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

[VOLUME 3]

Final Report

Version 1.1 linking to Workplan Submitted to the Commission on 30th April 2008
Version 1.2 Submitted to the Commission on 27th June 2008
Version 2.1 Submitted to the Commission on 26th November 2008
Version 3.0 Submitted to the Commission on 18th March 2009
Version 4.0 Submitted to the Commission on 24th of April 2009

Evaluation for the European Commission

BUDG 06/PO/01/Lot3

Disclaimer

In keeping with our values of integrity and excellence, Matrix has taken reasonable professional care in the preparation of this report. Although Matrix has made reasonable efforts to obtain information from a broad spectrum of sources, we cannot guarantee absolute accuracy or completeness of information/data submitted, nor do we accept responsibility for recommendations that may have been omitted due to particular or exceptional conditions and circumstances.

Any enquiries about this report should be directed to enquiries@matrixknowledge.com

This evaluation is commissioned by the European Commission, DG RTD, in the context of the framework contract signed between the Directorate General for Budget and Ramboll Management in association with Matrix Insight and Eureval (Lot 3). The evaluation was carried out by a mixed team of experts from Matrix Insight and Rambøll in association with external experts. The team was led by Mrs Mariell Juhlin from Matrix Insight (mariell.juhlin@matrixknowledge.com).

The evaluation was managed by Mr Wolfgang Wittke (Wolfgang.Wittke@ec.europa.eu) and its progress monitored by a steering group composed by Commission staff from DG RTD and an external reviewer.

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

Status and versions of this document

Report	***Version***	***Status***	***Date***	***Author(s)***	***Feedback***
Inception Draft Structure Report	1.0	Internal draft for input by core team members	27/05/2008	Karen Siune Angus Hunter Leela Barham Pawel Janowski	Mariell Juhlin Karen Siune Angus Hunter
	1.1	Submitted to the EC	04/06/2008	Leela Barham, Pawel Janowski	Mariell Juhlin
	1.2	Submitted to the EC	27/06/2008	Mariell Juhlin, Pawel Janowski	Mariell Juhlin
Interim Draft Structure Report	2.0	Internal draft for input by core team members	17/11/2008		
Interim Draft Report	2.1	Submitted to the EC	1/12/2008	Mariell Juhlin, Mathieu Capdevila	Mariell Juhlin, Angus Hunter
Interim Draft Report	2.2	Submitted to the EC with feedback taken into accounts	12/12/2008	Mariell Juhlin, Mathieu Capdevila	Mariell Juhlin
Final Draft report	3.0	Amended with Impact, Economic and Network analyses	18/03/2009	Mariell Juhlin, Mathieu Capdevila	Mariell Juhlin
Final report	4.0 `	Revised	24/04/2009	Mathieu Capdevila	Mariell Juhlin

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

SD16-24: Thematic case studies and supporting annexes, as follows:

- SD16: Case study Energy
- SD17: Case study Environment
- SD18: Case study Life Science
- SD19: Case study Industrial Technologies and SMEs
- SD20: Case study Transport
- SD21: Case study Social Science and Humanities
- SD22: Case study International cooperation
- SD23: Case study Regional programmes coordinated in ERA-NETs
- SD24: Case study Fundamental Science

Appendix 1: List of Stakeholders
Appendix 2: Field work data collection: Interview guides

Q1: Impact on National Research Landscapes

Findings from the thematic 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:

Specific impacts evidenced in the thematic case studies included:

- creation of opportunities for international collaborative research and increased profile of transnational R&D activities within the research communities (e.g. in the Social Science and Humanities, Industrial Technologies & SMEs themes);
- increases in budgets earmarked to fund projects in specific thematic area (e.g. Environment and Transport);
- creation and coordination of national programmes in specific research fields (ERA-ARD, ASPERA and SEE ERA-NET); and
- national R&D programme designs and management informed by good practices drawn from ERA-NET participation (EU12 Member States in Life Sciences thematic area).

Q2: Structuring effect across thematic areas

Findings from the thematic 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 themes:

- In the Environment field, the ERA-NET field enabled Europe to gain more influence and to be fully integrated within the leading international players in specific scientific fields (e.g. Marine Science).
- For transport, a structuring effect was evidenced whenever there was a convergence between the ERA-NETs and the structuring of a national policy as was the case in Denmark. Transport did not suffer from overlaps to the same extent than other thematic areas.
- For Life Sciences, there was an indication of a structuring effect at the European Research Area level as many of the ERA-NET's defined common future R&D priorities and engaged with wider stakeholder groups.
- For Industrial Technology and SMEs, there were indications of development of new disciplines thanks to the ERA-NET scheme and greater awareness of specific topics mostly through networking.
- Fundamental Sciences was a mature research area for transnational cooperation, by definition this meant that the structuring effect of the scheme was somewhat limited, but not in the specific case of Astroparticle Physics (ASPERA).
- Structuring effects at European level in the Energy field were hampered by a lack of focus on particular research questions.
- In the large EU15 Member States, there was no discernible structuring effect on the International Cooperation theme as a result of the ERA-NET Scheme. Through the scheme, some smaller countries (e.g. Netherlands, Slovenia, & Finland) developed a new approach toward the advancement of their activities with China, which hitherto, had been fragmented.
- In Social Sciences and Humanities, there was a limited structuring effect on the design and contents of national SSH programmes. However, specific countries were able to invest in new topics (such as foresight and migration to the research agenda of Romania and Finland, respectively) and collaboration between scientific communities increased over the period.

- **Findings regarding additionality and efficiency in specific themes largely mirror the country-level findings**. Particular examples of added value are generally centred around ERA-NETs already identified in the country-level findings. This includes ECORD in the area of Environment; ASPERA, ASTRONET, and ERA-CHEMISTRY in Fundamental Sciences; NORFACE in Social Sciences and Humanities; or CORNET and ERASME in the

area of Industrial Technologies and SMEs. There were generally few clear thematic patterns related to the additionality of the scheme that could be identified.

Q3: Direct and Indirect Benefits

Findings from the thematic 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.

Main benefits reported in the thematic case studies were in line with the above. Benefits specific to the thematic areas were as follows:

- **Energy:** Direct benefits for policy stakeholders and participants centred on generating interest in energy technologies, recruiting competent personnel to ministries, allocating additional funding to the thematic field and supporting higher quality research than would have otherwise been possible.
- **Environment:** The most obvious benefit was the development of common perspectives on R&D priorities to better address common national issues and/or global challenges. Internationalisation of the research community was a valuable outcome in some countries as this was perceived to improve the quality of research results.
- **Fundamental Sciences:** Main benefits reported by participants were the increased reputation of some science fields and of the research organisations involved in the field, increased awareness of other national programmes and their focus and other ways of working across the ERA.
- **Industrial Technologies and SMEs:** Improvements in collaborative relationships between Ministries in the Member States and the channelling of funding contributions to joint calls in the field.
- **International cooperation:** Networking and establishing closer personal contacts with similar organisations or those with similar interests and priorities was a vital benefit for policy-makers and research institutes.
- **Life Sciences:** The most commonly cited benefit was the enabling function of the ERA-NET to define common priorities with other R&D funding organisations across Europe. Benefits for the research community were less clear partly because most of the funded projects were not yet completed.
- **Social Sciences and Humanities:** there has been an increase in transnational collaborative research as a result new research topics were introduced in some countries (Foresight and Immigration).
- **Transport:** Networking among policy-makers was seen as a direct benefit of the scheme.

Q4: Opening up of National Programmes

Findings from the thematic 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.

Evidence of opening up included:

- **Energy**, there were no joint calls funded through real common pots and there was a sentiment that opening up had not been very successful in this area. Generally, there was not enough political willingness to engage in common pots in energy which may have been due to the field being governed by strong industrial interests.
- **Environment**, participants experimented the funding of joint call through through the 'mixed-mode' or distributed common pot as well as the pooling of national resources on major international research projects. This apparent openness appeared stronger than in other ERA-NET domains although most of the joint calls were funded through virtual common pots.
- **Industrial Technologies and SMEs**, no evidence has been found to conclude that the ERA-NET scheme in general has contributed to the opening up of national programmes to

foreign beneficiaries in Industrial technologies and SMEs. More than 90 per cent of all joint calls were financed via virtual pots

- **International Cooperation,** national laws and regulatory constraints seemed to have a negative influence on the opening up of national programmes in the theme.
- A key feature of **Fundamental Sciences** ERA-NETs was their relatively high degree of openness. This was demonstrated by the amount of funding contributions channelled via real common pots under this theme (e.g. more than €104m, corresponding almost entirely to EURYI funding contributions). This represented 90% of all funding contributions made to joint calls in the theme. The remaing 10% was funded through virtual common pot for the most part.
- **Life Sciences**, many participants were keen to support transnational R&D collaboration in Europe (and policy-level support for this appeared to be increasing). However, there was virtually no commitment to real common pots, which were regarded as too difficult to achieve for the type of bottom-up cooperation.
- **Social Sciences and Humanities**, there was limited evidence of funding of non-resident from national R&D programmes and limited opening national programmes to non-resident research communities.
- **In transport,** strong industrial interests tended to hamper the opening up of national programmes in transport-related ERA-NETs. Around 10 percent of joint calls were channelled through a real common pot which indicates a relatively modest degree of opening up.

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
SD16: Thematic Report on Energy

The following document provides the structure for the thematic report on ERA-NETs in the Energy field.

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 theme. 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

1. Executive Summary - Overview

Q1 – Impact on Research Landscapes

- There was less evidence than for other areas to suggest that participation in energy ERA-NETs had influenced national programming e.g. setting up new programmes or in meeting the Barcelona targets. Participation in energy ERA-NETs had however allowed participants to become more strategic about existing programmes and enabled them to externalise programmes into agencies.

- Energy was a national R&D priority in most countries and, where national programmes existed, energy ERA-NETs aligned well with them. However, energy ERA-NETs had comparatively less influence on national programmes than ERA-NETs in other thematic areas.

- One of the goals of energy ERA-NETs was to bring industrial policy and sustainable development closer together.

- In many cases, energy ERA-NETs were a continuation of existing forms of cross-border cooperation, either at bilateral or multilateral level through the Framework Programmes, although participation did not foment additional transnational cooperation outside of the ERA-NET in this area.

- Because energy cuts across the competencies of several ministries and political stakeholders, decision-making and priority-setting, both domestically and within the wider international consortium, were very difficult to achieve in energy ERA-NETs. This was compounded in cases where domestic political reshuffles of energy portfolios were not reflected in the composition of the ERA-NET consortium.

- Where not all players with a stake in energy policy were involved in the consortium, this affected the national priority status of these ERA-NETs negatively and reduced their impact on national programmes.

Q2 – Structuring effect on specific research areas or fields

- The geographic coverage of energy ERA-NETs was relatively even although levels of activity across countries differed. Southern European countries (e.g. Italy, Portugal and Greece) generally did not participate to the same extent as countries from Northern Europe.

- Energy ERA-NETs had minimal impact on R&D policy and programming in this thematic area at national level. The reason for this may have been the division of ERA-NETs into different technologies which precluded energy ERA-NETs from analyzing "energy systems" as a whole. This put them at a disadvantage compared with other initiatives such as Smartgrids – the European technology platform.

- In terms of added value, the small size of projects funded in energy ERA-NETs helped differentiate the scheme from other European instruments such as the framework programmes.

Q3 - Direct benefits and indirect benefits

- Direct benefits for policy stakeholders and participants centred on generating interest in energy technologies, recruiting competent personnel to ministries, allocating additional funding to the thematic field and supporting higher quality research than would have otherwise been possible.

- Most benefits of energy ERA-NETs benefits were indirect in terms of creating good learning platforms about how other countries operate, how best to organise joint activities and how organisations make funding decisions.

- ERA-NET joint activities enabled new researchers with no previous international experience to engage in transnational projects and allowed access of beneficiaries to foreign research communities. These benefits were limited by the comparatively small size of joint calls.

Q4 – Opening up of national programmes

- 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.

- Generally, there was not enough political willingness to engage in common pots in energy which may have been due to the field being governed by strong industrial interests.

Q5 – Best practice

- Most energy ERA-NETs were discontinued after FP6 because of questions about their additionality and economic efficiency.

- One of the lessons of energy ERA-NETs was that better defined research questions and more flexible consortia could have increased the impact of energy ERA-NETs on national research field and the thematic area.

- At the same time, the small size of projects funded helped differentiate energy ERA-NETs from other instruments from the perspective of research beneficiaries.

- Participants in the energy thematic area were eight times as likely as the average to state that changes in programme management agencies had hindered the effects of their organisation's participation in the ERA-NET.

2. ERA-NET Thematic context

There were 71 ERA-NETs in total, out of which 5 were in energy. The 5 were: ERA-NET BIOENERGY, FENCO-ERA, HY-CO, INNER and PV ERA-NET.

Representatives of energy ERA-NETs sampled for field interviews were based in the Netherlands, Germany, Austria, France, Italy, Slovenia, the UK, Finland, Norway and Portugal. It can be argued that this sample of participating countries covered a wide range of countries with: (a) varying interests in and degree of importance of energy; (b) varying experience in funding energy research; and (3) different organisations for, and structuring of, energy research funding.

A total of €12.4m was committed to joint calls and €6.4m to joint programmes in this thematic area under the FP6 ERA-NET scheme as shown in Table 25.

2.1 **ERA and national programmes in the thematic area**

Most participants noted that energy in general and, in some cases, renewable **energy was a national R&D priority**. 74% of participants thought their ERA-NET had a good fit with the national R&D programme in energy[3]. This applied in particular to PV ERA-NET which dealt with photovoltaic energy and BIOENERGY and HY-CO which addressed hydrogen fuel cells.

For instance in the UK, renewable energy fitted within longer-term aims to reduce CO^2 emissions by 60% by 2050. Similarly, 70% of Austrian renewables spending had been focussed on bioenergy and as a result, the corresponding ERA-NET was very aligned with national priorities. In France, PV-ERA-NET was very aligned with the national photovoltaic programme of the ANR, and the French energy management agency (ADEME) participated in 7 ERA-NET projects including photovoltaic energy (PV ERA-NET), innovative energy technologies (INNER), and bioenergy research and development (BIOENERGY). In Portugal, there was limited strategic planning associated with Portuguese participation in energy ERA-NETs which was based on demands coming from its research community. At the beginning, this went as far as having researchers even represent the funding agency in ERA-NET consortia.

More generally, one participant interviewed pointed out that BIOENERGY ERA-NETS fitted well within the wider area of industrial policy (e.g. in Finland) or sustainable development (e.g. in the Netherlands). One of the goals of energy ERA-NETs was to bring these two approaches closer together and to combine R&D traditions that focused on industrial policy and sustainable development. However, 41% of participants in the energy field thought that energy ERA-NETs had had no influence on national research policy beyond the theme of the ERA-NET, compared with 18% across all ERA-NETs[4].

In many cases, energy ERA-NETs were a **continuation of existing forms of cross-border cooperation.** 70% of participants indicated that they had prior relationships with other participants in the ERA-NET[5]. For instance, the Finnish funding agency Tekes had been involved in FP projects prior to ERA-NETs and they had 3 programmes in the area of bio-energy. Similarly, the French energy agency (ADEME) had been involved in a network of countries interested in PV technologies before ERA-NET. Before this, transnational energy research had been funded bilaterally in cooperation mainly with Germany. In Germany (e.g. on INNER), it was hoped that ERA-NET could revive cross-border cooperation started in the 1980s and 90s.

One of the recurring comments that participants made related to the impact of the **diversity of participants** in energy ERA-NETs. Because energy cuts across the competencies of several ministries and political stakeholders, decision-making and priority setting were very difficult in energy ERA-NETs, both domestically and within the wider international consortium. 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.

This issue was compounded in cases where **domestic political reshuffles** of energy portfolios were not reflected in the composition of the ERA-NET consortium. For instance, the UK participant

[3] Refer to participant survey results in the annexes (Table 1).
[4] Refer to participant survey results in the annexes (Table 18).
[5] Refer to participant survey results in the annexes (Table 9).

in INNER was the National Economic Research Council (NERC) even though energy now falls within the remit of the Engineering and Physical Science Research Council (EPSRC). In Austria, the proliferation of political stakeholders in energy policy since the beginning of FP6 was also not reflected in the composition of the respective ERA-NET consortia.

Where not all players with a stake in energy policy were involved in the consortium, this affected the **national priority status** of these ERA-NETs negatively and prevented reforms to national programmes. For instance, one participant in HY-CO noted that none of the Member States had changed their national procedures in response to ERA-NET. Similarly, another respondent in this field mentioned that political stakeholders at national level had not been 'interested' in changes to energy policy.

2.2 ERA and structuring effect in the thematic area

In the participant survey, participants in the energy thematic field were overall less prone than the average participant to respond that their ERA-NET participation had influenced their country's national programmes. This included more than 70% of respondents answering that the participation had not influenced the discontinuation of existing programmes or creation of new programmes.

The participant survey also showed that participants in the energy field were overall more inclined to report that the ERA-NET had enabled them to undertake more strategic planning for existing programmes in this area than the average although they were less prone to say that it led to new programmes being set up than the average[6].

Most participants thought that the **geographic coverage** of energy ERA-NETs had been quite good even though levels of activity across countries differed. The table below has a list of partners in each of the five energy ERA-NETs. Germany coordinated four of the five energy ERA-NETs with only Bioenergy being coordinated by a different country (Netherlands)[7]. However, one participant from Finland pointed out that Southern European countries had not participated as much (e.g. Italy, Portugal and Greece). One French participant said statutory reasons had affected the Italian ministry's participation in ERA-NET. In PV ERA-NET, one French participant explained this with the fact that Greece, Poland or the UK did not, and continue not to have, a national PV programme. It was pointed out that EC funding was crucial to engaging these 'weaker' countries.

HYCO	FENCO	PV-ERANET	INNER	BIOENERGY
Austria	Austria	Austria	France	Austria
Belgium	Denmark	Belgium	Germany	Denmark
Czech Republic	Estonia	Denmark	Netherlands	Finland
Denmark	France	France	Nordic Energy Research	France
Finland	Germany	Germany	Norway	Germany
France	Greece	Greece	Poland	Sweden
Germany	Latvia	Netherlands	Portugal	Netherlands
Greece	Netherlands	Poland	Slovakia	United Kingdom
Iceland	Norway	Spain	Spain	
Italy	Poland	Sweden	Sweden	
Netherlands	Portugal	Switzerland	United Kingdom	
Nordic Energy Research	Spain	United Kingdom		
Norway	United Kingdom			
Portugal				

[6] Refer to participant survey results in the annexes (Table 19).
[7] Refer to participant survey results in the annexes (Table 24).

Romania				
Slovenai				
Spain				
Sweden				
United Kingdom				

Most participants thought that energy ERA-NETs had had **minimal impact on R&D policy and programming** in this thematic area. Only 17% of participants thought energy ERA-NETs had had an impact on the importance of energy as a national priority (as opposed to 29% of respondents across all thematic areas)[8]. For instance, in Austria 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. It was felt in particular that the division of ERA-NETs into different technologies had precluded energy ERA-NETs from analyzing "energy systems" as a whole and put them at a disadvantage compared with e.g. Smartgrids – the relevant European technology platform.

In **Finland**, interviewees' views were that the results of the 1st call on health effects of small particle emissions were considered interesting and this was taken into account in Tekes programmes in the field of energy. However, ERA-NET activities in Bio-Energy were much smaller in scale than similar FP calls which would have prevented ERA-NET from structuring this field. However, according to Finnish participants ERA-NET had enabled a change in the sense that it led to complementarities with other instruments and researchers being given a wider range of opportunities.

In the **UK**, energy interviewees could not point to the ERA-NET impacting in any significant way on UK policy or R&D planning because of the UK's very marginal participation in the scheme. Nevertheless, ERA-NETs did provide another important route to transnational R&D collaboration for research councils.

In **Portugal**, interviewees expressed the view that thematic structuring effects had been limited due to the country's tradition of non-thematic research programmes. However, greater transnational collaboration had resulted from Portugal's ERA-NET participation.

At **international** level, participants in several countries thought that energy ERA-NETs had had little impact on the research field, partly because the thematic area was very broad and defined along political rather than research lines. In addition, several participants in France and Germany thought that the impact of energy ERA-NETs had been limited due to a lack of interest on the part of the Commission in ERA-NETs in this field. For instance, PV ERA-NET participants were not consulted with regard to defining FP7 priorities in the field.

In terms of **motivations for joining energy ERA-NETs**, one German participant noted that the main objective was the need to develop common standards to facilitate more effective competition with the US, Japan and other economic areas. Accumulating expertise in areas where Germany did not already have this expertise at national level was cited as another motivation for ERA-NETs in the area of hydrogen fuel cells. In France, the Ademe's motivation was to engage in transnational research projects to reduce duplication of efforts and fragmentation. It was felt that in countries where the topic was well funded nationally, there was little incentive to engage in transnational cooperation.

[8] Refer to participant survey results in the annexes (Table 17).

3. ERA-NET funding considerations in the thematic area

3.1 Inputs into the ERA-NET scheme for this thematic area

Generally, inputs into energy ERA-NETs were not very significant compared to some of the other thematic areas.

In terms of the **costs of participation**, the participant survey indicated that participants in this field were more prone than the average to respond that EC funding covered all time and resources invested in participation in their ERA-NET (55% for energy vs. 49% on average)[9]. At the same time, 41% of participants in this field stated that national resources (staff and finance) were still a problem that needed to be overcome in order to exploit the full potential of ERA-NET participation[10]. It is possible that this refers to problems in making national programme budgets available to jointly funded calls and activities rather than actual staffing given the relatively modest amounts of funding channelled through joint calls in this theme. Although, as will be explored in the sections below, staffing and funding were clearly both issues in particular countries.

In Austria, interviewees 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 the UK, the participant in PV ERA-NET only spent 5% of their workload on ERA-NET. In Finland, the resource intensity of energy ERA-NETs came as a surprise and an extra assistant had to be hired. Partly this was due to the fact that Finland took on more responsibility at the beginning in view of the importance of this field. Similarly, in both Portugal and in Slovenia one person was fully financed by the ERA-NET scheme to coordinate participation for 'energy'. In France, Ademe did not put up additional resources to participate in PV ERA-NET (other than EC funding) but the national programme involved 4 FTE per year.

Energy ERA-NETs were active in joint calls and joint programmes although marginally in pilot actions[11]. On the whole, it was noted that **deciding on topics for joint calls** was a long process, mainly because they meant different things to different people and the participating countries were at different levels of development and capacity. In INNER, one German 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 joint calls**, all contributions were made through virtual common pots. This highlights that national considerations were decisive when funding joint calls. In terms of criteria for participation, both the excellence of the proposal and the benefit to German participants were the main criteria for Germany. Under HY-CO, for instance, Germany did not set any funds aside at project level due to a preference for funding the best quality proposals irrespective of whether they had originated in an energy ERA-NET. Similarly, in bioenergy Austrian criteria for participation in joint calls included an estimation of the value added of cooperation with other countries, availability of resources and national interest in the topic. The UK did not participate in any of the 4 PV-ERA-NET joint calls. The reason is that the National Economic Research Council did not have funding for energy research and transnational collaboration. In the UK this was only done on a government to government basis such as in the Framework Programme. For Finland, participation in joint calls was more likely in areas where the country already had a national programme. Another requirement was that the funding went to applied research involving at least 2 companies.

Other activities in which energy ERA-NETs participated more actively than other themes included **benchmarking** (78%) and the **development of multi-national evaluation procedures** (69%)[12]. In most energy ERA-NETs, it was agreed that **IPR issues should be addressed at beneficiary level**. For instance, some energy ERA-NETs organised workshops on IPR but ended up applying national rules and national IPR standards. A consortium agreement was also required in addition to individual agreements between the partners.

Nevertheless, **IPR was an issue in some energy ERA-NETs**. As one of the German participants in HY-CO noted, German rules required property rights to remain in Germany with an exclusive right to exploitation for German companies. Partly as a result of this, most HY-CO projects were in basic research where IPR tended to be less of an issue.

[9] Refer to participant survey results in the annexes (Table 3).
[10] Refer to participant survey results in the annexes (Table 23).
[11] Refer to participant survey results in the annexes (Table 25).
[12] Refer to participant survey questionnaire (Table 4).

3.2 **Opening up considerations for this thematic area**

The participant survey reveals that participants in the energy field were almost half as prone to answer that ERA-NET participation had led to the establishment of new eligibility criteria for foreign researchers as the average (26% of energy respondents reporting an influence vs. 42% of participants on average)[13].

Moreover, as no real common pots had been used in the energy field, there was a sentiment among interviewees that **opening up had not been very successful in this area**. The participant survey also indicated that transnational cooperation had not necessarily been fomented outside of the ERA-NETs either. In fact, three quarters of participants in the energy field thought that their ERA-NET experience had not led to an increase in the amount invested in transnational R&D projects outside the ERA-NET compared to 63% on average[14]. In Finland, one participant pointed out that real common pots had been used widely in transnational cooperation with other Nordic countries outside ERA-NETs. In contrast to ERA-NETs, these Nordic programmes were financed by the ministries. However, Tekes, the Finnish funding agency which participated in ERA-NETs could not fund foreign researchers. Similarly, in the UK, it was pointed out that UK funds could only be allocated/released for joint calls, if there was evidence that the UK would benefit.

Given the modest amounts of funding channelled through joint calls in this area it is possible that the main motivation for participation was indeed not joint calls. For instance, one participant pointed out that this had not been the main initial motivation for participation (e.g. in HY-CO) where the focus was on providing a framework for the joint technology initiative. In fact, more participants in this field than the average claimed that participation had helped existing programmes to becoming more strategic as well as helped to externalise R&D programmes into agencies[15].

Generally, participants thought there was **not enough political willingness** to engage in common pots. For instance, a French participant thought it was "too early" for common pots because every country wanted to avoid diverting public funds from the national research community. Similarly, the Portuguese participants thought the common pot was too risky and unlikely to align with Portugal's national interests.

A Dutch participant pointed out that the field of bioenergy was governed by **strong industrial interests** which did not favour opening up. However, a German participant found that INNER had funded a number of very small projects which had contributed to researcher mobility.

In interviews, interviewees claimed that there were **administrative obstacles** to the use of real common pots in this field although the participant survey results did not confirm this. In fact, a larger proportion of respondents in this field compared to the average claimed that national administrative procedures had been a success (17% of energy respondents compared to 6% on average)[16].

[13] Refer to participant survey questionnaire (Table 8).
[14] Refer to participant survey questionnaire (Table 12).
[15] Refer to participant survey questionnaire (Table 19).
[16] Refer to participant survey questionnaire (Table 23).

4. ERA-NET benefits for this thematic area

4.1 Direct and indirect benefits of ERA-NETs in this thematic area for national policy stakeholders and participants

The participant survey seems to suggest that the benefits to energy participants were in line with the average. On questions such as whether the ERA-NET participation had affected higher quality projects or new types of projects, the responses were very close to the average[17].

During interviews, interviewees were able to think of overall **few direct benefits for policy stakeholders and participants**. In the UK, it was pointed out that participation in the ERA-NET had generated interest in photovoltaic technology across Europe with a wide consortium of 19 partners across 12 countries. In Slovenia, ERA-NET participation had helped attract highly competent personnel to the Ministry including people with international experience. In Portugal, one participant noted that participation in energy ERA-NETs had pushed the funding agency to allocate additional funding to the field. Finally, the Finnish participant did mention that the quality of research supported in an ERA-NET joint calls was better than that of a similar national call. In addition, energy ERA-NETs facilitated an exchange with funding organisations elsewhere in Europe and they led to a greater number of transnational calls for the Finnish funding agency.

On the whole, however, **interviewees in energy ERA-NETs thought benefits had mostly been indirect**. Energy ERA-NETs were described as good learning platforms about how other countries operate, how best to organise joint activities and how organisations make funding decisions.

In **Germany**, the main benefit of HY-CO was thought to be the network itself and the knowledge sharing and information exchange that it enabled. Comparatively, there were few significant joint activities.

In **France**, the funding agency thought the main benefits had been a better understanding of developments in neighbouring countries and benchmarking benefits which led to identification of a number of parallel projects in other Member States.

In the **UK**, indirect benefits of PV ERA-NET included the formation of a database of R&D projects across the EU, a list of proposal assessors and the development of common criteria for reviewing proposals.

Finally, in **smaller countries**, indirect benefits were also most prominent for this field. For instance in Portugal, the funding agency pointed out that it had gained experience as a partner and learned about the research management processes. In Slovenia, standardisation of evaluation practices and the use of international evaluators were significant indirect benefits. In Austria, the main benefit for the respondent was the institutional learning that ERA-NET enabled.

4.2 Direct and indirect benefits of this ERA-NET thematic area for research beneficiaries

According to the participant survey, participants in the energy field were more likely than the average to have reported evidence of impact on new researchers benefiting from joint activities and gaining access to research communities abroad[18].

In interviews, the majority of participants thought that joint calls had been beneficial to those that received funds although they also acknowledged that the limited size of joint calls may have **limited the benefits to research beneficiaries.**

In **Finland**, beneficiaries thought the main benefit of ERA-NETs was relatively less bureaucratic nature than the framework programme since applications could be put in nationally. Similarly, Austrian beneficiaries pointed out that energy ERA-NETs had allowed them to apply for EU funding and engage in transnational cooperation without the administrative burden of the framework programmes.

In **Portugal**, the main benefit for researchers lay in the internationalisation of the research community because ERA-NET had attracted researchers to the European level and allowed those interested to get funding for projects that would not fit national programmes.

Similarly, one **Austrian** participant in Bioenergy pointed out that a number of projects would not have been supported without ERA-NETs because there were no national level experts in the field. In these cases, transnational cooperation had made a qualitative difference to the field as compared to purely national research.

[17] Refer to participant survey questionnaire (Table 22).
[18] Refer to participant survey results in the annexes (Table 22).

In **Germany**, the project partnership with Norway under HY-CO was highlighted as particularly beneficial to researchers because German researchers could use Norwegian neutron spectroscopy facilities and Norway benefited from German know-how.

5. European Added Value, relevance and efficiency

5.1 Additionality of ERA-NETs in this thematic area

In terms of additionality, participants interviewed generally thought that **small project size had helped differentiate the ERA-NET scheme from the framework programmes**. In addition, energy ERA-NETs had in some cases laid the **foundation for strategic cooperation**, exchange of practises and knowledge about activities in other countries. For instance in Finland it was pointed out that the Bio-energy ERA-NET had explicitly preferred smaller topics that could support but would not have received funding project under the framework programme. Similarly, under INNER there was a feeling that most projects supported by the ERA-NET would not otherwise have received funding. In Austria added value was derived from the strategic input of energy ERA-NETs into cross-border cooperation in the field, the variable geometry of the scheme, and the joint calls that had taken place.

However, individual energy ERA-NETs were very different in the level and type of added value that they generated. For instance, 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 UK, participants thought that energy ERA NETs had not exhibited significant additionality, due to limited UK participation and because research in energy was already a national priority and this had not been affected by ERA-NETs. Having said that, the participant survey indicated that participants in the energy field started the ERA-NET with a much greater sense of importance of their theme domestically than other themes[19]. After participation, they also reported that their theme was very important to a greater extent than the average[20].

5.2 Perceived economic efficiency and relevance

There were **mixed opinions about whether participation in energy ERA-NETs had been worthwhile**. The participant survey indicated that 84% of participants were satisfied the overall level of transnational cooperation and 91% thought their participation had been worthwhile, which is very significant but lower than the average across all thematic areas (88% and 95% respectively). Energy ERA-NET participants also reported to have benefited from their participation but to a lower extent than the thematic average[21].

On the positive side, in Finland, interviews indicated that the experience with energy ERA-NETs had been worthwhile despite greater than anticipated resource intensity. In the field of Bioenergy, one Austrian participant confirmed that participation had been worthwhile since ERA-NET **built up a network and demonstrated that there was a demand among the research community** as demonstrated by the wealth of proposals in response to joint calls. Similarly, in the UK, despite its relatively low involvement in energy ERA-NETs, benefits had outweighed costs because it was worthwhile to **reduce duplication and pursue synergies** in energy research. The Slovenian participants also thought their involvement in energy ERA-NET s had been worthwhile.

On the negative side, **bureaucracy and administrative burdens** were pointed out as costly by most participants. For instance, the discontinuation of Bioenergy was explained by the reluctance on the part of some countries to deal with the Commission's administrative requirements. Similarly, participants thought that INNER had been too expensive from an administrative perspective and most cooperation across borders happened outside the ERA-NET scheme because this was considered more efficient. In France, energy ERA-NETs were considered less efficient than bilateral or trilateral cooperation and the benefits of ERA-NETs in this field could not be justified without EC funding.

[19] Refer to participant survey results in the annexes (Table 15.)
[20] Refer to participant survey results in the annexes (Table 16).
[21] Refer to participant survey results in the annexes (Tables 6 & 7).

6. Annexes: Stakeholders and materials consulted

UK

Participant in PV ERA-NET

Participant in INNER ERA NET

DECC website www. decc.gov.uk

BERR website www.berr.gov.uk

BERR *Energy White Paper 2007: meeting the energy challenge*.

PV ERA-NET website http://www.pv-era.net/cms01/showlinx.asp?lang=e&id=73&menu=1

INNER ERA NET http://www.inner-era.net/index.php?index=92

PORTUGAL

FCT in Portugal

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

NETHERLANDS

Participant, Bioenergy

FINLAND

Participant, BIO-ENERGY, Tekes, Finland

FRANCE

ANR, http://www.agence-nationale-recherche.fr/Intl
ADEME, http://www.ademe.fr
French Ministry of Economics and Finance: http://www.finances.gouv.fr/lolf/5_1_145.htm

AUSTRIA

Austrian Energy Agency
BMVIT
FFG

GERMANY

BMWI
FZ Juelich

7. Annexes: Participant survey results

The figures below show responses to the participant questionnaire, completed by 27 Energy ERA-NET participants.

Table 1 - How would you rate the degree of fit between your national R&D programme relevant to the theme and this ERA-NET?

	Energy	Total
Good fit	74%	**84%**
Poor fit	13%	**5%**
No answer	13.00%	**11.00%**

Participants in the Energy thematic field were less likely than the average to report a good fit between national programmes and the ERA-NET and more likely to report a poor fit between the two than the average.

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

	Energy	Total
0 - 9999	8%	**4%**
10000 - 19999	0%	**2%**
20000 - 29999	9%	**3%**
30000 - 39999	0%	**2%**
40000 - 49999	0%	**2%**
50000 - 59999	11%	**2%**
60000 - 69999	0%	**1%**
70000 - 79999	2%	**6%**
80000 +	70%	**71%**
Not Answered	0%	**6%**

Responses from participants in the Energy thematic field indicated that the EC contribution for Energy was broadly in line with the average.

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

	Energy	Total
Yes	55%	49%
No	35%	51%
Don't Know	11%	0%
Not Answered	0%	0%

Participants in the Energy thematic field were slightly more prone to indicate that the EC funding had covered their participation in the scheme.

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

	Energy			Total		
	Yes	No	No answer	Yes	No	No answer
Coordination/clustering of ongoing nationally funded research projects	35%	41%	24%	**59 %**	**19 %**	**23%**
Benchmarking and common schemes for monitoring and evaluation	78%	4%	19%	**67 %**	**13 %**	**19%**
Multinational evaluation procedures (common evaluation criteria and methods of implementation	69%	15%	16%	**55 %**	**25 %**	**20%**
Schemes for joint training activities (so-supervised theses or common PhD schemes)	6%	63%	31%	**12 %**	**49 %**	**39%**
Schemes for personnel exchange	9%	57%	33%	**14 %**	**47 %**	**39%**
Schemes for mutual opening of facilities or laboratories	0%	61%	39%	**15 %**	**44 %**	**41%**
Specific cooperation agreements or arrangements	30%	48%	22%	**43 %**	**24 %**	**33%**
Action plan taking up common strategic issues and preparing for joint activities	69%	19%	13%	**75 %**	**11 %**	**13%**

Participants in the Energy thematic field were more engaged in coordination, benchmarking and evaluation procedures than the average participants and less engaged in other activities than the average.

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

	Energy	Total
Yes	91%	95%
No	9%	4%
Not Answered	0%	1%

Participants in the Energy thematic field were less prone to agree that the participation in the scheme had been worthwhile than the average although, overall a vast majority or participants said it was worthwhile.

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

	Energy	Total
I got more out of it than I expected	37%	41%
I got out of it what I expected	54%	51%
I got less out of it than I expected	9%	6%
Not Answered	0.00%	1%

Participants in the Energy thematic field were more prone than the average to report that they got out of the scheme what they expected although a higher percentage than the average reported to have got less out of the experience than expected.

Table 7 - How satisfied are you with the overall level of transnational cooperation within this ERA-NET?

	Energy	Total
Satisfied	84%	88%
Unsatisfied	16%	7%
No answer	0%	4%

Participants in the Energy thematic field were less satisfied with the overall level of transnational cooperation in their ERA-NETs than the average.

Table 8 - To what degree has your participation in this ERA-NET influenced your country's national programme(s)?

	Energy			Total		
	No influence	Influence	No answer	No influence	Influence	No answer
Discontinuation of existing programme(s) in some theme(s)	70%	22%	7%	**53%**	**34%**	**12%**
Reducing duplication between National programmes in your country	61%	28%	11%	**47%**	**38%**	**16%**
Design of programmes with longer time horizon	54%	39%	7%	**42%**	**49%**	**10%**
Design of programmes with shorter time horizon	62%	30%	8%	**51%**	**38%**	**11%**
Bigger programme budgets for the theme	56%	41%	4%	**42%**	**46%**	**12%**
Smaller programme budgets for the theme	72%	2%	26%	**63%**	**13%**	**23%**
New programme assessment/evaluation criteria	57%	31%	11%	**40%**	**50%**	**10%**
New opportunities to enable transnational R&D activities in the theme of the ERA-NET	21%	75%	4%	**8%**	**86%**	**6%**
New eligibility criteria allowing funding of foreign researchers in the area	63%	26%	11%	**43%**	**42%**	**15%**
Existing programme(s) now covering new theme(s)	59%	30%	11%	**48%**	**38%**	**14%**
New programme(s) put in place in response to new theme(s) identified	74%	15%	11%	**51%**	**34%**	**15%**

Participants in the Energy thematic field were overall less prone than the average participant to respond that their ERA-NET participation had influenced their country's national programmes. This included more than 70% of respondents answering that the participation had not influenced the discontinuation of existing programmes or creation of new programmes. Influence in this theme was by far the greatest with regard to creating new opportunities for transnational R&D activities where three fourths of the participants had seen an influence.

Table 9 - To what extent did your organisation have pre-existing relationships with participants in this ERA-NET prior to FP6?

	Energy	Total
Prior relationships	70%	66%
No prior relationships	20%	26%
No answer	9%	8%

Participants in the Energy thematic field were more likely than the average to have had prior relationships with other participants in their ERA-NET.

Table 10 - If there were prior relationships which of the following 6 statements best describes how these relationships evolved during your participation in this ERA-NET?

	Energy	Total
Strengthened	60%	63%
Weakened	0%	1%
No answer	24%	33%
No change	16%	4%

Participants in the Energy thematic field were more likely than the average to say that prior relationships remained unchanged.

Table 11 - Has your participation in this ERA-NET triggered transnational cooperation outside of the ERA-NET?

	Energy	Total
Yes	28%	31%
No	57%	47%
Not applicable	6%	16%
Not Answered	9%	5%

Participants in the Energy thematic field were less likely than the average participant to say that the participation had led to transnational cooperation outside of the ERA-NET.

Table 12 - 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?

	Energy	Total
Yes	6%	13%
No change	74%	63%
No answer	20%	23%

In line with the findings reported in Tables 8 and 11, participants in the Energy thematic field were more likely than the average to claim that the participation had had no impact on investment in transnational cooperation outside of the ERA-NET.

Table 13 - If yes roughly what proportion of your programme budget was transnational before your involvement in ERA-NET?

	Energy	Total
0-25%	2%	15%
26 to 50%	0%	0%
51 to 75%	2%	0%
76 to 100%	0%	1%
Not answered	96%	84%

Participants in the Energy thematic area were less able than others to state what percentage of their programme budget was dedicated to transnational activities before the ERA-NET.

Table 14 - If yes roughly what proportion of your programme budget is transnational now?

	Energy	Total
0-25%	7%	**13%**

26 to 50%	0%	**1%**
51 to 75%	0%	**0%**
76 to 100%	2%	**1%**
Not answered	91%	**84%**

Participants in the Energy thematic area were less able than others to state what percentage of their programme budget was dedicate to transnational activities after the ERA-NET.

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?

	Energy	Total
Very important	35%	21%
Fairly important	35%	48%
Not very important	22%	16%
Not at all important	2%	5%
Don't Know	0%	4%
Not Applicable	0%	2%
Not Answered	6%	5%

Participants in the Energy thematic area were more likely than the average to state that their topic had been very important to them before joining the ERA-NET.

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

	Energy	Total
Very Important	37%	24%
Important	57%	66%
Not important	0%	1%
No answer	6%	10%

After participation in the ERA-NET, participants in the Energy thematic area were still more likely than the average to state that their topic was very important to them although overall the response was lower than what was stated as having been the situation before joining the ERA-NET.

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?

	Energy	Total
To some extent	17%	29%
Not at all	0%	11%
No answer	83%	60%

Participants in the Energy thematic area were less able or willing to answer the question whether the ERA-NET had had any impact on the change in importance of the theme in their organization.

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

	Energy	Total
Influence	39%	63%
No influence	41%	18%

No answer	20%	19%

Participants in the Energy thematic area were twice as likely as the average participant to state that their involvement in the ERA-NET had had no influence on national policy beyond the theme of the ERA-NET.

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

	Energy					Total				
	Helped	Hindered	No effect	Not Answered	Not applicable	Helped	Hindered	No effect	Not Answered	Not applicable
Change in programme management agency	13%	48%	0%	0%	39%	**7%**	**6%**	**36 %**	**4%**	**47%**
New R&D management structure	7%	11%	45%	0%	36%	**11 %**	**7%**	**35 %**	**5%**	**42%**
For existing programmes, more strategic R&D programming/planning	34%	0%	45%	0%	21%	**29 %**	**0%**	**36 %**	**7%**	**28%**
Externalisation of R&D programmes into agency/agencies	17%	4%	35%	0%	44%	**8%**	**4%**	**33 %**	**5%**	**49%**
Setting up of new types of R&D programmes	4%	0%	83%	0%	13%	**24 %**	**7%**	**33 %**	**5%**	**30%**
Barcelona 3% targets	13%	0%	61%	0%	26%	**16 %**	**1%**	**39 %**	**8%**	**36%**

Participants in the Energy thematic area were eight times as likely as the average to state that changes in programme management agencies had hindered the effects of their organisation's participation in the ERA-NET. They were slightly more prone than the average to state that participation had helped them become more strategic about existing programmes as well as enabled them to externalise programmes into agencies. They were less prone than the average to agree that the participation had helped setting up new programmes or in meeting the Barcelona targets.

Table 20 - How strong are the links between this ERA-NET and Technology Platforms?

	Energy	Total
Strong	24%	23%
Weak	44%	44%
No answer	31%	33%

Participants in the Energy thematic area were in line with the average respondents as regarded links to technology platforms.

Table 21 - Does this ERA-NET overlap with other ERA-NETs in your country?

	Energy	Total
Yes, my ERA-NET overlaps with more than one ERA-NETs in my country	11%	8%
Yes, my ERA-NET overlaps with one other ERA-NET in my country	33%	17%
No overlaps	47%	57%
Don't know	4%	13%
Not Applicable	5%	2%
Not Answered	0%	2%

Participants in the Energy thematic area were more likely than the average to state that their ERA-NET overlapped with one or more ERA-NETs in their country.

Table 22 - 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?

	Energy			Total		
	Some evidence	No evidence	No answer	Some evidence	No evidence	No answer
Higher quality projects generated at national level (i.e. higher quality proposals)	39%	41%	20%	**39%**	**44%**	**17%**
Higher quality projects funded at national level (through joint calls/programmes)	31%	35%	33%	**35%**	**42%**	**23%**
New types of research projects generated (i.e. reflected in proposals received)	39%	43%	19%	**38%**	**42%**	**20%**
New types of research projects funded (through joint calls/programmes)	41%	20%	39%	**46%**	**32%**	**22%**
New researchers (with no prior international or European experience) benefiting from joint activities	51%	13%	36%	**40%**	**27%**	**33%**
New researchers (with no prior international or European experience) benefiting from joint calls/programmes	44%	17%	39%	**41%**	**34%**	**25%**
Access to foreign research communities/groups not present in my country	65%	26%	9%	**54%**	**28%**	**18%**

Participants in the Energy thematic area were more likely than the average to state that the ERA-NET joint activities had enabled new researchers with no previous international experience and allowed beneficiaries' access to foreign research communities.

Table 23 - Did any of the following factors either help or hinder your organisation to exploit the full potential of its participation in this ERA-NET?

	Energy					Total				
	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	24%	43%	0%	20%	13%	**16 %**	**46 %**	**13 %**	**12 %**	**13%**
National cultures or research traditions	20%	44%	13%	9%	13%	**10 %**	**46 %**	**15 %**	**14 %**	**15%**
National resources (staff time finances)	20%	6%	26%	41%	7%	**17 %**	**35 %**	**26 %**	**15 %**	**7%**
National administrative procedures (e.g. evaluation rules)	17%	35%	26%	15%	7%	**6%**	**25 %**	**29 %**	**28 %**	**12%**
National legal programme conditions (e.g. funding of non-residents IPR)	2%	67%	7%	13%	11%	**4%**	**35 %**	**19 %**	**25 %**	**17%**
EC administrative procedures or legal requirements	0%	52%	35%	6%	7%	**1%**	**34 %**	**36 %**	**12 %**	**18%**
Perceptions of benefits	9%	30%	28%	11%	21%	**15 %**	**28 %**	**16 %**	**13 %**	**28%**
Engagement in other transnational initiatives (e.g. COST EUREKA)	19%	20%	20%	6%	35%	**12 %**	**46 %**	**4%**	**4%**	**34%**

Participants in the Energy thematic field were more likely than the average to state that national thematic priorities, cultures & research traditions, resources, and admin procedure had helped in making participation a

success. Factors that had reportedly hindered success included EC admin procedures and perceptions of benefits, although these had largely been overcome. The main issue still to be resolved involved resources made available at the national level and national thematic priorities.

8. Annexes: Coordinator survey results[22]

The figures below show responses to the coordinator questionnaire in the theme of Energy.

5 of the 71 ERA-NETs belong to the energy theme, representing 7% of all ERA-NETs. Table 24 below lists these ERA-NETs.

Table 24 - List of ERA-NETs covered within the theme

ERA-NET	Number of participants	Coordinator country
ERA-NET BIOENERGY	13	Netherlands
FENCO-ERA	13	Germany
HY-CO	21	Germany
INNER	14	Germany
PV-ERA-NET	19	Germany

One energy ERA-NET was coordinated by the Netherlands, the remaining 4 were coordinated by Germany
Energy ERA-NETs were active in joint calls and joint programme and marginally in pilot actions. This is indicated in table 25 below. (NB: based on the Coordinator's survey which is not necessarily complete)

Table 25 - Details of joint activities within the theme

Joint activities	Number of joint activities	€ Virtual pot	€ Common pot	€ Mixed mode	€ Other	Total
Joint calls	10	12,398,924	0	0	-	12,398,924
Joint	1	6,400,000	0	0	0	6,400,000
Pilot actions	4	-	-	-	-	114,500

There were a total of 10 joint calls for a combined €12.4m and one joint programme with a virtual common pot of €6.4m. There were no real common or mixed mode pots in this thematic area.
Figures reported in table 25 only contain funding contributions for which coordinators were able to provide a clear breakdown of funding contributions by country. Hence figures in table 25 are conservative and robust estimates of contributions to joint calls, joint programmes, and pilot actions.

The overall total amounts reported by coordinators should be treated with caution since they were not necessarily broken down or attributed to countries. These are as follows:

- Joint calls
  - Virtual common pot: € 16,373,594
  - Real common pot: € 0
  - Mixed mode: € 0

- Joint programmes
  - Virtual common pot: € 6,500,000
  - Real common pot: € 0
  - Mixed mode: € 0

- Pilot actions
  - Virtual common pot: € 0
  - Real common pot: € 0
  - Mixed mode: € 0
  - Total funding: € 112,000

[22] 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
SD17: Thematic Report on Environment

The following document provides the structure for the thematic report on ERA-NETs in the Environment field.

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[23] in 15[24] 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 theme. 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.

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

Contents

1. Executive Summary - Overview

Q1 – Impact on Research Landscapes

- The 'Environment' theme is a high priority in most countries and the ERA-NET Scheme attracted participants from almost every country in the European Research Area. France, Germany and the UK were the most frequent participants across most of ERA-NETs in the environment thematic area
- France and the UK took a strong lead and coordinated 11 of the 15 ERA-NETs
- The main impact at the national level has been to create new opportunities for transnational R&D and about €50m had been invested in Joint Calls by 2008. In some cases this has driven changes in administrative rules to enable investment in transnational R&D projects.
- Two of the ERA-NETs (BIODIVERSA and BONUS) accounted for over two thirds of the reported investment in Joint Calls
- The environmental ERA-NETs have been very much an enabler (rather than an influencer) of national R&D policies related to common challenges like climate change and an integrated European approach to international issues
- Future participation and investment in ERA-NETs and joint programmes are likely to be based on the degree of fit with national priorities

Q2 – Structuring effect on specific research areas or fields

- 60% of the ERA-NETs were related to either marine science or water resources and interlinkages have been developed that may lead to more integrated coordination in the future
- Four of the ERA-NETs (BIODIVERSA, ECORD, EUROPOLAR and MARINERA) were concerned with basic research topics. The others were concerned with applied societal research
- Around 30 countries participated in the portfolio of environment-related ERA-NETs; ranging from five (NET-BIOME) to 19 (EUROPOLAR).
- Most of the FP6 ERA-NETs in this thematic area are still active and will continue to generate coordinated R&D investment through joint calls and the pooling of research resources
- Some ERA-NETs have already secured additional funding from FP7 and others are engaged in higher level policy initiatives (eg Joint Baltic Sea Programme, International Ocean Drilling Programme, EU Flooding Directive)
- Much of the national investments in individual Calls have been quite low (in thousands of Euros rather than in millions of Euros) but the cumulative and downstream effects could be quite significant. For example, several have the ambition to move to Article 169 joint programme coordination
- The general perception is that most of the environmental ERA-NETs will either move on to bigger and better forms of coordination and/or will enable the European R&D community to become fully integrated with higher level policy coordination activities both in Europe and internationally

Q3 - Direct benefits and indirect benefits

- Virtually all participants regarded their experience of the FP6 ERA-NET Scheme as worthwhile and over 50% indicated that they had got more out of it than expected
- The most obvious benefit was the development of common perspectives on R&D priorities to better address common national issues and/or global challenges
- The benefits of mutual learning and new relationships with peers in other countries was also regarded as very important. This should lead naturally to bigger and better forms of ERA collaboration in the future
- In some countries, participation in ERA-NET Joint Calls is seen as a means of facilitating internationalisation of the national research community and encouraging good practice in

research project management. This is perceived as a means to improve the quality of national research
- In some cases, there have been wider indirect benefits in the way that the ERA-NET has supported higher level policy objectives both at the national and European level
- The benefits to the research community (ie the beneficiaries of Joint Calls) is less clear at present, partly because some ERA-NETs are only just launching their 1st Calls or the impact is limited by the relatively low investments in some pilot Calls. The most important perceived benefits were to enable researchers with no prior experience to engage in transnational R&D activities and enable access to foreign expertise/facilities that is not available in a particular country

Q4 – Opening up of national programmes

- The cumulative investment in Joint Calls (€50m and rising) indicates a high level of buy-in to the ERA-NET philosophy of coordinated research activities between national programmes
- Over 50% of surveyed participants indicated that there was evidence that joint activities had enabled access to foreign research communities/groups that were not present in their country
- In spite of the interest in accessing foreign expertise/facilities there appears to be both institutional and political resistance in most countries to investment Joint Calls through the real common pot funding model. France is a notable exception
- The propensity to pool national research resources in Europe in support of common international objectives appears to be quite relevant to this thematic area as shown by way that ECORD has enabled coordinated European participation in international ocean drilling expeditions

Q5 – Lessons learned

- ERA-NET has been very much an enabler of coordinated transnational research rather than a driver of national R&D programme coordination
- The environmental ERA-NETs that are linked to basic research programmes appear more able to mobilise larger scale coordinated investment in joint calls and activities than those that are linked to environment ministries
- There are a diverse range of national organisations that are funding environment-related R&D across Europe
- In spite of the common societal challenges in the environment thematic area, the vast majority of investment in Joint Calls has been through the virtual common pot model. The common pot model appears to be impractical for the relatively small-scale and flexible Joint Calls that have been the norm in FP6 ERA-NETs

2. ERA-NET Thematic context

There were 15 FP6 ERA-NET Coordination Actions (CA) classified within the Environment Thematic Area. These and their specific topics are shown below.

