coordinators knew this information)

Table 25- Financial contribution to joint calls by theme

Theme	No contributions	€ virtual	€ common	€ mixed	Total
Transport	2	-	52,000	-	52,000
Life Sciences	8	14,510,380	-	-	14,510,380
Environment	5	350,000	50,000	4,000,000	4,400,000
Fundamental Sciences	6	-	4,000,000	780,000	4,780,000
INCO	1	50,000	-	-	50,000
Industrial Technologies and SMEs	23	13,024,000	62,643	1,129,000	14,215,643
Energy	3	2,585,793	-	-	2,585,793
Social Sciences and Humanities	5	-	1,282,542	-	1,282,542
Total	**53**	**30,520,173**	**5,447,185**	**5,909,000**	**41,876,358**

Most of the funding contributions were made through virtual common pots, Environment thematic area contained the largest real common pot contribution by far.

ERA-NET EVALUATION

Country Report on Portugal

The following document provides the structure for the country report on ERA-NETs in Portugal.

The content of this report has been informed by qualitative interviews and the findings of two surveys. The interviews were undertaken with ERA-NET stakeholders[157] in 15[158] of the 40 countries taking part in the scheme. The number of interviews by country ranged between handfuls in some countries to a couple of dozen in other countries. The same interviewees were chosen to represent thematic areas – the number of interview per theme ranged between 12 and 25 depending on the theme. The surveys were aimed at all ERA-NET coordinators and participants and responses were received by approximately half of these, although responses varied across themes and countries. In addition, and where relevant, the report has been informed by reviews of documents and websites.

Regarding the contents of this report it is important to remember that the findings described within cannot be regarded as a definitive or representative view of all activities within ERA-NETs in this country. Because the interviews were based on a narrow selection of countries and representing a minority of ERA-NETs in each theme, the contents of this report should very much be regarded as a case study that provides a view of the experience. This may also explain why the findings from the qualitative interviews are sometimes at odds with the findings of the surveys which were more inclusive and wide-ranging. Due to the low level of responses received from the Portuguese participants (9 in total), interpretation of the survey findings should be handled with extra care.

Where possible in the report, the source of evidence is indicated either as coming from one of the surveys or the field interviews.

[157] Stakeholders included National Policy Stakeholders, ERA-NET Coordinators and Participants, and ERA-NET beneficiaries.
[158] The countries were: Austria, Croatia, Finland, France, Germany, Italy, Netherlands, Norway, Poland, Portugal, Romania, Russia, Slovenia, Turkey, and UK,

Contents

Executive Summary - Overview

- Portugal participated in 27 ERA-NETs, and is currently participating in 23.
- There was no Portuguese coordination of ERA-NETs - they have only acted as participants.
- The dominant participant from Portugal was The Foundation for Science and Technology (FCT) in Portugal.
- Additional Portuguese ERA-NET participants came from: three Ministries, one agency, one Institute and two regional Governments.
- The FCT took part in 25 joint calls. It committed 7.5 M€ to these joint calls, of which 5.4 M€ had been contracted to research institutions by December 2008. It was involved in all activities regarding joint calls; preparation of procedures, organisation of workshops for theme selection, secretariat, internal evaluation and reporting. The administrative contribution from the FCT included 2 full time staff.
- Portuguese participants from all the ERA-NETs interviewed expect to participate in the second generation of ERA-NETs and / or in ERA-NET Plus.

Q1 – Impact on Research Landscapes

- The perception of among a majority of participants interviewed during the field work was that there had been an impact on Portuguese research landscape.
- ERA-NET participation has had an impact on Portuguese beneficiaries through increased participation of researchers in internationally consortia funded via joint calls, facilitated by the fact that the ERA-NET calls were seen as less onerous (less bureaucracy and administration) and hence making it more likely for researcher to respond to calls.
- ERA-NET participation has stimulated new bilateral agreements to take form between Portuguese and other Member State participants at programme manager level.
- Participation in the ERA-NET scheme enabled training of Portuguese programme managers on international funding schemes.

Q2 – Structuring effect on specific research areas or fields

- With a strong Portuguese tradition for broad R&D programmes across all themes and sectors, the ERA-NET scheme has had limited structuring effect on specific areas. Some structuring effects (increased awareness) were visible in some themes, as the national research landscape had become more thematically focused than national programmes traditionally had allowed. ERA-NET participation has influenced a long tradition of general national programmes to increase thematic priority in national funding decisions, albeit not in a formalised way.

- The effect has been greatest in the areas where Portugal has got a strong research tradition (where ERA-NET participation has also been stronger) e.g. in Marine Sciences, Life sciences and Environment.

- The ERA-NET scheme was considered to fill a gap between national research policies and the transnational research agenda generated at European level.

Q3 - Direct benefits and indirect benefits

Benefits of Portuguese ERA-NET participation have been as follows:

- increased cooperation and trust between funding agencies;
- increased participation of Portuguese beneficiaries in international consortia;
- learning from other participants on how to run large-scale international programmes; and
- joint actions.

Benefits have been greater in the areas of Marine Sciences, Life Sciences, and Environment. No evidence of regional benefits was found.

Q4 – Opening up of national programmes

- Portuguese participants displayed some scepticism towards opening up national R&D programmes to foreign researchers and towards using a common pot. In reality Portuguese funding has generally been dedicated to Portuguese researchers and participation has had no impact on the opening up of national programmes to foreign beneficiaries outside of Portugal.

- There is a clear political emphasis on Portuguese participation leading to the national research community. There is less emphasis on participating in the scheme to increase the impact on ERA, although internationalisation of researchers was recognised as a step towards ERA.

Q5 – Best practice

In terms of lessons learned for the overall scheme, the following issues were raised by some of the participant representatives:

- The large number of thematic ERA-NETs may be counterproductive as it becomes increasingly difficult to coordinate overlapping topics between the NETs. Suggestions for cross-NET coordination were made by Portuguese participants (in environment). The BIODIVERSA participant (also representing CIRCLE) talked about workshops organised with beneficiaries from more than one ERA-NET for similar projects.
- Emphasis on consensus building to promote the necessary conditions for common work. In practical terms, this needs dedicated funding for networking and coordination. This was emphasised by both participants from both Environment and Life Sciences.
- Regional organisation of calls within the ERA-NET (applied in CIRCLE) has allowed for appropriate flexibility with diverse national interests.

1. Overview of participation

1.1 Extent of involvement in the ERA-NET scheme[159]

Portugal participated in 29 ERA-NETs, and is currently participating in 23. Portugal did not coordinate any ERA-NETs. Portuguese ERA-NET participation is shown in Table 23.

The dominant participant from Portugal was The Foundation for Science and Technology in Portugal. Other Portuguese ERA-NET participants came from:

- Ministry of Agriculture, Fisheries and Rural Development (MARD);
- Ministry of Health (MS);
- Innovation agency (ADI);
- National Institute of Engineering, Technology and Innovation (INETI);
- Ministry of Interior / Higher Police Institute[160];
- National Institute for Biological Resources (INRB) (MARD); and
- Regional governments of Açores and Madeira.

The FCT took part in 25 joint calls. It initially committed 7.5 M€ to these joint calls of which 5.4 M€ had been contracted to research institutions by December 2008. FCT was involved in all activities regarding joint calls; preparation of procedures, organisation of workshops for theme selection, secretariat, internal evaluation and reporting. The administrative contribution for supporting participation by The FCT amounted to 2 full time staff.

The areas that the Portuguese participation covered in terms of themes were numerous, including Social Sciences and Humanities, Fundamental Sciences, Energy, Environment, Life Sciences and Transport.

Portuguese participants were mainly interviewed face to face representing 8 ERA-NETs (PathoGenoMics, BioDiversa, CIRCLE, ASPERA, EU-SEC, FENCO-ERA, AirTN, EULANEST). This included the following themes:

- Life sciences: PathoGenoMics
- Environment: CIRCLE, BioDiversa
- Energy: FENCO-ERA
- Fundamental Sciences: ASPERA
- Social Sciences and Humanities: EU-SEC
- Transport: AirTN
- INCO: EULANEST

The degree of involvement of Portuguese participants in the different ERA-NETs varied from strong involvement (e.g. PathoGenoMics, BIODIVERSA, CIRCLE) to more peripheral participation (e.g. ASPERA, EU-SEC).

[159] See Table 23.

[160] The represented participant had moved positions from the Ministry of Interior to the Higher Police Institute

1.2 Landscape and legal entities participating in the scheme [161]

The landscape of legal entities in Portugal has changed throughout ERA-NET participation. The Ministry of Science, Technology and Higher Education (MCTES) is in charge of publicly funded R&D in Portugal, as was the case during ERA-NET participation. Three departments operated under the Ministry: the General Directorate for Higher Education (DGES), the Office for International Relations of Science and Education (GRICES) and the National Foundation for Science and Technology (FCT). In the beginning ERA-NET participation was through representation of the FCT by the research community. In 2005-2006, a restructuring took place that assigned the close to full role of ERA-NET participation to the FCT, matching the role of the FCT as the key public funding agency of R&D. At the point of the evaluation, the majority of ERA-NETs were coordinated by the FCT.

The government outlined the main elements of its new 'Operational Programme Science & Innovation 2010' (POCI) in January 2005. It was the main policy instrument for stimulating development with a budget of approximately €400m, with EU funding making up 65%. During FP6, the FCT funded scientific programmes under POCI (formerly POCTI) launched in 2005, and with an annual budget of approximately €200m. The Innovation Agency (ADI) also operates under the MCTES and has funded projects and programmes relating to innovation, including applied/industrial research and SME support.

The FCT has undergone several changes in the recent years, which influenced its role in the ERA-NETs. Around 10 years ago, the FCT was reorganised as part of the public administration taking over management of national R&D programmes. Since 2005-2006, the FCT has been the key Portuguese participant in the ERA-NET scheme as the main public funding agency for the Ministry of Science, Technology and Higher Education (MCTES).

Independent of the FP6, there has been little private R&D funding in Portugal during the evaluation period (2002 – 2006), although the Innovation agency under the Ministry of Economy administered public-private partnerships for applied industrial research. There were two distinct groups of R&D programmes in Portugal during the evaluation period (and still are): (1) those managed by FCT, mainly addressed to basic and applied research; and (2) those focussed on stimulating R&D by companies, as well as the creation of new technology-intensive firms and technology, training and quality infrastructures. Operational R&D programmes have traditionally been assigned to one ministry, with no "central planning" of Portuguese R&D policies. The Ministry for Science, Technology and Higher Education (MCTES) was in charge of research policy. The MCTES was responsible for designing and implementing research policy, for funding academic institutions as well as for the development of international research co-operation and for producing R&D statistics.

[161] See Table 19

2. Strategic national context underpinning the ERA-NET participation

2.1 Strategic planning and role of ERA-NETs in the country[162]

Prior to joining the scheme, there was limited strategic planning associated with Portuguese participation in the ERA-NET scheme. Participation was linked by the interviewees to pressure from the scientific community for the FCT to participate in the scheme, to which the FCT responded on a case by case basis. The FCT became involved by solicitation of the research community, with researchers representing the FCT in networks funded on the same competitive basis as national research. As participation matured the FCT took over representative participation from the scientific community. Participants agreed that strategies for participation were linked to an overall objective of mobilising the Portuguese research community. Table 19 shows the perceived effect of the changing national context on ERA-NET participation.

When looking at Portuguese ERA-NET participation, it is important to note that national programmes had limited thematic focus both prior to and during the scheme as there has been and still is a strong tradition for a horizontal approach for all relevant academic areas from the natural sciences and engineering to the social sciences and humanities. Funding has been allocated on a competitive basis mainly through a big call for projects in all scientific fields on a bi-annual basis, without particular thematic priorities. There has been, and still is, a strong tradition for large programmes including all disciplines with international peer review, and some small thematic programmes linking with large European infrastructures or sectors / ministries for public issues with interest for policies.

The key criterion for Portuguese participation was to get involved in areas where Portugal had particular focus, such as in the Marine Sciences, Life Sciences and Environment.

2.2 Motivations for joining ERA-NET and set up[163]

The scheme provided an opportunity for cooperation with other funding agencies in a more regular fashion than other mechanisms for cooperation. One of the attractions to the scheme was the possibility to fund transnational projects in a bottom-up process, recognising the need to 'fill a gap' between national and large transnational R&D programmes such as the FPs. Hence, the ERA-NET scheme was considered to fill a gap between national research policies and the transnational research agenda generated at European level.

Moreover, since the late 1960s, there has been a strong emphasis on the training of young scientists in Portugal. This has led to a critical need for the domestic research system to find resources (financial, political and through stakeholder involvement) to absorb the growing number of new doctorates. From a strategic perspective, Portuguese participation in the scheme was motivated by a recognised need for capacity building of the Portuguese scientific community and to cater for the growing group of national researchers struggling to find a scientific future nationally. The ERA-NET scheme was seen as a means to reach out to younger scientists than before, particularly addressing one of the key challenges in the Portuguese scientific landscape, i.e. absorption of young researchers.

[162] See Table 14 and Table 19

[163] See Table 1.

The internationalisation of the Portuguese scientific community by enlarging and deepening Portuguese participation in European level programmes as well as international agreements has been a focus of successive governments in Portugal. A major contribution to this was the signing of international agreements with three high-profile American universities. The ERA-NET scheme provided an appreciated opportunity to put government policy into place in a more flexible way than other European level schemes, with the scientific community putting pressure on public agencies according to their needs. If the FCT was approached by researchers, then evaluation was undertaken to assess the national capacity of the scientific community, with the objective of internationalising the research teams.

The participant survey provides another perspective on key motivations for joining the ERA-NET scheme, as shown in Table 1. However, results in the table should be interpreted with caution, due to the low response rate in the survey.

3. ERA-NET processes and positioning

3.1 Inputs into the ERA-NET scheme[164]

Portuguese inputs into the scheme have been underpinned by strong national interests. Up front Portuguese participants generally committed to participating in joint activities, calls and programming but with the express objective to secure Portuguese returns. Portuguese participation has thus been characterised by a preference for the virtual common pot model to avoid funding more developed research systems. Because one of the key drivers for Portuguese participation was to stem 'national brain drain', funding was first and foremost aimed at capacity building and mobilisation of the Portuguese scientific community. Within this context, the ERA-NET scheme was recognised by national policy stakeholders as more flexible than other schemes to follow national priorities in allocating funding. Moreover it allowed Portuguese scientists to be assessed on par with other international researchers, through international evaluations of proposals, which provided Portuguese funders with the confidence that nationally funded research was internationally competitive.

Table 25 shows in more detail Portugal's financial contribution to ERA-NET joint calls. Please note that the coordinator survey provides a different perspective to inputs provided into the scheme. The discrepancy is most likely due to the funding of young researchers within the field of fundamental sciences (EURYI).

On a practical level, ERA-NET participation was administered by five people within the FCT including an overall coordinator. The ERA-NETs FCT participated in were divided into clusters for which different staff bore responsibility. These groups largely followed the FP6 thematic areas, such as the marine and environmental sciences or life sciences, although some groups consisted of more of a conglomerate of "smaller" thematic areas. The FCT committed additional administrative and staff costs towards participation beyond what was covered by the EC funding. The cost of two of the staff was wholly self-funded at the point of the evaluation. This developed from the increased responsibilities of the FCT since 2005, indicating a growing commitment to participation in the scheme. Where specific scientific input was required at ERA-NET workshops (such as for developing joint programming), the FCT brought in scientific experts (paid for by national budgets).

3.2 Participation in joint activities, calls or programming[165]

The extent of involvement has varied quite significantly, from small roles in smaller ERA-NETs (ASPERA, EU-SEC) to large calls (BIODIVERSA, CIRCLE) where Portugal has had strong interests.

Joint calls were envisioned from the start in the majority of the interviewed ERA-NETs. If joint calls were not envisioned, this was due to the purpose of the ERA-NET in scoping the potential for launching common R&D calls. As an example, ASPERA had not envisaged joint calls. The objective of this ERA-NET was to build the capability to launch common R&D calls and to map out a common strategy. Joint calls are however envisioned for ASPERA2. This seems to suggest a natural progression through the four stages envisaged by the ERA-NET scheme. The extent of participation in joint calls is shown in Table 24 and in other activities in table 4.

With regards to the releasing of funding for joint calls, Portuguese participants emphasised the effort dedicated to negotiating funding allocation within the ERA-NETs. The process for

[164] See Table 2, Table 3, Table 14 and Table 25.

[165] See Tables 24 and 25

this was similar in all ERA-NETs in which Portugal was a partner. The usual first step would be to discuss between all agencies within the ERA-NET whether to open a call. This would then be followed by a national evaluation to assess the utility and value for Portugal. This would then lead to a tentative but flexible pre-funding commitment. Examples were given were the FCT had funded more than the original commitment (PathoGenoMics), or where flexibility in obtaining funding was emphasised (BioDiversa, CIRCLE).

From the Portuguese beneficiary perspective, the flexibility of the scheme was emphasised. The ERA-NET scheme was complimented for reducing bureaucracy compared to FP, and the approachability of funding representatives. The Portuguese beneficiaries felt closer to the decision-making process, thus stimulating the research community to respond to calls.

3.3 Lessons learnt and best practice[166]

There were several lessons learned through Portuguese participation. One main lesson regarded the national value of internationally competitive Portuguese research. This opinion was shared between national policy stakeholders, participant representatives, and beneficiaries, meaning that Portugal generally maximised the output of their participation across the different ERA-NETs (with some exceptions, such as ASPERA and EU-SEC). Neither of the exceptions were fully managed by the FCT (there were no funding commitments in ASPERA and Portugal was represented by a research beneficiary, the participant in EU-SEC was not the FCT but the Higher Police Academy / Ministry of Interior).

The participant representatives also emphasised the value of having learnt more about the procedures for undertaking calls and evaluations and learning about how to administer big programmes. The learning has not necessarily changed the design of national programmes, but national policy stakeholders emphasised how it has aligned procedures such as evaluation and communication with European level procedures.

One of the policy stakeholders emphasised how the most valuable lessons learned has come from the training of human resources, i.e. future managers of national programmes. Through ERA-NET participation, managers have been trained to think 'European' and network with the larger community. Participants emphasised how ERA-NET participation has also influenced a long tradition of general national programmes to increase thematic priority in national funding decisions, albeit not in a formalised way. As a result of the experience so far, participant representatives is now looking to the FCT board to become more strategic and taking a step forward (away from the case by case decisions on ERA-NET participation) to a more strategic thematic prioritisation.

In terms of lessons learned for the overall scheme, the following issues were raised by some of the participant representatives:

- The large number of ERA-NETs may be counterproductive as it becomes increasingly difficult to coordinate overlapping topics between the NETs. Suggestions for cross-NET coordination were made by Portuguese participants (in environment). The BIODIVERSA participant (also representing CIRCLE) talked about workshops organised with beneficiaries from more than one ERA-NET for similar projects.
- Emphasis on consensus building to promote the necessary conditions for common work. In practical terms, this needs dedicated funding for networking and

[166] See Tables 19, 20 and 22

coordination. This was emphasised by both participants from both Environment and Life Sciences.

- Regional organisation of calls within the ERA-NET (applied in CIRCLE) has allowed for appropriate flexibility with diverse national interests.

According to a majority of Portuguese participants, the most recurrent success factor of the scheme has been its flexibility and light administration. There was a shared opinion that this had stimulated dialogue and articulation between agencies, and deepened relations between agencies, and encouraged new bilateral / multilateral agreements beyond the scheme. An example given was an Iberian collaboration on a nano-technology lab.

The FCT is currently undertaking an assessment of the overall ERA-NET participation to decide, on a case by case basis, which ones to take forward in the next generation of ERA-NETs.

4. ERA-NET benefits

4.1 Direct and indirect benefits to ERA-NET national policy stakeholders and participants[167]

All interviewees agreed that ERA-NET participation had had limited, if any, impact on the way national R&D programming is run in Portugal. However, national policy stakeholders emphasised that important benefits had been achieved in terms of training future national programme managers, and thus expecting impact on national R&D programming in the future – although participant representatives were generally more sceptical of such impact. Table 5 and Table 6 show that the participants generally found their ERA-NET participation worthwhile and got out of it at least what they expected, emphasising that motivations for joining were not related to potential impact on the way national R&D programming is run in Portugal.

Moreover, the establishment and stimulation of relationships between funders was mentioned as an important benefit that had come from ERA-NET participation, which had made it possible for the FCT to familiarise themselves with most European funding systems, and established relationships with other European funding managers. In more practical terms, Portugal benefited from shared knowledge and information between participants, particularly in how to manage large-scale European programmes.

Another benefit (rated both as direct and indirect) mentioned by national policy stakeholders was the internationalisation of the Portuguese research community i.e. the beneficiaries. By participating in the ERA-NETs and encouraging national beneficiaries to respond to joint calls, ERA-NET participation led to increased awareness among the Portuguese research community of the international competitiveness and quality of their research. ERA-NET participation also stimulated European integration of particular research communities that had traditionally been more reluctant to internationalise, such as the social sciences. Thus, an important benefit from participation has been the internationalisation of the Portuguese research community, facilitated by the fact that the ERA-NET calls were seen as less onerous (less bureaucracy and administration) and hence making it more likely for researcher to respond to calls.

One of the participants talked about how the ERA-NET scheme had provided the research community with an opportunity to change R&D objectives through a bottom-up approach. This was explained by how the FCT became (and still become) involved by solicitation of the scientific community, i.e. beneficiaries.

One of the participants talked of direct benefits of the ERA-NET in terms of providing a connection between the funding agency and the research community. This particular person was referring to the "old" model of Portuguese participation in the scheme, where participation was represented by the research community. However, scientific expertise is still consulted as part of the process where deemed relevant, thus providing a coordination of the needs of the scientific community with Portuguese participation at European level. The value for the scientific community in terms of learning management procedures was emphasised, as was networking having generated staff exchange.

Beneficiaries talked of direct benefits particularly in terms of the exchange of knowledge and learning from collaboration and training. This was recognised as having large research

[167] See Tables 5 and 6

benefits more long-term as shared knowledge could (and most likely will) lead to unique research results. For one of the ERA-NETs, the call specified a requirement to involve a non-European country. As a result, the ERA-NET scheme has provided research beneficiaries with access to third country research communities.

Important indirect benefits mentioned included:

- spill-over effect of networking in encouraging bilateral and multi-lateral relationship outside the ERA-NETs;
- increased visibility of Portuguese research institutes and communities without traditions for cooperation;
- increased visibility of domains nationally and internationally;
- awareness raising in aligning topic and research agendas across Europe; and
- increased national commitment to funding in response to pressure from the scientific community.

5. Impacts on national and international R&D policy and programming

5.1 Impact on national R&D policy[168]

The scheme has had limited impact on national R&D policy. If anything, the scheme has resulted in an increased awareness of transnational cooperation at policy level, but no commitment has been made or changes occurred in national R&D policy as a result of ERA-NET participation. The majority Portuguese participants who answered this question in the survey reported that the change in importance of theme was to some extent due to the ERA-NET (65%), which is significantly above the country grouping average (EU 15 - small)[169]. This emphasises that where impact has been achieved, this can to some degree be linked to the ERA-NET participation. Table 18 shows the perceived influence of the participation in the scheme on national R&D policy.

Changes that occurred have been driven at a higher level than the ERA-NET. As an example, the balance between national and international funded research has changed during ERA-NET participation, but this was considered as a result of the overall emphasis on internationalisation of the Portuguese research community rather than a direct impact from ERA-NET participation. This change is in line with the Barcelona target of 3% of GDP allocated to research funding.

The scheme has had limited impact on national R&D policy. If anything, the scheme has resulted in an increased awareness on the policy arena, but no commitment has been made or changes occurred in national R&D policy as a result of ERA-NET participation.

5.2 Impact on national R&D programming[170]

The impact that the scheme has had on the way national R&D programming is funded and structured in Portugal has been limited. One of the participant representatives emphasised this by talking about disconnectedness between ERA-NET participation and the running of national R&D programming. Participant representatives emphasised the value of the thematic focus of the ERA-NETs, but shared an opinion that this has had limited impact on national R&D programming to date, beyond an increased awareness.
Table 7 7 provides an overview of the perceived influence of ERA-NET participation on Portuguese national programmes.

However, funding has been shifted into ERA-NETs. Examples were given of ERA-NETs where more funding has been allocated than the pre-funding commitment indicated (PathoGenoMics) and where the FCT was complimented for its flexibility in allocating funding to the result of specific calls (BioDiversa, CIRCLE).

From an international perspective, Portugal has participated in calls when an appropriate national need / capability has been identified, thus primarily serving national interests. The balance between national and international funding has shifted, although this has not necessarily been directly attributable to the ERA-NET scheme.

[168] See Table 7 and Table 18
[169] See Table 17

[170] See Table 7 and Table 18
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5.3 Opening up on national R&D programming[171]

One of the key drivers for Portuguese participation was the mobilisation of its national research communities. There is scepticism towards the common pot model. The common pot was viewed as too risky and unlikely to match Portuguese national interests. Participant representatives were more open to the common pot model than programme owners. However, the virtual common pot was generally the preferred option for all the stakeholders consulted.

The coordinator survey results showed that there has been at least three ERA-NET[172] in which Portugal participated that had a common pot (NORFACE), where this was also a requirement for joining. Portugal invested €1,080,000 in two joint calls in this ERA-NET. The FCT also joined a pilot common pot on the SAFEFOODERA, involving a €30,000 investment.

From a regulatory perspective, certain changes have been made recently allowing post-doc positions to non-residents. This is however not seen as attributable to the ERA-NET scheme in particular. The perceived effect of ERA-NET on transnational cooperation is shown in Table 10.

5.4 Impact on the structuring of national or international research fields[173]

Generally, the interviewees agreed that ERA-NET participation had increased the international competitiveness of Portuguese research communities, particularly as scientists are more likely to work with international consortia and as a consequence are considered likely to have increased their scientific excellence. Indirectly, the ERA-NET scheme was hence seen to have led to the funding of research that would not otherwise be funded nationally. The internationalisation of research consortia was a key motivation for the researchers to apply for ERA-NET funding for individual projects. The perceived effects of the ERA-NET scheme on Portuguese research are outlined in Table 21.

Thematically, impact varied according to the different ERA-NETs. Structuring effects were visible in some themes, as the national research landscape had become more thematically focused than national programmes traditionally had allowed (by increased awareness). Thematic impact corresponded with the themes were participation had been the strongest, e.g. Marine Sciences, Life Sciences and Environment. Programme owners emphasised how the ERA-NET scheme had contributed to increased international collaboration where the tradition for this had been weak, such as in the social sciences. This was a general comment made by a national policy stakeholder, and could however not be fully tested through the interviews conducted.

[171] See Tables 10 and 11

[172] See Table 25

[173] See Tables 17 and 21

6. European Added Value, relevance and efficiency

6.1 Additionality of the ERA-NET scheme[174]

There are indications of additionality of the ERA-NET concept in Portugal. Participation has spurred cooperation with a number of countries, and familiarity with how to cooperate across borders will generate impact in years to come.

The ERA-NET has complemented other transnational cooperation schemes, with the following impacts emphasised by national policy stakeholders and participant representatives in Portugal:

- increased cooperation and trust between funding agencies;
- increased participation of Portuguese researchers in international research consortia;
- learning from other participants on how to run large-scale international programmes; and
- joint actions.

From a beneficiary perspective, the additionality appears less obvious. One of the beneficiaries emphasised how some Work Packages could have been funded nationally, while another referred to an existing project funded nationally on the same topic. It is still too early to assess whether the Portuguese research that has been funded via joint calls is better or different from Portuguese research being funded through national programmes or via the FPs.

6.2 Economic efficiency and relevance[175]

Responses to questions about the economic efficiency of the ERA-NET scheme were overall positive. With the exception of one participant representative (where no Portuguese funding had been applied to joint calls to date), all interviewees agreed that benefits and impacts from participation had outweighed the costs of involvement. This is shown in Table 5.

From a beneficiary perspective, the approachability and reduced bureaucracy and administrative burden was emphasised as particularly successful for the ERA-NET scheme.

7. Annexes: Stakeholders and materials consulted

Stakeholders consulted:

Three national policy stakeholders were consulted, all in the capacity of representing the FCT. One of the interviewees have moved jobs recently, but provided input in the capacity of her former role within the FCT, including as head of the department for European and bilateral research and as vice president / board representative for international relations.

Seven ERA-NET participant representatives were consulted, ranging from FCT cluster managers (clusters of ERA-NETs) and the overall coordinator for ERA-NET participation, to representatives from the research community managing Portuguese participation on behalf

[174] See Table 11

[175] See Table 5

of the FCT (CIRCLE, ASPERA). In addition, two research beneficiaries were consulted (PathoGenoMics and CIRCLE).

In addition to the FCT, only one other participant organisation was selected as part of the sample of interviewees (Higher Police Institute as participant in EU-SEC), thus information on such participation is limited in this report. The coordinator of FCT ERA-NET participation emphasised that these participants had been recruited for their technical expertise, and that none of them were in charge of national programming (with the exception of ADI).

Materials consulted:

Manuel Mira Godinho: ERAWATCH Research Inventory Report For: PORTUGAL (2008)

IMPLORE: National Programme Landscape in Portugal

Simoes et al.: Monitoring and analysis of policies and public financing instruments conducive to higher levels of R&D investments: The "Policy Mix" project - Country Review: Portugal (2007)

http://alfa.fct.mctes.pt/ (The Fundação para a Ciência e a Tecnologia)

http://cordis.europa.eu/coordination/projects.htm

8. Annexes: Participant survey results

The figures below show responses to the participant questionnaire, completed by 9 Portuguese participants.

Table 26 - What was your organisation's main rationale for participating in this ERA-NET?

	Portugal	EU 15 - small	Overall
Benchmarking of research funding against other countries	0%	2%	**1%**
Creating and supporting transnational projects in a field which requires transnational cooperation	13%	46%	**38%**
Improving own (national) R&D programme/s	0%	4%	**7%**
Learning from funders and sharing of information between funders in other countries	13%	10%	**10%**
Networking and building new relationships with funders from other countries	69%	35%	**35%**
Not Answered	0%	1%	**1%**
Opening up of national programmes in existing or new areas of research	6%	2%	**5%**
Other	0%	0%	**2%**

The most commonly cited rationale for ERA-NET participation was networking and building new relationships with funders from other countries (69%), which is significantly above the country grouping average (EU 15 - small).

Table2 - What was the original overall amount of EC funding allocated to your organisation in your contract to participate in this ERA-NET?

	Portugal	EU 15 - small	Overall
0 - 9999	0%	4%	**4%**
10000 - 19999	0%	3%	**2%**
20000 - 29999	0%	4%	**3%**
30000 - 39999	0%	1%	**2%**
40000 - 49999	0%	2%	**2%**
50000 - 59999	0%	1%	**2%**
60000 - 69999	0%	2%	**1%**
70000 - 79999	0%	0%	**6%**
80000 +	100%	75%	**71%**
Not Answered	0%	8%	**6%**

According to the participant survey, all Portuguese organisations (100%) were allocated over €80,000 in funding to participate in the ERA-NET, which is significantly above the country grouping average (EU 15 - small). The results were qualified by ERA-NET coordinator, and corrected with identifying six ERA-NETs below €80 000:

- One ERA-NET was funded €30000 – 39999
- Two ERA-NETs were funded €40000 – 49999
- Three ERA-NETs were funded €50000 - 59999

Table 27 - Did the EC funding cover all the time and resources your organisation invested in participating in this ERA-NET?

	Portugal	EU 15 - small	Overall
Yes	35%	52%	**49%**
No	65%	40%	**43%**
Don't Know	0%	5%	**4%**
Not Answered	0%	4%	**4%**

The majority of Portuguese participants (65%) reported that EC funding did not cover all the time and resources their organisation invested in participating in the ERA-NET, which is significantly above the country grouping average (EU 15 - small).

Table 4 - In which ERA-NET joint activities other than joint calls did you participate?

	Portugal			EU 15 - small			Overall		
	Yes	No	Other	Yes	No	Other	Yes	No	Other
Coordination/clustering of ongoing nationally funded research projects	35%	24%	41%	62%	19%	19%	**59%**	**19%**	**23%**
Benchmarking and common schemes for monitoring and evaluation	24%	47%	29%	66%	16%	17%	**67%**	**13%**	**19%**
Multinational evaluation procedures (common evaluation criteria and methods of implementation	12%	59%	29%	60%	17%	23%	**55%**	**25%**	**20%**
Schemes for joint training activities (so-supervised theses or common PhD schemes)	12%	47%	41%	11%	47%	42%	**12%**	**49%**	**39%**
Schemes for personnel exchange	0%	59%	41%	12%	47%	41%	**14%**	**47%**	**39%**
Schemes for mutual opening of facilities or laboratories	0%	59%	41%	20%	35%	45%	**15%**	**44%**	**41%**
Specific cooperation agreements or arrangements	35%	24%	41%	40%	25%	35%	**43%**	**24%**	**33%**
Action plan taking up common strategic issues and preparing for joint activities	63%	38%	0%	71%	14%	15%	**75%**	**11%**	**13%**

These numbers reflect the experience of ERA-NET participants during the FP6 period.

The majority of Portuguese participants took part in an action plan taking up common strategic issues and preparing for joint activities (63%), specific cooperation agreements or arrangements (35%) and coordination/clustering of ongoing nationally funded research projects (35%). In all cases the percentages for these joint activities are to some extent below the country grouping average (EU 15 - small).

Table 5 - Overall would you say that your participation in the FP6 ERA-NET has been worthwhile?

	Portugal	EU 15 - small	Overall
Yes	88%	95%	**95%**
No	12%	4%	**4%**
Not Answered	0%	1%	**1%**

These numbers reflect the experience of ERA-NET participants during the FP6 period.

Most Portuguese participants (88%) did find their participation in FP6 ERA-NET worthwhile, which is below the country grouping average (EU 15 - small).

Table 6 - Which of the three following statements best describes your personal experience of this ERA-NET?

	Portugal	EU 15 - small	Overall
I got more out of it than I expected	41%	41%	**41%**
I got out of it what I expected	59%	50%	**51%**
I got less out of it than I expected	0%	8%	**6%**
Not Answered	0%	1%	**1%**

The majority of Portuguese participants (59%) believed they got out of it what they expected, which is above the country grouping average (EU 15 - small).

Table 7 - To what degree has your participation in this ERA-NET influenced your country's national programme(s)?

	Portugal			EU 15 - small			Overall		
	No influence	Influence	Other	No influence	Influence	Other	No influence	Influence	Other
Discontinuation of existing programme(s) in some theme(s)	41%	35%	24%	52%	36%	12%	**53%**	**34%**	**12%**
Reducing duplication between National programmes in your country	25%	63%	13%	46%	40%	15%	**46%**	**37%**	**16%**
Design of programmes with longer time horizon	25%	63%	13%	29%	58%	13%	**42%**	**49%**	**10%**
Design of programmes with shorter time horizon	35%	41%	24%	43%	46%	11%	**51%**	**38%**	**11%**
Bigger programme budgets for the theme	24%	53%	24%	40%	47%	13%	**42%**	**46%**	**12%**
Smaller programme budgets for the theme	35%	12%	53%	66%	11%	24%	**63%**	**13%**	**23%**
New programme assessment/evaluation criteria	12%	65%	24%	48%	42%	10%	**40%**	**50%**	**10%**
New opportunities to enable transnational R&D activities in the theme of the ERA-NET	13%	75%	13%	9%	83%	8%	**8%**	**85%**	**6%**
New eligibility criteria allowing funding of foreign researchers in the area	65%	24%	12%	53%	32%	15%	**43%**	**42%**	**15%**
Existing programme(s) now covering new theme(s)	25%	31%	44%	45%	40%	15%	**48%**	**39%**	**13%**
New programme(s) put in place in response to new theme(s) identified	24%	24%	53%	46%	38%	17%	**51%**	**34%**	**15%**

A distinctive feature of the influence of ERA-NET on Portuguese National Programmes is that the impact is broadly in line with the country grouping average (EU 15 - small). This is

demonstrated by the total percentage for "influence" being broadly in line with the total percentage for "influence" in the country grouping average (EU 15 - small).

Table 8 - To what extent did your organisation have pre-existing relationships with participants in this ERA-NET prior to FP6?

	Portugal	EU 15 - small	Overall
Prior relationships	25%	60%	**66%**
No prior relationships	69%	34%	**26%**
No answer	6%	7%	**8%**

The majority of Portuguese participants (69%) reported that they did not have pre-existing relationships with participants in the ERA-NET, which is significantly above the country grouping average (EU 15 - small).

Table 9 - If there were prior relationships which of the following 6 statements best describes how these relationships evolved during your participation in this ERA-NET?

	Portugal	EU 15 - small	Overall
Strengthened	24%	55%	**63%**
Weakened	0%	0%	**1%**
No change	0%	4%	**4%**
No answer	76%	42%	**33%**

Most Portuguese participants who answered this question believed that the relationship strengthened during the participation in this ERA-NET (24%), which is significantly below the country grouping average (EU 15 - small).

Table 10 - Has your participation in this ERA-NET triggered transnational cooperation outside of the ERA-NET?

	Portugal	EU 15 - small	Overall
Yes	56%	28%	**31%**
No	38%	59%	**47%**
Not Answered	6%	6%	**5%**
Not applicable	0%	7%	**16%**

The majority of Portuguese participants reported that participation in the ERA-NET did trigger transnational cooperation outside of the ERA-NET (56%), which is significantly above the country grouping average (EU 15 - small).

Table 11 - Has the ERA-NET experience led to an increase in the amount of your programme budget that has been invested in transnational R&D projects outside of the ERA-NET?

	Portugal	EU 15 - small	Overall
Yes	0%	11%	**13%**
No change	94%	64%	**63%**
No answer	6%	25%	**23%**

The majority of Portuguese participants reported that the ERA-NET experience lead to no change to the amount of the programme budget that has been invested in transnational R&D projects outside of the ERA-NET (94%), which is significantly above the country grouping average (EU 15 - small).

Table 12 - If yes, roughly what proportion of your programme budget was transnational before your involvement in ERA-NET?[176]

	Portugal	EU 15 - small	Overall
0-25%	12%	16%	**15%**
26 to 50%	0%	0%	**0%**
51 to 75%	0%	0%	**0%**
76 to 100%	0%	1%	**1%**
Not answered	88%	83%	**84%**

The majority of Portuguese participants who answered this question reported that 0-25% of the budget was transnational before their involvement in the ERA-NET (12%), which is slightly below the country grouping average (EU 15 - small).

Table 13 - If yes, roughly what proportion of your programme budget is transnational now?