Environment ERA-NET	Topic	Objective
AMPERA	Prevention of marine pollution	Address environmental problem
BIODIVERSA	Biodiversity research in Europe	Scientific scale and capacity
BONUS	Marine science in the Baltic Sea	Ensure sustainable marine environment
CIRCLE	Climate Impacts and adaptation within a larger Europe	Address adaptation to Climate Change impacts
CRUE	Flood management	Address environmental problem
ECORD	Ocean sea drilling	Scientific scale and capacity
EUROPOLAR	Polar research	Scientific scale and capacity
EUWI-ERA-NET (Splash)	Water in developing countries	Address environmental problem
IWRM.Net.CA	Water resources	Support implementation of EU Water Framework Directive
Marifish	Marine fisheries	Sustainable fishing industry
MARINERA	Marine science research in Europe	Scientific scale and capacity
NET-BIOME	Biodiversity in tropical/subtropical regions	Sustainable management of fragile eco-systems
SKEP	Environmental protection	Improve scientific knowledge
SNOWMAN	Soil and groundwater pollution	Address environmental problem
URBAN-NET	Urban sustainability	Sustainable cities

Three of these started as Specific Support Actions (SSA) in 2004/5:

- CIRCLE
- EUWI-ERA-NET
- IWRM.Net-CA

This shows that some 60% of the FP6 ERA-NETs are concerned with marine science and water resources and 20% are related to climate change issues (CIRCLE, NET-BIOME, URBAN-NET).

2.1 ERA and national programmes in the thematic area

As well as the thematic topics and focus of the ERA-NET, it is also possible to classify the ERA-NETs by the dominant type of participating organisations and the focus of R&D projects that they fund as shown in the table below.

Environment ERA-NET	Dominant Type of Participants	R&D Project Focus
AMPERA	Research Councils and Ministries	Applied research
BIODIVERSA	Research Councils and Ministries	Basic research
BONUS	Research Councils and Ministries	Applied research
CIRCLE	Environment Ministries/Agencies	Applied research
CRUE	Environment Ministries/Agencies	Applied research
ECORD	Research Councils	Basic research
EUROPOLAR	Research Councils and Ministries	Basic research
EUWI-ERA-NET (Splash)	Development/Environment Ministries & Agencies	Applied research
IWRM.Net.CA	Environment Ministries/Agencies	Applied research
Marifish	Fishing Ministries/Agencies	Applied research
MARINERA	Research Councils	Basic research
NET-BIOME	Regional Government/Autorities	Applied research
SKEP	Environment Ministries/Agencies	Applied research
SNOWMAN	Environment Ministries/Agencies	Applied research
URBAN-NET	Various Ministries and Agencies	Applied research

The participant survey (based on 125 responses) provides some interesting feedback on the ERA-NET Scheme with respect to the national programmes:

- The main influence on national programmes was new opportunities for transnational R&D (86%). Such a high figure is typical across all of the ERA-NET thematic areas[25].
- Other, above average, influences were bigger programme budgets for the theme (54%), design of national programmes with longer time horizon (53%) and reducing duplication between national programmes in their country (48%)[26].
- 18% indicated that their ERA-NET overlapped with one other ERA-NET in that country which was in line with the average across all thematic areas. In addition, 13% indicated overlap with more than one other ERA-NET.[27]

This quantitative feedback clearly suggests that the ERA-NET's have enabled more transnational R&D activity funded by national programmes. Around one third of survey participants also indicated that problems related to national administrative procedures had been overcome[28].

Qualitative feedback from fieldwork interviews, however, suggests that the ERA-NETs have not really influenced the structure of national R&D programmes in this area. The general impression given is that ERA-NET has increased the breadth of cooperation in topics that are truly international (especially those that are marine or water-related) as well as supporting policy

[25] Table 8
[26] Table 8
[27] Table 21
[28] Table 23

objectives. Also, the mutual learning effect appears to have enabled the spread of good practice in programme design & management.

Some specific examples of the ERA-NET as an enabler of national policy and spread of good practice would include:

- Austria organised workshops for Austrian ERA-NET participants in the environment thematic area to exchange experience and good practice.
- Finland was already involved with Baltic Sea research and CIRCLE enabled more formal international collaboration beyond the existing trilateral cooperation with Sweden and Germany. In addition, Finland wanted to develop a climate change adaptation strategy so participation in CIRCLE was a very attractive opportunity
- France wanted to form an internationally recognised centre of excellence for scientific research and technological expertise on sustainable management of environments responding to the needs of countries in the Northern and Southern hemisphere
- CIRCLE was of particular interest to the Italian Ministry of Environment because climate change is a high priority area
- Russia has emphasised both nanotechnology and environmental science as two of its key strategic sectors
- Norway was already very active in research funding for ocean and the coastal layer and had previously funded transnational R&D projects on marine eco systems with Ireland, UK and Netherlands. AMPERA and MARINERA were very interesting for Norway because of their direct link to national priorities.

2.2 **ERA and structuring effect in the thematic area**

Most of the environment-related ERA-NETs attracted a relatively large number of participating organisations as shown below.

ERA-NET	Number of countries	Number of participants	Coordinator country
AMPERA	8	10	Spain
BIODIVERSA	13	19	France
BONUS	9	14	Finland
CIRCLE	13	19	Austria
CRUE	12	13	UK
ECORD	10	11	France
EUROPOLAR	19	25	France
EUWI-ERA-NET (Splash)	11	16	UK
IWRM.Net-CA	14	17	France
MariFish	16	19	UK
MARINERA	13	15	France
NET-BIOME	5	11	France
SKEP	13	16	UK
SNOWMAN	7	7	Austria
URBAN-NET	13	16	UK

In addition, a number of the ERA-NETs have additional 'observers'.

It can be seen from this table that France (6) and the UK (5) took a strong lead and coordinated 11 of the 15 ERA-NETs. These two countries also participated in most of the other ERA-NETs. Germany also participated in most of these ERA-NETs but not as coordinator.

Other countries that participated broadly in the environment-related ERA-NETs included Netherlands, Sweden, Belgium, Austria, Norway, Spain, Finland, Portugal and Italy. Overall, around 30 countries participated in the ERA-NETs in this area, including Russia

The participant survey indicates that over 60% had pre-existing relationships with at least some of the other participants and that these relationships had generally strengthened[29].

The importance of the Environment theme in countries' research programme was less than the thematic average before ERA-NET participation but on par with the average in 2008 (respectively 54% vs. 69% and 89% vs. 90%)[30]. The change was attributable to ERA-NETs for 34% of the participant as opposed to 29% across thematic areas.

The degree of fit between national R&D programmes and the theme of Environment ERA-NETs was rated as "good" by 69% of participants and poor by 22% of them. Note that the ratio of "good fit" was significantly below the average across all thematic areas (respectively 84 and 5%).

The eagerness to take part in joint activities other than joint calls was in line with the average across all thematic areas. The survey results tend to indicate a preference for common strategic activities and activities at researcher level (as opposed to tangible policy actions / agreements) compared to the average across all thematic area[31].

A summary of the degree of structuring effects that has been achieved by each of the environment ERA-NETs, based on information from coordinators and the websites, is provided in the table below.

ERA-NET	Start year	Structuring Effects
AMPERA	2005	1st Joint Call in 2007/8. Joint meeting with MARINERA in 2007. FP6 contract due to finish in 2009
BIODIVERSA	2005	1st Joint Call in 2008, 2nd planned for late 2008 or early 2009. 2nd Call will involve African partners
BONUS	2003	No FP6 Joint Calls but launched an ERA-NET Plus Call in 2008 and has been developing a BONUS-169 Joint Baltic Sea Research Programme. International Council for Exploration of the Sea is a partner. A legal entity (BONUS EEIG) has also been established.
CIRCLE	2005 (SSA previously)	Parallel Joint Calls were launched in different geographic zones (Nordic, Mediterranean) in 2007/8, Future Calls are expected to be broader
CRUE	2004	Two Joint Calls have been launched, in 2007 and 2008
ECORD	2003	Enabled coordinated European participation in the €850m Integrated Ocean Drilling Programme (IODP2003-2013), which is led by US and Japan.
EUROPOLAR	2005	1st Joint Call planned (closed March 2009). Aspiration to create a European Polar Science entity and joint programme. Linked to activities in Russia, Greenland and US
EUWI-ERA-NET (Splash)	2007 (SSA previously)	1st Joint Call planned
IWRM.Net.CA	2006 (SSA previously)	1st Call in 2008, A joint programme on Integrated Water Resource Management 2007-2010 has been developed for a 2nd Call. Has also initiated a water-related group with other ERA-NETs to prepare the way forward after 2010 when the EC-sponsored project finishes.
Marifish	2006	1st Joint Call underway
MARINERA	2004	Led by the European Science Foundation. 1st Joint

[29] Table 10
[30] Tables 16, 17 and 18
[31] Table 4

		Call in 2008. Played a catalytic role in a successful FP7 proposal to address the management of European regional fleets (EuroFLEETS).
NET-BIOME	2007	Engaged in survey of research activities and opinion on future priorities with the intention to launch a Joint Call
SKEP	2005	3rd Call launched in February 2009
SNOWMAN	2004	2nd Joint Call launched in January 2009
URBAN-NET	2006	1st Joint Call in 2008, 2nd is planned

This shows quite a quite a lot of thematic structuring in Europe and also linkages to international activities (eg BIODIVERSA, BONUS, ECORD, EUROPOLAR).

Qualitative feedback from the fieldwork interviews also appears to confirm that there has indeed been some European Research Area structuring in ERA-NETS like BONUS (Baltic Sea) and ECORD (ocean drilling) as all relevant European countries appear to be involved. In the case of ECORD, there has also been integration with international activity. The cooperation appears to go beyond simple R&D Calls and includes a wide range of strategic and policy support initiatives.

AMPERA

AMPERA attracted all relevant European players. There was some degree of variation in quality of applications for Marinera. The next generation of ERA-NETs should be better because of FP6 experience/learning.

BONUS

In Poland, one policy stakeholder believed that BONUS will have a structuring effect on research policy in the future because it has been very strategic and has good partners.

CIRCLE

The ERA-NET helped to intensify collaboration on Climate Change, Impacts, Adaptation and Vulnerability and two calls were launched. The consortium of participants including Observers in CIRCLE was large. Climate Change adaptation policies have became more prominent although this cannot only be attributed to FP6 ERA-NET.

CRUE

In the Italian case, CRUE was seen as the first step in internationalisation of ISPRA (Environment Agency) processes. Participation in ERA-NETs was seen as an opportunistic/experimental way of improving links between national and European scientific actors.

ECORD-NET

ECORD-NET has successfully integrated with other European and international scientific initiatives in this field (e.g. IODP, ECORD, ESSAC, ESF). It has coordinated actions by the international scientific community such as the use of deep sea research ships and infrastructure. ECORD-NET will continue under the broader ECORD network.

MARINERA

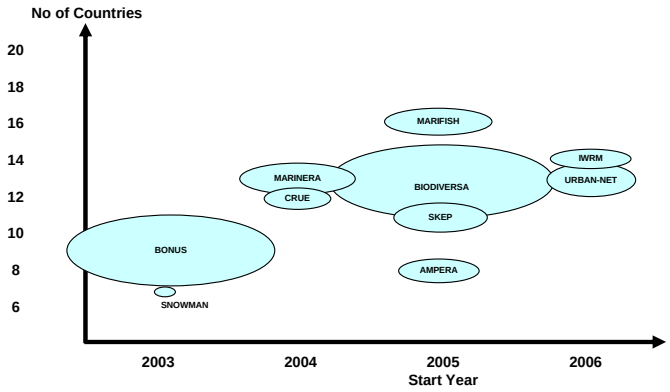
In addition to its partners, 14 observer members were associated with Marinera, from other ERA-NETs (BONUS, AMPERA, ECORD-NET, MariFISH). Marinera has also integrated with other science initiatives in addition to these initiatives. There has been some discussion about coordinating these five ERA-NETs under some FP7 umbrella. There is strong evidence from the above that Marinera was successful in attracting all relevant key players in this field of science.

3. ERA-NET funding considerations in the thematic area

The main input to the ERA-NET Coordination Actions was the 100% FP6 grant funding (c€3 million for the operational costs of each project) and any additional national resource that was applied to carry out the coordination activities. The most obvious indicator of impact on national R&D programmes and the ERA is the consequential investment in coordinated Joint Calls.

3.1 Inputs into the ERA-NET scheme for this thematic area

Feedback from the coordinator survey indicates a wide variation in Joint Call investment



	€m
AMPERA	2.25
BIODIVERSA	21.83
BONUS	22
CIRCLE	planned
CRUE	1.6
ECORD	0
EUROPOLAR	planned
EUWI ERA-NET	planned
IWRM.Net-CA	2.3
MARIFISH	3.38
MARINERA	4.58
NET-BIOME	0
SKEP	3.15
SNOWMAN	0.67
URBAN-NET	3.03

This provides a snapshot of funding in mid-2008 (coordinator survey), which amounted to €50 million. Two ERA-NETs (BIODIVERSA and BONUS) accounted for around two thirds of this investment. These are both generally linked to Research Councils and Science Ministries. The ERA-NETs that are linked to Environment Ministries and Agencies (eg CRUE, IWRM, SKEP, SNOWMAN) have much lower Joint Call budgets. For example, the €3.15m investment in SKEP spans three Joint Calls.

The evolving situation and the fact that some of these FP6 ERA-NETs will not conclude until 2010/11, will significantly increase the cumulative investment. For example, the €22m investment in BONUS was related to an ERA-NET Plus Call (FP7) and this ERA-NET is now moving towards an Article 169 project with an aspirational investment of over €50 million. Also, some additional Calls have been launched since the coordinator survey and this additional investment is not included in the above figures, eg:

- BIODIVERSA is planning a 2nd Call
- The BONUS EEIG has launched a Call for joint training projects
- CIRCLE has launched Nordic and Mediterranean Calls
- CRUE has launched a 2nd Call
- EUROPOLAR has launched a 1st Pilot Call (€10m)
- EUWI ERA-NET is planning a Joint Call
- SNOWMAN is planning a 2nd Call

Some of the ERA-NETs have also enabled coordinated national investment in addition to Joint Calls. The most obvious is ECORD, which is has allowed Europe to participate in international calls for scientific participation in ocean drilling expeditions under the €850m Integrated Ocean Drilling Programme (IODP) 2003-2013. ECORD members have already contributed €45m to fund the operational costs of scientific expertise and infrastructure for expeditions and this is expected to rise to €230m by 2013. The French coordinator also advised that ECORD-ERA has contributed to the launch of EUROmarc, a joint programme under the ESF/EUROCORES scheme.

Feedback from the participant survey indicates that almost 60% had invested more time and resources to participate in the ERA-NET than was covered by FP6 funding. This is relatively high compared with the average across other thematic areas where more than 50% had found it necessary to make additional investment to carry out the coordination activities[32].

The qualitative feedback below suggests that there has also been quite a lot of in-kind investment. In some cases, this was because ERA-NET participation was more labour-intensive than expected whilst in others it suggests a higher level of buy-in that may be related to fit with policy or operational.

- Finish participants advised that ERA-NETs were more resource-intensive than expected and EC funding did not cover all costs.
- In Italy three people from the Environment Agency (ISPRA) are involved in CRUE at their own cost. The EC contribution paid for expert support resource from their public sector research institutes. The same approach was used by the Ministry of Research
- In Portugal, one person was fully funded by the R&D funding agency to coordinate participation within the environment area as this is one of the areas where Portugal had a strong research tradition

3.2 Opening up considerations for this thematic area

Cumulative investment so far in Joint Calls and Activities indicates that there has been a high level of national buy-in to the ERA-NET philosophy of transnational knowledge exchange, collaboration and co-investment in joint activities. In addition, ERA-NET joint calls, joint programming or other joint activities appeared to have enabled participants to access to foreign research communities[33]. However, the dominance of virtual common pot funding models in the Joint Calls and comments from the fieldwork interviews below show that there is institutional resistance to the real common pot model in many countries. The BONUS Joint Call was an exception but this was an ERA-NET Plus, where the EC funding was utilised in a real common pot in parallel with a virtual common pot (mixed mode). The 2nd SKEP Call was implemented through a real common pot model but the consortium reverted to the virtual common pot model for the 3rd Call.

The propensity to pool national research resources in Europe in support of common international objectives appears to be quite relevant to this thematic area.

Some selected feedback from the fieldwork consultations highlight that, with the exception of France, there is still strong resistance to the funding of non-resident researchers.

- In France, one of the participants (Ifremer) was quite open to use scientific capacity from other institutes/universities. In 2005, Ifremer proposed to extend this model to non-French partners. In 2008, €3m (of their €160m budget) was earmarked for funding foreign researchers or foreign institutes (typically €30-100K contributions to common pot projects). Another public research institute in France (CNRS) was also doing this.
- In Italy, the Environment Agency could only consider virtual common pot because of lack of policy clarity. Also, the Environment Ministry could not participate in the 2nd SKEP Call because the real common model was used
- In Portugal, there was general scepticism about the value of the common pot model. This was deemed too risky and unlikely to match Portuguese national interests but its wider merits were recognised
- Norway was strictly interested in Norwegian money going to Norwegian researchers

The Ministry of Research in Italy provided a very interesting perspective on the different funding models. Their opinion is that the virtual common pot is much more practical for relatively small

[32] Table 3
[33] Table 22

investments (typical of FP6 ERA-NET Joint Calls) compared to the real common pot model, which generally requires higher level approval in most countries. The real common pot model may be more relevant for large scale, strategic projects like JTIs and Article 169.

4. ERA-NET benefits for this thematic area

4.1 Direct and indirect benefits of ERA-NETs in this thematic area for national policy stakeholders and participants

The participant survey indicates that the majority (94%) believed that that their participation in the FP6 ERA-NET had been worthwhile[34] and 52% had got more out of it than they expected[35]. Most of the survey respondents (88%) were satisfied with the level of transnational cooperation within their ERA-NET[36].

Some of the benefits in this thematic area appear to have been achieved at the policy/strategic level (eg Baltic Sea, climate change, EU Directives, etc) as well as the more obvious operational benefits that are most common in the other thematic areas.

The following examples of feedback from some of the more active countries indicates the broad mix of operational and strategic benefits

- In Austria, most benefits were for the agency, not for researchers. This included learning how others work and assembling contacts for other cross-border projects outside ERA-NET.
- In Finland, benefits included a new organisation established to coordinate BONUS, a focused call for Baltic Sea which had not been possible to organise under EU/FP, the R&D sector in this area becoming more integrated (funding agencies previously had national focus), a common proposal submission system established, BONUS being completely detached from purely national research activities and a long term programme put in place, high level of PR/dissemination, research performers and funding agencies working together on mapping priorities.
- In France, benefits included the development of a common perspective on the future of deep sea research, capacity building for very important and expensive projects, enablement of research in an area that would not have taken place otherwise, increased standing in Europe of French research institutes and practical experience for future joint programming
- In Italy, benefits included the strengthening of existing relationships and creation of new ones, better twin links between national Environment Ministries and Agencies, encouraging national researchers to become more international, increasing quality of research outputs from public institutes, informing policy and paving the way for bigger joint programmes (Article 169, JTI, etc)
- In Poland, participants learned about research policy management and appreciated the beneficial development of network of contacts.
- In Portugal, the funding agency was encouraged to put more money into the environment area, which would not have been allocated without ERA-NET participation.

4.2 Direct and indirect benefits of this ERA-NET thematic area for research beneficiaries

The feedback on benefits for the research community has been quite limited, compared with the benefits to participants. This is not very surprising as some ERA-NETs are only just launching their 1st Joint Calls and the majority of the funded R&D projects will not be completed yet. In some cases the national investment in Joint Calls has been relatively low, and experimental, compared with typical national or international R&D projects.

[34] Table 5
[35] Table 6
[36] Table 7

Quantitative feedback from the participant survey gives the perspective of the funding agencies, which highlights the following top five ERA-NET benefits for R&D performers in the Environment field[37]:

- 57% indicated that new researchers (with no prior international or European experience) had benefited from joint activities (40% average)
- 57% indicated that the ERA-NET had enabled access to foreign research communities/groups not present in their country (54% average)
- 50% indicated that new researchers (with no prior international or European experience) had benefited from joint calls/programmes (41% average)
- 50% indicated that new types of research projects had been funded through joint calls/programmes (46% average)
- 47% indicated that higher quality R&D proposals had been generated at national level (39% average)

These responses are all above the ERA-NET average. It is also worth noting that participants perceived higher benefits from Joint Activities than Joint Calls.

[37] Table 22

5. European Added Value, relevance and efficiency

5.1 Additionality of ERA-NETs in this thematic area

As mentioned above, FP6 ERA-NETs have created some structuring effects at the level of the European Research Area for the Environment, particularly through engagement with higher level policy stakeholders and broadening the scope and scale of European cooperation. Some have already become integrated within the FP7 Work Programme and there are some that have the ambition to move to Article 169 collaboration. Nearly 30% report that the ERA-NET has triggered transnational cooperation outside the ERA-NET[38]. However, only 18% reported strong links between their ERA-NET and Technology Platforms[39].

There is also evidence of added value at the national level as 55% of the Environment survey respondents indicated that the ERA-NET had influenced national research policy beyond the theme of the specific ERA-NET[40].

Additionality of Environment ERA-NETs can also be evidenced through the feedback from the fieldwork interviews. For example:

- Finland advised that the Baltic Sea research programme (BONUS) was considered under the high level strategy on the Baltic Sea. Finland is launching a new climate change research programme in 2010 with prominent adaptation content. This was probably influenced by CIRCLE to some degree.
- France advised that the coordination of national programme budgets in ECORD created synergies so that they could jointly fund activities that would not have taken place otherwise
- Italy advised that CRUE had facilitated a joined up approach between national Environment Ministries and Agencies on how R&D coordination at the European level could support the implementation of the EU Flood Directive

5.2 **Perceived economic efficiency and relevance**

Participants generally indicated that the benefits of ERA-NET participation outweighed the cost of participation. For instance, 94% of survey respondents in the Environment thematic area indicated that their participation in the ERA-NET had been worthwhile and over 50% got more value out of it than expected. The majority (88%) were satisfied with the level of transnational cooperation[41].

The most important problem that has been overcome was national administrative procedures (e.g. evaluation rules). The most important problems that have not been overcome are:

- 31% regard national resources (staff time and finance) as an unresolved problem
- 26% regard national legal programme conditions (e.g. funding of non-residents, IPR) as an unresolved problem[42].

These indicate the continuing, significant differences between the national systems and obviously create a high degree of discontent in the countries that are more open to transnational cooperation.

[38] Table 11.
[39] Table 20.
[40] Table 18
[41] Tables 5, 6 and 7
[42] Table 23

The main enablers to better cooperation was more strategic R&D programming/planning for existing programmes (33%) and setting up of new types of R&D programmes (25%)[43].

The qualitative feedback confirmed much of the above and that the benefits of participation in the FP6 ERA-NET Scheme have exceeded the costs. The interviews also highlighted some synergies between a number of the Environmental ERA-NETs. It seems also that buy-in to future ERA-NETs in the environment field will be strongly linked to the degree of policy fit.

[43] Table 19

6. Annexes: Stakeholders and materials consulted

The main inputs used to produce this thematic report were:

- Thematic extracts from the Country Reports, e.g.
    - Austria – CIRCLE, IWRM.Net-CA
    - Finland – BONUS, CIRCLE
    - France – ECORD, Marinera
    - Italy – CRUE, CIRCLE, SKEP, EUWI, Biodiversity
    - Poland – CRUE, EUROPOLAR, MARINERA
    - Portugal – BioDiversa, CIRCLE
    - Norway – AMPERA, MARINERA
    - Russia – BONUS, EUROPOLAR
- Quantitative data from the Coordinator Survey
- Analysis of feedback from the Participant Survey
- Review of relevant ERA-NET websites

7. Annexes: Participant survey results

The figures below show responses to the participant questionnaire, completed by 84 Environment ERA-NET participants.

Table 1 - How would you rate the degree of fit between your national R&D programme relevant to the theme and this ERA-NET?

	Environment	Total
Good fit	69%	**84%**
Poor fit	22%	**5%**
No answer	9%	**11.00%**

Participants in the Environment thematic field were less likely than the average to report a good fit between national programmes and the ERA-NET and more likely to report a poor fit between the two than the average.

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

	Environment	Total
0 - 9999	4%	**4%**
10000 - 19999	4%	**2%**
20000 - 29999	0%	**3%**
30000 - 39999	10%	**2%**
40000 - 49999	2%	**2%**
50000 - 59999	1%	**2%**
60000 - 69999	1%	**1%**
70000 - 79999	0%	**6%**
80000 +	69%	**71%**
Not Answered	10%	**6%**

Responses from participants in the Environment thematic field indicated that the EC contribution for Environment was broadly in line with the average.

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

	Environment	Total
Yes	30%	**49%**
No	59%	**51%**
Don't Know	4%	**0%**
Not Answered	7%	**0%**

Participants in the Environment thematic field were less prone to indicate that the EC funding had covered their participation in the scheme.

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

	Environment			Total		
	Yes	No	No answer	Yes	No	No answer
Coordination/clustering of ongoing nationally funded research projects	57%	25%	17%	**59 %**	**19 %**	**23%**
Benchmarking and common schemes for monitoring and evaluation	66%	20%	14%	**67 %**	**13 %**	**19%**
Multinational evaluation procedures (common evaluation criteria and methods of implementation	59%	15%	26%	**55 %**	**25 %**	**20%**
Schemes for joint training activities (so-supervised theses or common PhD schemes)	25%	42%	34%	**12 %**	**49 %**	**39%**
Schemes for personnel exchange	37%	34%	30%	**14 %**	**47 %**	**39%**
Schemes for mutual opening of facilities or laboratories	19%	38%	43%	**15 %**	**44 %**	**41%**
Specific cooperation agreements or arrangements	37%	29%	34%	**43 %**	**24 %**	**33%**
Action plan taking up common strategic issues and preparing for joint activities	83%	6%	10%	**75 %**	**11 %**	**13%**

Participants in the Environment thematic field were more engaged in schemes for joint training activities, schemes for personnel exchange, and action plan taking up common strategic issues and preparing for joint activities than the average participants.

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

	Environment	Total
Yes	94%	**95%**
No	5%	**4%**
Not Answered	2%	**1%**

Participants in the Environment thematic field were almost as prone to agree that the participation in the scheme had been worthwhile as the average.

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

	Environment	Total
I got more out of it than I expected	52%	**41%**
I got out of it what I expected	35%	**51%**
I got less out of it than I expected	10%	**6%**
Not Answered	2%	**1%**

Participants in the Environment thematic field were more prone than the average to report that they got out of the scheme more than what they expected although a higher percentage than the average reported to have got less out of the experience than expected.

Table 7 - How satisfied are you with the overall level of transnational cooperation within this ERA-NET?

	Environment	Total
Satisfied	88%	**88%**
Unsatisfied	6%	**7%**
No answer	6%	**4%**

Participants in the Environment thematic field were as satisfied with the overall level of transnational cooperation in their ERA-NETs as the average.

Table 8 - To what degree has your participation in this ERA-NET influenced your country's national programme(s)?

	Environment			Total		
	No influence	Influence	No answer	No influence	Influence	No answer
Discontinuation of existing programme(s) in some theme(s)	39%	46%	15%	**53%**	**34%**	**12%**
Reducing duplication between National programmes in your country	33%	48%	20%	**47%**	**38%**	**16%**
Design of programmes with longer time horizon	33%	53%	14%	**42%**	**49%**	**10%**
Design of programmes with shorter time horizon	50%	37%	13%	**51%**	**38%**	**11%**
Bigger programme budgets for the theme	36%	54%	10%	**42%**	**46%**	**12%**
Smaller programme budgets for the theme	57%	14%	29%	**63%**	**13%**	**23%**
New programme assessment/evaluation criteria	43%	42%	15%	**40%**	**50%**	**10%**
New opportunities to enable transnational R&D activities in the theme of the ERA-NET	5%	86%	10%	**8%**	**86%**	**6%**
New eligibility criteria allowing funding of foreign researchers in the area	47%	34%	19%	**43%**	**42%**	**15%**
Existing programme(s) now covering new theme(s)	46%	40%	14%	**48%**	**38%**	**14%**
New programme(s) put in place in response to new theme(s) identified	38%	40%	22%	**51%**	**34%**	**15%**

Participants in the Environment thematic field were overall slightly more prone than the average participant to respond that their ERA-NET participation had influenced their country's national programmes. 46% of respondents answered that the participation had influenced the discontinuation of existing programmes or creation of new programmes, as opposed to only 34% of respondents overall. Influence in this theme was by far the greatest with regard to creating new opportunities for transnational R&D activities.

Table 9 - To what extent did your organisation have pre-existing relationships with participants in this ERA-NET prior to FP6?

	Environment	Total
Prior relationships	63%	**66%**
No prior relationships	22%	**26%**
No answer	14%	**8%**

Participants in the Environment thematic field were less likely than the average to have had prior relationships with other participants in their ERA-NET.

Table 10 - If there were prior relationships which of the following 6 statements best describes how these relationships evolved during your participation in this ERA-NET?

	Environment	Total
Strengthened	62%	**63%**
Weakened	0%	**1%**
No answer	35%	**33%**
No change	3%	**4%**

Participants in the Environment thematic field were slightly more likely than the average to say that prior relationships remained unchanged.

Table 11 - Has your participation in this ERA-NET triggered transnational cooperation outside of the ERA-NET?

	Environment	Total
Yes	28%	**31%**
No	64%	**47%**
Not applicable	2%	**16%**
Not Answered	6%	**5%**

Participants in the Environment thematic field were considerably more likely than the average participant to say that the participation had not led to transnational cooperation outside of the ERA-NET.

Table 12- 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?

	Environment	Total
Yes	16%	**13%**
No change	58%	**63%**
No answer	26%	**23%**

Participants in the Environment thematic field were more likely than the average to claim that the participation had had impact on investment in transnational cooperation outside of the ERA-NET.

Table 13 - If yes roughly what proportion of your programme budget was transnational before your involvement in ERA-NET?

	Environment	Total
0-25%	15%	**15%**
26 to 50%	0%	**0%**
51 to 75%	0%	**0%**
76 to 100%	2%	**1%**
Not answered	83%	**84%**

Participants in the Environment thematic area were roughly as likely as others to state what percentage of their programme budget was dedicated to transnational activities before the ERA-NET.

Table 14 - If yes roughly what proportion of your programme budget is transnational now?

	Environment	Total
0-25%	13%	**13%**
26 to 50%	1%	**1%**
51 to 75%	0%	**0%**
76 to 100%	5%	**1%**
Not answered	82%	**84%**

Participants in the Environment thematic area were less able than others to state what percentage of their programme budget was dedicate to transnational activities after the ERA-NET.

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?

	Environment	Total
Very important	19%	**21%**
Fairly important	35%	**48%**
Not very important	26%	**16%**
Not at all important	7%	**5%**
Don't Know	3%	**4%**
Not Applicable	1%	**2%**
Not Answered	8%	**5%**

Participants in the Environment thematic area were less likely than the average to state that their topic had been very important to them before joining the ERA-NET.

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

	Environment	Total
Very Important	25%	**24%**
Important	64%	**66%**
Not important	2%	**1%**
No answer	10%	**10%**

As opposed to their responses regarding the time before joining the ERA-NET, after participation in the ERA-NET, participants in the Environment thematic area were more likely than the average to state that their topic was very important to them than the average.

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?

	Environment	Total
To some extent	34%	**29%**
Not at all	18%	**11%**
No answer	48%	**60%**

Participants in the Environment thematic area were more likely than the average to state that the change in the importance of the theme was to some extent due to ERA-NET.

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

	Environment	Total
Influence	55%	**63%**
No influence	21%	**18%**
No answer	24%	**19%**

Participants in the Environment thematic area were less likely than the average participant to state that their involvement in the ERA-NET had had influence on national policy beyond the theme of the ERA-NET.

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

	Environment					Total				
	Helped	Hindered	No effect	Not Answered	Not applicable	Helped	Hindered	No effect	Not Answered	Not applicable
Change in programme management agency	16%	2%	22%	6%	55%	**7%**	**6%**	**36 %**	**4%**	**47%**
New R&D management structure	8%	8%	32%	7%	45%	**11 %**	**7%**	**35 %**	**5%**	**42%**
For existing programmes, more strategic R&D programming/planning	33%	0%	32%	13%	23%	**29 %**	**0%**	**36 %**	**7%**	**28%**
Externalisation of R&D programmes into agency/agencies	12%	5%	25%	6%	53%	**8%**	**4%**	**33 %**	**5%**	**49%**
Setting up of new types of R&D programmes	25%	6%	25%	10%	35%	**24 %**	**7%**	**33 %**	**5%**	**30%**
Barcelona 3% targets	18%	0%	39%	18%	25%	**16 %**	**1%**	**39 %**	**8%**	**36%**

Participants in the Environment thematic area were more likely than the average to state that changes in programme management agencies have helped the effects of their organisation's participation in the ERA-NET. They were less prone than the average to state that externalisation of R&D programmes into agencies and setting up new types of R&D programmes has had no effect on their participation.

Table 20 - How strong are the links between this ERA-NET and Technology Platforms?

	Environment	Total
Strong	18%	**23%**
Weak	61%	**44%**
No answer	22%	**33%**

Participants in the Environment thematic area were more likely than the average to report that the links between their ERA-NETs and Technology Platforms were weak.

Table 21 - Does this ERA-NET overlap with other ERA-NETs in your country?

	Environment	Total
Yes, my ERA-NET overlaps with more than one ERA-NETs in my country	13%	**8%**
Yes, my ERA-NET overlaps with one other ERA-NET in my country	18%	**17%**
No overlaps	63%	**57%**
Don't know	5%	**13%**
Not Applicable	0%	**2%**
Not Answered	1%	**2%**

Participants in the Environment thematic area were more likely than the average to state that their ERA-NET overlapped with one or more than one ERA-NET in their country.

Table 22 - 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?

	Environment			Total		
	Some evidence	No evidence	No answer	Some evidence	No evidence	No answer
Higher quality projects generated at national level (i.e. higher quality proposals)	47%	32%	21%	**39%**	**44%**	**17%**
Higher quality projects funded at national level (through joint calls/programmes)	45%	27%	28%	**35%**	**42%**	**23%**
New types of research projects generated (i.e. reflected in proposals received)	43%	29%	28%	**38%**	**42%**	**20%**
New types of research projects funded (through joint calls/programmes)	50%	26%	24%	**46%**	**32%**	**22%**
New researchers (with no prior international or European experience) benefiting from joint activities	57%	18%	25%	**40%**	**27%**	**33%**
New researchers (with no prior international or European experience) benefiting from joint calls/programmes	50%	23%	27%	**41%**	**34%**	**25%**
Access to foreign research communities/groups not present in my country	57%	19%	24%	**54%**	**28%**	**18%**

Participants in the Environment thematic area were more likely to report some evidence of various ERA-NET national-level effects than the average.

Table 23 - Did any of the following factors either help or hinder your organisation to exploit the full potential of its participation in this ERA-NET?

	Environment					Total				
	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	17%	40%	10%	16%	17%	**16 %**	**46 %**	**13 %**	**12 %**	**13%**
National cultures or research traditions	11%	44%	19%	9%	17%	**10 %**	**46 %**	**15 %**	**14 %**	**15%**
National resources (staff time finances)	15%	10%	29%	31%	15%	**17 %**	**35 %**	**26 %**	**15 %**	**7%**
National administrative procedures (e.g. evaluation rules)	6%	26%	34%	12%	22%	**6%**	**25 %**	**29 %**	**28 %**	**12%**
National legal programme conditions (e.g. funding of non-residents IPR)	6%	29%	11%	26%	28%	**4%**	**35 %**	**19 %**	**25 %**	**17%**
EC administrative procedures or legal requirements	2%	40%	23%	12%	23%	**1%**	**34 %**	**36 %**	**12 %**	**18%**
Perceptions of benefits	15%	23%	10%	19%	32%	**15 %**	**28 %**	**16 %**	**13 %**	**28%**
Engagement in other transnational initiatives (e.g. COST EUREKA)	17%	34%	2%	6%	41%	**12 %**	**46 %**	**4%**	**4%**	**34%**

Participants in the Environment thematic field were generally less likely than the average to state that various factors were not a problem in exploiting the full potential of their participation in the ERA-NET. They were however more prone to report that engagement in other transnational initiatives was an aid to success.

8. Annexes: Coordinator survey results[44]

The figures below show responses to the coordinator questionnaire in the theme of environment.

16 of the 71 ERA-NETs belong to the Environment theme, representing 22.5% of all ERA-NETs. Table 1 below lists these ERA-NETs and indicates if they were covered by the field work.

Table 24 - List of ERA-NETs covered within the theme

ERA-NET	Number of participants	Coordinator country	Start year
AMPERA	10	Spain	2005
BIODIVERSA	19	France	2005
BONUS	14	Finland	2003
CIRCLE	17	Austria	2005
CRUE	13	UK	2004
ECORD	11	France	2003
EUROPOLAR	25	France	2005
SPLASH	16	UK	2007
IWRM.Net-CA	17	France	2006
MariFish	19	UK	2006
MARINERA	15	France	2004
NET-BIOME	11	France	2007
SKEP	16	UK	2005
SNOWMAN	7	Austria	2004
URBAN-net	16	UK	2006

Environment ERA-NETs were active in joint calls and joint programme, but not in pilot actions. This is indicated in table 2 below. (NB: based on the Coordinator's survey which is not necessarily complete)

Table 25 - Details of joint activities within the theme

Joint activities	Number of joint activities	€ Virtual pot	€ Common pot	€ Mixed mode	Total
Joint calls	15	39,144,181	397,500	10,404,000	49,945,681
Joint programmes	4	2,025,000	-	-	2,025,000
Pilot actions	0	-	-	-	-

Figures reported in table 25 only contain funding contributions for which coordinators were able to provide a clear breakdown of funding contributions by country. Hence figures in table 25 are conservative and robust estimates of contributions to joint calls, joint programmes, and pilot actions.

The overall total amounts reported by coordinators should be treated with caution since they were not necessarily broken down or attributed to countries. These are as follows:

- Joint calls
  - Virtual common pot: € 42,678,971
  - Real common pot: € 375,000
  - Mixed mode: € 42,000,000

- Joint programmes

[44] 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)

- Virtual common pot: € 2,000,000
- Real common pot: € 0
- Mixed mode: € 92,000,000

- Pilot actions
  - Virtual common pot: € 0
  - Real common pot: € 0
  - Mixed mode: € 0

ERA-NET EVALUATION
SD18 - Thematic Report on Life Sciences

The following document provides the structure for the thematic report on ERA-NETs in the Life Sciences field.

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[45] in 15[46] 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 theme. 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.

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

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

Contents

1. Executive Summary - Overview

Q1 – Impact on Research Landscapes

- The main impact at the national level has been to create new opportunities for transnational R&D (82% of survey participants) and over €230m had been invested in Joint Calls at the time of the coordinator survey (mid-2008). This has already increased. This will grow further, as some of the FP6 ERA-NETs only started in 2006 and others are moving to 2nd phase projects via FP7.

- Other programme level influences had included design of programmes with longer time horizons, bigger programme budgets for the theme, new programme assessment/evaluation criteria, reducing duplication between national programmes and new programmes put in place in response to new themes.

- Over 60% of the Life Science survey participants indicated that the ERA-NET had influenced national policy beyond the theme of the specific ERA-NET.

- Qualitative feedback indicated that there had been very little influence on the huge variety of incompatible national programme structures, especially in the more mature EU Member States. Associated and Accession countries seem more willing to adapt their R&D funding structures to align with EU or ERA-NET priorities.

Q2 – Structuring effect on specific research areas or fields

- The Life Sciences ERA-NETs were quite diverse in terms of both topics and objectives. Some were quite broad (eg systems biology, pathegenomics), others were in niche areas (eg organ donation, medicines for children)

- The majority (nine) of the 15 Life Science ERA-NETs were related to applied research topics

- The 'Life Sciences' theme has a high priority in most countries and the ERA-NET Scheme attracted a wide variety of participants from almost 30 countries including Health Ministries, Agriculture Ministries, Research Ministries, Economy Ministries, Research Councils, Agencies and Institutes. France participated in all 15 ERA-NETs in the Life Sciences area. The other large countries (Germany, Italy, Spain and the UK) along with the Netherlands participated in 80% of the Coordination Actions. Scandinavian countries, Austria, Belgium, Israel and Portugal were also well represented.

- France, Germany, Netherlands and the UK coordinated the majority of the ERA-NETs in the Life Sciences area

- Qualitative feedback indicated that the main structuring effect has been the high degree of relationship building between participants and countries that had not previously had any cooperation. In most cases, this has led to a synthesis of common R&D priorities and a strategic agenda for future research activities.

- Many Life Science participants viewed the ERA-NETs as a valuable instrument to support their wider ERA objectives and the significant Joint Call investments in ERA-NETs like EUROTRANSBIO demonstrates this trend.

Q3 - Direct benefits and indirect benefits

- Virtually all of the surveyed participants regarded their ERA-NET experience as worthwhile and almost 50% got more out of it than they expected

- Overall the benefits of participation in the FP6 ERA-NETs outweighed the costs. The most commonly cited benefit was the enabling function of the ERA-NET to define common priorities with other R&D funding organisations across Europe. In many cases, this has informed the design of Joint Calls (past/present/future) but in others the outputs are being used to produce common guides/methodologies/standards or for wider policy input (e.g. support for Directives/Regulations). Learning about programmes and systems in other countries was also valued highly. Many also commented on the ERA-NET as a practical opportunity to test and accelerate broader internationalisation policies.

- Benefits for the research community were less clear partly because most of the funded projects were not yet completed. The perception from the programme manager survey (ERA-NET participants) was that ERA-NET had mainly enabled access to foreign research communities/groups that were not present in their country and that new types of research projects had been funded. Some countries (eg Austria and France) were less enthusiastic about such benefits as their national programmes were already quite open to support cross-border R&D projects.

4 – Opening up of national programmes

- The cumulative national investment in Joint Calls (€230m and rising) indicates a high level of buy-in to the ERA-NET philosophy of coordinated research activities between national programmes

- Only one third of the Life Science survey participants indicated that participation in the ERA-NET had influenced the national programme in terms of new eligibility criteria allowing funding of foreign researchers. This was lower than the ERA-NET average (42%). This is not surprising as ERA-NET has been very much about enabling national researchers to participate in transnational projects rather than attracting European researchers to work on national programmes.

- More than €230m has been invested in Joint Calls across the 15 ERA-NETs but less than €1m has been channelled through the real common pot funding model.

- Many participants are keen to support transnational R&D collaboration in Europe (and policy-level support for this appears to be increasing). However, there is virtually no commitment to real common pots, which are regarded as too difficult to achieve for the type of bottom-up cooperation that has been typical in the FP6 Joint Calls. It appears that the real common pot model may be better suited to the larger scale coordination frameworks like ERA-NET Plus, Article 169 and JTIs.

Q5 – Lessons learned

- Knowledge exchange and working together on joint activities (e.g. R&D foresighting) has been more valuable than expected.

- Different national structures and policies make it difficult to achieve bottom-up coordination through small scale actions.

- The virtual common pot model appears to be the most practical tool for co-investment in R&D but some question the differentiation between this with other transnational schemes like EUREKA and EUROCORES.

- The main unresolved problems in a significant number of the ERA-NET's is the relative differences in commitment of national resources (time and money) across the consortium and national administrative procedures (which reduce the speed and efficiency of joint calls).

- The administrative burden imposed on ERA-NET participants is a negative feature but this is not deterring the majority from seeking continuation support from FP7. Some participants (especially from Ministries) could continue without EC funding but this funding appears essential to enable the Joint Call processes to continue at current levels.

2. ERA-NET Thematic context

There were 15 FP6 ERA-NET Coordination Actions (CA) classified within the Life Sciences Thematic area. These and their specific topics are shown below.

ERA-NET	Topic	Objective
ALLIANCE	Organ donation and transplantation	Address health care problem
CoCanCPG	Cancer clinical practice guidelines	Harmonisation of health care practice
CORE Organic	Organic food and farming	Sector development
ERA-AGE	Population aging	Address societal issue
ERA-IB	Industrial biotechnology	Sector development
ERA-PG	Plant genomics	Scientific scale and capacity
E-Rare	Rare diseases	Scientific scale and capacity
ERASysBio	Systems biology	Scientific scale and capacity
EUPHRESCO	Plant health (threat from pests/disease)	Address environmental problem
EUROTRANSBIO	Biotechnology SMEs	Sector development
HESCULAEP	Pre-hospital medical emergencies	Address health care problem
NEURON	Neuroscience	Scientific scale and capacity
PathoGenoMics	Pathogenomics (infectious diseases)	Scientific scale and capacity
PRIOMEDCHILD	Priority medicines for children	Address health care problem
SAFEFOODERA	Food safety	Consumer protection

The Life Science ERA-NETs are clearly quite diverse in terms of both topics and objectives with very little overlap. Two thirds of national survey respondents (Table 21) indicated that there were no overlaps with other ERA-NETs in their country.

Three of these started as Specific Support Actions (SSA) in 2004 - CoCanCPG, E-Rare and NEURON.

2.1 ERA and national programmes in the thematic area

As well as the thematic topics and focus of the ERA-NET, it is also possible to classify the ERA-NETs by the dominant type of participating organisations and the focus of R&D projects that they fund as shown in the table below.

ERA-NET	Dominant Type of Participants	R&D Project

		Focus
ALLIANCE	Health Ministries and Institutes	Applied research
CoCanCPG	Health Ministries and Agencies	Applied research
CORE Organic	Agriculture Ministries	Applied research
ERA-AGE	Research Councils	Basic research
ERA-IB	Science Ministries and Institutes	Applied research
ERA-PG	Research Councils and Ministries	Basic/applied research
E-Rare	Health Ministries and Institutes	Basic/clinical research
ERASysBio	Research Councils and Ministries	Basic research
EUPHRESCO	Agriculture Ministries	Protect natural plants
EUROTRANSBIO	Economy Ministries and Agencies	Applied research
HESCULAEP	Health Ministries & Delivery Agencies	Applied research
NEURON	Research Ministries and Councils	Basic/clinical research
PathoGenoMics	Research Ministries and Councils	Basic research
PRIOMEDCHILD	Research Councils and Health Institutes	Applied research
SAFEFOODERA	Various Ministries and Agencies	Applied research

This shows that the majority (nine) are related to ***applied research*** programmes although some of the six basic research programmes also include clinical research.

The participant survey[47] results provide some interesting feedback on the influence of participation in the ERA-NET with respect to the national policies and programmes:

- By far the main influence on national programmes (as for other ERA-NETs) was new opportunities for transnational R&D. Over 80% of survey respondents indicated that this was so[48]. Other significant ways that they had apparently influenced national programmes included:
  - Design of programmes with longer time horizons (61% for Life Sciences, ERA-NET average was 49%);
  - Bigger programme budgets for the theme (54% for Life Sciences, ERA-NET average was 46%)
  - New programme assessment/evaluation criteria (52% for Life Sciences, ERA-NET average was 40%)
  - Reducing duplication between national programmes (45% for Life Sciences, ERA-NET average was 38%)
  - New programmes put in place in response to new theme(s) identified (44% for Life Sciences, ERA-NET average was 34%)
- 61% of the survey participants in the Life Sciences area indicated that their involvement in the ERA-NET had influenced **national policy** beyond the theme of the ERA-NET[49]

[47] Thematic responses for the Life Science field were based on 131 responses.
[48] Table 8
[49] Table 18

This quantitative feedback suggests that participation in the ERA-NET's in this theme has had some influence on R&D programming in the participant countries. The qualitative feedback (see examples of feedback from specific countries below) indicated that these effects might have been largely contained to greater internationalisation of national programmes and also spread of good practice in national R&D programme design and management through mutual learning. In the more mature EU Member States, there was no indication that the ERA-NETs had made any real progress in harmonising the huge variety of incompatible R&D structures. This may be less so in New Member States and Associated/Accession countries where R&D programme structures are only just being developed or there is a motivation for strategic alignment with EU priorities.

Some specific examples of the feedback from individual countries are included below:

- In Austria, most participants thought that there had been very limited impact on national research fields.
- In France, Life Science was one of the key research domains at the start of the ERA-NET and has remained so throughout. ANR, a relatively new funding agency, has focused on funding competitive and collaborative R&D projects. Health and biology were (and still are) one of six themes of interest. OSEO, the other funding body in this thematic area, has focused on innovative SMEs. The ERA-NET provided a framework to help them internationalise and to share risks and costs. Other French ministries/institutes were also involved in Life Science ERA-NETs. ANR was interested in ERA-NETs that are aiming to fund high level joint calls that fit with priorities. It was also interested in peer learning/networking as a new agency, but to a lesser extent.
- In Germany, the initial motivation for participating in Life Sciences ERA-NETs was to collaborate with strategic partners in the main European countries active in this field. The ERA-NETs had the role of flanking national programmes to provide incentives for domestic companies and beneficiaries to "look over the fence at what is going on in the rest of Europe".
- In Italy, the Ministry of Research had only one national programme with no thematic priorities. It participated in ERA-PG. The main Italian participant in other health-related ERA-NETs has been the national research institute ISS It participated in five ERA-NETs (ALLIANCE-O, ERA-AGE, E-RARE, PRIOMEDCHILD, SAFEFOODERA) but very limited internal networking between Italian participants took place.
- In the Netherlands, most cooperation in the field of chemistry, materials and biotech were with countries outside of Europe (e.g. Taiwan, Japan). There was no strong focus on European, transnational cooperation from the Dutch side although the ERA-NET enabled more European cooperation and allowed for geographic/cultural distances to be overcome. One of the main benefits cited was to enlarge and consolidate pre-existing networks and develop a common strategy with other participants.
- In Poland, there were no national strategic programmes until 2008 so there were no links between ERA-NET participation and national programmes.
- Portugal participated in five ERA-NETs within the life sciences thematic. There was a strong research tradition in this area prior to the ERA-NET although no dedicated thematic programmes were in place.
- Russia indicated that ERA-NET participation supported its strategic policy for research & education, which is one of four common spaces for EU/Russia collaboration
- Slovenia did not set thematic priorities. The decision to participate in ERA-NETs was influenced by lobbying from researchers and institutes
- The UK is working towards the developing of a sustainable organic farming and food sector in England based on a 2002 Action Plan so CORE ORGANIC was a good fit. It was initiated by UK and Denmark (coordinator). UK participation was therefore well supported by policy makers. Benefits outweighed the costs but not to the extent of influencing UK R&D policy. ERA-NETs were another important route to international collaboration.

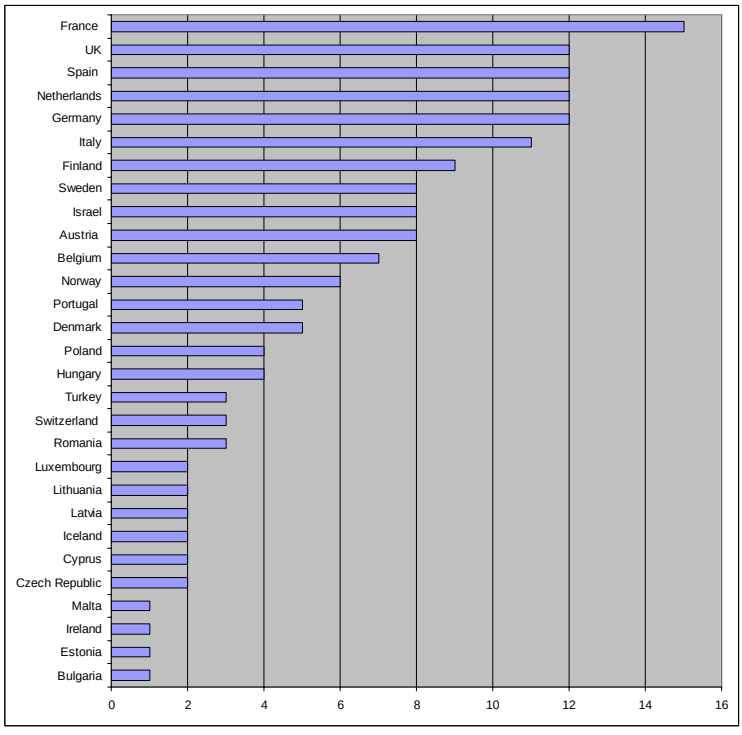
2.2 **ERA and structuring effect in the thematic area**

Most of the environment-related ERA-NETs attracted a relatively large number of participating organisations as shown below.

ERA-NET	Number of countries	Number of participants	Coordinator country
ALLIANCE	7	7	France
CoCanCPG	17	10	France
CORE Organic	13	11	Denmark
ERA-AGE	12	23	UK
ERA-IB	22	14	Netherlands
ERA-PG	17	15	Netherlands
E-Rare	10	8	France
ERASysBio	15	16	Germany
EUPHRESCO	17	24	UK
EUROTRANSBIO	8	12	France
HESCULAEP	8	10	France
NEURON	12	15	Germany
PathoGenoMics	10	15	Germany
PRIOMEDCHILD	8	8	Netherlands
SAFEFOODERA	18	21	Nordic

In addition, some ERA-NETs (eg ERA-AGE, ERA-PG, CoCanCPG) also have additional affiliates or associates that give a broader reach for joint activities and dissemination of results.

Almost 30 countries have participated in these ERA-NETs and the relative frequency is shown below:



This shows that France participated in all 15 Life Science ERA-NETs. This is not just because Life Science was one of the main R&D priorities in France but also highlights the country's strong commitment to supporting transnational R&D projects (as mentioned in Section 2.1 above). The other large countries and Scandinavia were also well represented. In addition, Austria, Portugal and some New Member States were well represented in this thematic area. It is interesting to note that Israel participated in eight of the Life Science ERA-NETs.

The participant survey indicated that around two thirds of Life Science participants had pre-existing relationships with at least some of the other participants[50] which was slightly lower than the average across all ERA-NETs. Around 60% of Life Science participants confirmed that these relationships had strengthened (only 2% highlighted a weakening of prior relationships)[51] .

Just under a quarter (23%) of survey participants reported that the Life Science theme had been very important in its countries' research programme at the outset[52] compared to just over a quarter (27%) at the point of evaluation (2008)[53]. Again, around a quarter (24%) attributed the change in importance to the participation in the ERA-NET compared to 29% across themes. The change was attributable to ERA-NETs for 24% of the participant as opposed to 29% across thematic areas[54].

The degree of fit between national R&D programmes and the theme of Life Science ERA-NETs was rated as "good" by 83% of participants and poor by 14% of them. Note that the ratio of "good fit" is on par with the average across all thematic areas (respectively 84% "good fit" and 5%"poor fit")[55].

Participants in the Life Sciences thematic field were overall less engaged in activities other than joint calls compared to the average participants[56].

A summary of the degree of structuring effects that has been achieved by each of the Life Science ERA-NETs, based on information from coordinators and websites, is provided in the table below.

ERA-NET	Start year	Structuring Effects
ALLIANCE	2004	No Joint Calls (transnational R&D not considered relevant). Tried to initiate pilot actions for Organ Exchange Programme and Common European Organ Donation Form. FP6 contract finished in 2007 but some partners are continuing to engage through coordination meetings.
CoCanCPG	2006 (SSA previously)	No Joint Calls (not ready yet). Some pilot actions related to common approaches in areas like ethics and standards were started in 2008.
CORE Organic	2004	1st Joint Call in 2007 (virtual pot). All of the 11 countries participated and eight projects were funded. The FP6 contract ended in 2007 but two coordination meetings, including new partners, have since been organised under the heading of CORE Organic Funding Body Network. In summary, FP6 coordination action is finished, and pilot projects are running until 2010. Follow on ERA-NET is included in the 2009 FP7 work programme.
ERA-AGE	2004	Joint Call for post-doctorate scholarships was launched in 2007
ERA-IB	2006	Joint Call launched in 2008 (virtual pot)
ERA-PG	2004	1st Joint Call in 2006, 2nd in 2008 (virtual pot). No

[50] Table 9
[51] Table 10
[52] Table 15
[53] Table 16
[54] Table 17
[55] Table 1
[56] Table 4

		more planned. Also some trilateral joint activities between France, Germany and the UK.
E-Rare	2006 (SSA previously)	1st Joint Call in 2007 (virtual pot). Another one was planned in 2009
ERASysBio	2006	1st Joint Call in 2006 (virtual pot), 2nd one was launched in 2008
EUPHRESCO	2006	Two Joint Calls launched in 2008 (one virtual common pot, the other real common pot). Only Netherlands and UK participated in the real common pot one. Also launched pilot, non-competitive action to co-fund four projects on ring testing of diagnostic methods.
EUROTRANSBIO	2004	Three annual Joint Calls launched in 2006, 2007 and 2008 (virtual pot). 4th Call for 2009 is planned.
HESCULAEP	2004	Finished 2008 with conference
NEURON	2007 (SSA previously)	1st Joint Call launched in 2008 (virtual pot)
PathoGenoMics	2004	1st Joint Call in 2006 (virtual pot), 2nd planned. Also launched joint action (PATHEGENOMICS PhD Awards)
PRIOMEDCHILD	2007	Hoped to launch Joint Call in 2009. Assessed research needs.
SAFEFOODERA	2004	Three parallel Joint Calls launched in 2006 on different topics (two were through real common pot model)

This shows that there has been quite a lot of Joint Call activity and some experimentation with the real common pot funding model.

Qualitative feedback from the fieldwork interviews (see feedback below) appears to confirm that there has indeed been a structuring effect in terms of the relationship building that has taken place between participants and countries that had not previously had any cooperation. The long term impact of this behavioural change could be quite significant. There is also evidence in the feedback below that some ERA-NET's are engaging with higher level EU policy stakeholders and developing common R&D priorities for Europe, as well as engaging in Joint R&D Calls.

CORE ORGANIC

The majority of European actors (apart from Ireland) participated in CORE ORGANIC. The consortium worked well, in spite of national interests, but timeliness of inputs was a nagging problem with such a large consortium. EC bureaucracy was also reported to have been time consuming.

ERA-IB

Without EC funds some countries with good researchers, but a lack of research funding, would not have taken part in joint activities (e.g. Spain, Portugal, Greece). The ERA-NET scheme was well-designed to support the additional costs associated with international cooperation (e.g. travel). This ERA-NET apparently was built on a pre-existing cooperation, SUSCHEM, which mostly involved industrial partners. It involved EUROPA BIO (European Federation) and other European chemistry organisations.

E-RARE

In E-RARE one key country was missing (UK). The perception was that UK was not involved in E-Rare either because the field was well-funded at national level or because the topic did not fit their priorities.

EUROTRANSBIO

Some key players were missing from EUROTRANSBIO like the UK, Sweden, Denmark, Norway, Italy and Israel. The reason for Israel's absence was that it preferred to engage in

EUREKA/Eurostars rather than in the ERA-NET scheme in this thematic area. As for Italy, it had no relevant national funding for SMEs. EUROTRANSBIO had the ambition to commit ministries/agencies to a truly integrated transnational programme.

PRIOMEDCHILD

The topic of this ERA-NET became a bigger issue with a new EU Regulation (2006) on Medicine for Children. This needed innovative new approaches for testing new drugs.

Feedback from individual countries also indicates ERA structuring effects. For example:

- In France, following their participation in EUROTRANSBIO, SMEs are now more aware and interested in European collaboration and external funding sources.
- A German participant mentioned that there were very few transnational programmes in the Life Sciences before ERA-NET compared with the large number of parallel international activities. The scheme had made a significant contribution to a change in attitudes among funding agencies and policy stakeholders where other countries are seen today as partners and not competitors. In terms of structuring effects this 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 Italy, ERA-NETs and higher level instruments (Article 169 and JTIs) were providing the platforms to support Italian policy to increase international research activities[57]. ERA-NET and the other instruments have become tools to implement policy.
- In Portugal, which has a tradition of broad/general research programmes, there are no dedicated thematic budgets. ERA-NET has given more thematic focus than the national programme and life sciences have seen an impact through increased international collaboration. There has been an overall shift in this direction but this is not attributable to life sciences ERA-NETs alone.
- Slovenia's participation in the Life Science ERA-NETs helped to build closer links to other Member States - participants considered that several ERA-NETs were overlapping and expected convergence in the future. Life Sciences ERA-NETs helped to put more focus on transnational cooperation but structuring effects were not apparent yet.
- In the UK, the CORE ORGANIC participant (Defra) had extensive international collaboration through partnerships in agricultural R&D, technology platforms and global animal health. ERA-NET complemented these other routes to international collaboration.

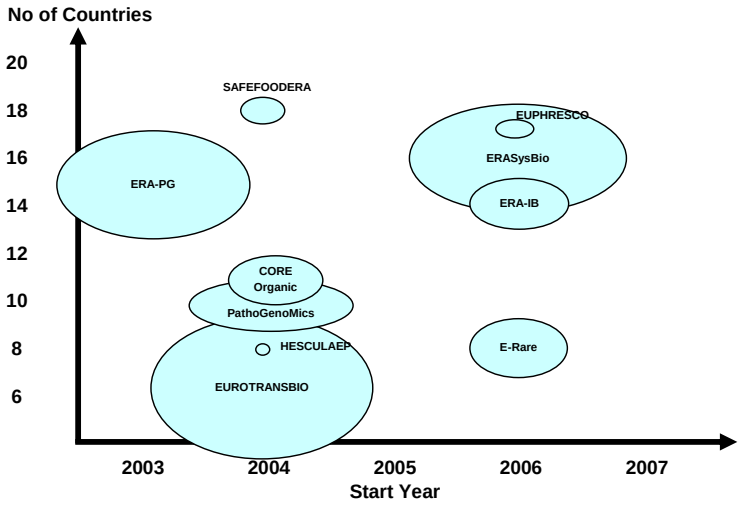
[57] This policy was introduced in the 2004 National Research Plan and allowed Italian stakeholders to participate as a latecomer to many ERA-NETs.

3. ERA-NET funding considerations in the thematic area

The main input to the ERA-NET Coordination Actions was the FP6 grant funding (c€3 million for each project) and any additional national resource that was applied to carry out the coordination activities. The most obvious indicator of impact is on national R&D programmes and the ERA is the consequential investment in coordinated Joint Calls.

3.1 Inputs into the ERA-NET scheme for this thematic area

Feedback from the coordinator survey indicates a wide variation in Joint Call investment across the Health-related ERA-NETs. The scale and diversity (at the time of the coordinator survey) is shown in below:



	€m
ALLIANCE-O	0
CoCanCPG	0
CORE Organic	8.3
ERA-AGE	0
ERA-IB	11.3
ERA-PG	53.5
E-Rare	10.04
ERASysBio	63
EUPHRESCO	1.24
EUROTRANSBIO	74
HESCULAEP	0.05
NEURON	0
PathGenoMics	15.1
PRIOMEDCHILD	0
SAFEFOODERA	2.28

This provides a snapshot of funding that had been committed to Joint Calls in mid-2008, which amounted to over €230m. Some 80% of this is accounted for by three ERA-NETs; EUROTRANSBIO, ERASysBio and ERA-PG. During the interviews it was claimed that joint calls had also been launched by ERA-AGE (post-doctoral fellowships), NEURON (€10m) and PRIOMEDCHILD (€10m). Also EUROTRANSBIO is planning a 4th Call in 2009. This would suggest that Joint Call investment in the Life Science field could reach €300m by the time that the FP6 contracts are completed. Any FP7 derivates would be additional.

As well as the more overt national investment in joint calls, it also appears that there has been a relatively high in-kind investment in time that has been devoted by participating organisations. Less than 40% of participants indicated that the EC funding covered all of the time and resources that were devoted to coordination activities[58]. This indicates a degree of co-funding and probably excludes much of the wider inputs from policy stakeholders above the national programme level.

Also, according to the participant survey results, over the ERA-NET implementation period, participants reported a small upward shift in the proportion of the programming budgets dedicated to transnational funding[59].

The qualitative feedback below also provides an indication of management resource that has been committed within the participating organizations. In some cases, there was a dedicated person to manage health-related ERA-NETs. In others, there was a team that worked part-time and ERA-NET activities were integrated with their other functions.

[58] Table 3
[59] Tables 12 and 13

- Five staff members in the Croatian Institute of Technology (HIT) were involved in ERA-IB.
- In France, ANR hired one person to monitor life sciences ERA-NETs across the thematic area. OSEO recruited especially for EUROTRANSBIO (1.5 Full time equivalent persons worked on the ERA-NET).
- In Italy, three people in the Ministry of Research were directly involved in ERA-NETs and some technical tasks/evaluations were delegated to experts, paid for by EC funding. PRIOMEDCHILD mobilised 1.5 Full time equivalent persons and ERA—NET related activities were integrated into normal activities of the research institute
- In Portugal, the participating agency (FCT) had one person fully dedicated to the coordination of their participation within the life sciences theme. Limited strategic planning took place before ERA-NET. FCT became involved through direct solicitation from the research community. Initially, participation was delegated to researchers but FCT took over the representation of Portugal in ERA-NETs.
- In the UK, the participating Ministry incorporated CORE ORGANIC responsibilities into the work of one employee and outsourced some support activities to a 3rd party (research institute)

3.2 **Opening up considerations for this thematic area**

The main indicator of increased openness to ERA cooperation was that 82% of the Life Science survey respondents agreed that the ERA-NET had enabled new opportunities for transnational R&D activities[60].

As stated previously, there has been a high level of national buy-in to the ERA-NET philosophy of transnational knowledge exchange, collaboration and co-investment in joint activities. The accumulated national investment in Life Science joint activities (over €230m and rising) is already over five times the EC investment for the Coordination Actions (c€3m each). However, since less than 1% has been invested via the common pot funding model[61], it would appear that virtually no progress has been made in opening national R&D programmes to the wider European research community. This message, and some of the rationale, is quite apparent from individual comments (below) from the fieldwork interviews.

- A Croatian participant was sceptical about value of the real common pot funding model as the proportion of national funding for R&D is only 0.8%.
- A French participant advised that the real common pot is not an option in their case for legal reasons (accountability to ministries and taxpayers) and past experience was seen as counter-productive[62]
- A German respondent felt that the danger of common pots was that they might lead to strategic behaviour where countries would only agree to joint calls in areas where there was a good chance that their researchers would be involved.
- In Italy, the Ministry of Research only participated in virtual common pot funding calls, which were relatively easy to administer for relatively small investments compared to the real common pot. The latter has only practical for large scale, strategic projects as higher level approval was required.
- One of the key motivations for Portugal to participate in ERA-NET was to mobilise the national research community towards transnational collaboration. There was general scepticism about the value of the common pot model for Portugal, Common pots were deemed as too risky and unlikely to match Portuguese national interests although its wider merits were recognised.
- In the UK, the real common pot to fund joint calls relating to CORE ORGANIC was not an option. Only the virtual common pot using existing rules was possible.

In spite of the rather negative feedback on the real common pot funding model, one third of the Life Science respondent indicate that participation in the ERA-NET had influenced the national programme in terms of ***new eligibility criteria allowing funding of foreign researchers in the area***. This is lower than the survey average (42%) but may be an indication that the progress on opening is more advanced than the general feedback might suggest[63].

[60] Table 8
[61] Table 25
[62] Some French participants in other ERA-NETs have been able to fund non-resident researchers
[63] Table 8

4. ERA-NET Benefits for this thematic area

4.1 Direct and indirect benefits of ERA-NETs in this thematic area for national policy stakeholders and participants

Participant feedback strongly indicates that the benefits of participation in the FP6 ERA-NET Scheme exceeded the costs of participation. This is clearly underpinned by the EC contribution to the significant resources that have been applied to networking and coordination activities. For example:

- 95% of survey respondents in the Life Science area indicated that their participation in the ERA-NET had been worthwhile[64] and almost 50% got more value out of it than expected[65]. The majority (87%) were satisfied with the level of transnational cooperation[66].

This is also apparent from the qualitative interviews in different countries (see below) that provided more insight into specific benefits such as peer learning and practical opportunities to implement higher level internationalisation policies.

- In Austria, one of the benefits was to improve relationships at operational level for the Life Sciences funding agency.
- Croatia learned a lot about other funding agencies and national programmes. ERA-NET participation was very relevant as Croatia intended to set up a general programming structure. Insights into tools used by the wider scientific community were derived from ERA-NET participation. Networking was expected to be valuable to help finding partners for future calls.
- Benefits reported by ANR (national research agency) included the fact that the ERA-NET scheme was a tool to facilitate partnerships with other funding agencies, fund excellent R&D projects, find common areas to collaborate, learn about new practices, establish benchmarks, increase proportion of international projects and increase ANR visibility (ANR was a relatively new agency). Benefits for OSEO (national innovation agency) included the ability to build and exploit a network of EU agencies, provide SMEs with an alternative to Framework Programmes and develop competence of SMEs to undertake international projects. ERA-NETs could also be seen as a mean to enhance participation in EU Framework Programme and increase success rates.
- One German respondent thought that the main benefit was that funding agencies had started to collaborate under ERA-NET when they had primarily been competing before. Cooperation between funders and the large size of calls were directly attributable to ERA-NETs. ERA-NETs had helped build trust and develop processes that enabled cooperation.
- For Italy, networking enabled learning on best practice in other countries. Better awareness of other national R&D systems was also useful for policy cooperation through CREST, and other transnational programmes. Practical experience helped overcome significant barriers and convince national-orientated policy makers about the value of, international R&D coordination. However, language was still seen as a barrier in Italy. ERA-NETs also helped pave the way for participation in bigger joint programmes (Article 169, JTI, etc). An unforeseen benefit [of PRIOMEDCHILD] was that it provided the opportunity to appreciate the high level of scientific competence in some New Member States. It also allowed scientific participants to gain a better understanding of regulatory and ethical frameworks for research. The national research institute participant (ISS) led specific tasks on Joint Activities and carried out a pilot stakeholder survey in Italy, on awareness and expected impact of the new EU Regulation, which was extremely valuable

[64] Table 5
[65] Table 6
[66] Table 7

from both a national and European perspective. This has led to the creation of an Italian network on topics that complement the ones of the FP6 ERA-NET schemes. Last it was an "eye-opener" on what others are doing and as a result provided lots of cultural learning and ideas to apply at national level.

- Through ERA-IB, the Netherlands gained some influence in setting the European agenda in the platform and learned about different approaches to evaluating projects.
- In Portugal, important benefits have been achieved in terms of training future national programme managers. Policy stakeholders had a positive view of the ERA-NET Scheme and some impact is expected on the structure of national programming in the future. Participants were more sceptical about the potential influence on R&D structures due to the long tradition of open research programmes in Portugal.
- In 2007, EU/FP evaluation methods were introduced into the Russian Research Development Programme that runs until 2014. Russian R&D funding agencies have been studying and adopting European good practices in anticipation of being recognised as an associate country in the future.
- In Slovenia the perceived benefits included stronger international relationships, insight into best practice in other countries, training of civil servants and enhanced R&D convergence.
- The UK experienced a number of direct benefits including building links with other funding agencies, identification of resources/expertise as a result of mapping exercises, helping to create critical mass of knowledge and learning about how other countries prioritise their research activities.

4.2 Direct and indirect benefits of this ERA-NET thematic area for research beneficiaries

The feedback on benefits for the research community has been more limited, compared with the benefits to participants. This is not very surprising as some ERA-NETs are only just launching their 1st Joint Calls and the majority of the funded R&D projects will not be completed yet. In some cases the national investment in Joint Calls has been relatively low, and experimental, compared with typical national or international projects.

The quantitative analysis from the participant survey gives the perspective of the funding agencies, which highlighted the following top five ERA-NET effects at national level[67] in the Life Sciences field:

1. 66% indicated that the ERA-NET had enabled access to foreign research communities/groups not present in their country (54% average);

2. 57% indicated that new types of research projects had been funded through joint calls/programmes (46% average);

3. 47% indicated that higher quality R&D proposals had been generated at national level (39% average);

4. 47% indicated that new types of research projects had been generated (38% average);

5. 47% indicated that new researchers (with no prior international or European experience) had benefited from joint calls/programmes (41% average).

These benefits (cited by Life Science ERA-NET participants) are all above the ERA-NET average.

[67] Table 22

The qualitative feedback from individual countries about research beneficiaries was mixed and seems to be at least partially dependent on the scale of Joint Call investment and/or creating new opportunities for researchers.

- An Austrian participant felt that top scientists in the Life Sciences field did not want to participate in ERA-NET because they could get funding from Austrian Science Fund or other sources. Instead it was felt that less good scientists in Austria used ERA-NET as a way of accessing international networks.
- In Germany it was felt that ERA-NET had been very beneficial for research beneficiaries in health sciences because of additional funding that was made available. It was mentioned that leverage has been very high since over €200m was raised for life science joint calls. Financial leverage has been one of the critical successes and was an indicator of benefits at researchers' level.
- In Italy, benefits were limited since very low budgets were channelled to fund joint calls.
- In Portugal, ERA-NET participation has increased mobility of researchers within life sciences and the effectiveness/implementation of projects. It also allowed life science researchers to get funding for projects that would not fit national programmes. Portuguese beneficiaries within life sciences talked about direct benefits through the exchange of knowledge and learning from collaboration and training. This was recognized as having large benefits in the longer term as shared knowledge would lead to more unique research results.

5. European Added Value, relevance and efficiency

5.1 Additionality of ERA-NETs in this thematic area

As mentioned in Section 2.2, it does appear that the FP6 ERA-NETs have created some structuring effects at the level of the European Research Area in Life Sciences. Some have already moved on to secure funding from FP7 Work Programme and it seems likely that others will also follow this route in the future. One or two are continuing, at least in the short term, without any EC funding. Some like ERA-PG claim to be influencing the relevant FP7 Work Programme. In addition, there are examples of engagement with wider European policy stakeholders and 3rd countries outside the European Research Area.

There is also evidence of added value at the national level as over 60% of the Life Science survey respondents indicated that the ERA-NET had influenced national research policy beyond the theme of the specific ERA-NET[68]. Nearly 70% indicated that they had developed some links with the relevant European Technology Platforms but these are generally not very strong[69].

The fieldwork interviews (see feedback below) suggest that the ERA-NET is generally seen as complementary to other funding schemes in Europe to support transnational research.

- In Austria, one of the participants (FWF) indicated that about half its fundamental research projects in the life sciences field involved foreign partners anyway and two thirds included more than one foreign partner. The additionality of ERA-NET in this area for Austria was therefore minimal.
- In France, the FP6 ERA-NETs were regarded as THE tool for internationalisation of SMEs by the innovation agency (OSEO), which now prefers the FP7 ERA-NET known as EUREKA/Eurostars. This agency mentioned that the same kind of projects across all OSEO ERA-NETs could have been funded by EUREKA/Eurostars.
- In Italy, the belief is that additionality of the ERA-NET scheme varied greatly according to the topic. PRIOMEDCHILD was seen as delivering added value since 2006 in support of a new EU Regulation on Medicine for Children (the participant mentioned that E-RARE also has some synergy with a new EU Directive). ERA-NET therefore provided a framework to develop solutions for the new EU Regulation. Better relationships were established between national participants and the regulatory body (Paediatric Committee) in London because of the opportunity provided by ERA-NET to establish an informal dialogue.
- For the Netherlands, ERA-NET provided an alternative to the ESF/EUROCORES Scheme. Joint Calls enabled involvement in setting priorities/themes, real cooperation between research councils & agencies and flexibility in selected projects. The added value is not found in the type of projects but in the way that ERA-NET complemented other instruments for international cooperation.
- In Poland, it was mentioned that the field of neuroscience (covered by NEURON) was already quite internationalised (e.g. collaboration between Poland and Germany) so the value added of ERA-NET was limited. ERA-NET activities were seen as being more complementary to what was already taking place.
- In Portugal, there were indications of additionality from the whole ERA-NET concept as participation had increased cooperation with a great number of countries. The familiarity that has been gained about how and when to cooperate will have additional impact in the future. However, since ERA-NET complemented other transnational cooperation schemes the additionality is not clear.
- No significant additionality was evidenced in the UK. Life Sciences was already an important policy area in the UK and ERA-NET activity was marginal. However, added value could be evidenced in three specific areas – the database of outputs of relevant

[68] Table 18
[69] Table 20

research, country reports on institutes and identification of researchers in the research themes of specific interest to Defra.

5.2 **Perceived economic efficiency and relevance**

As mentioned in Section 4.1 above, virtually all survey respondents indicated that their participation in ERA-NET had been worthwhile and half of them got more out of participation than they expected[70].

Unresolved problems that needed to be overcome in order to exploit the full potential of the ERA-NET participation included national resources, national administrative procedures national legal programme conditions and perception of benefits[71]. Most of these were ranked higher by the Life Sciences participant sample than for the ERA-NET average.

The qualitative feedback (below) confirmed much of the above and also highlighted some inefficiencies in the lack of coordination of websites and databases across the whole portfolio of 71 ERA-NET. This has, of course, been recognised and is the subject of the ERA-NET Learning Platform initiative that was launched in 2008.

- Croatian participants gained considerable recognition within the European R&D community and collected firsthand experience to support the establishment of their national programming scheme, although they mentioned issues regarding the balance of costs versus benefits.
- In France, ANR thought that the cost/benefit ratio was very good. OSEO agreed that benefits were higher than costs but emphasised that there was still room for improvement as participation would not have been worthwhile without EC funding (national funding in France for transnational projects could be directed without EC participation). OSEO wish to continue engaging with other countries through the next generation of ERA-NETs or similar schemes. It saw the ERA-NET scheme as a positive additional tool that could support small collaborative projects that were more practical for SMEs. EUROSTRANSBIO will continue for another four years. OSEO has no interest in ERA-NET Plus and considered that "original" ERA-NETs were more flexible while ERA-NET Plus has more constraints.
- Life science participants in Germany were very positive about the overall value of ERA-NET with most international activity now channelled through ERA-NET because of the savings associated with the EC financial contribution to the networking/coordination activities.
- ERA-NET participants in Italy had not taken too much time for Ministry staff since resource-intensive technical activities were delegated to experts. Participants considered the knowledge exchange to be very valuable. Italy will participate in the new generation of selected ERA-NETs and also the higher level instruments (ie JTI, Article 169, etc). The participant for PRIOMEDCHILD was very keen to continue with ERA-NET participation and was working on a broader FP7 ERA-NET proposal (KINMED – children) led by Sweden.
- Portuguese participants were generally positive about the economic efficiency of the ERA-NET scheme. Requests were made to increase the overall financial input as well as the size of calls. A strategic review of ERA-NET participation is planned and it is expected that the 'life sciences' theme will be an important priority going forward.
- A Slovenia participant suggested that the increasing role of ERA-NETs will require better 'play regulations'. In other words, more harmonisation and coordination of websites, rules, etc is needed.
- A UK participant was quite explicit about limited impact that such activities will have. UK policy makers in this area saw Framework Programmes as a bolt on to national priorities.

[70] Tables 5, 6 and 7
[71] Table 23

Therefore is unlikely that ERA-NET (with its voluntary participation) will have a significant impact compared with the wider ERA activities. There were benefits, however, that outweighed the cost of participation despite the heavy bureaucracy that was imposed. In the future national funding will be targeted at national priorities rather than a common pot.

6. Annexes: Stakeholders and materials consulted

The main inputs used to produce this thematic report were:

- Thematic extracts from the Country Reports, e.g.
    - Austria – PathoGenoMics
    - Croatia – ERA-IB
    - France – E-RARE, EUROTRANSBIO, ERASysBio, NEURON, Pathogenomics
    - Germany – ERA-IB, ERASysBio
    - Italy – ERA-PG, PRIOMEDCHILD
    - Netherlands – ERA-IB, HESCULAEP
    - Poland – NEURON
    - Portugal - PathoGenoMics
    - Russia – ERASysBio
    - Slovenia – HERCULAEP
    - UK – Core Organic
- Quantitative data from the Coordinator Survey
- Analysis of feedback from the Participant Survey
- Review of relevant ERA-NET websites

We would also like to thank Zsuzsanna Koenig for providing us with informal information on the current situation with Life Science ERA-NETs.

7. Annexes: Participant survey results

The figures below show responses to the participant questionnaire, completed by 89 participants in Life Sciences ERA-NETs.

Table 1 - How would you rate the degree of fit between your national R&D programme relevant to the theme and this ERA-NET?

	Life Sciences	Total
Good fit	83%	**84%**
Poor fit	14%	**5%**
No answer	3%	**11.00%**

The numbers of participants in the Life Sciences thematic field that rated a good fit between national programmes and the ERA-NET was on par with the average across all themes. Life Science participants were however more likely to report a poor fit than the average.

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

	Life Sciences	Total
0 - 9999	1%	**4%**
10000 - 19999	4%	**2%**
20000 - 29999	1%	**3%**
30000 - 39999	0%	**2%**
40000 - 49999	7%	**2%**
50000 - 59999	2%	**2%**
60000 - 69999	3%	**1%**
70000 - 79999	11%	**6%**
80000 +	66%	**71%**
Not Answered	6%	**6%**

Responses from participants in the Life Sciences thematic field indicated that the EC contribution was lower for Life Sciences than the average.

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

	Life Sciences	Total
Yes	39%	**49%**
No	55%	**43%**
Don't Know	2%	**4%**
Not Answered	5%	**3%**

Participants in the Life Sciences thematic field were less prone to agree that the EC funding had covered their participation in the scheme. More than half responded that the funding has not covered the time and resources invested.

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

	Life Sciences			Total		
	Yes	No	No answer	Yes	No	No answer

Coordination/clustering of ongoing nationally funded research projects	57 %	23 %	20%	**59%**	**19 %**	**23%**
Benchmarking and common schemes for monitoring and evaluation	62 %	23 %	15%	**67%**	**13 %**	**19%**
Multinational evaluation procedures (common evaluation criteria and methods of implementation	56 %	25 %	19%	**55%**	**25 %**	**20%**
Schemes for joint training activities (so-supervised theses or common PhD schemes)	11 %	48 %	41%	**12%**	**49 %**	**39%**
Schemes for personnel exchange	14 %	52 %	34%	**14%**	**47 %**	**39%**
Schemes for mutual opening of facilities or laboratories	15 %	56 %	29%	**15%**	**44 %**	**41%**
Specific cooperation agreements or arrangements	41 %	30 %	29%	**43%**	**24 %**	**33%**
Action plan taking up common strategic issues and preparing for joint activities	53 %	21 %	26%	**75%**	**11 %**	**13%**

Participants in the Life Sciences thematic field were overall less engaged in activities other than joint calls compared to the average participants.

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

	Life Sciences	Total
Yes	95%	**95%**
No	5%	**4%**
Not Answered	0%	**1%**

Participants in the Life Sciences thematic field overall agreed that participation had been worthwhile which was in line with the overall average.

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

	Life Sciences	Total
I got more out of it than I expected	49%	**41%**
I got out of it what I expected	43%	**51%**
I got less out of it than I expected	8%	**6%**
Not Answered	0%	**1%**

Participants in the Life Sciences thematic field were more prone than the average to report that they got out more of the scheme than expected and less prone to say they got what they expected. This may indicate a more positive experience overall than expected.

Table 726 - How satisfied are you with the overall level of transnational cooperation within this ERA-NET?

	Life Sciences	Total
Satisfied	87%	**88%**
Unsatisfied	5%	**7%**
No answer	8%	**4%**

Levels of satisfaction with the transnational cooperation within their ERA-NETs for participants in the Life Sciences thematic field was in line with that of the overall average and slightly below the average with regards to unsatisfied responses.

Table 8 - To what degree has your participation in this ERA-NET influenced your country's national programme(s)?

	Life Sciences			Total		
	No influence	Influence	No answer	No influence	Influence	No answer
Discontinuation of existing programme(s) in some theme(s)	49%	34%	17%	**53%**	**34%**	**12%**
Reducing duplication between National programmes in your country	37%	45%	17%	**47%**	**38%**	**16%**
Design of programmes with longer time horizon	30%	61%	8%	**42%**	**49%**	**10%**
Design of programmes with shorter time horizon	45%	43%	11%	**51%**	**38%**	**11%**
Bigger programme budgets for the theme	36%	54%	10%	**42%**	**46%**	**12%**
Smaller programme budgets for the theme	53%	24%	22%	**63%**	**13%**	**23%**
New programme assessment/evaluation criteria	39%	52%	9%	**40%**	**50%**	**10%**
New opportunities to enable transnational R&D activities in the theme of the ERA-NET	12%	82%	5%	**8%**	**86%**	**6%**
New eligibility criteria allowing funding of foreign researchers in the area	48%	33%	18%	**43%**	**42%**	**15%**
Existing programme(s) now covering new theme(s)	42%	40%	18%	**48%**	**38%**	**14%**
New programme(s) put in place in response to new theme(s) identified	41%	44%	14%	**51%**	**34%**	**15%**

Participants in the Life Sciences thematic field were overall more prone than the average participant to respond that their ERA-NET participation had: reduced duplication between National programmes in their countries; helped to design programmes with longer time horizons as well as shorter time horizons; brought bigger as well as smaller budgets for the theme; put new programmes in place and enabled use of new assessment criteria. Life Science participants were less likely than the average to respond that participation had led to new eligibility criteria to allow funding of foreign researchers or enabled new opportunities for transnational R&D activities in the theme of the ERA-NET.

Table 9 - To what extent did your organisation have pre-existing relationships with participants in this ERA-NET prior to FP6?

	Life Sciences	Total
Prior relationships	64%	66%
No prior relationships	26%	26%
No answer	10%	8%

Participants in the Life Sciences thematic field were slightly less likely than the average to have had prior relationships with other participants in their ERA-NET.

Table 10 - If there were prior relationships which of the following 6 statements best describes how these relationships evolved during your participation in this ERA-NET?

	Life Sciences	Total
Strengthened	59%	**63%**
Weakened	2%	**1%**
No answer	36%	**33%**
No change	3%	**4%**

Participants in the Life Sciences thematic field were less likely than the average to say that prior relationships had strengthened as a result of the ERA-NET.

Table 11 - Has your participation in this ERA-NET triggered transnational cooperation outside of the ERA-NET?

	Life Sciences	Total
Yes	28%	**31%**
No	52%	**47%**
Not applicable	18%	**16%**
Not Answered	2%	**5%**

Participants in the Life Sciences thematic field were slightly less likely than the average participant to say that the participation had led to transnational cooperation outside of the ERA-NET and more prone to say that it hadn't.

Table 12 - 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?

	Life Sciences	Total
Yes	17%	**13%**
No change	51%	**63%**
No answer	33%	**23%**

In line with the findings reported in Table 8, participants in the Life Sciences thematic field were more likely than the average to claim that the participation had had an impact on investment in transnational cooperation outside of the ERA-NET.

Table 13 - If yes roughly what proportion of your programme budget was transnational before your involvement in ERA-NET?

	Life Sciences	Total
0-25%	22%	**15%**
26 to 50%	0%	**0%**
51 to 75%	0%	**0%**
76 to 100%	1%	**1%**
Not answered	77%	**84%**

Participants in the Life Sciences thematic area were more able than others to state what percentage of their programme budget was dedicate to transnational activities before the ERA-NET.

Table 14 - If yes roughly what proportion of your programme budget is transnational now?

	Life Sciences	Total
0-25%	18%	**13%**
26 to 50%	2%	**1%**
51 to 75%	0%	**0%**
76 to 100%	1%	**1%**
Not answered	79%	**84%**

Participants in the Life Sciences thematic area were more able than others to state what percentage of their programme budget was dedicate to transnational activities after the ERA-NET. There was a small but noticeable upward shift in the size of the programme budgets dedicates to transnational funding.

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?

	Life Sciences	Total
Very important	23%	**21%**
Fairly important	40%	**48%**
Not very important	17%	**16%**
Not at all important	8%	**5%**
Don't Know	5%	**4%**
Not Applicable	2%	**2%**
Not Answered	5%	**5%**

Participants in the Life Sciences thematic area were more likely than the average to state that their topic had been very important or unimportant to them before joining the ERA-NET, but less likely than the average to respond that it had been fairly important.

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

	Life Sciences	Total
Very Important	27%	**24%**
Important	58%	**66%**
Not important	2%	**1%**
No answer	14%	**10%**

After participation in the ERA-NET, participants in the Life Sciences thematic area were still more likely than the average to state that their topic was very important to them.

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?

	Life Sciences	Total
To some extent	24%	**29%**
Not at all	9%	**11%**
No answer	67%	**60%**

Participants in the Life Sciences thematic area were less able or willing to answer the question whether the ERA-NET had had any impact on the change in importance of the theme in their organization.

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

	Life Sciences	Total
Influence	61%	**63%**
No influence	21%	**18%**
No answer	18%	**19%**

Participants in the Life Sciences thematic area were slightly less likely than the average participant to state that their involvement in the ERA-NET had had influence on national policy beyond the theme of the ERA-NET. This can be compared to the relatively high influences reported on programming in Table 8.

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

	Life Sciences					Total				
	Helped	Hindered	No effect	Not Answered	Not applicable	Helped	Hindered	No effect	Not Answered	Not applicable
Change in programme management agency	**0%**	11 %	27 %	5%	57 %	**7%**	**6%**	**36 %**	**4%**	**47 %**
New R&D management structure	9%	10 %	33 %	6%	42 %	**11 %**	**7%**	**35 %**	**5%**	**42 %**
For existing programmes, more strategic R&D programming/planning	37 %	**0%**	22 %	6%	35 %	**29 %**	**0%**	**36 %**	**7%**	**28 %**
Externalisation of R&D programmes into agency/agencies	9%	7%	33 %	9%	42 %	**8%**	**4%**	**33 %**	**5%**	**49 %**
Setting up of new types of R&D programmes	36 %	7%	18 %	5%	34 %	**24 %**	**7%**	**33 %**	**5%**	**30 %**
Barcelona 3% targets	18 %	2%	44 %	6%	30 %	**16 %**	**1%**	**39 %**	**8%**	**36 %**

Participants in the Life Sciences thematic area more likely than the average to state that more strategic R&D programming, setting up of new R&D programmes, externalisation of R*D programmes and the Barcelona targets, had helped the organisation's participation in their ERA-NET. They were more likely than the average to report that changes in programme management agencies and new R&D management structures and been a hindrance.

Table 20 - How strong are the links between this ERA-NET and Technology Platforms?

	Life Sciences	Total
Strong	20%	**23%**
Weak	49%	**44%**
No answer	30%	**33%**

Participants in the Life Sciences thematic area reported weaker links to technology platforms than the average respondents.

Table 21 - Does this ERA-NET overlap with other ERA-NETs in your country?

	Life Sciences	Total
Yes, my ERA-NET overlaps with more than one ERA-NETs in my country	11%	**8%**
Yes, my ERA-NET overlaps with one other ERA-NET in my country	12%	**17%**
No overlaps	67%	**57%**
Don't know	5%	**13%**
Not Applicable	2%	**2%**
Not Answered	3%	**2%**

Participants in the Life Sciences thematic area were more likely than the average to state that their ERA-NET overlapped with more than one ERA-NETs in their country but less likely than the average to say that they overlapped with one other ERA-NET. They were also reporting overall less overlaps than the average.

Table 22 - 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?

	Life Sciences			Total		
	Some evidence	No evidence	No answer	Some evidence	No evidence	No answer
Higher quality projects generated at national level (i.e. higher quality proposals)	47%	38%	15%	**39%**	**44%**	**17%**
Higher quality projects funded at national level (through joint calls/programmes)	32%	45%	23%	**35%**	**42%**	**23%**
New types of research projects generated (i.e. reflected in proposals received)	47%	36%	17%	**38%**	**42%**	**20%**
New types of research projects funded (through joint calls/programmes)	55%	28%	17%	**46%**	**32%**	**22%**
New researchers (with no prior international or European experience) benefiting from joint activities	37%	33%	30%	**40%**	**27%**	**33%**
New researchers (with no prior international or European experience) benefiting from joint calls/programmes	47%	26%	27%	**41%**	**34%**	**25%**
Access to foreign research communities/groups not present in my country	66%	18%	16%	**54%**	**28%**	**18%**

Participants in the Life Sciences thematic area were more likely than the average to state that the ERA-NET joint calls and activities had led to higher quality and new projects generated at national level and new projects funded but less prone to agree that higher quality projects had been funded. They were also more prone than the average to report that the ERA-NET joint activities had enabled new researchers with no previous international experience benefitting from joint calls as well as allowed beneficiaries' access to foreign research communities. They were less prone than the average to agree that new researchers had benefitted from joint activities, probably because the focus of ERA-NETs in this theme was largely on joint calls.

Table 23 - Did any of the following factors either help or hinder your organisation to exploit the full potential of its participation in this ERA-NET?

	Life Sciences					Total				
	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	10 %	40 %	15 %	17 %	17 %	**16 %**	**46 %**	**13 %**	**12 %**	**13 %**
National cultures or research traditions	6%	33 %	21 %	14 %	27 %	**10 %**	**46 %**	**15 %**	**14 %**	**15 %**
National resources (staff time finances)	10 %	15 %	20 %	37 %	17 %	**17 %**	**35 %**	**26 %**	**15 %**	**7%**
National administrative procedures (e.g. evaluation rules)	5%	29 %	24 %	30 %	13 %	**6%**	**25 %**	**29 %**	**28 %**	**12 %**
National legal programme conditions (e.g. funding of non-residents IPR)	2%	41 %	15 %	24 %	18 %	**4%**	**35 %**	**19 %**	**25 %**	**17 %**
EC administrative procedures or legal requirements	2%	36 %	29 %	11 %	22 %	**1%**	**34 %**	**36 %**	**12 %**	**18 %**
Perceptions of benefits	20 %	14 %	17 %	23 %	24 %	**15 %**	**28 %**	**16 %**	**13 %**	**28 %**
Engagement in other transnational initiatives (e.g. COST EUREKA)	1%	37 %	6%	9%	47 %	**12 %**	**46 %**	**4%**	**4%**	**34 %**

Participants in the Life Sciences thematic field were more likely than the average to state that the problems still to be overcome in order to enable them to exploit the full potential of the ERA-NET participation were national thematic priorities, national resources, national administrative procedures, perceptions of benefit and engagement in other transnational initiatives. The Life Sciences participants were more likely than the average to have overcome problems around national cultures or research traditions as well as EC administrative procedures.

8. Annexes: Coordinator survey results[72]

The figures below show responses to the coordinator questionnaire in the theme of Life Sciences.

15 of the 71 ERA-NETs belong to the life sciences theme, representing 21% of all ERA-NETs. Table 24 below lists these ERA-NETs and indicates if they were covered by the field work.

Table 24 - List of ERA-NETs covered within the theme

ERA-NET	Number of participants	Coordinator country
ALLIANCE-0	7	France
CoCanCPG	17	France
CORE Organic	13	Denmark
ERA-AGE	12	UK
ERA-IB	22	Netherlands
ERA-PG	17	Netherlands
E-Rare	9	France
ERASysBio	16	Germany
EUPHRESCO	24	UK
EUROTRANS-BIO	12	France
HESCULAEP	17	France
NEURON	15	Germany
PathoGenoMics	15	Germany
PRIOMEDCHILD	9	Netherlands
SAFEFOODERA	21	Norway

Life sciences ERA-NETs were active in joint calls and joint programme, but not in pilot actions. This is indicated in table 25 below. (NB: based on the Coordinator's survey which is not necessarily complete)

Table 25 - Details of joint activities within the theme

Joint activities	Number of joint calls	€ Virtual pot	€ Common pot	€ Mixed mode	Total
Joint calls	21	275,018,382	1,086,000	40,000	276,144,382
Joint programmes	1	4,160,000	-	-	4,160,000
Pilot actions	4	-	-	-	240,000

There were a total of 21 joint calls for a combined €276.1m and, one joint programme with a virtual pot of €4.2m, and 4 pilot actions. The total real common pot funding in this area amounted to €1m.

[72]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

SD19: Thematic Report on Industrial Technologies and SMEs

The following document provides the structure for the thematic report on ERA-NETs in the Industrial Technologies field.

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[73] in 15[74] 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 theme. 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. Representatives of the Industrial Technologies and SME theme, sampled for field interviews were based in: Austria, Germany, Finland, France, Italy, Netherlands, Norway, Poland, Romania, Slovenia, and Turkey.

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

Contents

1. Executive Summary - Overview

Development of Industrial technologies and support of SMEs

Industrial Technologies and support to SMEs were integrated within the ERA-NET scheme as one theme given the strong inter-linkage between the two areas.

In summary, there is evidence that ERA-NETs in Industrial Technologies and SMEs have helped to shape the European Research Area through:

- generating increased awareness of the ERA;
- enabling researchers and companies to find partners with similar interests;
- facilitating networking and better cooperation between funding agencies;
- allowing agencies to learn from others about how to better operate calls and evaluate proposals;
- increasing funding for transnational research projects in this theme;
- creating multi-country, transnational calls;
- enabling exchanges of industrial innovations across Europe;
- establishing new cooperation patterns between regions in Europe;
- initiating further networks of cooperation.

Q1 – Impact on Research Landscapes

The extent to which FP6 ERA-NET participation has had an effect on the ERA landscape for Industrial technologies and SMEs varied from ERA-NET to ERA-NET. In highly scientific areas such as nano- and biotechnology the impact of the ERA-NET activities was perceived as having had less of an impact on research landscapes than in more applied fields within Industrial technologies where it was possible to focus more narrowly on specific issues. The overall impact of the scheme for this thematic area has hence to take into account variations between different types of ERA-NETs within the theme.

All in all, the following conclusions around the impact of the ERA-NET participation in this theme on national R&D landscapes can be drawn:

- participation by national funders in Industrial Technology and SME ERA-NETs has increased the internationalisation of national research landscapes[75].
- the ERA-NETs within Industrial Technologies generated increased awareness of developments within industrial technologies both among beneficiaries and participants;
- the impact on New Member State policy and programming was particular strong including in;
    - Poland where there was no national strategic programmes until 2008. Slovenia where participation demonstrated significant structural impacts on its research landscape based on closer relations with other EU Member States.
    - Development of new instruments of funding was mentioned as the main impact by Romania.
- ERA-NETs also demonstrated impact on the research landscape in several of the EU15 Member States (e.g. via the MNT ERA-NET);
- the numbers of proposals received in response to joint calls in this theme is an indicator of the scheme on the European and national research landscapes (e.g. one MATERA call received applications from 170 research groups).
- €114 million was put into joint calls by participants in this theme according to information collected during the evaluation procedure[76]; but according to the commission already in the thematic report from 2006 there was a figure of €126 million, in the workshop report from December 2007 the figure was €300 million and it is estimated

[75] This is vetted by the majority of survey participants (58 per cent) which confirmed that involvement in these ERA-NETs had influenced national research policy. Refer to participant survey annex.
[76] Refer to participant survey findings in the annexes (Table 25).

that in addition €100 million has been allocated to calls within ERA-NETs Industrial Technologies.
- New Member States had in general increased their research activity, specifically in relation to new technology, and felt that their participation had increased their visibility[77];
- Regional cooperation developed within different ERA-NETs (e.g. MANUNET);
- attribution of impacts of the ERA-NET participation is more difficult in small EU15 countries that were already active in the area of new technology and SME's prior to the scheme (e.g. Norway and the Netherlands);
- within large EU15 countries the impact of the scheme in the industrial technology and SME field varied with the type of ERA-NET (e.g. greater impact on enterprises working on the biotech- and nanotechnology than on food);

Q2 – Structuring effect on specific research areas or fields

An overall summary of the structuring effects that the FP6 ERA-NET scheme or specific ERA-NETs has had on research fields relevant to Industrial technologies and SMEs is very much influenced by state of the research field before the introduction of FP6 ERA-NET Scheme. Much attention to SME was allocated at the national level outside of the ERA-NET Scheme, and much national and European level attention was given to new technologies like nano and bio-technology as well as increasing attention towards energy programmes in national strategies. Therefore the structuring effect on the development of industrial technologies and SMEs from the ERA-NET Scheme has evolved in interaction with other European and national initiatives.

- there are indications of development of new disciplines thanks to the ERA-NET scheme and greater awareness of specific topics[78];
- impact of the ERA-NET on small EU15 countries in the theme was mainly in the form of setting the agenda with new projects within Industrial Technologies and access to more networking (e.g. Finland perceived additionality in working within a large consortium of partners and by strengthening pre-exiting links and facilitating the creation of new ones. Within the MNT ERA-NET a new cooperation between the Basque region and Austria resulting among other projects in PULSECHROM, which is a project considered as one of the success stories of this ERA-NET;
- associated countries experienced limited impact of the ERA-NET but gained access to more networking;
- New Member States reaped the greatest impact with respect to new projects and new funding mechanisms as well as new networking (e.g. CORNET added value by helping Poland to promote collective research in the country);
- the impact of participation of large EU15 countries in the theme achieved less impact on new themes due to already clearly defined research agendas although they developed new partnerships.

Q3 - Direct benefits and indirect benefits

An overall summary of the direct and indirect benefits generated through the ERA-NET Scheme or through participation in ERA-NETs in Industrial technologies and SMEs included direct benefits such as:

- improvements in relations between ministries in the Member States;
- clarification of research directives;
- addition of new instruments to existing ones;

[77] New Member States were extremely committed to investing in innovation and aware of the need for reinforcement of SME's.
[78] Based on feedback from participants during the field work.

Indirect benefits of participating were primarily to do with the opening up of the European Research Area and the standardization of evaluation procedures.

The evaluation has so far only been able to observe benefits as they are perceived at the national level, but regarding benefits these can be aggregated to the European level:

- there has been an increased awareness of ERA;
- researchers across Europe got to know each other;
- there has been growing networking leading to greater ability to follow developments within new technologies;
- some regions have come to work together thanks to involvement in the ERA-NET;
- research councils and other funding agencies have learnt how to make calls and how to evaluate proposals in a European context.

Q4 – Opening up of national programmes

- There is evidence from many of the ERA-NETs within this theme that some national programmes have opened up to more international themes.
- No evidence has been found to conclude that the ERA-NET scheme in general has contributed to the opening up of national programmes to foreign beneficiaries in Industrial technologies and SMEs.
- More than 90 per cent of all joint calls were financed via virtual pots although more countries have come to think about the potential advantage of a real common pot.