	Portugal	EU 15 - small	Overall
0-25%	25%	14%	**13%**
26 to 50%	0%	2%	**1%**
51 to 75%	0%	0%	**0%**
76 to 100%	0%	2%	**1%**
Not answered	75%	82%	**84%**

The majority of Portuguese participants who answered this question reported that 0-25% of the budget was transnational at the time of the survey (25%), which is above the country grouping average (EU 15 - small).

Table 14 - What provisions have been made in your country to coordinate participation in ERA-NETs under FP6? - Single national coordinator for all ERA-NETs

	Portugal			EU 15 - small			Overall		
	Yes	No	No answer	Yes	No	No answer	Yes	No	No answer

[176] In the case of the Portuguese response to question in Table 11, no respondents have answered 'Yes' to the question 'Has the ERA-NET experience led to an increase in the amount of your programme budget that has been invested in transnational R&D projects outside of the ERA-NET?'. The reason why there are answers in the following two questions, Tables 12 and 13, which are only relevant if the respondent has answered 'Yes' previously are due to the technical characteristic of the survey software. The software did not allow for certain questions to remain blocked or hidden, which made it possible for respondents to enter information for the following two questions. Excessive manual 'cleaning' of the dataset was ruled out in order to avoid introducing any bias, which is why the answers to these questions remained in the dataset. Since, however, the value entered was the same for the question regarding budget before ERA-NET involvement and the budget at the time of administering the survey, this constitutes no change and is thus consistent with the answers to the question in Table 11.

Single national coordinator for all ERA-NETs	41%	47%	12%	17%	62%	21%	15%	66%	19%
Team of several coordinators at national level	12%	47%	41%	21%	53%	26%	24%	51%	24%
Coordination meetings for all national participants	38%	50%	13%	37%	36%	27%	37%	41%	22%
Organisation-specific coordination meetings	53%	24%	24%	59%	19%	22%	50%	31%	19%

The majority of Portuguese participants reported that the provision made to coordinate ERA-NET participation were organisation-specific coordination meetings (53%), which is slightly below the country grouping average (EU 15 - small).

Table 15 - Earlier we asked you to state your ERA-NET's theme. How important was this theme in your country's research programme before your organisation joined this ERA-NET?

	Portugal	EU 15 - small	Overall
Very Important	13%	21%	**21%**
Fairly Important	88%	44%	**48%**
Not very important	0%	20%	**16%**
Not at all important	0%	6%	**5%**
Don't Know	0%	3%	**4%**
Not Answered	0%	3%	**5%**
Not Applicable	0%	3%	**2%**

Most Portuguese participants reported that the ERA-NET's theme was fairly important in their country's research programme before their organisation joined the ERA-NET (88%), which is significantly above the country grouping average (EU 15 - small).

Table 16 - How important is this theme in your country's research programme now?

	Portugal	EU 15 - small	Overall
Very important	35%	25%	**24%**
Fairly important	65%	53%	**56%**
Not very important	0%	14%	**11%**
Not at all important	0%	0%	**1%**
Don't know	0%	3%	**3%**
Not Answered	0%	3%	**4%**
Not applicable	0%	2%	**2%**

The majority of Portuguese participants (65%) reported that the ERA-NET's theme was fairly important to their country's research programme at the time of the survey, which is significantly above the country grouping average (EU 15 - small).

Table 17 - If there has been a change in the importance of the theme to what extent do you think this was due to the ERA-NET?

	Portugal	EU 15 - small	Overall
To some extent	65%	43%	**29%**
Not at all	12%	10%	**11%**
No answer	24%	47%	**60%**

The majority Portuguese participants who answered this question reported that the change in the importance of the theme was to some extent due to the ERA-NET (65%), which is significantly above the country grouping average (EU 15 - small).

Table 18 - Has your organisation's involvement in this ERA-NET influenced national research policy beyond the theme of this ERA-NET?

	Portugal	EU 15 - small	Overall
Influence	47%	62%	**63%**
No influence	12%	19%	**18%**
No answer	41%	19%	**19%**

Most Portuguese participants (47%) reported that their involvement in the ERA-NET influenced national research policy beyond the theme of the ERA-NET, which is significantly below the country grouping average (EU 15 - small).

Table 19 - Have any of the following external factors helped or hindered the effects of your organisation's participation in this ERA-NET?

	Portugal					EU 15 - small					Overall				
	Helped	Hindered	No effect	Not Answered	Not applicable	Helped	Hindered	No effect	Not Answered	Not applicable	Helped	Hindered	No effect	Not Answered	Not applicable
Change in programme management agency	12%	12%	35%	0%	41%	8%	4%	29%	3%	55%	**7%**	**6%**	**36%**	**4%**	**47%**
New R&D management structure	12%	0%	76%	0%	12%	16%	4%	25%	6%	49%	**11%**	**7%**	**35%**	**5%**	**41%**
For existing programmes, more strategic R&D programming/planning	24%	0%	35%	0%	41%	30%	0%	37%	6%	27%	**29%**	**0%**	**36%**	**7%**	**28%**
Externalisation of R&D programmes into agency/agencies	12%	0%	24%	0%	65%	10%	4%	19%	5%	63%	**8%**	**4%**	**33%**	**6%**	**49%**
Setting up of new types of R&D programmes	24%	0%	24%	0%	53%	25%	1%	31%	5%	39%	**24%**	**7%**	**33%**	**5%**	**30%**
Barcelona 3% targets	12%	0%	35%	0%	53%	19%	0%	43%	8%	30%	**16%**	**0%**	**39%**	**9%**	**36%**

Most Portuguese participants consider most of this external factor as not applicable. However, for the ones who did, some reported that existing programmes, more strategic R&D programming/planning (24%) helped the effects of their organisations' participation in the ERA-NET, which is below the country grouping average (EU 15 - small) and setting up new types of R&D programmes (24%) helped the effects of their organisations' participation in the ERA-NET, which is broadly in line with the country grouping average (EU 15 – small).

Table 20 - How satisfied are you with the overall level of transnational cooperation within this ERA-NET?

	Portugal	EU 15 - small	Overall
Satisfied	100%	88%	**88%**
Unsatisfied	0%	8%	**7%**
No answer	0%	4%	**4%**

All Portuguese participants (100%) were satisfied with the overall level of transnational cooperation within the ERA-NET, which is significantly above the country grouping average (EU 15 - small).

Table 21- Have you seen evidence of the following effects at national level as a result of this ERA-NETs joint calls joint programming or other joint activities?

	Portugal			EU 15 - small			Overall		
	Some evidence	No evidence	No answer	Some evidence	No evidence	No answer	Some evidence	No evidence	No answer
Higher quality projects generated at national level (i.e. higher quality proposals)	59%	12%	29%	44%	40%	17%	**39%**	**44%**	**17%**
Higher quality projects funded at national level (through joint calls/programmes)	38%	25%	38%	44%	31%	25%	**35%**	**42%**	**23%**
New types of research projects generated (i.e. reflected in proposals received)	47%	24%	29%	44%	38%	19%	**38%**	**42%**	**20%**
New types of research projects funded (through joint calls/programmes)	71%	0%	29%	51%	25%	23%	**46%**	**32%**	**22%**
New researchers (with no prior international or European experience) benefiting from joint activities	47%	24%	29%	43%	34%	23%	**40%**	**27%**	**33%**
New researchers (with no prior international or European experience) benefiting from joint calls/programmes	47%	24%	29%	46%	28%	25%	**41%**	**34%**	**25%**
Access to foreign research communities/groups not present in my country	88%	12%	0%	59%	21%	21%	**54%**	**28%**	**18%**

Most Portuguese participants reported evidence of access to foreign research communities/groups not present in my country (88%), which is significantly above the country grouping average (EU 15 - small), and new types of research projects funded (71%), which is significantly above the country grouping average (EU 15 - small).

Table 22 - Did any of the following factors either help or hinder your organisation to exploit the full potential of its participation in this ERA-NET?

	Portugal					EU 15 - small					Overall				
	Aid to success	No problem	Problem but overcome	Problem still not overcome	No answer	Aid to success	No problem	Problem but overcome	Problem still not overcome	No answer	Aid to success	No problem	Problem but overcome	Problem still not overcome	No answer
National thematic programme priorities	31%	50%	6%	0%	13%	15%	42%	19%	10%	15%	**16%**	**46%**	**13%**	**12%**	**13%**
National cultures or research traditions	41%	35%	0%	0%	24%	13%	43%	16%	12%	17%	**10%**	**46%**	**15%**	**14%**	**15%**
National resources (staff time finances)	41%	24%	24%	0%	12%	13%	17%	34%	23%	13%	**17%**	**35%**	**26%**	**15%**	**7%**
National administrative procedures (e.g. evaluation rules)	0%	59%	0%	29%	12%	5%	26%	38%	18%	13%	**6%**	**25%**	**29%**	**28%**	**12%**
National legal programme conditions (e.g. funding of non-residents IPR)	31%	38%	19%	0%	13%	6%	27%	33%	17%	18%	**4%**	**35%**	**19%**	**25%**	**17%**
EC administrative procedures or legal requirements	0%	0%	12%	41%	47%	2%	36%	26%	14%	23%	**1%**	**34%**	**36%**	**12%**	**18%**
Perceptions of benefits	29%	12%	12%	0%	47%	24%	13%	22%	15%	26%	**15%**	**28%**	**16%**	**13%**	**28%**
Engagement in other transnational initiatives (e.g. COST EUREKA)	29%	12%	0%	0%	59%	12%	45%	3%	4%	36%	**12%**	**46%**	**4%**	**4%**	**34%**

Most Portuguese participants reported that national administrative procedures (59%) and national thematic programme priorities (50%) were no problem in exploiting the full potential of their organisation's participation in the ERA-NET, while most reported EC administrative procedures or legal requirements (41%) as a problem that was still not overcome

9. Annexes: Coordinator survey results[177]

The following tables show information from the coordinator questionnaire.

Table 23 - ERA-NET participation by theme

Theme	Number	Percentage
Transport	1	4.0%
Life Sciences	4	16.0%
Environment	9	36.0%
Fundamental Sciences	2	8.0%
INCO	1	4.0%
Industrial Technologies and SMEs	3	12.0%
Energy	3	12.0%
Social Sciences and Humanities	2	8.0%
Total	**25**	**100%**

Environment and Life Sciences thematic areas attracted most of the Portuguese participants.

Table 24 - Joint call participation by theme

Theme	Number	Percentage
Transport	0	**0.0%**
Life Sciences	5	**21.7%**
Environment	5	**21.7%**
Fundamental Sciences	6	**26.1%**
INCO	1	**4.3%**
Industrial Technologies and SMEs	1	**4.3%**
Energy	1	**4.3%**
Social Sciences and Humanities	4	**17.4%**
Total	23	**100%**

Fundamental Sciences, Life Sciences and Environment thematic areas channelled most of the contributions to joint calls.

[177] The Coordinator survey covered all 71 ERA-NETs - although in case of 7 ERA-NETs, the information collected dates back from the 2006 survey. 59 ERA-NETs provided information about the calls they have done over the period (NB: it is likely that not all ERA-NETs have reported call information in an exhaustive way). 49 ERA-NETs provided a breakdown of funding contributions at country level for calls (NB: this is likely to be an underestimate as not all ERA-NET coordinators knew this information)

Table 25 - Financial contribution to joint calls by theme

Theme	No contributions	€ virtual	€ common	€ mixed	Total
Transport	0	-	-	-	0
Life Sciences	5	1,556,872	30,000	-	1,586,872
Environment	5	1,879,458	-	-	1,879,458
Fundamental Sciences	6	-	950,000	380,000	1,330,000
INCO	1	200,000	-	-	200,000
Industrial Technologies and SMEs	1	200,000	-	-	200,000
Energy	1	100,000	-	-	100,000
Social Sciences and Humanities	4	-	1,101,340	-	1,101,340
Total	**23**	**3,936,330**	**2,081,340**	**380,000**	**6,397,670**

Most of the funding contributions were made through virtual common pots, Fundamental Sciences and Social Sciences and Humanities thematic areas contained the largest real common pot contributions.

ERA-NET EVALUATION

SD9: Country Report on Slovenia

The following document provides the structure for the country report on ERA-NETs in Slovenia.

The content of this report has been informed by qualitative interviews and the findings of two surveys. The interviews were undertaken with ERA-NET stakeholders[178] in 15[179] of the 40 countries taking part in the scheme. The number of interviews by country ranged between handfuls in some countries to a couple of dozen in other countries. The same interviewees were chosen to represent thematic areas – the number of interview per theme ranged between 12 and 25 depending on the theme. The surveys were aimed at all ERA-NET coordinators and participants and responses were received by approximately half of these, although responses varied across themes and countries. In addition, and where relevant, the report has been informed by reviews of documents and websites.

Regarding the contents of this report it is important to remember that the findings described within cannot be regarded as a definitive or representative view of all activities within ERA-NETs in this country. Because the interviews were based on a narrow selection of countries and representing a minority of ERA-NETs in each theme, the contents of this report should very much be regarded as a case study that provides a view of the experience. This may also explain why the findings from the qualitative interviews are sometimes at odds with the findings of the surveys which were more inclusive and wide-ranging.

Where possible in the report, the source of evidence is indicated either as coming from one of the surveys or the field interviews.

[178] Stakeholders included National Policy Stakeholders, ERA-NET Coordinators and Participants, and ERA-NET beneficiaries.
[179] The countries were: Austria, Croatia, Finland, France, Germany, Italy, Netherlands, Norway, Poland, Portugal, Romania, Russia, Slovenia, Turkey, and UK,

Contents

0. Executive Summary - Overview

Q1 – Impact on Research Landscapes

- In Slovenia, participation in the ERA-NET was viewed positively from the start. Having partaken in 20 ERA-NETs, Slovenian participants have a strong belief in the fundamental strategy of the ERA-NET i.e. the transnational cooperation via the ERA-NETs can create a diversified, still less fragmented ERA.

- There was high level strategic buy-in for the scheme from the Ministry level which was reflected in strong Ministry participation in ERA-NETs and recruitment of new staff to deal specifically with the Slovenian involvement in the ERA-NETs.

- Compared to other EU 12 countries, Slovenia has made the most individual joint call contributions and in terms of total funding was the third biggest EU12 contributor to ERA-NET joint calls, which constitutes a substantial investment in the scheme.

- The results of the participant survey indicate that Slovenian ERA-NET participants believed that the scheme had some influence on R&D policy outside of the theme of the ERA-NET, as well as on extending the time horizon and changing the assessment/evaluation criteria of Slovenian national programmes.

- New processed and procedures were adopted nationally such as peer reviews and transnational evaluation panels as a result of cross-border learning from other participants in the ERA-NETs.

- The ERA-NET participation also boosted national 'self-confidence' in the area of transnational cooperation and on the basis of a positive experience gained through ERA-NET participation.

Q2 – Structuring effect on specific research areas or fields

- There were few clear structuring effects, although the participant survey points towards some influence on reduced duplication of Slovenian research.

Q3 - Direct benefits and indirect benefits

- The ERA-NET participation has provided Slovenian participants with valuable experiences and affected the way that they go about their daily work.

- Slovenian participants feel much better and able to engage in transnational co-operation as a result of the ERA-NET. A main direct benefit included the establishment of contacts to colleagues in other European countries. A practical implication of this is that participants now feel much more able to contact colleagues abroad than before.

Q4 – Opening up of national programmes

- ERA-NET participation has not had a direct effect on the opening up of national programming to foreign researchers. Already preceding the scheme, Slovenian funds could be accessed by for instance students from neighbouring countries such

as Croatia. Why this has not been expended more widely is not clear but there does not seem to be much reluctance to the idea among Slovenian participants.

- Slovenia contributed to 5 real common pots, which constitutes over a third of Slovenian financial contributions and can be seen as a step towards opening up of Slovenian R&D programming.

Q5 – Best practice

- The Slovenian perception was that a strong coordinator had been a decisive factor for success of the ERA-NETs including the ability of coordinators to identify possible overlaps, to find possible compromises so that the priorities of each participant are heard, and to keep up good communication between participants.

1. Strategic national context underpinning the ERA-NET participation

1.1 Strategic planning and role of ERA-NETs in Slovenia[180]

This section will focus on the strategic planning associated with the participation in the ERA-NET scheme prior to joining the scheme, such as the participation criteria, and how this has impacted on the structure of and role of the ERA-NETs in Slovenia.

The Ministry of Higher Education, Science and Technology (MHEST) in Slovenia is the main actor in this field. Until 2004, nobody else was involved in strategic planning in the field of research. Slovenia is a small country and constitutes only one NUTS 3 (Nomenclature of Territorial Units for Statistics) region, so there is no regional level involved in research.

In 2004, the Slovenian Research Agency and the Public Agency for Technology (TIA) were established. They were previously part of the Ministry before being turned into agencies. The Research Agency is responsible for the implementation and funding of national research programmes, whereas TIA funds and implements technology programmes dealing only with businesses. TIA also has ties to the Ministry of Economy, whose focus is on small business innovation. The formulation of research policy and guidelines is the responsibility of the MHEST.

The Slovenian participation in ERA-NETs generally involved the MHEST. 16 out of 20 ERA-NET participants from Slovenia were Ministry employees.

According to some of Slovenian ERA-NET participants interviewed, one of the impacts of ERA-NET participation has been that participants have learnt how to better develop sector- and thematic strategies. This learning is likely to, over time, become increasingly incorporated into national research programming although little could be said about actual changes in programming to date as a result of participation. Some participants believed that Slovenia will continue to follow the general research policy priorities of other European countries going forward.

The MHEST (and Slovenia as such) have gained self-confidence having provided crucial inputs, and performed well the tasks allocated to them, as part of the ERA-NET programme. The programme has given Slovenia a valuable, positive experience of transnational cooperation, which is important for the future.

A few participants mentioned that ERA-NET has concretely affected policy in the sense that, it made it necessary to change legislation to allow certain actions, like giving money for specific purposes or allowing the provision of support to certain types of projects that could otherwise not receive support.

In Slovenia, there is generally a strong belief in the fundamental strategy of ERA-NET. It is believed that the country will get stronger budgets and that the cooperation will create a diversified, but less fragmented research, which will provide synergy as well as an increased focus and convergence. However, no clear evidence for this development was given by the interviewees.

1.2 Motivations for joining ERA-NET and set up[181]

[180] See Table 14 and Table 19.
[181] See Table 1.

This section touches on the perceived need that ERA-NET scheme was envisaged to fill.

Some participants reported that they had become aware of the ERA-NET through existing, transnational research networks and former co-operation partners in the respective fields of research. Others were contacted by foreign, potential partners through the Ministry.

For Slovenia as a relatively new EU Member State the pre-accession programme and the EU membership played a key role in generating interest for the ERA-NET scheme. The general interest at policy level and among both participants and researchers for transnational and European involvement, cooperation and financial support played a major role in connection with the decisions to participate in ERA-NETs.

This shall also be seen against the background for involvement in the Framework Programmes, which was a very new step and experience for Slovenia. This was seen as a new and very welcome source of funding, but at the same time the need for development of competencies and networks at policy level was made apparent. One participant expressed it as follows: *"The ministry was very interested, and we did it in the interest of the researchers, to get more funding, but also to train and organize ourselves to be better at working across borders".*

In a single case, the nature of the subject matter and the project was given as the reason for the participation in the ERA-NET. The rationale was that the project could not have been done by only one nation. In another case, the key driver for cooperating with principally northern European partners was that these were seen as potential role models from which to learn.

The attractiveness of Slovenia as a cooperation partner reportedly also played a role. Being a small country in the Balkans and yet capable of participating in mainstream research policy and programming activities made Slovenia an obvious and desirable cooperation partner.

The most important factor for the high participation rate of Slovenia, according to many actors, was the high interest of the MHEST in increasing transnational networking and cooperation. The ministry employed an additional 8 persons in the Ministry to take care of the ERA-NET participation.

2. Overview of participation

2.1 Extent of involvement in the ERA-NET scheme[182]

This section will describe the extent to which Slovenia participated in the scheme.

Slovenia participated in 20 of the 71 full ERA-NETS under FP6 but was not involved as the coordinator for any of these. 20 is a large number for a small country like Slovenia, and it takes a relatively large amount of human resources. According to one source, the reason for this was that it was 'very popular' to seek for EU funding.

The themes or the technical areas covered by the 20 ERA-NET are shown in the table below. Vertical themes included:

- Social Sciences and Humanities;
- Life Sciences;
- Environment and Energy; and
- Industrial Technologies, Aeronautics, Space, IT, Innovation.

ERA-NETs with Slovenian participation under FP6

ERA-NET Project[183]	Coordinator Nationality	Theme
1. HERA (CA)	Netherlands	Humanities and Social Sciences
2. EraSME	Germany	
3. MNT ERA-NET (CA)	Austria	Life Sciences
4. MATERA (CA)	Finland	
5. ERASysBio (CA)	Germany	
6. PathoGenoMics (CA)	Germany	
7. SAFEFOODERA (CA)	Norway	Environment and Energy
8. ERA-ARD (CA)	France	
9. EUROPOLAR	France	
10. HY-CO (Coordination Action CA)	Germany	Industrial Technologies, Aeronautics, Space, IT, Innovation
11. OPERA (CA)	Spain	
12. ERA-STAR Regions (CA)	Belgium	
13. ERA-SPOT (CA)	Germany	
14. BrainBridges (CA)	Sweden	
15. CISTRANA (CA)	Germany	
16. ENMatSSA (Specific Support Action SSA)	Finland	International Cooperation
17. ERA-NET ROAD	England	
18. COMPERA (CA)	Belgium	
19. SEE-ERA.NET (CA)	Austria	
20. CO-REACH	Netherlands	

The 20 ERA-NETs in which Slovenia participated reflected its thematic priorities but also reflected the availability of research capacity, and to a minor degree lobbyism of the different researchers and research institutions. The Ministry did the selection of themes on the basis of its view of the FP6 themes which it tried to follow. Like other Member States, Slovenia had its own special domestic priorities, like the development of Slavic heritage and language and the regional aims of having the neighbouring countries as EU members. In general however the selection of which ERA-NETs to participate in was rather top-down, but without a clear policy and strategy despite having a well-developed research base (e.g.

[182] See Table 23.

[183] Sources: http://www.rtd.si/eng/era/aktivnost/projektimvzt/eranet/pregled.asp and 'Preliminary findings from the ERA-NET Participants Survey'

large universities) and relatively high R&D spending. Some interviewees argued that an increased focus for the future would be desirable.

In two of eleven ERA-NETs that were interviewed during the field work, there existed some trans-border cooperation in the field before the establishment of the ERA-NET project. Where the partners already knew one another, the ERA-NET was more or less a continuation of previous activities. However, in most cases this was not the case. To the contrary, in a few areas there was simply no tradition of transnational cooperation as e.g. within social sciences and in fields, where new staff was recruited for the roles as participants.

In the ERA-NETs interviewed, the MHEST took the final decision on the participation of Slovenia in the ERA-NET, but at the same time there appears to have been a strong interest among the participants.

The Slovenian participants interviewed spoke of good cooperation and communication within the ERA-NETs they participants. Participants spoke of meeting very often and working closely together. The Slovenian participants told of having selected packages of tasks that suited to their expertise and experience.

According to Slovenian participants, a large amount of resources was spent on travelling which was welcomed by many participants although they also saw it as a burden. For instance, one participant who was the Slovenian participant for five ERA-NETs eventually moved to another job, partly because of the large amount of travelling. Another participant suggested that technologies like video conference facilities could be used for communication purposes in future. Some ERA-NETs were said to have benefited a lot from a common information sharing website where all relevant information was stored and well organised.

Generally the Slovenian participants provided the impression that the ERA-NETs they were involved in had worked smoothly overall. Problems had occurred particularly when people in the organisations had changed jobs or where, in some cases, participant governments had changed during implementation. In a few cases the ERA-NET process had been delayed because of personal conflicts or because of different approaches. Some people wanted to cover all possible outcomes and scenarios that might occur, whereas others accepted to deal with the problems when they occurred.

It was the clear impression from the Slovenian participants that the coordinators, who were responsible for communication, information, planning, dissemination, preparation of proposals and pushing the agenda, had done a good job, and that their contribution and efforts had been decisive in the success of the ERA-NETs. One experienced participant concluded that *"you need a very strong coordinator to identify overlaps and to find possible compromises. A good coordinator ensures that everybody's priorities are heard and maintains the common goal of the ERA-NET".*

It was the impression from both participants and policy-stakeholders that Slovenia had participated as an equal partner in many ERA-NETs and in some cases that they had played an important role, which in turn had boosted their self-confidence.

IPR was reported as having been a very important issue within the ERA-NETs that participants were interviewed for. Various ERA-NETs seems to have dealt differently with this. In general it seemed that, at the outset, all argued for free accessibility, and it was easy to initially agree on sharing all results from joint activities and calls. However in the end, there had been problems in this field. One participant concluded that it was

necessary to outline how to deal with IPR by project consortia and to ask them to describe this in the project proposal.

3 ERA-NET processes and positioning

3.1 Inputs into the ERA-NET scheme[184]

This section outlines the degree to which there was a commitment to joint activities, calls or programming up front, and how much extra effort was put in by Slovenia.

According to one national policy stakeholder, Slovenia is and has been a believer in the importance of the ERA-NET system and is committed to creating a competitive EU research landscape. The country was open towards real common pot funding and in participating in joint activities. A precondition for participating in real common pot funding, however, has that it was in an area where they saw themselves and their contribution as relevant and competitive. Complementarity was therefore important.

According to the Slovenian participants and policy stakeholders interviewed, there was a redirection of human resources towards the ERA-NET projects, but no formal organisational changes were undertaken to support implementation across the board in Slovenia. Some funding was earmarked for the ERA-NETs from the outset, but it was the impression that the main part of the monetary contribution came from the EU. Additional human resources, 8 new persons, were indeed brought into the Ministry to deal with the ERA-NETs. In addition to that, the workload was borne by existing staff.

Slovenian authorities regarded themselves as front runners on the national/ organisational position on the mutual opening up of R&D programmes to non-resident researchers. In general, Slovenia has collaborated closely with its Balkan counterparts and in particular with Croatia, and Croatian students can access funding from Slovenia.

3.2 Participation in joint activities, calls or programming[185]

This section focuses on the way Slovenia was involved in ERA-NET joint-activities, calls and/or programming. As shown in Table 24, Slovenia participated in 14 joint calls, to which it contributed a total of over EUR 1.6 million (see

[184] The most commonly cited rationales for ERA-NET participation were creating and supporting transnational projects in a field which requires transnational cooperation (31%), networking and building new relationships with funders from other countries (25%), and improving own R&D programmes (20%), which is broadly in line with the country grouping averages reported.

Table 2,

Table 3, Table 14, and

Table 25.

[185] See Table 4 and Table 24.

Table 25). The coordinator survey showed that compared to other EU 12 countries, Slovenia has made the most individual joint call contributions and in terms of total funding was the third biggest EU12 contributor to ERA-NET joint calls, which constitutes a substantial investment in the scheme, especially given that Slovenia is a much smaller than some of other EU12 countries.

At the overall ministerial level, Slovenia pursued the approach of going for joint activities and calls when the country had knowledge and experience to contribute. This also ensures a certain complementarity in the process.

EU funding played a significant enabling role in determining the Slovenian level of involvement in joint activities. In one case, pilot joint calls with a certain percentage real common pot were planned at the outset. In another, a Slovenian participant had the view that *"we participated in all calls. We wanted to participate. Otherwise it would be loss of money and the time we had already spent".*

Slovenian participants seemed to have been overall positive to contributing to a real common pot for joint calls/actions. In a concrete case, they trusted the coordinator and had a positive experience. It is believed that the future development will depend on trust. The majority of joint call funding was however channelled through the virtual common pot, rather than real common pot, as shown in Table 25.

The possibility of working on a transnational project was seen by participants and beneficiaries as a positive factor and a key enabler for participating in common activities. On the other hand, bureaucratic constraints associated with agreed funding procedures were seen as a hindrance for beneficiaries although it was regarded as no worse than under EU programmes.

3.3 Lessons learnt and best practice[186]

This section will focus on lessons learned by the Slovenian stakeholders.

In Slovenia, there was strong ministerial support for the ERA-NET scheme. According to the Ministry, because of the experience from the ERA NET participation, Slovenia is now ready to compete in an open market and suggests allocating a certain percentage for open competition under ERA-NET.

All the participants interviewed in Slovenia expressed the view that the effort of the coordinator of an ERA-NET has been the main condition for success.

For the beneficiaries, the application procedures and the rules for proposals and the application and administrative procedures were seen as an important success factor of the ERA-NETs. The impression was that the amount of red tape was at least similar to other EU programmes, but that the experience from other programmes facilitated the process. The lack of standardised procedures across ERA-NETs had to some extent constituted a barrier for beneficiaries that had to learn the rules and requirements of different application and administration models.

[186] See Table 19, Table 20, and Table 22.

4 ERA-NET benefits

4.1 Direct and indirect benefits to ERA-NET national policy stakeholders and participants[187]

The policy stakeholder interviews revealed a number of direct and indirect benefits of the ERA-NET schemes. The better and closer links among participating Member States at ministerial level and the increased exchange of information and experience were seen as the main direct benefits. Among other things, the scheme had provided valuable training of civil servants, and increased trust and knowledge among the cooperation partners.

Indirectly, the ERA-NET, according to a policy stakeholder, provided more projects for the same budgets and resulted in more successful research. The ERA-NET scheme has been more successful than expected.

Slovenian participants regarded themselves as solid ERA-NET partners, especially after picking up tasks that were given up by another Member State.

According to the participants, the main direct benefits from the ERA-NET scheme was the opening up of the European Research Area including the establishment of contacts with colleagues in other European countries and learning of good practises from each other, in particular concerning cooperation. As a consequence, Slovenia has adopted transnational practises, such as the peer reviews. The evaluations have become more standardized, and Slovenia now makes use of transnational evaluators.

Among indirect benefits, the most dominating experience among the Slovenian participants was that the ERA-NETs had attracted highly competent people, e.g. English speaking PhD's to the ministry. One participant argued that ERA-NET brought more dialogue among national players in different countries, and that a strategic dialogue was developing as a result.

Some participants also mentioned indirect benefits in terms of better research results in their respective fields and the opportunity to travel in Europe. All seem to have had positive experiences from the ERA-NETs and took continued participation in the scheme as a given.

4.2 Direct and indirect benefits to ERA-NET beneficiaries

To the beneficiaries, the possibility to work on a transnational project was a main advantage. It was seen as a drawback by some participants and beneficiaries, however, that the researchers and their departments, as a result of internal procedures, couldn't get paid for their contributions themselves. Instead, they either worked overtime or employed other persons that tended to leave at the end of the task, as it was difficult to get additional funding. Application procedures were not considered more difficult than under other similar programmes.

[187] See Table 5 and Table 6.

5 Impacts on national and international R&D policy / programming

5.1 Impact on national R&D policy and programming[188]

There were no indications yet of the ERA-NET scheme being taken into account at the national policy or programming level. The results of the participant survey however suggest that participants believed that the ERA-NET scheme had some influence on R&D policy outside of the theme of the ERA-NET, as seen in Table 18. The survey respondents also identify some influence of the scheme on extending the time horizon of national programmes, as well as changing the assessment/evaluation criteria in national programmes, which is shown in Table 7.

The closer and better transnational ties that had formed with the other participating countries were expected by the MHEST to have a positive impact on national R&D policy, for example through the training of civil servants, more convergence in research schemes and through the exchange of best practices.

The participants had not been able to point at resulting changes in the R&D policy and programming, but pointed at possible impacts on the distribution of funds, on administrative procedures and legislation to allow the full participation in the scheme as well as on the attraction of highly competent people with transnational experience.

5.2 Opening up on national R&D programming[189]

There appears to be no dispute among the interviewees that participation in the ERA-NET scheme has opened up the research landscape in Slovenia. The interviewees were committed to the concept of the ERA-NET and had incorporated new ideas and techniques into their research methods and practices.

The Slovenian research programmes have been sufficiently broad to fit to the ERA-NET. Better transnational collaborations and more funding have been key to the success of the evaluated ERA-NETs.

Despite the majority of Slovenian joint call funding having been channelled through a virtual common pot, Slovenia made 5 separate real common pot contributions, which constitutes over a third of Slovenian joint call contributions. This can be considered a step towards the opening of Slovenian R&D programming.

5.3 Impact on the structuring of national or international research fields[190]

The interviewees generally found little evidence of structuring effects, but the results of the participant questionnaire point to a possible effect on duplication: Table 7 shows that majority of participants who answered the survey questions regarding short-term effects on national programmes, believed that there was some evidence of the scheme reducing duplication.

[188] See Table 7 and Table 18.
[189] See Table 10 and Table 11.
[190] See Table 17 and Table 21.

6 European Added Value, relevance and efficiency

6.1 Additionality of the ERA-NET scheme[191]

Judging from the interviewees there are some tangible additionalities from the scheme in Slovenia. Perhaps one of the more obvious ones include the new processes and procedures adopted nationally (e.g. peer review and transnational evaluation panels) as a result of learning from others in the ERA-NETs. Also, within the commitment of Slovenia to the ERA-NET plays a central role and has surfaced as a good vehicle for Slovenian transactional cooperation in R&D policy and funding. This positive attitude and experience may be derived from an initial openness by Slovenian participants towards EU cooperation but also the central role played by the key Ministry. Slovenia's involvement was very much at the policy as well as the programme level which could explain why the policy-layer is so positive to the scheme. Although Slovenia had links to other countries prior to the scheme it is unlikely they would have engaged to this degree in transnational cooperation without it. The amount of resources set aside specifically for the ERA-NET is an indication of this.

6.2 Economic efficiency and relevance[192]

There was reportedly a bit frustration among participants because the various ERA-NETs in which Slovenia participate did their joint calls slightly differently from one another. This made the preparation more difficult and time-consuming when dealing with more than one call at the same time. Despite this, some ERA-NETs worked together to make the process more unified, this benefited the Slovenian administration to some extent.

Participants and beneficiaries found that the bureaucratic red tape with regards to funding negatively impacted on the perceived economic efficiency of the ERA-NET, but that this was about the same in this scheme as in others. Table 5 shows that on the whole, the ERA-NET participants found the participation in the scheme worthwhile.

[191] See Table 11.

[192] See Table 5.

7 Annexes: Stakeholders and materials consulted

The stakeholders consulted in Slovenia include:

- 7 ERA-NET participants in CORNET, EraSME, HESCULAEP, HY-CO, iMERA, MATERA, MNT ERA-NET, NORFACE, ERA-STAR REGIONS, ERA-SPOT, SEE ERA-NET; and
- 2 National policy stakeholders.

These stakeholders represented the following types of organisations:

- Ministry;
- Research agency;
- Technology agency; and
- Universities/institutes.

8 Annexes: Participant survey results

The figures below show responses to the participant questionnaire, completed by 10 Slovenian participants.

Table 1 - What was your organisation's main rationale for participating in this ERA-NET?

	Slovenia	EU 12	Overall
Benchmarking of research funding against other countries	0%	0%	**1%**
Creating and supporting transnational projects in a field which requires transnational cooperation	50%	22%	**38%**
Improving own (national) R&D programme/s	30%	8%	**7%**
Learning from funders and sharing of information between funders in other countries	0%	5%	**10%**
Networking and building new relationships with funders from other countries	0%	52%	**35%**
Not Answered	0%	0%	**1%**
Opening up of national programmes in existing or new areas of research	20%	14%	**5%**
Other	0%	1%	**2%**

The most commonly cited rationales for ERA-NET participation were creating and supporting transnational projects in a field which requires transnational cooperation (50%), improving own R&D programmes (30%), both significantly above the country grouping averages, and opening up of national programmes in existing or new areas of research, which is above the country grouping averages.

Table 2 - What was the original overall amount of EC funding allocated to your organisation in your contract to participate in this ERA-NET?

	Slovenia	EU 12	Overall
0 - 9999	0%	4%	**4%**
10000 - 19999	0%	1%	**2%**
20000 - 29999	20%	1%	**3%**
30000 - 39999	0%	0%	**2%**
40000 - 49999	10%	1%	**2%**
50000 - 59999	0%	1%	**2%**
60000 - 69999	0%	1%	**1%**
70000 - 79999	0%	7%	**6%**
80000 +	60%	78%	**71%**
Not Answered	10%	6%	**6%**

The majority of Slovenian organisations (60%) were allocated over €80,000 in funding to participate in the ERA-NET, which is significantly under the country grouping and overall participant averages.

Table 3 - Did the EC funding cover all the time and resources your organisation invested in participating in this ERA-NET?

	Slovenia	EU 12	Overall
Yes	20%	63%	**49%**
No	60%	29%	**43%**
Don't Know	10%	5%	**4%**
Not Answered	10%	3%	**4%**

The majority of Slovenian participants (60%) reported that EC funding did not cover all the time and resources their organisation invested in participating in the ERA-NET, which is significantly above the country grouping averages.

Table 4 - In which ERA-NET joint activities other than joint calls did you participate?

	Slovenia			EU 12			Overall		
	Yes	No	Other	Yes	No	Other	Yes	No	Other
Coordination/clustering of ongoing nationally funded research projects	50%	10%	40%	72%	13%	15%	**59%**	**19%**	**23%**
Benchmarking and common schemes for monitoring and evaluation	40%	40%	20%	81%	13%	6%	**67%**	**13%**	**19%**
Multinational evaluation procedures (common evaluation criteria and methods of implementation	60%	10%	30%	38%	53%	9%	**55%**	**25%**	**20%**
Schemes for joint training activities (so-supervised theses or common PhD schemes)	9%	55%	36%	10%	68%	22%	**12%**	**49%**	**39%**
Schemes for personnel exchange	10%	40%	50%	8%	66%	26%	**14%**	**47%**	**39%**
Schemes for mutual opening of facilities or laboratories	10%	40%	50%	6%	70%	25%	**15%**	**44%**	**41%**
Specific cooperation agreements or arrangements	27%	36%	36%	72%	9%	19%	**43%**	**24%**	**33%**
Action plan taking up common strategic issues and preparing for joint activities	80%	0%	20%	84%	2%	13%	**75%**	**11%**	**13%**

Majority of Slovenian participants took part in an action plan taking up common strategic issues and preparing for joint activities (80%), multinational evaluation procedures (60%), and co-ordination/clustering of ongoing nationally funded research projects (50%). In two of these cases, percentages for these joint activities differ significantly when compared to country grouping averages.

Table 5 - Overall would you say that your participation in the FP6 ERA-NET has been worthwhile?

	Slovenia	EU 12	Overall
Yes	100%	100%	**95%**
No	0%	0%	**4%**
Not Answered	0%	0%	**1%**

All Slovenian participants (100%) found their participation in FP6 ERA-NET worthwhile, which is broadly in line with the averages for country grouping (EU 12) and slightly above the overall population of participants.

Table 6 - Which of the three following statements best describes your personal experience of this ERA-NET?