Q5 – Lessons learned

An overall summary of the lessons learned are based on the responses collected during field work for the stakeholders involved (ministries, agencies, researchers doing ERA-NET funded transnational projects) and gives evidence on where lessons have been embedded:

- Greater concentration of effort is needed.
- Codes of conduct have been influenced.
- Programmes have been developed.
- Institutional web-sites have been produced.
- Publications and public presentations are increased in numbers as the result of participation in ERA-NETs.
- Plenty of lessons have been learned about cooperation and coordination.
- Participants have learnt how to make and how to manage transnational calls and how to evaluate proposals coming from different countries.

Networking has increased during the joint activities and "getting to know some outside the country working with these themes" has been mentioned by several as the main benefit. 42 per cent of the participants reported that their participation in ERA-NETs had triggered transnational cooperation outside the ERA-NET.

The main problem identified for further transnational cooperation was coordination between national systems due to inherent procedural differences, but with increase in number of experiences this problem will be reduced.

In summary ERA-NETs in Industrial Technologies compared to other topics were characterized by:

- huge call budgets,
- many ERA-NETs moving into annual calls,
- comparatively strong collaboration with ETPs,
- rather strong focus on programmes supporting competiveness of industry,
- only few examples so far for establishing multi-annual programmes.

2. ERA-NET Thematic context

2.1 ERA and national programmes in the Industrial Technologies and SMEs thematic area

Industrial technologies and SMEs have received growing attention in Europe over the years. The linkage between R&D and innovation has been widely recognized as a motor for new technologies and growth and was manifested in the Lisbon Strategy in 2000. Innovation policies have been initiated in a considerable number of countries as evident in the Innovation Trend Chart national reports.

Publicly funded research programmes in the area of Industrial Technologies and SMEs were in existence in most EU15 Member States before FP6. According to almost two thirds of the participant survey this theme was already high (very high or fairly high) on the national agenda before the organisations joined the ERA-NET scheme[79]. The participant survey indicated that participants in this area were more likely than the average to claim that their participation had lead to an increase in the amount of the programme budget invested in transnational R&D projects outside of the ERA-NET[80]

The survey also indicated that participants in the Industrial Technologies and SMEs were also slightly more likely to agree that participation in the scheme had been worthwhile compared to the average across ERA-NETs (97% for Ind Tech and 95% across all ERA-NETs). These figures clearly show that the vast majority of participants were overall satisfied with the scope of participation[81]. Several interviewees stated that all key players had been involved. Slovenia however indicated that some countries were missing in the projects where they participated.
New technologies and innovation were very high on the agenda in the national set ups before FP6 and therefore a driving factor behind participation in the scheme. ETRANET for example was interesting for many due to many countries specific interest in new technology relevant for food processing. Several participants also mentioned that they were able to run projects which otherwise would not have been funded at national level.

In terms of national programming, 84% of respondents to the participant survey reported that the ERA-NET theme for the ERA-NET they participated in fitted well with national R&D programming[82]. This was in line with the overall average although slightly more participants from this field reported a poor fit with national programmes (9% for Ind Tech vs. 5% overall).

Slovenia participated in several ERA-NETs under this theme and mentioned in interviews that its participation in ERA-NET had resulted in closer relations with other EU Member States.

A significant number of funding agencies stated in interviews that there were other viable ways for funding their research activities but that the ERA-NET scheme had added value since it provided new options for geographic expansion of relevant research activities.

According to the participant survey, 71 per cent of respondents in the theme indicated that they had had prior relationships with other participants before the scheme started, which is above average for the other themes[83]. The motivation for participation was driven by both top-down and bottom-up considerations. On the one hand, national organisations were aware of the relevance of certain topics in the transnational R&D sphere and on the other researchers pushed for agencies to take part in the scheme.

2.2 ERA and structuring effect in the thematic area

[79] Refer to participant survey results in the annexes (Table 15).
[80] Refer to participant survey results in the annexes (Table 12).
[81] Refer to participant survey results in the annexes (Table 5).
[82] Refer to participant survey results in the annexes (Table 1).
[83] Refer to participant survey results in the annexes (
Table).

There were 71 ERA-NETs in total, out of which 16 belonged to the Industrial Technologies and SMEs' theme thus representing 22.5% of all ERA-NETs. The 16 included in this evaluation were: ACENET, CORNET, ERABUILD, EraSME, ERA-SPOT, ETRANET, iMERA, MANUNET, MARTEC, MATERA, MNT ERA-NET, NanoSci-ERA, NEW OSH ERA, SUSPRISE, VISION, and WOODWISDOM-NET. As listed in the overview from the workshop about Industrial Technologies held in 2007 (see 6. ANNEX) also COMPERA, ERACHEMISTRY and WORK IN NET are included in Industrial technologies, but those are not included in this evaluation.

Themes covered by these ERA-NETs included nanotechnology, material sciences, engineering, and metrology. All but a few of the ERA-NETs (iMERA and NanoSciERA) targeted applied research.

Some of the ERA-NETs could be labelled industrial application of scientific discipline or technology domain; others were with a clear sector focus like ERABUILD and WOODWISDOM and finally some concentrated on specific topics of industrial application like information technology.

It seems that Industrial Technologies and SMEs ERA-NETs were able to achieve sizable structuring effects. According to the participant survey 33 to 40% of Ind Tech participants reported effects at the national level in the form of new and higher quality types of research projects being developed and funded. However, on average their response was below average across all themes[84].

Participants in the Industrial Technologies and SMEs area were much more prone to reporting that ERA-NET participation had had an impact on the importance of the theme in their organization (39% for Ind tech vs. 29% across themes)[85].
Regarding impacts on national programming, Industrial Technologies and SMEs participants overall in line with the average with regard to the influence that the ERA-NET had had on national programmes. They were however much more likely to report influence on the design of programmes with a longer time horizon and to a lesser extent, putting new programmes in place to respond to new themes, than the average[86].
For instance, in Poland the Industrial Technologies and SMEs ERA-NETs contributed to the development of a new research field. CORNET focused on collective research, which was new to Poland. As a result, a national research programme on collective research is in the pipe-line for which CORNET constitutes the key inspiration and blueprint.

Increased interest in nano and micro-technology can be observed according to the fieldwork as a broader impact of the ERA-NET activities. As part of the ERA-NET, participants were able to follow up on developments in the European context but it was also indicated that **communicating this learning experience back to national policy or programming level was cumbersome**. They further argued that due to the fact that innovation was not perceived as science by a number of research councils, the ERA-NET experiences were only partially taken into account in future R&D planning.

On an operational level, one of the main benefits mentioned by interviewees had been the **learning** from other organisations about **transnational calls and evaluations of proposals**. That cooperation deepened the understanding of differences among countries and agencies and helped coping with challenges caused by these differences.

There are some indications, largely base on interviews, that those ERA-NETs that fit with the mainstream national technology thematics like ERA-CHEMISTRY, iMERA, MATERA and MNT ERA-NET and NanoSci-ERA have been the most successful in terms of ERA structuring. This may also be the case with those that have a clear sector focus like ERABUILD and WOODWISDOM. On the other hand, ETRANET (ICT + Manufacturing) faced some difficulties to align with a

[84] Refer to participant survey results in the annexes (Table 22).
[85] Refer to participant survey results in the annexes (Table 17).
[86] Refer to participant survey results in the annexes (Table 8).

heterogeneous range of national manufacturing programmes. It has since decided to align with the more homogeneous national ICT programmes.

Regarding the design of the ERA-NETs, critical remarks made by interviewees referred to the following issues as part of the fieldwork:

- Some ERA-NETs were regarded as being too broad from the beginning (comments on MNT-ERA).
- A number of ERA-NETs were seen as too open in all respects. The structuring effect was hence not as strong as it could be.
- National policy stakeholders were aware of several overlapping ERA-NETs in some topics but expected the next phase to bring more convergence.

However this may not be a true depiction of the overall participants experience as participants from the theme were less likely than the average to state that their ERA-NET overlapped with one or more ERA-NETs in their country in the participant survey[87].
The examples below describe both motivation and structuring effects for a few ERA-NETs in more detail and based on field interviews:

MNT ERA-NET launched in 2004 was regarded as having been attractive to participants due to its topic on nanotechnology and micro technology. It organized its first coordinated call in 2006 and funded 14 collaborative projects covering topics such as powders, carbon nanotubes, polymers, composites and microsystems. A second call followed in 2007, spanning 19 countries/regions. The second call attracted 36 eligible projects out of which 21 were selected for funding. A third call in cooperation with MATERA (an ERA-NET focusing on materials) was launched in 2008. The participants were now in a stage to design their own programme. Norway and Finland in particular were keen to drive the MNT ERA-NET forward. Also the WOOD WISDOMNET anticipates that there will be a new programme in line with their activities and interests in the near future.
SUSPRISE in the field of sustainable enterprise built upon pre-existing cooperation in the PREPARE network where informal talks took place with participants managing sustainability programmes in industry in Germany, Austria and the Netherlands. When the ERA-NET call was published, a subgroup of PREPARE saw the ERA-NET as a suitable tool for them to continue and enlarge to group to new members.

As a result of SUSPRISE, the Netherlands is seeking reinforced cooperation with its Flemish counterpart in Belgium. This bilateral cooperation in eco-technologies will be one of the pillars of the future international strategy in the thematic area between both parties who share a common language. Other nationalities are eligible for funding, in Flanders under the conditions that non-Flemish participants are to be subcontracted, so that the Flemish side benefits from IPR. It is as a result of the ERA-NET that they are doing this, and if needed, regulations will be revised for more flexibility. The driving force of this cooperation is to avoid double funding in the Netherlands and in Belgium since both programmes are similar. An added European value can be said to come from this cooperation.

Germany showed an interest in cooperating but had difficulties with eligibility issues of non-residents' participants. There were legal matters that needed to be solved regarding whom to fund from the national level.

iMERA is very advanced. It has already launched an ERA-NET Plus and is currently working towards an Article 169. This is partly because of the tenacity of the coordinator but also because there is already a pan-European organisation for metrology known as EURAMET. Although EURAMET, a European association of national metrological institutes, existed before the ERA-NET scheme there was no efficient vehicle in place to facilitate collaboration at the ERA level. Countries joined iMERA because they considered it important to share lessons learnt, experience and resources across the NMI community.

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

IMERA has an impact on an area much dominated by basic research where there was no clear policy from the national ministries. The ERA-NET scheme was considered helpful for the national organisations to develop their own strategic priorities.

ERASME is an example of an ERA-NET with many calls**.** ERASME managed 5 calls under FP6. This project like many others within Industrial technologies brought together funding agencies and ministries, and supported research for SMEs and research organizations. ERASME was an example of an ERA- NET in an area where the political influence of the ERA-NET was relatively low due to the fact that national programmes were less strong and the impact on national policy therefore limited. As a result, the 2nd phase of ERASME had to emphasize cooperation between programme owners as opposed to funding agencies. In ERASME, coordinated by Germany, a core group of partners were willing to cooperate pro-actively, they had a number of fast followers and a number of funding agencies/partners whose active engagement was affected by budget constraints or because domestic programmes were discontinued. The lack of national funding in some countries enhanced those participants' engagement within the ERA-NET. The main motivation for German participants in ERASME was to organize joint calls from the very beginning.

With respect to political impact the **WOODWISDOM** ERA-NET has, according policy stakeholders, led to changes in national forestry policy as a result of expertise and experience shared between the UK and Northern Europe. WOODWISDOM is an example of a "successful" ERA-NET with strong links also to the ETP.

Under **ERABUILD** a big contacts database was built where researchers and funding agencies could find out what activities were funded in other countries. In addition ERABUILD designed two programmes on specific areas which will be implemented in the successor project

Beyond the ERA-NET scheme, participants in the Industrial technologies and SMEs thematic area were more prone than the average to report both stronger and weaker links between their ERA-NETs and the Technology Platforms[88]. Given this it is perhaps not surprising that participants in this thematic area also saw engagement in other transnational initiatives (e.g. COST & EUREKA) as an aid in the success of their ERA-NET (15% for Ind Tech vs. 12% across themes)[89].

The Finnish funding agency TEKES, for example, was like many other funding agencies, involved in COST and EUREKA. The participation in the ERA-NET scheme was perceived as an additional option for intensifying collaboration with other countries in the fields of Industrial Technologies and SMEs, in particular in material science and nanotechnology. All in all Finland are partner in 7 ERA-NETs.

[88] Refer to participant survey results in the annexes (Table 20).
[89] Refer to participant survey results in the annexes (Table 23).

3. ERA-NET funding considerations in the thematic area

Funding of calls could have been a problem for several of the ERA-NETs, because not all countries participating were willing to put money into calls. At the same time flexible geometry allowed countries that did not participate in the ERA-NET from the beginning to participate in the calls.

In almost all ERA-NETs calls are based on virtual common pot – meaning that a country is paying for participants from their own country and not for participants from another country.

Willingness among national ministries and funding agencies to fund calls within Industrial Technologies are caused by calls being programmes hopefully supporting competitiveness of the national industries.

3.1 Inputs into the ERA-NET scheme for Industrial technologies and SMEs

In general there were specific funding considerations at the national level before joining ERA-NETs in Industrial Technology and SMEs theme. In all countries, additional funding for calls was necessary and taken from national funds to allow the country to participate in joint calls. There were problems in countries where no funding was available for participating in the calls. Considerable funding difficulties occurred particularly in countries without programmes for new technology.

The money spent or set aside for the different ERA-NETs varied enormously within this thematic field leaving a few countries with insufficient funding. A total of more than €114.000.000 were activated for 33 joint calls according to the survey[90], but according to calculations from the commission much more (close to €400 million) was spent on calls with Industrial Technologies. In general the spending was perceived as effective. Less than 20 % of the participant survey respondents thought that the ERA-NET experience had led to an increase in programme budget to be invested in transnational R&D projects outside the ERA-NET, although this was higher for this theme than the average[91].

In many cases large ERA-NETs such as MNT ERA-NET and ETRANET were made possible thanks to the ERA-NET scheme only. Although ERA-NET participation was aligned with wider national priorities, funding transfers from national research pots to ERA-NET ones faced a number of difficulties. National funding agencies have nevertheless over time become more devoted to international research since certain topics and markets are acknowledged as transnational.

In ERASME, the coordinator highlighted the high leverage of the scheme at research level, with joint calls for a total of EUR 25m based on an initial Commission contribution of EUR 3.5m. ERASME was seen as "groundbreaking" in terms of internationalizing cooperation between SMEs and funding agents.

3.2 Opening up considerations for this thematic area

Industrial Technologies and SMEs is a research area with strong interests from both national policy makers and industry. Although it might be widely acknowledged that a real common pot would fund the best project, this national characteristics of the involved interests were perceived as a large hindering factor for opening up of national funding to non-residential researchers in the theme.

Looking at the participant survey results, participants from the theme are in line with the average across themes with regards to the extent to which the ERA-NET participation influenced new eligibility criteria for foreign researchers in national programmes (41% of Ind Tech participants reported influence vs. 42% across themes)[92]. Moreover, Ind Tech participants were

[90] Refer to coordinator survey results in the annexes (Table 25).
[91] Refer to participant survey results in the annexes (Table 12).
[92] Refer to participant survey results in the annexes (Table 8).

less likely than the average to report that National legal programming conditions that could limit access to foreign researchers were still a problem, if anything a greater percentage than the average reported it to have been overcome[93].

On the other hand, only about 3% of all joint calls funding has been channelled through a real common pot which could go some way to explain why access to foreign researchers has largely not been seen as a problem – since most of the funding has been via virtual pots it would not have generated problems. This is in line with sentiment picked up during the field work and in interviews, as almost no evidence to support a sincere willingness to become involved in a real common pot could be found. Besides having little control over where the funding would go, there were some open questions regarding how to treat IPR in relation to real common pots. This is perhaps one of the areas that differentiate the Industrial Technologies and SMEs theme from other themes. Given its proximity to industry and the applied nature of some of the research, such issues as IPR and patent rights would be more relevant for this theme than perhaps others.

Despite a lack of evidence of opening up across the theme, some evidence could be found in particular ERA-NETs. For instance, as a result of participation in **SUSPRISE** (an ERA-NET working with joint regional activities) the Netherlands and the Flemish part of Belgium initiated increased bilateral cooperation. However, whether this would be subject to real common pots was not clear.

MNT ERA-NET and ETRANET participants confirmed the general reluctance to opening up of national programming to non-resident researchers. At the same time, these participants acknowledged the potential benefits of joint research cooperation so there is a potential that opening up will be reconsidered by these participants in future.

In iMERA a virtual pot was used which drew on existing budgets and as well as tried to raise more funding from national sources.

Most beneficiaries interviewed within the theme had applied for FP funding before and many were satisfied with the opportunities presented under the ERA-NET scheme.

[93] Refer to participant survey results in the annexes (Table 23).

4. ERA-NET benefits for Industrial technology and SMEs

4.1 Direct and indirect benefits of ERA-Nets in this thematic area for national policy stakeholders and participants in the Industrial Technology ERA-NET.

In summary, the field work indicated positive responses regarding benefits for national policy stakeholders and participants in the area of Industrial Technology and SMEs.

Slovenia and Italy expressed that they had strongly benefited from the ERA-NET participation at national and regional level. They and others elaborated on benefits for:

- the funding agencies;
- SMEs;
- the research itself.

Interviewees at **funding agencies** expressed that they benefited from gaining insight into other countries' best funding practices. In this way, civil servants were trained in designing funding programmes, and running the proposal evaluations. Funding agencies intensified relationships among themselves and got in contact with funding agencies in New Member States. They believed it would now be easier to identify partners for upcoming collaborations.

Austria mentioned that they had learnt directly from Northern European countries about how to work with information technology in the construction sector which they had taken into account in contemplating investments into this area.

Norway mentioned that communicating the lessons learnt back to policy-makers was cumbersome because innovation was not perceived as 'science' by the research councils.

ERA-NET also helped funding agencies to understand differences between countries and agencies and to cope with differences in ways of working. According to participants in MNT-ERA NET, SUSPRISE and many others one of the key lessons learnt was this insight into the barriers that prevented countries from setting up a common pot strategy. The most difficult subjects entailed diverging research priorities, selection criteria for research projects, eligibility rules, and IPR. Difficulties arisen whilst organising joint calls were major examples of this, and in most ERA-NETs, virtual joint calls proved to be tremendously complex and burdensome, though participants were creative enough to overcome these problems. Participants did nevertheless call for some clearer guidance around this issue from the EC. Similarly, they called for more harmonisation in approaches surrounding virtual pot driven joint calls.

The ERA-NET scheme was seen as an opportunity for **SMEs** to open up to the European market and to access European networks. Some ERA-NETs were a great tool for small collaborative projects where SMEs were able to play a leading role.

Research was believed to have converged under the ERA-NET scheme. More projects were able to be funded which led to better research. Moreover, the visibility of research from new Member states was increased.

The ERA-NET scheme indirectly contributed to building up trust among the funding agencies and to strengthen networking which would not have happened otherwise.

4.2 Direct and indirect benefits of ERA-NETs within Industrial Technology and SMEs for research beneficiaries

Through the participant survey, participants in the Industrial technologies and SMEs thematic area were more likely than the average to state that the ERA-NET joint calls and activities had enabled access to foreign research communities/groups and allowed new researchers to benefit from joint calls/programmes[94].
Researchers indicated great opportunities through the ERA-NET scheme to integrate into a network of European researchers working with technological development. They profited from greater mobility and more contacts for future cooperation. SUSPRISE beneficiaries and other beneficiaries has expressed satisfaction or great satisfaction with the opportunity offered under ERA-NET to share know-how on special techniques available in other countries.

Polish beneficiaries in **MNT ERA-NET** joint calls benefited from the fact that ERA-NET funded projects allowed them to concentrate on substantive issues with little administrative efforts. This view was shared by **SUSPRISE** beneficiaries who believed that the less 'bureaucratic approach' under ERA-NET joint calls was well suited for SMEs. They also expressed satisfaction with newly generated contacts through the scheme.

Regarding the participation in **MARTEC** joint calls, Polish beneficiaries stated that they were in particular interested in the calls of this ERA-NET due to the combination of horizontal and thematic research it facilitated.

Finnish beneficiaries expressed satisfaction with their experience with **MATERA**, in particular the opportunity to work in a smaller transnational consortium compared to other FP programmes although the consortium was still larger than what national funding would have allowed for. These beneficiaries also pointed to less competition in the material sciences under the ERA-NET scheme compared to other FP programmes and that there had been less bureaucracy involved.

Researchers pointed to a number of small countries involved in a consortium under MATERA to have enabled a good working atmosphere when not all key players participated. Material sciences covered a wide field and it was seen as difficult to link these diverse programmes a coherent structure. However, one MATERA call received applications from 170 research groups which indicate that linkages between researchers received a boost.

The small **size of joint calls** in construction was perceived as an added value by beneficiaries because it had allowed for more effective partnerships than huge pan-European projects. This is in line with expectations that the scheme indented to fill the void between the FPs and national funding.

IPR were perceived as a difficult issue by beneficiaries under MATERA and MNT and called for more guidance on how to deal with it in the future. Contrary to this ERABUILD did not face IPR issues since companies in the construction field are specialized in separate aspects of a (construction) project.

Beneficiaries regarded it as being too early to draw conclusions about impacts of the ERA-NET scheme on patents, licenses, joint ventures or spin-offs,

[94] Refer to participant survey results in the annexes (Table 22).

5. European Added Value, relevance and efficiency

5.1 Additionality of ERA-Nets for the Industrial Technologies and SMEs theme

In interviews, policy stakeholders and participants agreed that the ERA-NET scheme had enabled benefits in the thematic area which would not otherwise have been possible. It was mentioned in particular that funding agencies were able share programming experience and that they learnt how to cooperate. They also became aware of partners with similar interests. SMEs were provided with access to developments within industrial technologies which would have been very difficult without the ERA-NET scheme.

Poland pointed out that CORNET generated added value by helping to promote collective research in the country. Finland perceived additionality in working within a large consortium of partners and by strengthening pre-exiting links and facilitating the creation of new ones. Within the MNT ERA-NET a new cooperation in form of a joint project between the Basque region and Austria, PULSECHROM, was initiated.

For the beneficiaries the main added value was the less bureaucratic approach to reporting under the ERA-NET scheme compared to other FP programmes.

Critical remarks by funding agencies focussed on the additional costs of participation not covered by EC funding, the administrative burden of complying with reporting requirements, issues around the commitment of participants and to some extent problems arising through informal hierarchies. The effort linked to the implementation of joint calls were also perceived as a burden by several funding agencies. Regarding staff costs, Polish participants in the CORNET ERA-NET for example had to proactively seek out potential beneficiaries for its joint call since it was in a new area, believed to be of benefit to Poland.

The perception of administrative burdens associated with EC funding was confirmed in the participant survey where proportionately more Industrial Technology participants rated this to be a problem yet to be overcome than the average (18% of Ind Tech vs. 12% across themes)[95].

5.2 Perceived economic efficiency and relevance

Overall, 97 per cent of participant survey respondents believed that the benefits and impacts generated through ERA-NET participation had outweighed the cost of national involvement. Half of the participants thought they got what they expected out of their participation, whilst 45 per cent reported to have got more out of it than expected[96]. During interviews, it was mentioned several times that for example in SUSPRISE and MNT ERA-NET, joint calls had been burdensome and that there has been a lack of a common strategy and of using up too many resources.

89 percent of the participant survey respondents expressed satisfaction in particular with the transnational cooperation within the ERA-NETs in this theme[97].

Austrian and German participants regarded the ERABUIILD, ERASME and WOODWISDOM ERA-NETs as having been particularly relevant and economically efficient for them. Italy followed RTD priorities from FP6 and got inspiration to their national and regional programming when they introduced a more federal structure in their research landscape.

[95] Refer to participant survey results in the annexes (Table 23)
[96] Refer to participant survey results in the annexes (Table).
[97] Refer to participant survey results in the annexes (Table).

6. Annexes : ERA-NETs on Industrial Technologies

Source : ERA-NET Learning Platform. Report on the Workshop for ERA-NETs on Industrial Technologies, Brussels, November 2007.

ACRONYM	FULL TITLE/TOPIC
ACENET ERA-NET	Applied catalysis European network. ERA-NET on applied catalysis and sustainable chemistry.
COMPERA	Programme coordination for national and regional programmes and initiatives dedicated to the creation and support of Competence Research Centres.
CORNET	ERA-NET for national and regional programmes and initiatives to promote research and the dissemination of the results, to the benefit of large communities of SMEs (Collective research)
ERABUILD	Strategic cooperation between national programmes promoting sustainable construction and operation of buildings.
ERA-CHEMISTRY	Network of research councils for the development and the implementation of joint bottom-up European programmes in chemistry.
EraSME	ERA-NET on national and regional programmes to promote innovation networking and cooperation between SMEs and research organisations.
ERA-SPOT	ERA-NET for strengthening photonics and optical technologies for Europe.
ETRANET	Promoting research and collaboration in the domain of "ICT for traditional manufacturing industries" within the EU.
iMERA	Implementing metrology in the European research area.
MANUNET	Walking towards a European regionally-based research area on new processes and flexible intelligent manufacturing systems.
MARTEC	Maritime technologies as an ERA-NET.
MATERA	ERA-NET materials - European network for organisations funding the field of material science and technology.
MNT ERA-NET	Network of European micro and nanotechnology support programmes.
NanoSci-ERA	Nanoscience in the European research area
NEW OSH ERA	New and emerging risks in occupational safety and health (OSH) - anticipating and dealing with change in the workplace through coordination of OSH risk research.
SUSPRISE	Networking, coordination, co-operation and integration of national RTD programmes in the field of the sustainable enterprise.
VISION	Collaborative network of nationally leading innovation policy agencies.
WOODWISDOMNET	Networking and integration of national programmes in the area of wood material science and engineering.
WORK-IN-NET	Work and Innovation: work-oriented innovations, a key to better employment, cohesion and competitiveness in knowledge intensive society.

7. Annexes: Stakeholders and materials consulted

This section will features the stakeholders consulted for the field work in a given country.

Theme: Industrial Technologies and SMEs

Country	Type of interviewee	ERA-NET
Germany	C=coordinator	EraSME
Germany	P/C=participant/coordinator	WOODWISDOM
France	NSP=National policy stakeholder	NanoSci-ERA
Italy	P/C	MANUNET
Italy	P/C	iMERA
Italy	B=Beneficiary	MANUNET
Netherlands	P/C	SUSPRISE
Norway	P/C	ETRANET
Norway	P/C	MNT ERA-NET
Austria	P	ERABUILD
Poland	B	MNT ERA-NET
Poland	B	MNT ERA-NET
Romania	P/C	MNT ERA-NET
Slovenia	NPS	iMERA
Slovenia	P/C	iMERA
Finland	NPS	MATERA
Finland	P/C	MATERA
Finland	P/C	MNT ERA-NET
Finland	B	MATERA
Turkey	C	ETRANET
Slovenia	P/C	EraSME CORNET

In addition to coordinators and participants from the different ERA-NETs stakeholders from the following organisations and countries have been interviewed:

- Office of International Cooperation, MIUR, Italy
- Regione Piemonte, Italy
- INRIM, Italy
- Ministry of Housing, Spatial Planning and the Environment, The Netherlands
- Ministry of Higher Education, Science and Technology (MHEST), Slovenia
- Public Agency for Technology, TIA, Slovenia
- Ministry of Higher Education, Science and Technology (MHEST), Slovenia

In addition, the following materials were consulted:
ERA-NET Learning Platform. Report on the Workshop for ERA-NETs on Industrial Technologies, Brussels, November 2007.

European Innovation Trend Chart, DG Enterprise, European Commission, National reports http://ec.europa.eu/enterprise/innovation/index_en.htm

http://ec.europa.eu/research/industrial_technologies/pdf/eir_magazine_9_en.pdf (in particular)

http://ec.europa.eu/research/industrial_technologies/lists/magazine_en.html (in general)

8. Annexes: Participant survey results

The figures below show responses to the participant questionnaire. The findings are based on 103 responses from participant in the Industrial technologies and SMEs field.

Table 1 - How would you rate the degree of fit between your national R&D programme relevant to the theme and this ERA-NET?

	Industrial technology and SMEs	Total
Good fit	84%	**84%**
Poor fit	9%	**5%**
No answer	7%	**11.00%**

Participants in Industrial technology and SMEs ERA-NETs were as likely to report good fit between their national R&D programme and the ERA-NET as participants on the whole, but more prone than the average to report a poor fit.

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

	Industrial technology and SMEs	Total
0 – 9999	3%	**4%**
10000 – 19999	1%	**2%**
20000 – 29999	2%	**3%**
30000 – 39999	1%	**2%**
40000 – 49999	1%	**2%**
50000 – 59999	4%	**2%**
60000 – 69999	2%	**1%**
70000 – 79999	1%	**6%**
80000 +	72%	**71%**
Not Answered	11%	**6%**

Responses from participants in the Industrial Technology and SMEs thematic field indicated that the EC contribution for Industrial Technology was broadly in line with average.

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

	Industrial technology and SMEs	Total
Yes	39%	**49%**
No	45%	**51%**
Don't Know	11%	**0%**
Not Answered	5%	**0%**

Participants in the Industrial technology and SMEs thematic field were less prone than the average to indicate that the EC funding had either covered or not covered their participation in the scheme. This response could be down to a larger number of non-responses or respondents answering that they did not know.

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

	Industrial technology and SMEs			Total		
	Yes	No	No answer	Yes	No	No answer
Coordination/clustering of ongoing nationally funded research projects	59%	18%	23%	**59 %**	**19 %**	**23%**

Benchmarking and common schemes for monitoring and evaluation	65%	13%	23%	**67 %**	**13 %**	**19%**
Multinational evaluation procedures (common evaluation criteria and methods of implementation	60%	16%	24%	**55 %**	**25 %**	**20%**
Schemes for joint training activities (so-supervised theses or common PhD schemes)	18%	33%	49%	**12 %**	**49 %**	**39%**
Schemes for personnel exchange	15%	33%	52%	**14 %**	**47 %**	**39%**
Schemes for mutual opening of facilities or laboratories	11%	35%	55%	**15 %**	**44 %**	**41%**
Specific cooperation agreements or arrangements	35%	26%	38%	**43 %**	**24 %**	**33%**
Action plan taking up common strategic issues and preparing for joint activities	72%	11%	17%	**75 %**	**11 %**	**13%**

Besides joint calls, participants in the Industrial technologies and SMEs thematic field were more engaged in multinational evaluation procedures and schemes for joint training activities and schemes for personnel exchange than the average participant, but less engaged in other activities than the average.

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

	Industrial technology and SMEs	Total
Yes	97%	**95%**
No	1%	**4%**
Not Answered	1%	**1%**

Participants in the Industrial technologies and SMEs thematic field were slightly more prone to agreeing that the participation in the scheme had been worthwhile compared to the average across themes.

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

	Industrial technology and SMEs	Total
I got more out of it than I expected	45%	**41%**
I got out of it what I expected	50%	**51%**
I got less out of it than I expected	4%	**6%**
Not Answered	1%	**1%**

Participants in the Industrial technologies and SMEs thematic field more likely than the average to report that they got more out of the ERA-NET than they expected.

Table 7 - How satisfied are you with the overall level of transnational cooperation within this ERA-NET?

	Industrial technology and SMEs	Total
Satisfied	89%	**88%**
Unsatisfied	9%	**7%**
No answer	2%	**4%**

Participants in the Industrial technologies and SMEs thematic field were broadly as satisfied with transnational cooperation within the ERA-NET as the average.

Table 8 - To what degree has your participation in this ERA-NET influenced your country's national programme(s)?

	Industrial technology and SMEs			Total		
	No influence	Influence	No answer	No influence	Influence	No answer
Discontinuation of existing programme(s) in some theme(s)	46%	36%	19%	**53%**	**34%**	**12%**
Reducing duplication between National programmes in your	41%	40%	19%	**47%**	**38%**	**16%**

country						
Design of programmes with longer time horizon	27%	63%	10%	**42%**	**49%**	**10%**
Design of programmes with shorter time horizon	43%	41%	16%	**51%**	**38%**	**11%**
Bigger programme budgets for the theme	36%	41%	23%	**42%**	**46%**	**12%**
Smaller programme budgets for the theme	53%	7%	40%	**63%**	**13%**	**23%**
New programme assessment/evaluation criteria	34%	51%	15%	**40%**	**50%**	**10%**
New opportunities to enable transnational R&D activities in the theme of the ERA-NET	7%	85%	7%	**8%**	**86%**	**6%**
New eligibility criteria allowing funding of foreign researchers in the area	39%	41%	21%	**43%**	**42%**	**15%**
Existing programme(s) now covering new theme(s)	41%	37%	21%	**48%**	**38%**	**14%**
New programme(s) put in place in response to new theme(s) identified	43%	37%	20%	**51%**	**34%**	**15%**

Participants in the Industrial technologies and SMEs thematic field were broadly as prone to indicate the influence of the ERA-NET on national programmes as the average. They were however much more likely to report influence on the design of programmes with a longer time horizon and to a lesser extent, putting new programmes in place to respond to new themes.

Table 9 - To what extent did your organisation have pre-existing relationships with participants in this ERA-NET prior to FP6?

	Industrial technology and SMEs	Total
Prior relationships	71%	**66%**
No prior relationships	23%	**26%**
No answer	6%	**8%**

Participants in the Industrial technologies and SMEs thematic field were more likely than the average to have had prior relationships with other participants in their ERA-NET.

Table 10 - If there were prior relationships which of the following 6 statements best describes how these relationships evolved during your participation in this ERA-NET?

	Industrial technology and SMEs	Total
Strengthened	66%	63%
Weakened	0%	1%
No answer	30%	33%
No change	4%	4%

Participants in the Industrial technologies and SMEs thematic field were more likely than the average to say that prior relationships had strengthened during the ERA-NET.

Table 11 - Has your participation in this ERA-NET triggered transnational cooperation outside of the ERA-NET?

	Industrial technology and SMEs	Total
Yes	42%	**31%**
No	43%	**47%**
Not applicable	11%	**16%**
Not Answered	3%	**5%**

Participants in the Industrial technologies and SMEs thematic field were more likely than the average participant to say that the participation had led to transnational cooperation outside of the ERA-NET.

Table 12 - 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?

	Industrial technology and SMEs	Total
Yes	17%	**13%**
No change	58%	**63%**
No answer	25%	**23%**

Participants in the Industrial technologies and SMEs thematic field were more likely than the average to claim that the participation lead to an increase in the amount of the programme budget that had been invested in transnational R&D projects outside of the ERA-NET.

Table 13 - If yes roughly what proportion of your programme budget was transnational before your involvement in ERA-NET?

	Industrial technology and SMEs	Total
0-25%	20%	**15%**
26 to 50%	1%	**0%**
51 to 75%	0%	**0%**
76 to 100%	1%	**1%**
Not answered	79%	**84%**

Participants in the Industrial technologies and SMEs thematic area were more able than others to state what percentage of their programme budget was dedicate to transnational activities before the ERA-NET, and most of the ones who did indicated that it was 0-25%.

Table 14 - If yes roughly what proportion of your programme budget is transnational now?

	Industrial technology and SMEs	Total
0-25%	14%	**13%**
26 to 50%	2%	**1%**
51 to 75%	2%	**0%**
76 to 100%	1%	**1%**
Not answered	81%	**84%**

Participants in the Industrial technologies and SMEs thematic area were more able than others to state what percentage of their programme budget was dedicate to transnational activities after the ERA-NET, and most of the ones who did indicated that it was 0-25%.

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?

	Industrial technology and SMEs	Total
Very important	18%	**21%**
Fairly important	49%	**48%**
Not very important	19%	**16%**
Not at all important	2%	**5%**
Don't Know	4%	**4%**
Not Applicable	5%	**2%**
Not Answered	3%	**5%**

Participants in the Industrial technologies and SMEs thematic area were less likely than the average to state that their topic had been very important to them before joining the ERA-NET.

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

	Industrial technology and SMEs	Total

Very Important	21%	**24%**
Important	69%	**66%**
Not important	0%	**1%**
No answer	10%	**10%**

After participation in the ERA-NET, participants in the Industrial technologies and SMEs thematic area were still less likely than the average to state that their topic was very important to them although overall the response was higher than what was stated as having been the situation before joining the ERA-NET.

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?

	Industrial technology and SMEs	Total
To some extent	39%	**29%**
Not at all	8%	**11%**
No answer	53%	**60%**

Participants in the Industrial technologies and SMEs thematic area were more able or willing to answer the question whether the ERA-NET had had any impact on the change in importance of the theme in their organization and mostly reported that it did to some extent.

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

	Industrial technology and SMEs	Total
Influence	58%	**63%**
No influence	17%	**18%**
No answer	25%	**19%**

Participants in the Industrial technologies and SMEs thematic area were less likely than the average participant to state that their involvement in the ERA-NET had had influence on national policy beyond the theme of the ERA-NET.

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

	Industrial technology and SMEs					Total				
	Helped	Hindered	No effect	Not Answered	Not applicable	Helped	Hindered	No effect	Not Answered	Not applicable
Change in programme management agency	3%	10%	22%	6%	59%	**7%**	**6%**	**36 %**	**4%**	**47%**
New R&D management structure	8%	11%	22%	7%	52%	**11 %**	**7%**	**35 %**	**5%**	**42%**
For existing programmes, more strategic R&D programming/planning	29%	1%	24%	10%	36%	**29 %**	**0%**	**36 %**	**7%**	**28%**
Externalisation of R&D programmes into agency/agencies	7%	4%	23%	7%	58%	**8%**	**4%**	**33 %**	**5%**	**49%**
Setting up of new types of R&D programmes	22%	4%	29%	9%	37%	**24 %**	**7%**	**33 %**	**5%**	**30%**
Barcelona 3% targets	11%	1%	39%	12%	37%	**16 %**	**1%**	**39 %**	**8%**	**36%**

Participants in the Industrial technologies and SMEs thematic area were more likely than the average to state that changes in programme management agencies and new R&D management structure had hindered the effects of their organisation’s participation in the ERA-NET. They were generally less prone to report that the various external factors had no effect.

Table 20- How strong are the links between this ERA-NET and Technology Platforms?

	Industrial technology and SMEs	Total
Strong	26%	**23%**
Weak	49%	**44%**
No answer	25%	**33%**

Participants in the Industrial technologies and SMEs thematic area were more than the average to report both stronger and weaker links between the ERA-NET and the Technology Platforms.

Table 21- Does this ERA-NET overlap with other ERA-NETs in your country?

	Industrial technology and SMEs	Total
Yes, my ERA-NET overlaps with more than one ERA-NETs in my country	7%	**8%**
Yes, my ERA-NET overlaps with one other ERA-NET in my country	15%	**17%**
No overlaps	67%	**57%**
Don't know	6%	**13%**
Not Applicable	3%	**2%**
Not Answered	2%	**2%**

Participants in the Industrial technologies and SMEs thematic area were less likely than the average to state that their ERA-NET overlapped with one or more ERA-NETs in their country.

Table 22 - 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?

	Industrial technology and SMEs			Total		
	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%	45%	21%	**39%**	**44%**	**17%**
Higher quality projects funded at national level (through joint calls/programmes)	35%	39%	26%	**35%**	**42%**	**23%**
New types of research projects generated (i.e. reflected in proposals received)	33%	42%	25%	**38%**	**42%**	**20%**
New types of research projects funded (through joint calls/programmes)	40%	33%	27%	**46%**	**32%**	**22%**
New researchers (with no prior international or European experience) benefiting from joint activities	41%	32%	27%	**40%**	**27%**	**33%**
New researchers (with no prior international or European experience) benefiting from joint calls/programmes	43%	27%	31%	**41%**	**34%**	**25%**
Access to foreign research communities/groups not present in my country	58%	19%	23%	**54%**	**28%**	**18%**

Participants in the Industrial technologies and SMEs thematic area were more likely than the average to state that the ERA-NET joint calls and activities had enabled access to foreign research communities/groups and allowed new researchers to benefit from joint calls/programmes. They were less likely than the average to state that the joint calls and activities has led to higher quality of new types of research projects being developed.

Table 23- Did any of the following factors either help or hinder your organisation to exploit the full potential of its participation in this ERA-NET?

	Industrial technology and SMEs	Total

	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	15%	42%	13%	16%	13%	**16 %**	**46 %**	**13 %**	**12 %**	**13%**
National cultures or research traditions	16%	42%	11%	14%	17%	**10 %**	**46 %**	**15 %**	**14 %**	**15%**
National resources (staff time finances)	11%	22%	31%	21%	15%	**17 %**	**35 %**	**26 %**	**15 %**	**7%**
National administrative procedures (e.g. evaluation rules)	7%	23%	31%	22%	16%	**6%**	**25 %**	**29 %**	**28 %**	**12%**
National legal programme conditions (e.g. funding of non-residents IPR)	6%	29%	27%	17%	21%	**4%**	**35 %**	**19 %**	**25 %**	**17%**
EC administrative procedures or legal requirements	1%	28%	31%	18%	23%	**1%**	**34 %**	**36 %**	**12 %**	**18%**
Perceptions of benefits	19%	23%	13%	15%	30%	**15 %**	**28 %**	**16 %**	**13 %**	**28%**
Engagement in other transnational initiatives (e.g. COST EUREKA)	15%	39%	1%	3%	42%	**12 %**	**46 %**	**4%**	**4%**	**34%**

Participants in the Industrial technologies and SMEs thematic field were more likely than the average to state that EC administrative procedures, cultural issues & research traditions and national thematic priorities were problems still to be overcome. At the same time they were more prone than the average to say that cultures and research traditions, perceptions of benefits and engagement in other transnational initiatives had been an aid to success.

9. Annexes: Coordinator survey results[98]

The figures below show responses to the Coordinator's questionnaire

16 of the 71 ERA-NETs belonged to the Industrial Technologies and SMEs theme, representing 22.5% of all ERA-NETs.

Table 27 - List of ERA-NETs covered within the theme

ERA-NET	Number of participants	Coordinator country
ACENET	13	Netherlands
CORNET	24	Germany
ERABUILD	17	Finland
EraSME	21	Germany
ERA-SPOT	8	Germany
ETRANET	16	UK
iMERA	20	UK
MANUNET	21	Spain
MARTEC	11	Germany
MATERA	19	Finland
MNT ERA-NET	21	Austria
NanoSci-ERA	13	France
NEW OSH ERA	20	Finland
SUSPRISE	15	Netherlands
VISION	10	Finland
WOODWISDOM-NET	18	Finland

Table 25 - Details of joint activities within the theme

Joint activities	Number	€ Virtual pot	€ Common pot	€ Mixed mode	Total
Joint calls	37	126,603,500	308,501	10,499,000	137,411,001
Joint programmes	5				-
Pilot actions	3	-	-	-	9,200,000

Industrial Technologies and SMEs ERA-NETs were active in 37 joint calls, but less so in pilot actions and joint programmes. The bulk of call funding was channelled through virtual common pots.

Figures reported in table 25 only contain funding contributions for which coordinators were able to provide a clear breakdown of funding contributions by country. Hence figures in table 25 are conservative and robust estimates of contributions to joint calls, joint programmes, and pilot actions.

The overall total amounts reported by coordinators should be treated with caution since they were not necessarily broken down or attributed to countries. These are as follows:

- Joint calls
  - Virtual common pot: € 192,427,283
  - Real common pot: € 338,550

[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).

- Mixed mode: € 11,543,000

- Joint programmes
  - Virtual common pot: € 20,700,000
  - Real common pot: € 0
  - Mixed mode: € 0

- Pilot actions
  - Virtual common pot: no data
  - Real common pot: no data
  - Mixed mode: no data
  - Total funding: € 9,200,000

ERA-NET EVALUATION
SD 20:Thematic Report on Transport

The following document provides the structure for the thematic report on ERA-NETs in the Transport field.

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 theme. 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

1 Executive Summary - Overview

Q1 – Impact on Research Landscapes

- Transnational cooperation was already well developed in the transport thematic area prior to the scheme. Hence the importance of pre-existing relationships was more important in Transport than the average across other themes.
- National programmes were overall well-aligned with the FP6 ERA-NETs.
- The scheme had had little direct impact on national transport research funding policies with some exceptions. For instance, Denmark designed a new national transport research funding programme during ERA-NET Transport.
- The impact of the scheme was more marked on national programming although it is possible that increased budget shares for transnational cooperation were channelled through bilateral and trilateral agreements more than the ERA-NET.
- The scheme generated more involvement from EU15 small Member States and New Member States in transnational research funding cooperation, although participation from New Member States could be improved further.

Q2 – Structuring effect on specific research areas or fields

- Transport ERA-NETs experienced wide participation from EU Member States.
- A structuring effect was evidenced whenever there was a convergence between the ERA-NETs and the structuring of a national policy as was the case in Denmark.
- There was a commitment by participants in transport to reduce inefficiencies stemming from duplication in public funded transport research and participants were more likely than the average to report reductions in duplication due to cooperation in ERA-NETs.
- Transport did not suffer from overlaps between ERA-NETs in their countries to the same extent as other themes.
- Transport participants were more likely than the average to report that more strategic planning regarding the implementation of national research programmes had helped to maximise the participation in ERA-NET whilst at the same time recognising the need to focus even more on strategic planning and synchronisation of national policies and research programmes to improve efficiencies.

Q3 - Direct benefits and indirect benefits

- ERA-NET joint activities enabled higher quality projects to be submitted and retained for funding at the national level.
- New researchers with no previous international experience were benefiting from joint calls launched by ERA-NEts.
- National thematic priorities, cultures & research traditions, national administrative procedures, legal conditions (funding regulation), perceptions or benefits and engagement in other transnational initiatives were said to have aided transport participants to fully exploit their ERA-NET participation according to the evidence gathered via the participant survey.

- Networking among transport research policy-makers were seen as a direct benefit of the scheme.
- Gaining of knowledge of research policies and programmes in other Member States were seen as a benefit.
- Learning how to organise and manage transnational cooperation programmes and joint calls were seen as a benefit.
- Enhanced visibility of research policy and research activities in New Member States in the thematic area was an indirect benefit of the scheme.

Q4 – Opening up of national programmes

- Participants in the transport theme were less likely than the average to claim that ERA-NET participation had influenced eligibility criteria allowing non-resident researchers access to national programmes, although participants did not necessarily regard legal issues (national funding regulations), such as those constraining the funding of non-resident researchers, to have been a hindrance to realising the full potential of their ERA-NET participation.
- During FP6, about 10 percent of the budget for joint calls was allocated to a real common pot – in ERA NET road related research procurement and not competitive calls. The other 90 percent were channelled to joint calls using virtual common pot mode of financing.
- Strong industrial interests tended to hamper the opening up of national programmes in transport-related ERA-NETs.

Q5 – Lessons learned

- National research programmes tended to be consistent regarding research priorities and there were opportunities for better cooperation, as shown in a study conducted as part of ERA-NET Transport.
- ERA-NET provided an opportunity to expose and decrease the multiple barriers that still obstruct cooperation between national research policies and programmes; yet, national interest still prevailed; the contempt of the subsidiarity principle was a collateral concern
- EC administrative procedures were seen as less of a hindrance in this theme than the average across themes.
- Transport participants seemed to have been able to overcome any legal constraints (funding regulations) to a much higher degree than other participants.

2 ERA-NET Thematic context

2.1 ERA and national programmes in the thematic area

There were 71 ERA-NETs in total, out of which 4 belonged to the transport theme, representing 5.6% of all ERA-NETs. The 4 were: AirTN, ERA-NET ROAD, ERA-NET TRANSPORT, and ERA-STAR REGIONS

Representatives of transport ERA-NETs sampled for field interviews were based in Austria, Finland, Germany, Netherlands, Poland, Portugal, Romania, and the UK.

A total of €10.4m was committed to joint calls and €15.4m to joint programmes in this thematic area under the FP6 ERA-NET scheme.

The participant survey revealed that participants in the transport thematic field were more likely than the average to report a good fit between national programmes and the ERA-NET actions (93% for transport vs. 84% across themes). At the same time, and as evidenced by the participant survey, participants in the transport theme were slightly less likely than the average across all thematic areas to report a good it between the theme of their ERA-NET and the corresponding one of national R&D programmes (7% for transport vs. 5% overall)[101]. This provides an indication of the degree of alignment between national transport research programmes across Europe in this thematic area.

Surveys conducted by the ERA-NETs as part of the their activities showed that in the field of public funded road research before ERA-NET started the landscape was rather diverse but that consistencies could be identified: the same themes were studied in the ERA-NET Road countries, with the exception of policy and user focused research, which was a a road research focus only in a few countries (especially Finland). Road design, construction and maintenance, as well as engineering and materials focused research were equally addressed in EU Member States, though not necessarily with the same research focus. Traffic and transportation flow focused research was a very consistent field throughout Europe.

The area of air transport has been characterised by strong industrial interests and involvement. The EU Member States' have been supportive of R&D in this area to maintain the competitiveness of their national industries in the aeronautics sector. At European level, GARTEUR[102] initiated the ERA-NET project in air transport in order to step up initial cooperation among different Member States, and support the work of ACARE[103] in this regard. Before the ERA-NET in aeronautics started, transnational research policy cooperation was already well developed in the area. In interviews ERA-NET participants acknowledged that challenges remain mostly in respect to opening up aeronautics research to SMEs (suppliers) and in encouraging smaller and New Member States to develop aeronautic related research programmes and to be more involved in transnational research cooperation.

According to interviewees with ERA-NET participants, transnational cooperation was already well developed in the transport area before 2006. Internal market and competition rules, the innovation agenda (Lisbon Strategy) and strong industrial interests have spurred Member States into cooperation. However, participants claimed that there had been a tendency to focus transnational funding resources, mainly the FP resources, on big projects, such as Joint Technology Initiatives (JTIs). Hence the ERA-NET scheme was seen as an opportunity to reinforce and formalise networks between policy-makers and to better coordinate national transport research funding policies to ensure broader participation in research activities.

[101] Refer to participant survey results attached in the annexes (Table 1).
[102] GARTEUR is an organisation for research cooperation in Europe in the field of aeronautics. It is based on a government agreement between France, Germany, Italy, the Netherlands, Spain, Sweden and the United Kingdom. Founded in 1973, it is the oldest aeronautical R&T network in Europe.
[103] Advisory Council for Aeronautics Research in Europe.

In general, results from the participant survey show that the participants in the transport thematic area were twice as likely as the average to state that their research priorities (research topics selected for the programme) had been very important to them before joining the ERA-NET. And although the importance of the research priorities remained high, if not increased slightly, throughout implementation, participants did not attribute this to the ERA-NET scheme or their participation in it[104].

Overall the participant survey results show that, compared to the average across other thematic areas, Transport ERA-NETs thought that ERA-NET participation had a bigger influenced on their country's national research programming and programme implementation with respect to existing programmes, reducing duplication, design or programmes with shorter time horizons, higher programme budgets and new programme assessment criteria. This view was not extended to influence over existing programmes or in terms of covering new themes[105].

Looking into more depth, the qualitative and survey feedback from transport participants on the impact of the FP6 ERA-NETs on the thematic landscape, provide a more mixed picture. Although EU15 small countries and New Member States clearly got more involved in transnational research policy and research cooperation thanks to ERA-NETs[106], actual public funding into transnational cooperation may well have been made largely outside of the ERA-NET through bilateral and trilateral agreements.

Participants in the transport thematic field responding to the survey were more likely than the average to claim that their participation had increased the public funding budget share invested in transnational research cooperation outside of the ERA-NET (17% for transport vs. 13 % across themes)[107]. Given the strength of pre-existing relationships[108] and the fact that the ERA-NET itself triggered fewer collaborations outside of the ERA-NET for this theme than the average across all themes, can be interpreted to mean that more public investment was made through pre-existing transnational cooperation. This was supported in interviews with participants in AirTN who claimed that, due to the very political dimension of the Air Industry, more internationalisation of national programmes in the area led more to bilateral or trilateral agreements than to multilateral cooperation. It has as well to be mentioned that the sector has a history in cooperation and bilateral agreements referring e.g. to DEUFRAKO, DACH or other cooperation agreements.