	Slovenia	EU 12	Overall
I got more out of it than I expected	40%	36%	**41%**
I got out of it what I expected	50%	59%	**51%**
I got less out of it than I expected	10%	5%	**6%**
Not Answered	0%	0%	**1%**

Most Slovenian participants believed they got out of it what they expected (50%), which is below averages for the country grouping average (EU 12) and broadly in line with the overall population of participants.

Table 7 - To what degree has your participation in this ERA-NET influenced your country's national programme(s)?

	Slovenia			EU 12			Overall		
	No influence	Influenc	Other	No influence	Influenc	Other	No influence	Influenc	Other
Discontinuation of existing programme(s) in some theme(s)	60%	20%	20%	70%	19%	11%	**53%**	**34%**	**12%**
Reducing duplication between National programmes in your country	30%	50%	20%	54%	31%	15%	**46%**	**37%**	**16%**
Design of programmes with longer time horizon	18%	64%	18%	54%	42%	5%	**42%**	**49%**	**10%**

Design of programmes with shorter time horizon	50%	30%	20%	65%	28%	8%	**51%**	**38%**	**11%**
Bigger programme budgets for the theme	50%	30%	20%	59%	36%	6%	**42%**	**46%**	**12%**
Smaller programme budgets for the theme	80%	0%	20%	79%	8%	13%	**63%**	**13%**	**23%**
New programme assessment/evaluation criteria	9%	55%	36%	18%	73%	9%	**40%**	**50%**	**10%**
New opportunities to enable transnational R&D activities in the theme of the ERA-NET	0%	90%	10%	6%	90%	4%	**8%**	**85%**	**6%**
New eligibility criteria allowing funding of foreign researchers in the area	18%	45%	36%	35%	55%	9%	**43%**	**42%**	**15%**
Existing programme(s) now covering new theme(s)	60%	10%	30%	61%	30%	9%	**48%**	**39%**	**13%**
New programme(s) put in place in response to new theme(s) identified	18%	36%	45%	61%	28%	11%	**51%**	**34%**	**15%**

A distinctive feature of the influence of ERA-NET on Slovenian National Programmes is that impact is broadly in line with the averages of other countries (EU 12 and overall). This is demonstrated by the percentages for "influence" being broadly in line with the averages of other countries overall.

Table 8 - To what extent did your organisation have pre-existing relationships with participants in this ERA-NET prior to FP6?

	Slovenia	EU 12	Overall
Prior relationships	80%	82%	**66%**
No prior relationships	0%	15%	**26%**
No answer	20%	4%	**8%**

The majority of Slovenian participants (80%) reported that they had pre-existing relationships with participants in the ERA-NET, which is slightly below the averages reported for EU 12 countries and significantly above the averages reported for other countries overall.

Table 9 - If there were prior relationships which of the following 6 statements best describes how these relationships evolved during your participation in this ERA-NET?

	Slovenia	EU 12	Overall
Strengthened	80%	79%	**63%**
Weakened	0%	0%	**1%**

No change	0%	5%	**4%**
No answer	20%	16%	**33%**

The majority of Slovenian participants (80%) believed that the relationship strengthened during the participation in this ERA-NET, which is broadly in line with the average reported for EU 12 countries and significantly above the average reported for other countries overall.

Table 10 - Has your participation in this ERA-NET triggered transnational cooperation outside of the ERA-NET?

	Slovenia	EU 12	Overall
Yes	55%	23%	**31%**
No	27%	25%	**47%**
Not Answered	9%	1%	**5%**
Not applicable	9%	52%	**16%**

The majority of Slovenian participants (55%) reported that participation in the ERA-NET did trigger transnational cooperation outside of the ERA-NET, which is significantly above the country grouping averages (EU 12 and overall).

Table 11 - Has the ERA-NET experience led to an increase in the amount of your programme budget that has been invested in transnational R&D projects outside of the ERA-NET?

	Slovenia	EU 12	Overall
Yes	10%	9%	**13%**
No change	30%	67%	**63%**
No answer	60%	23%	**23%**

The majority of Slovenian participants who answered this question reported that the ERA-NET experience lead to no change in the amount of their programme budget that has been invested in transnational R&D projects outside of the ERA-NET (30%), which is significantly below the country grouping averages (EU 12 and overall).

Table 12 - If yes, roughly what proportion of your programme budget was transnational before your involvement in ERA-NET?

	Slovenia	EU 12	Overall
0-25%	10%	7%	**15%**
26 to 50%	0%	1%	**0%**
51 to 75%	0%	0%	**0%**
76 to 100%	0%	0%	**1%**
Not answered	90%	92%	**84%**

The majority of Slovenian participants who answered this question (10%) reported that 0-25% of the budget was transnational before their involvement in ERA-NET which is slightly above the country grouping average (EU 12).

Table 13 - If yes, roughly what proportion of your programme budget is transnational now?

	Slovenia	EU 12	Overall
0-25%	10%	6%	**13%**
26 to 50%	0%	1%	**1%**
51 to 75%	0%	0%	**0%**
76 to 100%	0%	2%	**1%**
Not answered	90%	91%	**84%**

The majority of Slovenian participants who answered this question (10%) reported that 0-25% of their programme budget is transnational now, which is slightly above the country grouping average (EU 12).

Table 14 - What provisions have been made in your country to coordinate participation in ERA-NETs under FP6?

	Slovenia			EU 12			Overall		
	Yes	No	No answer	Yes	No	No answer	Yes	No	No answer
Single national coordinator for all ERA-NETs	18 %	36 %	45%	13 %	77 %	10%	15 %	66 %	19%
Team of several coordinators at national level	20 %	20 %	60%	18 %	68 %	14%	24 %	51 %	24%
Coordination meetings for all national participants	36 %	18 %	45%	31 %	58 %	11%	37 %	41 %	22%
Organisation-specific coordination meetings	30 %	30 %	40%	35 %	54 %	11%	50 %	31 %	19%

Slovenian participants reported that the most commonly made provisions to coordinate ERA-NET participation were co-ordination meetings for all national participants (36%), which is slightly above country grouping average (EU12).

Table 15 - Earlier we asked you to state your ERA-NET's theme. How important was this theme in your country's research programme before your organisation joined this ERA-NET?

	Slovenia	EU 12	Overall
Very Important	0%	13%	**21%**
Fairly Important	45%	64%	**48%**
Not very important	27%	12%	**16%**
Not at all important	18%	6%	**5%**
Don't Know	0%	2%	**4%**
Not Answered	9%	4%	**5%**
Not Applicable	0%	0%	**2%**

Most Slovenian participants (45%) reported that the ERA-NET's theme was fairly important in their country's research programme before their organisation joined the ERA-NET, which is significantly below the country grouping average (EU12).

Table 16 - How important is this theme in your country's research programme now?

	Slovenia	EU 12	Overall
Very important	0%	15%	**24%**
Fairly important	50%	73%	**56%**
Not very important	30%	7%	**11%**
Not at all important	0%	2%	**1%**

Don't know	10%	2%	**3%**
Not Answered	10%	1%	**4%**
Not applicable	0%	0%	**2%**

Half of Slovenian participants (50%) reported that the ERA-NET's theme was fairly important to their country's research programme at the time of the survey, which is significantly below the country grouping average (EU 12).

Table 17 - If there has been a change in the importance of the theme to what extent do you think this was due to the ERA-NET?

	Slovenia	EU 12	Overall
To some extent	18%	14%	**29%**
Not at all	0%	2%	**11%**
No answer	82%	85%	**60%**

The majority of Slovenian participants who answered this question reported that the change in the importance of the theme was to some extent due to the ERA-NET (18%), which is slightly below the country grouping average (EU1 2).

Table 18 - Has your organisation's involvement in this ERA-NET influenced national research policy beyond the theme of this ERA-NET?

	Slovenia	EU 12	Overall
Influence	50%	80%	**63%**
No influence	20%	10%	**18%**
No answer	30%	10%	**19%**

Slovenian participants who answered this question reported that their involvement in the ERA-NET influenced national research policy beyond the theme of the ERA-NET (50%), which is significantly below the country grouping average (EU 12).

Table 19 - Have any of the following external factors helped or hindered the effects of your organisation's participation in this ERA-NET?

	Slovenia					EU12					Over		
	Helped	Hindered	No effect	Not Answered	Not applicable	Helped	Hindered	No effect	Not Answered	Not applicable	Helped	Hindered	No effect
Change in programme management agency	0%	0%	30%	10%	60%	2%	3%	64%	1%	29%	**7%**	**6%**	**36%**
New R&D management structure	0%	20%	30%	10%	40%	2%	5%	71%	2%	20%	**11%**	**7%**	**35%**
For existing programmes, more strategic R&D programming/planning	0%	0%	20%	10%	70%	24%	0%	55%	5%	16%	**29%**	**0%**	**36%**
Externalisation of R&D programmes into agency/agencies	0%	0%	20%	10%	70%	6%	1%	65%	3%	25%	**8%**	**4%**	**33%**
Setting up of new types of R&D programmes	10%	0%	10%	10%	70%	21%	2%	53%	2%	22%	**24%**	**7%**	**33%**
Barcelona 3% targets	18%	9%	27%	18%	27%	7%	1%	28%	6%	59%	**16%**	**0%**	**39%**

Most Slovenian participants (18%) reported that the Barcelona 3% targets helped the effects of their organisations' participation in the ERA-NET, which is significantly above the country grouping average (EU 12).

Table 20 - How satisfied are you with the overall level of transnational cooperation within this ERA-NET?

	Slovenia	EU 12	Overall
Satisfied	90%	94%	**88%**
Unsatisfied	0%	4%	**7%**
No answer	10%	2%	**4%**

The majority of Slovenian participants were satisfied with the overall level of transnational cooperation within the ERA-NET (90%), which is slightly below the country grouping average (EU 12).

Table 21 - Have you seen evidence of the following effects at national level as a result of this ERA-NETs joint calls joint programming or other joint activities?

	Slovenia			EU12			Overall		
	Some evidence	No evidence	No answer	Some evidence	No evidence	No answer	Some evidence	No evidence	No answer

Higher quality projects generated at national level (i.e. higher quality proposals)	36%	27%	36%	28%	60%	12%	**39%**	**44%**	**17%**
Higher quality projects funded at national level (through joint calls/programmes)	36%	27%	36%	19%	66%	16%	**35%**	**42%**	**23%**
New types of research projects generated (i.e. reflected in proposals received)	36%	27%	36%	31%	54%	15%	**38%**	**42%**	**20%**
New types of research projects funded (through joint calls/programmes)	36%	27%	36%	31%	54%	15%	**46%**	**32%**	**22%**
New researchers (with no prior international or European experience) benefiting from joint activities	36%	27%	36%	22%	12%	66%	**40%**	**27%**	**33%**
New researchers (with no prior international or European experience) benefiting from joint calls/programmes	36%	27%	36%	22%	53%	25%	**41%**	**34%**	**25%**
Access to foreign research communities/groups not present in my country	80%	0%	20%	40%	48%	12%	**54%**	**28%**	**18%**

The majority of Slovenian participants reported evidence of access to foreign research communities or groups not present in their country (80%), as a result of this ERA-NET, which is significantly above country grouping averages (EU 12 and overall).

Table 22 - Did any of the following factors either help or hinder your organisation to exploit the full potential of its participation in this ERA-NET?

	Slovenia					EU 12					Overall			
	Aid to success	No problem	Problem but overcome	Problem still not overcome	No answer	Aid to success	No problem	Problem but overcome	Problem still not overcome	No answer	Aid to success	No problem	Problem but overcome	Problem still not
National thematic programme priorities	0%	55%	0%	18%	27%	11%	58%	12%	12%	8%	**16%**	**46%**	**13%**	**12**
National cultures or research traditions	0%	20%	0%	50%	30%	2%	67%	13%	8%	10%	**10%**	**46%**	**15%**	**14**
National resources (staff time finances)	0%	10%	10%	50%	30%	6%	52%	9%	24%	9%	**17%**	**35%**	**26%**	**15**
National administrative procedures (e.g. evaluation rules)	0%	55%	0%	18%	27%	0%	19%	16%	55%	9%	**6%**	**25%**	**29%**	**28**
National legal programme conditions (e.g. funding of non-residents IPR)	0%	44%	11%	0%	44%	0%	21%	9%	56%	14%	**4%**	**35%**	**19%**	**25**
EC administrative procedures or legal requirements	0%	40%	10%	20%	30%	0%	18%	65%	5%	12%	**1%**	**34%**	**36%**	**12**
Perceptions of benefits	0%	20%	0%	50%	30%	4%	54%	14%	14%	14%	**15%**	**28%**	**16%**	**13**
Engagement in other transnational initiatives (e.g. COST EUREKA)	0%	70%	0%	0%	30%	8%	61%	0%	3%	28%	**12%**	**46%**	**4%**	**4**

The majority of Slovenian participants reported that national thematic programming priorities (55%) and national administrative procedures (55%) were no problem in exploiting the full potential of their organisation's participation in the ERA-NET, while half (50%) national cultures or research traditions and national resources were problems that were not overcome.

9 Annexes: Coordinator survey results[193]

The following tables show information from the coordinator questionnaire.

Table 23 - ERA-NET participation by theme

Theme	Number	Percentage
Transport	2	10.0%
Life Sciences	5	25.0%
Environment	1	5.0%
Fundamental Sciences	0	0.0%
INCO	2	10.0%
Industrial Technologies and SMEs	7	35.0%
Energy	1	5.0%
Social Sciences and Humanities	2	10.0%
Total	20	100%

Industrial Technologies and SME's and Life Sciences areas attracted most of the Slovenian participants.

Table 24 - Joint call participation by theme

Theme	Number	Percentage
Transport	2	14.3%
Life Sciences	0	0.0%
Environment	0	0.0%
Fundamental Sciences	0	0.0%
INCO	2	14.3%
Industrial Technologies and SMEs	6	42.9%
Energy	0	0.0%
Social Sciences and Humanities	4	28.6%
Total	14	100%

Industrial Technologies and SME's and Social Sciences and Humanities channelled most of the contributions to joint calls.

[193] The Coordinator survey covered all 71 ERA-NETs - although in case of 7 ERA-NETs, the information collected dates back from the 2006 survey. 59 ERA-NETs provided information about the calls they have done over the period (NB: it is likely that not all ERA-NETs have reported call information in an exhaustive way). 49 ERA-NETs provided a breakdown of funding contributions at country level for calls (NB: this is likely to be an underestimate as not all ERA-NET coordinators knew this information)

Table 25 - Financial contribution to joint calls by theme

Theme	No contributions	€ virtual	€ common	€ mixed	Total
Transport	2	93,675	34,000	-	127,675
Life Sciences	0	-	-	-	0
Environment	0	-	-	-	0
Fundamental Sciences	0	-	-	-	0
INCO	2	348,000	-	60,000	408,000
Industrial Technologies and SMEs	6	917,000	-	-	917,000
Energy	0	-	-	-	0
Social Sciences and Humanities	4	-	220,268	-	220,268
Total	14	1,358,675	254,268	60,000	1,672,943

Most of the funding contributions were made through virtual common pots, real common pots were used in Transport and Social Sciences and Humanities.

ERA-NET EVALUATION

SD10: Country Report on Poland

The following document provides the structure for the country report on ERA-NETs in Poland.

The content of this report has been informed by qualitative interviews and the findings of two surveys. The interviews were undertaken with ERA-NET stakeholders[194] in 15[195] of the 40 countries taking part in the scheme. The number of interviews by country ranged between handfuls in some countries to a couple of dozen in other countries. The same interviewees were chosen to represent thematic areas – the number of interview per theme ranged between 12 and 25 depending on the theme. The surveys were aimed at all ERA-NET coordinators and participants and responses were received by approximately half of these, although responses varied across themes and countries. In addition, and where relevant, the report has been informed by reviews of documents and websites.

Regarding the contents of this report it is important to remember that the findings described within cannot be regarded as a definitive or representative view of all activities within ERA-NETs in this country. Because the interviews were based on a narrow selection of countries and representing a minority of ERA-NETs in each theme, the contents of this report should very much be regarded as a case study that provides a view of the experience. This may also explain why the findings from the qualitative interviews are sometimes at odds with the findings of the surveys which were more inclusive and wide-ranging. **Due to the low level of responses received from the Portuguese participants (12 in total), interpretation of the survey findings should be handled with extra care.[196]**

Where possible in the report, the source of evidence is indicated either as coming from one of the surveys or the field interviews.

[194] Stakeholders included National Policy Stakeholders, ERA-NET Coordinators and Participants, and ERA-NET beneficiaries.
[195] The countries were: Austria, Croatia, Finland, France, Germany, Italy, Netherlands, Norway, Poland, Portugal, Romania, Russia, Slovenia, Turkey, and UK,
[196] Please note that the participant survey results are based on a weighted sample of respondents, which is the reason why in some cases the percentage responses might not correspond to the total number of respondents in that country.

Contents

0. Executive Summary - Overview

- Poland participated in the ERA-NET scheme at the time of re-definition of research priorities and the forming of strategic research programmes, with the initiative for joining ERA-NETs coming to a large extent from research units throughout the country.
- ERA-NET ownership was transferred from research performers acting on behalf of the Ministry of Science and Higher Education (MSHE) to the National Centre for Research and Development (NCBiR) during the lifecycles of Poland's ERA-NET projects.
- The re-definition of national research priorities and the introduction of national strategic research programmes took place in 2008, when FP6 ERA-NETs were nearing the end of their lifecycle. The ERA-NET scheme was seen as having had limited influence on these developments.

Q1 – Impact on Research Landscapes

- The re-definition of research priorities and recent formulation of strategic programmes, as well as the relatively recent transfer of ERA-NET ownership, limited potential impact on research landscapes.
- The changes in the research landscape were, on the one hand, not seen as having been influenced by ERA-NET, and, on the other hand, were too recent for the ERA-NET to have had any impact on the changed landscape.
- Newly redefined priorities and new strategic programmes have placed Poland in a position to experience stronger ERA-NET impacts in the future.

Q2 – Structuring effect on specific research areas or fields

- Due to the reshaping of the Polish research landscape during the lifetime of the ERA-NET projects, structuring effects were also limited.
- The redefinition of priorities was too recent for there to have been evidence of structuring effect at the time of evaluation.

Q3 - Direct benefits and indirect benefits

- Most of the identified benefits were benefits to ERA-NET Participants, in particular the learning about research policy management, commercialisation and technology transfer and building networks of contacts.
- Research beneficiaries found that not having to deal with administrative issues of their European partners allowed more focus on substantive issues.

Q4 – Opening up of national programmes

- There was little evidence of opening up, possibly due to the restructuring of Polish research policy which was taking place during the lifecycles of the ERA-NET projects.
- NCBiR, the key Polish ERA-NET participant was in favour of the Virtual Common Pot mode of funding due to its mission to support Polish researchers.

Q5 – Best practice

- Most Polish ERA-NET participants pointed to frequent meetings and good communication as a facilitator of working within the ERA-NETs.

- On an institutional level, access to sufficient human resources and an English language website were seen as good practices that Poland should adopt.
- On the ERA-NET level, good dissemination and promotion of the ERA-NET, well-designed activities, links to research community, SWOT analyses, and a presence of call secretariat were considered to be good practice.

1. Strategic national context underpinning the ERA-NET participation

1.1 Strategic planning and role of ERA-NETs in the country[197]

Initial Polish involvement in ERA-NET projects was largely a **'bottom-up'** process initiated by the research centres that would eventually participate in the ERA-NETs on behalf of the Ministry. The centres, such as the Silesian University of Technology in the case of ERA-NET TRANSPORT, had thematic interest in the ERA-NETs. This bottom-up nature of the initial ERA-NET involvement can also be attributed to initial **lack of strategic research programmes**.

The **National Scientific Research and Experimental Development Programme** ("Krajowy Program Badań Naukowych i Prac Rozwojowych") introduced on 30th October 2008, established **five priority areas**, which became the basis for the drawing up of two newly-launched **strategic research programmes**, one in the area of energy and one in the area of systems for scientific and scientific-technical information. This also could provide a more strategic top-down approach to ERA-NET participation to be applied in future. However, the decision on NCBiR's joining new ERA-NET projects is taken by the Minister for Science and Higher Education, who supervises NCBiR.

The ERA-NET participants however noted that looking retrospectively at the FP6 ERA-NETs Poland was involved in, most of the topics broadly corresponded to the priorities set out in the **National Scientific Research and Experimental Development Programme**. Exceptions included projects such as ASTRONET which focused on the area of astronomy, absent in the document.

1.2 Motivations for joining ERA-NET and set up[198]

It is important to note that NCBiR, which the interviewed ERA-NET participants represent, did not take the decisions regarding joining the scheme. This section is thus based on the personal interpretations and understandings of interviewed participants rather than on their experiences, as well as on the input from national policy stakeholders.

For Poland the key strategic reason for ERA-NET involvement, from the point of view of participants, was the confidence that international cooperation within the Framework Programme would ensure **higher competitiveness of Polish science**. Involvement in FP6 instruments also presented an opportunity to further **benefit from EU funds**, an area in which Poland did not have a strong track record. The motivations for ERA-NET participation are outlined in Table 1.

In individual thematic areas, the main motivation to join ERA-NETs was the existence of significant Polish expertise in the research fields, as well as the existence of Polish research centres with sufficient experience in international cooperation to participate in joint calls organised within ERA-NETs.

In the case of AirTN, for example, Poland had a comparatively well-developed aerospace industry and significant research expertise in the area. The situation was similar in the case of neurology and the NEURON ERA-NET or micro- and nano-science and MNT ERA-NET, even if these two fields were more diffuse than the relatively concentrated and well-linked aerospace field.

[197] See Table 14 and table 19.
[198] See Table 1.

For Polish researchers who received funding within ERA-NET joint calls it was generally seen as another possible source of funding for their projects. What distinguished ERA-NET funding from other potential funding sources, and provided extra motivation, was the fact that specific consortia were not imposed on potential research beneficiaries. What that meant was that as long as a particular country participated in the joint call, potential beneficiaries had relative **freedom to choose the most suitable institution** from that country for their projects.

2. Overview of participation

2.1 Extent of involvement in the ERA-NET-scheme[199]

Poland has been involved to various extents in 31 FP6 ERA-NETs[200], with the majority of these ERA-NETs being in the areas of Industrial Technologies and SMEs, Environment, and Life Sciences. Poland has not coordinated any of the ERA-NETs, which the participants attributed to the fact that the Polish institutions involved were generally less experienced than their counterparts in other European countries. In some ERA-NETs, Poland participated as an associate (NANOSCIENCE ERA-NET), while in others it was a partner, but with no assigned tasks (MARINERA). Poland also took part in regional ERA-NETs, for instance in MANUNET, which saw participation from the Wroclaw Regional Development Agency in Lower Silesia.

At the time of the launch of ERA-NETs in Poland, the Ministry of Science and Higher Education delegated the everyday ERA-NET tasks to research centres operating in thematic areas covered by the ERA-NETs in question (mandate from MSHE). For example, in the case of AirTN these everyday tasks were performed by the Institute of Aviation, while in MNT ERA-NET they were delegated to the Institute of Electron Technology. The Ministry was responsible for taking final (i.e. financial) decisions, for instance regarding joint call participation and funding for joint calls.

On June 15th 2007 an act was passed to create the **National Centre for Research and Development (NCBiR)**. One of the tasks commissioned to the Centre by the Minister for Science and Higher Education was to carry out tasks related to Polish participation in the ERA-NET scheme. In January 2008 most of the ERA-NETs in which the Ministry previously participated have been passed onto the Centre. The Centre has since participated in 22 FP6 ERA-NETs.

[199] See Table 23.

[200] This number represents all ERA-NETs where a Polish institution was involved, including institutions acting independent from MSHE, as well as ERA-NETs where Poland was not a full partner.

3. ERA-NET processes and positioning

3.1 Inputs into the ERA-NET scheme[201]

The ERA-NET participants at NCBiR generally agreed that **joint calls were a key aim** of the Centre's ERA-NET involvement and if joint call participation was envisioned, the necessary funding was secured from the Ministry for the given financial year. The extent of Polish financial contributions into joint calls is outlined in more detail in Table 25 in the Annex. It is important to note that these numbers represent the contributions throughout FP6 and are thus not limited only to contributions by NCBiR.

3.2 Participation in joint activities, calls or programming[202]

According to the coordinator survey, Poland has participated in **12 joint calls** across a number of ERA-NETs. This is shown in more detail in Table 24.

The ERA-NET participants at NCBiR identified a number of **key criteria** for joint call participation:

- how the topic fitted into national priorities;
- the nature of the particular field in Poland (i.e. how many projects were financed, what funds were available in that area);
- likely response from the research community of industry (i.e. number of beneficiaries); and
- the needs of the potential stakeholders (i.e. who in Poland could benefit from the ERA-NET-financed research).

Answering these questions was not always easy for the ERA-NET participants. The national priorities, for instance, have only been re-defined in 2008, when FP6 ERA-NETs were nearing the end of their lifecycles. Secondly, the needs of the research community, industry, or other stakeholders and their potential response to the call could not always be easily assessed. For example, comparing ERA-NETs AirTN and MNT, in the former it was considered easy to gouge the field's interest as relevant industry and academia was concentrated in a few key institutions. In the latter it was more difficult, since the field of micro- and nanotechnology has been more diffuse, even though there were many research units likely to benefit from ERA-NET funding.

In terms of the formal process for joining a call within an ERA-NET in which NCBiR was partner, the Centre made the decision. The funding mode preferred by the Centre was Virtual Common Pot. This was due to the Centre's explicit **mission to support Polish scientists**, meaning that it would not directly fund research performed outside of Polish research units.

However, other organisations, such as The General Directorate for National Roads and Motorways of Poland, which participates in ERA-NET ROAD, had a mission to improve Polish infrastructure, and could thus accept other modes of joint call funding. This allowed it to participate in a common pot-funded joint programme, to which it contributed EUR 150,000,

Issues with regards to Intellectual Property Rights (IPR) were generally agreed on within the ERA-NET consortia.

[201] See Table 2, Table 3, Table 24, and table 25.
[202] See Table 24

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3.3 Lessons learnt and best practice[203]

ERA-NET participants at NCBiR generally found that frequent meetings sand communication between members of the consortium contributed to a successful working of the ERA-NET. Participants that met frequently found it easier to discuss potential new initiatives in their ERA-NETs. Ultimately, however, this depended on the ERA-NET, and some participants believed that the frequency of meetings did not seem to have an effect on how well they thought their ERA-NETs functioned (i.e. in CRUE and MARTEC ERA-NETs). Other good practices identified by some of the participants with particular relevance for Polish institutions included:

- having 2-3 people in one institution involved in one ERA-NET, allowing participants to do more than the bare minimum necessary within ERA-NET and thus benefit more from their participation; and
- having a comprehensive English-language website.

Good practices identified by the Polish participants in managing ERA-NET participation included:

- having a call secretariat coordinating calls within an ERA-NET;
- well-designed activities that allow all participants to be involved;
- good links with the research community;
- emphasis on promoting the ERA-NET;
- distributing questionnaires about funding practices to participants and publishing the results; and
- performing SWOT analyses.

[203] See Table 19, Table 20, and Table 22.

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4. ERA-NET benefits

4.1 Direct and indirect benefits to ERA-NET national policy stakeholders and participants[204]

As the Centre had participated in the scheme only for a short period of time at the point of the evaluation, Polish ERA-NET participants at NCBiR generally pointed out that the benefits from ERA-NET were limited. The participants believed that they benefited professionally from ERA-NET participation by forming networks of contacts and gaining better understanding of research policy management, commercialisation and knowledge transfer. As the ERA-NET scheme is evolving, Polish participants, including NCBiR representatives, are trying to engage in new activities and make the consortium activities more transparent to other national stakeholders, which can help to better distribute the above benefits in the future.

Table 6 shows that Polish ERA-NET participants thought that on the whole they got out of their participation more than what they expected.

4.2 Direct and indirect benefits to ERA-NET beneficiaries

Polish ERA-NET beneficiaries found one of the main benefits of the scheme to be, the administrative and funding issues of each organisation involved were dealt with within their respective country, unlike in many other transnational research projects. This allowed project coordinators to focus on substantive issues rather than deal with administrative issues of the consortium. This, in turn, was positively reflected in the quality of research output. The beneficiaries considered this to be key advantage of the scheme and believed that it set the ERA-NET funding aside from other transnational funding sources.

Other benefits identified by a Polish beneficiary of MNT ERA-NET were the contacts that were made through ERA-NETs even outside of the individual project. That particular beneficiary said that he was notified of certain events with a large networking potential through the NCBIR's coordinator of this ERA-NET.

In terms of the type of research done and the quality of research, the evaluation process in ERA-NET joint calls has opened some Polish research to increasing international scrutiny, but this effect so far has been limited.

[204] See Table 5 and Table 6.

5. Impacts on national and international R&D policy and programming

5.1 Impact on national R&D policy[205]

ERA-NET participants generally agreed that the impact of ERA-NET on national R&D policy was minimal. The creation of the National Centre for Research and Development, the drawing up of revised national research priorities, and the development of Strategic Research Programmes constituted a significant transformation of the Polish research policy, It brought the Polish institutional landscape in line with many other European countries, for instance by separating legislative power (held by the Programme Owner) from the executive one (held by the Programme Manager) for some funding channels. The ERA-NET participants and policy stakeholders however did not believe that these changes can in any significant degree be attributed to the Polish ERA-NET participation.

At the same time, the interviewees thought these developments to be too recent for the ERA-NET to have an impact on the transformed R&D landscape, since most of the aforementioned developments took place in 2007 and 2008, when FP6 ERA-NETs were already nearing completion.

Generally, the participants also saw the relatively recent changeover in ERA-NET participation and the constant learning necessary as having made it difficult for ERA-NETs to have an impact on national R&D policy. They found as well that so far there have been few mechanisms for transferring participants' learning from the ERA-NETs further into the policy arena.

5.2 Impact on national R&D programming[206]

Since national Strategic Research Programmes only started their lifecycles in 2008, with the first calls planned for 2009, the ERA-NET impact until now was minimal and the ERA-NET participants and national policy stakeholders did not believe that the scheme had any influence on the development of these programmes. Nevertheless, going forward, the interviewees at NCBiR hoped that the persons responsible for research programmes in certain thematic areas will cooperate with persons managing ERA-NETs in these areas, which should facilitate the transfer of learning from the ERA-NETs and inform the process of developing national research programmes.

5.3 Opening up on national R&D programming[207]

The recent formation of new strategic programmes and the simultaneous revision of research priorities, means that it is generally too early to look for evidence of opening of up of national R&D programming.

As mentioned earlier, the chosen funding mode for the NCBiR, which participated in the bulk of Polish ERA-NETs, was Virtual Common Pot. The Directorate of National Roads and Motorways of Poland did participate in a common-pot funded joint programme as part of the ERA-NET ROAD, but this can be seen more of an exception rather than evidence of opening up of research funding.

5.4 Impact on the structuring of national or international research fields[208]

[205] See Table 7 and Table 18.
[206] See Table 7 and Table 18.
[207] See Table 10 and Table 11.
[208] See Table 17 and Table 21.

ERA-NET participants generally saw little evidence of structuring effects in Poland. This is due to the change of institutions participating in the ERA-NET, as NCBiR still going through the process of learning.

On example of structuring impact is that of the CORNET ERA-NET, which focused on collective research, a relatively new area in Poland. Although NCBiR only participated in the CORNET II project under FP7 (previous participant under FP6 was the Ministry), the NCBiR participant believed that the FP6 CORNET I project had an effect on national research by popularising collective research among relevant stakeholders.

6. European Added Value, relevance and efficiency

6.1 Additionality of the ERA-NET scheme[209]

The National Centre for Research and Development, together with ERA-NETs, has taken over other funding schemes, such as Eureka or selected JTIs. To date, they see **little clear added value** of the ERA-NET scheme, although, yet again, this was largely due to the change of participants and the Centre being a very young organisation.

Some participants identify the added value as gaining valuable knowledge of research management across Europe and developing valuable contacts, which could have been more difficult to develop without ERA-NET participation. This, however, depended on the research field, with some fields having always seen more European and international collaboration. An example of this is the field of astronomy, where large international infrastructures have been of high importance.

For Polish beneficiaries, the foreign institutions they work together with within ERA-NET projects were often institutions they were already familiar with, so, although there is a lot of information, skills and knowledge sharing, the ERA-NET added value was limited. The main advantage, however, that the ERA-NET scheme offered to them was the way it was administered: As mentioned earlier, the fact that funding and other administrative issues for each partner were dealt within their respective countries means that there was less administrative burden on the individuals and institutions coordinating the projects, which in turn allowed them to focus on substantive issues and, as a result, conduct better research.

6.2 Economic efficiency and relevance[210]

The ERA-NET participants generally found it difficult to gouge the efficiency of the ERA-NET scheme in Poland, since there were few tangible benefits. The costs were generally not seen as being very high and many participants believed that in the long run the benefits will outweigh the costs. On the whole, the ERA-NET participants generally believed that their participation in the scheme has been worthwhile, as can be seen in Table 5.

[209] See Table 11

[210] See Table 5.

7. Annexes: Stakeholders and materials consulted

7.1 Stakeholders consulted

- National Centre for Research and Development (NCBiR)
- Cracow University of Technology
- Technical University of Lodz
- National Contact Point
- Academy of Science

7.2 Materials consulted

- Ministry of Science and Higher Education (2008). *Krajowy Program Badan Naukowych i Prac Rozwojowych (National Scientific Research and Experimental Development Programme)*, available at: http://www.ncbir.pl/www/images/doc/spb/20081030_KRBNiPR_wraz_z_komunikatem.pdf
- Individual ERA-NET websites
- NCBiR website

8. Annexes: Participant survey results

The figures below show responses to the participant questionnaire, completed by 12 Polish participants[211].

Table 1 - What was your organisation's main rationale for participating in this ERA-NET?

	Poland	EU 12	Overall
Benchmarking of research funding against other countries	0%	0%	**1%**
Creating and supporting transnational projects in a field which requires transnational cooperation	25%	22%	**38%**
Improving own (national) R&D programme/s	23%	8%	**7%**
Learning from funders and sharing of information between funders in other countries	3%	5%	**10%**
Networking and building new relationships with funders from other countries	15%	52%	**35%**
Not Answered	0%	0%	**1%**
Opening up of national programmes in existing or new areas of research	35%	14%	**5%**
Other	0%	1%	**2%**

The most commonly cited rationales for ERA-NET participation were opening up of national programmes in existing or new areas of research (35%), which is significantly above the country grouping average (EU 12) and creating and supporting transnational projects in a field which requires transnational cooperation (25%) which is slightly above the country grouping average (EU 12).

Table 2 - What was the original overall amount of EC funding allocated to your organisation in your contract to participate in this ERA-NET?

	Poland	EU 12	Overall
0 - 9999	15%	4%	**4%**
10000 - 19999	5%	1%	**2%**
20000 - 29999	0%	1%	**3%**
30000 - 39999	0%	0%	**2%**
40000 - 49999	0%	1%	**2%**
50000 - 59999	3%	1%	**2%**
60000 - 69999	0%	1%	**1%**
70000 - 79999	30%	7%	**6%**
80000 +	38%	78%	**71%**
Not Answered	10%	6%	**6%**

[211] Please note that due to the time elapsed between the administration of the survey and the fieldwork interviews as well as due to the changing nature of Polish participation in the scheme, the respondents to the participant survey are not necessarily the same respondents or respondents from the same organisations as the ERA-NET participants interviewed as part of the fieldwork.

Most Polish organisations (38%) were allocated over €80,000 in funding to participate in the ERA-NET, which is significantly below the country grouping average (EU 12).

Table 3 - Did the EC funding cover all the time and resources your organisation invested in participating in this ERA-NET?

	Poland	EU 12	Overall
Yes	31%	63%	**49%**
No	52%	29%	**43%**
Don't Know	12%	5%	**4%**
Not Answered	5%	3%	**4%**

The majority of Polish participants (52%) reported that EC funding did not cover all the time and resources their organisation invested in participating in the ERA-NET, which is significantly above the country grouping average (EU 12).

Table 4 - In which ERA-NET joint activities other than joint calls did you participate?

	Poland			EU 12			Overall		
	Yes	No	Other	Yes	No	Other	Yes	No	Other
Coordination/clustering of ongoing nationally funded research projects	44 %	24 %	32%	72 %	13 %	15%	**59 %**	**19 %**	**23%**
Benchmarking and common schemes for monitoring and evaluation	73 %	22 %	5%	81 %	13 %	6%	**67 %**	**13 %**	**19%**
Multinational evaluation procedures (common evaluation criteria and methods of implementation	59 %	29 %	12%	38 %	53 %	9%	**55 %**	**25 %**	**20%**
Schemes for joint training activities (so-supervised theses or common PhD schemes)	22 %	41 %	37%	10 %	68 %	22%	**12 %**	**49 %**	**39%**
Schemes for personnel exchange	17 %	45 %	38%	8%	66 %	26%	**14 %**	**47 %**	**39%**
Schemes for mutual opening of facilities or laboratories	10 %	54 %	37%	6%	70 %	25%	**15 %**	**44 %**	**41%**
Specific cooperation agreements or arrangements	62 %	10 %	29%	72 %	9%	19%	**43 %**	**24 %**	**33%**
Action plan taking up common strategic issues and preparing for joint activities	66 %	0%	34%	84 %	2%	13%	**75 %**	**11 %**	**13%**

The majority of Polish participants took part in benchmarking and common schemes for monitoring and evaluation (73%), an action plan taking up common strategic issues and preparing for joint activities (66%), and specific cooperation agreements or arrangements (62%). In all cases the percentages for these joint activities are below or significantly below the country grouping average (EU 12).

Table 5 - Overall would you say that your participation in the FP6 ERA-NET has been worthwhile?

	Poland	EU 12	Overall
Yes	100%	100%	**95%**
No	0%	0%	**4%**
Not Answered	0%	0%	**1%**

All Polish participants (100%) did find their participation in FP6 ERA-NET worthwhile, which is in line with the country grouping average (EU 12).

Table 6 - Which of the three following statements best describes your personal experience of this ERA-NET?

	Poland	EU 12	Overall
I got more out of it than I expected	66%	36%	**41%**
I got out of it what I expected	22%	59%	**51%**
I got less out of it than I expected	12%	5%	**6%**
Not Answered	0%	0%	**1%**

The majority of Polish participants (56%) believed they got more out of it than they expected, which is significantly above the country grouping average (EU 12).

Table 7 - To what degree has your participation in this ERA-NET influenced your country's national programme(s)?

	Poland			EU 12			Overall		
	No influence	Influence	Other	No influence	Influence	Other	No influence	Influence	Other
Discontinuation of existing programme(s) in some theme(s)	51 %	41%	7%	70 %	19 %	11 %	**53 %**	**34 %**	**12 %**
Reducing duplication between National programmes in your country	13 %	80%	8%	54 %	31 %	15 %	**46 %**	**37 %**	**16 %**
Design of programmes with longer time horizon	24 %	71%	5%	54 %	42 %	5%	**42 %**	**49 %**	**10 %**
Design of programmes with shorter time horizon	41 %	51%	7%	65 %	28 %	8%	**51 %**	**38 %**	**11 %**
Bigger programme budgets for the theme	17 %	78%	5%	59 %	36 %	6%	**42 %**	**46 %**	**12 %**
Smaller programme budgets for the theme	51 %	29%	20 %	79 %	8%	13 %	**63 %**	**13 %**	**23 %**
New programme assessment/evaluation criteria	22 %	71%	7%	18 %	73 %	9%	**40 %**	**50 %**	**10 %**
New opportunities to enable transnational R&D activities in the theme of the ERA-NET	17 %	78%	5%	6%	90 %	4%	**8 %**	**85 %**	**6%**
New eligibility criteria allowing funding of foreign researchers in the area	71 %	24%	5%	35 %	55 %	9%	**43 %**	**42 %**	**15 %**
Existing programme(s) now covering new theme(s)	27 %	66%	7%	61 %	30 %	9%	**48 %**	**39 %**	**13 %**
New programme(s) put in place in response to new theme(s) identified	35 %	58%	8%	61 %	28 %	11 %	**51 %**	**34 %**	**15 %**

A distinctive feature of the influence of ERA-NET on Polish National Programmes is that the impact is significantly above the country grouping average (EU 12). This is demonstrated by the total percentage for "influence" being significantly above the total percentage for "influence" in the country grouping average (EU 12).

Table 8 - To what extent did your organisation have pre-existing relationships with participants in this ERA-NET prior to FP6?

	Poland	EU 12	Overall
Prior relationships	46%	82%	**66%**
No prior relationships	51%	15%	**26%**
No answer	2%	4%	**8%**

The small majority of Polish participants who answered this question (51%) reported that they did not have pre-existing relationships with participants in the ERA-NET, which is significantly above the country grouping average (EU 12).

Table 9 - If there were prior relationships which of the following 6 statements best describes how these relationships evolved during your participation in this ERA-NET?

	Poland	EU 12	Overall
Strengthened	45%	79%	**63%**
Weakened	0%	0%	**1%**
No change	14%	5%	**4%**
No answer	40%	16%	**33%**

Most Polish participants who answered this question believed that the relationship strengthened during the participation in this ERA-NET (45%), which is significantly below the country grouping average (EU 12).

Table 10 - Has your participation in this ERA-NET triggered transnational cooperation outside of the ERA-NET?

	Poland	EU 12	Overall
Yes	37%	23%	**31%**
No	29%	25%	**47%**
Not Answered	0%	1%	**5%**
Not applicable	34%	52%	**16%**

Most Polish participants who answered this question reported that participation in the ERA-NET did trigger transnational cooperation outside of the ERA-NET (37%), which is significantly above the country grouping average (EU 12).

Table 11 - Has the ERA-NET experience led to an increase in the amount of your programme budget that has been invested in transnational R&D projects outside of the ERA-NET?

	Poland	EU 12	Overall
Yes	24%	9%	**13%**
No change	39%	67%	**63%**
No answer	37%	23%	**23%**

Most Polish participants who answered this question reported that the ERA-NET experience lead to no change to the amount of the programme budget that has been invested in transnational R&D projects outside of the ERA-NET (39%), which is significantly below the country grouping average (EU 12).

Table 12 - If yes, roughly what proportion of your programme budget was transnational before your involvement in ERA-NET?

	Poland	EU 12	Overall
0-25%	22%	7%	**15%**
26 to 50%	2%	1%	**0%**
51 to 75%	0%	0%	**0%**
76 to 100%	0%	0%	**1%**
Not answered	76%	92%	**84%**

Most Polish participants who answered this question reported that 0-25% of the budget was transnational before their involvement in the ERA-NET (22%), which is significantly above the country grouping average (EU 12).

Table 13 - If yes, roughly what proportion of your programme budget is transnational now?

	Poland	EU 12	Overall
0-25%	13%	6%	**13%**
26 to 50%	3%	1%	**1%**
51 to 75%	0%	0%	**0%**
76 to 100%	8%	2%	**1%**
Not answered	78%	91%	**84%**

Most Polish participants who answered this question reported that 0-25% of the budget was transnational at the time of the survey (13%), which is above the country grouping average (EU 12).

Table 14 - What provisions have been made in your country to coordinate participation in ERA-NETs under FP6? - Single national coordinator for all ERA-NETs

	Poland			EU 12			Overall		
	Yes	No	No answer	Yes	No	No answer	Yes	No	No answer
Single national coordinator for all ERA-NETs	29 %	59 %	12%	13 %	77 %	10%	15%	66 %	19%
Team of several coordinators at national level	27 %	66 %	7%	18 %	68 %	14%	24%	51 %	24%
Coordination meetings for all national participants	73 %	12 %	15%	31 %	58 %	11%	37%	41 %	22%
Organisation-specific coordination meetings	63 %	24 %	12%	35 %	54 %	11%	50%	31 %	19%

The majority of Polish participants reported that the provision made to coordinate ERA-NET participation were coordination meetings for all national participants (73%), which is significantly above the country grouping average (EU 12).

Table 15 - Earlier we asked you to state your ERA-NET's theme. How important was this theme in your country's research programme before your organisation joined this ERA-NET?

	Poland	EU 12	Overall
Very Important	22%	13%	**21%**
Fairly Important	44%	64%	**48%**
Not very important	17%	12%	**16%**
Not at all important	7%	6%	**5%**
Don't Know	2%	2%	**4%**
Not Answered	7%	4%	**5%**
Not Applicable	0%	0%	**2%**

Most Polish participants reported that the ERA-NET's theme was fairly important in their country's research programme before their organisation joined the ERA-NET (44%), which is significantly below the country grouping average (EU 12).

Table 16 - How important is this theme in your country's research programme now?

	Poland	EU 12	Overall
Very important	29%	15%	**24%**
Fairly important	63%	73%	**56%**
Not very important	5%	7%	**11%**
Not at all important	0%	2%	**1%**
Don't know	2%	2%	**3%**
Not Answered	0%	1%	**4%**
Not applicable	0%	0%	**2%**

The majority of Polish participants (63%) reported that the ERA-NET's theme was fairly important to their country's research programme at the time of the survey, which is significantly below the country grouping average (EU 12).

Table 17 - If there has been a change in the importance of the theme to what extent do you think this was due to the ERA-NET?

	Poland	EU 12	Overall
To some extent	18%	14%	**29%**
Not at all	0%	2%	**11%**
No answer	83%	85%	**60%**

Most Polish participants who answered this question reported that the change in the importance of the theme was to some extent due to the ERA-NET (18%), which is slightly above the country grouping average (EU 12).

Table 18 - Has your organisation's involvement in this ERA-NET influenced national research policy beyond the theme of this ERA-NET?

	Poland	EU 12	Overall
Influence	78%	80%	**63%**
No influence	10%	10%	**18%**
No answer	12%	10%	**19%**

The majority of Polish participants (78%) reported that their involvement in the ERA-NET influenced national research policy beyond the theme of the ERA-NET, which is broadly in line with the country grouping average (EU 12).

Table 19 - Have any of the following external factors helped or hindered the effects of your organisation's participation in this ERA-NET?

	Poland					EU 12					Overall				
	Helped	Hindered	No effect	Not Answered	Not applicable	Helped	Hindered	No effect	Not Answered	Not applicable	Helped	Hindered	No effect	Not Answered	Not applicable
Change in programme management agency	2%	0%	54 %	0%	44 %	2%	3 %	64 %	1 %	29 %	**7%**	**6 %**	**36 %**	**4 %**	**47 %**
New R&D management structure	5%	12 %	73 %	0%	10 %	2%	5 %	71 %	2 %	20 %	**11 %**	**7 %**	**35 %**	**5 %**	**41 %**
For existing programmes, more strategic R&D programming /planning	57 %	0%	33 %	0%	10 %	24 %	0 %	55 %	5 %	16 %	**29 %**	**0 %**	**36 %**	**7 %**	**28 %**
Externalisation of R&D programmes into agency/agencies	17 %	0%	69 %	0%	14 %	6%	1 %	65 %	3 %	25 %	**8%**	**4 %**	**33 %**	**6 %**	**49 %**
Setting up of new types of R&D programmes	73 %	0%	17 %	0%	10 %	21 %	2 %	53 %	2 %	22 %	**24 %**	**7 %**	**33 %**	**5 %**	**30 %**
Barcelona 3% targets	7%	0%	71 %	0%	22 %	7%	1 %	28 %	6 %	59 %	**16 %**	**0 %**	**39 %**	**9 %**	**36 %**

The majority of Polish participants (73%) reported that setting up new types of R&D programmes helped the effects of their organisations' participation in the ERA-NET, which is significantly above the country grouping average (EU 12).

Table 20 - How satisfied are you with the overall level of transnational cooperation within this ERA-NET?

	Poland	EU 12	Overall
Satisfied	95%	94%	**88%**
Unsatisfied	5%	4%	**7%**
No answer	0%	2%	**4%**

The majority of Polish participants (95%) were satisfied with the overall level of transnational cooperation within the ERA-NET, which is broadly in line with the country grouping average (EU 12).

Table 21 - Have you seen evidence of the following effects at national level as a result of this ERA-NETs joint calls joint programming or other joint activities?

	Poland			EU 12			Overall		
	Some evidence	No evidence	No answer	Some evidence	No evidence	No answer	Some evidence	No evidence	No answer
Higher quality projects generated at national level (i.e. higher quality proposals)	66%	17%	17%	28%	60%	12%	**39%**	**44%**	**17%**
Higher quality projects funded at national level (through joint calls/programmes)	34%	41%	24%	19%	66%	16%	**35%**	**42%**	**23%**
New types of research projects generated (i.e. reflected in proposals received)	66%	10%	24%	31%	54%	15%	**38%**	**42%**	**20%**
New types of research projects funded (through joint calls/programmes)	66%	10%	24%	31%	54%	15%	**46%**	**32%**	**22%**
New researchers (with no prior international or European experience) benefiting from joint activities	41%	12%	46%	22%	12%	66%	**40%**	**27%**	**33%**
New researchers (with no prior international or European experience) benefiting from joint calls/programmes	37%	10%	54%	22%	53%	25%	**41%**	**34%**	**25%**
Access to foreign research communities/groups not present in my country	78%	5%	17%	40%	48%	12%	**54%**	**28%**	**18%**

Most Polish participants reported evidence of access to foreign research communities/groups not present in my country (78%), which is significantly above the country grouping average (EU 12).

Table 22 - Did any of the following factors either help or hinder your organisation to exploit the full potential of its participation in this ERA-NET?

	Poland					EU 12					Overall			
	Aid to success	No problem	Problem but overcome	Problem still not overcome	No answer	Aid to success	No problem	Problem but overcome	Problem still not overcome	No answer	Aid to success	No problem	Problem but overcome	
National thematic programme priorities	12%	29%	34%	24%	0%	11%	58%	12%	12%	8%	**16%**	**46%**	**13%**	**1**
National cultures or research traditions	0%	60%	38%	3%	0%	2%	67%	13%	8%	10%	**10%**	**46%**	**15%**	**1**
National resources (staff time finances)	17%	29%	15%	39%	0%	6%	52%	9%	24%	9%	**17%**	**35%**	**26%**	**1**
National administrative procedures (e.g. evaluation rules)	0%	22%	34%	41%	2%	0%	19%	16%	55%	9%	**6%**	**25%**	**29%**	**2**
National legal programme conditions (e.g. funding of non-residents IPR)	0%	29%	17%	51%	2%	0%	21%	9%	56%	14%	**4%**	**35%**	**19%**	**2**
EC administrative procedures or legal requirements	0%	41%	59%	0%	0%	0%	18%	65%	5%	12%	**1%**	**34%**	**36%**	**1**
Perceptions of benefits	8%	30%	33%	28%	3%	4%	54%	14%	14%	14%	**15%**	**28%**	**16%**	**1**
Engagement in other transnational initiatives (e.g. COST EUREKA)	12%	44%	0%	0%	44%	8%	61%	0%	3%	28%	**12%**	**46%**	**4%**	

Most Polish participants reported that national cultures or research traditions (60%) and engagement in other transnational initiatives (44%) were no problem in exploiting the full potential of their organisation's participation in the ERA-NET, while most reported national legal programme conditions (51%) as a problem that was still not overcome.

9. Annexes: Coordinator survey results212

The following tables show information from the coordinator questionnaire.

Table 23 - ERA-NET participation by theme

Theme	Number	Percentage
Transport	3	11.1%
Life Sciences	4	14.8%
Environment	6	22.2%
Fundamental Sciences	1	3.7%
INCO	2	7.4%
Industrial Technologies and SMEs	8	29.6%
Energy	2	7.4%
Social Sciences and Humanities	1	3.7%
Total	**27**	**100%**

Industrial Technologies and SME's and Environment thematic areas attracted most of the Polish participants.

Table 24 - Joint call participation by theme

Theme	Number	Percentage
Transport	0	0.0%
Life Sciences	1	8.3%
Environment	1	8.3%
Fundamental Sciences	2	16.7%
INCO	1	8.3%
Industrial Technologies and SMEs	7	58.3%
Energy	0	0.0%
Social Sciences and Humanities	0	0.0%
Total	**12**	**100%**

The Industrial Technologies and SME's thematic area channelled most of the contributions to joint calls.

[212] The Coordinator survey covered all 71 ERA-NETs - although in case of 7 ERA-NETs, the information collected dates back from the 2006 survey. 59 ERA-NETs provided information about the calls they have done over the period (NB: it is likely that not all ERA-NETs have reported call information in an exhaustive way). 49 ERA-NETs provided a breakdown of funding contributions at country level for calls (NB: this is likely to be an underestimate as not all ERA-NET coordinators knew this information)

Table 25 - Financial contribution to joint calls by theme

Theme	No contributions	€ virtual	€ common	€ mixed	Total
Transport	0	-	-	-	0
Life Sciences	1	1,500,000	-	-	1,500,000
Environment	1	-	-	766,000	766,000
Fundamental Sciences	2	-	200,000	700,000	900,000
INCO	1	150,000	-	-	150,000
Industrial Technologies and SMEs	7	7,045,000	-	-	7,045,000
Energy	0	-	-	-	0
Social Sciences and Humanities	0	-	-	-	0
Total	**12**	**8,695,000**	**200,000**	**1,466,000**	**10,361,000**

Most of the funding contributions were made through virtual common pots, Fundamental Sciences thematic area contained the only real common pot contribution.

ERA-NET Evaluation

SD11: Country report on Romania

The following document provides the structure for the country report on ERA-NETs in Romania.

The content of this report has been informed by qualitative interviews and the findings of one survey. The interviews were undertaken with ERA-NET stakeholders[213] in 15[214] of the 40 countries taking part in the scheme. The number of interviews by country ranged between handfuls in some countries to a couple of dozen in other countries. The same interviewees were chosen to represent thematic areas – the number of interview per theme ranged between 12 and 25 depending on the theme. The survey was aimed at all ERA-NET coordinators and responses were received by approximately half of these, although responses varied across themes and countries. In addition, and where relevant, the report has been informed by reviews of documents and websites. Another survey was conducted which aimed at participants, however in the case of Romania, not enough responses were received to be able to report on findings from this survey as part of this report.

Regarding the contents of this report it is important to remember that the findings described within cannot be regarded as a definitive or representative view of all activities within ERA-NETs in this country. Because the interviews were based on a narrow selection of countries and representing a minority of ERA-NETs in each theme, the contents of this report should very much be regarded as a case study that provides a view of the experience. This may also explain why the findings from the qualitative interviews are sometimes at odds with the findings of the surveys which were more inclusive and wide-ranging.

Where possible in the report, the source of evidence is indicated either as coming from one of the coordinator survey or the field interviews.

[213] Stakeholders included National Policy Stakeholders, ERA-NET Coordinators and Participants, and ERA-NET beneficiaries.
[214] The countries were: Austria, Croatia, Finland, France, Germany, Italy, Netherlands, Norway, Poland, Portugal, Romania, Russia, Slovenia, Turkey, and UK,

Contents

0. Executive Summary - Overview

- Romania participated in a dozen of ERA-NETs with Environment & Energy, Life Sciences, Industrial Technologies and SMEs representing the majority of their participation in ERA-NETs. This was broadly in line with the budget allocated to national programmes in these thematic areas.

- Among the EU12 Member States Romania was the second largest contributor to joint calls or programmes after Poland. It contributed to more than €2m to joint calls in total. Almost all of Romania's joint call contributions were channelled through virtual pots. Above 75% of Romanian contributions were made in the Industrial Technologies and SMEs area.

Q1 – Impact on Research Landscapes

- The impact of the scheme on Romanian R&D policy has been limited. The rationale for Romania's participation in ERA-NETs was part of a much broader strategy for accessing the EU. Romania was fully committed to supporting the ERA objectives in view of becoming a full member of the European Union. On this basis, Romania decided to participate in as many ERA-NETs as possible.

- ERA-NETs were seen as a conduit to coordinating Romanian R&D policies with the ones of the ERA in an easier, faster and more concrete way than would be possible through other means. Direct evidence of impact on Romanian R&D policy-making could be found in the fact that the ERA-NET scheme provided the Romanian State with a new funding instrument for R&D projects.

Q2 – Structuring effect on specific research areas or fields

- Overall, the FP6 rather than the ERA-NET scheme itself impacted on the structuring of the national research landscape and its integration into the ERA.
- Examples of a structuring effect directly linked to the ERA_NET scheme were best evidenced on the access of national scientific communities in the fields of International Cooperation (SEE ERA-NET), Life Sciences (NEURON), Energy and Environment to foreign researches and transnational projects.
- The additionality of the ERA-NET scheme was demonstrated by the strengthening of relationships (through bilateral agreements) and integration of Romanian scientific community within the ERA. The extent to which this was directly attributable to the FP6 ERA-Net scheme could not be verified.

Q3 - Direct benefits and indirect benefits

- Generally, Romanian participants derived direct and indirect benefits from ERA-NET participation. Main benefits included the integration of Romanian Science Communities into the ERA, networking benefits leading to more opportunities for collaborative research and the enhanced visibility of Romanian research teams.
- All in all, the ERA-NET provided Romanian scientists with good opportunities to learn about the principles and constraints of transnational research.

Q4 – Opening up of national programmes

- Under FP6, the preference and policy of the Romania state was oriented towards virtual pots. Real common pots, allowing for funding of foreign researchers or

organisations, required specific approval from the Ministry of Finance and was hence regarded as too cumbersome.
- The ERA-NET scheme had had an impact on the coordination and internationalisation of Romanian R&D programmes (e.g. NEURON, AIRTN).

Q5 – Best practice

Lessons learned and best practices included:

- Multiple engagement made sense and was seen as valuable for managing programmes under which CNMP, acting as a coordinator and funding agency for the ERA-NET scheme in Romania, came in support of Research performing organisations.
- More ambitious research objectives could be achieved through transnational cooperation by joining forces and funding.
- With regard to joint calls, advance planning, identification of, and notification to researchers were seen as key factors to ensure adequate participation of the national research community. Defining tightly and narrowing down the topic of the call could help avoiding oversubscription of the call.
- Lesson learned relative to joint call applications from the research community is essential. Follow up tools need to be in place to find out on what happened at national level, consortium level, and ERA level.
- IPR agreements should be in place at consortium level before the start of the research project.

1. Strategic national context underpinning the ERA-NET participation

1.1 Strategic planning and role of ERA-NETs in the country

Preparation for accession to full EU membership drove Romania's overall political strategy in the area of R&D as well as more broadly. The evolution of the Romanian Research and Innovation system has undergone important positive changes during the last five years, mainly due to efforts associated with complying with the 2007 EU accession requirements and for ensuring the necessary conditions to fulfil the overall Lisbon objectives.

Romania's science strategy for the initial part of the ERA-NET scheme implementation was defined **in the first national plan of R&D and Innovation (NRDI 1999 -2006).** The strategy was to progressively aggregate existing programmes into a new financing scheme. In September 2001 priority programmes were launched in the following fields: agriculture and food industry (AGRAL), environment and energy (MENER), transport (ANTRANS), life sciences and health (VIASAN), inventions (INVENT), information society (INFOSOC), biotechnology (BIOTECH), materials and nanotechnology (MATNANTEH), aerospace (AEROSPATIAL), economy and social sciences (CERES). The new plan shifted the emphasis from supply-oriented actions to demand-oriented actions in order to satisfy better the economy and society's needs. Co-operation with private sector businesses was consolidated. Furthermore, Romania intended to ensure a steady correlation of national R&D programs with European ones.

The second national plan (NRDI - 2007-2013) was based on a series of foresight exercises aimed to defined the overall research objectives and ensure their alignment with the ones of the Lisbon Strategy. Key features of the strategy were:

- development of human resources for research;
- integration of Romanian researcher into the ERA; and
- improving the participation in transnational programmes.

It is the main instrument for the implementation of the National RDI Strategy 2007-2013, introduced the following objectives, which focused especially on NIS challenges:

- increasing the number and performance of researchers;
- developing research capacities;
- achieving high scientific and technologic results;
- improving economic competitiveness;
- growing the ability of innovation, technologic development; and
- supporting institutional performance.

After a long period of a declining R&D intensity (from 1% in 1990 to 0.39 % in 2004), Romania increased the total expenditure for research, in order to catch up with the objectives established in the Lisbon Strategy. The Budget Law for 2006 stated that the public expenditure for R&D would reach, in 2006, 0.38% GDP – almost double the previous year level while the budget project for 2007 stipulated a percentage of 0.56% of GDP for R&D activities.

The main national programmes in relation to FP6 themes were as follows:

- MATNANTECH - Program for New Materials, micro- and nano-technologies (2001-2008) - 7.54% of the NPRD funds in 2005 – €4.39m in 2005).

- AEROSPATIAL - Programme for Technologies in Aeronautics and Space field (since 2006 - 6.4% of the National Programme for Research and development in 2006, RON 16m – €3.59 in 2005).
- AMTRANS – Programme for Civil Planning and Transports (2005 - 8.34% of the total budget of the National RDI - €4.64m in 2005).
- VIASAN – Program for Life and Health (7.01% of the total budget of NPRD in 2005 – €3.91m in 2005).
- BIOTECH - Programme for Biotechnologies (since 2001, 7.1% of the National Programme for Research and development in 2005 - €4 m in 2005).
- MENER - Programme for Environment Energy and Resources (Managed by Polytechnic University of Bucharest, 6.45% of the amount funds of NPRD in 2005 – €3.85m in 2005).
- CORINT – Program for International Cooperation and International Partnership (since 1999, Ministry of Education and Research 2005 - 4.78% of the total budget of the National RDI Plan – €4.26 m in 2005).

The main actors in the Romania Science and R&D policy landscape are as follows:

- the Ministry of Education and Research (MER);
- the Ministry of Finance; and
- National Authority for Scientific Research (ANCS).

The Romanian R&D system was then still fragmented. There were research institutions of the Academies, former industry institutes (most of them have been recently privatised), universities and few local private R&D bodies formed spontaneously with own resources. R&D was performed mainly in Research Institutes that consisted of a large number of sector-based organisations performing applied R&D.

The main actors relevant to the FP6 ERA-NET scheme were as follows:

National Authority for Scientific Research (ANCS)
Established in 2005, The National Authority for Scientific Research exercises the responsibilities of the state for research and development and carries out activities related to scientific research and technological development. The Authority has:

- a political function: to present and unify political points of view regarding research, development and innovation;
- a strategic function: to plan strategically and ensure the basis and implementation of policies in the research, development and innovation field;
- an administrative function: to foresee, plan, allocate, supervise and evaluate the use of resources for the implementation of policies in the research, development and innovation field; and
- a function of policy monitoring, evaluation and control in the research, development and innovation field.

ANCS implemented the NRDI strategy by co-ordinating the programmes carried out through projects. The projects were realised by national organisations directly or by active participation in international programmes.

The national programmes were financed in most cases by public funds, but also by private ones (co-financing), depending on the type of programme and organization.

ANCS inherited the programme dedicated to international cooperation started in 1999. Part of the programme entailed the management of 15 bilateral cooperation programmes. In 2002 it represented 10% of the budget of the NRDI plan, less than 5% in 2006.

The international programmes (FP6, FP7, Eureka, ETP, JRC, EUREKA, and bilateral cooperation) were financed by means of Romanian contributions from public funds to the programmes of the international organisations or by applying the international co-operation agreements settled at Governmental or institutional level.

Since Romanian accession in 2007 a new type of programme was financed by structural funds, in order to reach the community goal of increasing national competitiveness at the European development strategy level.

87% of the public budget for research was channelled through ANCS to fund research projects according to the priorities of the second national plan.

Centrul National de Management Programe (CNMP)

National Centre for Programme Management (CNMP) was created by in 2004 by the Ministry of Education and Research. At that time the decision was unconnected to the existence of the ERA-NET scheme. To engage in the ERA-NET scheme the Programme Management Unit International Partnerships was created. After 2004, the CNMP was involved as a partner and was acting as a funding agency in ERA-NETs under ERA-NET Scheme/FP6 and FP7, Art. 169 and Joint Technology Initiatives. International projects were coordinated within the Programme Management Unit International Partnerships.

The CNMP's remit was as follows:

- Conducting scientific research programs, technological development and / or innovation, funded partially or entirely Ministry of Education and Research,
- Lead and manage other programmes targeted at research and innovation, with funding from sources other than those of. Ministry of Education and Research,

CNMP led and monitored the following programmes:

- CORINT - international cooperation and partnership;
- ESTROM - Environmental Science and Technology in Romania;

CNMP managed modules of the Centre of excellence in Research (CEEX):

- CEEX M1 - Biotech - "Biotechnologies"
- CEEX M1 - INFOSOC - "Information technologies and communications;
- CEEX M3 - Promotion - Promotion of participation in the European and international research.

CNMP managed Programme 4 - "Partnerships in priority areas", the programme was structured around the new directions of research:

- Information Technology and Communications;
- Energy;
- Environment;
- Health;
- Agriculture, food safety and security;
- Biotechnology;
- Materials, processes and innovative products;
- Space and security;

- Research Socio-economic and humanities.

The extent of the involvement in ERA-NETs of the CNMP was as follows:

- Life Sciences: NEURON, ERA IB.
- Environment: EUROPOLAR, URBAN NET.
- Industrial Technologies and SMEs: MANU NET, MNT.
- Energy: FENCO – ERA, URBAN NET.

The involvement of the CNMP in ERA-NETs was recent for NEURON and EUROPOLAR where the agency had only been involved in the implementation of joint calls. As for ERA-IB the CNMP had been involved since the beginning of the ERA-NET. As evidenced by the list above, the CNMP has not one but many thematic focuses and is very relevant for funding, managing and implementing joint actions in partnerships with research institutes.

In the specific case of EUROPOLAR, the corresponding national programme was not very much aligned to the thematic area. The national scientific competencies and facilities were driving the focus of the research and research institutes had in mind to develop and design their own special programme.

Romanian Space Agency (ROSA)
The national coordinating body of the space activities is the Romanian Space Agency (ROSA). It is an independent public institution under the auspices of the Ministry of Research and Technology (actually, the Ministry of Education and Research)

The missions of ROSA are to promote and coordinate development and national efforts in the field, and, as a Government representative, to promote international cooperation. In particular, ROSA is authorised to establish research and development centres oriented on specific objectives of the Romanian Space Programme. ROSA is developing its own research and development projects.

One of the ROSA´s main responsibilities is to coordinate and integrate the activities of the national space research and development programme. In cooperation with the Science Council for Aeronautics and Space of the Government's Advisory Board for Research and Development, the public financing body, ROSA coordinates projects towards: basic space science, space structures, technologies, microgravity, communications, information, education, Earth observation and remote sensing applications, life sciences and medicine.

On behalf of the Government, ROSA is the national representative in the cooperative agreements with international organizations, such as European Space Agency (ESA) and Committee on Space Research (COSPAR), as well as bilateral governmental agreements. Together with the Ministry of Foreign Affairs, ROSA is representing Romania in the sessions of the United Nations Committee on the Peaceful Use of Outer Space (COPUOS) and its Subcommittees.

The Romanian Academy (AR)
The Romanian Academy is a public body, structured into 14 specialised scientific departments, covering both technical and basic sciences, as well as socio-economic and humanistic research fields. The institutional network conducted by the Academy includes 65 research institutes and centres in the 14 mentioned research areas. Out of these, seven institutes belong to the economic research department. The Romanian Academy participated in FORESOCIETY ERA-NET.

Polytehnica University of Bucharest (PUB)
University Politehnica of Bucharest co-ordinated the National R&D Programme "New materials, Micro and nanotechnologies – MATNANTECH" (2001-2008). The focus of the National R&D Programme "New materials, Micro and nanotechnologies – MATNANTECH" was: new materials (composites, biomaterials, powders, micro and nanotechnologies, etc). MNT ERA-NET was aligned to national priorities (i.e. integration in European Research Area) and more particularly to the thematic domains of the MATNANTECH Programme.

At the time of the ERA-NET scheme launch, Polytehnica University of Bucharest (PUB) was not already involved in transnational R&D cooperation but only in academic bilateral Co-operation through FP5, FP6, FP7. The PUB did not participate in any other ERA-NETs in the theme other than MNT ERA-NET.

1.2 Motivations for joining ERA-NET and set up

With regard to the ERA-NET scheme, the Romanian state provided full political support to the participation of organisations belonging to the National research landscape. The scheme was seen as a practical instrument to coordinate national policy with the ones of the ERA and thus foster deeper European integration. The main rationale was to align national scientific policy to the Framework Programme (e.g. in terms of thematic alignment of National Programme). At organisational level, a secondary rationale was to establish a network and build new relationships with funders from other countries.

Specific research organisation rationale is highlighted below:

National Authority for Scientific Research (ANCS)
Before FP6, Romania was only involved in transnational cooperation through bilateral agreements and this across all thematic areas. At that time, Romania had particularly good relationships with Austria, Germany and Greece. The rationale for entering in the ERA-NET scheme was to further exploit transnational cooperation opportunities, extend bilateral agreements and move on to the multilateral level. Before FP6, Romania was involved in FP5 with mixed results. Special measures of the European Commission (e.g. launch dedicated calls for NAS) helped Romania to increase its participation in FP5 projects.

Centrul National de Management Programe (CNMP)
For a management structure still in its early years, the ERA-NET scheme provided the opportunity to network with and build a community of funding agencies in Europe. The part of most of the transnational projects funded in Romania could not have been funded otherwise. There was simply no appropriate partner for these themes in Romania. With regard to joint calls, thematic areas like Environment (climate change) and Life Sciences (Neuro sciences) were topics of interest of the Romanian Scientific community and areas which it had been already involved in, performing research in.

Polytehnica University of Bucharest (PUB)

The rationale for joining this specific ERA-NET was to establish long-term cooperation and to increase visibility of the Romanian R&D teams. The MATNANTECH Programme had flexibility to participate in ERA-NET related activities. Activities like the dissemination of the best practice, the transnational call matched research offers and industry needs.

Romanian Academy (AR)

Before the start of FORSOCIETY, the ERA-NET participant was involved in several transnational projects under FP5 (Idealist-FP5). The AR was also involved in the preparation of the FORSOCIETY ERA-NET. At National Level the AR had conducted and supported a number of foresight exercises in the field of research policy. There was a clear strategy of the AR to develop an expertise in this area through international cooperation and transnational R&D projects. Hence, the theme of the ERA-NET was very much aligned to the national priorities in this area.

Romanian Space Agency (ROSA)

Until 2006, Aerospatial, the National Programme relevant to AIRTN, included aerospace per se. After 2006, Aerospatial included space and security to better align to FP7 main themes and foster participation of Romania in the European research framework. The objectives of the ERA-NET and the ones of ROSA in this field of research were very much aligned. ROSA was already active in International projects. In addition, there were a lot of transnational agreements in place, mainly because of the very international nature of the field. In addition, AIR TN activities fitted quite well with current national programme activities.

2. Overview of participation

2.1 Extent of involvement in the ERA-NET scheme[215]

Romania participated in a dozen of ERA-NETs with Environment & Energy, Life Sciences, Industrial Technologies and SMEs representing the majority of their participation in ERA-NETs. This was broadly in line with the budget allocated to national programmes in these thematic areas (e.g. respectively 6.45%, 7.1% and 7.54% of the 2005 national R&D budget)[216].

In terms of contribution to joint calls or joint programmes, Romania was the second contributor to joint calls after Poland among the EU12 Member states. It contributed to more than €2m to joint calls in total. Almost all of Romanian joint call contributions were channelled through virtual common pots. Above 75% of Romanian contributions were made in the Industrial Technologies and SMEs theme[217].

[215] Refer to coordinator survey results in the annexes (Tables 1 & 2)
[216] Refer to section 1.1 Strategic planning and role of ERA-NETs in the country
[217] Refer to coordinator survey results in the annexes (Table 3)

3. ERA-NET processes and positioning

3.1 Inputs into the ERA-NET scheme

Overall, EC funding covered all the time and resources Romanian organisations invested in participating in their respective ERA-NETs. In terms of funding contributions and as stated above more than €2m in joint calls were invested of which a significant part in the Industrial Technologies and SMEs area.

The extent of the effort related to ERA-NET participation and contributions is detailed below:

- ANCS hired one or two persons full time or part time (the so-called additional personnel), on different periods of time during the lifetime of the project to work on SEE ERA-NET. This/these person(s) required additional help at various stages of the ERA-NET. Romania participated in the pilot joint call under work package 5 (funded amounted to €35k via a mixed mode virtual and common pot). A joint multilateral call was intended to be launched under work package 6 in 2008. However, the consortium decided to transfer it on the SEE ERA NET Plus project.
- CNMP was entitled up to 15% of the budget of each ERA-NET for managing ERA-NET participation. The rest of the EC funding went to research performing organisations.
- In ERA-MNT, the Romanian participant estimated that 60% of one FTE was required to participate in this ERA-NET over the 2005-2008 period. This did not change over the period. PUB had limited flexibility in the financing transnational projects due to legal constraints. The funding was released to fund relevant project in the thematic area and meant to finance Romanian beneficiaries (e.g. via a Virtual Pot only).
- In FORSOCIETY, EC budget was sufficient to cover the cost of participation of the Romanian Academy. Forsociety has not made a call as a result of the ERA-NET. A call under FP7 relevant to a foresight exercise in SSH was in preparation at the time of the interview.
- ROSA participated in AIRTN through its existing structure (e.g. with personnel already in post). No additional resources were required for participating in the Coordination Action. No joint call was made in this ERA-NET.

3.2 Participation in joint activities, calls or programming

Other than joints calls, Romanian participants were mainly involved in action plans for taking up common strategic issues and preparing for joint activities, the coordination / clustering of ongoing nationally funded research projects and participation in joint calls. The activities performed by ANCS and CNMP tended to focus on joint programming and joint calls while other activities have been performed in conjunction with research institutes. The interviewees or the material gathered highlighted the following:

- ANCS participation in SEE ERA-NET involved networking, gathering information, coordinating and supporting RTD activities conducted at bilateral level and with a view to structuring and expanding ERA to the West Balkan countries. A pilot joint call was launch and a real call is expected to be launched as part of SEE-ERA-NET+ in 2009.

- The CNMP was mainly involved in the development of the ERA-NET joint calls. For instance it funded two joint calls NEURON (2008) and EUROPOLAR (2009). In order to do so it participated in foresight workshops to identify the subject of the

calls. The participation in other joint activities of the work programme was delegated to associated research institutes.

- For Rosa and its participation in AirTN, the ERA-NET activities fitted quite well with national work programme. Rosa mainly participated in workshops to identify joint activities and topics of joint calls.

- In FORSOCIETY ERA-NET, The Romanian Academy was coordinating 60 research organisations from a large spectrum of research activities and promoting an increased link of the research with the real societal needs. Romanian Academy also conducted a Delphi survey for the foresight project "Information Society – Society of Knowledge". Finally, Romanian Academy had taken part in the development of Training Schemes and Foresight Tool-kit, building on its expertise in this area and considered that it was a very useful contribution of the project for the foresight practitioner and researchers in Romania.[218]

3.3 Lessons learnt and best practice

Lessons learned and best practices from interviewees are summarised as follows:

- ANCS and CNMP understood how to make the best use of national legal framework to fully participate and engage the research community in transnational activities and projects
- ERA-NETs were a mean to gain reputation and visibility at transnational level (e.g. ROSA)
- For CNMP, multiple engagements in ERA-NETs have brought a lot of benefits. These multiple engagements made sense for managing programmes under which CNMP came in support of Research performing organisations.
- More ambitious research objectives could be achieved through transnational cooperation by for instance joining forces and funding.
- With regard to joint calls, advance planning, identification of and notification to researchers were key to ensure adequate participation of the national research community. Defining tightly and narrowing down the topic of the call could help avoiding oversubscription of the call.
- The return on experience relative to joint call applications from the research community was essential. Follow up tools need to be in place to reach conclusions on what happened at national level, consortium level, and ERA level.
- IPR agreement should be in place at consortium level before the start of the research project.

One example of a direct application of lessons learnt at national level has been mentioned as follows:

- Evaluation of calls has improved as a result of FP6 ERA-Net (e.g. improved evaluation practices), reliance on foreign evaluators, online evaluation (e.g development and monitoring at long distance. These principles have been applied to national programmes and at regional level.

[218] http://www.eranet-forsociety.net/ForSociety/partners/AR.html

4. ERA-NET benefits

4.1 Direct and indirect benefits to ERA-NET national policy stakeholders and participants

Overall, Romanian participants derived direct and indirect benefits from ERA-NET participation. Main benefits were a better integration of the Romanian Science Community in the ERA, networking benefits leading to more opportunities for collaborative research and the enhanced visibility of Romanian research teams.

The direct and indirect benefits of ERA-NETs for PUB were as follows:

- PUB was able to engage in more transnational R&D cooperation activities. As a result it increased the visibility of Romanian R&D teams in the Industrial Technologies and SME field. The learning, new knowledge, new practices and new management practices gain through ERA-NET participation generated efficiencies of implementation and increased the proficiency in the management of new projects and of the R&D activities
- Networking activities led to long term co-operation, and more links with international partners.