The transport area is also an area in which links with Technology Platforms have been strong overall. In the participant survey, participants in the transport thematic area were twice as likely as the average respondents to report strong links with the European Technology Platforms (49% for transport vs. 23% across themes)[109].

2.2 ERA and structuring effect in the thematic area

Participation in the transport ERA-NETs had a structuring effect as far as improved strategic planning and/or synchronisation of national research funding policies and programmes were concerned. At the same time, more structuring impact may have been possible had larger and more projects been funded. In this area, perhaps unlike some other themes, national transport research programmes were largely consistent throughout Europe, and Member States now share the objective of avoiding inefficiencies. Across the transport theme there has been a move towards common research programming in order to generate such efficiencies.

[104] Refer to participant survey results in the annexes attaches to this report (Tables 15, 16 to 17).
[105] Refer to participant survey results in the annexes attaches to this report (Table 8).
[106] In Romania, for instance, European integration was already a priority when FP6 ERA-NET started, and the scheme contributed to this objective. After 2006, the national research programme Aerospatial included space and security to better align to FP7 main themes and foster participation of Romania in the European research framework. In Austria, the internationalisation of Austrian industry had been a national political priority. 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.
[107] Refer to participant survey results in the annexes attaches to this report (Table 12).
[108] Participants in the transport thematic field were more likely than the average to have had prior relationships with other participants in their ERA-NET. Refer to participant survey results in the annexes attaches to this report (Table 9).
[109] Refer to participant survey results in the annexes attaches to this report (Table 20).

ERA-NET Transport was successful in gathering a large number of participants from the EU15 group (13 participant countries were involved). In addition to this, ERA-NET Transport held its first plenary meeting in December 2008, gathering about fifty stakeholders from transport related ERA-NETs and European Technology Platforms as well as representatives from national research programmes, EC and further European policy networks.

In the field of air transport cooperation between key players was already well established, and one of the objectives pursued was to involve more participants. In interviews, participants however deemed that participation from New Member States was good though not fully satisfactory.

According to interviewees, ERA-NET filled a gap that enabled policy makers to discuss transport research issues in a more flexible way than in other groups e.g. the EU Council or the Programme Committee. In this regard, ERA-NET Transport was said to have been successful in gathering high level staff in some of its action groups: this contributed to ensuring useful discussions on how to synchronise existing transport research policies and think about future joint activities and programmes. The relatively large amount of funding planned for joint programming is an indication of this[110].

Structuring effect in the field of transport was observed when there was a temporary conjunction between the ERA-NET project and the structuring of a national policy in this thematic area. For example, Denmark restarted a national transport research programme with support of ERA-NET Transport. The transport research programme was some years before merged with the Danish energy research programme. One of the characteristics of the new programme is a focus on transnational research cooperation and flexibility to join forces with other national transport research funding programmes. Similarly, participation in the ERA-NET reinforced the new Austrian strategy towards more transnational cooperation in research programming and research programme implementation.

In terms of new thematic research priorities, no clear breakthrough emerged, as the transport research area has been and remains rather consistent throughout Europe regarding its research priorities. The survey of ERA-NET participants again showed that the shift to a more strategic R&D programming/planning helped the effects of national organisations participation in transport ERA-NETs (55% of ERA-NET participants in the field of transport, vs. 29% overall)[111].

[110] Refer to coordinator survey results in the annexes attaches to this report (Table 25).
[111] Refer to participant survey results annexes to this report (Table 19).

3 ERA-NET funding considerations in the thematic area

3.1 Inputs into the ERA-NET scheme for this thematic area

The participant survey results show that in half of all cases, EC funding did not cover all the time and resources national organisations invested in participating in transport ERA-NET[112]. This was in line with the average across all thematic areas. On the other hand, ERA-NET participants from the transport theme seemed to have been more able to overcome staff resource constraints than the average participants[113]. Given that staff time for ERA-NET participation would have been drawn from existing staff resources, participation seems to have been facilitated in countries where research programmes were managed by state agencies that were more flexible in terms of staff secondment for ERA-NET activities[114].

In terms of participating in joint calls, funding criteria were set at the national level, just as in most thematic areas. Participation in a joint call was generally conditional on a national programme from which a line of budget could be allocated to the call[115]. In the transport area, contributions to joint calls came mainly from the coordination of a budget line in a national research funding programme. Hence National eligibility and selection criteria remained, and collaboration in joint calls was also conditional to the matching of national research funding programmes (time, earmarked budget shares etc.). As is clear from the coordinator survey figures, the bulk of joint calls were financed by allocation of budget shares for resident researchers participating in a project retained for funding in a joint call (virtual pot model)..

In Finland, no funding was initially available to participate in joint calls since all the available national funding budget was already earmarked. This was then rectified in order to enable Finnish participation to joint calls.

In terms of financial inputs, an investigation by the Austrian Ministry of Transport, Innovation and Technology found that Austrian participation in joint calls in the transport sector – regarding the budget contribution in the national programmes – was low compared with budgetary contributions of 5-14% across most other schemes.

3.2 Opening up considerations for this thematic area

The participant survey show that participants in the transport theme were less likely than the average to claim that ERA-NET participation had influenced eligibility criteria allowing not-resident researchers access to national research funding programmes (37% of transport participants claimed an influence vs. 42% across themes)[116]. At the same time, participants in this theme did not necessarily regard legal issues, such as those constraining the funding of non-resident researchers, to have been a hindrance to realising the full potential of their ERA-NET participation. When it had been regarded as a problem, transport participants were more likely to say that it had been overcome than the average across themes[117].

[112] Refer to the participant survey results in the annexes (Table 3).
[113] Refer to participant survey results in annexes (Table 23).
[114] Several state agencies used the change to contract new personnel for ERA NET.
[115] Refer to the coordinator survey results in the annexes (Table 25).
[116] Refer to the participant survey results in the annexes (Table 8).
[117] Refer to the participant survey results in the annexes (Table 23).

Looking at the mode of funding used for joint calls, it is clear that "openness" in this area has been relatively low compared to some other thematic areas. For instance, only about 10% of the funding put into joint calls was distributed via a real common pot[118][119].

In aeronautics research, strong industry policy interests seemed to have hampered the opening up of national programmes to the funding of non-resident researchers. There was however fledgling attempts at individual project level within AirTN to allow the participation of non-resident companies. For instance, Austria, as a member of AirTN had mentioned that it could be possible for UK companies to participate in the national programme if calls were to be launched along these lines. The UK also had talks with the French about the possibility of supporting jointly R&D activities in landing gears. However, at the end no project involving non-resident research organisations was retained for funding.

Austria and Finland were two countries, where the interviewees expressed, that there were no legal restriction to deposit national funding budget shares in a common pot. These countries were pushing into the direction of real common pots in particular in the road transport sector. The Finnish participant expressed in the interview his ambition to achieve a real common pot for a ERA-NET Transport Plus action. On the contrary, the Netherlands, where as well no legal restriction to deposit national budget in a real common pot existed either did not seem to prioritise joint calls based on a common pot model. Instead the interviewee of the Ministry of Transport argued for more focus on strategic planning and research programming instead of joint programme implementation.

Bilateral and trilateral agreements seemed to be an easier way to organise joint calls although this has not necessarily to involve the use of a common pot. Romania, together with Austria and Germany, organised recently a joint call as a result of a cooperation agreement. ERA-NET may have played a role in this since it has helped the participants of these countries to understand their respective funding approaches and programmes. For this call no common pot was implemented.

Hence overall, although here had been some results in terms of opening up national research programmes in the area of transport, further progress can still be made, possibly under FP7.

[118] Refer to the coordinator survey results in the annexes (Table 25).

[119] Reasons for that are simple: These are mainly research, technology and innovation programmes with a strong industrial policy ideal. The 10 percent are for sure mainly in road research, because road directorates run public research procurement schemes and not competitive calls.

4 ERA-NET benefits for this thematic area

4.1 Direct and indirect benefits of ERA-Nets in this thematic area (transport research) for national policy stakeholders and participants

In interviews, participants in transport-related ERA-NETs identified the following direct benefits, including:

- networking among policy makers, trust-building;
- knowledge of research policies and programmes in other Member States;
- exchange of good practices and experience;
- learning of how to organise and manage transnational research programme cooperation and joint calls ERA-NET Transport and ERA-NET Road organised joint calls.

The New Member States particularly flagged better awareness and improved image of their national research programmes and policies as a direct benefit of participation. The 'aerospace valley' in Poland was presented as a research and innovation cluster among industry and academia focusing on general aviation , in which Poland was "the strongest of the New Member States and Polish expertise is valued in Europe". Better visibility and better linkages to aerospace and general aviation industries in the rest of the continent were said to be key ERA-NET benefits in this field. The Romanian participant to AIRTN was very much in line with his Polish counterpart: Better image /reputation: the international standing of the national research programme ROSA has improved as the Romanian research support agency was able to communicate on its national activities.

Through the participant survey it became clear that Participants in the transport thematic area were more likely than the average to state that the ERA-NET joint activities had enabled higher quality projects to be submitted and that new researchers with no previous international experience were benefiting from joint calls[120] launched by ERA-NEts.

The survey also showed that participants in the transport thematic area were more likely than the average to state that national thematic priorities, research policy cultures & traditions, national administrative procedures, legal conditions, positive perceptions or benefits and engagement regarding the participation in other transnational activities initiatives had aided in the full exploitation of their ERA-NET participation. They were overall also much less likely to state that EC administrative procedures had been a hindrance for participation than the average participant. They also seemed to have overcome any legal constraints to a much higher degree than other participants[121].

4.2 Direct and indirect benefits of this ERA-NET thematic area for research beneficiaries

As pointed out in the participant survey results, additional opportunities to participate to transnational cooperation represented a direct benefit for researchers, as beneficiaries in joint calls launched by transport ERA-NETs[122] although this was in line with overall responses in other thematic areas. Apart from this, little evidence was collected on how much ERA NETs joint activities benefited the actual transport researchers. Yet, it is worth mentioning the case of the Dutch participants in AIRTN, who claimed a stronger involvement of suppliers (SMEs) in public funded research activities. ERA-NET offered a forum to talk about important issues regarding the implementation of research programmes, 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 agree to involve more suppliers in the "clean sky" JTI (Joint Technology Initiatives).

[120] Refer to participant survey results annexed to this report (Table 22).
[121] Refer to participant survey results annexed to this report (Table 23).
[122] Refer to participant survey results annexed to this report (Tables 8 & 22).

5 European Added Value, relevance and efficiency

5.1 Additionality of ERA-NETs in this thematic area

ERA-NET's added value in the transport area, when mentioned, is not different compared to what is generally observed in other thematic areas: interview findings indicate that ERA-NETs in transport offered policy-makers the opportunity to cooperate in a more flexible manner. The European framework programme was said to be too constraining in terms of bureaucracy and consortium building; bilateral agreements were considered as too narrow for transnational research collaboration.

Compared to other EU and transnational cooperation schemes, observers also praised the flexibility in organising joint calls. These were sometimes very vaguely defined (e.g. thematic priorities, topics) to suit to all participants.

Yet, one can mention the specific case of air transport: while Member States tried to protect their national interests, the aircraft industry is already largely internationalised and involved in cross-border research cooperation. Although there was less need for a transnational research policy in this field, participants considered important to have a policy that supported and orientated these efforts, and the EU level was and is relevant to this. In the aeronautics sector the ERA-NET was an interesting set up for better coordination between industrial players and national authorities: this led for instance to interesting talks on how to integrate more SMEs into transnational research collaboration. The ERA-NET joint calls also enabled more participation from smaller (e.g. Austria) and New (e.g. Romania, Poland) Member States in transnational research collaboration.

5.2 Perceived economic efficiency and relevance

Survey results showed that 51% of respondents thought that they got more out of transport ERA-NETs than expected compared with 41% in the overall population. 95% said their participation was worthwhile[123].

Interviews confirmed this: participants agreed to say that benefits of cooperation outweighed costs, while not being so enthusiastic about the "economic efficiency" and relevance of the scheme. Efficiency and relevance was expected to be realised in the long run, being through the implementation of adequate European strategies and a number of joint calls.

[123] Refer to the participant survey results in the annexes (Tables 5, 6 & 7).

Annexes: Stakeholders and materials consulted

ACARE website: http://www.acare4europe.org/
ERA Road website: http://www.era-road.net/information.html
AIRTN website: http://www.airtn.eu/
ERA-NET Transport website: http://www.transport-era.net/

Participants' responses to the evaluation survey

The Netherlands
Dutch participants in AirTN, ERA-NET Transport, and ERA-NET Road

Finland
Finnish participant in ERA-NET Transport, Ministry of Transport, Finland

Poland
Polish participants in AirTN and ERA-NET Transport

The United Kingdom
UK participant in AirTN, BERR, also involved in The National Aerospace Technology Strategy of the Aerospace Innovation and Growth Team, GARTEUR, and several other European Commission committees on aeronautics.

BERR website:
http://www.berr.gov.uk/whatwedo/sectors/aerospacemarinedefence/overview/page39259.html

Portugal
Manuel Mira Godinho: ERAWATCH Research Inventory Report For: PORTUGAL (2008)
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)
IMPLORE: National Programme Landscape in Portugal
The Fundação para a Ciência e a Tecnologia: http://alfa.fct.mctes.pt/

Germany
Participant in AirTN.

Austria
Participant in AirTN and ERASTAR Regions.

Romania
Romanian participant to AIRTN ERAN-NET
ROSA web site: http://web.rosa.ro/rosa.htm

Annexes: Participant survey results

The figures below show responses to the participant questionnaire. Responses were received from 38 participants in the transport theme.

Table 1- How would you rate the degree of fit between your national R&D programme relevant to the theme and this ERA-NET?

	Transport	Total
Good fit	93%	**84%**
Poor fit	7%	**5%**
No answer	0%	**11.00%**

Participants in the transport thematic field were more likely than the average to report a good fit between national programmes and the ERA-NET and more likely to report a poor fit between than the average.

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

	Transport	Total
0 - 9999	5%	**4%**
10000 - 19999	0%	**2%**
20000 - 29999	5%	**3%**
30000 - 39999	0%	**2%**
40000 - 49999	3%	**2%**
50000 - 59999	0%	**2%**
60000 - 69999	0%	**1%**
70000 - 79999	0%	**6%**
80000 +	80%	**71%**
Not Answered	8%	**6%**

Responses from participants in the transport thematic field were more likely to have received an over €80,000 contribution than the average.

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

	Transport	Total
Yes	49%	**49%**
No	51%	**43%**
Don't Know	0%	**4%**
Not Answered	0%	**3%**

Participants in the transport thematic field were in line with the average respondents that answered positively to the question whether EC funding had covered their participation in the scheme and more likely than the average to answer that EC funding hadn't covered their participation.

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

	Transport			Total		
	Yes	No	No answer	Yes	No	No answer
Coordination/clustering of ongoing nationally funded research projects	51 %	20 %	29%	**59 %**	**19 %**	**23%**
Benchmarking and common schemes for monitoring and evaluation	63 %	12 %	24%	**67 %**	**13 %**	**19%**
Multinational evaluation procedures (common evaluation criteria and methods of implementation	40 %	19 %	40%	**55 %**	**25 %**	**20%**
Schemes for joint training activities (so-supervised theses or common PhD schemes)	7%	36 %	57%	**12 %**	**49 %**	**39%**
Schemes for personnel exchange	12 %	36 %	52%	**14 %**	**47 %**	**39%**
Schemes for mutual opening of facilities or laboratories	10 %	32 %	59%	**15 %**	**44 %**	**41%**
Specific cooperation agreements or arrangements	39 %	7%	54%	**43 %**	**24 %**	**33%**
Action plan taking up common strategic issues and preparing for joint activities	10 %	59 %	32%	**75 %**	**11 %**	**13%**

Participants in the transport thematic field were overall less engaged in activities other than joint calls compared to the average participant. These findings may be influenced by the high degree of non-response to this question by transport participants.

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

	Transport	Total
Yes	95%	95%
No	0%	4%
Not Answered	5%	1%

Overall a vast majority or participants in the transport theme said that the participation had been worthwhile. This was in line with the average response across themes.

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

	Transport	Total
I got more out of it than I expected	51%	41%
I got out of it what I expected	39%	51%
I got less out of it than I expected	5%	6%
Not Answered	5%	1%

Participants in the transport thematic field were more prone than the average to report that they got more out of the scheme than they expected and less prone than the average to report that they got less out of the experience than expected.

Table 7 - How satisfied are you with the overall level of transnational cooperation within this ERA-NET?

	Transport	Total
Satisfied	83%	**88%**
Unsatisfied	10%	**7%**
No answer	7%	**4%**

Participants in the transport thematic field were less satisfied with the overall level of transnational cooperation in their ERA-NETs than the average.

Table 8 - To what degree has your participation in this ERA-NET influenced your country's national programme(s)?

	Transport			Total		
	No influence	Influence	No answer	No influence	Influence	No answer
Discontinuation of existing programme(s) in some theme(s)	34%	41%	24%	**53%**	**34%**	**12%**
Reducing duplication between National programmes in your country	31%	43%	26%	**47%**	**38%**	**16%**
Design of programmes with longer time horizon	31%	48%	21%	**42%**	**49%**	**10%**
Design of programmes with shorter time horizon	32%	51%	17%	**51%**	**38%**	**11%**
Bigger programme budgets for the theme	43%	50%	7%	**42%**	**46%**	**12%**
Smaller programme budgets for the theme	81%	7%	12%	**63%**	**13%**	**23%**
New programme assessment/evaluation criteria	41%	56%	2%	**40%**	**50%**	**10%**
New opportunities to enable transnational R&D activities in the theme of the ERA-NET	5%	86%	10%	**8%**	**86%**	**6%**
New eligibility criteria allowing funding of foreign researchers in the area	39%	37%	24%	**43%**	**42%**	**15%**
Existing programme(s) now covering new theme(s)	51%	39%	10%	**48%**	**38%**	**14%**
New programme(s) put in place in response to new theme(s) identified	49%	34%	17%	**51%**	**34%**	**15%**

Participants in the transport thematic field were overall more self-confident than the average participant to respond that their ERA-NET participation had influenced their country's national programmes: reducing duplication, design of programmes with shorter time horizons, larger programme budgets and new programme assessment criteria. There were mixed responses with regard to influences on existing programmes covering new themes.

Table 9 - To what extent did your organisation have pre-existing relationships with participants in this ERA-NET prior to FP6?

	Transport	Total
Prior relationships	69%	66%
No prior relationships	14%	26%
No answer	17%	8%

Participants in the transport thematic field were more likely than the average to have had prior relationships with other participants in their ERA-NET.

Table 10 - If there were prior relationships which of the following 6 statements best describes how these relationships evolved during your participation in this ERA-NET?

	Transport	Total
Strengthened	64%	**63%**
Weakened	5%	**1%**
No answer	26%	**33%**
No change	5%	**4%**

Participants in the transport thematic field more likely than the average to say that prior relationships had strengthened as well as weakened.

Table 11 - Has your participation in this ERA-NET triggered transnational cooperation outside of the ERA-NET?

	Transport	Total
Yes	24%	**31%**
No	59%	**47%**
Not applicable	7%	**16%**
Not Answered	10%	**5%**

Participants in the transport thematic field were less likely than the average participant to say that the participation had triggered transnational cooperation outside of the ERA-NET.

Table 12 - 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?

	Transport	Total
Yes	17%	13%
No change	41%	63%
No answer	41%	23%

Participants in the transport thematic field were more likely than the average to claim that the participation had increased the amount invested in transnational cooperation outside of the ERA-NET. Given the strength of pre-existing relationships and the fact that the ERA-NET itself triggered fewer collaborations outside of the ERA-NET for this theme than the average across all themes this answer can be interpreted to mean that more investment was made into pre-existing transnational cooperation.

Table 13 - If yes, roughly what proportion of your programme budget was transnational before your involvement in ERA-NET?

	Transport	Total

0-25%	19%	15%
26 to 50%	0%	0%
51 to 75%	0%	0%
76 to 100%	0%	1%
Not answered	81%	84%

Participants in the transport thematic area stated that their programme budget for transnational cooperation prior to the ERA-NET was largely in the 0-25% bracket. This was higher than for the average across themes.

Table 14 - If yes, roughly what proportion of your programme budget is transnational now?

	Transport	Total
0-25%	19%	**13%**
26 to 50%	0%	**1%**
51 to 75%	0%	**0%**
76 to 100%	0%	**1%**
Not answered	81%	**84%**

Participants in the transport thematic area indicated that the budget spent on transnational cooperation outside ERA-NET after participation, remained in the same 0-25% bracket. Given the large, it is not possible to discern whether there has been movement within as claimed in Table 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?

	Transport	Total
Very important	44%	**21%**
Fairly important	29%	**48%**
Not very important	2%	**16%**
Not at all important	2%	**5%**
Don't Know	5%	**4%**
Not Applicable	7%	**2%**
Not Answered	10%	**5%**

Participants in the transport thematic area were twice as likely as the average to state that their topic had been very important to them before joining the ERA-NET.

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

	Transport	Total
Very Important	45%	24%
Important	33%	66%
Not important	0%	1%
No answer	21%	10%

After participation in the ERA-NET, participants in the transport thematic area were still more likely than the average to state that their topic was very important to them. The response was even higher after participation than what was stated as having been the situation before joining the ERA-NET. However, looking at the following table, it seems the transport participants were not necessarily attributing this to the ERA-NET.

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?

	Transport	Total
To some extent	14%	**29%**
Not at all	10%	**11%**
No answer	76%	**60%**

Participants in the transport thematic area were less able or willing to answer the question whether the ERA-NET had had any impact on the change in importance of the theme in their organization.

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

	Transport	Total
Influence	57%	**63%**
No influence	19%	**18%**
No answer	24%	**19%**

Participants in the transport thematic area were less likely than the average participant to state that their involvement in the ERA-NET had an influence on national policy beyond the theme of the ERA-NET.

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

	Transport					Total				
	Helped	Hindered	No effect	Not Answered	Not applicable	Helped	Hindered	No effect	Not Answered	Not applicable
Change in programme management agency	19 %	7%	33 %	2%	38 %	**7 %**	**6 %**	**36 %**	**4 %**	**47 %**
New R&D management structure	10 %	7%	26 %	12 %	45 %	**11 %**	**7 %**	**35 %**	**5 %**	**42 %**
For existing programmes, more strategic R&D programming/planning	55 %	**0 %**	19 %	7%	19 %	**29 %**	**0 %**	**36 %**	**7 %**	**28 %**
Externalisation of R&D programmes into agency/agencies	19 %	5%	31 %	2%	43 %	**8 %**	**4 %**	**33 %**	**5 %**	**49 %**
Setting up of new types of R&D programmes	20 %	7%	24 %	2%	46 %	**24 %**	**7 %**	**33 %**	**5 %**	**30 %**
Barcelona 3% targets	29 %	**0 %**	20 %	15 %	37 %	**16 %**	**1 %**	**39 %**	**8 %**	**36 %**

Participants in the transport thematic area more likely than the average to state that changes in programme management agencies, more strategic planning of existing programmes, externalisation of programmes into agencies and the Barcelona targets had helped the effects of their organisation's participation in the ERA-NET.

Table 20 - How strong are the links between this ERA-NET and Technology Platforms?

	Transport	Total
Strong	49%	**23%**
Weak	22%	**44%**
No answer	29%	**33%**

Participants in the transport thematic area were twice as likely as the average respondents to report strong links with technology platforms.

Table 21 - Does this ERA-NET overlap with other ERA-NETs in your country?

	Transport	Total
Yes, my ERA-NET overlaps with more than one ERA-NETs in my country	5%	**8%**
Yes, my ERA-NET overlaps with one other ERA-NET in my country	12%	**17%**
No overlaps	68%	**57%**
Don't know	7%	**13%**
Not Applicable		**2%**
Not Answered	7%	**2%**

Participants in the transport thematic area were less likely than the average to state that their ERA-NET overlapped with one or more ERA-NETs in their country.

Table 22 - 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?

	Transport					
	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%	32%	27%	**39%**	**44%**	**17%**
Higher quality projects funded at national level (through joint calls/programmes)	43%	26%	31%	**35%**	**42%**	**23%**
New types of research projects generated (i.e. reflected in proposals received)	34%	32%	34%	**38%**	**42%**	**20%**
New types of research projects funded (through joint calls/programmes)	39%	29%	32%	**46%**	**32%**	**22%**
New researchers (with no prior international or European experience) benefiting from joint activities	38%	29%	33%	**40%**	**27%**	**33%**
New researchers (with no prior international or European experience) benefiting from joint calls/programmes	48%	24%	29%	**41%**	**34%**	**25%**
Access to foreign research communities/groups not present in my country	46%	22%	32%	**54%**	**28%**	**18%**

Participants in the transport thematic area were more likely than the average to state that the ERA-NET joint activities had enabled higher quality projects to develop and become funded and that new researchers with no previous international experience were benefiting from joint calls.

Table 23- Did any of the following factors either help or hinder your organisation to exploit the full potential of its participation in this ERA-NET?

	Transport					Total				
	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	24 %	34 %	15 %	10 %	17 %	**16 %**	**46 %**	**13 %**	**12 %**	**13 %**
National cultures or research traditions	17 %	22 %	24 %	12 %	24 %	**10 %**	**46 %**	**15 %**	**14 %**	**15 %**
National resources (staff time finances)	12 %	15 %	37 %	17 %	20 %	**17 %**	**35 %**	**26 %**	**15 %**	**7%**
National administrative procedures (e.g. evaluation rules)	19 %	21 %	33 %	10 %	17 %	**6 %**	**25 %**	**29 %**	**28 %**	**12 %**
National legal programme conditions (e.g. funding of non-residents IPR)	12 %	34 %	29 %	7%	17 %	**4 %**	**35 %**	**19 %**	**25 %**	**17 %**
EC administrative procedures or legal requirements	**0 %**	41 %	17 %	12 %	29 %	**1 %**	**34 %**	**36 %**	**12 %**	**18 %**
Perceptions of benefits	31 %	19 %	19 %	**0 %**	31 %	**15 %**	**28 %**	**16 %**	**13 %**	**28 %**
Engagement in other transnational initiatives (e.g. COST EUREKA)	22 %	41 %	5%	5%	27 %	**12 %**	**46 %**	**4 %**	**4 %**	**34 %**

Participants in the transport thematic field more likely than the average to state that national thematic priorities, cultures & research traditions, national administrative procedures, legal conditions, perceptions or benefits and engagement in other transnational initiatives had aided in the full exploitation of their ERA-NET participation. They were overall much less likely to state that EC administrative procedures had been a hindrance than the average participant. They also seemed to have overcome any legal constraints to a much higher degree than other participants.

Annexes: Coordinator survey results

The figures below show responses to the coordinator questionnaire in the theme of Transport[124].

4 of the 71 ERA-NETs belong to the transport theme, representing 5.6% of all ERA-NETs. Table 24 below lists these ERA-NETs.

Table 24 - List of ERA-NETs covered within the theme

ERA-NET	Number of participants	Coordinator country
AirTN	24	Germany
ERA-NET ROAD	11	UK
ERA-NET TRANSPORT	13	Germany
ERA-STAR REGIONS	15	Belgium

Transport ERA-NETs were active in joint calls and joint programme, but not in pilot actions. This is indicated in table 25 below. (NB: based on the Coordinator's survey which is not necessarily complete)

Table 25 - Details of joint activities within the theme

Joint activities	Number of joint calls	€ Virtual pot	€ Common pot	€ Mixed mode	€ Other	Total
Joint calls	10	10,016,786	430,000	-	-	10,446,786
Joint programmes	-	-	1,650,000	-	13,827,000[1]	15,477,000
Pilot actions	1	-	-	-	-	96,000

Note [1]: It is thought that some of this funding is being planned and that a possible piece by piece approach has made it difficult for the coordinator to state the mode of funding.
Note [1]: It is thought that some of this funding is being planned and that a possible piece by piece approach has made it difficult for the coordinator to state the mode of funding.

The overall total amounts reported by coordinators should be treated with caution since they were not necessarily broken down or attributed to countries. These are as follows:

- Joint calls
  - Virtual common pot: € 20,403,622
  - Real common pot: € 430,000
  - Mixed mode: € 0
- Joint programmes
  - Virtual common pot: € 0
  - Real common pot: € 0
  - Mixed mode: € 0
  - Other: € 13,000,000
- Pilot actions
  - Virtual common pot: no data
  - Real common pot: no data
  - Mixed mode: no data
  - Total funding: € 96,000

[124] 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

SD21: Thematic Report on Social Sciences and Humanities

The following document provides the structure for the thematic report on ERA-NETs in the Social Sciences and Humanities field.

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[125] in 15[126] 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 theme. 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.

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

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

Table of Contents

1. Executive Summary - Overview

Q1 – Impact on Research Landscapes

- the scheme has created opportunities for international collaborative research. Collaborative research in any field often generates positive impacts as new information on, expertise in, and analysis of a topic of research can enhance the quality of the research outputs, and as well, are beneficial to the research base of a country;
- the increased opportunities for networking, which together with collaborative research, could have an impact on the research landscape;
- the increased opportunities for additional funding and resources for collaborative research;
- the scheme has fostered greater coordination with a possible reduction in duplication and fragmentation as a result. While the EU12 viewed this as a direct impact or benefit from the ERA-NET Scheme, the EU15 Member States generally suggested this as a potential impact;
- collaboration with some SSH research communities not involved in international research have been established;
- overall, to date, there has been limited impact on national research programmes and policy-making.

Q2 – Structuring effect on specific research areas or fields

- the scheme has generated an increase in the international dimension of SSH research;
- the scheme has led to the introduction of new SSH topics such as foresight and migration to the research agenda of Romania and Finland, respectively;
- there has been an elevation of the topic of migration from a national-oriented research topic to a European-wide one as in the UK;
- informal bilateral and trilateral arrangements have become formalised, for instance between the UK and the Nordic countries, and the Netherlands and the Nordic countries;
- new SSH topics of research, for instance, foresight and migration, have been introduced.
- there has been a limited structuring effect on the design and content of national SSH programmes by the EU15 but clear effect on EU12 e.g. Romania and Slovenia.

Q3 - Direct benefits and indirect benefits

- there has been an increase in international collaborative research;
- networking and the establishment of personal contacts with similar organisations or those that have similar interests and priorities has been established;
- learning good practice and knowledge transfer has been achieved (as in the peer review process and how other funding agencies operate);
- databases of key players, programmes and projects in SSH have been established;

Q4 – Opening up of national programmes

- overall, there was limited evidence of funding of non-resident from national R&D programmes;
- Overall, there was limited opening up of national programmes to non-resident research communities although there has been some opening up of national programmes to non-resident researchers, for instance in Slovenia, and UK Research Councils are beginning to fund non-resident researchers for their participation in UK funded projects and programmes. However, it is not clear that these examples can be directly attributed to ERA-NET participation.

Q5 – Lessons learned

- the resource intensity required for participation was deemed high;
- the need for prudent selection of participants to ensure commitment was seen as important;
- the need for clarity of objectives was seen as a key factor to success.

2. ERA-NET Thematic context

There were six Social Sciences and the Humanities ERA-NETs.

There were 71 ERA-NETs in total, out of which six (6) were in the Social Sciences and Humanities area (SSH). The six were: ERA-SAGE; EU-SEC; FORSOCIETY; NORFACE, WORK-IN-NET and HERA. The countries that were sampled for their participation in these SSH ERA-NETs included the UK, Finland, the Netherlands, Poland, Italy, Slovenia, Germany, Romania, Italy, and Norway. It can be argued that this sample of participating countries covered a wide range of countries with: (a) varying interests in and degree of importance of SSH research; (b) varying experience in funding SSH research; and (3) different organisations for, and structuring of, SSH research funding. A total of € 28,920,335 to a common pot was committed to SSH joint calls and € 23,147,800 to joint programmes.

2.1 ERA and national programmes in the thematic area

Among the sampled countries, the UK, Finland, Norway, Germany and the Netherlands were the only identified countries that had a national research agenda for SSH research organised either thematically or in an interdisciplinary structure. There was often a mix of national and international dimensions to their research themes, the balance of which depended on the topic or area of research. Insofar as the SSH ERA-NETs reflected SSH research priorities in these countries, there appeared to have been some degree of alignment, for instance, in FORSOCIETY (foresight) and NORFACE (migration). It was high in HERA as this ERA-NET brought together about 13 funding agencies, including the European Science Foundation. HERA aimed to coordinate the research programmes of these agencies to enhance the profile of research in the Humanities, a research area which is often contextually bound127.

Overall participants in the SSH ERA-NETs tended to come mainly from research councils, funding agencies or public research organisations. This observation implies that the themes of the SSH ERA-NETs also reflected the congruency of research interests. It is perhaps of interest to note that the joint call for migration launched by NORFACE was a new research topic for countries, such as for Finland, and foresight (via FORSOCIETY) for Romania, which had created a Centre for Excellence in foresight in the Academy. From this we can infer that the ERA-NET Scheme stimulated new areas of research interest in the research areas of these two countries. Whether migration will result in a new research programme for Finland is unclear.

In drawing together the national R&D policies in SSH of the sampled countries, we cannot conclude that there are distinct SSH programmes in the sampled countries, apart from the UK. Instead, as noted above, Finland, Germany, the Netherland and Norway have SSH research embedded in the countries' disparate national programmes128. The same can be said of the sampled New Member States with the exception of Slovenia and Romania.

---

[127] The results from the PQ 6.4 to 6.6 of the participant questionnaire (Tables 15, 16 and 17) demonstrate that the importance of SSH in countries research programme has increased (from 91% before the start of the coordination action to 96% at the end of the coordination action) but that the change is only attributable to the influence of ERA-NET to some extent (below thematic average). In addition, the results from the question 2.11 of the participant questionnaire (Table 1) highlight a high degree of fit between national R&D programmes relevant to the theme and ERA-NETs (99%). Last, national thematic programme priorities were not seen has a problem but rather an aid to success to fully exploit the participation in ERA-NETs in the country (21% of the SSH respondents thought they were an aid to success as opposed to 16% overall and 58% of them thought they did not pose a problem as opposed to 46% overall).

[128] This may explain programme changes in the thematic area as evidenced by the participant questionnaire. For instance question 5.3 (Table 8) demonstrates that quite a lot of changes have happened in the national programmes:

- Discontinuation of existing programme(s) in some theme(s) (for 77% of the SSH respondents vs. 53% overall)
- Reducing duplication between National programmes in your country (for 77% of the SSH respondents vs. 47% overall)

However it is worth stating that SSH research will always necessarily be undertaken as long as the economy and cultural heritage remain, for instance, important policy considerations to a country. Even if there is no particular agency or national programme dedicated to the pursuit of the Social Sciences and the Humanities research, its absence may not be interpreted as SSH research being unimportant to a country's research agenda.

In the UK SSH research has been primarily under the remit of the Economic and Social Research and the Arts and Humanities Research Council respectively. The ESRC had a budget of approximately £105 million for directly-related research activities in 2008 funding about 2,500 researchers in academic institutions and policy research institutes. About £56 million were allocated for post-graduate training.

The UK Engineering and Physical Sciences Research Council has occasionally funded Social Sciences research when it has been shown to have relevance and impact on either engineering or the physical sciences. Other UK organisations that have had a SSH research focus include the Royal Society and the British Academy, although their research funding has largely been dedicated to supporting researcher mobility, travel and conference grants and small fellowships.

An underlying principle of British Research Councils has been to foster and facilitate collaborative research within and beyond national boundaries. While funding has been mainly allocated for UK resident researchers, provisions have been made, under "exceptional expert services," to help fund non-resident researchers. The Economic and Social Research Council, in particular, has begun funding directly non-resident researchers for costs incurred through "daily subsistence and travel" expenditures for UK projects. In most cases, salaries of non-resident researchers are not permitted, although here too, exceptions may be made.

Given this contextual environment, UK participation in the SSH ERA-NETs largely reflected national research themes in which the Economic and Social Sciences Research Council and Humanities were already pursuing. The Royal Society also represented British participation in the SSH ERA-NETs.

In Finland, SSH were pursued as part of the research agendas of the Academy of Finland and Science and Finnish Funding agency for Technology and Innovation. For example, the Academy of Finland covered four research councils and the focus was to give opportunities to Finnish researcher by preserving the equality between all the disciplines. Unlike in the UK, these research agendas were not thematically organised. The Finnish Funding agency for Technology and Innovation focused on applied research where the key was to provide utility of the research to business and industry through academic-industry research collaboration. The focus again was not on thematic priorities. Instead research, whatever the themes may have been, was conducted across themes many of which entailed SSH research.

The Netherlands Organisation for Scientific Research (NWO) organised its research programmes both along disciplinary lines in its eight divisions – of which Humanities and Social Sciences are two – and also according to themes, which were *multidisciplinary*. Their research themes show that they embraced a number of SSH issues. For instance, "Conflict and Security," "Cultural Dynamics", "Creative Industry" "Responsible Innovation," involved

---

- Design of programmes with longer time horizon (for 72% of the SSH respondents vs. 42% overall
- Design of programmes with shorter time horizon (for 73% of the SSH respondents vs. 51% overall)
- Existing programme(s) now covering new theme(s) (for 60% of the SSH respondents vs. 48% overall)
- New programme(s) put in place in response to new theme(s) identified (for 72% of the SSH respondents vs. 51% overall)

SSH research in addition to other disciplinary-specific research[129]. The NWO Humanities Division has a annual budget of approximately 25 million euro to fund humanities researchers.

Poland only instituted national research programmes in 2008. Despite the country's participation in WORK-IN-NET, which focused on innovation in the workplace, it appeared that given the newness of the country's national research programmes, and presumably other pressing national issues, innovation has not been a topic of immediate interest or relevance to Poland.

Romania overhauled its R&D and Innovation national plan to comply with the 2007 EU accession requirements and to ensure the necessary conditions for achieving the overall Lisbon tasks. The country's science strategy was defined in the first national plan of R&D and Innovation 1999 -2006. In September 2001, priority programmes were launched in several sectoral fields, such as agriculture and food industry (AGRAL), environment and energy (MENER), transports (ANTRANS), life and health (VIASAN), inventions (INVENT), information society (INFOSOC), biotechnology (BIOTECH), materials and nanotechnology (MATNANTEH), aerospace (AEROSPATIAL), and economic and social (CERES).

The second R&D and Innovation national plan for 2007-2013, which was implemented in June 2006, further reinforced these themes. It also entailed an increase spending for R&D, from 0.38 per cent of GDP in 2006, to 0.56 per cent GDP for R&D activities. The budget spent on SSH (INFOSOC AND CERES) was €6.45 million and €1.45 million respectively. Despite the current fragmented structure of the research community, Romania has been intent on creating a critical mass of social scientists who can work in concert to help establish the salience of SSH research in the country.

As the latest Full Member State it is therefore not surprising that Romanian policy-makers have supported the ERA-NET Scheme wholeheartedly, and have viewed it as a practical instrument to coordinate as much as possible, its national policy with those of the European Union, particularly through alignment of its science policy with the Framework Programme (e.g. in terms of thematic alignment). Whether participation in the ERA-NET Scheme has had any tangible impact on its national R&D plan is not clear.

Slovenia appears to fall somewhere between Poland and Romania in its R&D policy. While the former has only begun considering a national R&D policy, the latter has formulated clear targeted themes and increased budget spend for the policy. Slovenian national policy-makers continue to grapple with what the country's research agenda should entail, although the current choice of national R&D themes appear to reflect trends, in the main, in the EU as well as domestic interests. That the selection of themes for the SSH ERA-NET participation was, to some extent, influenced by the lobbying efforts of researchers and research institutions is perhaps testimony to the "fuzziness" of the country's R&D priorities in SSH.

There was little information on Italy's position on national SSH research priorities. The Italian participant (coordinator) in EU-SEC was the United Nations UNICRI (United Nations Interregional Crime and Justice Research Institute) which has 70 regional staff in Europe (50 in Turin, 27 in the Lab). Its role has been to assist intergovernmental, governmental and non-governmental organisations to formulate and implement improved policies in the field of crime prevention and criminal justice. However, given that this field of research is in the common interest of the EU, if not the world, one can say that this SSH topic of research has indeed been pursued in Italy, some of which has also been undertaken by the Italian Ministry of the Interior and the Police Academies.

In Germany, the Deutsche Forschungsgemeinschaft (DFG, German Research Foundation) has been the central self-governing research funding organisation for promoting research at universities and other publicly financed research institutions. It has had an extensive programme to promote the internationalisation of research across the board. For instance,

[129] For more information please refer to http://www.nwo.nl/nwohome.nsf/pages/NWOA_6XYDNE_Eng

through the European Science Foundation, DFG funds projects aimed at promoting European networks of research activity in all disciplines and co-operation between outstanding scientists and academics in Europe[130]. It is also widely acknowledged that there is a strong SS research community in Germany. DFG has also actively supported research in the Humanities and recently introduced a three-year pilot "Humanities Research Funding Initiative." Humanities Research Centres have also been funded by the German Science Council. DFG has not had a distinct SSH programme. DFG participates in NORFACE but not in HERA. The German participation in HERA is through BMBF.

The Research Council of Norway has been the main funding agency for research in Norway. A common disciplinary thread underpinning the four main themes has been SSH. The Council has expressed that "to ensure adequate capacity and quality, [t]here must be greater investment in research activity and the overall quality must be enhanced to help researchers, trade and industry and society at large to develop and compete in an increasingly globalised world"[131]. This has been a central component of SSH research funding.

Furthermore Norway has had a tradition of international collaborative research and is well regarded for it. The Council's participation in NORFACE reflected the country's interest in co-operating with European research funding organisations to promote research in Europe. Benefiting from knowledge of how other research councils organise their research activities was thus a key driver for Norway's participation in NORFACE. The Council participated in FORSOCIETY, which was essentially on foresight, because it was a relatively new research area for the Council and also provided an opportunity to learn what and how other countries conduct foresight exercises. Furthermore Norway's participation in HERA signalled the country's interest in raising the profile of research in the Humanities. Extrapolating from the limited input provided, and the Council's forward-looking strategy (for 2009-2012), one can safely conclude that SSH will remain a key research theme.

2.2 **ERA and structuring effect in the thematic area**

The Social Sciences and Humanities ERA-NETs have received widespread support from policy-makers to programme managers. For instance, our survey of participants reported that 99 per cent of the participants thought that there has been a good fit between the SSH ERA-NET themes and their national research areas. The same survey indicated that the vast majority of participants were ready to co-operate in joint calls and programmes[132].

The following table gives direct evidence of the number of countries involved in coordination action around specific topics in this theme and across the ERA.

[130] For more information please refer to:
http://www.dfg.de/en/international/international_research_policy/europa.html
[131] For more information please refer to:
http://www.forskningsradet.no/en/Newsarticle/Charting+a+new+course/1233558119853&kilde=f,
[132] Refer to participant questionnaire, questions 4.2. (Table 4; e.g.73% participated in the Coordination/clustering of ongoing nationally funded research projects (as opposed to 59% overall); 66% in specific cooperation agreements or arrangements (as opposed to 43% overall); 94% in action plans taking up common strategic issues and preparing for joint activities (as opposed to 75% overall)).

ERA-NET	Number of participants	Coordinator country	Start year
ERA-SAGE	11	Netherlands	2005
EU-SEC	12	UNICRI	2004
FORSOCIETY	19	Greece	2004
HERA	20	Netherlands	2005
NORFACE	12	Finland	2004

As demonstrated above, FORSOCIETY and HERA managed to attract a significant number of participant countries and associated organisations in the ERA. This argues in favour of a structuring effect.

Specifically, HERA supported a work package on the creation of a European Reference Index for the Humanities which should lay the foundation for a humanities bibliometric database. A conference highlighting the first results of this ongoing endeavour drew much interest from the SSH community as bibliometrics are widely used as a tool for impact assessment of research outputs. In addition, informal bilateral and trilateral collaborative arrangements, such as those between the UK and the Nordic countries, were formalised as a result of their participation in both in HERA and in NORFACE. For participating countries that had not collaborated with some countries before participating in the ERA-NET Scheme, the structuring has been more pronounced. This argues in favour of a structuring effect as a result of participation in the ERA-NET scheme. For EU15 countries however, ERA-NETs were seen as an opportunity to formalise pre-existing relationships, which limited the extent of the structuring effect at the level of the ERA.

One may be cautious however to directly attribute a structuring effect on the national R&D programmes and policy-making. For instance, the interdisciplinary nature of the Social Sciences can make it difficult to delineate research themes into "thematic silos" or set up funding agencies dedicated to SSH research, as evidenced by the national research agendas of the Finnish and Dutch Research Councils. Against these suggested concerns one needs to exercise caution about the structuring effect of the ERA-NET Scheme in having a potential effect on how national R&D policies and programmes are formulated because they will affect the resources and "political will" for the establishment of a common research platform.

Despite the positive views of the range of government-based participants in the SSH ERA-NETs (and others), it was apparent from the interview inputs that "Ministerial" interest in, or knowledge of, this Scheme was somewhat "more than distant", particularly in the case of the EU15 countries interviewed. Interview inputs also suggested that participants in the SSH ERA-NETs came mainly from middle-ranking officials. With the exception of Poland (see above) interview data show that Slovenian and Romanian high-level policy-making authorities had adopted the research themes of the ERA-NET Scheme (and the Framework Programmes) into their national R&D policies.

As explained above, the UK has had a well-developed SSH research agenda managed and designed by the relevant Research Councils. Therefore participation in the SSH ERA-NETs was treated as another avenue, albeit important, for SSH collaborative research, especially as the perceived key players were participating in these SSH ERA-NETs. Furthermore, British Research Councils already had several bilateral and tri-lateral informal collaborative arrangements with several members of the EU. However, for instance, in the HERA and NORFACE ERA-NET collaboration was regarded as a means to formalise such collaboration with the Nordic countries. Themes offered by the SSH ERA-NETs were already reflected in the Research Councils' research agendas.

Participating British Research Councils and national policy-makers stated that neither the Framework Programmes nor the ERA-NET Scheme had had any marked impact on British

national R&D policies. From a UK perspective, it is difficult to attribute a direct structuring effect to the ERA-NET Scheme in the SSH theme. Furthermore, changes in national policies come from an assortment of drivers, not least of which are the external environment and the interests of a new Prime Minister, as explained by some UK policy-makers.

A similar situation with respect to the limited structuring effect of the ERA-NET Scheme was observed in Finland, Norway and Germany. In the case of Finland, ERA-NET participation was not linked to a particular national programme. Here we particularly observed the specific structure of Finnish research, which was not thematically organised. Furthermore, Finland's research priority has often been transnational- or bilateral-oriented. Hence, participation in the SSH ERA-NETs was a means to formalise collaboration, particularly as the main players were participating in these SSH ERA-NETs.

Norway's research priorities were thematically organised around four issues. As noted above, and similar to Finland to a large extent, the four issues involved interdisciplinary research of which SSH was a central component. Participation in the ERA-NET Scheme, while beneficial, was not expected to impact on the national R&D programmes.

German participants also expressed a lack of ERA-NET impact on German SSH research. Here scepticism was raised about the ERA-NET Scheme's influence on increasing internationalisation and researcher mobility. Such a view is arguably based on the existing practice of international research conducted by German scholars within the country and abroad. However, the ERA-NET Scheme provided another avenue of international collaborative research and this in itself was beneficial for German participation.

The Netherlands' driving motivation to participate in HERA was to help increase the profile of the Humanities in the Framework Programme. NWO viewed the ERA-NET Scheme as a potential way to reduce fragmentation in the various fields of research. However, it would be premature to suggest that the ERA-NET has had an effect on how NWO's research agenda has been or is organised.

In the specific cases of Poland and Italy, little is known whether ERA-NET participation has integrated national R&D policies with the ones of the ERA-NETs. In Poland, the ERA-NET Scheme had little impact on Poland's national R&D policy. The country only begun formulating its R&D policy in 2008 and, according to one Polish participant, the ERA-NET Scheme did not influence the structuring of the country's national R&D policy and research programmes.

According to Slovenian national policy stakeholders, participation in the ERA-NET has helped Slovenia build closer relations to the other EU Member States and opened up the national research landscape in general. The ERA-NET activities have also complemented the existing national work programmes, many of which mirror the Framework Programme themes. The general impression is that the ERA-NET participation, particularly as it appeared to have involved the leading research actors, increased the overall focus on international cooperation but it is too early to say if the Scheme will have any lasting structuring effect on Slovenian national R&D policy.

Romania's participation in FORSOCIETY was particularly responsible for the creation of a Centre of Excellence on foresight in Romania, spearheaded by the Romanian Academy, who was the participant in this ERA-NET. At least it can be concluded that the ERA-NET Scheme has had a positive effect on some aspect of national SSH research.

3. ERA-NET funding considerations in the thematic area

3.1 Inputs into the ERA-NET scheme for this thematic area[133]

Overall the reimbursement from the Commission to participants in the ERA-NETs was used to help defray the cost of their involvement[134]. The UK Department participants, however, were disallowed by regulations to receive any monies from third parties to conduct additional tasks within their normal workload. There were two results from this regulatory prohibition: (1) All Government departments' participants spent less than 5 per cent of their time on ERA-NET related tasks, and (2) the ERA-NET reimbursement was used only to pay for their travel and subsistence and the balance was outsourced to third parties to manage and operate the ERA-NET. This 5 per cent was used for meetings and the preparation of reports and audits for the Commission.

Participants from research councils of the UK, Finland and Norway expressed that the resource intensity of participation had been high. A UK Research Council participant expressed that he spent more than 50 per cent on just ERA-NET related tasks and deliverables.

As for joint calls, UK Research Councils had the autonomy to make any form of contribution to ERA-NET research projects. The Economic and Social Research Council contributed about €4 million to NORFACE for a real common pot for a joint call. However this allocation of monies was primarily targeted to the participation of UK researchers, although in principle, it was not exclusive of non-resident UK researchers. The Arts and Humanities Council contributed about €5.5 million to the HERA joint call.

Finland also contributed both to the HERA and the NOFACE common pot.

France did not contribute to either real common pot but did reserve some funding to allow French researchers to participate in Norface joint programme workshops.

In total at least thirteen countries contributed to the NORFACE common pot for joint calls including Germany and Norway. Thirteen countries contributed to HERA's real common pot.

The formula for allocation of monies to NORFACE deserves mention. Arising from a concern of some participants, such as Germany, over the possibility of "unequal" contribution by participants to a common pot, it was decided that the contribution would be based on a percentage of GDP and population size. For instance, the UK contribution was 24 per cent and Germany's at 27. The original criterion for contribution was based on a percentage of national R&D expenditure as reported by Eurostat. The "bigger country" participants deemed this criterion to be unfair, arguing that they would bear a disproportionate share of the contribution.

The Netherlands did not have specific rules that discriminated against the funding of non-resident researchers. However, approaches diverged between NWO and SenterNovem[135]. SenterNovem was apparently more reluctant to funding non-resident/national researchers as innovation programmes involved the private sector and thus involved IPR issues. Furthermore SenterNovem worked on the principle that that national funding should go to national researchers. On the contrary, NWO was seemingly less rigid about funding non-resident researchers and had in effect strongly advocated the setting up of a real common pot for the HERA's joint call.

---

[133] Refer to table 25 for a detailed view of funding contribution in this thematic area

[134] As the results of the participant questionnaire demonstrate(Table 3), EC funding covered, in most cases e.g. for 75% of the SSH respondents, all the time and resources organisations invested in participating in SSH ERA-NETs (Refer to question 3.1)

[135] SenterNovem is an agency of the Dutch Ministry of Economic Affairs charged with promoting innovation in the Netherlands. For further information refer to (http://www.senternovem.nl/english

Poland, Slovenia, Italy and Romania's participation in the SSH ERA-NETs were primarily funded by the Commission's contribution. Slovenia contributes to both the HERA and NORFACE joint call. It is not clear if the others had contributed to a common pot for joint calls.