The direct and indirect benefits of ERA-NETs for AR were as follows:

- FORSOCIETY ERA-NET fostered deeper integration with other Member States
- Romanian academy (AR) has acquired more visibility internationally in the field of foresight.
- The ERA-NET raised awareness on how to use foresight in Romania
- A centre for Foresight in Romania was created as a direct results of ERA-NET participation

Direct and indirect benefits of ERA-Nets for ROSA were as follows:

- Rosa gained valuable experience and insights in the field of the ERA-NET.
- One Joint call involving Romania outside the ERA-NET has taken place and may be attributable to this ERA-NET

Direct and indirect benefits of ERA-Nets for CNMP were as follows:

- CNMP experienced Networking benefits with funding agencies as it learnt about and application of good practices

Direct and indirect benefits of ERA-Nets for ANCS were as follows:

- ANCS developed its knowledge and experience through ERA-NET participation (Coordination of national programmes to avoid duplication of research, …)
- It benefited from networking opportunities with funding agencies and ministries (e.g. opportunities to extend the number and nature of bilateral agreements / schemes)
- More specifically, involvement in SEE ERA-NET contributed to the strengthening of the ERA in west Balkan countries

4.2 Direct and indirect benefits to ERA-NET beneficiaries

Limited evidence has been gathered on benefits to ERA-NET beneficiaries. However, interviewees mentioned the following benefits:

- Overall, ERA-NET provided Romanian scientists with good opportunities to learn about the principles and constraints of transnational research.
- The Romanian participants in FORESOCIETY seemed to have benefited personally from the ERA-NET and learned from joint activities. Learning points have been disseminated and put into practice across the Romanian research landscape in the form of Foresight exercises. This led to the creation of the centre for Foresight within the AR.
- In the field of Neurosciences, NEURON mobilised the Neuroscientists from Romania and abroad (e.g. through the Romanian Diaspora) to structure this science field at national level and explore opportunities for collaboration.

5. Impacts on national and international R&D policy and programming

5.1 Impact on national R&D policy

The impact of the scheme on the Romanian R&D policy has been somewhat limited. As stated above, the rationale for Romania's participation in ERA-NETs was part of the much broader strategy for accessing the EU. Romania was fully committed to support the ERA objectives in view of becoming a full member of the European Union. Hence, it took the decision to participate in as many ERA-NET as possible.

ERA-NETs were seen as a conduit to coordinate Romania R&D policies with the ones of the ERA in an easier, faster and more concrete way.

However, direct evidence of impact on Romanian R&D policy-making can be found in the fact that the ERA-NET scheme provided the Romanian State with the development of a new funding instrument for R&D projects.

Anecdotal evidence from the interviewees is as follows:

- For the CNMP "It is too early for assessing the impact of the FP6 ERA-NET scheme at national policy level."

5.2 Impact on national R&D programming

ERA-NET scheme appeared to have had an influence on national R&D programming, although quite limited. Romanian national R&D programmes were already aligned with the commission's Framework Programme or aligned to its objectives. Coherence with European R&D strategy and key policy principles was a cornerstone of the Romanian strategy for accession. Feedback gathered by the interviewees is rather mixed but mentions some level of influence, for instance:

- At the policy level, ERA-NETs were and are still considered as "a privileged instrument for joint programming". It was and still is a relevant policy instrument which has had an impact on the coordination of national programmes.

- PUB, responsible for the MATNANTECH Programme when the ERA-NET scheme started was the first Romanian participant in the ERA-NET scheme and its first contributor in terms of funding for joint calls. After joining the MNT ERA-NET, Romanian Authorities participated in other 12 ERA-NET projects in different thematic areas. MNT ERA- NET provided visibility of Romania R&D teams in the Industrial Technology and SMEs thematic area.

- With regard to the impact of AIRTN, the Aerospatial national programme could not change much during the period of FP6. The R&D strategy was approved and there was a limited extent to which external elements could influence national R& D programming. The perspective of FP7 and of the EU accession had a much bigger impact on national programming than the FP6 ERA-NET scheme. For instance, FP7 have helped reducing duplication within programmes at national level and financing projects on the basis of excellence.

5.3 Opening up on national R&D programming

Under FP6, the preference and policy of the Romania state was oriented towards virtual pots. The Romanian scientific community was not prepared to compete at European level

and match the highest standards. Real common pots were a complicated system which did not suit Romania's policy and legal system since Romania could not always recover all the funding costs in case of a joint call. Specific approval from the Ministry of Finance was required to finance foreign researchers or organisations and the "principle of just return" applied. However the ERA-NET scheme appears to have had an impact on the coordination and internationalisation of Romanian R&D programmes:

- MNT ERA-NET had an influence on the opening up of MATNANTECH programme since programme activities were only confined to Romania before FP6.
- AR's involvement in the ERA-NET led it to look for opportunities to engage further in transnational, European and international R&D cooperation after the end of Foresociety. The AR has tried to set up a European Economic Interest Group specialised on Foresight, without any results to date. The AR seems keen to continue being involved in such transnational R&D activities in the future.
- Romania participated in one joint call with Austria and Germany as a result of bilateral agreements in the transport theme. AirTN may have played a role in this since it has helped the participants of these countries understand their respective programmes and funding schemes.
- Before the ERA-NET scheme, Romania could not fund foreign researchers. Over the period scientific visas have been introduced for foreign researchers to come and perform research in Romania. The extent to which this was due to the ERA-NET scheme is uncertain.
- SEE ERA-NET has participated in the opening of bilateral schemes with focus on the West Balkan region across the ERA. Romania participated in the pilot joint call. A joint multilateral call was to be launched under workpackage 6 in 2008

5.4 Impact on the structuring of national or international research fields

FP6 rather than the ERA-NET scheme had an impact on the structuring of the national research field and its integration in the ERA[219]. However, the examples of a structuring effect of the national or international research fields were best evidenced by the Romanian participation in SEE ERA-NET and NEURON.

- SEE ERA-NET has had some structuring effect for the scientific communities of participant countries. Romania for instance was able to extend cooperation from the bilateral level to the multilateral level. Building on the particular network created, multilateral R&D projects were established with research teams from all 17 countries members of the consortium, in different variable geometries. In this way the Romanian research teams had the opportunity to co-operate with countries with which there was no bilateral S&T governmental Agreement concluded at that time.. The ERA-NET has participated in the opening of bilateral schemes with focus on the West Balkan region across the ERA.
- As already mentioned above, NEURON mobilised the Neuroscientists from Romania and abroad (e.g. through the Romanian Diapora) to structure this science field at national level and explore opportunities for collaboration.

[219] For instance: The thematic focus of the MATNANTech programme was the same than for MNT-NET. The reason being that in view of EU accession the strategy of the Romanian state was to structure the research landscape in thematic areas matching the ones of the EU.

6. European Added Value, relevance and efficiency

6.1 Additionality of the ERA-NET scheme

Additionality of the ERA-NET scheme is demonstrated by the strengthening of relationships and better integration of Romanian scientific community within the ERA. However the extent to which this was directly attributable to the FP6 ERA-Net scheme could not be verified.

Examples of additionality were as follows:

- For CNMP, a management structure still in its early years, the ERA-NET scheme provided the opportunity to network with and build a community of funding agencies in Europe. The part of most of the transnational projects funded by the organisation could not have been funded otherwise. There was simply no appropriate partner for these themes in Romania.
- In FORESOCIETY, the AR and some participants expressed an interest for building on the success of this ERA-NET and go beyond ERA-NET cooperation by creating a European economical interest group. The aim was to provide foresight-related services at national level. However this did not materialised at transnational level although at national level AR added a new competence via the creation of a Centre of Excellence for Foresight.
- In the field of Air Transport, one Joint call involving Romania outside the ERA-NET has taken place and may be attributable to AIR TN.
- In SEE ERA-NET, bigger and more ambitious research objectives were achieved through larger networks of research teams that could not have been possible otherwise.
- In the Environment and Energy themes, most of the transnational projects funded in Romania could not have been funded otherwise. There was simply no appropriate partner for these themes in Romania.

6.2 Economic efficiency and relevance

The vast majority of Romanian participants viewed that their participation in ERA-NETs as worthwhile. In addition, Romanian participants seemed to be satisfied with the overall level of transnational cooperation within this ERA-Net.

Feedback on economic efficiency and relevance from the interviewees was as follows:

- According to the CNMP, the participation in the FP6 ERA-NET scheme has been worthwhile. The FP6 ERA-NET scheme was seen as an opportunity to be involved in transnational projects. In the future, the CNMP wishes remain to remain involved in such schemes. However, participation in the next generation of ERA-NETs (e.g. ERA-NET+) might be difficult because of the size of the investment required and the funding mode ("this is too much of a risk for small countries").

- According to PUB, overall the benefits and impacts generated through ERA-NET participation outweighed the cost of participation. Other alternative ways to engage in transnational R&D cooperation consisted in bilateral cooperation and

participation in EU Framework Programmes' sponsored projects.PUB will not be part in the next generation of ERA-NET (ERA-NET+)[220].

- Overall, for ANCS, the Romanian participant in SEE ERA-NET, it was a beneficial exercise in terms of policy coordination and experience in trans-national cooperation (e.g. from the point of view of the opening of bilateral schemes).

[220] Several reasons underpinned this statement: MATNANTECH Programme is closed at this moment, the participation in the ERA-NET plus will be made by the CNMP the coordinator for R&D activities, universities are not eligible in ERA-NET plus.

7. Annexes: Stakeholders and materials consulted

This section features the outline of stakeholders consulted in given country and the material, web site consulted.

Participant organisations' consulted and website:

National Authority for Scientific Research (ANCS) **-** http://www.mct.ro
Centrul National de Management Programme - http://www.cnmp.ro/
Romanian Academy **-** http://www.acad.ro/

ERA-NET web sites

Forsociety Website **-** http://www.eranet-forsociety.net/ForSociety/index.html
AIRTN web site- http://www.airtn.eu/
ROSA web site- http://web.rosa.ro/rosa.htm
SEE ERA-NET web site - http://www.see-era.net

Other Materials

- "Report 2006 – Government policies in the field of R&D and Innovation in Romania "
- "Policy-Mix_countryReview_RO.pdf"

8. Annexes: Participant survey results

Five responses to the participant survey were received from Romania. This is not enough to be able to confidently report on findings from this survey as part of this report.

9. Annexes: Coordinator survey results[221]

The following tables show information from the coordinator questionnaire.

Table 1 - ERA-NET participation by theme

Theme	Number	Percentage
Transport	1	8.3%
Life Sciences	3	25.0%
Environment	4	33.3%
Fundamental Sciences	0	0.0%
INCO	1	8.3%
Industrial Technologies and SMEs	2	16.7%
Energy	0	0.0%
Social Sciences and Humanities	1	8.3%
Total	**12**	**100%**

Romanian organisations were most likely to participate in Environment and Life Sciences ERA-NETs.

Table 2 - Joint call participation by theme

Theme	Number	Percentage
Transport	0	0.0%
Life Sciences	0	0.0%
Environment	2	33.3%
Fundamental Sciences	0	0.0%
INCO	1	16.7%
Industrial Technologies and SMEs	2	33.3%
Energy	1	16.7%
Social Sciences and Humanities	0	0.0%
Total	**6**	**100%**

Romania participated mainly in Industrial Technologies and SMEs and Environment joint calls.

[221] The Coordinator survey covered all 71 ERA-NETs - although in case of 7 ERA-NETs, the information collected dates back from the 2006 survey. 59 ERA-NETs provided information about the calls they have done over the period (NB: it is likely that not all ERA-NETs have reported call information in an exhaustive way). 49 ERA-NETs provided a breakdown of funding contributions at country level for calls (NB: this is likely to be an underestimate as not all ERA-NET coordinators knew this information)

Table 3 - Financial contribution to joint calls by theme

Theme	No contributions	€ virtual	€ common	€ mixed	Total
Transport	0	-	-	-	0
Life Sciences	0	-	-	-	0
Environment	2	300,000	-	-	300,000
Fundamental Sciences	0	-	-	-	0
INCO	1	-	-	35,000	35,000
Industrial Technologies and SMEs	2	1,740,000	-	-	1,740,000
Energy	1	150,000	-	-	150,000
Social Sciences and Humanities	0	-	-	-	0
Total	**6**	**2,190,000**	**0**	**35,000**	**2,225,000**

Most of Romanian joint call contributions were channelled through virtual pots.

ERA-NET EVALUATION

SD12: Country Report for Norway

The following document provides the structure for the country report on ERA-NETs in Norway.

The content of this report has been informed by qualitative interviews and the findings of two surveys. The interviews were undertaken with ERA-NET stakeholders[222] in 15[223] of the 40 countries taking part in the scheme. The number of interviews by country ranged between handfuls in some countries to a couple of dozen in other countries. The same interviewees were chosen to represent thematic areas – the number of interview per theme ranged between 12 and 25 depending on the theme. The surveys were aimed at all ERA-NET coordinators and participants and responses were received by approximately half of these, although responses varied across themes and countries. In addition, and where relevant, the report has been informed by reviews of documents and websites.

Regarding the contents of this report it is important to remember that the findings described within cannot be regarded as a definitive or representative view of all activities within ERA-NETs in this country. Because the interviews were based on a narrow selection of countries and representing a minority of ERA-NETs in each theme, the contents of this report should very much be regarded as a case study that provides a view of the experience. This may also explain why the findings from the qualitative interviews are sometimes at odds with the findings of the surveys which were more inclusive and wide-ranging.

Where possible in the report, the source of evidence is indicated either as coming from one of the surveys or the field interviews.

[222] Stakeholders included National Policy Stakeholders, ERA-NET Coordinators and Participants, and ERA-NET beneficiaries.
[223] The countries were: Austria, Croatia, Finland, France, Germany, Italy, Netherlands, Norway, Poland, Portugal, Romania, Russia, Slovenia, Turkey, and UK,

Contents

0. Executive Summary - Overview

- Norway has participated in a great number of ERA-NETs, altogether up to 45.
- The dominant participant from Norway was The Research Council of Norway (RCN) which participated in 40 of the ERA-NETs that involved Norwegian participation.
- The Norwegian research system, in particular the Norwegian research administrative system, reaped benefits from ERA-NET participation in the form of practical experience of transnational cooperation.
- Norwegian researchers benefited from Norwegian participation in the scheme through greater access to transnational networks.
- RCN now (2008) takes part in 34 ongoing ERA-NETs. Some ended naturally and new ones developed.
- An evaluation by the RCN concluded that the ERA-NET participation had an impact on the internationalisation of its programmes and the budgets of those programmes that participated in Joint calls; the way in which calls and proposal evaluations were conducted in some programmes; and on administrative routines
- There has been a direct economic benefit according to calculations from the Norwegian research council
- The ERA-NET Scheme was not considered as the main alternative for engaging in international cooperation by Norwegian participants.
- Lessons were primarily learned in relation to improved administrative procedures, how to build up calls, and how to evaluations and panels.

Q1 – Impact on Research Landscapes

Based on the information collected during the fieldwork it is clear that the ERA-NET scheme has impacted upon the Norwegian research landscape although this impact has been somewhat limited.

Before FP6 Norway had already a long experience of engaging in transnational research cooperation and Norwegian participation in a great number of ERA-NETs is an indication of the Norwegian interest in transnational research cooperation in general and European research cooperation in particular.

The Norwegian Research Council has wide experiences of coordination and participation in multi- and bilateral research cooperation, so the impact of the ERA-NET scheme participation was limited in terms of generating new multinational cooperation impacts.

Impact of participation in the scheme was particularly clear in relation to changes in administrative processes generated. Impact was much more evident in this area than on the wider policy or programming levels, simply because it was nice and without extra costs to learn and it did not interfere with the national programme decisions.

Q2 – Structuring effect on specific research areas or fields

Norwegian participation in the FP6 ERA-NET scheme has generated very limited structuring effect, if any. There have nevertheless been national follow-ups to specific ERA-NETs, for instance in the area of Social Science and Humanities.

Thematic research policy and programming in Norway today (2008) is more in favour of international programming that at the outset of the ERA-NET scheme although national programmes still dominate.

Some ERA-NETs have been of greater interest for ongoing Norwegian research than others and some have worked more successfully than others. The ERA-NETs within Social Science have had an impact, as has the ERA-NETs within polar research. ERA-NETs aimed at fomenting innovation have had less of an impact. Over time, influenced through participation in the ERA-NET but largely based on national interests and concerns, Norway has increased its investment into climate and environment as strategic priorities.

Going forward, Norway intends, according to all interviewees (both at policy and participants level), to participate in ERA-NETs aligned to Norwegian interest and in those where Norway has strong researcher capacity. This was referred to as being the official position of Norway that only could be changed by a Parliamentary decision[224].

The RCN intention was to follow all European calls where Norway might have an interest, but so far Norwegian money has primarily been directed to (and intended for) Norwegian beneficiaries. But there is an impact on national priorities and there might come an impact, not yet seen, on national policies regarding opening to foreign researchers.

Q3 - Direct benefits and indirect benefits

Norway did maximize the outcomes of their participation according to Note from RCN November 2008.

Norwegian researchers have benefited from the scheme through increased access to greater transnational networks. Other direct and indirect benefits generated through the ERA-NET scheme overall, or particular ERA-NETs in Norway, had been limited according to most interviewees at both levels. This message was repeated several times in the interviews, and it shows a perception of limited impact that is a bit contrary to the later note from the RCN-administration where the focus is on the economic benefits of Norwegian participation in ERA-NETs.

Within the social science programme NORFACE as well as within all the other ERA-NETs Norway participated in, all participants gained experience about practices and research activities in other countries. In that way the Norwegian research system, the Norwegian research administrative system in particular, benefited from involvement in the form of practical experience of transnational cooperation.

There has been a direct economic benefit according to calculations from the Norwegian research council, see below and see note from RCN from November 2008. The economic calculation presented in the November note was not known when the field work took place,

[224] Definitions of interest take place both at ministerial level, that is the policy level, and at the council level, while limitations or strength of research capacity dominantly take place at the level of the research council.

it has been presented later by the Norwegian research council (see this calculation in appendix).

> "A brief calculation suggests that the added value of taking part in Joint Calls is very high. By spending 12 MEUR on Joint Calls, RCN has connected Norwegian researchers and research institutions to international networks, high level competence, and scientific results worth 175 MEUR. This multiplies their investment by approx. 15".

Q4 – Opening up of national programmes

Based on the available evidence gathered, Norway's participation in the ERA-NET scheme or individual ERA-NETs has not opened up of Norwegian funding to non-Norwegians or allowed Norwegian R&D money to be put into common pots. However, there has been an impact so far as the issue of opening up of Norwegian research funding to non-Norwegians has been discussed inside the research council and to some degree with the ministries involved in the ERA-NET activities. As a result, this issue is therefore closer to becoming an issue to be discussed at the parliamentary level in Norway, where the decision at the moment lays. Every interviewee consulted as part of the fieldwork indicated that such as step would need a clear political decision at the level of Parliament (Stortinget) in order to materialise.

Q5 – Good practices

Lessons learned were primarily focussed on improved procedures for administrating calls and especially with regard to the evaluation of proposals. Lessons learnt have been embedded in codes of conduct, programme structuring, building up of calls, evaluations and studies, institutional web-sites, and some lessons have also been documented in publications about best practices.

1. Overview of participation

1.1 Extent of involvement in the ERA-NET scheme[225]

- Norway has participated in a great number of ERA-NETs. Altogether there has been Norwegian participation in 45 ERA-NETs.
- The Research Council of Norway participated in 40 ERA-NETs.
- The dominant Norwegian participant was The Research Council of Norway.
- Other Norwegian ERA-NET participants came from the Ministry of Transport and Communications, and Nordic energy research.
- The total EU contributions to Norwegian participants were 9 MEUR, of which 5 MEUR went to the RCN.
- RCN now (2008) takes part in 34 running ERA-NETs. Some of the ERA-NETS started under FP6 ended naturally, like NORFACE, FORSOCIETY, ETRANET, MNT ERA-NET; some of these continue into 2009 like FENCO, MARINERA and AMPERA, while others were introduced starting in 2008 as part of FP7.
- RCN did not coordinating any ERA-NET, but was Work Package leader in several.
- Norway expects to participate in several ERA-NETs under FP7.
- The RCN has taken part in joint calls in 15 ERA-NETs.
- The total budget for joint calls in those ERA-NETs was 170 MEUR of which the RCN contributed 12 MEUR.
- The administrative and management contribution from the RCN consisted of roughly 15-20 person months in total. This amounted to 1 person months for each joint call on average.

The areas that the Norwegian participation covered in terms of themes were numerous including: Social Sciences and Humanities, Fundamental Sciences, Energy, Environment, Life Sciences, Transport, New Materials, and Ocean and Coastal areas programmes (see appendix about RCN ERA-NET participation). Representatives of 8 of these networks were interviewed face-to-face as part of this exercise. Norwegian ERA-NET participation is shown in more detail in Table 23.

1.2 Landscape and legal entities participating in the scheme[226]

Among the Norwegian legal entities involved in the ERA-NET scheme, the Research Council of Norway (RCN) was the dominant one.

The research council is divided in three divisions for research funding:
- a division for science;
- a division for strategic priorities; and
- a division for innovation.

[225] See Table 23.
[226] See Table 19.

In addition there is a special section for international affairs. CO-REACH was linked to the section for international affairs; NORFACE was linked to the division for science; MARINERA, AMPERA and FORSOCIETY were attached to the division for strategic priorities, while FENCO, MNTERA and ETRANET were attached to the division for innovation. Only two of these ERA-NETs finished their work in 2007 (ETRANET and FORSOCIETY); the rest were still running in the fall of 2008.

In the interviews it became very clear the RCN had had ongoing interactions with all the relevant ministries supporting research funding via RCN, all together 15 different ministries, so an ongoing cooperation between the council and the ministries brought Norway to the situation that the country could participate in all the networks they were invited to and where Norway had a national interests. The national interest could be put on the joint agenda by the experts in the council administration or by agents from different ministries. RCN was administratively well equipped in order to fully participate in the ERA-NET Scheme. And Norway participated in all the ERA-NETs where one of the above mentioned agents of interest saw potential benefits of Norwegian participation.

The Norwegian research landscape has changed over the last five to ten years, after a structural reorganization of the council back in 1993. Although the trend towards greater transnational research cooperation and more strategic orientation started before FP6 and the ERA-NET Scheme were introduced, the following conclusion about their impact was mentioned in an evaluation from the RCN227:

"So far the ERA-NET participation has had an impact on 1) the internationalisation of our programmes and the budgets of those programmes that have participated in Joint calls; 2) for some programmes, the way in which calls and proposal evaluations are conducted; and 3) our administrative routines (financial reporting etc.). Certain programmes and priorities are stronger influenced than others…" (The examples mentioned in the report did not on for part of the ERA-NETs selected for qualitative interviewing during this exercise)...

[227] Forskningsrådet, EU RTD Department: Experiences with ERA-NET participation, Oslo. Notat 20.11. 2008

2. Strategic national context underpinning the ERA-NET participation

2.1 Strategic planning and role of ERA-NETs in Norway[228]

The strategic planning associated with the participation in the ERA-NET scheme prior to joining the scheme was well developed in Norway and developed further over time as well. In general the Norwegian participants felt better about the ERA-NETs, where they had participated from the beginning than ERA-NETs where they were invited to participate later on (and upon which they therefore had limited impact on the structuring). From the beneficiary perspective, in relation to most ERA-NET themes, there were qualified Norwegian researchers interested in these themes. Hence the political interest in participating in the ERA-NET Scheme was matched with interests within the research council and by Norwegian researchers.

Norway was invited to participate in building up of most of the ERA-NETs. In general they heard about all the ERA-NETs very early on either through personal contacts within DG Research - some based on former positions and contacts there - or directly from a representative of DG Research in Brussels coming to see the Norwegian research council or through already existing networks like the foresight network.

In general, Norwegians saw their participation in the different ERA-NETs as an opportunity to participate in European transnational exchange of information about research and to engage in new networks and not the least as a way to learn more about research programmes and research administrations in other countries all being potential cooperation partners.

One of the guiding principles of Norwegian participation from the beginning was that joint calls should 'give money back'. "We do not have so much money so we want to give them to others" was also the view expressed by national policy stakeholders. However, according to interviewees at all levels consulted, Norway wanted to be involved to get access to networks for further national cooperation and to learn from new research going on in the European research area.

2.2 Motivations for joining ERA-NET and set up[229]

One of the reasons for joining the ERA-NET Scheme was that RCN, when evaluated in 2001 by an international consortium230, got as a critical remark that RCN should be more open to processes of other countries and more involved in foresight activities for strategic reasons.

The main driver for participation, and here both policy stakeholders and participants agreed consistently, was to pursue Norwegian research interest. Among these, reinforcement of Norwegian strength regarding research capacities and research programmes as well as to be better informed about how to cooperate transnationally. Involvement in new research areas were not mentioned by anybody at any level as having been a driver.

Moreover, it was a policy decision, from the top policy level at the research council, to get experience in cooperation and administration at an international, trans-European level. The

[228] See Table 14 and Table 19.
[229] See Table 1.
[230] Forskningsrådet, EU RTD Department: Experiences with ERA-NET participation, Oslo. Notat 20.11. 2008

focus on exchange of information was not necessarily motivated by strategic reasons but based on wishes about learning and sharing of best practice.

"Visiting agencies in other countries to get to know how they work" was one of the motivations mentioned. Another interviewee highlighted that: "The most useful is the participation in the ERA-NETs as such."

Norway had experience with other transnational cooperation, and the ERA-NET Scheme was thus not regarded as the main alternative for engaging in transnational cooperation, although it was perceived as the most viable alternative to increase networking in some cases.

RCN invested effort into the setting up of structures to facilitate participation in the ERA-NETs. In general, the resources invested were found of value for those participating in the actual ERA-NETs, but also considered of value for Norwegian participation in future cross-national research activities. In addition to the human resources invested and the administrative and scientific motivation for this, it is concluded in a note from the Norwegian research Council, that the participation also economically were expected to be of value (see Note from November 2008 from RCN).

During the field work not much was said about how the policy-makers regarded the need by beneficiaries and how it might have evolved. In most cases it was too early to ask the beneficiaries themselves, since the joint calls were few and came relatively late during the FP6 period.

3. ERA-NET processes and positioning

3.1 Inputs into the ERA-NET scheme[231]

From the beginning of FP6, Norwegian administrative resources were invested into the scheme, and there was (according to interviewees) a relatively high degree of commitment to joint activities, calls or programming among the research council and among the ministries funding research activities in cooperation with the council. The level of financial contribution is outlined in more detail in Table 25.

Resources were set aside to support the scheme at the outset, especially in the form of manpower. Funding was also set aside for Norwegian participation.

Compared to Norwegian funding of other forms of intergovernmental research such as bilateral agreements, EUREKA, EUROCORES, FP Networks and ad hoc multilateral networks, there seemed to have been more of a limited opening when it came to the ERA-NETs.

To some degree there was in the council some flexibility to which existing programme funding could be diverted towards the ERA-NET scheme joint actions or activities, both in the shape of funding and human resources. In addition extra effort in terms of extra funding was inputted to cover Norwegian participation from the ministries interested in specific research activities and therefore interested in specific ERA-NETs.

3.2 Degree of involvement by national participants

The interviews indicated an active pattern of participation by the Norwegian ERA-NET participants. They became heavily involved in many ERA-NETS and were only peripherally involved in the smaller number of ERA-NETs for which they were invited to participate in later on (i.e. they joined late in the process). Norway did not coordinate any ERA-NETs, but were responsible for delivering workpackages.

The Norwegians self-assessment of their experience as participants in the ERA-NETs was that they saw themselves overall as having been well-prepared and well-functioning. At the same time (perhaps not unexpected) they lamented that some other countries had not been able to participate fully in the ERA-NET activities. One study (referred to in an internal document) estimated that 90% of all partners participated in the calls, but that those few cases in which countries had participated in discussions around a call but then weren't able to participate in the financing of the call, were not popular and had resulted in a kind of distrust that had lead to the questioning of partners early on in cooperation whether they were able to finance.

The strategic considerations driving the involvement in, and funding of, Norwegian participation in the ERA-NET scheme was to participate allow Norway to gain experience. This was mentioned by both policy and participant levels.

3.3 Participation in joint activities, calls or programming[232]

[231] See Table 2, Table 3, Table 14, and Table 25.
[232] See Table 4, and Table 24.

The Norwegian research council has participated in most of the calls within the ERA-NETs they have been participating in and the involvement has been based on the items listed below.

The Norwegian national programming was limited in enabling funds for joint calls to be diverted into the ERA-NETs, when there were requests and discussions of a common pot, but has participated in most joint calls with a Norwegian economic input (see appendix).

The Norwegian administrators and participants stated that they were critical of countries that were not able to find national funds to put into the calls, and when this happened it influenced their attitudes towards those countries and their participants in a broader sense.

When it came to the national/organisational position on contributing to a common pot for joint calls/actions between existing programmes or through a joint R&D programme, Norway was not willing to open up. Research council's positions were the same regarding mutual opening up of R&D programmes to non-resident researchers. Any changes to allow foreign researchers to benefit from national R&D funding could only take place at the parliamentary level. Discussions between policy and programming people during the ERA-NET may mean that this is now an issue which Parliament will deal with in future.

Norwegian funding of joint calls have mostly been done through virtual pots. Participation in a common pot only occurred in one of the ERA-NETs the Norwegians were involved in.

In calls with virtual pots the network members were involved in:

- Common guidelines albeit with national appendices;
- Common proposal (again with national appendices);
- Common evaluation (there was some learning to do);
- Decisions were taken primarily in joint meetings, again respecting national rules;
- Contracts were made up at the national level;
- Follow-up had been a mixture of common and national reporting.

Norwegian participation in joint calls is reported on in Table 24, and participation in activities other than joint calls in Table 4.

3.4 Lessons learnt and best practice[233]

Lessons learned by the national stakeholders were many and those learned were significant. Due to different experiences in different ERA-NETs the participants varied in their responses and varied in their degree of positive attitude. Many positive comments emanated but also a series of negative comments came especially from the social sciences, while the negative comments came from ERA-NETs within technology and innovation.

Norwegian participants brought lessons learnt from their participation in the ERA-NETs back and shared these experiences at several internal workshops within RCN and seminars with external participants. Overtime, the Norwegian participation gained an added value in itself through better knowledge of R&D coordination. In the 2008 Note from the RCN (see appendix) some overall conclusions on the added value of Joint Calls were stated:

[233] See Table 19, Table 20, and Table 22.

"The coordination aspect is an added value in itself. It is our experience that Joint Calls seem to have the potential to coordinate European research in a new way, and really contributes to such coordination".

"Based on our experiences a "common pot" could sometimes be the preferred collaboration model for Joint Calls, as it can be more efficient than a "virtual pot"

Again according to the Note from RCN November 2008, Norway maximized the outcomes of their participation in the ERA-NETs. Above all, they learnt about procedures applied to calls, evaluations and administration of big programmes.

Experienced administrative resources helped reaching the achievement of impact and benefits ranging from impacts on research areas and policies right down to the impacts on the participant organisations such as learning effects and adoption of new processes or procedures. Staff experienced in leading on transnational research activities was a great advantage to generate the full benefits of ERA-NET participation. Benefits and lessons learned were embedded into the set of procedures and practices at country level. This was indicated at national, programmatic levels, organisational and individual levels, see report from NORFACE.

The ERA-NET processes and agreements regarding Intellectual property rights have not yet been used to the extent that it can be said to have made a significant impact, but the processes and agreements are used when relevant.

4. ERA-NET benefits

4.1 Direct and indirect benefits to ERA-NET national policy stakeholders and participants[234]

The main direct benefits for the participants from Norway were that they learned what and how other agencies do in other countries. In that way it influenced a move towards future trans-national research cooperation.

"The chance to follow the relevant themes, meet other countries administrators, meet other researchers all lead to positive attitude to further European and international cooperation, and in this way a step towards ERA."(Bogstad about NORFACE)

Positive experiences like the following have been mentioned in an internal Norwegian survey, presented in ERA-NET Forum 25.09.08:

- Research projects with higher quality.
- Common activity reduces costs per partner – economies of scale.
- Themes and issues are very much the same across borders.
- Good connections with national programmes.
- Increased internationalisation.
- Fine learning process for coordinators and likely for all involved.

These experiences were perceived as both direct and indirect benefits for national policy stakeholders as well as for participants, and it will influence the processes for assessing research proposals in the future and in this way it will have some impact on the structure and role of transnational research in Norway.

4.2 Direct and indirect benefits to ERA-NET beneficiaries

The focus of thematic research policy and programming in Norway today (2008) has become more in favour of international programming and the increased internationalization is perceived as a benefit for researchers in general.

[234] See Table 5 and Table 6.

5. Impacts on national R&D policy and programming

5.1 Impact on national R&D policy[235]

The scheme has had an impact on the way national R&D policy is focused in Norway, but the impact is perceived among the interviewed as being limited. The balance between national vs. international has moved a little more in the direction of international projects and particularly more into the areas of climate and environment. This is to some extent reflected in Table 18.

Norwegian participation in some ERA-NETs was in some cases terminated due to low match with programmes within RCN and due to a heterogeneous consortium. The low match argument has been applied to MNTERA and ETRANET showing the impact of national policies on trans-national involvement.

Among the lessons learned which is expected to have an impact on national R&D policy, and on the way participation in transnational research activities will be planned, is that *"all scientific officers must have a clear mandate from their home base before each meeting". "Learned also that all partners should be responsible for the whole ERA-NET."*
(Trygve Lande, COREACH)

"More countries ought to take the challenge and use a greater part of their means for transnational calls." (ERA-NET Forum September 2008).

Lessons learned have to some degree been taken into account, but according to the interviews it varied from ERA-NET to ERA-NET.

Norwegian participants did learn and their participation has had some impact on the structure of and role of transnational research in Norway. Overtime the Norwegian participation gained an added value in itself via the coordination aspect. In the Note from the RCN some overall conclusions on the added value of Joint Calls are stated:

> 1) A brief calculation suggests that the added value of taking part in Joint Calls is very high. By spending 12 MEUR on Joint Calls, RCN has connected Norwegian researchers and research institutions to international networks, high level competence, and scientific results worth 175 MEUR. This multiplies their investment by approx. 15.
>
> 2) The coordination aspect was an added value in itself. It is was their experience that Joint Calls seem to have the potential to coordinate European research in a new way, and really contributes to such coordination.

In general less bureaucracy is wanted (mentioned with these words by several) and less paperwork. And with respect to the issue of common pot the following statement must be repeated:

"Based on our experiences a "common pot" could sometimes be the preferred collaboration model for Joint Calls, as it can be more efficient than a "virtual pot" (RCN, November 2008) Although it was argued that this would increase efficiency, it is interesting to see that Norway only chose to participate in one ERA-NET that uses common pots.

[235] See Table 7 and Table 18.

5.2 Impact on national R&D programming[236]

The impact that the scheme has had on the way national R&D programming is funded and structured in Norway has so far been limited according to all interviewees during field work. Going forward more openings towards preparing Norwegian researchers for international cooperation is expected and this is expected to influence national planning.

There is in Norway a willingness to participate in transnational research programmes if it follows Norwegian strategic goals and Norwegian strength, not the other way around. Therefore the impact of European initiatives will vary between themes as it has done during the ERA-NET scheme.

RCN is in charge of managing programmes and setting priorities after communication with ministries and other agencies at the national level. Sometimes ministries take the lead and contact RCN, other times the opposite is true. The level of alignment/overlap between thematic policies and thematic programming is adjusted along the ideas from the council and the ministries.

The strong interaction between the research council and the ministries indicates that Norwegian interests are prevailing.

"The balance between national and international programming has moved more in favour of international involvement, but still national programmes dominate". (Karin Refsnes)

"Increased investment in climate and environment, but the increase has not been as high as wanted."(Karin Refsnes)

One of the questions for the future for funding of Norwegian research is how to get more from private companies for funding of public research.

5.3 Opening up on national R&D programming[237]

"In general very limited willingness to open up more than already; Norwegian participation in joint calls has been paid for by Norwegian money, not more. Ad hoc multilateral networks ok, but after the same principles. The issue is political, and it is the government and the parliament who decides". None of the policy advisors were willing to predict on this issue, but they were both of the opinion that the ERA-NET Scheme did not have any influence on the Norwegian political position.

[236] See Table 7 and Table 18.
[237] See Table 10 and Table 11.

5.4 Impact on the structuring of national or international research fields

Impact on national research fields[238]

The impact that the scheme has had on the structuring of new or existing research field in the country is limited according to the interviews, albeit Norway is interested in pursuing transnational cooperation. The structuring effects are visible in some themes, especially on themes in environment and climate, but all in all the national research landscape has become more focused on participation in big programmes.

It is perceived among most of the participants that the standing of Norwegian research has increased due to participation in FP6. While others said "No, not really: Norway had a great standing already but the participation helped getting to know more".

Impact on international research fields

It is expected, seen from Norway's perspective, that the ERA-NET Scheme as a whole has enabled the structuring of a research field at the international or European level. And the Norwegians are in general in favour of increased international research cooperation.

There are clear indications that there is an increased expectation about international research fields and international cooperation due to the whole idea of ERA, but the impact, according to all levels, is not solely due to ERA-NETs but due to the whole concept of the European Research Area (ERA).

[238] See Table 17 and Table 21.

6. European Added Value, relevance and efficiency

6.1 Additionality of the ERA-NET scheme[239]

There are indications of additionality of the whole ERA-NET concept. Greater and easier cooperation among a great number of countries has found a mode, and the greater knowledge about how to cooperate has had an additional impact.

Some of the above mentioned impacts or benefits would not have emerged in this country had it not been for the EC cooperation within the ERA-NET Scheme.

The projects which benefited from joint calls are positive about the role of ERA-NETs but it is still too early to judge the impact, sine the establishment of joint calls took a long time, and several ERA-NETs never came to that point. Some have just started their calls, and no one from these ERA-NETs could provide any feedback about impacts at this moment.

The main conclusion is that it is the scientific administrators from the research council and the ministry of Transport, being interviewed for this evaluation that learnt the most from the ERA-NET participation so far.

European added value of the research outcome of the exercise is yet to be shown according to the interviewees.

6.2 Economic efficiency and relevance[240]

Responses to questions about the economic efficiency of the ERA-NET scheme from the perspective of Norway are in summary positive. Not all network activities were structured to enable the expected impacts to be generated and not all functioned well, but most did.

About the economic outcome see the above mentioned calculation from the research council.

The final question that can be raised is whether the overall benefits and impacts generated through Norway's participation in the ERA-NET has outweighed the cost of Norwegian involvement? The response was positive for most of participants and policy people, as can be seen in Table 5, and the note RCN from November 2008 also reached this conclusion. It has been worth for Norway to participate, and Norway is ready to continue in selected ERA-NETs.

[239] See Table 11.
[240] See Table 5.

7. Annexes: Stakeholders and Material consulted

Two stakeholders were interviewed, one from the most relevant ministry Kundskabs-departementet, being senior adviser to the government regarding science and innovation and the other being senior advisor in the Norwegian research council, project director for the division on climate and environment, has worked for the EU Commission as expert, now taking on the role as advisor to the government on the basis of research.