3.2 **Opening up considerations for this thematic area**

Our online survey shows that only 28 per cent of participants reported that ERA-NET joint calls, joint programming or other joint activities influenced their access to non-resident foreign research communities. This is rather a low number compared to the 54 per cent of all the ERA-NET participants that reported that kind of influence in the participant survey[136]. This is symptomatic of the relatively low degree of openness in this thematic area.

UK Research Councils has had some latitude to open up their research programmes for participation of non-resident researchers because they are independent bodies funded by the national budget. Their research programmes, however, have reflected national research priorities. The best case of opening up relates to the joint call NORFACE launched in which the UK participated. As mentioned before, the Economic and Social Research Council has already begun to fund non-resident researchers.

UK research programmes managed by Government departments, on the other hand, did not appear to have had the same autonomy as enjoyed by the Research Councils. Regarding the funding of non-resident researchers, the UK Government policy did not, as a rule, provide such funds. They provided financial assistance on a government to government level, such as in the Framework Programme and financial aid to developing countries. Such assistance was hardly ever done on an individual basis outside international agreements. However, Government departments could contribute monies to a project via a Research Council, as had been done for ERA-ARD (on agricultural research for development). Furthermore if a compelling case could be made to Government for funding of an international project, this too, can result in Government contribution. A compelling case would, for instance, involve tangible evidence that the research outputs would benefit UK Plc.

As far as was discernible at the point of writing, Finland has not, and does not intend to open up its national research programmes to non-resident researchers. Finland contributed to the HERA and NORFACE joint calls. Norway also has not been inclined to open up its national research programmes to non-resident researchers and the opinion put forward in interviews was that the ERA-NET scheme had had little impact on national R&D programmes and policy-making. They did however also contribute to the real common pots of both HERA and NORFACE.

As explained above, in terms of contributing to joint calls, no rule prevented the funding of non-resident researchers. However, with the divergent approaches taken by NWO and SenterNovem toward funding non-resident researchers, there was a likelihood that the issue of opening up of national programmes to non-resident researchers would remain a prickly issue on the funding of non-resident researchers in SSH. NWO, however, did succeed in contributing both to a common pot for a joint call for HERA and to a common pot for a joint call in NORFACE.

Slovenia has decided to open up its national programmes to non-resident researchers. While researcher exchange and international collaborative research were lauded as beneficial to Poland and Romania, it was possible to surmise that preference was given to their national researchers, as these countries continued to develop their research infrastructure. Here, it was interesting to note that Slovenia's intent to fund non-resident researchers differed in strategy to both the EU12 and a majority of the EU15 Member States.

[136] For further information refer to question 7.2 of the participant questionnaire (Table 22)

In Poland the absence of national programmes in any particular research theme has made the issue of the opening up of national programmes a premature matter. In Romania funding non-resident researchers has simply not been possible. Finally, little indication as to whether Italy funded or opened up its national research programmes to non-resident researchers could be gathered.

4. ERA-NET benefits for this thematic area

4.1 Direct and indirect benefits of ERA-NETs in this thematic area for national policy stakeholders and participants

The main benefits and impacts were:

- *networking and the creation of personal contacts from various agencies and among researchers.* This was a key benefit as many participants came to understand the operations and structure of the agencies involved in funding and formulating research agendas. Conferences and workshops hosted by the SSH ERA-NETs, such as by HERA, also facilitated such networking, which was perceived as paving the way to more collaborative research activity in SSH. This benefit was greatly derived from the participation of the key actors in SSH research;
- *knowledge transfer and cross-learning*, such as in devising a robust criterion for peer review, and in the case of Slovenia, in the construction of a funding agency through its participation in NORFACE. In addition NWO learned from its partners in HERA on how to conduct ex-post evaluation of projects and new methods for assessment of their impact. Learning how other funding agencies operate, specifically with respect to how funding is allocated and what may be funded, was found to be very beneficial to the funding agencies that participated in the ËRA-NETs as this could potentially help in the selection of future participants. Associated with this was knowledge about the national R&D system of participating countries as this too could further understanding of the kind of contribution that may be expected from a participating country. National policy makers also came to learn more about how other countries organise their R&D programmes as well as how EU programmes are conducted;
- *the potential of fostering greater coordination in research areas and possibly reducing duplication and fragmentation.* While the EU12 viewed this as a direct benefit from the ERA-NET Scheme, the EU15 Member States generally suggested this as a potential benefit. As evidenced by some Country Reports, the reduction of duplication in some area of research is very much determined, *inter alia*, by national R&D policies;
- *databases of key players in SSH and the kinds of research activities conducted in these fields.* These were found to be useful not only during the period of participation but it was also suggested that these databases would be helpful for the future planning of collaborative research in these fields;
- *raising the level of collaborative research*. NORFACE led the UK Economic and Social Research Council to "move" the issue of migration from a national to a European orientation. NORFACE also motivated Finland to study migration when previously it did not feature as a research area in the country's research agenda. In the case of EU-SEC a common European agenda for research in criminal justice and its direct relationship (or utility) to practice was cited as a distinct benefit. Norway and Romania was able to develop its interest in foresight through FORSOCIETY. In the case of Romania the Academy created a Centre of Excellence for the study on foresight;
- *providing new resources for researcher mobility*. Romania and Slovenia were particularly positive about this benefit from participation.
- *the engagement of researchers in collaborative projects is beneficial to the research base of the country*. Collaborative research in any field often generates positive benefits as new information on and analysis of a topic of research can enhance the quality of the research outputs;

- *new resources for SSH international activities*. This benefit was only offered by Slovenia but it is significant as it augurs a policy approach toward the importance of SSH research. However, researchers who were interviewed viewed additional funding, whether in the form of a common or virtual pot, as beneficial to them.
- Disbenefits:

The consensus was that the bureaucratic burden imposed on participating ERA-NET countries was quite heavy. Despite this consistent lament it was clear that the benefits obtained from participation compensated for the time consumed in complying with the bureaucratic demands. The question remains whether the spending of a considerable amount of the ERA-NET funding on bureaucratic reporting activities is warranted.

4.2 **Direct and indirect benefits of this ERA-NET thematic area for research beneficiaries**

A very limited number of interviews were conducted with researchers. This was expected since there have not been too many calls for research projects by the SSH ERA-NETs. The expressed views were:

- the ERA-NET projects provided a first time opportunity to participate in international research;
- it allowed the potential for developing a joint research platform;
- it brought the possibilities of additional **and** external funding;
- it enabled the benefit of collaboration.

5. European Added Value, relevance and efficiency

5.1 Additionality of ERA-NETs in this thematic area

Overall additionality can be attributed to SSH ERA-NETs through the forums created for networking and knowledge transfer in this area of research. They also helped to identify new and key players in the field of SSH, and in this way have contributed to the strengthening of this field of research. However this effect could also be the result of the Networks of Excellence funded by the European Commission under FP6, many of which were in the field of Social Sciences.

Below is specific evidence of additionality:

1. the reinforcing of the importance of international research collaboration in certain SSH topics, for instance, migration, Cultural Dynamics and Creativity and Innovation;
2. the promotion of synergy of SSH research topics in national programmes particularly for Slovenia;
3. the introduction of a new topic of SSH research, such as foresight for Norway and Romania (FORSOCIETY), and migration for Finland (NORFACE);
4. the increased profile of the EU in the United Nations via the participation of UNICRI (Italy) in EU-SEC.

The results from the participant survey, however, do not argue in favour of a strong impact on additionality. For instance:

5. Participation in SSH ERA-NETs had triggered transnational cooperation outside of the ERA-NET for 23 per cent of the SSH participants compared to 31 per cent across all thematic areas[137].
6. Participation in SSH ERA-NETs had not led to massive increases in the amount of programme budgets that were invested in transnational R&D projects outside of the SSH focused ERA-NET. 86 per cent of SSH participant reported no change had happened[138].

5.2 Perceived economic efficiency and relevance

The participants survey revealed that 100 per cent of respondents were satisfied with their overall participation in SSH ERA-NETs[139]. This survey response was corroborated by the majority of interviewees who expressed that participants in these ERA-NETs worked well together. The survey also reported that 98 per cent got as much as expected or more out of their participation in the SSH ERA-NETs[140]. This could refer to the networking and knowledge transfer that the ERA-NETs facilitated.

Similarly, with regard to the transnational element of the SSH ERA-NETs, 97 per cent of the survey respondents expressed their satisfaction[141]. These survey results are elements which demonstrate that the overall purpose of the ERA-NET Scheme, which was to foster transnational collaborative research across many EU members was achieved. National research communities in the Social Sciences field are very national but have a clear benefit in working internationally.

Findings relative to economic efficiency (or lack thereof) and relevance are summarised below:

[137] Refer to question 5.7 of the participant questionnaire annexed to this report (Table 11).
[138] Refer to question 5.9 of the participant questionnaire annexed to this report (Table 12).
[139] Refer to question 5.1 of the participant questionnaire annexed to this report (Table 5).
[140] Refer to question 5.2 of the participant questionnaire annexed to this report (Table 6).
[141] Refer to question 6.9 of the participant questionnaire annexed to this report (Table 7).

- the benefits outweighed the cost of participation;
- the resource intensity required in participation was not envisaged and 75 per cent of our survey respondents reported that the Commission reimbursement covered costs incurred. (Note that this point was made specifically about the bureaucratic demands. The question remains whether so much effort and funding should be spend on bureaucratic demands.)
- the good working relationship between the participants in the SSH ERA-NETs but there were many comments about the inordinate amount of time taken to decide on the topics/objectives of the joint calls;
- the need for clarity of objectives for joint calls;
- the lack of commitment of many task leaders.

6. Annexes: Stakeholders and materials consulted

Interview input from all SSH participants.

Selected online survey responses

Additional material consulted

http://www.dfg.de/en/international/international_research_policy/europa.html

http://www.forskningsradet.no/en/Newsarticle/Charting+a+new+course/1233558119853&kilde=f
http://www.nwo.nl/nwohome.nsf/pages/NWOA_6XYDNE_Eng

http://www.senternovem.nl/english/

7. Annexes: Participant survey results

The figures below show responses to the participant questionnaire, completed by 30 Social Sciences and Humanities ERA-NET participants.

Table 128 - How would you rate the degree of fit between your national R&D programme relevant to the theme and this ERA-NET?

	Social Sciences and Humanities	Total
Good fit	99%	**84%**
Poor fit	0%	**5%**
No answer	1%	**11%**

Participants in the Social Sciences and Humanities thematic field were more likely than the average to report a good fit between national programmes and the ERA-NET.

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

	Social Sciences and Humanities	Total
0 - 9999	0%	**4%**
10000 - 19999	0%	**2%**
20000 - 29999	0%	**3%**
30000 - 39999	1%	**2%**
40000 - 49999	2%	**2%**
50000 - 59999	1%	**2%**
60000 - 69999	1%	**1%**
70000 - 79999	17%	**6%**
80000 +	78%	**71%**
Not Answered	0%	**6%**

Responses from participants in the Social Sciences and Humanities thematic field indicated that the EC contribution for Social Sciences and Humanities was slightly higher than the average.

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

	Social Sciences and Humanities	Total
Yes	75%	**49%**
No	25%	**43%**
Don't Know	0%	**4%**
Not Answered	0%	**3%**

Participants in the Social Sciences and Humanities thematic field were much more prone to indicate that the EC funding had covered their participation in the scheme.

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

	Social Sciences and Humanities			Total		
	Yes	No	No answer	Yes	No	No answer
Coordination/clustering of ongoing nationally funded research projects	73 %	3%	24%	**59 %**	**19 %**	**23%**
Benchmarking and common schemes for monitoring and evaluation	74 %	2%	24%	**67 %**	**13 %**	**19%**
Multinational evaluation procedures (common evaluation criteria and methods of implementation	42 %	50 %	8%	**55 %**	**25 %**	**20%**
Schemes for joint training activities (so-supervised theses or common PhD schemes)	1%	69 %	30%	**12 %**	**49 %**	**39%**
Schemes for personnel exchange	3%	71 %	27%	**14 %**	**47 %**	**39%**
Schemes for mutual opening of facilities or laboratories	18 %	52 %	30%	**15 %**	**44 %**	**41%**
Specific cooperation agreements or arrangements	66 %	5%	29%	**43 %**	**24 %**	**33%**
Action plan taking up common strategic issues and preparing for joint activities	94 %	3%	2%	**75 %**	**11 %**	**13%**

Participants in the Social Sciences and Humanities thematic field were more engaged in most activities than the average. The exceptions were multinational evaluation procedures, schemes for joint training activities, and schemes for personnel exchange.

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

	Social Sciences and Humanities	Total
Yes	100%	**95%**
No	0%	**4%**
Not Answered	0%	**1%**

Participants in the Social Sciences and Humanities thematic field were more prone to agree that the participation in the scheme had been worthwhile as the average.

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

	Social Sciences and Humanities	Total
I got more out of it than I expected	10%	**41%**
I got out of it what I expected	88%	**51%**
I got less out of it than I expected	3%	**6%**
Not Answered	0%	**1%**

Participants in the Social Sciences and Humanities thematic field were much more prone than the average to report that they got out of the scheme what they expected and also much less prone to report that they got more out of it than expected.

Table 7- How satisfied are you with the overall level of transnational cooperation within this ERA-NET?

	Social Sciences and Humanities	Total
Satisfied	97%	**88%**
Unsatisfied	1%	**7%**
No answer	2%	**4%**

Participants in the Social Sciences and Humanities thematic field were more satisfied with the overall level of transnational cooperation in their ERA-NETs than the average.

Table 8 - To what degree has your participation in this ERA-NET influenced your country's national programme(s)?

	Social Sciences and Humanities			Total		
	No influence	Influence	No answer	No influence	Influence	No answer
Discontinuation of existing programme(s) in some theme(s)	77%	21%	2%	**53%**	**34%**	**12%**
Reducing duplication between National programmes in your country	77%	20%	3%	**47%**	**38%**	**16%**
Design of programmes with longer time horizon	72%	25%	3%	**42%**	**49%**	**10%**
Design of programmes with shorter time horizon	73%	24%	3%	**51%**	**38%**	**11%**
Bigger programme budgets for the theme	57%	40%	3%	**42%**	**46%**	**12%**
Smaller programme budgets for the theme	78%	17%	5%	**63%**	**13%**	**23%**
New programme assessment/evaluation criteria	42%	54%	4%	**40%**	**50%**	**10%**
New opportunities to enable transnational R&D activities in the theme of the ERA-NET	3%	96%	1%	**8%**	**86%**	**6%**
New eligibility criteria allowing funding of foreign researchers in the area	26%	68%	5%	**43%**	**42%**	**15%**
Existing programme(s) now covering new theme(s)	60%	38%	3%	**48%**	**38%**	**14%**
New programme(s) put in place in response to new theme(s) identified	72%	23%	5%	**51%**	**34%**	**15%**

Participants in the Social Sciences and Humanities thematic field were overall slightly more prone than the average participant to respond that their ERA-NET participation had not influenced their country's national programmes, with the exception of new opportunities to enable transnational activities and new eligibility criteria.

Table 29 - To what extent did your organisation have pre-existing relationships with participants in this ERA-NET prior to FP6?

	Social Sciences and Humanities	Total
Prior relationships	62%	**66%**
No prior relationships	36%	**26%**
No answer	2%	**8%**

Participants in the Social Sciences and Humanities thematic field were less likely than the average to have had prior relationships with other participants in their ERA-NET.

Table 10 - If there were prior relationships which of the following 6 statements best describes how these relationships evolved during your participation in this ERA-NET?

	Social Sciences and Humanities	Total
Strengthened	62%	**63%**
Weakened	0%	**1%**
No answer	38%	**33%**
No change	0%	**4%**

Participants in the Social Sciences and Humanities thematic field were more likely than the average to say that prior relationships remained unchanged.

Table 11 - Has your participation in this ERA-NET triggered transnational cooperation outside of the ERA-NET?

	Social Sciences and Humanities	Total
Yes	23%	**31%**
No	28%	**47%**
Not applicable	47%	**16%**
Not Answered	2%	**5%**

Participants in the Social Sciences and Humanities thematic field were much more likely than the average participant to say that this question did not apply to them.

Table 30 - 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?

	Social Sciences and Humanities	Total
Yes	3%	**13%**
No change	86%	**63%**
No answer	12%	**23%**

Participants in the Social Sciences and Humanities thematic field were much more likely than the average to claim that the participation had had no impact on investment in transnational cooperation outside of the ERA-NET.

Table 13 - If yes roughly what proportion of your programme budget was transnational before your involvement in ERA-NET?

	Social Sciences and Humanities	Total
0-25%	3%	**15%**
26 to 50%	0%	**0%**
51 to 75%	0%	**0%**
76 to 100%	0%	**1%**
Not answered	97%	**84%**

Participants in the Social Sciences and Humanities thematic area were less able than others to state what percentage of their programme budget was dedicated to transnational activities before the ERA-NET.

Table 14 - If yes roughly what proportion of your programme budget is transnational now?

	Social Sciences and Humanities	Total
0-25%	3%	**13%**
26 to 50%	0%	**1%**
51 to 75%	0%	**0%**
76 to 100%	0%	**1%**
Not answered	97%	**84%**

Participants in the Social Sciences and Humanities thematic area were similarly less able than others to state what percentage of their programme budget was dedicate to transnational activities after the ERA-NET.

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?

	Social Sciences and Humanities	Total
Very important	2%	**21%**

Fairly important	89%	**48%**
Not very important	1%	**16%**
Not at all important	3%	**5%**
Don't Know	2%	**4%**
Not Applicable	0%	**2%**
Not Answered	2%	**5%**

Participants in the Social Sciences and Humanities thematic area were much less likely than the average to state that their topic had been very important to them before joining the ERA-NET, but also more likely to state that it has not been very or at all important.

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

	Social Sciences and Humanities	Total
Very Important	2%	**24%**
Important	94%	**66%**
Not important	0%	**1%**
No answer	4%	**10%**

Also after participation in the ERA-NET, participants in the Social Sciences and Humanities thematic area were much less likely than the average to state that their topic was very important to them than the average.

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?

	Social Sciences and Humanities	Total
To some extent	23%	**29%**
Not at all	18%	**11%**
No answer	59%	**60%**

Participants in the Social Sciences and Humanities thematic area were less likely than the average to state that the change in the importance of the theme was to some extent due to ERA-NET.

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

	Social Sciences and Humanities	Total
Influence	91%	**63%**
No influence	6%	**18%**
No answer	3%	**19%**

Participants in the Social Sciences and Humanities thematic area were much more likely than the average participant to state that their involvement in the ERA-NET had had influence on national policy beyond the theme of the ERA-NET.

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

	Social Sciences and Humanities					Total				
	Helped	Hindered	No effect	Not Answered	Not applicable	Helped	Hindered	No effect	Not Answered	Not applicable
Change in programme management agency	1%	0%	69 %	2%	28 %	**7%**	**6%**	**36 %**	**4%**	**47 %**

New R&D management structure	18 %	0%	52 %	2%	28 %	**11 %**	**7%**	**35 %**	**5%**	**42 %**
For existing programmes, more strategic R&D programming/planning	4%	0%	70 %	2%	24 %	**29 %**	**0%**	**36 %**	**7%**	**28 %**
Externalisation of R&D programmes into agency/agencies	0%	0%	53 %	4%	42 %	**8%**	**4%**	**33 %**	**5%**	**49 %**
Setting up of new types of R&D programmes	22 %	17 %	52 %	2%	7%	**24 %**	**7%**	**33 %**	**5%**	**30 %**
Barcelona 3% targets	23 %	0%	25 %	2%	51 %	**16 %**	**1%**	**39 %**	**8%**	**36 %**

Participants in the Social Sciences and Humanities thematic area were much less likely than the average to state that more strategic R&D programming or planning helped the effects of their organisation's participation in the ERA-NET and more likely to state that setti9ng up new types of R&D programmes hindered these effects.

Table 20 - How strong are the links between this ERA-NET and Technology Platforms?

	Social Sciences and Humanities	Total
Strong	23%	**23%**
Weak	25%	**44%**
No answer	53%	**33%**

Participants in the Social Sciences and Humanities thematic area were less likely than the average to report that the links between their ERA-NETs and Technology Platforms were weak.

Table 21 - Does this ERA-NET overlap with other ERA-NETs in your country?

	Social Sciences and Humanities	Total
Yes, my ERA-NET overlaps with more than one ERA-NETs in my country	1%	**8%**
Yes, my ERA-NET overlaps with one other ERA-NET in my country	19%	**17%**
No overlaps	33%	**57%**
Don't know	47%	**13%**
Not Applicable	0%	**2%**
Not Answered	0%	**2%**

Participants in the Social Sciences and Humanities thematic area were less likely than the average to state that their ERA-NET overlapped with more than one ERA-NET in their country, and more likely to state that it overlapped with one other ERA-NET.

Table 22 - 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?

	Social Sciences and Humanities			Total		
	Some evidence	No evidence	No answer	Some evidence	No evidence	No answer
Higher quality projects generated at national level (i.e. higher quality proposals)	26%	68%	6%	**39%**	**44%**	**17%**
Higher quality projects funded at national level (through joint calls/programmes)	23%	70%	7%	**35%**	**42%**	**23%**
New types of research projects generated (i.e. reflected in proposals received)	26%	66%	8%	**38%**	**42%**	**20%**
New types of research projects funded (through joint calls/programmes)	42%	49%	8%	**46%**	**32%**	**22%**
New researchers (with no prior international or European experience) benefiting from joint activities	23%	24%	53%	**40%**	**27%**	**33%**
New researchers (with no prior international or European experience) benefiting from joint calls/programmes	23%	71%	7%	**41%**	**34%**	**25%**
Access to foreign research communities/groups not present in my country	28%	65%	7%	**54%**	**28%**	**18%**

Participants in the Social Sciences and Humanities thematic area were more likely to report no evidence of various ERA-NET national-level effects than the average, with the exception of new researchers benefiting from joint activities.

Table 23 - Did any of the following factors either help or hinder your organisation to exploit the full potential of its participation in this ERA-NET?

	Social Sciences and Humanities					Total				
	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	21 %	58 %	18 %	**0%**	3%	**16 %**	**46 %**	**13 %**	**12 %**	**13 %**
National cultures or research traditions	**0%**	73 %	5%	21 %	1%	**10 %**	**46 %**	**15 %**	**14 %**	**15 %**
National resources (staff time finances)	2%	55 %	39 %	3%	1%	**17 %**	**35 %**	**26 %**	**15 %**	**7%**
National administrative procedures (e.g. evaluation rules)	**0%**	10 %	22 %	67 %	**0%**	**6%**	**25 %**	**29 %**	**28 %**	**12 %**
National legal programme conditions (e.g. funding of non-residents IPR)	**0%**	29 %	18 %	49 %	3%	**4%**	**35 %**	**19 %**	**25 %**	**17 %**
EC administrative procedures or legal requirements	**0%**	23 %	69 %	3%	5%	**1%**	**34 %**	**36 %**	**12 %**	**18 %**
Perceptions of benefits	5%	51 %	19 %	4%	21 %	**15 %**	**28 %**	**16 %**	**13 %**	**28 %**
Engagement in other transnational initiatives (e.g. COST EUREKA)	5%	88 %	**0%**	**0%**	7%	**12 %**	**46 %**	**4%**	**4%**	**34 %**

Participants in the Social Sciences and Humanities thematic field were generally less likely than the average to state that various factors were an aid in exploiting the full potential of their participation in the ERA-NET, with the exception of national thematic programme priorities.

8. Annexes: Coordinator survey results[142]

The figures below show responses to the coordinators questionnaire in the theme of Social Sciences and Humanities.

6 of the 71 ERA-NETs belong to the SSH theme, representing 8% of all ERA-NETs. Table 24 below lists these ERA-NETs and indicates if they were covered by the field work

Table 24 - List of ERA-NETs covered within the theme

ERA-NET	Number of participants	Coordinator country	Start year
ERA-SAGE	11	Netherlands	2005
EU-SEC	12	UNICRI	2004
FORSOCIETY	19	Greece	2004
HERA	20	Netherlands	2005
ERA-AGE	13	UK	2005
URBAN-NET	16	UK	2006

Social Sciences and Humanities ERA-NETs were active in joint calls and joint programmes, but not in pilot actions. This is indicated in table 25 below. (NB: based on the Coordinator's survey which is not necessarily complete)

Table 25 - Details of joint activities within the theme

Joint activities	Number of joint activities	€ Virtual pot	€ Common pot	€ Mixed mode	€ Other	Total
Joint calls	8	0	28,920,335	0		28,920,335
Joint programmes	2	0	23,147,800	0	0	23,147,800
Pilot actions	1	-	-	-	-	0

Figures reported in table 25 only contain funding contributions for which coordinators were able to provide a clear breakdown of funding contributions by country. Hence figures in table 25 are conservative and robust estimates of contributions to joint calls, joint programmes, and pilot actions.

The overall total amounts reported by coordinators should be treated with caution since they were not necessarily broken down or attributed to countries. These are as follows:

- Joint calls
  - Virtual common pot: € 0
  - Real common pot: € 41,309,495
  - Mixed mode: € 0

- Joint programmes
  - Virtual common pot: € 0
  - Real common pot: € 28,230,000
  - Mixed mode: € 0

- Pilot actions

[142] 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)

- Virtual common pot: € 0
- Real common pot: € 0
- Mixed mode: € 0

ERA-NET EVALUATION

SD22: Thematic Report on INCO

The following document provides the structure for the thematic report on ERA-NETs in the International Cooperation field.

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[143] in 15[144] 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 theme. 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.

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

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

Table of Contents

1. Executive Summary - Overview

Q1 – Impact on Research Landscapes

- Setting up an ERA-NET in the field of international scientific cooperation was motivated by the absence of similar initiatives at national level and the lack of attempt to coordinate national bilateral programmes with international participation by the European Commission.

- For the majority of the EU15 Member States, the scheme had a limited impact on national research landscapes.
- Activities, however, such as mapping the relevant field, was helpful in avoiding overlap and duplication in areas where there is a multiplicity of "donors" and potential sources of funding, and where policy making is shared by several partners.
- The scheme generated some coordination of national programmes in the agricultural research field (ERA-ARD only)
- For EU12 Member States (e.g. Romania, Slovenia), there was some impact on bilateral agreements/schemes through increased focus on the Western Balkans region.

Q2 – Structuring effect on specific research areas or fields

- In the large EU15 Member States[145], there was no discernible structuring effect on the International Cooperation theme as a result of the ERA-NET Scheme.
- Many of the participating project partners in the international co-operation ERA-NET projects did not plan to open up bilateral programmes by replacing them. Instead, the main driver to "open up" was the creation of new networking and funding opportunities for their national research communities. However, this did not contribute to the overall ERA-NET objective of reducing research funding programme fragmentation, but specifically in the case of SEE-ERA-NET, it instigated policy dialogues between the European Union member states and targeted regions outside the EU, which led to the creation of a EU Steering Platform for Research collaboration with all the six West Balkan countries' government.

- Through the scheme, some smaller countries (e.g. Netherlands, Slovenia, & Finland) developed a new approach toward the advancement of their activities with China, which hitherto, had been fragmented.
- The scheme spurred some EU12 Member States (Slovenia and Romania) to develop specialisation in agricultural research (via ERA-ARD).

Q3 - Direct benefits and indirect benefits

- Networking and establishing closer personal contacts with similar organisations or those with similar interests and priorities was a vital benefit for policy-makers and academies (CO-REACH and ERA-ARD).

[145] For instance, Agricultural research for development has been a long-standing policy for both the UK and France; developing S&T relations with China has been undertaken by UK academic institutions for more than five years ago and continues to be a significant activity by UK research and funding agencies.

- Learning what other Member States were doing in International Cooperation was beneficial (ERA ARD and CO-REACH).
- Learning how other Member States had organised and pursued International Cooperation was beneficial (ERA ARD and CO-REACH).
- The ERA-NET targeting all the new democracies in the West Balkan region resulted in the implementation of more bilateral agreements and funding programmes between the single ministerial project partners (SEE-ERA-NET).

- The ERA-NET scheme brought more coherence and streamlining to national programmes and raised the profile of agricultural research in Europe and internationally (ERA-ARD).
- There was some value in setting up an advisory body, such as the Special Advisory Group for ARD, to better meet the requirements of targeted non-European communities (ERA-ARD).
- CO-REACH led to the creation of a platform for further collaborative effort after the end of CO-REACH. This collaboration was not perceived to be within the ambit of the ERA-NET Scheme.
- Projects targeting China, Latin America and Southeast Europe (CO-REACH, EULANEST AND SEE-NET), provided for the first time opportunities to exchange information about their national funding programmes and funded projects, and a common forum for discussing joint initiatives. Equally importantly, the participants learned about the different approaches for evaluating, monitoring programmes and assessing project applications.

- All the ERA-NETs created studies on existing policies and funding opportunities, and mappings of the R&D landscape, in the respective target regions outside Europe. They also explored the possibility of joint future collaboration.

- Some projects invested national budgets for funding new multilateral research collaboration projects (e.g. SEE-ERA-NET, ERA-ARD, CO-REACH);
- Joint funding programmes were drafted and were partly implemented (ERA-ARD, SEE-ERA-NET).

- Political EU dialogue platforms with third countries' participation were created, for instance, one SEE-ERA-NET outcome was the EU Presidency’s initiative to implement the Steering Platform on Research for the Western Balkan Countries

- Some participants in the SEE ERA-NET consortium learnt how to participate productively in transnational collaborative research activities.

Q4 – Opening up of national programmes

- National participation in the International Co-operation ERA-NETs had been impressive resulting from the belief that some form of knowledge exchange would result from it that could potentially have some impact on their national programmes.
- National laws and regulatory constraints have hindered the opening up of national programmes in international co-operation. Some noticeable exceptions were as follows:
    - At the UK non-Governmental level, such as the Royal Societies, which are independent academies, there was funding for their International Co-operation programs for non-nationals. These were grants or fellowships for visiting foreign scholars or visiting post-doctoral researchers to the UK.
    - Slovenia allowed foreign nationals and organisations to participate in their programmes at their own expense.

Q5 – Lessons learned

- A main lesson learned for future ERA-NETs in International Cooperation (or any other theme) was the need for clarity in the objectives of the ERA-NET. Narrowing the focus of the research topic could also have helped to avoid oversubscription to a joint call.
- Participation in an FP6 ERA-NET consortium was restricted to European programme owners and programme managers, and therefore excluded the direct participation of Third Country organisations. An exception to this rule was the SEE-ERA-NET project in which programme owners of the West Balkan countries participated directly. In all other cases, extra mechanisms had to be put in place to involve regional and sub regional actors from Third Countries in the ERA-NETs' discussions. These led to Third Countries' representatives participating as observers or as experts in workshops.[146]
- Mapping the relevant field is crucial for national programme owners to avoid overlap and duplication in areas where there are a multiplicity of "donors" and potential sources of funding in regions such as Latin America or the Balkan Countries. Similarly, where strategy making is shared by several other stakeholders such as International Non-Governmental Organisations (UN organisations), investors/banks (the World Bank, the European Bank for Reconstruction and Development), or aid progamme owners, such mapping is also vital to helping the avoidance of duplication.
- There was a need for unambiguous terminology for use in the ERA-NET, for example, the meaning of project, programme and mobility funding. For one partner, project meant the same as programme. For another R&D funding only meant funding researchers; for another member, R&D funding could have meant funding "15+ researchers' salaries." Hence the need for a glossary of terms.
- The selection of policy-experienced and/or knowledgeable participants could have substantially assisted in the management of the ERA-NET.

[146] We have since been informed by the European Commission that as one of the lessons learned from this evaluation exercise, FP7 has opened the doors to Third Countries' programme owners to give them the opportunity to speak directly with their European counterparts.

- Commitment by participants to the ERA-NET and responsibility for the success of the ERA-NET was deemed as important.
- A directory of the different activities undertaken by participants at national level would have been useful in order to understand how these activities were being undertaken and the parties who were undertaking them.
- Information overload resulted in difficulties to identify common issues and to devise a common strategy to achieve desired objectives.
- Participants wished that "future EU instruments could build on existing bilateral agreements."
- International Cooperation ERA NET consortia reflected a big disparity in the ERA-NET partners. Most of these ERA-NET consortia consisted mainly of national ministries and less of funding agencies. Given the international character of these ERA-NETs (e.g. ERA-ARD), they often involved different ministries from the participating state (Ministry of Foreign Affairs, Ministry of Education and Research, Ministries of Development, etc.). Each of these ministries has its own agenda; challenges arise from the differences between the strategic interests of, for example, a ministry responsible for internal economic affairs and a ministry charged with international aid and development. Other ERA NET consortia (e.g. CO-REACH) involved the participation of academies of science, science councils, single national agencies as well as single (external) international bureaus for ministries.

- It was also apparent that the international cooperation dimension of the ERA-NET Scheme did not attract regional authorities and/or programme owners in Europe as opposed to national stakeholders.

2. ERA-NET Thematic context

2.1 ERA and national programmes in the thematic area

In large EU15 countries national policies with regards to international cooperation was already well established prior to the ERA-NET scheme. These countries considered INCO ERA-NETs as vehicles to better implement national policies by involving other relevant and interested European countries and promote this research field at a supranational level (ERA-ARD). These ERA-NETs were aligned with national policies of large EU15 Member States[147].

EU15 small countries regarded geographical INCO ERA-NETs as a means to strengthen their cooperation with specific geographical regions outside the European Union.

EU12 and EU15 countries were interested in extending pre-existing bilateral agreements with specific regions to multilateral agreements and/or actions by participating in multinational joint activities and research projects.

The impact on national programmes of INCO ERA-NETs was relatively important as demonstrated by the Participant survey results[148]. The degree to which participation in INCO ERA-NETs have influenced country national programmes was significantly above the thematic average in terms of discontinuation of existing programmes (58% as opposed to 34% across all themes), existing programmes covering new themes (58% as opposed to 38% across all themes), bigger programme budgets for the theme (57% as opposed to 46% across all themes) and new programmes put in place (42% as opposed to 34% across all themes).

United Kingdom

The UK Department for International Development's (DFID) remit is to provide international assistance to developing countries. It fulfils this remit through a number of activities and often on a bilateral basis. Scientific and financial aid is one of the key instruments of UK's policy in international cooperation. DFID also works with multilateral organisations, such as the European Union, the World Bank and the United Nations. International financial assistance is granted on a government-to-government level and rarely ever directly to individual projects. DFID, however, can award funds directly to UK and international research councils, and public research institutes with the aim of supporting research.

DFID was a participant of ERA-ARD, which was aimed at promoting agricultural research for development and coordinating efforts in this area. Sustainable agriculture was and still is a central plank of DFID's economic growth agenda. In 2006/7 DFID invested over £30 million in research on sustainable agriculture – including fisheries and forestry. In December 2005, DFID also produced a policy paper on "Growth and poverty reduction: the role of agriculture," which declared that agriculture was a key part of the Department's efforts to reduce global poverty. At the heart of this policy was the role of "agriculture for development."

DFID channels £20 million a year to the Consultative Group on International Agricultural Research (CGIAR), and is the third largest contributor. The CGIAR is a strategic alliance of members, partners and international agricultural centres that mobilises science to help reduce poverty[149]. Its members involve developing countries, such as Peru, Nigeria, Morocco, and Kenya, and developed countries, such as France, Germany, Sweden, Canada, Israel and the U.S.

[147] In some cases, INCO-ERA-NETs have influenced the formulation of national strategies. For example SEE-ERA-Net certainly lead to a new political approach towards South-Eastern Europe in Germany. In this case, also extra national money was raised for cooperation with the target area, money that otherwise would not have been calculated for the budget for this region.

[148] Please refer to the participant survey results in the annexes (Table 8).

[149] For further information please refer to http://www.cgiar.org

Furthermore DFID has continuously been involved in the European Initiative on Agriculture for Development (EIARD) [150], which focuses specifically on agriculture for development. It was launched in 1994 when France held the Presidency of the Union and in June 1995, the European Commission proposed a European Coordination Group (ECG) to implement the Initiative, which would improve coordination between the Member States and the Commission[151].

Not surprisingly, national policy makers and participants in ERA-ARD thought that the theme was well-aligned with DFID's policy and research agenda. While ERA-ARD reflected UK national priority, the participant stated that ERA-ARD had not had much impact on UK national policy. Nonetheless, the UK's interest in participating in ERA-ARD was driven by a belief that it had as much to contribute to promoting wider interest in agricultural research as it had as much to learn about the activities of the participating members.

In CO-REACH, the UK participants were the Royal Society and the British Royal Society of Arts. In this particular area of international co-operation, UK's national priorities were and are still to increase links with China and to learn more about China, with the aim of trying to align better the processes for working with the country, particularly in S&T issues.

The Royal Society and the British Royal Society of Arts are not research councils and do not undertake R&D, although they have funding schemes, which are aimed primarily at facilitating and supporting researcher mobility and exchange, as well as granting fellowships. The two organisations joined CO-REACH because (1) it complemented the planned Chinese activities of the Society; (2) participation in CO-REACH provided opportunities to learn more about China; (3) it provided an opportunity to get better acquainted with European partners who have offices in China; and (4) it offered a potential expansion of networks with European academies and government agencies seeking to promote research activities in China.

France

In France, the Ministry of Foreign Affairs was and is in charge of defining the strategy on International and European affairs. The Ministry of Education and Research also defines the strategy to engage in transnational research in conjunction with the Ministry of Foreign Affairs. France mainly invests in international scientific co-operation with French-speaking countries in Africa and the Mediterranean with some activities in Latin-America. Their strategies are then implemented by Research Performing Organisations and Universities (Labs). These responsibilities led the two Ministries to participate in EULANEST, which was a geographically-focused ERA-NET. The recently formed Agence Nationale de la Recherche (ANR – French Research Agency) participated in EULANEST as well but it is to be noted that this research organisation do not count INCO as one of its thematic priorities.

France, as with the UK, regards the field of agricultural research for development as a key policy area. Several research institutes are involved in the field such as CIRAD, INRIA, IRD as well as three Ministries[152]. The Ministry of Education and Research, Ministry of Agriculture and the Ministry of Foreign Affairs were involved through the Commission for

[150] 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.

[151] For further information please refer to http://www.eiard.org/introduction.html

[152] 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 organisations 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.

international co-operation and agricultural research through an entity that coordinates research organisations in this specific domain in France (e.g. CIRAD, INRIA, IRD) and which was especially set up two years ago. The French Ministry of Education and Research was involved in ERA-ARD because of its strategic interest in the field of Agriculture and International Cooperation. France has also been an active member of EIARD since its inception.

As noted above, agricultural research for development is a key policy objective for France in its international co-operation agenda. The key ministries involved in international co-operation are the Ministry of Education and Research, Ministry of Agriculture and the Ministry of Foreign Affairs. Several research institutes are also involved in the field such as for instance CIRAD, INRIA, and IRD.

Before the start of ERA-ARD, France was already active in the EIARD[153], 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[154]. CIRAD has been active in the field for more than 20 years. France dedicated €217m to this field of research in 2005. CIRAD was the Coordinator in ERA-ARD.

EULANEST was built on the achievements of the previous SSA INCONET (contract ERAS-CT-2004-011821). This had created a network of EU countries interested in coordinating their national activities on international scientific co-operation between the EU and Latin America. Thus EULANEST was seen by France as another forum to continue this line of co-operative activity.

Finland

In Finland, a variety of themes are pursued as part of the research agendas of the Academy of Finland and Science and Finnish Funding agency for Technology and Innovation. For example, the Academy of Finland covers four research councils and the focus is to give opportunities to Finnish researcher by preserving the equality between all the disciplines. The Finnish Funding agency for Technology and Innovation focuses on applied research where the key is to provide utility of the research to business and industry through academic-industry research collaboration. The focus here too is not on thematic priorities. Instead research, whatever the themes may be, is conducted across themes.

Resulting from this organisational structure, the Finnish participant claimed that the ERA-NET Scheme had had a minimal effect on how Finland organises its research agendas. However, as with several countries, developing S&T/R&D relations with China is of interest to Finland. As far as CO-REACH is concerned, this ERA-NET was a timely mechanism to support this interest as well as to learn from other participants how and what they were undertaking to develop this relationship.

Finland was motivated to participate in CO-REACH to gain access to China and viewed this ERA-NET as a vehicle to strengthen its existing bilateral agreements with China. As with several countries, establishing stronger relationships in R&D or business with China has become an important policy objective, and in this, Finland aspires to be a main player in this activity.

The Netherlands

As explained above, CO-REACH had catalysed a new approach of the Netherlands to the development of R&D activities with China. When such development was previously conducted discretely by the Ministry of Education, Culture and Science, KNAW and NWO, there was one combined approach. This new approach inspired by developments in CO-REACH has meant that the Netherlands' has a "joined-up" approach to advance its Chinese activities even through participation in CO-REACH has not affected the country's national R&D programmes and policy.

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

There are three key actors in the development of Dutch-Chinese relations. The three are the Ministry of Education, Culture and Science, NWO (the Netherlands Organisation for Scientific Research) and KNAW (The Royal Academy of Arts and Sciences). Interviewees claimed that the KNAW initiated CO-REACH and saw it as a good opportunity to co-operate with NWO who also participated in the ERA-NET. The two organisations saw the ERA-NET Scheme as a timely opportunity to learn from other countries in how they were organising and conducting their Chinese activities in S&T.

Portugal

Over the recent past, Portugal has developed a strong focus on the internationalisation of its research community. INCO ERA-NETs corresponded with a number of bilateral and multilateral agreements the country had concluded previously such as individual agreements with four different US universities. Participation in the ERA-NET Scheme provided an additional avenue to broaden its transnational collaborative research activity. Portugal's participation in EULANEST grew from the country's strong (although recent) research interest and capability. There were however no national programmes dedicated to any particular theme but EULANEST reflected a Portuguese tradition for broad and general research programmes, where research is funded on an overall competitive basis rather than one that is targeted at specific themes.

Romania

Before FP6, Romania was only involved in transnational co-operation through bilateral agreements and across all thematic areas and had particularly good relationships with Austria, Germany and Greece. It had however participated in FP5 with mixed results. Special measures of the European Commission (e.g. dedicated calls for New Accession States) helped Romania to increase its participation in FP6 projects.

The rationale for Romania participating in SEE-ERA-NET, a networking project aimed at integrating EU Member States and South-eastern European countries through linking of research programmes, was to further exploit transnational co-operation opportunities and extend bilateral agreements with the aim of developing international opportunities. Moreover, the ERA-NET Scheme afforded an opportunity for additional funding resources for more focused collaborative research. One could also argue that in the case of Romania or any New Member State multilateral research programmes, such as the ERA-NET Scheme, could complement bilateral programmes to facilitate bigger projects.

Established in 2005, the Romanian National Authority for Scientific Research managed the programme dedicated to international co-operation, which was started in 1999. Part of the programme entailed the management of 15 bilateral co-operation programmes. In 2002 it represented 10% of the budget of the National RTD plan and less than 5% in 2006. The international programmes that Romania participated in at international level (e.g. FP6, FP7, Eureka, ETP, JRC, EUREKA, and bilateral co-operation) were publicly financed.

Slovenia

During FP6, Slovenian national policy-makers appeared to have grappled with what the country's research agenda should entail, although the choice of national R&D themes appeared to have reflected trends in the EU as well as domestic priorities. Yet it is interesting to note that in the ERAWATCH "research inventory" Slovenia had formulated in 2005 its "National Research and Development Programme" for the period 2006-2010. This document specified the country's R&D policy, its objectives and priorities, the stakeholders, scope and means of financing and the evaluation criteria[155]. The impression that Slovenia appeared to be somewhat ambiguous in its research agenda could be explained by the fact that budgetary constraints the country is experiencing have somewhat hindered the full implementation of the National Research and Development Programme. For instance, according to ERAWATCH, the public budget for Slovenia's R&D had not been able to increase at the rate of growth of GDP during the past few years, and only accounted for 0.54 per cent of the country's GDP in 2006. In 2001, however, the R&D

[155] (http://cordis.europa.eu/erawatch/index.cfm?fuseaction=policy.document&uuid=7D87A9BB-B3F1-0959-F567E3A894EDC30B).

budget was 0.6 per cent of GDP[156]. Nonetheless, Slovenian participation in SEE-ERA-NET was in some ways an extension of existing bilateral co-operation with the Western Balkan countries.

156

(http://cordis.europa.eu/erawatch/index.cfm?fuseaction=ri.content&topicID=612&countryCode=SI&parentID=12).

Norway

Norwegian participation in CO-REACH, as with Finland, was driven by its interest in developing S&T relations with China and learning from other participating countries how this line of activity was being organised and conducted. Generally outward-looking and international in its research activities, CO-REACH also provided an opportunity to be involved in an international network targeted at developing a research-based relationship with China. Participation in the ERA-NET Scheme however was not perceived or expected to have much impact on national R&D programmes and policy, given the way research themes via the Research Council of Norway is organised[157].

2.2 **ERA and structuring effect in the thematic area**

Overall, the INCO ERA-NETs did not have much structuring effect on the Member States and this despite the dramatic increased in importance of the theme of international cooperation over the period[158] and despite strengthening of existing relationships[159]. This is not so surprising because international co-operation in all its forms is a key plank of national policies and priorities[160]. For many countries bilateral or trilateral agreements appeared to have had more influence than ERA-NET participation except in the case of SEE-ERA-NET[161].

There were four horizontal INCO ERA-NETs out of the 71 ERA-NETs. These were ERA-ARD, CO-REACH, EULANEST and SEE-ERA-NET. The first one was focused on Agricultural research in the developing world. The latter three were geographically focused ERA-NETs on China, Latin America and South-eastern Europe respectively.

Beyond the INCO ERA-NETs, the ERA-NET scheme had quite a success in attracting participants from third countries. The following organisations have been involved to some degree in ERA-NET related activities[162]:

ERA-NET	Theme	Africa	Europe	Middle East	Americas	Asia	International
BIODIVERSA	Environment	Botswana					UNESCO, Diversitas
BONUS	Environment		Russia				
CIRCLE	Environment		Russia	Israel			
ECORD	Environment				USA	Japan, Korea, China	
EUROPOLAR	Environment		Russia		Greenland		
URBAN-NET	Environment						UN
ERA-AGE	Life Sciences			Israel			
ERA-IB	Life Sciences			Israel			
SAFEFOODERA	Life Sciences				Brazil		
ERASysBio	Life Sciences		Russia				
CoCanCPG	Life Sciences				Canada		
ERA-SAGE	Social Sciences and Humanities			Israel	Canada		
EU-SEC	Social Sciences and Humanities						UNICRI
NORFACE	Social Sciences and Humanities				Canada		
WOODWISDOM-NET	Industrial Technologies and SMEs				Canada	China	
ASTRONET	Fundamental Sciences						NOTSA, ESO

[157] For further information please refer to http://www.forskningsradet.no/en/Newsarticle/Charting+a+new+course/1233558119853&kilde=f)

[158] Refer to the results from the participant survey. For instance, before ERA-NET involvement, 65% of participants rated the theme as "high" as opposed to 69% across thematic areas. After the ERA-NET participation these figures evolved to 97% and 90% respectively (Tables 15 and 16).

[159] Refer to the results of the participant question (See Table 10))

[160] This is best demonstrated by the participant survey results. A majority of participants national factors as a constraint to exploit the full potential in their participation for instance national thematic programme priorities (45% vs. 25% overall), national cultures or research traditions (55% vs. 29%), national administrative procedures (68% vs. 58% overall), national legal programme conditions (61% vs. 44%) (See Table 23),

[161] The participant survey results also demonstrate that participants in INCO ERA-NETs had pre-existing relationships prior to FP6 to a higher degree than for other themes (71% vs. 66% across all thematic areas) (See Table 9)

[162] Note that the list as described in the table might not be exhaustive. It was based on the results from the coordinator questionnaire

The best example of the involvement of an International Organisation in an ERA-NET can be demonstrated by the EU-SEC ERA-NET, although it is in the field of the Social Sciences and the Humanities (SSH). Yet its transnational characteristic cannot be underestimated in the general area of International Co-operation. In EU-SEC, the Italian participant (coordinator) was the United Nations UNICRI (United Nations Interregional Crime and Justice Research Institute), which has 70 regional staff in Europe (50 in Turin, 27 in the Lab). Its role had been to assist intergovernmental, governmental and non-governmental organisations to formulate and implement improved policies in the field of crime prevention and criminal justice. However, given that this field of research is in the common interest of the EU, if not the world, one can say that this SSH ERA-NET distinctly manifests the high level of transnational co-operation and collaborative research.

ERA-ARD

The structuring effects of ERA-ARD on EU15 Member States were limited because these Member States have long been engaged in agricultural development research. However, some evidence of a structuring effect by this ERA-NET may be seen in the coordination of existing national programmes through joint activities. For example, common approaches and programmes have been made in relation to (1) capacity development of human resources; (2) agri-food chain safety; and (3) the development of a new evaluation method for international research.

ERA-ARD reflected one of UK's long-standing national priorities in international co-operation – financial agricultural assistance to developing countries. The unequivocal view was that the ERA-NET Scheme had not had, and likely will not have, any structuring effect on this policy area in the UK.

ERA-ARD also did not experience a structuring effect on France's national programmes on international co-operation, including agricultural research. At the policy level, the French policy stakeholder argued that the INCO ERA landscape was still fragmented. "There is [sic] too many national programmes and there is still a need for common programming and to work together." Thus the structuring effect at the ERA-NET level has been very limited.

However, the structuring effect on some of the EU12 Member States is discernible. ERA ARD provided the opportunity for EU12 Member States to "think more" about agricultural research. For instance, Hungary and Slovenia had learnt more about agricultural research and hence developed greater competence in this research area. As ERA-ARD had joint activities with African, Asian and South American countries, the Hungary and Slovenia have begun to award fellowships to African students.

SEE ERA-NET

The ERA-NET Scheme had some structuring effect on New Member States. Romania for instance was able to extend co-operation from the bilateral level to the multilateral level. Building on previously established R&D networks with Austria, Germany and Greece, Romania used SEE ERA-NET as an opportunity to enlarge its existing networks into a larger transnational network. SEE ERA-NET also facilitated further development of Romania's bilateral schemes with the West Balkan region.

In Slovenia, participation in SEE ERA-NET helped Slovenia build closer relations with other EU Member States and importantly, helped to open up the national research programmes to non-resident researchers. The reason is that SEE ERA-NET was closely aligned to an existing work programme and to the participant's research focus, which was Western Balkans Integration. Furthermore, there were already active bilateral co-operative arrangements between Slovenia and the West Balkan countries. While participating in the ERA-NET scheme has added depth to this area of research, SEE ERA-NET augmented Slovenia's research in Southeast-eastern Europe.

The EU12 Member States, particularly Romania and Slovenia regarded the SEE ERA-NET as an opportunity to extend their hitherto bilateral co-operative activities towards further internationalisation. Through this structuring effect on their research activities, they also used it to further grow and enlarge bilateral relations. Overall and importantly SEE ERA-

NET provided a timely opportunity for the national ministries of these countries to work productively together after the Balkan wars.

Given Romania and Slovenia's focus on bilateral relations and interests in internationalising their research activities, one could surmise that the EU15 Member States could have benefited from the bilateral arrangements already established by these countries (or more generally from other EU 12 bilateral agreements in other areas of research). For instance, EU15 Member States could have obtained more opportunities to engage with the Balkan countries and Southeast-eastern Europe. Thus there would have been mutual benefit.

Last but not least, we can surmise that the political aspect was of some importance to the consortium. After the bloody wars and instabilities in the West Balkan region, SEE-ERA-NET's could be regarded as a "peace-keeping measure." This aspect could be seen in the earmarking of national budgets for regional collaboration by the relevant ministries of Serbia, Bosnia, Croatia, the former Yugoslav republic of Macedonia, Albania and Montenegro. Such a tangible measure to promote regional collaboration reflects these countries' efforts to not be merely aid-receiving countries from donors, such as the European Commission, international NGOs or banks.