The research council RCN is in charge of setting priorities and in charge of managing programmes. In both interviews it was emphasized that there is very good interaction between the research council and the different ministries, altogether 15 different ministries supporting research via RCN.
Both interviewed had in the early days of the ERA NET Scheme prepared ERA-NETS but in October 2008 they both wanted to be interviewed as policy stakeholders and not as participants in any of the nets selected for the face to face interviews, since there had for years been others representing Norway in these nets.

Material:

Forskningsrådet, EU RTD Department: Experiences with ERA-NET participation, Oslo. Notat 20.11. 2008

Johs. Kjosbakken: ERA-NET: Erfaringer med felles utlysninger, PPT presented at Møte I ERA-NET Forum 25.09.2008

Trygve Lande: COREACH Lessons learned, PPT presented at EULANEST Meeting, Oslo 12.6. 2008

Trygve Lande: Report from WP-3, PPT presented at MT meeting Helsinki 11.05. 2007

NORFACE: Comparative Analysis of Partner Councils, www.NORFACE.org

NORFACE: Opening up to transnational participation, NORFACE deliverable 4.6.

NORFACE: Report on programme Development and Management, Helsinki 2007

8. Participant survey results

The figures below show responses to the participant questionnaire, completed by 22 Norwegian participants.

Table 1 - What was your organisation's main rationale for participating in this ERA-NET?

	Norway	Associated	Overall
Benchmarking of research funding against other countries	0%	0%	**1%**
Creating and supporting transnational projects in a field which requires transnational cooperation	69%	60%	**38%**
Improving own (national) R&D programme/s	6%	9%	**7%**
Learning from funders and sharing of information between funders in other countries	4%	10%	**10%**
Networking and building new relationships with funders from other countries	21%	20%	**35%**
Not Answered	0%	2%	**1%**
Opening up of national programmes in existing or new areas of research	0%	0%	**5%**
Other	0%	0%	**2%**

The most commonly cited rationales for ERA-NET participation were creating and supporting transnational projects in a field which requires transnational cooperation (69%), which is above the country grouping average (Associated countries) and networking and building new relationships with funders from other countries (21%) which is broadly in line the country grouping average (Associated countries).

Table 2 - What was the original overall amount of EC funding allocated to your organisation in your contract to participate in this ERA-NET?

	Norway	Associated	Overall
0 - 9999	8%	5%	**4%**
10000 - 19999	0%	0%	**2%**
20000 - 29999	0%	0%	**3%**
30000 - 39999	0%	0%	**2%**
40000 - 49999	0%	5%	**2%**
50000 - 59999	4%	6%	**2%**
60000 - 69999	0%	0%	**1%**
70000 - 79999	49%	32%	**6%**
80000 +	39%	49%	**71%**
Not Answered	0%	3%	**6%**

Most Norwegian organisations (49%) were allocated between €70,000 and €79,999 in funding to participate in the ERA-NET, which is significantly above the country grouping average (Associated countries).

Table 3 - Did the EC funding cover all the time and resources your organisation invested in participating in this ERA-NET?

	Norway	Associated	Overall
Yes	19%	27%	**49%**
No	77%	66%	**43%**
Don't Know	4%	5%	**4%**
Not Answered	0%	2%	**4%**

The majority of Norwegian participants (77%) reported that EC funding did not cover all the time and resources their organisation invested in participating in the ERA-NET, which is significantly above the country grouping average (Associated countries).

Table 4 - In which ERA-NET joint activities other than joint calls did you participate?

	Norway			Associated			Overall		
	Yes	No	Other	Yes	No	Other	Yes	No	Other
Coordination/clustering of ongoing nationally funded research projects	25 %	12 %	63%	33 %	13 %	54%	**59 %**	**19 %**	**23%**
Benchmarking and common schemes for monitoring and evaluation	40 %	2%	58%	56 %	1%	43%	**67 %**	**13 %**	**19%**
Multinational evaluation procedures (common evaluation criteria and methods of implementation	82 %	2%	16%	76 %	5%	20%	**55 %**	**25 %**	**20%**
Schemes for joint training activities (so-supervised theses or common PhD schemes)	2%	25 %	73%	11 %	35 %	54%	**12 %**	**49 %**	**39%**
Schemes for personnel exchange	20 %	16 %	65%	19 %	28 %	53%	**14 %**	**47 %**	**39%**
Schemes for mutual opening of facilities or laboratories	2%	25 %	73%	6%	32 %	62%	**15 %**	**44 %**	**41%**
Specific cooperation agreements or arrangements	17 %	13 %	69%	22 %	25 %	53%	**43 %**	**24 %**	**33%**
Action plan taking up common strategic issues and preparing for joint activities	91 %	4%	6%	73 %	16 %	11%	**75 %**	**11 %**	**13%**

Most Norwegian participants took part in an action plan taking up common strategic issue and preparing for joint activities (91%), multinational evaluation procedures (82%) and benchmarking and common schemes for monitoring and evaluation (40%). The percentages for these joint activities all differ to the country grouping average (Associated countries).

Table 5 - Overall would you say that your participation in the FP6 ERA-NET has been worthwhile?

	Norway	Associated	Overall

Yes	100%	95%	**95%**
No	0%	5%	**4%**
Not Answered	0%	0%	**1%**

All Norwegian participants (100%) did find their participation in FP6 ERA-NET worthwhile, which is slightly above the country grouping average (Associated countries).

Table 6 - Which of the three following statements best describes your personal experience of this ERA-NET?

	Norway	Associated	Overall
I got more out of it than I expected	17%	27%	**41%**
I got out of it what I expected	75%	63%	**51%**
I got less out of it than I expected	8%	10%	**6%**
Not Answered	0%	0%	**1%**

The majority of Norwegian participants (75%) believed they got out of it what they expected, which is significantly above the country grouping average (Associated countries).

Table 7 - To what degree has your participation in this ERA-NET influenced your country's national programme(s)?

	Norway			Associated			Overall		
	No influence	Influence	Other	No influence	Influence	Other	No influence	Influence	Other
Discontinuation of existing programme(s) in some theme(s)	25 %	71 %	4%	33 %	58 %	10 %	**53 %**	**34 %**	**12 %**
Reducing duplication between National programmes in your country	33 %	60 %	8%	28 %	65 %	7%	**46 %**	**37 %**	**16 %**
Design of programmes with longer time horizon	62 %	37 %	2%	48 %	51 %	1%	**42 %**	**49 %**	**10 %**
Design of programmes with shorter time horizon	86 %	12 %	2%	66 %	28 %	6%	**51 %**	**38 %**	**11 %**
Bigger programme budgets for the theme	22 %	73 %	6%	24 %	72 %	4%	**42 %**	**46 %**	**12 %**
Smaller programme budgets for the theme	42 %	48 %	10 %	40 %	42 %	18 %	**63 %**	**13 %**	**23 %**
New programme assessment/evaluation criteria	63 %	31 %	6%	51 %	45 %	4%	**40 %**	**50 %**	**10 %**
New opportunities to enable transnational R&D activities in the theme of the ERA-NET	10 %	90 %	0%	20 %	78 %	2%	**8 %**	**85 %**	**6%**
New eligibility criteria allowing funding of foreign researchers in the area	21 %	71 %	8%	23 %	68 %	9%	**43 %**	**42 %**	**15 %**
Existing programme(s) now covering new theme(s)	29 %	69 %	2%	29 %	60 %	11 %	**48 %**	**39 %**	**13 %**

New programme(s) put in place in response to new theme(s) identified	77 %	19 %	4%	60 %	35 %	5%	**51 %**	**34 %**	**15 %**

A distinctive feature of the influence of ERA-NET on Norwegian National Programmes is that the impact is broadly in line with the country grouping average (Associated countries). This is demonstrated by the total percentage for "influence" being broadly in line with the total percentage for "influence" in the country grouping average (Associated countries).

Table 8 - To what extent did your organisation have pre-existing relationships with participants in this ERA-NET prior to FP6?

	Norway	Associated	Overall
Prior relationships	37%	53%	**66%**
No prior relationships	58%	40%	**26%**
No answer	6%	7%	**8%**

The majority of Norwegian participants who answered this question (58%) reported that they did not have pre-existing relationships with participants in the ERA-NET, which is significantly above the country grouping average (Associated countries).

Table 9 - If there were prior relationships which of the following 6 statements best describes how these relationships evolved during your participation in this ERA-NET?

	Norway	Associated	Overall
Strengthened	37%	51%	**63%**
Weakened	0%	0%	**1%**
No change	0%	2%	**4%**
No answer	63%	47%	**33%**

Most Norwegian participants who answered this question believed that the relationship strengthened during the participation in this ERA-NET (37%), which is significantly below the country grouping average (Associated countries).

Table 10 - Has your participation in this ERA-NET triggered transnational cooperation outside of the ERA-NET?

	Norway	Associated	Overall
Yes	69%	57%	**31%**
No	24%	33%	**47%**
Not Answered	6%	7%	**5%**
Not applicable	2%	4%	**16%**

The majority of Norwegian participants reported that participation in the ERA-NET did trigger transnational cooperation outside of the ERA-NET (69%), which is significantly above the country grouping average (Associated countries).

Table 11 - Has the ERA-NET experience led to an increase in the amount of your programme budget that has been invested in transnational R&D projects outside of the ERA-NET?

	Norway	Associated	Overall
Yes	6%	24%	**13%**
No change	79%	60%	**63%**
No answer	15%	16%	**23%**

The majority of Norwegian participants reported that the ERA-NET experience lead to no change to the amount of the programme budget that has been invested in transnational R&D projects outside of the ERA-NET (79%), which is significantly above the country grouping average (Associated countries).

Table 12 - If yes, roughly what proportion of your programme budget was transnational before your involvement in ERA-NET?

	Norway	Associated	Overall
0-25%	2%	20%	**15%**
26 to 50%	0%	0%	**0%**
51 to 75%	0%	0%	**0%**
76 to 100%	2%	1%	**1%**
Not answered	96%	79%	**84%**

Of the minority of Norwegian participants who answered this question, half (2%) reported that 0-25% of the budget was transnational before their involvement in the ERA-NET, whilst the other half (2%) reported that 76-100% of the budget was transnational before their involvement in the ERA-NET.

Table 13 - If yes, roughly what proportion of your programme budget is transnational now?

	Norway	Associated	Overall
0-25%	2%	15%	**13%**
26 to 50%	0%	3%	**1%**
51 to 75%	0%	0%	**0%**
76 to 100%	2%	1%	**1%**
Not answered	96%	81%	**84%**

Of the minority of Norwegian participants who answered this question, half (2%) reported that 0-25% of the budget was transnational at the time of the survey, whilst the other half (2%) reported that 76-100% of the budget was transnational at the time of survey.

Table 14 - What provisions have been made in your country to coordinate participation in ERA-NETs under FP6? - Single national coordinator for all ERA-NETs

	Norway	Associated	Overall

	Yes	No	No answer	Yes	No	No answer	Yes	No	No answer
Single national coordinator for all ERA-NETs	12 %	77 %	12%	15 %	72 %	13%	15 %	66 %	19%
Team of several coordinators at national level	65 %	14 %	22%	45 %	34 %	22%	24 %	51 %	24%
Coordination meetings for all national participants	74 %	8%	19%	56 %	26 %	18%	37 %	41 %	22%
Organisation-specific coordination meetings	37 %	48 %	15%	48 %	36 %	16%	50 %	31 %	19%

The majority of Norwegian participants reported that the provision made to coordinate ERA-NET participation were coordination meetings for all national participants (74%), which is significantly above the country grouping average (Associated countries).

Table 15 - Earlier we asked you to state your ERA-NET's theme. How important was this theme in your country's research programme before your organisation joined this ERA-NET?

	Norway	Associated	Overall
Very Important	10%	11%	**21%**
Fairly Important	67%	55%	**48%**
Not very important	10%	19%	**16%**
Not at all important	2%	1%	**5%**
Don't Know	6%	4%	**4%**
Not Answered	6%	7%	**5%**
Not Applicable	0%	2%	**2%**

The majority of Norwegian participants reported that the ERA-NET's theme was fairly important in their country's research programme before their organisation joined the ERA-NET (67%), which is significantly above the country grouping average (Associated countries).

Table 16 - How important is this theme in your country's research programme now?

	Norway	Associated	Overall
Very important	10%	11%	**24%**
Fairly important	82%	68%	**56%**
Not very important	0%	10%	**11%**
Not at all important	0%	0%	**1%**
Don't know	0%	0%	**3%**
Not Answered	8%	8%	**4%**
Not applicable	0%	3%	**2%**

The majority of Norwegian participants (82%) reported that the ERA-NET's theme was fairly important to their country's research programme at the time of the survey, which is significantly above the country grouping average (Associated countries).

Table 17 - If there has been a change in the importance of the theme to what extent do you think this was due to the ERA-NET?

	Norway	Associated	Overall
To some extent	19%	27%	**29%**
Not at all	50%	34%	**11%**
No answer	31%	39%	**60%**

Half of Norwegian participants who answered this question reported that the change in the importance of the theme was not at all due to the ERA-NET (50%), which is significantly above the country grouping average (Associated countries).

Table 18 - Has your organisation's involvement in this ERA-NET influenced national research policy beyond the theme of this ERA-NET?

	Norway	Associated	Overall
Influence	86%	77%	**63%**
No influence	6%	13%	**18%**
No answer	8%	10%	**19%**

The majority of Norwegian participants (86%) reported that their involvement in the ERA-NET influenced national research policy beyond the theme of the ERA-NET, which is above the country grouping average (Associated countries).

Table 19 - Have any of the following external factors helped or hindered the effects of your organisation's participation in this ERA-NET?

	Norway					Associated					Overall			
	Helped	Hindered	No effect	Not Answered	Not applicable	Helped	Hindered	No effect	Not Answered	Not applicable	Helped	Hindered	No effect	Not Answered
Change in programme management agency	0%	2%	25%	6%	67%	0%	15%	24%	9%	52%	**7%**	**6%**	**36%**	**4%**
New R&D management structure	2%	6%	23%	6%	63%	4%	15%	21%	9%	52%	**11%**	**7%**	**35%**	**5%**
For existing programmes, more strategic R&D programming/planning	24%	0%	10%	6%	61%	23%	0%	16%	9%	52%	**29%**	**0%**	**36%**	**7%**
Externalisation of R&D programmes into agency/agencies	6%	0%	17%	6%	71%	5%	10%	23%	9%	54%	**8%**	**4%**	**33%**	**6%**
Setting up of new types of R&D programmes	10%	48%	15%	8%	19%	17%	41%	16%	11%	16%	**24%**	**7%**	**33%**	**5%**
Barcelona 3% targets	6%	0%	67%	12%	15%	10%	0%	54%	12%	24%	**16%**	**0%**	**39%**	**9%**

Most Norwegian participants (24%) reported that existing programmes, more strategic R&D programming/planning, helped the effects of their organisations' participation in the ERA-NET, which is broadly in line the country grouping average (Associated countries).

Table 20 - How satisfied are you with the overall level of transnational cooperation within this ERA-NET?

	Norway	Associated	Overall
Satisfied	88%	84%	**88%**
Unsatisfied	6%	8%	**7%**
No answer	6%	7%	**4%**

The majority of Norwegian participants (88%) were satisfied with the overall level of transnational cooperation within the ERA-NET, which is slightly above the country grouping average (Associated countries).

Table 21 - Have you seen evidence of the following effects at national level as a result of this ERA-NETs joint calls joint programming or other joint activities?

	Norway			Associated			Overall		
	Some evidence	No evidence	No answer	Some evidence	No evidence	No answer	Some evidence	No evidence	No answer
Higher quality projects generated at national level (i.e. higher quality proposals)	29%	63%	8%	45%	49%	6%	**39%**	**44%**	**17%**
Higher quality projects funded at national level (through joint calls/programmes)	13%	71%	15%	34%	54%	12%	**35%**	**42%**	**23%**
New types of research projects generated (i.e. reflected in proposals received)	25%	63%	12%	40%	51%	9%	**38%**	**42%**	**20%**
New types of research projects funded (through joint calls/programmes)	65%	21%	13%	66%	24%	10%	**46%**	**32%**	**22%**
New researchers (with no prior international or European experience) benefiting from joint activities	35%	54%	12%	43%	46%	11%	**40%**	**27%**	**33%**
New researchers (with no prior international or European experience) benefiting from joint calls/programmes	24%	61%	16%	40%	45%	15%	**41%**	**34%**	**25%**
Access to foreign research communities/groups not present in my country	25%	60%	15%	45%	42%	13%	**54%**	**28%**	**18%**

Most Norwegian participants reported evidence of new types of research projects funded (65%), which is broadly in line with the country grouping average (Associated countries),

and new researchers benefiting from joint activities (35%), which is below the country grouping average (Associated countries).

Table 22 - Did any of the following factors either help or hinder your organisation to exploit the full potential of its participation in this ERA-NET?

	Norway					Associated					Overall			
	Aid to success	No problem	Problem but overcome	Problem still not overcome	No answer	Aid to success	No problem	Problem but overcome	Problem still not overcome	No answer	Aid to success	No problem	Problem but overcome	
National thematic programme priorities	60%	21%	6%	6%	8%	41%	25%	6%	17%	11%	**16%**	**46%**	**13%**	**1**
National cultures or research traditions	9%	19%	19%	47%	6%	15%	28%	15%	36%	7%	**10%**	**46%**	**15%**	**1**
National resources (staff time finances)	4%	23%	63%	4%	6%	5%	24%	49%	15%	7%	**17%**	**35%**	**26%**	**1**
National administrative procedures (e.g. evaluation rules)	10%	14%	20%	55%	2%	12%	12%	22%	48%	6%	**6%**	**25%**	**29%**	**2**
National legal programme conditions (e.g. funding of non-residents IPR)	10%	65%	17%	6%	2%	11%	62%	15%	5%	7%	**4%**	**35%**	**19%**	**2**
EC administrative procedures or legal requirements	2%	14%	76%	2%	6%	1%	29%	52%	12%	5%	**1%**	**34%**	**36%**	**1**
Perceptions of benefits	6%	15%	13%	4%	62%	10%	13%	13%	17%	46%	**15%**	**28%**	**16%**	**1**
Engagement in other transnational initiatives (e.g. COST EUREKA)	0%	69%	10%	0%	21%	4%	57%	8%	5%	27%	**12%**	**46%**	**4%**	

Most Norwegian participants reported that engagement in other transnational initiatives (69%) and national legal programme conditions (65%) were no problem in exploiting the full potential of their organisation's participation in the ERA-NET, while most reported national administrative procedures (55%) as a problem that was still not overcome.

9. Annexes: Coordinator survey results[241]

The following tables show information from the coordinator questionnaire.

Table 23 - ERA-NET participation by theme

Theme	Number	Percentage
Transport	2	5.6%
Life Sciences	5	13.9%
Environment	10	27.8%
Fundamental Sciences	0	0.0%
INCO	2	5.6%
Industrial Technologies and SMEs	9	25.0%
Energy	3	8.3%
Social Sciences and Humanities	5	13.9%
Total	**36**	**100%**

Environment and Industrial Technologies and SME's thematic areas attracted most of the Norwegian participants.

Table 24 - Joint call participation by theme

Theme	Number	Percentage
Transport	5	14.7%
Life Sciences	5	14.7%
Environment	5	14.7%
Fundamental Sciences	3	8.8%
INCO	1	2.9%
Industrial Technologies and SMEs	9	26.5%
Energy	1	2.9%
Social Sciences and Humanities	5	14.7%
Total	**34**	**100%**

The Industrial Technologies and SME's thematic area channeled most of the contributions to joint calls.

[241] The Coordinator survey covered all 71 ERA-NETs - although in case of 7 ERA-NETs, the information collected dates back from the 2006 survey. 59 ERA-NETs provided information about the calls they have done over the period (NB: it is likely that not all ERA-NETs have reported call information in an exhaustive way). 49 ERA-NETs provided a breakdown of funding contributions at country level for calls (NB: this is likely to be an underestimate as not all ERA-NET coordinators knew this information)

Table 25 - Financial contribution to joint calls by theme

Theme	No contributions	€ virtual	€ common	€ mixed	Total
Transport	6	500,000	52,000	-	552,000
Life Sciences	5	1,612,000	100,000	-	1,712,000
Environment	5	1,692,250	-	-	1,692,250
Fundamental Sciences	3	-	3,800,000	-	3,800,000
INCO	1	500,000	-	-	500,000
Industrial Technologies and SMEs	10	5,314,000	25,000	-	5,339,000
Energy	1	285,000	-	-	285,000
Social Sciences and Humanities	5	-	1,758,610	-	1,758,610
Total	**36**	**9,903,250**	**5,735,610**	**0**	**15,638,860**

Most of the funding contributions were made through virtual common pots, Fundamental Sciences thematic area contained the largest real common pot contribution.

ERA-NET EVALUATION

SD13: Country Report on Turkey

The following document provides the structure for the country report on ERA-NETs in Turkey.

The content of this report has been informed by qualitative interviews and the findings of one survey. The interviews were undertaken with ERA-NET stakeholders[242] in 15[243] of the 40 countries taking part in the scheme. The number of interviews by country ranged between handfuls in some countries to a couple of dozen in other countries. The same interviewees were chosen to represent thematic areas – the number of interview per theme ranged between 12 and 25 depending on the theme. The survey was aimed at all ERA-NET coordinators and responses were received by approximately half of these, although responses varied across themes and countries. In addition, and where relevant, the report has been informed by reviews of documents and websites. Another survey was conducted which aimed at participants, however in the case of Turkey, not enough responses were received to be able to report on findings from this survey as part of this report.

Regarding the contents of this report it is important to remember that the findings described within cannot be regarded as a definitive or representative view of all activities within ERA-NETs in this country. Because the interviews were based on a narrow selection of countries and representing a minority of ERA-NETs in each theme, the contents of this report should very much be regarded as a case study that provides a view of the experience. This may also explain why the findings from the qualitative interviews are sometimes at odds with the findings of the surveys which were more inclusive and wide-ranging.

Where possible in the report, the source of evidence is indicated either as coming from one of the coordinator survey or the field interviews.

[242] Stakeholders included National Policy Stakeholders, ERA-NET Coordinators and Participants, and ERA-NET beneficiaries.
[243] The countries were: Austria, Croatia, Finland, France, Germany, Italy, Netherlands, Norway, Poland, Portugal, Romania, Russia, Slovenia, Turkey, and UK,

Contents

0. Executive Summary - Overview

Q1 – Impact on Research Landscapes

- No direct impact of ERA-NET participation on the overall structure of the research landscape in Turkey could be evidenced. The overall structure has not changed in recent years, although funding has increased sharply following a "vision process" in 2002-2004.
- The main motivation for joining ERA-NET and other EU research programmes was a wish for further integration into European research and for strengthening of Turkish research through internationalisation.

Q2 – Structuring effect on specific research areas or fields

- The extent of Turkish participation in the ERA-NET programme has been limited. With the exception of industrial research, no direct or significant structuring effects on specific research areas or fields could be evidenced.

Q3 - Direct benefits and indirect benefits

- A direct benefit has emerged in the field of industrial technologies, where ERA-NET participation helped generate several transnational research projects with the participation of private enterprises. It also gave direct impetus towards creating a special transnational programme where private enterprises obtained 10% additional funding if foreign partners were involved, thus providing further incentives for the internationalisation of private research.
- Overall, indirect benefits were the most important benefits of the programme. They were primarily related to network building and learning about research policy and the procedures for implementation of research projects and programmes in other countries.
- Overall, the perception was that the benefits outweighed the cost of participation in the programme.

Q4 – Opening up of national programmes

- In principle, National Turkish research programmes were not opened up to foreign beneficiaries. Turkish law specifically prohibits the funding of foreign researchers and organisations, and there is no indication of any changes in this respect in the foreseeable future.

Q5 – Best practice

- The lessons learnt from Turkish participation in ERA-NETs were related to the procedures and the internal functioning of programmes, and to some extent to financing of projects (including wider possibilities for financing of international travel for research collaboration).
- ERA-NET was generally seen as facilitating the opening up of the world of European research to Turkish researchers and an important factor in the further internationalisation of Turkish research.

1. Strategic national context underpinning the ERA-NET participation

1.1 Strategic planning and role of ERA-NETs in the country

TUBITAK (Scientific and Technological Research Council of Turkey) is the institution responsible for designing Turkish research and innovation policies as well as developing and managing the main research programmes. It was established in 1963 with a mission to advance science and technology, conduct research and support Turkish researchers. The research institutes of TUBITAK are among the most active research institutions, working in a variety of technology areas. Although some ministries, such as the Ministry of Agriculture are involved in research activities, TUBITAK is the key player, responsible for implementation of the national Turkish research programme and co-ordinating participation in EU programmes.

This situation has not changed much in recent years. According to interviewees, there was no major changes in the overall structure of research, although some ministries have become more research oriented, for instance in the fields of transport and energy.

A participatory approach has been taken to the design of research policies since the mid-nineties, with stakeholders from both private and public sectors and from NGOs involved in the policy-making process. Current research policy was laid out as a result of the Vision 2023 project carried out between 2002 and 2004 to formulate Turkey's science and technology strategies for the next two decades. On the basis of the Vision 2023 project, the Supreme Council of Science and Technology (BTYK[244]) defined the Turkish Research Area in 2004 as a platform for the private and public sectors and NGOs to strategically focus and collaborate in R&D.

Turkish research grants were given through a national programme covering all fields. There were no regional or thematic programmes, nor calls for proposals. Since 2004, the budget has increased sharply, and the expectation is that within a couple of years, the focus will be shifted towards thematic and regional programmes.

The guiding principles for coordinating R&D and opening up of national R&D programmes do not seem to have been influenced by participation in the ERA-NET programme. The same is, according to the interviewees, true for policy-making in the research field. It is expected that thematic calls and/or programmes will appear in the future. Although this, if and when it happens, may be inspired by research policy in European countries, it cannot be said to be directly caused by the participation in European programmes. An important issue in relation to the participation in European programmes in general and the ERA-NET scheme in particular is that Turkish law did not permit the funding of non-Turkish researchers, meaning that Turkey could not participate in real common pots (with the exception of one contribution to EURYI)[245]. This does not seem about to change.

1.2 Motivations for joining ERA-NET and set up

The main motivation for joining ERA-NET and other EU research programmes was the desire for further integration in Europe and the strengthening of Turkish research. ERANETs were seen as a step for Turkey to become more involved and for European research institutions to get to know their Turkish counterparts with the expectation that in the longer term this will lead to more involvement in research projects under the

[244] BTYK is chared by the prime minister. TUBITAK acts as secretariat to BTYK.

[245] According to the coordinator survey results, €200k were contributed to a real common pot in the fundamental sciences theme.

Commission's Framework Programmes. One of the main blocker was geographical distance but there was also a sense of cultural distance. In the past, many of the most talented Turkish researchers had preferred to work with the US, so the participation in ERA-NETs was seen as a means to shift the focus towards the EU. In particular, it was perceived as difficult for newcomers to become involved in established (European) research relationships, so that ERA-NETs could be a way to open up for the establishment of such relationships.

2. Overview of participation

2.1 Extent of involvement in the ERA-NET scheme

Results from the coordinator survey demonstrate the extent of the involvement of Turkey in ERA-NETs[246]. As an associated country, Turkey's participation has been limited to a few networks spread across various sectors of priority: Life Sciences, Environment, and Industrial Technologies & SMEs. Participation seemed to be gradually expanding, with several interviewees expecting increased participation in EU programmes in the future.

Environment and Industrial Technologies and SME's thematic areas attracted most of the Turkish participants. These areas correspond well to the current overall research priorities of Turkey which include competitiveness in industrial production, improvements in the quality of life, sustainable development and strengthening of the technological infrastructure for the transition to the information society. However, as mentioned above, there is as yet no thematic focus in Turkish research financing[247].

The Industrial Technologies and SME's thematic area channelled most of the contributions to joint calls. As mentioned previously, Turkey cannot participate in real common pots thus participation is in practice limited to virtual pots.

[246] Refer to coordinator survey results in the annexes (Table 1)

[247] Refer to coordinator survey results in the annexes (Table 2)

3. ERA-NET processes and positioning

3.1 Inputs into the ERA-NET scheme

Resources for participation in European programmes remained limited regarding specific financing set aside for management and co-ordination of participation in ERA-NETs. Resources for co-ordination and participation were mostly taken from "ordinary" staff time within the co-ordinating organisations, and there was little or no support structure. One project co-ordinator mentioned that they would have liked to budget for staff costs for co-ordination done by their institution but that this was not possible.

In terms of funding of projects, one ERA-NET (environment/social sciences) reported that they were the largest contributor in their ERA-NET, contributing 1.5 million EUR (virtual pot) to a pilot call. However, there were not enough applications to use these research grants fully (EUR 300,000 were not spent), which seems to have been caused mainly by a problem of reaching the research communities. The pilot call was advertised on the institution's web page, but there were no resources for further information activities. According to the co-ordinator, the number of applications for the pilot call might have been larger if resources had been available for information days or similar activities at research institutions.

3.2 Participation in joint activities, calls or programming

There is no possibility of opening of Turkish research programmes to non-resident researchers and no possibility to participate in real common pots. Even difficulties with funding of travel were reported in a couple of cases. Although some discussions on the issue of real common pots were mentioned by interviewees, this situation did not seem about to change. Thus, for the ERA-NETs with direct funding of projects, Turkey participated via virtual pots, which seemed to work quite well.

3.3 Lessons learnt and best practice

The lessons learnt and, to some extent, applied, from Turkish participation in ERA-NETs were mostly related to the procedures and the internal functioning of the projects. Several co-ordinators mentioned that they were impressed by the way the projects were run by their counterpart project managers, especially regarding communication and the hosting of conferences etc. Collaboration with the European partners was seen as positive and fruitful.

The main limitations in terms of reaping the full benefits of participation seemed to be related to funding, in particular that Turkey could not participate in real common pots and that (too) few resources were often available for co-ordination of participation in the ERA-NET programmes. Turkish participation was also restricted by what may be called "cultural" barriers – researchers were not, as yet, very experienced when it comes to European co-operation, and the experience showed that it was difficult to undertake transnational research co-operation activities, since many participants in research projects found their partners on the basis of previous experience. However, ERA-NETs were generally seen as a facilitating factor in giving access to the world of European research to Turkish researchers, creating personal contacts and networks which may be exploited in terms of collaboration in other research projects.

4. ERA-NET benefits

4.1 Direct and indirect benefits to ERA-NET national policy stakeholders and participants

The main benefit of ERA-NET participation appeared to be further integration in and knowledge of European research and how research projects were run in other countries. For instance, one co-ordinator said that "we are learning how other countries work with targeted programmes, how such programmes are working". When it comes to direct co-operation between researchers, it was seen as an advantage to start with a relatively small involvement, in order for Turkish researchers to become familiar with working with Europeans, "they prefer to start small and are less afraid of such programmes".

There were also direct benefits in terms of seeing other approaches to funding mechanisms. One example was the funding of travel expenses. This was not common before but was changed following the ERA-NET experience. The importance of "coming together", meeting face to face, has been acknowledged. Also in a broader sense, the importance and benefits of international collaboration have been demonstrated through individual ERA-NETs, and all co-ordinators are either already involved in follow-up projects, or considering such involvement, especially under ERA-NET plus, and often with the same partners. Others are now involved in the preparation of FP7 proposals for research projects with partners that they came into contact with through the ERA-NET participation.

An important *indirect* benefit of ERA-NET participation is the integration taking place internally in Turkey. Through the ERA-NET scheme, more ministries are becoming involved in research collaboration and this is seen as an important integrating factor in relation to the Turkish Research Area.

4.2 Direct and indirect benefits to ERA-NET beneficiaries

From the interviews conducted, it seemed that the specific research activities funded via those of the ERA-NETs that did actually fund projects through calls for proposals could probably also have been funded directly by the Turkish national research programme, although of course without the international element. In those ERA-NETs where actual projects have been funded, it has given the Turkish researchers an opportunity to interact with foreign partners that they would most likely not have been able to co-operate with without these funding opportunities.

5. Impacts on national and international R&D policy and programming

5.1 Impact on national R&D policy

The scheme did not seem to have had any direct impact on overall R&D policy, although some minor procedural changes (financing mechanisms) have been introduced. Only two of the ERA-NETs have funded calls for proposals, and on a rather limited scale, so the direct impact has not been very large to date. It has opened up for more international co-operation on a relatively small scale, but could nonetheless be regarded as a stepping stone for further internationalisation of Turkish research through future collaboration with European counterparts.

5.2 Impact on national R&D programming

The direct impact on R&D programming was limited to small adjustments as mentioned above (for instance, further opening up of possibilities for funding international travel in connection with research collaboration).

The possibility of an *indirect* impact on programming was evidenced by the increasing focus on sectoral research, and a possible development from a non-thematic national programme towards a more thematically focused programme, which is expected to come about within the next few years. The extent to which ERA-NET participation had or will have a direct influence on this aspect of programming could not be determined, but there was some evidence of "inspiration" coming out of the international collaboration and the increased knowledge of how research programming was structured in other countries.

5.3 Opening up of national R&D programming

National R&D programming has not opened up to foreign researchers and this was not expected to take place in the foreseeable future, as Turkish legislation does not allow this.

5.4 Impact on the structuring of national or international research fields

Given Turkey's status as an associated country, the impact on the European level (ERA) was not really relevant to Turkish participation in the programme. In terms of structuring the national programmes, this had already been touched upon in the preceding sections.

One specific topic that deserved mentioning here was the involvement of private enterprises in research. One of the main challenges for Turkey was the fact that the country needed to increase the innovation performance of the private sector. There seemed to be only limited research collaboration between universities and other public research institutions, and the private sector.

However, one successful ERA-NET in the field of industrial technologies focused on involvement of industry in projects and added extra financial incentives (10%) for national players to participate in this type of projects. Several projects were generated, and one transferred to the EUREKA scheme for funding. Subsequently, a new programme for international projects was developed, which provided 10% extra grants to participants if the project has international partners. Grants were given only to companies, but research institutions and universities may have been involved as subcontractors.

6. European Added Value, relevance and efficiency

6.1 Additionality of the ERA-NET scheme

The learning and network building which was further discussed below constituted the main added value of Turkey's participation in the ERA-NET programme.

6.2 Economic efficiency and relevance

For all the interviewees, the ERA-NETs in question were their first project of this type, and there was broad agreement that participation gave "value for money", mostly in terms of learning, establishing networks and contacts and seeing how things were done in other countries.

Direct benefits may be relatively small - the number of projects generated did not always measure up to the overall expenditure on participation in a specific ERA-NET. But often, the indirect benefits mentioned in terms of integration and learning were the most important, and these indirect benefits were generally seen as clearly outweighing the costs.

7. Annexes: Stakeholders and materials consulted

Interviews:

National policy stakeholder (deputy manager for international relations), TUBITAK
Project co-ordinator for URBAN-NET, TUBITAK
Project co-ordinator for ETRANET, TUBITAK
Project co-ordinator for ForSociety, TUBITAK
Project co-ordinator for EUPHRESCO, Ministry of Agriculture and Rural Affairs, General Directorate of Agricultural Research

Materials consulted:

- Brochures and websites of individual ERA-NETs
- INNO-Policy TrendChart – Policy Trends and Appraisal Report: TURKEY 2007
- ERAWATCH Research inventory report: TURKEY

8. Annexes: Participant survey results

Three responses to the participant survey were received from Turkey. This is not enough to be able to confidently report on findings from this survey as part of this report.

9. Annexes: Coordinator survey results[248]

The following tables show information from the coordinator questionnaire.

Table 1 - ERA-NET participation by theme

Theme	Number	Percentage
Transport	0	0.0%
Life Sciences	3	43.0%
Environment	1	14.0%
Fundamental Sciences	0	0.0%
INCO	0	0.0%
Industrial Technologies and SMEs	2	29.0%
Energy	0	0.0%
Social Sciences and Humanities	1	14%
Total	7	100%

Life Sciences and Industrial Technologies and SME's thematic areas attracted most of the Turkish participants.

Table 2 - Joint call participation by theme

Theme	Number	Percentage
Transport	0	0.0%
Life Sciences	1	20.0%
Environment	1	20.0%
Fundamental Sciences	1	20.0%
INCO	0	0.0%
Industrial Technologies and SMEs	2	40.0%
Energy	0	0.0%
Social Sciences and Humanities	0	0.0%
Total	**5**	**100%**

The Industrial Technologies and SME's thematic area channelled most of the contributions joint calls.

[248] The Coordinator survey covered all 71 ERA-NETs - although in case of 7 ERA-NETs, the information collected dates back from the 2006 survey. 59 ERA-NETs provided information about the calls they have done over the period (NB: it is likely that not all ERA-NETs have reported call information in an exhaustive way). 49 ERA-NETs provided a breakdown of funding contributions at country level for calls (NB: this is likely to be an underestimate as not all ERA-NET coordinators knew this information).

Table 3 - Financial contribution to joint calls by theme

Theme	No contributions	€ virtual	€ common	€ mixed	Total
Transport	0	-	-	-	0
Life Sciences	1	505,010	-	-	505,010
Environment	1	1,500,000	-	-	1,500,000
Fundamental Sciences	1	-	200,000	-	200,000
INCO	0	-	-	-	0
Industrial Technologies and SMEs	2	1,080,500	-	-	1,080,500
Energy	0	-	-	-	0
Social Sciences and Humanities	0	-	-	-	0
Total	5	3,085,510	200,000	0	3,285,510

Most of the funding contributions were made through virtual pots, real common pots were used in the Fundamental Sciences thematic area (EURYI).

ERA-NET EVALUATION

SD14: Country Report on Russia

The following document provides the structure for the country report on ERA-NETs in Russia.

The content of this report has been informed by qualitative interviews and the findings of one survey. The interviews were undertaken with ERA-NET stakeholders[249] in 15[250] of the 40 countries taking part in the scheme. The number of interviews by country ranged between handfuls in some countries to a couple of dozen in other countries. The same interviewees were chosen to represent thematic areas – the number of interview per theme ranged between 12 and 25 depending on the theme. The survey was aimed at all ERA-NET coordinators and responses were received by approximately half of these, although responses varied across themes and countries. In addition, and where relevant, the report has been informed by reviews of documents and websites. Another survey was conducted which aimed at participants, however in the case of Turkey, not enough responses were received to be able to report on findings from this survey as part of this report.

Regarding the contents of this report it is important to remember that the findings described within cannot be regarded as a definitive or representative view of all activities within ERA-NETs in this country. Because the interviews were based on a narrow selection of countries and representing a minority of ERA-NETs in each theme, the contents of this report should very much be regarded as a case study that provides a view of the experience. This may also explain why the findings from the qualitative interviews are sometimes at odds with the findings of the surveys which were more inclusive and wide-ranging.