CO-REACH

Another ERA-NET involved in International Co-operation was CO-REACH, which focused on research programme coordination between Europe and China in the Natural Sciences and Social Sciences. CO-REACH worked with major Chinese scientific organisations, such as the Ministry for Science and Technology, Ministry of Education, the Chinese Academy of Sciences, the National Natural Science Foundation of China, and many others. Its aim was to promote effective networking with its Chinese counterparts by giving regular updates about CO-REACH activities and results and, where appropriate, facilitate their participation in CO-REACH activities. This ERA-NET involved a diversity of government participants, research organisations and academies.

Here it may be interesting to note that working with the Chinese in CO-REACH was rather bewildering to European participants. In the first instance it was difficult for the Chinese to understand the concept of an ERA-NET. Secondly, the Chinese as a rule did not fund interdisciplinary research as each Chinese funding agency had a specific disciplinary mandate. Furthermore, Chinese funding agencies were not autonomous and needed to receive approval from the Ministry of Science and Technology or Ministry of Education to fund any international project. Since the philosophy of the ERA-NET scheme was not clear to Chinese participants, it became difficult to pinpoint who should have participated in joint activities. Hence Chinese participation in CORE-REACH had been less than anticipated. In the Social Sciences, however, communication, according to one participant, worked better and CO-REACH is now working with the Chinese Academy of Social Sciences. This success was achieved through personal links of the British Academy of Arts who had presented a set of mechanisms for Social Sciences research to the Chinese.[163]

In the UK, no impact on UK activities related to China was identified or anticipated from British participation in CO-REACH.

In the Netherlands, CO-REACH had some tangible structuring effect. Through CO-REACH the Netherlands developed a new approach to advancing its Chinese activities.

Furthermore the Netherlands, as a small country, likely did not have the resources to cover the range of interests and opportunities that China could offer. Thus a fragmented approach to developing relations with China by such a small country was quickly realised to be inefficient and ineffective by the three bodies. This approach also meant that funding for Chinese activities was dispersed in these bilateral activities. These, added to the expressed concern by the Ministry of Education, Culture and Science, over how bilateral Dutch-Chinese relations were being conducted, further animated the Dutch initiative in Co-

[163] The participant was unable to provide details of what these mechanisms were.

REACH. According to the CO-REACH coordinator, this new approach towards China was a direct outcome of the ERA-NET.

Finland's participation in CO-REACH was not linked to any particular programme. Instead in Finland, a variety of themes were pursued as part of the research agendas of the Academy of Finland and Science and the Finnish Funding agency for Technology and Innovation[164]. Because of the organisational structure and set-up between these two main players, one Finnish participant claimed that the ERA-NET Scheme had had minimal effect on how Finland organises its research agendas. However, as with several countries, developing S&T/R&D relations with China is of interest to Finland. Hence CO-REACH was a timely mechanism to support this interest as well as to learn from other participants how and what they were undertaking to develop this relationship.

In sum, insofar as the CO-REACH consortium members are concerned, this ERA-NET can be said to have been successful overall because all parties expressed a clear interest to continue the collaboration after CO-REACH. This collaboration is not perceived to be within the purview of the ERA-NET Scheme.

EULANEST

In France, Co-operation with Latin America is reflected by eight bilateral schemes that the country has with the region. However there is no evidence that EULANEST had any structuring effect on how France has organised and conducted its research activities with this region.

The Portuguese participant in EULANEST expressed that there was limited structuring effect on thematic areas in Portugal because Portugal's national R&D activities were not thematically organised. However, as their research activities were becoming increasingly more international in their outlook (see above), the ERA-NET Scheme provided a fitting opportunity for international collaborative research activity.

[164] For example, the Academy of Finland covers four research councils and the focus is to give opportunities to Finnish researcher by preserving the equality between all the disciplines. The Finnish Funding agency for Technology and Innovation focuses on applied research where the key is to provide utility of the research to business and industry through academic-industry research collaboration. The focus here too is not on thematic priorities. Instead research, whatever the themes may be, is conducted across themes.

3. ERA-NET funding considerations in the thematic area

3.1 Inputs into the ERA-NET scheme for this thematic area

Inputs into the INCO ERA-NET were mostly in terms of additional human resources for participating in joint activities. The results from the participant survey indicate that participant organisation had been able to cover their cost of participation with EC funding for 77% of the respondents; a figure significantly higher than for other thematic areas[165].

All four INCO ERA-NETs had launched joint calls which amounted to a total €7,807,500 (€6,977,500 to a virtual pot and €830,000 in mixed mode combination)[166]. The stark difference between monies for a virtual and mixed mode pot speaks to the observation that international co-operation is paradoxically "nationally oriented" in the sense that funding contributions in kind or cash are targeted to resident researchers.

The total budget for ERA-ARD was €3.5 million. EC funding generally covered the cost of participation of ERA-NET participants but as noted above, ERA-ARD had an extra-European dimension, which involved Africa, Latin America and Asia. ERA-ARD was not structured and neither suited for funding these participants. DFID contributed £170K to BBSRC, NERC and the ESRC (UK Research Councils) to fund a joint call in 2008 (out of total fund of €2 million) that helped the participation of these countries. In the main, however, this contribution was targeted at UK organisations.

As explained above, UK departments did not contribute funding directly to projects; funding monies were arranged on a government-to-government basis, such as in the Framework Programmes, or in the case of international co-operation and development, financial assistance was granted to a national research organisation or equivalent.

UK departments, however, did contribute to research projects via the relevant UK research council as explained above. They also could contribute directly to a project if a compelling case could be made, and if the benefits could be shown directly to benefit "UK Plc."

British participants did not have to reallocate time from their own workload to fit around the tasks incurred from participation in ERA-ARD and CO-REACH. In the case of ERA-ARD the UK participant spent about five percent of his time on ERA-ARD tasks and had outsourced the management and operation to a third party[167].

In CO-REACH the UK participant spent about 25 per cent of her workload on the ERA-NET's tasks and had the assistance of an existing staff member already helping with the Royal Society's "Chinese portfolio." So, the overlap of tasks helped to contain resources, which were adequately covered by the EC contribution to the cost of ERA-NET participation.

In terms of organisational set up, French ERA-ARD participants had tended to rely on their existing human resources already in place in Ministries, Agencies and Research Institutes. Intra-national coordination was difficult for this specific theme due to its broad nature.

The ANCS (Romanian National Authority for Scientific Research, see above) had to hire one person full time to only work on SEE-NET. This person required additional help at various stages of the coordination activity. The country however had participated in a pilot joint call in SEE-NET. Romania was not in a position to comply with the requirements of the joint call launched in 2008. Furthermore, contributing to a common pot was constrained by Romania's policy and legal system, since it was not always certain that the country could recover all the funding costs incurred. This principle of "juste retour" interestingly was also noted by another participant in another INCO ERA-NET.

[165] Please refer to the Coordinator survey results in the annexes (Table 3)

[166] Please refer to the Coordinator survey results in the annexes (Table 25)

[167] UK civil servants are not permitted to receive any monies from third parties for work that is performed as part of their work routine. This regulatory constraint had led several participants from UK Departments to outsource the operations and management of the ERA-NET, keeping only that part of the EC contributions to cover for ERA-NET travel and subsistence costs.

Regarding human resources input, the Finnish participant stated that participation was resource intensive and extra resources were mobilised for all the ERA-NETs. The Norwegian participant in one of the INCO ERA-NETs maintained that "too many resources were spent on working with problems rather than on common objectives." Still, participation in INCO ERA-NETs had expanded the country's international activities, although there was no indication of the Scheme having any structural effect on the way Norway organises its research activities.

A key Slovenian national policy stakeholder from the Ministry of Higher Education, Science and Technology believed that participation in the ERA-NET Scheme would eventually lead to bigger budgets for international collaborative research activities. The Slovenian participant also noted that from the outset, a total of 8 persons were recruited to participate in the various ERA NET schemes. EC funding to cover the cost of participation was spent on the wages of 2 PhD students. For the SEE ERA NET, a total of 39 man-months were granted by the European Commission, of which 25 percent were contributions in kind, i.e. work by existing staff. Although there was a specific budget for the ERA-NET Scheme, the money has yet to be made available and the country's participation has relied on loans from the Ministry.

In sum, the primary method of funding joint calls was through a virtual pot. As explained above, national laws and policies constrain the possibility of providing direct funds to collaborative projects in international co-operation.

3.2 Opening up considerations for this thematic area

No impact can be attributed to the ERA-NET scheme with regard to the funding of transnational research activities through national budgets. This had happened before and was attributable to pre-existing bilateral agreements and national policies. However, ERA-NET joint calls, joint programming or other joint activities appeared to have influenced participants' access to non-resident foreign research communities[168].

The chosen financing mode for the joint call implied that each country funded its own component of the transnational project. For instance, there is no evidence that the UK Government funded directly non-national researchers in its research programmes in international co-operation, except through development aid which was channelled directly to governments, their research institutes and research councils. However, as explained above, ERA ARD received indirect funding from Government via the relevant UK Research Councils.

One of the participating British Royal Societies involved in CO-REACH made it quite clear that the academy does not fund R&D in its international activities. Instead, as noted above, it funded the mobility of scholars, and this could somewhat stretch the concept of R&D. But if stretching mobility of scholars, that is, paying for visiting scholars to the UK could be treated as R&D collaboration, then this would be regarded as an opening of national research programs. As for contributing to joint calls, the Societies would consider contacting the relevant Research Council.

For France, funding of Southern (Africa, South America and Asia) partners was left to the national funding organisations and according to their own funding regulations.

The view from a French participant was that "in theory research performing organisations could fund research projects using common pots. However in practice this was not easy due to the national science strategies. Furthermore you needed sustainable policy instrument [sic] and mechanism [sic] to organise this. Funding research projects through common pots could be best achieved through inter-governmental mechanisms, open method of coordination (CREST, INTAS) as well as smaller initiatives (EFS- EURYI)."

However to ensure some degree of opening up any research consortium applying for the joint call in ERA-ARD, projects had to be transnational and had to consist of a minimum of

[168] For further information refer to question 7.2 of the participant questionnaire (Table 22)

three independent legal entities in partnership with three different countries of which at least two were from the ERA ARD partner countries and one from a country on the "DAC List of ODA Recipients". The research consortium had to be led by an institution in an ERA ARD Consortium member country.

Finland's involvement in CO-REACH was a strategic decision because the Academy of Finland, the participant, aspired to be an active player in European-China collaboration. A Finnish participant in this ERA-NET explained that the country's participation was driven by a belief that China would use participation in CO-REACH as an important signal of any country's knowledge of Chinese research activities. However, the ERA-NET Scheme has had little impact on how Finland organises or will organise its national R&D research programmes.

The Slovenian national policy stakeholder in SEE-ERA-NET particularly highlighted the collaboration with Croatian and other Balkan relatives as examples of the opening up of the Slovenian research programmes. In particular, there are existing close links to Croatian researchers and students that are already benefiting from the openness of Slovenia. This, however, is not believed to be motivated by the participation in ERA-NETs.

As noted above, Slovenia has opened up its national research programmes to non-resident researchers. This however does not mean that non-resident researchers are funded as they would have to provide for their own expenses. However, the Ministry of Higher Education, Science and Technology's budget is open to young PhD's and post doctorates from all countries. This measure was a laudable step toward the internationalisation of the country's research activities. Since the Slovenian National Research and Development programme was adopted before participation in the ERA-NET scheme, its impact on Slovenia's R&D programmes was somewhat limited. However, the participant conjectured that the Scheme will have more influence in the future.

In Romania, the funding of non-resident foreign resident was not possible for legal reasons.

3 ERA-NET benefits for this thematic area

4.1 Direct and indirect benefits of ERA-Nets in this thematic area for national policy stakeholders and participants

The INCO ERA-NETs discussed here can be divided into (1) non-regional – ERA-ARD and CO-REACH; and (2) regional – SEE ERA-NET and EULANEST. The benefits will be accordingly differentiated[169].

ERA-ARD

- For the UK, its participation helped in influencing the ERA-NET to take account of the views of stakeholders in the developing countries, including the EU12 Member States on agricultural R&D, and to stimulate and encourage them to think about agricultural R&D.
- The coordinated position on the international and national levels on the importance of agricultural research helped European actions in third countries to be more coherent and "joined up."
- The networking with and learning of the interests of participants was significant. Related to this was the useful knowledge gained from learning how other governments or organisations organised their International Cooperation activities with respect to the specific objectives of ERA-ARD.
- The advocacy role ERA-ARD played in helping to raise the profile and importance of agricultural research for development was important.
- Methodologies (for planning, monitoring, evaluation of international research) learnt from ERA-ARD could apply to the whole thematic area.
- ERA-ARD was a "stairway to go to the joint programming."

CO-REACH

- The increased understanding between European partners in building links with China, and how this activity was conducted, was a great learning experience.
- Networking was a major advantage.
- Since the majority of participants in CO-REACH had agencies in China the collaboration increased knowledge of their Chinese operations, which was useful.
- The creation of a directory mapping national activities in each of the participant countries was very informative.
- The participation "stimulated of an appetite" for European partners to look at other opportunities for collaboration beyond bilateral arrangements. For instance, one of the UK's participating Royal Societies is now arranging with the Netherlands Academy and the Chinese Academy of Sciences to work on a trilateral basis.
- CO-REACH generated an interest in opening up of non-funded activities with China, for instance, a workshop[170].

[169] One participant stated that Inco ERA-Nets overcame the lack of advanced instruments for third country cooperation in many member states and also of advanced competitive instruments in many third countries. Another benefit mentioned was the development of management skills of programme owners in many third countries, leading to the conclusion that the ERA-Net scheme provided an instrument for mutual learning and continuous improvement in this respect.

[170] It is to be noted that the joint call in Co-Reach led to a high number of positively evaluated applications which in the end resulted in an almost doubling of funding amount from the Chinese side (CASS)

- CO-REACH facilitated the first participation of KNAW (the Dutch Royal Academy of Arts and Sciences) in the Framework Programme. KNAW is in charge of international cooperation programmes with third countries.

EULANEST

- Participants learnt about the funding and policy instruments of other countries.
- EULANEST helped to create a common European position towards the Latin American countries it targeted.
- The ERA-NET also helped to reinforce the relevant national programmes for this region.

SEE-ERA-NET

- Knowledge developed, lessons learnt and experience gained as a result of ERA-NET participation, including the coordination of national programmes to avoid duplication of research were vital benefits.
- Networking opportunities with funding agencies and ministries and learning how other countries organise their research activity in international co-operation was highly beneficial.
- SEE-ERA-NET afforded opportunities to extend the number and nature of bilateral agreements/schemes.
- SEE-ERA-NET fostered the internationalisation of research activities beyond bilateral research arrangements.
- Participation in this ERA-NET led to a valuable understanding of how to make the best use of national legal framework to fully participate in transnational projects.
- The bringing together of the best research teams was a learning experience for Slovenia.
- For Slovenia, participation enabled the training of civil servants in coordinating and managing the ERA-NETs.

4 European Added Value, relevance and efficiency

5.1 Additionality of ERA-NETs in this thematic area

The results from the participant survey argue in favour of a modest impact in terms of additionality. For instance:

- Participation in INCO ERA-NETs triggered transnational cooperation outside of the ERA-NET for 41 per cent of the INCO ERA-NET participants compared to 31 per cent across all thematic areas[171].
- Participation in INCO ERA-NETs led to increases in the amount of programme budgets that were invested in transnational R&D projects outside of the INCO focused ERA-NET. 28 per cent of INCO ERA-NET participants reported that change had taken place as opposed to 13% across all ERA-NETs [172].

For the UK and France, participation in ERA-ARD did not have an impact in terms of additionality for the two countries, as international co-operation in agricultural research is a long-standing national policy. For the UK, participation in CO-REACH was beneficial but the development of relations with China would have continued even in the absence of CO-REACH, as already explained above.

For the Netherlands the participation in CO-REACH evidently helped the creation of a coherent approach toward the development of relations with China. As explained above, previous to this participation there were three discrete approaches toward this activity. Furthermore CO-REACH provided KNAW the first opportunity to be involved in a Framework Programme.

For Finland, CO-REACH enabled a large international collaborative group that would have been previously possible only with bilateral agreements. In particular, the mapping of each other's activities and producing a directory of national activities probably would not have happened without this ERA-NET.

For Romania and Slovenia it was clear that their participation in SEE-ERA-NET brought additional value. This ERA-NET facilitated the internationalisation of their research activities beyond their existing bilateral arrangements with the Western Balkan's region and South-eastern European countries. Equally apparent is what these two countries had learnt about agricultural research for development, knowledge that would not have been obtained as easily without ERA-ARD.

For the purposes of this Report, we have defined "added value" as the value attributed to the "product," in this case, the ERA-NET, that a "customer" (in this case the ERA-NET participant) was prepared to "pay" (in this case, in terms of time, effort and other related resources that the ERA-NET participant expended) because of the benefits obtained.

European added value can be seen in the consensus among participating country (e.g. "speaking with one voice") on relations with the Latin American region (EULANEST).

Added value from participation in CO-REACH was particularly expressed in terms of the increased opportunities in establishing closer and more personal links with ERA-NET participants who had set up agencies in China and learning how they operated in that country. Added value from CO-REACH may also be evidenced by the interest to continue collaboration with the partners after CO-REACH.

For ERA-ARD the establishment of a Southern Advisory Group (SAG) brought value for the general issue of international co-operation in sustainable agriculture. This group made sure that work programmes considered the requirements of the SAG beneficiaries since the

[171] Refer to question 5.7 of the participant questionnaire annexed to this report (Table 11).
[172] Refer to question 5.9 of the participant questionnaire annexed to this report (Table 12).

beneficiaries were outside of Europe. This was also viewed as a good practice and EIARD has decided to involve members of the Southern Advisory Group in its activities.

5.2 Perceived economic efficiency and relevance

The participant survey revealed that 100 per cent of INCO respondents were satisfied with their overall participation in INCO ERA-NETs[173]. This survey response was corroborated by the majority of interviewees who expressed that overall the benefits of participation have outweighed the costs associated with it. The survey also reported that 94 per cent got as much as expected or more out of their participation in the INCO ERA-NETs[174], a figure slightly higher than the average across all thematic areas. However, INCO ERA-NET participants appeared to be less satisfied about the overall level of transnational co-operation within this ERA-NET than the average across all thematic area (74% of satisfied participants as opposed to 88% overall)[175].

SEE ERA-NET had clear results and impact on participating countries[176] at all levels. ERA-ARD also seemed to have generated some good results mainly in terms in promoting the research field of Agricultural research for development across the ERA and abroad. For instance future INCO ERA-NETs could benefit non-EU countries such as those that participated in ERA-ARD.

As for CO-REACH while it had generated considerable benefits to the partners, there remained a question about the complexity and length of time required to deal with China in this ERA-NET. This therefore raises the issue of "economic efficiency" of the ERA-NET Scheme when dealing with China[177].

Joint calls were largely "financed" by a virtual pot and the processes involved in launching the joint calls were resource intensive. A participant suggested that INCO projects would best be funded via top-down schemes like FP7.

[173] Refer to question 5.1 of the participant questionnaire annexed to this report (Table 5).

[174] Refer to question 5.2 of the participant questionnaire annexed to this report (Table 6).

[175] Refer to participant questionnaire annexed to this report (Table 7).

[176] One of the best examples of this is Slovenia. Slovenia's participation in SEE-ERA-NET was viewed positively because it afforded an opportunity to meet and work with the experts in this field of research. Whether the ERA-NET Scheme would affect the country's research programmes structure is premature. It was noted that such participation have led to a more diversified but less fragmented research scene in Slovenia.

[177] This however is not particular to the ERA-NET Scheme. Received wisdom is that dealings with China on funding issues are often a complicated matter because of the country's rather arcane system of funding. One just has to learn and deal with the system.

6 Annexes: Stakeholders and materials consulted

Interview data from participants in the INCO ERA-NETs. These participants were based at the following institutions:

- Croatia: Ministry of Science, Education and Sports
- France: CIRAD
- Finland: Academy of Finland
- Germany: Bundesministerium für Bildung und Forschung
- Netherlands: The Royal Netherlands Academy of Arts and Sciences
- Norway: The Research Council of Norway
- Romania: National Authority for Scientific Research (ANCS)
- UK: Department for International Development and The Royal Society of London for Improving Natural Knowledge

Additional material:

Department for International Development (2008). *DFID Research Strategy 2008-2013.* Working Paper Series: Sustainable Agriculture

http://www.dainet.de/european-forum

http://www.cgiar.org/

http://www.eiard.org/introduction.html

http://www.forskningsradet.no/en/Newsarticle/Charting+a+new+course/1233558119853&kilde=f

7 Annexes: Participant survey results

The figures below show responses to the participant questionnaire, completed by 28 INCO ERA-NET participants.

Table 1- How would you rate the degree of fit between your national R&D programme relevant to the theme and this ERA-NET?

	INCO	Total
Good fit	90%	**84%**
Poor fit	0%	**5%**
No answer	10%	**11%**

Participants in the INCO thematic field were more likely than the average to report a good fit between national programmes and the ERA-NET.

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

	INCO	Total
0 - 9999	38%	**4%**
10000 - 19999	0%	**2%**
20000 - 29999	21%	**3%**
30000 - 39999	0%	**2%**
40000 - 49999	3%	**2%**
50000 - 59999	3%	**2%**
60000 - 69999	0%	**1%**
70000 - 79999	0%	**6%**
80000 +	31%	**71%**
Not Answered	3%	**6%**

Responses from participants in the INCO thematic field indicated that the EC contribution for INCO was much lower than the average.

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

	INCO	Total
Yes	77%	**49%**
No	19%	**43%**
Don't Know	0%	**4%**
Not Answered	3%	**3%**

Participants in the INCO thematic field were much more prone to indicate that the EC funding had covered their participation in the scheme.

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

	INCO			Total		
	Yes	No	No answer	Yes	No	Other
Coordination/clustering of ongoing nationally funded research projects	45 %	6%	48%	**59 %**	**19 %**	**23%**
Benchmarking and common schemes for monitoring and evaluation	58 %	3%	39%	**67 %**	**13 %**	**19%**
Multinational evaluation procedures (common evaluation criteria and methods of implementation	61 %	26 %	13%	**55 %**	**25 %**	**20%**
Schemes for joint training activities (so-supervised theses or common PhD schemes)	0%	32 %	68%	**12 %**	**49 %**	**39%**
Schemes for personnel exchange	0%	16 %	84%	**14 %**	**47 %**	**39%**
Schemes for mutual opening of facilities or laboratories	0%	32 %	68%	**15 %**	**44 %**	**41%**
Specific cooperation agreements or arrangements	61 %	13 %	26%	**43 %**	**24 %**	**33%**
Action plan taking up common strategic issues and preparing for joint activities	90 %	3%	6%	**75 %**	**11 %**	**13%**

Participants in the INCO thematic field were more engaged in multinational evaluation procedures, specific cooperation agreements or arrangements, and action plan taking up common strategic issues than the average.

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

	INCO	Total
Yes	100%	**95%**
No	0%	**4%**
Not Answered	0%	**1%**

Participants in the INCO thematic field were more prone to agree that the participation in the scheme had been worthwhile as the average.

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

	INCO	Total
I got more out of it than I expected	81%	**41%**
I got out of it what I expected	13%	**51%**
I got less out of it than I expected	6%	**6%**
Not Answered	0%	**1%**

Participants in the INCO thematic field were much more prone than the average to report that they got out of the scheme more than what they expected.

Table 7 - How satisfied are you with the overall level of transnational cooperation within this ERA-NET?

	INCO	Total
Satisfied	74%	**88%**
Unsatisfied	13%	**7%**
No answer	13%	**4%**

Participants in the INCO thematic field were less satisfied with the overall level of transnational cooperation in their ERA-NETs than the average.

Table 8 - To what degree has your participation in this ERA-NET influenced your country's national programme(s)?

	INCO			Total		
	No influence	Influence	No answer	No influence	Influence	No answer
Discontinuation of existing programme(s) in some theme(s)	42%	58%	0%	**53%**	**34%**	**12%**
Reducing duplication between National programmes in your country	35%	48%	16%	**47%**	**38%**	**16%**
Design of programmes with longer time horizon	35%	61%	3%	**42%**	**49%**	**10%**
Design of programmes with shorter time horizon	33%	60%	7%	**51%**	**38%**	**11%**
Bigger programme budgets for the theme	23%	57%	20%	**42%**	**46%**	**12%**
Smaller programme budgets for the theme	61%	10%	29%	**63%**	**13%**	**23%**
New programme assessment/evaluation criteria	27%	73%	0%	**40%**	**50%**	**10%**
New opportunities to enable transnational R&D activities in the theme of the ERA-NET	7%	93%	0%	**8%**	**86%**	**6%**
New eligibility criteria allowing funding of foreign researchers in the area	57%	43%	0%	**43%**	**42%**	**15%**
Existing programme(s) now covering new theme(s)	42%	58%	0%	**48%**	**38%**	**14%**
New programme(s) put in place in response to new theme(s) identified	58%	42%	0%	**51%**	**34%**	**15%**

Participants in the INCO thematic field were overall slightly more prone than the average participant to respond that their ERA-NET participation had influenced their country's national programmes, especially in the area of new programme assessment or evaluation criteria, new themes being covered by existing programmes and new programmes being put in place in response to new themes identified.

Table 9 - To what extent did your organisation have pre-existing relationships with participants in this ERA-NET prior to FP6?

	INCO	Total
Prior relationships	71%	**66%**
No prior relationships	29%	**26%**
No answer	0%	**8%**

Participants in the INCO thematic field were more likely than the average to have had prior relationships with other participants in their ERA-NET.

Table 10 - If there were prior relationships which of the following 6 statements best describes how these relationships evolved during your participation in this ERA-NET?

	INCO	Total
Strengthened	71%	**63%**
Weakened	0%	**1%**
No answer	29%	**33%**
No change	0%	**4%**

Participants in the INCO thematic field were less likely than the average to say that prior relationships remained unchanged.

Table 11 - Has your participation in this ERA-NET triggered transnational cooperation outside of the ERA-NET?

	INCO	Total
Yes	42%	**31%**
No	45%	**47%**
Not applicable	0%	**16%**
Not Answered	13%	**5%**

Participants in the INCO thematic field were more likely than the average participant to say that the participation had led to transnational cooperation outside of the ERA-NET.

Table 12 - 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?

	INCO	Total
Yes	28%	**13%**
No change	66%	**63%**
No answer	6%	**23%**

Participants in the INCO thematic field were much more likely than the average to claim that the participation had had impact on investment in transnational cooperation outside of the ERA-NET.

Table 13 - If yes roughly what proportion of your programme budget was transnational before your involvement in ERA-NET?

	INCO	Total
0-25%	29%	**15%**
26 to 50%	0%	**0%**
51 to 75%	0%	**0%**
76 to 100%	0%	**1%**
Not answered	71%	**84%**

Participants in the INCO thematic area were less able than others to state what percentage of their programme budget was dedicated to transnational activities before the ERA-NET.

Table 14 - If yes roughly what proportion of your programme budget is transnational now?

	INCO	Total
0-25%	29%	**13%**

26 to 50%	0%	**1%**
51 to 75%	0%	**0%**
76 to 100%	0%	**1%**
Not answered	71%	**84%**

Participants in the INCO thematic area were also less able than others to state what percentage of their programme budget was dedicate to transnational activities after the ERA-NET.

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?

	INCO	Total
Very important	39%	**21%**
Fairly important	26%	**48%**
Not very important	23%	**16%**
Not at all important	13%	**5%**
Don't Know	0%	**4%**
Not Applicable	0%	**2%**
Not Answered	0%	**5%**

Participants in the INCO thematic area were more likely than the average to state that their topic had been very important to them before joining the ERA-NET, but also more likely to state that it has not been very or at all important.

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

	INCO	Total
Very Important	45%	**24%**
Important	52%	**66%**
Not important	3%	**1%**
No answer	0%	**10%**

Also after participation in the ERA-NET, participants in the INCO thematic area were more likely than the average to state that their topic was very important to them than the average.

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?

	INCO	Total
To some extent	29%	**29%**
Not at all	3%	**11%**
No answer	68%	**60%**

Participants in the INCO thematic area were as likely as the average to state that the change in the importance of the them was to some extent due to ERA-NET.

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

	INCO	Total
Influence	68%	**63%**
No influence	10%	**18%**
No answer	23%	**19%**

Participants in the INCO thematic area were more likely than the average participant to state that their involvement in the ERA-NET had had influence on national policy beyond the theme of the ERA-NET.

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

	INCO					Total				
	Helped	Hindered	No effect	Not Answered	Not applicable	Helped	Hindered	No effect	Not Answered	Not applicable
Change in programme management agency	19 %	0%	29 %	13 %	39 %	**7%**	**6%**	**36 %**	**4%**	**47 %**
New R&D management structure	27 %	0%	30 %	13 %	30 %	**11 %**	**7%**	**35 %**	**5%**	**42 %**
For existing programmes, more strategic R&D programming/planning	45 %	0%	23 %	13 %	19 %	**29 %**	**0%**	**36 %**	**7%**	**28 %**
Externalisation of R&D programmes into agency/agencies	0%	0%	29 %	13 %	58 %	**8%**	**4%**	**33 %**	**5%**	**49 %**
Setting up of new types of R&D programmes	35 %	0%	3%	13 %	48 %	**24 %**	**7%**	**33 %**	**5%**	**30 %**
Barcelona 3% targets	6%	0%	45 %	13 %	35 %	**16 %**	**1%**	**39 %**	**8%**	**36 %**

Participants in the INCO thematic area were more likely than the average to state that the various external factors helped the effects of their organisation's participation in the ERA-NET, with exception of externalisation of R&D programming in top agency or agencies.

Table 20 - How strong are the links between this ERA-NET and Technology Platforms?

	INCO	Total
Strong	13%	**23%**
Weak	48%	**44%**
No answer	39%	**33%**

Participants in the INCO thematic area were less likely than the average to report that the links between their ERA-NETs and Technology Platforms were strong.

Table 21- Does this ERA-NET overlap with other ERA-NETs in your country?

	INCO	Total
Yes, my ERA-NET overlaps with more than one ERA-NETs in my country	0%	**8%**
Yes, my ERA-NET overlaps with one other ERA-NET in my country	20%	**17%**
No overlaps	43%	**57%**
Don't know	3%	**13%**
Not Applicable	20%	**2%**
Not Answered	13%	**2%**

Participants in the INCO thematic area were less likely than the average to state that their ERA-NET overlapped with more than one ERA-NET in their country, and more likely to state that it overlapped with one other ERA-NET.

Table 22 - 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?

	INCO			Total		
	Some evidence	No evidence	No answer	Some evidence	No evidence	No answer
Higher quality projects generated at national level (i.e. higher quality proposals)	58%	19%	23%	**39%**	**44%**	**17%**
Higher quality projects funded at national level (through joint calls/programmes)	58%	19%	23%	**35%**	**42%**	**23%**
New types of research projects generated (i.e. reflected in proposals received)	61%	16%	23%	**38%**	**42%**	**20%**
New types of research projects funded (through joint calls/programmes)	68%	10%	23%	**46%**	**32%**	**22%**
New researchers (with no prior international or European experience) benefiting from joint activities	57%	17%	27%	**40%**	**27%**	**33%**
New researchers (with no prior international or European experience) benefiting from joint calls/programmes	61%	16%	23%	**41%**	**34%**	**25%**
Access to foreign research communities/groups not present in my country	71%	10%	19%	**54%**	**28%**	**18%**

Participants in the INCO thematic area were more likely to report some evidence of various ERA-NET national-level effects than the average.

Table 23 - Did any of the following factors either help or hinder your organisation to exploit the full potential of its participation in this ERA-NET?

	INCO					Total				
	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	**0%**	35 %	39 %	6%	19 %	**16 %**	**46 %**	**13 %**	**12 %**	**13 %**
National cultures or research traditions	3%	29 %	39 %	16 %	13 %	**10 %**	**46 %**	**15 %**	**14 %**	**15 %**
National resources (staff time finances)	6%	32 %	23 %	19 %	19 %	**17 %**	**35 %**	**26 %**	**15 %**	**7%**
National administrative procedures (e.g. evaluation rules)	6%	13 %	52 %	16 %	13 %	**6%**	**25 %**	**29 %**	**28 %**	**12 %**
National legal programme conditions (e.g. funding of non-residents IPR)	6%	19 %	45 %	16 %	13 %	**4%**	**35 %**	**19 %**	**25 %**	**17 %**
EC administrative procedures or legal requirements	**0%**	32 %	29 %	26 %	13 %	**1%**	**34 %**	**36 %**	**12 %**	**18 %**
Perceptions of benefits	7%	30 %	10 %	7%	47 %	**15 %**	**28 %**	**16 %**	**13 %**	**28 %**
Engagement in other transnational initiatives (e.g. COST EUREKA)	13 %	35 %	6%	**0%**	45 %	**12 %**	**46 %**	**4%**	**4%**	**34 %**

Participants in the INCO thematic field were generally less likely than the average to state that various factors were an aid in exploiting the full potential of their participation in the ERA-NET, with the exception of national legal programme conditions.

8 Annexes: Coordinator survey results

The figures below show responses to the coordinator questionnaire in the theme of International Cooperation[178].

4 of the 71 ERA-NETs belong to the international cooperation theme, representing 5.6% of all ERA-NETs. Table 1 below lists these ERA-NETs and indicates if they were covered by the field work

Table 24- List of ERA-NETs covered within the theme

ERA-NET	Number of participants	Coordinator country	Start year
CO-REACH	13	Netherlands	2005
ERA-ARD	15	France	2005
EULANEST	8	Spain	2006
SEE-ERA-NET	15	Austria	2004

International cooperation ERA-NETs were active in joint calls and joint programme, but not in pilot actions. This is indicated in table 2 below. (NB: based on the Coordinator's survey which is not necessarily complete)

Table 25 - Details of joint activities within the theme

Joint activities	Number of joint calls	€ Virtual pot	€ Common pot	€ Mixed mode	Total
Joint calls	4	6,977,500	-	830,000	7,807,500
Joint programmes	0	-	-	-	-
Pilot actions	2	-	-	-	-

Figures reported in table 25 only contain funding contributions for which coordinators were able to provide a clear breakdown of funding contributions by country. Hence figures in table 25 are conservative and robust estimates of contributions to joint calls, joint programmes, and pilot actions.

The overall total amounts reported by coordinators should be treated with caution since they were not necessarily broken down or attributed to countries. These are as follows:

- Joint calls
  - Virtual common pot: € 6,875,000
  - Real common pot: € 0
  - Mixed mode: € 830,000

- Joint programmes
  - Virtual common pot: € 0
  - Real common pot: € 0
  - Mixed mode: € 0

- Pilot actions
  - Virtual common pot: € 0
  - Real common pot: € 0
  - Mixed mode: € 0

[178] 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

SD23: Thematic Report on Regional ERA-NETs

The following document provides the structure for the thematic report on ERA-NETs in the Regional ERA-NETs field.

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[179] in 15[180] 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 theme. 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.

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

Contents

1. Executive Summary - Overview

Q1 – Impact on Research Landscapes

- The perceived impact on national policy and programmes is lower than average for the regional ERA-NETs.
- In general, the national/regional investments in joint activities have been very low (less than €100K per joint call is quite common).
- The exceptions are some of the regions in Italy and Spain, which have mobilised relatively high budgets for joint calls (especially in MANUNET where the Basque region of Spain and the Piemont region of Italy accounted for 80% of the 1st joint call budget).

Q2 – Structuring effect on specific research areas or fields

- The regional ERA-NETs have attracted quite a large number of participants but the structuring effect is limited because of missing countries and marginal investment in joint activities
- MANUNET appears to be engaged with the European Technology Platform for Manufacturing (MANUFUTURE).
- ERA-STAR REGIONS appears to complement national-level cooperation in space-related research and offers a link to the EU Innovation Programme (CIP).
- NET-BIOME appears to be raising the profile of the need for coordinated EU/national research on climate change impacts in the outermost regions of France, Netherlands, Portugal, Spain and the UK.

Q3 - Direct benefits and indirect benefits

- Regional ERA-NETs appear to be fostering activities of a larger scale than is possible within the individual regions (i.e. critical mass).
- The ERA-NET scheme provided the opportunity to engage in transnational R&D activities that had a high priority in specific regions but not necessarily at national or EU level.
- Regional ERA-NETs have raised the profile of the topics they focussed on as well as increased awareness of regional specialisms at both national and EU level.

Q4 – Opening up of national/regional programmes

- All of the Joint Calls so far have used a virtual pot funding model.
- Regional ERA-NET participants reported higher than average influence of the scheme on fostering collaboration with foreign science communities but were almost half as likely as other ERA-NET participants to report any impact on the opening up of programming to non-residents.

Q5 – Lessons learned

- Some topics appear very relevant to regional cooperation (e.g. manufacturing-intense regions, regional clusters of space-related industries, biodiversity in the tropical/subtropical regions of EU Member States) but the three regional ERA-NETs appears to have little in common.
- Different levels of commitment and programme diversity have made it very difficult to achieve programme coordination between regions.
- In spite of the diversity of programmes and commitment, two of the ERA-NETs have managed to involve a high proportion of participants in their joint calls.

2. ERA-NET Thematic context

2.1 ERA and regional/national programmes in the thematic area

Participants in the regional ERA-NETs generally indicated a good fit with the relevant national programmes but the degree of fit was lower than average for all ERA-NETs (77% of Regional ERA-NET participants reported a good fit compared with 84% across themes)[181]. This may be due to the diversity of regional programmes and/or regional specialisations that are not replicated at the national level.

At the beginning of the FP6 ERA-NET Scheme there was a clear focus on 'national' R&D programmes but it became clear that regional R&D programmes were equal or more relevant in some countries, or for specific topics. The most obvious example was Belgium, where the majority of R&D policy and funding is devolved to the regions. This opened the way not only for such countries to participate in the mainstream ERA-NETs but also to establish Coordination Actions between regions that have a particular specialisation and related R&D programme.

As far as participation in the wider [national R&D focussed] ERA-NETs is concerned, by far the most common regional participant has been Flanders in Belgium that participated in around 20% of the Coordination Actions. The Wallonia Region also participated but only in a selected few. Other countries with active regional participation included:

- Spain (Andalucia, Basque country, Catalonia, Galicia, Valencia).
- Italy (Emilia Romagna, Liguria, Lombardia, Trento, Tuscany).
- UK (Northern Ireland, Scotland).
- Germany (North Rhine-Westphalia).
- France (Midi-Pyrenees).

This clearly highlights those countries that have a strong federal structure or are also funding R&D activity at the regional level. Some of these are long standing (e.g. Belgium, Germany) but regional R&D programmes has been a more recent trend in France, Italy and the UK.

In addition to the above, three 'regional' ERA-NET Coordination Actions were funded under FP6:

- ERA-STAR REGIONS – for regions (and smaller countries) with R&D programmes in the thematic area of ***space applications***. The consortium includes participants from Andalusia, Austria, Bavaria, Bremen, Czech Republic, Lombardia, Madrid, Midi-Pyrenees, Netherlands, Slovenia, Tuscany and Wallonia. It was coordinated by the regional Ministry of Wallonia in Belgium.
- MANUNET – focused on ***manufacturing-intense*** and smaller manufacturing countries. The consortium included participants from 14 regions (Basque country, Catalonia, East Netherlands, Emilia Romagna, Flanders, Lower Austria, Lower Silesia, Navarra, North Rhine-Westphalia, Northern Ireland, Piemont, Tuscany, Wallonia and Western Greece) and five countries (Estonia, Germany, Romania, Slovakia and Slovenia) plus nine associated partners (Austria, France, Switzerland, Aragon, East Midlands, Provence, Styria, Tampere and Valencia). It was coordinated by the Basque region in Spain.
- NET-BIOME – for the outermost regions and overseas territories that have a common interest in ***tropical and subtropical biodiversity*** R&D. This involved 10 partners from regions/territories of France, Netherlands, Portugal, Spain and also

[181] Refer to participant survey findings in the annexes (Table 1).

the UK Overseas Territories Conservation Forum. The coordinator was La Réunion; one of the overseas sub-regions of France.

These three ERA-NETs could hardly be more diverse in terms of their thematic focus and are partly distorted with some national participants.

Feedback from participants of these three ERA-NETs indicates that the influence on national programmes has been lower than average in terms of impact on new programmes responding to new themes, existing programmes covering new themes, the duration of programmes, programme budgets, evaluation criteria, and eligibility criteria for foreign researchers. The highest influence, as for the wider ERA-NET population was new opportunities to enable transnational R&D activities in the theme of the ERA-NET although this was lower than the average across themes (74% reported influence for the Regional ERA-NETs compared with 85% across themes). Above average influence for this theme was reported for the discontinuation of existing programmes and reduction of duplication between national programmes[182]. The influence seems to have been strongest for ERA-NET STAR and virtually non-existent so far for NET-BIOME.

The overlap with one other ERA-NETs in the same country was higher than average for Regional ERA-NETs (27% for Regional ERA-NETs compared to 8% across themes although they reported lower than average overlaps with more than ones ERA-NET[183]. This is thought to be due to MANUNET, which typically aligned with programmes that were quite open and that may have been linked to other ERA-NETs.

2.2 **ERA and structuring effect in the thematic area**

As mentioned in Section 1.1 above, the main structuring effect has been "new opportunities to enable transnational R&D activities in this area". Interestingly, the influence on new eligibility criteria allowing funding of foreign researchers is much lower (23%) than the ERA-NET average (43%)[184].

The three 'regional' ERA-NETs and their progress can be summarised as follows:

ERA-STAR REGIONS[185]
This ERA-NET started in October 2004 and has been extended beyond the original contract period. Two Joint Calls have been launched; in December 2006 and December 2007 respectively. Both Calls have focused on the same three topics; Galileo applications, GMES applications and Technological applications. The joint call investments have been relatively low; approx €1.7 million and €2 million in total for the first and second Joint Calls respectively. Qualitative interviews indicated that there was quite a lot of cross-border cooperation before ERA-NET but this was mainly at national (rather than regional) level.

MANUNET[186]
This ERA-NET started in 2004 as a Specific Support Action (SSA) and was led by the Basque Government and Regione Lombardia. It became a full Coordination Action in 2006/7 and is due for completion in 2010. A 3rd joint call (2009) was launched in December 2008 and is supported by 19 of the participating regions/countries. The 1st Call (2007) had a public sector budget of €13m (15 sponsors). Budget details for the 2nd Call (2008) were not available at the time of the coordinator survey but 17 of the partners/associates were involved. The Calls have been open to all fields of manufacturing research.

[182] Refer to participant survey findings in the annexes (Table 8).
[183] Refer to participant survey findings in the annexes (Table 21).
[184] Refer to participant survey findings in the annexes (Table 8).
[185] www.era-star.net
[186] www.manunet.net

NET-BIOME[187]

This ERA-NET started in March 2007 but had not launched any joint calls at the time of the evaluation. The outermost regions and overseas territories of the five participating EU Member States are exceptionally rich in biodiversity. At the same time, their environments are very fragile and are most exposed to the impacts of climatic change, natural hazards and the pressures of human activity. In response to these threats, local authorities promote and fund research activities to ensure the sustainable management of the local biodiversity. Initial progress was delayed by the recruitment of a project manager. At the time of evaluation, participants were engaged in a survey of existing research in each region and gathering individual opinion on what needed to be done in the future. This was expected to inform the definition of common priorities for some kind of joint activity.

[187] www.netbiome.org

3. ERA-NET funding considerations in the thematic area

3.1 Inputs into the ERA-NET scheme for this thematic area

In terms of overall cost of participation:

Feedback from the participant survey indicates that the EC funding covered most of the time and resources (70%) to carry out the coordination activities[188]. This is much higher than average (49%) for the whole ERA-NET population and may indicate that regional organisations and/or small countries are less able to co-invest in such Coordination Actions. This difference is less apparent for ERA-STAR REGIONS than for the other two, which may be an indication of participation by more affluent regions/countries and the advanced nature of the topic.

National resources were a problem for 53% of the participants (compared to 41%) across all other themes[189]. In many cases these problems have still not been overcome.

In terms of joint calls:

An overview of the investment in joint calls by region is show in the Table below.

Host country	Region	ERA-NETs involved in	No of contributions to joint calls	contibution to joint calls (region)	contribution joint calls (host country)	% of host country
Spain	Andalusia	ERA-STAR REGIONS; HESCULAEP	3	463,000	49,244,710	0.9%
Spain	Basque Country	EUROTRANS-BIO; SAFEFOODERA; MNT ERA-NET	9	4,124,000	49,244,710	8.4%
Germany	Bavaria	ERA-STAR REGIONS	4	460,000	119,925,346	0.4%
Germany	Bremen	ERA-STAR REGIONS	1	0	119,925,346	0.0%
Spain	Catalonia	MANUNET	1	396,000	49,244,710	0.8%
Belgium	Flanders	ERA-SME;EUROTRANS-BIO; MATERA; SKEP; SNOWMAN; MNT ERA-NET	15	18,253,000	35,081,653	52.0%
Spain	Galicia	AMPERA	1	414,180	49,244,710	0.8%
Poland	Lower Silesia	MANUNET	1	30,000	10,361,000	0.3%
Spain	Madrid	ERA-STAR REGIONS	4	649,454	49,244,710	1.3%
France	Midi-Pyrenees	MNT ERA-NET; ERA-STAR REGIONS	8	1,382,000	65,271,078	2.1%
Spain	Navarra	MANUNET	1	310,000	49,244,710	0.6%
	Nordic	ERA-BUILD; SAFEFOODERA; WOODWISDOMNET; MNT ERA-NET	7	3,827,000		
Germany	North Rhein	MANUNET	2	185,000	119,925,346	0.2%
Germany	North Rhine Westphalia	MATERA	1	150,000	119,925,346	0.1%
UK	Northern Ireland	MANUNET	1	567,000	41,080,022	1.4%
Italy	Piedmont	MANUNET	1	4,850,000	31,939,340	15.2%
Germany	Saxony	ERA-IB	1	1,200,000	119,925,346	1.0%
Italy	Tuscany	ERA-SME; ERA-STAR REGIONS	2	298,000	31,939,340	0.9%
Belgium	Wallonia	ERA-STAR REGIONS; MATERA; MNT ERA-NET	6	2,091,000	35,081,653	6.0%

Source: Coordinator survey (2008)

It should be noted that this data is based on information provided from the coordinator survey and is very much a snapshot of investment in completed calls at the time. For example, it only includes the 1st calls of MANUNET (3rd call now launched) and ERA-STAR REGIONS (2nd call now completed).

What is very clear from this table is the huge diversity of relative investment by regions that were participating in ERA-NETs. This is even clearer at the level of the specific calls, for example:

- The 1st call of ERA-STAR REGIONS involved 11 public sponsors and individual contributions varied from less than €40,000 (Czech Republic) to around €450,000

[188] Refer to participant survey findings in the annexes (Table 3).
[189] Refer to participant survey findings in the annexes (Table 23).

(Andalusia). The latter is a higher order of magnitude but still relatively low for co-funding multiple R&D projects.

- The 1st call of MANUNET involved 15 public sector sponsors and individual contributions varied from €30,000 (Lower Silesia) to €5.46 million (Basque). This was more than two orders of magnitude higher than for this type of R&D projects.

In fact, some 80% of the total 1st call budget for MANUNET came from just two regions; Basque country in Spain (as above) and Piemont in Italy (€4.85m). Feedback from the fieldwork interviews indicated that this differential in relative ability to invest in joint calls was still an ongoing issue.

3.2 **Opening up considerations for this thematic area**

All of the Calls that have been launched so far by ERA-STAR REGIONS and MANUNET have used a virtual pot funding model. Some regions (e.g. Flanders in Belgium) have been quite open to the use of non-resident researchers for some time, to complement and enhance their internal scientific capacity, but this is the exception rather than the rule.

The motivation among Regional participants to engage in ERA-NET joint activities to address national/regional R&D capacity weaknesses was apparent in the participant survey, which highlighted that it had allowed access to foreign researchers not present in their country (67% of Regional participants saw this as an effect of ERA-NET joint activities compared with 54% across themes)[190].

In spite of this, the participants reported lower influence than average with regard to the influence of ERA-NET participation of the opening of programmes to non-residents. Only 23% reported an influence on new eligibility criteria allowing funding of foreign researchers compared with the ERA-NET average of 42%[191].

[190] Refer to participant survey findings in the annexes (Table 22).
[191] Refer to participant survey findings in the annexes (Table 8).

4. ERA-NET benefits for this thematic area

4.1 Direct and indirect benefits of ERA-NETs in this thematic area for national policy stakeholders and participants

The participant survey indicates that the majority of regional participants (87%) believed that their participation in the FP6 ERA-NET had been worthwhile[192] and 37% had got more out of it than they expected[193]. In interviews, around half of the ERA-STAR REGIONS sample indicated that they had "got more out of it than they expected".

All of the survey respondents were satisfied with the level of transnational cooperation within the three regional ERA-NETs[194]. This is perhaps surprising for NET-BIOME as there have not yet been any joint activities.

The main benefits highlighted from fieldwork interviews were to help SMEs open the door to partners and markets in other European countries and to understand how their peers in other regions deal with similar issues. The latter was particularly true in MANUNET and NET-BIOME. Some had an overt objective to broaden their existing interest in supporting cross-border projects.

The main benefits that were highlighted in a workshop[195] for regional participants were:

- Regions could use ERA-NET as a tool for particular industrial sectors to achieve a critical mass necessary to become or remain competitive.
- ERA-NET allowed regions to pursue a research and innovation policy independently from the national one.
- ERA-NET could be used as a support mechanism for large-scale initiatives that regions were involved in.

In general, the concept of a region being involved in specific activities of scale that would be impossible with other regions in their own country appears to be the distinctive benefit of such ERA-NETs. This appears to be relevant to all of the regions involved in ERA-STAR REGIONS, MANUNET and NET-BIOME. Put another way, they have more in common with regions in other countries than those of their own country.

4.2 **Direct and indirect benefits of this ERA-NET thematic area for research beneficiaries**

Quantitative feedback from the participant survey gives the perspective of the funding agencies, which highlights the most important effects for beneficiaries[196]:

- 67% indicated that the ERA-NET had enabled access to foreign research communities/groups not present in that country (54% across themes).
- 42% indicated that new types of research projects had been funded (46% across themes).
- 37% indicated that new types of research projects had been generated (38% across themes).
- 32% indicated that new researchers (with no prior international or European experience) had benefited from joint calls (41% across themes).

[192] Refer to participant survey findings in the annexes (Table 5).
[193] Refer to participant survey findings in the annexes (Table 6).
[194] Refer to participant survey findings in the annexes (Table 7).
[195] Summary report on "ERA-NET as a tool for regional cooperation", Brussels 30 May 2006.
[196] Refer to participant survey findings in the annexes (Table 22).

These figures were generally below the ERA-NET average across themes. This could be due to the fact that NET-BIOME had not yet engaged in joint calls when the data was gathered. The relative importance of accessing expertise/knowledge from other countries was, however, very apparent. In interviews, one of the Italian beneficiaries indicated that the ERA-NET had enabled a joint project with a Spanish organisation that was able to provide all of the expertise/facilities needed for the project. This could only have been achieved by involving several complementary partners in Italy. The beneficiary also indicated that their project was of much larger scale than could have been funded by public sector programmes in Italy.

5. European Added Value, relevance and efficiency

5.1 Additionality of ERA-NETs in this thematic area

Almost 20% of the survey participants indicated that the ERA-NET had led to an increase in the amount of their programme budget that had been invested in transnational R&D outside the ERA-NET compared to 13% across themes[197]. This suggests that there may be slightly more flexibility (or policy support) for transnational R&D projects but clearly budgets are limited judging by the relatively low investments in joint calls.

Judging from the field work interviews, one general impression of the regional ERA-NETs was that they appeared to be more complementary to the EU Innovation Programme (now CIP) than the RTD Framework Programme and that could become a possible future route for the new relationships that developed as part of the ERA-NET. One respondent mentioned that some members of the ERA-STAR REGIONS consortium were now working on another EU funded project and that this could explain the relatively high response[198] to the survey question about ERA-NET participation triggering transnational cooperation outside the ERA-NET.