Where possible in the report, the source of evidence is indicated either as coming from one of the coordinator survey or the field interviews.

[249] Stakeholders included National Policy Stakeholders, ERA-NET Coordinators and Participants, and ERA-NET beneficiaries.
[250] The countries were: Austria, Croatia, Finland, France, Germany, Italy, Netherlands, Norway, Poland, Portugal, Romania, Russia, Slovenia, Turkey, and UK,

Contents

0. Executive Summary - Overview

While the overall EU-Russia relations in R&D policy are rapidly developing and negotiations in this area between the EU officials and representatives of the Russian government are ongoing, EU-Russia relations regarding the ERA-NET scheme are still of emerging nature.

During FP6, Russian participation in the ERA-NET did not fully materialise. Legal and administrative barriers prevented funding agencies to becoming actively involved. Russian participation was mainly limited to beneficiaries attending workshops and meetings financed under the ERA-NET scheme, whilst the activities of funding agencies themselves were limited to handling national projects. It is important to note that the effects outlined in the report are not directly attributable to Russia's participation in the ERA-NET scheme but rather result from a general high interest in EU-Russia cooperation in research in general and the awareness of the ERA-NET scheme in particular.

Q1 – Impact on Research Landscapes

- During the ERA-NET implementation period, the former President made a strategic appointment of the previous Acting Minister of Industry, Science and Technology as Minister of Education and Science. This marked an increase in the strategic importance of the R&D area in Russia and indicates an interest in a more competitive R&D sector as well as in stronger linkages to industry.
- "Research and Education" was advanced to becoming one of four "common spaces" of cooperation between the EU and Russia and agreement on a road map was reached in 2005.

- An expression of interest was put forward to the EU by the Russian Minister of Education and Science to becoming an Associate Country under FP7 in 2008.
- Under FP6 Russia participated in 3 ERA-Nets: BONUS for the Baltic Sea Science - Network of Funding Agencies; EUROPOLAR: The European Polar Consortium: Strategic Coordination and Networking of European Polar RTD Programmes and ERASYSBIO: Systems Sciences.
- Under FP7 Russia is participating in 1 ERA-NET: ERA-NET RUS: Linking Russia to the ERA: Coordination of Member States' and Associated Countries' programmes towards and with Russia.

Q2 – Structuring effect on specific research areas or fields

- Russia has emphasised both nanotechnology and environmental science amongst others as two of its key strategic sectors during the ERA-NET implementation period. In both fields they possess long term expertise and see potential to both commercialise research results and improve human wellbeing.

Q3 - Direct and indirect benefits

- Russian policy-makers have been using evaluation methods, project and financial management tools similar to those of the FP for the Russian Research Development Programme since 2007.
- There is evidence that Russian funding agencies actively studied European FP6 requirements and procedures. The implication is that they will be well prepared for fully engaging forthcoming cooperation once Russia is eventually recognised as an Associate country.
- Beneficiaries involved in the ERA-NETs outlined three main benefits:
    - Through participation in the European Polar Consortium, Europe’s principle strategic forum for Science Policy Issues in the Arctic and Antarctic, they were able to intensify contacts with other scientists across Europe;
    - The reengagement with Romania as a cooperation partner in EUROPOLAR was seen as positive, after having neglected it for the last 15 years;
    - Through participation beneficiaries learnt more about EC financial reporting and management requirements.

Q4 – Opening up of national programmes

No evidence

Q5 – Best practice

Although not able to fully engage with European agencies, the Russian funding agency is familiar with relevant FP6 procedures and the nature of the ERA-NET programme in particular. At one funding agency the position of a Director of International Affairs has been created and filled recently. However, no statements on its impact can be made at this stage.

1. Strategic national context underpinning the ERA-NET participation

1.1 Strategic planning and role of ERA-NETs in the country

During the last 5 years, Russian research and higher education sector started to recover from years of neglect during the years following 1991.[251]

Among the **ministries**, the Ministry of Education and Science, the Ministry of Foreign Affairs and the Ministry of Finance are the relevant players with regard to Russian participation in the ERA-NET.

Although a number of **research funding agencies** have existed for a number of years, with the exception of the Russian Academy of Science (RAS), these agencies' operations have depended on direction provided by the Ministry of Education and Science. The RAS have enjoyed more decision-power and has been better connected to key decision-makers than the other agencies but cannot be compared to those since it does not fund projects or individuals outside the academy. The Russian Foundation for Basic Research (RFBR) and the Federal Service of the Russian Federation on Hydrometeorology and Environmental Monitoring (Roshydromet) are funding bodies in the thematic fields or the ERA-NET scheme but have, up to now, due to legal and administrative barriers, only actively funded national projects which however are thematically linked to ERA-NETs. Anecdotal evidence suggests that these agencies are trying to change their set up to be able to act more independently towards entities abroad which is a pre-condition for a full participation in the ERA-NET scheme.

EU-Russian cooperation in the research area has been high on the political agenda over the past five year[252] but this cannot be attributed to Russia's involvement in the ERA-NET since cooperation was initiated earlier on. Russian agencies have not been able to effectively participating in the FP6 ERA-NET scheme. However, ongoing negotiations are very much aimed at enabling Russia to fully participate in the ERA-NET scheme going forward.

In this way, the joint EU-Russia 'road map'[253] does not mention ERA-NET in particular but recommends actions to be taken to:

[251] It inherited the structure left over from the Soviet Union where sciences related to military applications were of high priority. The Russian Academy of Science (RAS) enjoyed particular privilege; long term cooperation relations were mainly established with the former East bloc countries, only. This neglect led to a massive brain drain among Russian scientists. However, a majority – although migrating to the US and other world class science countries – maintained contacts with former colleagues at the RAS and other research centres.

[252] In the framework of the Partnership and Cooperation Agreement Russia and the EU agreed at the St. Petersburg Summit in May 2003 to reinforce their cooperation by creating four **'common spaces'** in the long term. Remarkably, Research and Education is one of the spaces and ranges on the same level of importance as economic issues and environment; freedom, security and justice, and external security. An S&T cooperation Agreement was signed in the margins of the EU-Russia summit in Rome in November 2003. The Moscow summit in 2005 followed up and developed a '**road map'** that sets out specific objectives and actions. It outlines common interests in the link between research and innovation, and in maintaining a small and medium size entrepreneurship in this field. Also an enhanced competitiveness of the research sector is stated as an objective. Space, new materials and nanotechnologies, life sciences, information society technologies and clean and renewable energy are identified as priority research domains.

[253] Road Map for the common space of research and education, including cultural aspects, pp. 44-52.

- Establish an effective information exchange and analysis of Russian participation in the Framework Programme calls for proposals;
- Encourage integration of leading Russian research institutions and teams into European research networks:
- Promote networking and access to the electronic services linking research libraries and data archives;
- Increase the mobility of researchers and students.

Although the FP6 ERA-NET scheme has not been the driving force for developing these actions points, their implementation is in line with the objectives of the ERA-NET scheme.

While Russia has been engaged in negotiations on a new Partnership and Cooperation Agreement with the EU since mid-2008, a few steps towards greater EU-Russian dialogue have been undertaken in the R&D policy area sector. In the first meeting of the **EU-Russia Permanent Partnership Council** on Research (May 2008) Andrej Fursenko, the Minister of Education and Science, **signalled Russia's interest in achieving associate status** under the 7th Framework Programme for Research and Development (FP7). In a joint statement the participants highlighted the added value for a Russia-EU scientific and technological cooperation and in particular for the European Research Area if Russia were to become a "full part" of the ERA. Participants also expressed their satisfaction with current bilateral cooperation programmes and activities between Russia and EU Member States and reaffirmed their common interest in further cooperation "based on principles of equality and mutual benefit".[254]

An examination of aspects of the EU-Russian relations undertaken by the Council and Commission in autumn 2008 concluded that "the Common Space on Research, Education, and Culture is characterised by a strong mutual interest".[255]

As confirmed by an international science and technology expert in Russia as well as by interlocutors at a research funding agency and researchers at the Arctic and Antarctic Research Institute (AARI), there is a great and persistent interest on the Russian side to get fully engaged in EU-Russian S&T cooperation in general, and in participating in the ERA-NET scheme in particular. The **ongoing intensive policy dialogue between EU officials and representative of the relevant ministries,** as described above, underline this interest.

However, despite a number of expressions of interest as well as an active engagement in discussions on a very high political level, as far as ERA-NET is concerned the Russian legal and administrative system imposes a number of burdens to effective cooperation between Russia and the EU (including its

[254] Joint Statement of EU-Russia Permanent Partnership Council on Research, Press release, 26 May 2008, see http://www.eu2008.si/en/News_and_Documents/Press_Rezleases/May/0526EU_Russia_Research_Joint_Statement.html

[255] Review of EU-Russia relations, Brussels, 5 November 2008, see http://europa.eu/rapid/pressReleasesAction.do?reference=MEMO/08/678&format=HTML&aged=0&language=EN&guiLanguage=en

Member States and Associated countries). Internal reforms have been and remain cumbersome in this area. Additionally, given both that Russia is not an EU Member State and that most ERA-NETs have not been designed for cooperation with third countries in particular, planning and implementing research within a European framework was not seen as "natural". Feedback from another interviewee indicated that cooperation interest was low because of Russia's limited influence over EU decision making entities and consultative status. Strained relations between specific EU Member States and Russia were also mentioned as providing further political barriers to engagement.

According to one international expert consulted, the modernisation of the science sector initiated in 2005 has since pushed modernisation within Russian agencies to "an edge internally" indicating that necessary steps have been initiated and are monitored, and that over time modernisation provides hope for further European engagement. The ERA-NET scheme was mentioned as one of the options for facilitating this modernisation.

1.2 Motivations for joining ERA-NET and set up

Essential for an increased engagement by the Russian government in joint research activities in recent years has been the overall **shift on the EU side in its approach towards Russia**. While previous EU-Russia relationship has been based on (conditioned) assistance to Russia, the guiding principle moved towards *equal partnerships instead*. In this sense cooperation intentions were based on *jointly identified* thematic priority areas and on *co-funding* of joint projects.

The **appointment** of the current **Minister of Education and Science** who previously acted as Deputy and later Acting Minister of Industry, Science and Technology has been proofed beneficial for the EU-Russian overall cooperation in R&D and for the ERA-NET scheme in particular.

Similarly, at one funding agency the position of a Director of International Affairs has been created and filled.

According to an international expert, the procedures and experience of EU funding and national public funding mechanisms in the Member States have been of great interest and have therefore been studied by a number of Russian policy stakeholders. In this way, the Russian Government has adopted a 6-year programme on Russian research ("Federal Targeted Programme 2007-2012[256]) which follows methods similar to fundamental elements of European Framework Programmes in terms of:

- Priority setting;
- Evaluation methodology;
- Project and finance management.

[256] http://mon.gov.ru/dok/prav/nti/4418/

During the ERA-NET implementation period an increasing number of stakeholders have been seen to have a stake in the practice of competitive funding, peer reviews and benchmarking as tools for **effective and efficient research management.** Staff at a funding agency appeared to be familiar with European procedures and two interviewees reported an interest to be increasingly involved in European cooperation schemes, with ERA-NET as one option, since this was seen to allow for exchanges of good practice in dealing with project funding. However it is assumed that the modernisation of the current science management will take some time.

Researchers' Motivations

A very strong interest of an increasing Russian participation in multilateral research cooperation was expressed by the **researcher beneficiaries** themselves. Long lasting collaborations with Russian and non-Russian scientists already exist. Their interest in transnational research and cooperation was indisputably confirmed by other interviewees (EC official and representatives of the funding agency). The funding agencies had received a number of completed proposals which they held back due to an insufficient legal basis for active participation in the ERA-NET scheme. Also the researchers confirmed that they had received numerous invites by colleagues from abroad for joint research proposals – under EUREKA and COST not the ERA-NET – and that there were a number of common areas of interest and complementary capacities as well. They regarded the possibility of engaging in joint research with peers in EU Member States as a **win-win situation** for both Europe and Russia. Russian researchers would for instance be able to provide access to data bases while being able to use new technology, gain additional funding, and adapt new management procedures and tools. The researchers' motivation is driven by expectations of **word-class level innovative research results** to be achieved and to be published in joint research projects and within the EUROPOLAR ERA-NET by hopes to **strengthen long terms collaborations with the current main bilateral partners** Germany and Norway.

For researchers that had been involved in specific ERA-NETs, the benefits to date were tangible and the motivation for continuous involvement strong. For instance, the researchers that took part in the EUROPOLAR ERA-NET expressed a desire to further integrate into the project since they were able to offer relevant data, equipped polar stations and valuable cooperation experience with major players in this science field over the past.[257]

[257] AARI, from which researchers involved in this ERA-NET came from, has gathered data related to polar research since 1920 and operates 5 permanent bases in the polar area which is the highest number worldwide. During the International Polar Year in 2007/2008, it undertook 12 expeditions to the Arctic and Antarctic stations, most of them with international participants. In return the researchers expect to strengthen their bilateral relations to other institute, to be mutually visiting each others sites and to establish further contacts to other scientists within ERA-NET or similar schemes. Recently, AARI organised a joint expedition with icebreakers and other high-tech equipment with German and French scientists to their Antarctic Ocean stations. AARI maintains close relations to Alfred Wegener Institute for Polar and Marine Research, Bremerhaven, Leibniz Institute of Marine Sciences at the Christian-Albrechts University of Kiel (IFM-GEOMAR) and International Arctic Research Center (IARC) of the University of Alaska Fairbanks.

Although Russian beneficiaries have participated in networking under the ERA-NET scheme and expressed a great interest in participating in joint calls their leverage in terms of speed up reforms within national funding bodies to facilitate this has been limited.

2. Overview of participation

2.1 Extent of involvement in the ERA-NET scheme[258]

Unlike in a number of EU Member States, Russian research funding agencies are less able to operate independently of relevant ministries. Relevant ministries include Ministry of Foreign Affairs, Ministry of Finance, and Ministry of Education and Science, which hold decision-power over budget and procedures.

Funding agencies face a number of burdens to actively participating in the ERA-NET scheme. Regulations of the Federal Bank and the Ministry of Foreign Affairs (MFA) forbid any public body to transfer money out of Russia. Exceptions are made for *regular* payments to international organisations where routine procedures are in place. In contrast, ERA-NET and other project-related payments would require approval by a number of instances as a general procedure is not yet in place.

These administrative and legal barriers have prevented Russian funding agencies from fully participating in the ERA-NET. However, initiatives have been undertaken by the funding agencies in order to overcome these barriers. When the RFBR was approached by scientists on the question of participating in several FP projects about 18 months ago it sent an official letter to the Ministry of Education and Science to express an interest in ERA-NET and to ask for support. The response outlining that RFBR should approach all relevant ministries with this request to get their approval reached the RFBR about one year ago.

The thematic focus of Russian research has been streamlined during the recent years. This development cannot be attributed to the ERA-NET scheme but follows internal priorities. However, it is in line the thematic areas of the ERA-NET scheme.

In his report to the Government Council on **Nanotechnology** in 2007, the Russian Minister of Education and Science emphasized that Russia had "advanced and often unique plants of research infrastructure, e.g. synchrotron centers, neutron reactors, centers of electron beam technologies". [259] However, poor coordination of research activities as well as the low level of national nano-industry infrastructure was perceived as major barriers to collaboration. An initiative called "Strategy for nano-industry development" was confirmed to be set up by the President in April 2008, and it was decided to establish the "Russian corporation of nanotechnology". This body was supposed to elaborate and develop a state nanotechnology policy, including a strategy on selection, coordination and financing prospective projects. A European perspective was not

[258] See coordinator survey results in the annexes (Tables 1 and 2).

[259] Minister of Education and Science A. Fursenko's report at the meeting of the Government Council for Nanotechnology, On current state and development lines of nanoindustry in the Russian Federation. On primary measures for realization of the President's initiative "Strategy of nanoindustry development", Moscow 21 June 2007, see http://eng.mon.gov.ru/ruk/ministr/dok/4133/

explicitly mentioned in the Minister's speech but advancing nanotechnology research was in line with the thematic focus of the ERA-NETs.

Besides nanotechnology, **environmental research** has been advanced to a top priority in the past few years. Russia undertakes wide-ranging research on the earth's **climate** systems as well as wide-scale systematic observations and monitoring activities. The interview partners at AARI expected more joint research coming up in the environmental field as well as in nanotechnology, bio-chemistry and nuclear physics.

Ongoing national environmental research programmes include:

- "Research and Development on the Priority Directions of Progressing in Science and Civil Engineering" with a focus on "Ecology and Rational Nature Management";
- "Natural Processes in Outer Shells of the Earth in Conditions of Increasing;
- Anthropogenic Influence and Scientific Basics of Ecologically Non-Dangerous Rational Natural Management";
- "World ocean" with the subprogramme "Study and Research of the Antarctic Region";
- "The Technology of Forecasting and Assessment of Changes in Climate, Ecosystems, and Resource Due to Anthropogenic Effect, and their Consequences";
- The Federal Space Program of Russia with its subprogramme "Remote Sensing of the Earth".

The scope of all research activities mentioned above has been limited to the **national contexts**. The programmes have been initiated independently of the ERA-NET scheme. The ERA-NET scheme therefore has not an impact on the direction of these programmes but interviewees fed back that overlaps in interests provided the potential for fruitful cooperation going forward. In fact, the European Community and Russia have already launched **coordinated calls for co-funded research project proposals** in the areas of food, agriculture & biotechnology and in energy and by May 2008 they were in progress to prepare additional calls in the areas of health, and nanotechnologies & new materials.
IN FP6 Russian beneficiaries have been involved in three ERA-NETs: EUROPOLAR, BONUS and up to 2006 in ERASysBio.

- Researchers at AARI participated in workshops financed under EUROPOLAR.
- RFBR received numerous proposals for BONUS. It was invited by other ERA-NET participants to be involved but faced legal and administrative restrictions.
- On an individual basis, RFBR was involved in ERASysBio up to 2006 when the person in charge passed away and was not replaced.

Table 1 shows Russian involvement in the ERA-NET scheme broken down by thematic area.

3. ERA-NET processes and positioning

3.1 Inputs into the ERA-NET scheme[260]

Russian researchers have participated in research activities financed under the ERA-NET scheme. By using resources by Member State funding agencies participating in the ERA-NET scheme AARI scientists were able to travel to workshops funded under the **EUROPOLAR**. According to funding agencies and a country expert on research policy **BONUS** was also very popular among researchers since it had a thematic (environment) as well as a regional (Baltic Sea) focus. Besides biology and earth sciences, research related to the Baltic region is popular among the scientists. The Russian agencies received a number of proposals for the Environment ERA-NET e.g. a joint proposal with Finland and Sweden was among them. Great efforts were taken to involve Russia in biology research via the **ERASysBio** by the main scientists involved on behalf of the RFBR up until the point at which the person deceased. The replacement was not able to follow this through.

Besides the three ERA-NETs mentioned, positive perceptions were held among interviewees of the concept of INCO ERA-NET. According to an expert, INCO ERA-NETs were overall better known in Russia than others types since they addressed cooperation with third countries in particular and might pave the way for enhanced cooperation also in thematical ERA-Nets. Additionally, instruments like the Joint technology platform and European technology platform seemed better accessible from the Russian side since they focused on innovation and transnational competition.

3.2 Participation in joint activities, calls or programming[261]

No evidence of Russia having participated in joint ERA-NET activities was found. However, joint calls for co-funded research projects were launched at the researcher (not funding agency) level, but funded through existing national funds. This is an indication of the general interest and a tendency towards full participation of Russia in the ERA-NET in future.

A recent joint statement of representatives of the EU-Russia Permanent Partnership Council on Research of 26 May 2008 read:

> *"The participants of the first meeting of the EU-Russia Permanent Partnership Council on Research "expressed satisfaction with the fact that the European Community and Russia have launched coordinated calls for co-funded research project proposals (in the areas of Food, Agriculture & Biotechnology and in the area of Energy). They welcomed the fact that more such coordinated calls for co-funded projects, namely in the areas of Health, Nanotechnologies & New Materials, will be launched soon, and expressed satisfaction that analogous discussions are ongoing on similar*

[260] See Table 3.

[261] See Table 2Table 24.

co-funded initiatives in the areas of aeronautics, nuclear fission energy research, and in space research. The participants noted with satisfaction that these coordinated calls will facilitate the implementation of their strategic partnership in the field of science and technology."[262]

3.3 Lessons learnt and best practice

Since participation in ERA-NET was limited to involvement in ERA-NET financed research activities, lessons learnt on the side of funding agencies has been limited. However, representatives of funding agencies emphasised their learning experience when familiarising themselves with EC calls and procedures. By studying European FP6 requirement and procedures they perceived to have become familiarised with the essential information to prepare them for active participation in FP7 or later. Additionally, the Russian R&D Work Programme until 2015[263] has striking similarities in methodology, priority setting and terminology with EC programming instruments.

[262] Joint Statement of EU-Russia Permanent Partnership Council on Research , 26 May 2008 http://www.eu2008.si/en/News_and_Documents/Press_Releases/May/0526EU_Russia_Research_Joint_Statement.html

[263] Complex Programme of the Scientifical-technological Development and Technological Modernisation of the Economy of the Russian Federation up to 2015 (in Russian), see http://www.mon.gov.ru/work/nti/dok/

4. ERA-NET benefits

4.1 Direct and indirect benefits to ERA-NET national policy stakeholders and participants

Due to Russia's limited involvement in the ERA-NET scheme, benefits have been limited. However, there has been a tendency towards greater interest and openness towards practices in the EU and how Russian funders of R&D could learn from this. For instance:

- The Russian R&D Work Programme until 2015 has striking similarities in methodology, priority setting and terminology with EC programming instruments.
- Funding agencies studied European FP6 requirement and procedures and are best prepared for fully engaging once Russia eventually becomes an Associate country in the ERA-NET scheme.

4.2 Direct and indirect benefits to ERA-NET beneficiaries

Benefits to beneficiaries occurred thanks to their attendance of workshops and other meetings financed under certain ERA-NETs. In this way, scientists maintained contacts with colleagues abroad. Although they stated that benefits had been "minimal" so far, three main benefits were mentioned:

- Participation in the European Polar Consortium, Europe's principle strategic forum for Science Policy Issues in the Arctic and Antarctic, and the resulting intensification of contacts to European players;
- Reengaging with Romania as a cooperation partner in EUROPOLAR, which had largely been neglected over the previous 15 years;
- Learning about financial reporting to the EC.

5. Impacts on national and international R&D policy and programming

Given the early stage of EU-Russian ERA-NET relations and the ongoing negotiations in these affairs, Russian full participation in ERA-NET has not yet been possible. Legal and administrative barriers have not allowed for full involvement. Therefore, participation was limited to beneficiaries attending workshops and meetings financed by ERA-NET participants. Funding agencies did not participate in ERA-NET.

5.1 Impact on national R&D policy

Russia is aware of the internal barriers to full participation in EU-Russia R&D cooperation, including in the ERA-NET scheme.

The **Minister of Education and Science**, Andrej Fursenko, has been one of the driving factors for comprehensive legal reforms effecting Russian research and the higher education system, and for an opening the Russian research area and overcoming certain obstacles. In his speech to the Presidium of the State Council of the Russian Federation meeting on 19 April 2008 he pointed out the great opportunity of Russia joining the FP7 since this would provide "access to the scientific potential of main European research centers and … give a mighty incentive for developing the commercialization of the results received, for reforming the ineffective structure and management."[264] For this he **demanded reforms of a number of regulations** of the Civil and Budget Codes and other federal laws. He concluded his speech by summarizing: "But there are no rules for all times and the old rules must be changed. THE INNOVATIONS CANNOT WAIT."

- Under FP7 Russia is participating in one ERA-NET: **ERA-NET RUS**: Linking Russia to the ERA: Coordination of Member States' and Associated Countries' programmes towards and with Russia

ERA-NET RUS links back to FP6 since it builds on experience from the three FP6 ERA-NETs Russia was involved in, BONUS, ERASYSBIO, EUROPOLAR, and is aiming at identifying good practice of FP6 INCO ERA-NETs, most prominently SEE-ERA.NET.

5.2 Impact on national R&D programming

Again, there is no evidence that recent programming activities were influenced by Russia's participation in the ERA-NET. However, large political interests in joint EU-Russian research activities indicate that current programmes such as ERA-NET are mainly positively perceived. According to a review undertaken by the Council and Commission in autumn 2008, entities of the Russian Federation participate in all thematic and sub-programmes of the FP7 with a Community contribution of

[264] Minister A. Fursenko's speech at the Presidium of the State Council of the Russian Federation meeting on April 19, 2008. see http://eng.mon.gov.ru/ruk/ministr/dok/4132/

some € 29 million. Further co-operation includes the Agreements for co-operation between Euratom and Russia in the fields of nuclear safety and controlled nuclear fusion, both concluded in 2002 for an initial period of 10 years.[265]

5.3 Opening up on national R&D programming

No evidence could be found.

5.4 Impact on the structuring of national or international research fields

AARI researchers' participation in the European Polar Consortium strengthened the European focus at the research institute.

6. European Added Value, relevance and efficiency

6.1 Additionality of the ERA-NET scheme

N/A

6.2 Economic efficiency and relevance

N/A

[265] Review of EU-Russia relations, Brussels, 5 November 2008, see http://europa.eu/rapid/pressReleasesAction.do?reference=MEMO/08/678&format=HTML&aged=0&language=EN&guiLanguage=en

7. Annexes: Stakeholders and materials consulted

- EC official based in Moscow.
- 2 staff members of a funding agency, BONUS
- 2 scientists at Institute for Arctic and Antarctic Research (AARI), EUROPOLAR

- International Bureau of the German Federal Ministry of Education and Research (BMBF). Establishing research relationships from Paris to Almaty, Press Release, September 2008
- Richard Burger. EU science policy and instruments. Presentation on the 11th Tomsk Innovation Forum, 10-11 October 2008
- Richard Burger. EU-Russia cooperation in science & technology. Presentation for ESI training, 8 December 2006
- Climate Impact Research Coordination for a Larger Europe (CIRCLE). Sixth Framework Programme Priority: ERA-NET. Coordination of National and Regional Activities (ERA-NET scheme). Report on the current state of National Research Programmes on Climate Change Impacts and Adaptation in Europe. Extended Country Report, 15 May 2006
- Andreev, A. O., M. V. Dukalskaya and S. V. Frolov. The International Polar Year. History and Perspectives, Arctic and Antarctic Research Institute (AARI), St. Petersburg, 2007
- European Commission's Delegation in Russia. The Common Space of Research, Education and Culture

8. Annexes: Participant survey results

No data available

9. Annexes: Coordinator survey results[266]

The following tables show information from the coordinator questionnaire.

Table 1 - ERA-NET participation by theme

Theme	Number	Percentage
Transport	0	0%
Life Sciences	2	50%
Environment	2	50%
Fundamental Sciences	0	0%
INCO	0	0%
Industrial Technologies and SMEs	0	0%
Energy	0	0%
Social Sciences and Humanities	0	0%
Total	**4**	**100%**

Table 2 - Joint call participation by theme

Theme	Number	Percentage
Transport	0	0%
Life Sciences	0	0%
Environment	1	100%
Fundamental Sciences	0	0%
INCO	0	0%
Industrial Technologies and SMEs	0	0%
Energy	0	0%
Social Sciences and Humanities	0	0%
Total	**1**	**100%**

Table 3 - Financial contribution to joint calls by theme

Theme	Number of contributions	€ virtual	€ common	€ mixed	Total
Transport	0	-	-	-	0
Life Sciences	0	-	-	-	0
Environment	1	-	-	380,000	380,000
Fundamental Sciences	0	-	-	-	0
INCO	0	-	-	-	0
Industrial Technologies and SMEs	0	-	-	-	0
Energy	0	-	-	-	0
Social Sciences and Humanities	0	-	-	-	0
Total	**1**	**0**	**0**	**380,000**	**380,000**

[266] The Coordinator survey covered all 71 ERA-NETs - although in case of 7 ERA-NETs, the information collected dates back from the 2006 survey. 59 ERA-NETs provided information about the calls they have done over the period (NB: it is likely that not all ERA-NETs have reported call information in an exhaustive way). 49 ERA-NETs provided a breakdown of funding contributions at country level for calls (NB: this is likely to be an underestimate as not all ERA-NET coordinators knew this information)

ERA-NET Evaluation

SD15: Country report on Croatia

The following document provides the structure for the country report on ERA-NETs in Croatia.

The content of this report has been informed by qualitative interviews and the findings of one survey. The interviews were undertaken with ERA-NET stakeholders[267] in 15[268] of the 40 countries taking part in the scheme. The number of interviews by country ranged between handfuls in some countries to a couple of dozen in other countries. The same interviewees were chosen to represent thematic areas – the number of interview per theme ranged between 12 and 25 depending on the theme. The survey was aimed at all ERA-NET coordinators and responses were received by approximately half of these, although responses varied across themes and countries. In addition, and where relevant, the report has been informed by reviews of documents and websites. Another survey was conducted which aimed at participants, however in the case of Croatia no responses were received.

Regarding the contents of this report it is important to remember that the findings described within cannot be regarded as a definitive or representative view of all activities within ERA-NETs in this country. Because the interviews were based on a narrow selection of countries and representing a minority of ERA-NETs in each theme, the contents of this report should very much be regarded as a case study that provides a view of the experience. This may also explain why the findings from the qualitative interviews are sometimes at odds with the findings of the surveys which were more inclusive and wide-ranging.

Where possible in the report, the source of evidence is indicated either as coming from one of the coordinator survey or the field interviews.

[267] Stakeholders included National Policy Stakeholders, ERA-NET Coordinators and Participants, and ERA-NET beneficiaries.
[268] The countries were: Austria, Croatia, Finland, France, Germany, Italy, Netherlands, Norway, Poland, Portugal, Romania, Russia, Slovenia, Turkey, and UK,

Contents

0. Executive Summary - Overview

Q1 – Impact on Research Landscapes

- The Croatia's efforst to join the EU was reported as a main driver for participation in the ERA-NET scheme alongside a desire to learn about R&D porgramming from other European countries.
- Croatia's cooperation in the SEE-ERA-NET led to acknowledgement and further commitment to European R&D activities by the government including a Memorandum of Understanding between the Ministers Responsible for Education, Science and Research in 5 South Eastern European Countries.
- According to Croatian participants, the Government has linked national research priorities to FP priorities and similarly to those of EUREKA. Environment, for example, became one of the priorities which before was not the case. In this sense, the existence of European level initiatives seems to have structured the national research landscape.
- Croatia's participation in the ERA-NET scheme prompted a transfer of funding activities to a body outside the Ministry of Education. In 2006, the Croatian Institute of Technology (HIT) was established as intermediary level between the Ministry and the researchers in order to run fund programmes in the future.
- Five staff members at the Ministry of Science, Education and Sports received training as National Contact points for the ERA-NET scheme under FP6. These staff was later transferred to HIT which took over participation of the ERA-IB.
- The fact that Croatia was involved in FP6 as a participant for the first time clearly changed the landscape of players involved in European R&D. SEE-ERA-NET in particular opened up European research to non-EU Member States who before mainly focused on bilateral cooperation. However, the participation of non-EU members did not have a great impact on the structures and mechanisms since it was limited to smaller tasks and the national funding was considerably smaller.

Q2 – Structuring effect on specific research areas or fields

- Croatia as a non-EU Member State was involved as an ERA-NET participant for the first time under FP6. In the INCO-type ERA-NET SEE-ERA-NET Croatia as country with EU candidate status played a special role as bridge between EU Member States and potential candidates. However, Croatia's participation shaped the research field only minor since its task was limited to a SWOT analysis. Resulting from Croatia's participation in SEE-ERA-NET the country also participated in a joint call.

Q3 - Direct benefits and indirect benefits

Main benefits for National Policy Stakeholders and Participants included:

- networking with funding agencies from other countries;
- establishing new and stronger cooperation relationships;
- learning about the set up of R&D programming and funding in other countries in order to establish a Croatian system;
- insight into the use of management tools such as feedback sessions and lessons learnt and first steps incorporate into their national programming system;
- improved knowledge of the national and European science communities.

Main benefits for beneficiaries and researchers included:

- networking with researchers from other countries;

- sharing of scientific and managerial experience;
- European level working experience.

Q4 – Opening up of national programmes

- No foreign individual or organisation was ever directly funded by Croatia but the Croatian contribution to SEE-ERA-NET was indirectly used to fund Austrian researchers.
- Croatian interviewees expressed scepticism towards a common pot system due to already small budgets for R&D at the national level. However, they were much more open to participation in virtual pots. So far they have participated in one mix-mode call under the SEE-ERA-NET.

Q5 – Best practice

- National Policy Stakeholders mentioned regular and clear communication with the European Commission as a best practice.
- Other participants fed back that budgeting for individual tasks could be made more precise in order to avoid miscalculations. They also high-lighted well-functioning information systems as being important to the functioning of the ERA0Nets including each participant disseminating information to all others; steering board meetings twice a year, working groups on specific aspects meeting regularly and disseminating results to other participants.
- Researchers fed back that the reporting format used for communication to the funding agency was a useful tool.

1. Strategic national context underpinning the ERA-NET participation

1.1 Strategic planning and role of ERA-NETs in the country

The **Ministry of Science, Education and Sports (MSES)** is responsible for the designing the Croatian research policy on a strategic level. It runs the communication processes between the Ministry, the National Contact Point (NCP) and the funding agencies. In the past it was also in charge of allocating funding but recently set up an intermediary level of funding agencies positioned between the Ministry and the research performers. These funding agencies are the Croatian Institute of Technology (HIT), the Business Innovation Centre of Croatia (BICRO), the National Foundation for Science (NZZ) and the Unity Through Knowledge Fund (UKF).

The ministry trained 5 staff members to become the NCP for FP and to be transferred to the HIT. After the transfer, 2 staff members remained at the Ministry for dealing with the ERA-NET scheme.

The new level comprises four financial bodies in charge of allocating research funding. The **Croatian Institute of Technology (HIT)** and the **Business Innovation Centre of Croatia (BICRO),** both established by the government in 2006 and in 1998 respectively, are in charge of running innovation policy programmes. HIT is the new programme owner of the ERA-IB since 2008 and is also in charge of operating the national research programmes. The **National Foundation for Science (NZZ)** was initiatied in 2005 to promote science-business cooperation in the sense of increasing non-governmental investment in basic research while the programme **Unity Through Knowledge Fund (UKF)** was launched by MSES in 2004. It is supported by the World Bank and aims to unite the scientific and professional potential of researchers from Croatia and those living abroad (i.e. the Diaspora).

Unlike HIT and BICRO that were set up to run research programmes, NZZ operates as a scientifial advisory body and allocates additional research funding on a national level, mainly for basic research.

HIT and BICRO fund applied sciences project, BICRO typically business studies and HIT foremost technology-related research. EUREKA projects are still run by the ministry but will soon be tranferred to HIT and BICRO.

Research is carried out by both public and private research organisations. The main **public research entities** are the 6 universities in Croatia - Zagreb, Rijeka, Osijek, Split, Zadar and Pula (faculties in Varazdin are part of University of Zagreb and faculties in Slavonski Brod are part of the University of Osijek) and the Croatian Academy of Science and Art. According to current law, universities' faculties are separate legal entites with their Deans possesing signatory authorisation. In the future, universities should become a legal entity representing all its faculties, and its rector will be authorised to sign contracts.

Croatia has 11 **private research institutes**. They started to be established 2-3 years ago and were either created from scratch or transformed from state organisations into private bodies. Most of them are SMEs undertaking research and consultancy services, a small percentage is involved in industrial research. The Naval Institute Zagreb e.g. was set up by the government but is registered as a private company at present. Oikon Institute for Applied Ecology was newly set up in Zagreb in 1997. It employs 45 persons. Private research in particular focuses on commercialiasable topics like environment, civil and naval engineering, and the pharmaceutical sector.

1.2 Motivations for joining ERA-NET and set up

An overall driver for participation was Croatia's desire to join the EU.

On the level of National Policy Stakeholders, participating in ERA-NET was seen as a great opportunity for Croatian policy-makers to collaborate with European partners, to explore how research programmes are developed in EU Member States and to see 'what works'. The design of a Croatian research programme is still under way but participants confirmed that experience gained from the participation in the ERA-NET scheme will have major influence its design in terms of topics and procedures. Participants also expected benefits arising from the establishment of new contacts with staff at Member States' funding agencies.

On participant level, HIT was initially invited to participate in a proposal by the Centre for Innovation in Vienna to participate in the ERA-NET scheme. HIT wanted to increase the number of participations in the FP and to improve scientific research by sharing information, knowledge and ideas. Additionally, funding agencies learnt lessons from the ERA-NET scheme and confirmed their intention to apply them when establishing programming on national level for bilateral and regional cooperation during the next months. In the ERA-NETs, Croatian participants focused on identifying what kinds of programming seemed most effective, what countries had similar objectives and complementary ressources, and what themes were those of common interest.

Beneficiaries expressed that they had been involved in bilateral and multilateral projects in the past. Their motivation for applying for ERA-NET project funds was driven by a desire to strengthen contacts with researchers in Europe, to be involved projects on European level and to learn and share experience cross borders.

2. Overview of participation

2.1 Extent of involvement in the ERA-NET scheme[269]

Croatia had third country status in FP5 and FP6. Under FP7 its status changed to participant for the first time. Besides ERA-NET, Croatia participates in EUREKA and COST and in a number of bilateral cooperation.

In the past the National Council of Science and the Academy of Science believed that only basic research was 'real research' and only PhD theses in basic research were permitted. Recently the relevance of applied research has been acknowledged and last year the Academy of Science has streamlined national research and agreed on 26 national priority research themes including engineering, energy efficiency and electronics given Croatia's strong foundations in these fields and ICT, biotechnology and environment (forest issues among others) as new fields. ICT, biotechnology and environment were added as response to the ERA-NET priorities and anticipated opportunities to engage in these fields on a European level.

Besides particular themes, Croatia is involved in regional research collaborations, e. g. in South Eastern Europe, the Danube region and the Mediteranean space. The regional focus on South Eastern Europe was initiated by Croatia's participation in the SEE-ERA-NET.

Table 23 shows the extent of Croatian participation in the scheme.

[269] SeeTable 23 .

3. ERA-NET processes and positioning

3.1 Inputs into the ERA-NET scheme[270]

Croatia has been involved, as a participant, in two ERA-NETs: Southeast European ERA-NET (SEE-ERA-NET) and ERA-IB. SEE-ERA-NET was a networking project aimed at integrating EU Member States and Southeast European countries into the European Research Area and fell into the International Cooperation (INCO) theme. ERA-IB was a thematic ERA-NET in the area of Industrial Biotechnology i.e. the Life Sciences theme.

In SEE-ERA-NET Croatia participated by undertaking a SWOT analysis of bilateral cooperation between the particpating countries. For this, the Institute of Social Science was sub-contracted for data collection and analysis. Although this was a comparatively small assignment it was considered as relevant on all levels since it indicated progress in Croatia's efforts to engage in joint European actions and to underline its interest in joining the EU in the future.

The country's desire to join the EU were also driving factors for taking part in other programmes such as Western Balkan Plus, SEE-ERA.NET Plus, EUREKA and in 16 COST projects, as well as to nominate National Contact Points (NCP) for six themes within for instance Transport, Nanotechnology and INCO. Participants expected the numbers of NCPs to increase in future.

Following the participation in the FP6 ERA-NET scheme, the structure at the ministry was slightly adjusted in 2006. A directorate was divided into two parts. However, no additional ressources were set aside to support the scheme which was perceived as problematic by participants.

3.2 Participation in joint activities, calls or programming[271]

According to a national policy stakeholder, Croatia participated in seven joint calls in three themes: ICT, Environment and Health which all finished in 2006 or 2007. For more details see Table 24. Croatia's task was mainly to undertake data collection exercises. Projects funded by Croatian participants were largely small mobility projects lasting about 7 months. As a result of participating in the FP6 ERA-NETs, Croatia will participate in SEE-ERA-NET Plus launched under FP7. Future joint calls up to 2010 will focus on 10 main fields with agriculture, fishery, social and nautical sciences amongst others.

The rationale for participating in the ERA-NET scheme was to learn how to set up research programming in Croatia by sharing experience from EU Member States and to engage in networking with equivalent organisations abroad.

Participating in a virtual pot under SEE-ERA-NET was found relatively easy. Regarding participating in a common pot the responses varied among the interviewees but the overall view was one of scepticism. No foreign individual or organisation was ever directly funded by Croatia.

Croatia's assignment in the SEE-ERA-NET was small compared to other participants. Undertaking the SWOT analysis was a relatively simple way to contribute to the large network. Attending workshops and meeting was seen as great opportunity to engage with funding agencies from other countries and to share scientific as well as management

[270] See
Table 25.
[271] See Table 24.

experience. The administrative requirements were partly seen as unclear and time-consuming.

3.3 Lessons learnt and best practice

In general, Croatia's participation the FP6 ERA-NET scheme was seen as a very positive experience. The interviewees described enabling and hindering factors in a wider context as well as good practice examples on an operation level.

Enabling and hindering factors

On the level of National Policy Stakeholders the limited national budget dedicated to research was mentioned as hindering factor. Although 3 % of total spending is set as a target, the share is only 0.8 % at present. Additionally, funding agencies face cumbersome and slow procedure in communication with their government.

The participants emphasised the generous time frame of 8 months between the tender publishing and the deadline for proposals which enabled the participants to write a good proposal and form a high-level consortium. Compared to COST or EUREKA this was seen as a major advantage.

Theme-wise, both ERA-NETs – SEE-ERA-NET and ERA-IB – where Croatia participated, fit well into ongoing national research programming priorities such as environment, biology, and ICT. Joint projects, in particular in ICT and water protection, between the ERA-NET participants in these themes are ongoing after the FP6 finished. It was noted that in the field of environment there were too many ERA-NETs. Croatia participated fully up to the staff limit of 7 persons (2 at the ministry, 5 at HIT) and believes that for smaller countries collaboration in sub-areas e.g. of the environmental R&D would be beneficial.

The participants of SEE-ERA-NET expressed great satisfaction about the good cooperation on an individual level as well as with most of the participants at the country level. However, cooperation efforts by particular countries in Southern Europe had been perceived as poor and as exclusively targeted to countries which were historically bound together. The fact that Italy did not participate was regretted. Therefore, it was not easy to move forward with joint projects as easily. Moreover, the rationale of the ERA-NET to cooperate as a large region was put into question: *"We don't need the region. If we want to spend more, it is better without the region".*

In terms of allocation of resources, FP6 was preferred to FP7. While the total budget of 3 million was considered sufficient for each ERA-NET under FP6, the budget necessary to undertake the SWOT analysis was underestimated and additional resources had to be taken from other sources.

Administrative procedures were partly perceived as lengthy and more clarification regarding rules and procedures from both the Coordinator and from the Commission would have been appreciated.

Good practice examples

On the level of National Policy Stakeholders it was highlighted that regular and clear communication with the European Commission was necessary.

Budgeting for individual tasks had to become more precise to avoid miscalculations.

The information systems developed at project inception were seen as very useful: Each participant disseminated information to all others, the steering board met twice a year and

the working groups on specific aspects met regularly. The results were shared with the other participants.

One IPR issue occurred which is being handled by one funding agency at the moment. Overall, Croatian participants expressed that it was too early in the process to extract lessons learnt on how to deal with IPR issues.

Beneficiaries mentioned that the reporting format was a useful tool they might use in other contexts.

4. ERA-NET benefits

4.1 Direct and indirect benefits to ERA-NET national policy stakeholders and participants

National Policy Stakeholder mostly benefited from participating in joint calls and in workshops. In this way, they could approach and involve others and establish stronger cooperation relationships for future use.

Participants gained new insights into tools like feedback sessions and extracting lessons learnt which they started to incorporate into national programming schemes. They also gained knowledge of scientific communities in Europe and in Croatia.

It was further mentioned that the label ERA-NET was well established within the science community.

4.2 Direct and indirect benefits to ERA-NET beneficiaries

Researchers benefited by attending workshops and meetings funded under the SEE-ERA-NET. This enabled them to network with researchers from other countries and to share both scientific and managerial experience. Researchers expressed an interest to establish new cooperation on European level.

On an individual level, the participation in a large-scale European project is an asset for their future careers.

5. Impacts on national and international R&D policy and programming

5.1 Impact on national R&D policy

Croatia's cooperation in the SEE-ERA-NET led to acknowledgement and further commitment to European R&D activities by the government. On 4 May 2007, Croatia with 5 other South European countries and Kosovo signed a "Memorandum of Understanding between the Ministers Responsible for Education, Science and Research in South Eastern Europe"[272]. The Memorandum explicitly considers the steps towards an integration of these countries into the European Research Area and refers to the SEE-ERA-NET in particular. The signing officials agree to further cooperate in the education and research field, in particular to implement the "Detailed Work Programme on the Follow-up of the Objectives of Education and Training Systems in Europe" as well as the objectives of the Copenhagen and Bologna process.

Due to Croatia's participation in the ERA-NET scheme the need to transfer funding activities to a body outside the Ministry of Education was recognised. In 2006, the Croatian Institute of Technology (HIT) was established as intermediary level between the Ministry and the researchers in order to run funding programmes in the future. 5 staff members have been trained at the Ministry and now moved to the premise of HIT.

Croatia has decided to participate in ERA-NET Plus under FP7. For SEE-ERA-NET more than 30 good proposals arrived and 7 are funded.

According to a participant the government has linked national R&D priorities to FP priorities, e.g. environmental R&D.

5.2 Impact on national R&D programming

The experience gained from participating in the ERA-NET scheme under FP6 was considered essential for designing national R&D programming. Impacts were not yet visible since the FP6 participation was meant to be a learning experience in order to establish a system for national programming. The person in charge is in the process of analysing new knowledge and extracting lessons learnt to be used for the Croatian context.

5.3 Opening up on national R&D programming

Bilateral and multilateral cooperation in R&D has been strengthened. Both ERA-NET on the level of funding agencies and EUREKA on the researchers level have complemented this.

In terms of funding, participation in a virtual pot enjoyed more support from Croatian policy makers as the idea of funding non-resident researchers with already limited Croatian funds caused a stir in the Ministry.

5.4 Impact on the structuring of national or international research fields

The fact that Croatia was involved in FP6 as a participant for the first time clearly changed the landscape of players involved in European R&D. SEE-ERA-NET in particular opened up European research to non-EU Member States who before mainly focused on bilateral cooperation. However, the participation of non-EU members did not have a great impact

[272] See: www.bmukk.gv.at/medienpool/15243/mouistanbul2007_web.pdf

on the structures and mechanisms since it was limited to smaller tasks and the national funding was considerably smaller.

6. European Added Value, relevance and efficiency

6.1 Additionality of the ERA-NET scheme

Through participating in ERA-NET, Croatia was enabled to link more strongly to the European R&D community, in SEE-ERA-NET to the Central and South European countries in particular. Additionally, Croatia gained one additional instrument in searching for partners.

ERA-NET helped to streamline national programming and to recognise what programmes and how they run in other countries. The scheme further helped Croatia to identify its own strong points in order to find entry points for collaboration in the future.

Researchers were enabled to undertake a SWOT analysis which they had not done before in a cross-country context. They strongly benefited from sharing and discussing their results with participants from other European countries which would not have been possible in a national project.

6.2 Economic efficiency and relevance

Participants were convinced that Croatia gained considerably recognition with the European R&D community and collected firsthand experience in order to establish a national programming scheme.

7. Annexes: Stakeholders and materials consulted

- National Policy Stakeholder, Ministry of Science, Education and Sports, SEE-ERA-NET and ERA-IB
- ERA-NET participant, funding agency, SEE-ERA-NET
- ERA-NET participant, funding agency, ERA-IB
- Researcher, university, SEE-ERA-NET
- Researcher, university, SEE-ERA-NET

- Memorandum of Understanding between the Ministers Responsible for Education, Science and Research in South Eastern Europe, 4 May 2007, see: www.bmukk.gv.at/medienpool/15243/mouistanbul2007_web.pdf
- European Communities. 2008. ERAWATCH Research Inventory Report for Croatia

8. Annexes: Participant survey results

No responses to the participant survey were received from Croatia.

9. Annexes: Coordinator survey results[273]

The following tables show information from the coordinator questionnaire.

Table 1 - ERA-NET participation by theme

Theme	Number	Percentage
Transport	0	0.0%
Life Sciences	1	50.0%
Environment	0	0.0%
Fundamental Sciences	0	0.0%
INCO	1	50.0%
Industrial Technologies and SMEs	0	0.0%
Energy	0	0.0%
Social Sciences and Humanities	0	0.0%
Total	**2**	**100%**

Life Sciences and INCO thematic areas attracted Croatian participants.

Table 2 - Joint call participation by theme

Theme	Number	Percentage
Transport	0	0.0%
Life Sciences	0	0.0%
Environment	0	0.0%
Fundamental Sciences	0	0.0%
INCO	1	100.0%
Industrial Technologies and SMEs	0	0.0%
Energy	0	0.0%
Social Sciences and Humanities	0	0.0%
Total	**1**	**100%**

The INCO thematic area channelled the joint call.

[273] The Coordinator survey covered all 71 ERA-NETs - although in case of 7 ERA-NETs, the information collected dates back from the 2006 survey. 59 ERA-NETs provided information about the calls they have done over the period (NB: it is likely that not all ERA-NETs have reported call information in an exhaustive way). 49 ERA-NETs provided a breakdown of funding contributions at country level for calls (NB: this is likely to be an underestimate as not all ERA-NET coordinators knew this information)

Table 3 - Financial contribution to joint calls by theme

Theme	No contributions	€ virtual	€ common	€ mixed	Total
Transport	0	-	-	-	0
Life Sciences	0	-	-	-	0
Environment	0	-	-	-	0
Fundamental Sciences	0	-	-	-	0
INCO	1	-	-	50,000	50,000
Industrial Technologies and SMEs	0	-	-	-	0
Energy	0	-	-	-	0
Social Sciences and Humanities	0	-	-	-	0
Total	**1**	**0**	**0**	**50,000**	**50,000**

The funding contribution made was through a mixed pot in the INCO thematic area.

Appendix 1: List of Stakeholders

The following table shows the organisations, ERA-NETs, and thematic areas associated with ERA-NET coordinators, participants, and beneficiaries interviewed during the country visits[274].

Table I – Coordinators, participants, and beneficiaries interviewed as part of the fieldwork

Country	Organisation	ERA-NET	Theme
Austria	Austrian Energy Agency	ERA-NET BIOENERGY	Energy
Austria	BMVIT	ERA-STAR REGIONS	Transport
Austria	BMVIT	ERABUILD	Industrial Technologies and SMEs
Austria	FFG	AirTN	Transport
Austria	FFG	PV-ERA-NET	Energy
Austria	FWF	ERA-CHEMISTRY	Fundamental Sciences
Austria	FWF	PathoGenoMics	Life Sciences
Austria	Umweltbundesamt (Federal Environment Agency, Austria)	IWRM.Net-CA	Environment
Croatia	HIT	ERA-IB	Life Sciences
Croatia	MZOS	SEE-ERA-NET	INCO
Croatia	University Zagreb	SEE-ERA-NET	INCO
Finland	Academy of Finland	NORFACE	Social Sciences and Humanities
Finland	Academy of Finland	CO-REACH	INCO
Finland	Academy of Finland	ERA-CHEMISTRY	Fundamental Sciences
Finland	Academy of Finland	HERA	Social Sciences

[274] It is important to note that the number of entries in the table does not necessarily represent the number of interviews completed, since it is sometimes the case that a single individual is involved in more than one ERA-NET, while in some cases a number of individuals in the same organisation could be involved in the same ERA-NET. This is not reflected in the table.

			and Humanities
Finland	Baltic Organisations Network for Funding Science	BONUS	Environment
Finland	Church Research Institute, Finland	NORFACE	Social Sciences and Humanities
Finland	Finnish Ministry of Transport and Communications	ERA-NET TRANSPORT	Transport
Finland	Technical research Centre of Finland	MATERA	Industrial Technologies and SMEs
Finland	Tekes	MNT ERA-NET	Industrial Technologies and SMEs
Finland	Tekes	ERA-NET BIOENERGY	Energy
Finland	Tekes	MATERA	Industrial Technologies and SMEs
Finland	The Finnish Environment Institute	CIRCLE	Environment
France	Agence de l'Environnement et de la Maitrise de l'Energie	PV-ERA-NET	Energy
France	Agence Nationale de la Recherche	NEURON	Life Sciences
France	Agricultural Research Centre for International Development	ERA-ARD	INCO
France	CNRS	ASPERA	Fundamental Sciences
France	CNRS	ERA-CHEMISTRY	Fundamental Sciences
France	Ifremer	ECORD	Environment
France	Institut Francais de Recherche pour l'Exploration de la Mer	MARINERA	Environment
France	Ministere des Affaires Etrangeres	ERA-ARD	INCO
France	OSEO	EUROTRANS-BIO	Life Sciences
France	Université de Bordeaux	ERA-CHEMISTRY	Fundamental Sciences
Germany	Bundesministerium für Bildung und Forschung	ASPERA	Fundamental Sciences

Germany	Bundesministerium für Bildung und Forschung	EULANEST	INCO
Germany	Bundesministerium für Wirtschaft und Technologie	HY-CO	Energy
Germany	Bundesministerium für Wirtschaft und Technologie	AirTN	Transport
Germany	DFG	ERA-CHEMISTRY	Fundamental Sciences
Germany	DFG	NORFACE	Social Sciences and Humanities
Germany	DLR	AirTN	Transport
Germany	DLR	EULANEST	INCO
Germany	Forschungszentrum Juelich GmbH	INNER	Energy
Germany	Forschungszentrum Juelich GmbH	ERASysBio	Life Sciences
Germany	Forschungszentrum Juelich GmbH	WOODWISDOM	Industrial Technologies and SMEs
Germany	VDI/VDE Innovation + Technik GmbH	EraSME	Industrial Technologies and SMEs
Italy	Agenzia per la Protezione dell'Ambiente e per i Servizi Tecnici'	CRUE	Environment
Italy	Centre of Culture for Engineering of the Plastics	MANUNET	Industrial Technologies and SMEs
Italy	Instituto Nazionale di Astrofisica	ASTRONET	Fundamental Sciences
Italy	Istituto Nazionale di Ricerca Metrologica	iMERA	Industrial Technologies and SMEs
Italy	Istituto Superiore di Sanita	PRIOMEDCHILD	Life Sciences
Italy	Ministero dell'Ambiente e della Tutela del Territorio e del Mare	SKEP	Environment
Italy	Ministero dell'Universita e della Ricerca	HY-CO	Energy
Italy	Ministero dell'Universita e della Ricerca	MATERA	Industrial Technologies and SMEs

Italy	Ministero dell'Universita e della Ricerca	ACENET ERA-NET	Industrial Technologies and SMEs
Italy	Ministero dell'Universita e della Ricerca	BIODIVERSA	Environment
Italy	Ministero dell'Universita e della Ricerca	AirTN	Transport
Italy	Ministero dell'Universita e della Ricerca	ERA-PG	Life Sciences
Italy	Ministero dell'Universita e della Ricerca	EUROPOLAR	Environment
Italy	Regione Emilia Romagna - Agenzia Sanitaria Regionale	CoCanCPG	Life Sciences
Italy	Regione Piemonte - Productive Activities Directorate	MANUNET	Industrial Technologies and SMEs
Italy	Regione Toscana	ERA-STAR REGIONS	Transport
Italy	United Nations Interregional Crime and Justice Research Institute	EU-SEC	Social Sciences and Humanities
Netherlands	Ministry of Economic Affairs	ERA-NET BIOENERGY	Energy
Netherlands	Ministry of Economic Affairs	AirTN	Transport
Netherlands	Nederlandse Organisatie voor Wetenschappelijk Onderzoek	NORFACE	Social Sciences and Humanities
Netherlands	Raad van Geneeskundig Functionarissen/Geneeskundige Hulpverlening bij Ongevallen en Rampen in Nederland	HESCULAEP	Life Sciences
Netherlands	SenterNovem	SUSPRISE	Industrial Technologies and SMEs
Netherlands	Stiching voor Fundamenteel Onderzoek der Materie	ASPERA	Fundamental Sciences
Netherlands	Nederlandse Organisatie voor Wetenschappelijk Onderzoek	HERA	Social Sciences and Humanities
Netherlands	The Royal Netherlands Academy of Arts and Sciences	CO-REACH	INCO
Norway	Norwegian Public Roads Administration	ERA-NET ROAD	Transport

Norway	The Research Council of Norway	NORFACE	Social Sciences and Humanities
Norway	The Research Council of Norway	FORSOCIETY	Social Sciences and Humanities
Norway	The Research Council of Norway	ETRANET	Industrial Technologies and SMEs
Norway	The Research Council of Norway	MARINERA	Environment
Norway	The Research Council of Norway	AMPERA	Environment
Norway	The Research Council of Norway	MNT ERA-NET	Industrial Technologies and SMEs
Norway	The Research Council of Norway	CO-REACH	INCO
Norway	The Research Council of Norway	FENCO-ERA	Energy
Poland	Cracow University of Technology	MNT ERA-NET	Industrial Technologies and SMEs
Poland	National Centre for Research and Development	ASTRONET	Fundamental Sciences
Poland	National Centre for Research and Development	MARINERA	Environment
Poland	National Centre for Research and Development	NEURON	Life Sciences
Poland	National Centre for Research and Development	CRUE	Environment
Poland	National Centre for Research and Development	MARTEC	Industrial Technologies and SMEs
Poland	National Centre for Research and Development	MNT ERA-NET	Industrial Technologies and SMEs
Poland	National Centre for Research and Development	ERA-NET TRANSPORT	Transport
Poland	National Centre for Research and Development	AirTN	Transport
Poland	National Centre for Research and Development	WORK-IN-NET	Social Sciences and Humanities
Poland	National Centre for Research and Development	CORNET	Industrial Technologies

			and SMEs
Poland	Technical University of Lodz	MNT ERA-NET	Industrial Technologies and SMEs
Portugal	Cabinet of the Ministry of the Interior	EU-SEC	Social Sciences and Humanities
Portugal	Foundation of the Faculty of Sciences of the University of Lisbon	CIRCLE	Environment
Portugal	Foundation of the Faculty of Sciences of the University of Lisbon	AirTN	Transport
Portugal	Fundacao para a Ciencia e a Tecnologia (FCT)	PathoGenoMics	Life Sciences
Portugal	Fundacao para a Ciencia e a Tecnologia (FCT)	FENCO-ERA	Energy
Portugal	Fundacao para a Ciencia e a Tecnologia (FCT)	EULANEST	INCO
Portugal	Fundacao para a Ciencia e a Tecnologia (FCT)	ASPERA	Fundamental Sciences
Portugal	Fundacao para a Ciencia e a Tecnologia (FCT)	BIODIVERSA	Environment
Portugal	IPATIMUP	PathoGenoMics	Life Sciences
Portugal	IST	CIRCLE	Environment
Romania	National Authority for Scientific Research (ANCS)	SEE-ERA-NET	INCO
Romania	National Center for Management Programmes (CNMP/NCPM)	NEURON	Life Sciences
Romania	National Center for Management Programmes (CNMP/NCPM)	EUROPOLAR	Environment
Romania	National Center for Management Programmes (CNMP/NCPM)	MANUNET	Industrial Technologies and SMEs
Romania	Politehnica University of Bucharest	MNT ERA-NET	Industrial Technologies and SMEs
Romania	Romanian Academy	FORSOCIETY	Social Sciences and Humanities
Romania	Romanian Space Agency	AirTN	Transport

Russia	Arctic And Antarctic Research Institute Of Roshydromet (AARI)	EUROPOLAR	Environment
Russia	RFBR	BONUS	Environment
Slovenia	Ministry of Higher Education, Science and Technology	HY-CO	Energy
Slovenia	Ministry of Higher Education, Science and Technology	MNT ERA-NET	Industrial Technologies and SMEs
Slovenia	Ministry of Higher Education, Science and Technology	MATERA	Industrial Technologies and SMEs
Slovenia	Ministry of Higher Education, Science and Technology	ERA-STAR REGIONS	Transport
Slovenia	Ministry of Higher Education, Science and Technology	ERA-SPOT	Industrial Technologies and SMEs
Slovenia	Ministry of Higher Education, Science and Technology	CORNET	Industrial Technologies and SMEs
Slovenia	Ministry of Higher Education, Science and Technology	EraSME	Industrial Technologies and SMEs
Slovenia	Ministry of Higher Education, Science and Technology	SEE-ERA-NET	INCO
Slovenia	Public Health Institute of Ljubljana	HESCULAEP	Life Sciences
Slovenia	University of Ljubljana	iMERA	Industrial Technologies and SMEs
Turkey	Middle East Technical University	FORSOCIETY	Social sciences and humanities
Turkey	Ministry of Agriculture and Rural Affairs, General Directorate of Agricultural Research	EUPHRESCO	Life Sciences
Turkey	Scientific and Technical Research Council of Turkey (TUBITAK)	ETRANET	Industrial technologies and SMEs
Turkey	Scientific and Technical Research Council of Turkey (TUBITAK)	URBAN-NET	Environment
UK	Department for Business, Enterprise & Regulatory Reform	PV-ERA-NET	Energy

UK	Department for Business, Enterprise & Regulatory Reform	AirTN	Transport
UK	Department for Environment, Food and Rural Affairs	CORE-ORGANIC	Life Sciences
UK	Department for International Development	ERA-ARD	INCO
UK	Department of Communities and Local Government	FORSOCIETY	Social Sciences and Humanities
UK	Economic and Social Research Council	NORFACE	Social Sciences and Humanities
UK	Engineering and Physical Sciences Research Council	COMPLEXITY NET	Fundamental Sciences
UK	Natural Environment Research Council	INNER	Energy
UK	Science and Technology Facilities Council	ASPERA	Fundamental Sciences
UK	The Royal Society of London for Improving Natural Knowledge	CO-REACH	INCO

The table below reflects the national policy stakeholders interviewed during the fieldwork.

Table II - National policy stakeholders interviewed as part of the fieldwork

Country	Number of stakeholders
Austria	3
Croatia	1
Finland	3
France	3
Germany	2
Italy	3
Netherlands	3
Norway	2
Poland	2
Portugal	3
Romania	1
Russia	1
Slovenia	2
Turkey	2
UK	3

Appendix 2: Field work data collection: Interview guides

The interview guides were developed to mirror the survey questionnaires to bridge any gaps in knowledge and help the answering of the five main research questions, deliverables and sub-deliverables.

Table III - Fieldwork Schedule aimed at Participants and Coordinators

BACKGROUND & CONTEXT
Name of Interviewee:
Organisation:
Type of interviewee:
Country:
Date of interview:
Type of interview:
1. Please confirm you email address for contact purposes.
2. Please confirm which ERA-NETs you are participating in or coordinating?
3. Please confirm the thematic focus of this/ these ERA-NETs?
4. What is your role in the organisation you are working for?
5. Please describe the responsibility and purpose of the organisation in relation to the ERA-NET.
6. Please describe thematic focus of your organisation?
MOTIVATION FOR JOINING THE ERA-NET
7. How did you or your organisation become aware of the ERA-NET scheme?
8. At the time of the ERA-NET scheme launch, were you already involved in transnational R&D cooperation? If yes, did this lead you to participate in the ERA-NET? If no, what is the key reason why you became engaged in the ERA-NET? How does this vary according thematic areas?
9. At the time of the ERA-NET scheme launch, were there other viable alternative ways to engage in transnational R&D cooperation? Probe: Bilateral agreements EUREKA FP Networks Ad hoc multilateral networks

10. What made your organisation take part in setting up and participating in an ERA-NET? Probe: Strategic reasons (e.g. opportunity to invest in / strengthen research area / thematic area) Tactical reasons (e.g. knowing what other countries, organisations are doing in this research area,) Operational reasons (e.g. information sharing with other participants) Where there any particular considerations regarding thematic areas?
11. To what extent was ERA-NET participation aligned with wider national priorities? And more specifically in relation to the thematic domain of the ERA-NET?
UNDERSTANDING OF ERA-NET WORKING PRACTICES
12. How did your organisation structure its participation in the ERA-NET internally in order to participate effectively? Probe: Were there any wider national support structures? Were there any structural constraints to providing a support structure? Other: Permissions / authorisations Legal Strategic direction Stakeholders
13. Were any resources set aside to support the scheme at the outset? Did that change over time? Probe: staff time (management and admin)
14. How did you and fellow participants develop the ERA-NET work Programme? Did you envisage joint calls / programming from the start?
15. What were factors (if any) that either enabled or hindered the delivery of all activities as planned? Where any changes made in response?
16. How have you and fellow participants in other countries involved in the ERA-NET worked together? What worked well? What worked less well? Probe: Systematic exchange of information and good practices, identification and analysis if common strategic issues. What adjustments were made in order to improve working practices?

17. How have ERA-NET activities fitted into your existing work programmes? In particular with regard to thematic areas? Probe: Are there any issues around flexibility? R&D funding
18. Please describe the process through which your organisation has decided to participate in joint calls or not. What are the key factors for this? For example do you consider the needs of researchers? Or do you consider the available funding?
19. What types of projects have tended to be funded through the joint calls and why? Has it differed in any way from the type of research funded through your national programmes and why? Probe: Basic/generic Applied Industrial R&D Applied Societal R&D
20. Describe the process determining how funding is released and allocated under joint calls. E.g. Unconnected R&D funding, virtual versus real pots, quotas for actual funding of applications. Does it vary with varying circumstances e.g. degree of response from national beneficiaries, according to thematic areas?
21. Have you ever funded a foreign national or organisation as part of the joint call?
22. Tell us how your ERA-NET has dealt with IPR issues in joint activities and calls? Has it varied depending on the focus of the research?
23. Are you aware of any instruments or processes that enable ERA-NET joint calls to better deal with the allocation of funding? Have these been practiced in your ERA NET? If not, why not?
24. Overall, have your organisation's guiding principles for coordinating R&D and opening up of national R&D programmes been influenced by your participation in the ERA-NETs? If yes, do you apply this in other inter-governmental research mechanisms such EUREKA, EUROCORES, etc.?
BENEFITS AND IMPACTS OF THE ERA-NET
25. For your organisation, what have been the main benefits or drawbacks from participating in individual ERA-NETs? Has it varied according to thematic focus? Probe: Learning/knowledge, new practices, new focus.

26. Is the experience similar with regard to involvement in multiple ERA-NETs? Probe: critical mass/efficiencies, more complex management, too resource intensive compared to benefits.
27. Have you been able to fund projects through ERA-NET joint activities/calls or programmes that would not have been possible to fund previously at the national level or through other schemes? Please explore further, in particular has the thematic focus been a factor?
28. Has your organisation's involvement in the ERA-NET led to your organisation engaging further in transnational, European or international R&D cooperation separate to the ERA-NET? Please explore further, in particular taking into account the thematic focus. Has it varied overtime?
29. What have been the direct benefits of participating in the ERA-NET on the way that your organisation runs its R&D programming? Please explore further, in particular taking into account the thematic focus. Probe: More links between national and international programmes, more coordination between disciplines, efficiencies of implementation, etc.
30. In addition, can you think of any other indirect benefits of your organisation's participation in the ERA-NET on national R&D policy or programming?
31. As far as you are aware, have lessons learnt via your ERA-NET been reported and taken into account at national policy or programming level? If so, how?
32. In your opinion, what has been the impact of the ERA-NET scheme on national R&D policy-making (if any)? Probe: - Changes to organisational structures that deliver and design the R&D programming (ministries and agencies) - Actual restructuring of national or international programming - Change in thematic focus - Development of new areas of funding
33. What were the key enablers for this change to take place? Probe: Multiple ERA-NETs, high level strategic buy-in, ministerial commitment, shift in political priorities, timing.
34. Has your participation in ERA-NET increased the standing of your organisation/ programme/country in the thematic area of the ERA-NET?
35. Overall do the benefits and impacts generated through your participation in the ERA-NET outweigh the cost of your involvement?

36. Will you be part of the next generation of ERA-NETs under ERA-NET plus?

If yes, please describe what benefits you anticipate to get from continuing involvement?

If no, why not? What changes would need to be put in place for you to participate again.

BEST PRACTICES

37. Your ERA-NET has been nominated as a best practice ERA-NET by national policy stakeholders, why do you think that is?

38. Please provide tangible examples of best practices in your ERA-NET in relation to the four main stages of development of an ERA-NET (as applicable):

- Systematic exchange of information and good practices on existing programmes.

What exactly did you do as part of this phase and what can be learnt from it?

- Identification and analysis of common strategic issues?

What exactly did you do as part of this phase and what can be learnt from it?

- Development of joint activities between national and regional programmes.

What exactly did you do as part of this phase and what can be learnt from it?

- Implementation of joint transnational research activities.

What exactly did you do as part of this phase and what can be learnt from it?

39. Are you aware of any other best practices in other ERA-NET(s) and what enabled these?

Has this affected or informed your own practices?

40. To what extent your ERA-NET processes and agreements regarding Intellectual property rights have enabled better outcomes for you as a participant as well as for beneficiaries?

Would you describe the way you dealt with the following issues as best practice (as appropriate) and why? Have you got tangible evidence of how it enabled better outcomes for beneficiaries:

- Patents
- Licensing
- Joint ventures
- Spin-offs

41. What information exchange systems were developed within your ERA-NET?

How important are these to the quality of the cooperation?

(a) If important, explain how

(b) If problematic, explain why

(c) Are you considering measures to mitigate to improve the information exchange system?

42. Are you aware of the CERIF standard for information exchange?

If yes, are you using it? What is(are) the advantages of using it?

If not, why not?

43. Has your participation in ERA-NET led to new ways of working / more efficient ways of working in your organisation / programme / research area? What are these new ways of working and how are they adding value to your organisation / programme / research area?
44. Reflecting on your participation in the ERA-NET scheme what would you change / do more / stop doing in order to fully benefit from your participation in the future?

Table 4 - Fieldwork Interview Schedule: National Policy Stakeholders

INTERVIEWEE BACKGROUND
Name of Interviewee:
Organisation:
Country:
Date of interview:
Type of interview:
1. What is your role in the organisation you are working for?
2. Please describe the areas of responsibility and purpose of the organisation in relation to the ERA-NET.
3. Please confirm you email address for contact purposes.
ERA-NET IMPACT ON THE RESEARCH LANDSCAPE
4. How would you describe the **overall national research programme landscape** in your country in 5 to 10 years back in terms of: • Ministries/agencies that sponsor or manage research programmes • Typology and quantity of programmes • National/regional balance • National/international balance [**Note to researcher:** thematic discussion should be reserved for later questions, see below]
5. How would you describe the **overall national research programme landscape** in your country today (2008) according to the same categories as before: • Ministries/agencies that sponsor or manage research programmes • Typology and quantity of programmes • National/regional balance • National/international balance
6. What have been the main drivers that have led to the **changes in the national research programme landscape** that you describe between 2003 and 2008? Could you give an example of how the initial programme changed in nature throughout your involvement in FP6? [**Note to researcher – ask for evidence:** Recent documents or policy reports that summarises the current landscape, how it supports policy and how/why or if it has changed in the last 5 years]
7. To what extent have any of these changes been driven by participation in the ERA-NET Scheme or by the fact that there was (is) such a scheme?

8. How would you describe the focus of **thematic research policy and programming** in your country in 2003 when the FP6 ERA-NET Scheme was launched in terms of:

- Balance between thematic versus non-thematic areas;
- Who is in charge of managing programmes and setting priorities i.e. the mix of Ministries/agencies at national versus regional level;
- The level of alignment/overlap between thematic policies and thematic programming;
- Typology and quantity of programmes;
- Balance between national and international programming.

9. How would you describe the focus of **thematic research policy and programming** in your country today (2008) in terms of: • Balance between thematic versus non-thematic areas; • Who is in charge of managing programmes and setting priorities i.e. the mix of Ministries/agencies at national versus regional level; • The level of alignment/overlap between thematic policies and thematic programming; • Typology and quantity of programmes; • Balance between national and international programming. **Evidence:** Recent research policy document that shows the thematic research priorities	10. To what extent have any of these changes been driven by participation in the ERA-NET Scheme or by the fact that there was (is) such a scheme?

11. In your opinion, what have been the **direct benefits** of participating in the ERA-NET Scheme on national research programming and/or policy?

Probe: Access to background intellectual property from other countries, access to lessons on design/management/evaluation of R&D programmes, economies of scale in a particular research topic, better value for money through shared inputs/outputs, changes to the way in which research programmes are constructed, tightening up of research management practices, relaxation of employment laws.

[**Note to researcher – ask for evidence:** National impact evaluations of ERA-NET participation.]

12. What do you believe have been the **indirect benefits** of participation in the ERA-NET Scheme?

Probe: Spread of good practice in national policy & programme design, new international relationships, more robust means of developing trans-national consensus on priorities for the EU RTD Framework Programme, common European voice in international research area.

[**Note to researcher – ask for evidence:** National impact evaluations of ERA-NET participation.]

13. What has been your country's guiding principles for **when to coordinate R&D and opening up of national R&D programmes via ERA-NETs** versus other inter-governmental research mechanisms such as bilateral agreements, EUREKA, EUROCORES, FP Networks and ad hoc multilateral networks?

14. What is the national/organisational position on the mutual opening up of R&D programmes to non-resident researchers?

Did the ERA-NET Scheme have any influence on this position?

Probe: By definition a country has opened up in the true sense of ERA if it is prepared "in principle" to fund non-residents or put money in a central pot where selection of the best projects is decided by an international panel and on the basis of research excellence.

15. What is the national/organisational position on contributing to a common pot for joint calls/actions between existing programmes or through a joint R&D programme? Does it vary between thematic areas?
16. Has the position whether to contribute to a common pot been influenced by the ERA-NET Scheme in any way? If yes, how? If no, why not? [**Note to researcher – for reference only!:** FFF (Austria) allowed to fund non-nationals but was asked not to do it – For other programmes this may be due to legal barriers / national priorities]
17. What lessons have been learned through participation in the ERA-NET that is now being taken into account in how R&D is run in your country and in how your country relates to other countries or institutions in the EU or beyond? Probe: Investment in FP, strategic/tactical collaboration in ERA-NET plus. [**Note to researcher – ask for evidence:** FP7/transnational cooperation/ international cooperation strategy, long-term national strategy aligning to European priorities e.g. ERA]
18. What will be the **role of transnational ERA-NET type schemes in national policy and programming** going forward and why? Probe: ERA-NET plus, bilateral agreements, other transnational cooperation/ international cooperation programmes, etc
19. In your view, has the ERA-NET scheme attracted and included **all relevant European players**? If yes, please elaborate. If no, why not? Does this vary according to **thematic areas**? If yes, please elaborate. If no, why not?
20. In your view, what has been the impact of the ERA-NET scheme in contributing to the creation of the **European Research Area**? For instance are you aware of the ERA-NET scheme helping to reduce fragmentation or duplication of research, or increase the mobility of researchers? If yes, please elaborate If no, why not?

Table 5 - Fieldwork interview schedule aimed at Research Beneficiaries

BACKGROUND & CONTEXT
Name of Interviewee:

Organisation:
Country:
Date of interview:
Nominee:
1. Please confirm you email address for contact purposes.
2. What type of organisation do you work for?
3. What is your role in this organisation? Is it purely research focussed?
4. What are your organisations main areas of research (outside of the ERA-NET funded research)?
5. Were you involved in transnational (as opposed to national or international) research projects before ERA-NET? Probe: By transnational we mean doing joint projects with researchers in other countries funded by your respective governments as transnational projects (not national funds being used informally for transnational cooperation). If yes, which ones? If no, why not?
6. What ERA-NET funded project(s) or activities have you participated in?
MOTIVATION FOR SEEKING ERA-NET FUNDING
7. How did you become aware of the ERA-NET funding opportunity to received support through?
8. Who did you partner with? Did you already know them from before? In what countries were the other partners based?
9. What was the reason(s) for seeking ERA-NET funding as opposed to national funding?
10. What sources of international funding have you used or sought to date (e.g. Framework programme funding)? What type of projects have you sought these funds for?
11. What expectations did you have with regards to the ERA-NET funding? Have these expectations been matched?
CALL PROCESS
12. How did the application and proposal submission procedure compare to that of other funding sources (red tape, bureaucracy)?

13. Has the proposal-to-funding period been longer or shorter than in the case of other sources of funding?
ERA-NET IMPACT
14. What is the status of the project at present? Has everything gone to plan?
15. To date, what have been the main benefits of the joint call for your research projects? In the future, what are the anticipated outcomes of the project?
16. To what extent national programmes involved in the joint action could have funded your research if the ERA-NET scheme had not been in place?
17. To what extent has the ERA-NET scheme enabled you to access facilities or expertise in other European and non-European countries involved in the scheme?
ADDITIONALITY OF THE ERA-NET
18. Have you developed new skills / expertise or approaches on how to conduct research through your participation in an ERA-NET funded research project?
19. Has the ERA-NET funding allowed you to conduct research differently than you could have done supported through other national or international sources of funding or schemes? (better quality, faster, new research)
20. Overall, how does ERA-NET compare to other sources of funding? What are the main pros and cons?