The regional ERA-NETs also report an above average engagement with the European Technology Platforms[199]. Survey and fieldwork responses suggest that this was primarily due to the links that MANUNET developed with the MANUFUTURE Platform.

5.2 **Perceived economic efficiency and relevance**

Participants mostly agreed that participation in the FP6 ERA-NET had been worthwhile and were generally satisfied with the overall level of cooperation[200].

The main issue that was expressed in fieldwork interviews was the different levels of commitment across the consortium and the inherent administrative burden of the EC contract. The variable commitment of financial resources in joint calls was very clear (see section 1.2 above) but there were less overt signals, which indicate that some partners put more into the networking and knowledge exchange activities than others. This was also apparent in some of the participant responses[201], for example:

- 23% indicated that national thematic priorities and resources (staff time, finance) were both still a problem that had not been overcome (ERA-NET average was 12% and 15% respectively).

The first of these (thematic priorities) may be connected with niche strengths or issues in a specific region that have a low national priority. In some cases (e.g. Spain) the national priorities and cultures (and engagement in other transnational initiatives) seems to have been an aid to success of their participation in the ERA-NET.

[197] Refer to participant survey findings in the annexes (Table 12).
[198] Refer to participant survey findings in the annexes (Table 11).
[199] Refer to participant survey findings in the annexes (Table 20).
[200] Refer to participant survey findings in the annexes (Tables 5 and 7).
[201] Refer to participant survey findings in the annexes (Table 23).

6. Annexes: Stakeholders and materials consulted

The main inputs used to produce this thematic report were:

- Quantitative data from the Coordinator survey.
- Analysis of feedback from the Participant survey.
- Extracts from the Country Reports and interviews with participants in ERA-STAR REGIONS, MANUNET and NET-BIOME and more particularly interviews for the following organisations:

ERA-STAR REGIONS	Ministry of Higher Education, Science and Technologies	Slovenia
ERA-STAR REGIONS	Regione Toscana	Italy
ERA-STAR REGIONS	Bundesministerium für Verkehr, Innovation und Technologie	Austria
MANUNET	Regione Piemonte	Italy
MANUNET	National Centre for Programme Management	Romania

- Review of the ERA-STAR REGIONS, MANUNET and NET-BIOME websites.

7. Annexes: Participant survey results

The figures below show responses to the participant questionnaires. They are based on 23 responses, including:

- 11 from ERA-STAR REGION participants
- 8 from MANUNET participants
- 4 from NET-BIOME participants

The tables show the percentage responses for the three regional ERA-NETs compared with the average for the whole population of 71 ERA-NETs.

Table 1- How would you rate the degree of fit between your national R&D programme relevant to the theme and this ERA-NET?

	Regional	Total
Good fit	77%	**84%**
Poor fit	20%	**5%**
No answer	3%	**11.00%**

Although the fit is very high it is below average, which is probably due the diversity of regional R&D systems and the involvement of some New EU Members States that do not yet have conventional national R&D programmes.

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

	Regional	Total
0 - 9999	0%	**4%**
10000 - 19999	0%	**2%**
20000 - 29999	10%	**3%**
30000 - 39999	0%	**2%**
40000 - 49999	0%	**2%**
50000 - 59999	0%	**2%**
60000 - 69999	3%	**1%**
70000 - 79999	0%	**6%**
80000 +	76%	**71%**
Not Answered	10%	**6%**

This shows that the majority of participants received a reasonable share of the EC funding.

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

	Regional	Total
Yes	70%	**49%**
No	17%	**51%**
Don't Know	10%	0%
Not Answered	3%	0%

More than average suggests that regional and small country participants might be less able to co-invest in the networking activities.

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

	Regional			Total		
	Yes	No	No answer	Yes	No	No answer
Coordination/clustering of ongoing nationally funded research projects	47 %	33 %	20%	**59 %**	**19 %**	**23%**
Benchmarking and common schemes for monitoring and evaluation	50 %	33 %	17%	**67 %**	**13 %**	**19%**
Multinational evaluation procedures (common evaluation criteria and methods of implementation	60 %	27 %	13%	**55 %**	**25 %**	**20%**
Schemes for joint training activities (so-supervised theses or common PhD schemes)	3%	71 %	26%	**12 %**	**49 %**	**39%**
Schemes for personnel exchange	10 %	55 %	35%	**14 %**	**47 %**	**39%**
Schemes for mutual opening of facilities or laboratories	26 %	35 %	39%	**15 %**	**44 %**	**41%**
Specific cooperation agreements or arrangements	43 %	30 %	27%	**43 %**	**24 %**	**33%**
Action plan taking up common strategic issues and preparing for joint activities	67 %	27 %	7%	**75 %**	**11 %**	**13%**

These ERA-NETs appear to have been more focussed on joint calls than the average (e.g. above average score for multinational evaluation procedures, highest score related to preparing for joint activities).

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

	Regional	Total
Yes	87%	**95%**
No	7%	**4%**
Not Answered	7%	**1%**

Very high satisfaction levels, slightly lower than average.

Table 31 - Which of the three following statements best describes your personal experience of this ERA-NET?

	Regional	Total
I got more out of it than I expected	37%	**41%**
I got out of it what I expected	57%	**51%**
I got less out of it than I expected	0%	**6%**
Not Answered	7%	**1%**

Slightly below average is generally consistent with Table 5.

Table 7 - How satisfied are you with the overall level of transnational cooperation within this ERA-NET?

	Regional	Total
Satisfied	100%	**88%**
Unsatisfied	0%	**7%**
No answer	0%	**4%**

Above average 100% score is slightly surprising, given the responses in Tables 5 and 6.

Table 8 - - To what degree has your participation in this ERA-NET influenced your country's national programme(s)?

	Regional			Total		
	No influence	Influence	No answer	No influence	Influence	No answer
Discontinuation of existing programme(s) in some theme(s)	48%	39%	13%	**53%**	**34%**	**12%**
Reducing duplication between National programmes in your country	30%	40%	30%	**47%**	**38%**	**16%**
Design of programmes with longer time horizon	48%	35%	16%	**42%**	**49%**	**10%**
Design of programmes with shorter time horizon	52%	32%	16%	**51%**	**38%**	**11%**
Bigger programme budgets for the theme	52%	26%	23%	**42%**	**46%**	**12%**
Smaller programme budgets for the theme	58%	10%	32%	**63%**	**13%**	**23%**
New programme assessment/evaluation criteria	50%	37%	13%	**40%**	**50%**	**10%**
New opportunities to enable transnational R&D activities in the theme of the ERA-NET	13%	73%	13%	**8%**	**86%**	**6%**
New eligibility criteria allowing funding of foreign researchers in the area	67%	23%	10%	**43%**	**42%**	**15%**
Existing programme(s) now covering new theme(s)	58%	26%	16%	**48%**	**38%**	**14%**
New programme(s) put in place in response to new theme(s) identified	48%	32%	19%	**51%**	**34%**	**15%**

The very clear message from this is that, like other ERA-NETs, the main influence has been new opportunities to enable transnational R&D activities in this area. Interestingly, the influence on new eligibility criteria allowing funding of foreign researchers is much lower (23%) than the ERA-NET average (43%).

Table 9 - To what extent did your organisation have pre-existing relationships with participants in this ERA-NET prior to FP6?

	Regional	Total
Prior relationships	71%	**66%**
No prior relationships	19%	**26%**
No answer	10%	**8%**

This suggests that had prior relationships with at least one of the other participants (which would explain the high score). It is unlikely that the prior relationships were with the whole consortium although this may be more the case with ERA-STAR REGIONS and NET-BIOME as both of these have a relatively small European stakeholder community compared with MANUNET.

Table 10 - If there were prior relationships which of the following 6 statements best describes how these relationships evolved during your participation in this ERA-NET?

	Regional	Total
Strengthened	61%	**63%**

Weakened	0%	**1%**
No answer	29%	**33%**
No change	10%	**4%**

The above average 10% minority that report no change in prior relationships may suggests that the main benefit has been in developing new relationships.

Table 11- Has your participation in this ERA-NET triggered transnational cooperation outside of the ERA-NET?

	Regional	Total
Yes	47%	**31%**
No	43%	**47%**
Not applicable	3%	**16%**
Not Answered	7%	**5%**

Higher than average is consistent with qualitative comments from interviews, and secondary sources, that regional public organisations are keen to engage in transnational cooperation with other synergetic regions in other European countries.

Table 12 - 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?

	Regional	Total
Yes	19%	**13%**
No change	58%	**63%**
No answer	23%	**23%**

This suggests that there may be slightly more flexibility (or policy support) for transnational R&D projects but clearly R&D budgets are tight.

Table 13 - If yes, roughly what proportion of your programme budget was transnational before your involvement in ERA-NET?

	Regional	Total
0-25%	23%	**15%**
26 to 50%	0%	**0%**
51 to 75%	0%	**0%**
76 to 100%	0%	**1%**
Not answered	77%	**84%**

The large proportion of 'not answered' makes it difficult to interpret the answers to this question.

Table 14 - If yes, roughly what proportion of your programme budget is transnational now?

	Regional	Total
0-25%	23%	**13%**
26 to 50%	0%	**1%**
51 to 75%	0%	**0%**
76 to 100%	0%	**1%**
Not answered	77%	**84%**

As for Table 13.

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?

	Regional	Total
Very important	27%	**21%**
Fairly important	43%	**48%**
Not very important	13%	**16%**
Not at all important	0%	**5%**
Don't Know	7%	**4%**
Not Applicable	0%	**2%**
Not Answered	10%	**5%**

70% response indicates general importance but this would be expected from those that had joined a specific ERA-NET. The "don't knows" might be an indicator of staff churn in public sector agencies

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

	Regional	Total
Very Important	27%	**24%**
Important	60%	**66%**
Not important	0%	**1%**
No answer	13%	**10%**

Importance score increasing from 70% to 87% seems to indicate increased importance.

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?

	Regional	Total
To some extent	35%	**29%**
Not at all	13%	**11%**
No answer	52%	**60%**

This suggests that, whilst ERA-NET has some influence on priorities, there are wider policy factors that had more influence. This is consistent with the message from qualitative interviews where ERA-NET has often been viewed as a means to implement policy rather than an influence of policy.

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

	Regional	Total
Influence	48%	**63%**
No influence	6%	**18%**
No answer	45%	**19%**

In contrast with Table 14, this suggests a significant influence but this appears to be lower with the regional ERA-NETs (this could be distorted by the wording of the question, which refers to 'national research policy').

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

	Regional					Total				
	Helped	Hindered	No effect	Not Answered	Not applicable	Helped	Hindered	No effect	Not Answered	Not applicable
Change in programme management agency	10 %	6%	55 %	0%	29 %	**7%**	**6%**	**36 %**	**4%**	**47 %**
New R&D management structure	7%	0%	47 %	0%	47 %	**11 %**	**7%**	**35 %**	**5%**	**42 %**
For existing programmes, more strategic R&D programming/planning	30 %	0%	40 %	0%	30 %	**29 %**	**0%**	**36 %**	**7%**	**28 %**
Externalisation of R&D programmes into agency/agencies	10 %	0%	43 %	0%	47 %	**8%**	**4%**	**33 %**	**5%**	**49 %**
Setting up of new types of R&D programmes	29 %	0%	35 %	0%	35 %	**24 %**	**7%**	**33 %**	**5%**	**30 %**
Barcelona 3% targets	10 %	0%	45 %	6%	39 %	**16 %**	**1%**	**39 %**	**8%**	**36 %**

External factors appear to neither helping nor hindering regional participation.

Table 20 - How strong are the links between this ERA-NET and Technology Platforms?

	Regional	Total
Strong	29%	**23%**
Weak	39%	**44%**
No answer	32%	**33%**

Slightly higher than average response may be related to the MANUNET links to the MANUFUTURE Technology Platform.

Table 21 - Does this ERA-NET overlap with other ERA-NETs in your country?

	Regional	Total
Yes, my ERA-NET overlaps with more than one ERA-NETs in my country	3%	**8%**
Yes, my ERA-NET overlaps with one other ERA-NET in my country	27%	**17%**
No overlaps	60%	**57%**
Don't know	10%	**13%**
Not Applicable	0%	**2%**
Not Answered	0%	**2%**

The typical R&D programmes in regions and small countries tend to be open to all types of projects so a higher than average overlap could be expected.

Table 22 - 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?

	Regional			Total		
	Some evidence	No evidence	No answer	Some evidence	No evidence	No answer
Higher quality projects generated at national level (i.e. higher quality proposals)	30%	50%	20%	**39%**	**44%**	**17%**
Higher quality projects funded at national level (through joint calls/programmes)	30%	43%	27%	**35%**	**42%**	**23%**
New types of research projects generated (i.e. reflected in proposals received)	37%	43%	20%	**38%**	**42%**	**20%**
New types of research projects funded (through joint calls/programmes)	42%	29%	29%	**46%**	**32%**	**22%**
New researchers (with no prior international or European experience) benefiting from joint activities	30%	30%	40%	**40%**	**27%**	**33%**
New researchers (with no prior international or European experience) benefiting from joint calls/programmes	32%	29%	39%	**41%**	**34%**	**25%**
Access to foreign research communities/groups not present in my country	67%	13%	20%	**54%**	**28%**	**18%**

The above average response for 'access to foreign research expertise' is logical for regions and small countries.

Table 23 - Did any of the following factors either help or hinder your organisation to exploit the full potential of its participation in this ERA-NET?

	Regional					Total				
	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	29 %	35 %	3%	23 %	10 %	**16 %**	**46 %**	**13 %**	**12 %**	**13 %**
National cultures or research traditions	23 %	40 %	3%	20 %	13 %	**10 %**	**46 %**	**15 %**	**14 %**	**15 %**
National resources (staff time finances)	7%	23 %	30 %	23 %	17 %	**17 %**	**35 %**	**26 %**	**15 %**	**7%**
National administrative procedures (e.g. evaluation rules)	13 %	37 %	27 %	10 %	13 %	**6%**	**25 %**	**29 %**	**28 %**	**12 %**
National legal programme conditions (e.g. funding of non-residents IPR)	0%	39 %	3%	19 %	39 %	**4%**	**35 %**	**19 %**	**25 %**	**17 %**
EC administrative procedures or legal requirements	0%	26 %	32 %	16 %	26 %	**1%**	**34 %**	**36 %**	**12 %**	**18 %**
Perceptions of benefits	17 %	23 %	3%	13 %	43 %	**15 %**	**28 %**	**16 %**	**13 %**	**28 %**
Engagement in other	17	43	0%	7%	33	**12**	**46**	**4%**	**4%**	**34**

transnational initiatives (e.g. COST EUREKA)	%	%			%	**%**	**%**			**%**

National priorities resources and cultures appear to be a relatively more important unresolved problem in this type of ERA-NET. In contrast, above average progress appears to have been achieved on national administration procedures and legal problem. This is possibly because regional administrations are less bureaucratic than national administrations.

8. Annexes: Coordinator survey results[202]

The figures below show responses to the coordinator questionnaire in the regional theme.

3 of the 71 ERA-NETs are Regional, representing 4% of all ERA-NETs. Table 24 below lists these ERA-NETs.

Table 24- List of ERA-NETs covered within the theme

ERA-NET	Number of participants	Coordinator country	Start year
ERA-STAR REGIONS	15	Belgium (Wallonia)	2004
MANUNET	19	Spain (Basque)	2006
NET-BIOME	11	France (La Réunion)	2006

Regional ERA-NETs were active in joint calls, but not in pilot actions and joint programme. This is indicated in table 25 below. (NB: based on the Coordinator's survey which is not necessarily complete).

Table 25 - Details of joint activities within the theme

Joint activities	Number of joint calls	€ Virtual pot	€ Common pot	€ Mixed mode	Total
Joint calls	5	13,704,786	-	-	13,704,786
Joint programmes	0	-	-	-	-
Pilot actions	0	-	-	-	-

[202] 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

SD24: Thematic report on Fundamental Sciences

The following document provides the structure for the thematic report on ERA-NETs in the Fundamental Sciences theme.

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[203] in 15[204] of the 40 countries taking part in the scheme. The number of interviews by theme 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 theme. 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.

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

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

Contents

1. Executive Summary - Overview

There were 71 ERA-NETs in total, out of which 5 were in Fundamental Sciences. The 5 were: ASPERA, ASTRONET, COMPLEXITY-NET, ERA-CHEMISTRY and EURYI focusing on the respective science fields of Astroparticle Physics, Astronomy, Complexity Sciences, Chemistry and Young researchers.

More than €116m was committed to 10 joint calls and less than €1m to pilot actions in this thematic area under the FP6 ERA-NET scheme. There were no reports of joint programmes having been undertaken in this thematic area.

Q1 – Impact on Research Landscapes

- The impact on national programmes varied from country to country according to national circumstances and the theme of the ERA-NET. For instance:
    - EU15 large countries had existing long term programmes in the area that were largely not impacted upon through ERA-NET participation.
    - EU15 small and EU12 countries tended not to have established programmes with a specific focus in this area. While Aspera had an impact on the creation of new programmes in some countries (e.g. The Netherlands) the impact of other Fundamental Sciences ERA-NETs (e.g. ERA-CHEMISTRY, ASTRONET) on national programmes in other countries have been limited.

Q2 – Structuring effect on specific research areas or fields

- Fundamental Sciences was a mature research area for transnational cooperation, which by definition meant that the structuring effect of the scheme was somewhat limited. For instance:
    - The impact of ERA-CHEMISTRY, an ERA-NET built on a pre-existing transnational network, on the coordination or alignment of national programmes was limited although it did strengthened the cooperation within the field by involving more countries previously not active in transnational cooperation in this field.
    - ASPERA had an impact on the coordination and funding of national programmes in the field of astroparticle physics. It strengthened an emerging research field within each participant country at the ERA as well as global level by setting a common strategic direction and aligning national programmes.
    - Complexity-net emerged as a new research field and during the period added a new scientific community (social scientists) to its research field.
- Within the broader Fundamental Sciences umbrella, the additionality of Fundamental Sciences ERA-NETs have been limited and confined to specific ERA-NETs, countries or fields.

Q3 - Direct benefits and indirect benefits

- Overall, the vast majority of participants considered their participation in FP6 ERA-NET as having been worthwhile.

- Main benefits derived by participants in the Fundamental Sciences ERA-NETs were found in the increased reputation of some science fields (e.g. Astroparticle Physics, Complexity Science) and of the research organisations involved in the field as well as networking benefits among participants, increased awareness of other national programmes and their foci and other ways of working across the ERA.

- Main benefits reported by research beneficiaries were found in the expansion of personal networks with researchers in Europe and the fact that joint calls under the ERA-NET scheme addressed a real need for funding transnational collaborative research.

Q4 – Opening up of national programmes

- A key feature of Fundamental Sciences ERA-NETs was their relatively high degree of openness. This was demonstrated by the amount of funding contributions channelled via real common pots under this theme (e.g. more than €104m). This represented 90% of all funding contributions made to joint calls in the theme.

- National legal conditions were not seen as an obstacle to fulfilling the potential of the ERA-NETs by a majority of participants in this theme. The participant survey highlights that the funding of non-residents was less of a problem for funders in this area (17% of respondents in Fundamental Sciences compared with 25% across all themes).

- Direct impact was also evidenced by the opening up of national programmes through programme coordination and the sharing of research infrastructures (ASPERA), as well as the mixed mode for funding joint calls used, in some cases, to attract key players and new partner countries in certain areas (ERA-Chemistry).

Q5 – Lessons learned

- The two step procedure when launching calls was considered efficient (pre-proposals and full proposals) as it reduced the number of applicants and relatively simple to manage.

- Including international experts as part of the proposal review panel helped in addressing issues around conflicts of interests (e.g. ERA-Chemistry). A peer review committee with a good scientific reputation was helping to evaluate projects (e.g. ASPERA).

- Greater intensity of participation led to better outcomes.

- Tightly defining the research field was important to address common strategic issues (e.g. Astroparticles).

- Dissemination activities were regarded as useful by researchers e.g. as part of one ERA-NET, virtual lectures were given to researchers every week through via the Internet.

2. ERA-NET Thematic context

There were 71 ERA-NETs in total, out of which 5 were in Fundamental Sciences. The 5 were: ASPERA, ASTRONET, COMPLEXITY-NET, ERA-CHEMISTRY and EURYI and each focusing on a specific science field i.e. Astroparticle Physics, Astronomy, Complexity Sciences, Chemistry and Young researchers respectively.

Representatives of Fundamental Sciences ERA-NETs sampled for field interviews were based in Austria, France, Finland, Germany, The Netherlands, Poland, Portugal and the UK. It can be argued that this sample of participating countries covered a wide range of countries with: (a) varying interests in and degree of importance of Fundamental Sciences; (b) varying experience in funding Fundamental Sciences related research; and (3) different organisations for, and structuring of, Fundament Sciences research funding.

More than €116m was committed to 10 joint calls and less than €1m to pilot action as part of this thematic area under the FP6 ERA-NET scheme. No funding contribution appears to have been channelled through joint programmes in this thematic area.

2.1 ERA and national programmes in the thematic area

Fundamental Sciences ERA-NETs were aligned to national programmes priorities and objectives for the most part. The participant survey highlighted that 86% of participants thought their ERA-NET had made a good fit with the national R&D programme in Fundamental Sciences, slightly above the average across all themes[205]. This was further demonstrated by the fact that only 3% of the participants in the Fundamental Sciences theme reported "national thematic priorities" as a "problem still not overcome" when asked about factors that had hindered the full exploitation of participation in the ERA-NET[206].

The landscape of national programmes varied according to national circumstances, for instance:
In Austria, FWF, Fonds zur Förderung der wissenschaftlichen Forschung, was responsible for funding the research landscape, including the Fundamental Sciences field, although it had no thematic programme. In the Fundamental Sciences, ERA-NETs served as an eye-opener for Austria because it provided a yard stick for national funders to measure themselves against other countries funders.

In Finland, the main organisations involved in ERA-NETs did not have a specific thematic focus. Hence, Finland did not have a national programme in this thematic field. Finland took part in ERA-Chemistry from the beginning. Chemistry, as a basic field of science, had a strong background in the country although there had been little transnational calls in a systematic way in the field before FP6 ERA-NET. Finland had bilateral agreements with Nordic countries and China and Japan but not with Central European countries for example.
In France, and for the Centre National pour la Recherche Scientifique, CNRS, in particular, 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[207] 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 evolve from a 'club' to a specific and integrated structure). The rationale for participation in Aspera was similar with the exception that CNRS was also interested in rationalising budgets allocated to research infrastructures[208]. Before the FP6 ERA-NET scheme, CNRS already participated in transnational

[205] Refer to participant survey results in the annexes (Table 1).

[206] Refer to participant survey results in the annexes (Table 23).

[207] 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.

[208] The nature of this interdisciplinary science implied that research on this field had to be undertaken at a European or an International level. The research experiments increasing in importance and scale made bilateral cooperation[208] not sufficient enough. To give a sense of scale the next generation of experiments in

cooperation. It did so through bilateral agreements with key countries like Germany and The Netherlands.
Poland did not have national strategic programmes until 2008, so there were no links between ERA-NET participation and national programmes.

Portugal participated in 4 ERA-NETs within the Fundamental Sciences theme, of which one (ASPERA) was consulted during the fieldwork interviews. Portuguese input into this ERA-NET can be considered weak, and the interviewees suggested that this thematic area had not generally been a priority in Portugal.

In the UK, there was and is long term commitment to Fundamental Sciences. Astroparticle physics, for instance, has been a long standing research theme in the UK. The Science and Technology Facilities Council (STFC)[209] have had overall responsibility of the field. The STFC joined ASPERA to contribute to the development of a European-wide strategy for this field of research. Tactically it saw it as another way to engage in transnational collaboration and to create synergies to better use current UK research infrastructures and facilities. Complexity science, also part of Fundamental Science, was a more recent research theme. A UK participant, the Engineering and Physical Sciences Research Council (EPSRC), was involved in a cross-disciplinary research programme for the last few years. Complexity Net was also a logical route to transnational R&D collaboration. According to the UK participant, "participating in the ERA-NET scheme is a strategic decision based on UK research and its collaboration with the European Union".

2.2 ERA and structuring effect in the thematic area

In the participant survey, participants in the Fundamental Sciences thematic field were overall less prone than the average participants to respond that their ERA-NET participation had influenced their country's national programmes. For instance, only 25% of respondents reported that participation had influenced the discontinuation of existing programmes (compared to 34% overall). 31% of Fundamental Science participants reported that the ERA-NET had reduced duplication between national programme (compare compared to 38% overall) and 29% reported that new programmes had been put in place (compared to 35% across themes. Influence in this theme was by far the greatest with regard to creating new opportunities for transnational R&D activities where **77% of the participants had seen an influence compared to 86% across themes, as well as for new programme assessment/evaluation criteria (62% for Fundamental Sciences vs. 50% across themes)[210].**

Again through the survey, a majority of participants reported that Fundamental Sciences **was important to their country's research programme before and after ERA-NET participation (e.g. respectively 57% and 86%)**. However, the degree of importance reported for the theme was slightly below the average across all thematic areas (e.g. 69% and 90% respectively). Changes in importance could be attributed to ERA-NETs in this field to some extent for 31% of the respondents, which was slightly above the thematic average (29% across themes)[211].
In terms of the structuring effect of the FP6 ERA-NET scheme, a majority of participants (63%) reported prior relationships with ERA-NET participants prior to FP6, in line with the average across all thematic areas (66%). The same proportion (62%) reported that their relationships strengthened over the period, in line with the average across all thematic areas (63%). Detailed additional evidence is provided in the qualitative findings below:

Astroparticles physics requires multi-million euro investments. Hence for CNRS the rationale for engaging in transnational research project to rationalise budgets earmarked for very large equipments.

[209] The STFC is one of seven UK Research Councils. STFC is in charge of UK space science program, which includes astroparticle physics. It is also responsible for providing facilities to all UK science laboratories. It also provides access to international science facilities, such as through CERN and the European Space Agency. STFC provides the UK with a broad range of scientific and technical expertise in space and ground-based astronomy technologies, microelectronics, wafer scale manufacturing, particle and nuclear physics, alternative energy production, radio communications and radar (www.scitech.ac.uk).

[210] Refer to participant survey results in the annexes (Table 8).

[211] Refer to participant survey results in the annexes (Tables 15 to 17).

Participation in Fundamental ERA-NETs was geographically narrower than for other themes: Fundamental Sciences ERA-NETs covered most of EU15 Members States, although particular countries like France, Germany, Italy, Portugal, Spain, and the United Kingdom were more frequently involved than other countries. Only three EU 12 countries were involved as participants in Fundamental Sciences ERA-NETs: Czech Republic, Hungary and Poland. Associated countries involved in Fundamental Sciences ERA-NETs included Switzerland and Turkey.

ASPERA

Six large agencies founded a consortium called ApPEC (Astroparticle Physics European Coordination) in 2001. The rationale for joining efforts by then was that the emerging field of astroparticle physics was not covered by the coordinating and funding of adjacent disciplines like physics or astronomy. The peer review committee reviewed each of the subfields of astroparticle physics with topical workshops in 2002 – 2004. By 2005 ApPec realised that its goals and methods fitted perfectly to the FP6 ERA-NET Scheme and ASPERA started in July 2006 for a three year period. This intense European coordination was used as a lever to convince stakeholders to structure the research field at national level and to spend resources on it.

A clear structuring effect could be evidenced in this science field. The ASPERA programme gave a boost to the European convergence of the field. The process became visible internationally and elicited demands from other continents for global coordination (e.g. OECD Megascience forum under preparation). Evidence of the structuring effect in the field of astroparticle physics was given by the fact that the consortium of six countries in 2001 evolved into a consortium regrouping 11 countries in 2008 (12 if you include Greece in the New Aspera for 2009). The entire field of astroparticle physics has evolved from 60 programmes at the start of the ERA-NET to 7 programmes in 2008. In the future, Aspera intends to conduct common calls for joint funding of research and development initiatives as well as coordinated joint programming of multi-million euro programmes.

In France, ASPERA was and is well-aligned to national priorities in the field. France has as a coordinator had a major influence on the agenda in this field of science. France will remain involved in this field of science in the future.

In the Netherlands, a clear structuring effect could be identified in the field of astroparticle physics in the Nertherlands. In 2002-2003, the Dutch research institute NIKHEF, Nationaal instituut voor subatomaire fysica, 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 in European cooperation as a partner in the ASPERA ERA-NET. 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 Netherlands is a key player in a better structured European arena. All these processes developed in parallel and ERA-NET strongly contributed to this.

In the UK, the STFC joined ASPERA because it saw it as a way to developing a European-wide strategy for this field of research. Tactically it saw it as another way to engage in transnational collaboration. Regarding the impact of the ERA-NET Scheme on the **UK's** focus on space science, of which astroparticle physics is a component research field, the participant was quite clear that ASPERA did not introduced transnational collaboration into STFC's activities as it has had a long experience of such collaboration. Instead, ASPERA was regarded as a new funding scheme for collaboration. Furthermore, STFC engagement in transnational or European R&D was not dependent on its ASPERA involvement. ASPERA was another transnational R&D mechanism, in which the key European players in astroparticle physics were members.

ASTRONET

ASTRONET was created by a group of European funding agencies in order to establish a comprehensive long-term planning process for the development of European astronomy. The objective of this effort was to consolidate and reinforce the world-leading position that European astronomy has attained at the beginning of the 21st century. Nine participants were involved in

this ERA-NET which represented about 80% of the total astronomical resources in Europe. No qualitative evidence about the impact of this ERA-NET on the field could be gathered as part of the interviews around this ERA-NET.

COMPLEXITY-NET

In order to put stronger focus on the field of Complexity and complex systems - an emerging research field with a large technological potential - nine countries initiated a coordination action that aimed to coordinate strategically planned research activities at national level. In terms of key players, France and Germany appeared to be missing from this ERA-NET. The feedback from the interviews indicated that this was because these two countries lacked a funding mechanism for complexity science.

In the UK, the EPSRC got engaged since it was open to opportunities in transnational R&D activities. Complexity Net was seen as a logical route to transnational R&D collaboration. According to the UK participant, "participating in the ERA-NET scheme is a strategic decision based on UK research and its collaboration with the European Union. Such participation and collaboration are good for UK researchers." Thus, ERA-NET participation could be seen as a part of the EPSRC's activities to build coherence in UK research community. So participation in Complexity NET was one route to trying to build this coherence by exploring how complexity science (Fundamental Science) could engage with social scientists, such as in applying social network analysis to explain emergent patterns of a "system."

However, similarly to ASPERA, UK engagement in transnational or European R&D was not dependent on its involvement in the ERA-NET. Complexity-NET was another transnational R&D mechanism, in which some European players in the field were members. The UK interviewees consulted were content with the activities performed within the ERA-NET although it had no effect on the UK national policy and programming landscape.

ERA- CHEMISTRY

The main objective of ERA-CHEMISTRY was to sharpen up CERC3 by integrating public sector research into the fields of chemistry across Europe. All key players in the field seemed to have been involved although future transnational actions will aim to involve more European countries. The ERA-NET was relatively successful since the participants saw some value in ERA-Chemistry: "it has had a structuring effect for basic research fundamental research in the field". ERA-NET participants reported that they would continue to collaborate beyond the FP6 ERA-NET.

In Austria most respondents across thematic areas and policy and participant/coordinator level thought that there had been very limited impact on national research fields. 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, as they saw it, a lack of 'critical mass'. At participant level, Fundamental Sciences ERA-NETs were considered as an instrument that could be used to exploit existing research fields, without however being truly innovative.

The Finish participant in ERA-Chemistry reported commitment to continued involvement after the end of the FP6.

According to the **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. Interviewees attributed this to national customs, structures, and legal frameworks including the principles that money follows researchers. The speed at which procedures and processes changed was extremely slow. Evidence of this is that issues related to national procedures were 'worked around' rather than properly addressed. There was still a need to create European procedures linking to existing national procedures. At the level of CNRS, ERA-Chemistry had become the biggest action of the chemistry department. ERA-Chemistry was seen as a key vehicle of essential actions in the field and hence in that of French research policy.

A process for joint calls between Germany, Switzerland and Austria outside the ERA-NET was being set up and, according to the **German coordinator** could be seen as a logical consequence of ERA-Chemistry.

In Portugal, there was limited structuring effect on thematic areas overall and Fundamental Sciences was no exception. This corresponded with a Portuguese tradition for broad and general research programmes, where research is funded on an overall competitive basis rather than dedicated to specific themes.

One participant reported an interesting development in that **Spain** in ERA-Chemistry became a major country at scientific, administrative and funding levels. This was demonstrated by the degree of openness and financial contributions. This was due to the fact that Spain had the

political will to engage in transnational research in this area. This could not be verified by Spanish participants directly as Spain did not form part of the field work.

EURYI

The European Young Investigator Awards (EURYI) scheme was designed to attract outstanding young scientists in all research domains, including the humanities, from any country in the world to create their own research teams in European research centres. It was managed by the European Science Foundation. No qualitative evidence has been gathered as part of the interviews around this ERA-NET. However, the 2nd evaluation of the European Young Investigator Award Scheme (EURYI) found that "The management of the EURYI scheme has implied cooperation, learning and inspiration between the national research funding agencies involved. In terms of ERA-NET project ambitions, this same evaluation regarded EURYI as having been both unique and successful. Compared to initiatives that did not demand separate annual funding decisions from the participating countries, on the other hand, EURYI had clear limitations concerning geographical scope, budgets and durability"[212].

[212] The 2nd evaluation of the European Young Investigator Award Scheme (EURYI) – 2007.

3 ERA-NET funding considerations in the thematic area

3.1 Inputs into the ERA-NET scheme for this thematic area

In terms of the **costs of participation**, the participant survey indicated that EC funding did not cover all time and resources invested in participation in the ERA-NETs for about half of the participants in the theme (49%). This was entirely in line with the average across themes[213]. At the same time, 29% of participants in this field stated that national resources (staff and finance) were still a problem that needed to be overcome in order to exploit the full potential of ERA-NET participation, a figure that was significantly higher for this theme than others (15% across themes)[214].

Fundamental Sciences ranked third in terms of the funding contributions channelled across all thematic areas under FP6. As stated above, more than €117m were invested in joint calls and pilot actions over the period. The amount of contributions to joint calls reflected the frequency of ERA-NET participation but only to some extent. Active funders of research projects via the ERA-NETs in this area included Austria, Germany, Spain, The Netherlands, Portugal, Spain and Belgium (all in the EU15 Member States). France, Italy and the UK contributed to calls but to a lesser extent than the countries already mentioned. Among EU12 Member States and associated countries, Hungary and Switzerland contributed to ERA-NET generated research projects to the same extent than the most active EU15 Large countries.

Qualitative evidence from interviewees is presented below:

In Austria and Germany, most participants felt that a significant set of activities had taken place. 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.

In Finland, overall ERA-NET participation was more resource-intensive than anticipated and the Academy of Finland had to contribute with its own resources. Apart from ERA-NET activities, participants were interested in the way different funding organisations operated and how thematic programmes were coordinated. Finland took part in the first call organised by ERA-CHEMISTRY but none of the applications were successful.

In France, to participate in ERA-CHEMISTRY, CNRS had to hire one programme Manager. This person managed the operational activities linked to this ERA-NET and also managed other European programmes and instruments. Similarly, to manage the French participation in ASPERA, CNRS had to hire one programme manager. CNRS also had to provide extra funding to cover the cost of its participation. CNRS have contributed to 2 of the 3 joint calls organised under ERA-CHEMISTRY via a mixed mode of financing (respectively 66% via Virtual Pots and 33% via Real Common Pots). At the time of the interviews, CNRS was willing to participate in a pilot call via a Virtual Pot for ASPERA[215].

In Portugal, the sample of interviewees suggested that input into this thematic area had been limited[216]. Prior to joining the scheme, there was limited strategic planning associated with Portuguese participation in the ERA-NET scheme overall, to which this theme was no exception. The FCT became involved by solicitation of the research community, and as participation matured, the FCT took over representative participation from the scientific community. ASPERA was an example of an ERA-NET where researchers represented the FCT in the ERA-NETs and were funded on the same competitive basis as national research. Input into the ERA-NET in questions (ASPERA) was limited.

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

[214] Refer to participant survey results in the annexes (Table 23).

[215] A pilot called is scheduled to take place in 2009 (FP7). The financing mode will be a virtual common pot and overall contributions are estimated to €5 m in total. A real common pot would have led to less funding contributions since national budgets are earmarked for the national use according to the French cooridnator.

[216] This is at odds with the results of the coordinator survey. Hence, the interpretation of the results should be seen as representative of Portugal's involvement in Aspera and not of Portugal's involvement in Fundamental ScienceFundamental Sciences area as a whole.

In the UK, there has been no decision as to whether contributions will be made to future ASPERA joint calls. Nevertheless, the UK will contribute to a real common pot to fund a joint call organised by Complexity-Net. In this ERA-NET, the Research Council is prepared to contribute to a real common pot to fund a joint call. However, the contribution is "targeted for UK researchers who respond to the joint call".

3.2 Opening up considerations for this thematic area

The participant survey reveals that participants in Fundamental Sciences were as prone as participants in other theme to answer that ERA-NET participation had led to the establishment of new eligibility criteria for foreign researchers as the average (42% in both Fundamental Sciences and across)[217]. The propensity of ERA-NETs in the theme to influence access to foreign research communities/ group which were not present at national level was also in line with the average across all themes. In addition, National legal conditions were not seen as a major obstacle by a majority of participants. The participant survey highlights that the funding of non-residents was a problem not overcome for only 17% of respondents in this theme, compared to 25% across all thematic areas[218].

A key feature of Fundamental Sciences ERA-NETs was their high degree of openness. This was demonstrated by the amount of funding contributions channelled in the thematic area via real common pots and mixed mode pots (e.g. respectively more than €104m and €8.6m). Contributions to real common pots represented 90% of all funding contributions received in the theme, corresponding to contributions for joint calls organised by EURYI only.

The relatively high degree of opening was also corroborated by qualitative evidence collected during the field work:

In Germany, one respondent in the **Fundamental Sciences** thematic area pointed out that the ERA-NET had allowed researchers from across Europe to apply for funding. In the field of **chemistry**, 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.

One Finnish participant in ERA-CHEMISTRY reported that some countries had difficulties in taking part in joint calls financed under real common pots because of national legal rules. In the first two calls real common pots were used but not since then because some countries were not satisfied that they gave more money than they got back. Finland funded a foreign researcher as part of the first call via funding given to a real common pot.

In the UK, as noted above, the STFC has not made any decision as to whether it will contribute to a real common pot, or whether its contribution to fund the joint call will be primarily targeted at UK researchers. On the other hand, it is possible that the STFC contribution may be "virtual". This could take the form of access to and use of the STFC scientific facilities and laboratories by researchers. Also noted above, the EPSRC will be contributing real money for a joint call. However, as with most of its funding activities, the Council's money will be aimed at supporting UK researchers.

[217] Refer to participant survey questionnaire (Table 8).

[218] Refer to participant survey questionnaire (Table 23).

4 ERA-NET benefits for this thematic area

4.1 Direct and indirect benefits of ERA-NETs in this thematic area for national policy stakeholders and participants

The participant survey seems to suggest that the benefits to Fundamental Sciences participants were in line with the average across all thematic areas. On questions such as whether the ERA-NET participation had affected higher quality projects or new types of projects, the responses were respectively slightly above and slightly below the average[219].
Main benefits derived from Fundamental Sciences ERA-NETs were mainly found in the increased reputation of some science fields (Astroparticle Physics, Complexity Science) and the respective research organisations involved in the field. Other benefits included networking, greater understanding of respective national programmes and focus as well as learning about ways to work across the ERA.
Direct and indirect benefits of **ASTRONET** for national policy stakeholders and participants were as follows:

- For Poland, the benefits were limited, since the ERA-NET generally did not fit into recently drawn-up national priorities and it was addressing a small scientific community.
- The Polish National Centre of Research and Development could benefit from being involved in the astronomy roadmap (which was part of the project), for example through increased visibility.

Direct and indirect benefits of **ASPERA** for national policy stakeholders and participants were as follows:

- Networking with programme owners and research community at EU level
- Visibility at European and global level of the astroparticle physics science field has dramatically increased
- Sustainability of the ERA-NET (Two or three major countries wished to make this organisation perennial)
- Increased international reputation for the French Research Institute CNRS
- National programmes aligned to ASPERA strategy
- Clearly identified countries who were interested in astroparticle physics;
- Better understanding of funding mechanisms of partner countries;
- Taking part in ERA-NET gave Dutch participants credit for reinforcing their field of research in the national arena. Participation to ASPERA had a positive influence in structuring astroparticle physics in the Netherlands. NICKEF's participation to an ERA-NET had a catalytic affect, which contributed to get FOM (Institute for Plasma Physics Rijnhuizen, the funding agency) include astroparticles in its strategy
- Enlarged and consolidated networks were another direct benefit of ERA-NET. In the field of astroparticle physics, ASPERA complemented at a more policy level the work carried out so far by ApPEC, which was a coordination of research organisations.

Direct and indirect benefits of **ERA-CHEMISTRY** for national policy stakeholders and participants were as follows:

[219] Refer to participant survey questionnaire (Table 22).

- The German coordinator thought ERA-Chemistry was a success, partly because there was little need for expensive infrastructure in this field. The ERA-NET 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.

- Innovation / inventiveness with regard to collaboration actions: focus on scientific excellence and brainstorming, tangible actions that adds 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.

- Knowledge of the focus of different organisations in the field.

Direct and indirect benefits of **COMPLEXITY NET** for national policy stakeholders and participants were as follows:

- ERA-NET provided a longer time frame under which to encourage transnational R&D.

- The longer term allowed new researchers to "join the club."

- The engagement of UK researchers in European initiatives in complexity science was beneficial to the UK science base.

- The reduction of duplication in complexity science research was seen as a benefit.

- UK's EPSRC obtained a broader knowledge of what Europe is doing in complexity science. Such knowledge was beneficial to research councils who were keen on promoting transnational collaboration for their country's researchers.

4.2 Direct and indirect benefits of this ERA-NET thematic area for research beneficiaries

According to the participant survey, participants in Fundamental Sciences were no more or no less likely than the average to have reported evidence of impact on new researchers benefiting from joint activities and gaining access to research communities abroad than other themes[220]. A majority of Fundamental Sciences participants (44%) saw some evidence that new researchers (with no prior international or European experience) had benefited from joint calls and joint programmes, compared to 41% across all thematic areas).

Direct and indirect benefits of this Fundamental Sciences for research beneficiaries were as follows:

- Expansion of 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 was no other tool to do that).

- ERA-NETs managed to create a long lasting collaboration between researchers.

- The ERA-NET created a window of opportunity to collaborate with another country.

[220] Refer to participant survey results in the annexes (Table 22).

- Created an 'intelligencia' of EU researchers (e.g. internationally visible community).

5 European Added Value, relevance and efficiency

5.1 Additionality of ERA-NETs in this thematic area

Results from the participant survey and interviewees suggest that additionality of ERA-NETs in the Fundamental Sciences was limited. For instance, a short majority of participants did not regard their participation in Fundamental Sciences ERA-NET as having triggered transnational cooperation outside of the ERA-NET (46% in the theme vs. 40% across themes). However, the number of positive response to the question was higher than the average across all thematic area (47% for Fundamental Sciences vs. 31% across).[221]

Similarly, a strong majority of participant (66%) did not see the amount of their programme budget invested in transnational R&D projects outside the ERA-NET being increased[222], compared to an average of 63% across all thematic area. These may be due to the fact that:

- Fundamental Sciences were already a transnational thematic area before FP6.
- Budgetary constraint limited the increase in budgets over the period.

Further evidence of limited additionality of the ERA-NETs in this thematic area was given as follows:

- **In Austria,** 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 seen as minimal.

- **In Finland**, one interviewee commented that taking part in ERA-CHEMISTRY did not lead the Academy to allocate less or more funding to the field. In addition, funding was competitive in Fundamental Sciences and the Academy needed to balance the funding between all the fields to keep equality between them.

- **In Germany,** most participants thought that the additionality of projects funded under ERA-NET was good. For instance in ERA-Chemistry, there was a feeling that most projects supported by the ERA-NET would not otherwise have received funding. However, for projects above a certain size, other support schemes such as the ESF would make more sense.

- **In Poland,** researchers were already involved in the thematic area relevant to Astronet at European or International level and this because of nature of the research field and its dependence on large infrastructures that a country like Poland did not have. This may be why the added value of this ERA-NET was seen as limited by Polish participants.

- **In Portugal**, there were few indications of additionality for ERA-CHEMISTRY. As the research community represented the funding agency in the ERA-NET consulted, participation had not necessarily increased cooperation beyond existing international and European networks. Efforts had been made to expand these networks, although this had not necessarily given clear results in Portugal.
- **In the UK,** participants in the Fundamental Sciences ERA-NETs did not perceive additionality from their participation. Research in astroparticle physics and complexity science were ongoing and established priorities so that programmes were not affected by ERA-NETs. Furthermore, participants did not expect much impact from participation on their programmes of activities. They maintained that it was too early to judge what the

[221] Refer to participant survey results in the annexes (Table 11)
[222] Refer to participant survey results in the annexes (Table 12)

research outputs that the joint calls would produce. All these, however, did not imply that there had been no benefits. As shown above, these benefits cannot be underestimated.

Added value from participation in Complexity NET was particularly demonstrated when mapping the European landscape of complexity science. It showed the absence of social scientists' contribution/participation in this field. So in January 2008 an effort was made to engage social and political scientists to be involved in complexity science.

Interesting elements of additionality could be found as follows:

- ERA-Chemistry has been taken as a model to coordinate actions in the Chemistry domain at International level (IUPAC). This NGO of chemist has limited resources and a small budget to try to coordinate actions in the Chemistry domain at International level with the financial contributions of national funding agencies. A call was launched in august 2006 and implemented in 2008 where up to 8 partners in ERA-Chemistry financed a PHD grant. Funded PHD students were given a grant to work with other countries to develop knowledge and dissemination of this knowledge. These new actions are the consequence of ERA-chemistry.
- ERA-Chemistry was also taken as a model of excellence networks for PRIME[223].
- For ASPERA, the National Science Foundation in the USA was keen to share lessons learned from the ERA-NET experience in astroparticle physics.

5.2 Perceived economic efficiency and relevance

Overall, the vast majority of participants considered their participation in FP6 ERA-NET as having been worthwhile (86%), although this was below the average across all thematic areas (95%). Similarly, most participants (92%) got out as much as or more than what they expected, on par with participants across all thematic area. As for the degree of satisfaction of the overall level of transnational cooperation within Fundamental Sciences ERA-NETs, a majority of participants were satisfied (71%) although a strong minority (20%) were unsatisfied, compared to respectively 88% and 7% on average across all thematic areas[224].

This relatively low degree of perceived economic efficiency may be due to the fact that this thematic area was already a mature area for transnational cooperation.

Country specific views on economic efficiency and relevance were given as follows:

- **In Austria,** it was felt that top scientists did not want to participate in ERA-NETs 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 transnational research networks.

- **In Finland,** ERA-Chemistry participants will remain involved in the continuation of the existing ERA-CHEMISTRY consortium (previously CERC3) and some activities might be handled together with this consortium in the future. However, Participation was more resource intensive than anticipated. Also organising transnational calls could have been more efficient given the fact that it is difficult because everyone have different schedules and the calls do not fit to national schedules. However, all organisations considered, might have got more out than the cost of participation.

- **In France,** CNRS thought that their participation in ERA-NETs was globally positive (e.g. "the benefits outweighed the costs"). CNRS is part of the generation of ERA-NETs.

[223] http://www.prime-noe.org/Local/prime/dir/News/Toulouse%202008%20Conference/Toulouse_Kuhlmann%20ERA%20Dynamics.pdf

[224] Refer to the participant survey results (Tables 5, 6, & 7)

- **In Germany**, one of the coordinators of ERA-Chemistry pointed out that the scheme had 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.
- **In Portugal**, responses to questions about the economic efficiency of the ERA-NET scheme were positive across all themes. However, the respondent interviewed for this theme would not reply to this question, as limited financial input had been made.
- **In the UK,** the benefits outweighed the cost of involvement. The ERA-NET Scheme was not expected to impact in any significant way on UK policy and R&D planning but provided another important route to transnational R&D collaboration. **For UK participants**, the value derived from the national open day in which ASPERA attendees from China, India, Japan and the U.S. suggested that global cooperation in astroparticle physics should be considered as a long term activity with possible participation from these countries.

6 Annexes: Stakeholders and materials consulted

Stakeholder Consulted:

- Austria, ERA-CHEMISTRY, FWF
- Germany, ERA-CHEMISTRY, DFG
- Finland, ERA-CHEMISTRY, the Academy of Finland
- France, Aspera, ERA-CHEMISTRY, CNRS- http://www.cnrs.fr
- The Netherlands, ASPERA, Nikhef
- Poland, Polish participants in ASTRONET
- Portugal, ERA-CHEMISTRY, LIP
- UK, ASPERA, ERA-CHEMISTRY, COMPLEXITY NET - STFC and the EPSRC

ERA-NET Web sites:

- http://www.aspera-eu.org
- http://www.erachemistry.net
- http://www.astronet-eu.org
- http://www.complexitynet.eu/Pages/default.aspx
- http://www.esf.org/activities/euryi/
- http://cordis.europa.eu/coordination/projects.htm

Materials consulted:

- CNRS report - https://dri-dae.cnrs-dir.fr/IMG/pdf/CNRS_EUROPEengl_web.pdf
- Astroparticle Physics – The European Strategy http://www.aspera-eu.org/images/stories/roadmap/aspera_roadmap.pdf
- PRIME http://www.prime-noe.org/Local/prime/dir/News/Toulouse%202008%20Conference/Toulouse_Kuhlmann%20ERA%20Dynamics.pdf
- 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)

- The 2nd evaluation of the EuropeanYoung Investigator Award Scheme (EURYI) - 2007

7 Annexes: Participant questionnaire results

The figures below show responses to the participant questionnaire, completed by 27 Fundamental Sciences participants.

Table 1- How would you rate the degree of fit between your national R&D programme relevant to the theme and this ERA-NET?

	Fundamental sciences	Total
Good fit	86%	**84%**
Poor fit	14%	**5%**
No answer	0%	**11%**

Participants in Fundamental Sciences ERA-NETs were slightly more likely to report good fit between their national R&D programme and the ERA-NET as participants on the whole.

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

	Fundamental sciences	Total
0 - 9999	6%	**4%**
10000 - 19999	0%	**2%**
20000 - 29999	6%	**3%**
30000 - 39999	0%	**2%**
40000 - 49999	0%	**2%**
50000 - 59999	0%	**2%**
60000 - 69999	0%	**1%**
70000 - 79999	0%	**6%**
80000 +	82%	**71%**
Not Answered	6%	**6%**

Responses from participants in the Fundamental Sciences thematic field indicated that the EC contribution for Energy was higher than the average.

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

	Fundamental sciences	Total
Yes	49%	**49%**
No	51%	**51%**
Don't Know	0%	0%
Not Answered	0%	0%

Participants in the Fundamental Sciences thematic field were as prone as the average to indicate that the EC funding had not covered their participation in the scheme.

Table 432 - In which ERA-NET joint activities other than joint calls did you participate?

	Fundamental sciences			Total		
	Yes	No	No answer	Yes	No	No answer
Coordination/clustering of ongoing nationally funded research projects	79%	3%	18%	**59 %**	**19 %**	**23%**
Benchmarking and common schemes for monitoring and evaluation	86%	14%		**67 %**	**13 %**	**19%**
Multinational evaluation procedures (common evaluation criteria and methods of implementation	66%	14%	20%	**55 %**	**25 %**	**20%**
Schemes for joint training activities (so-supervised theses or common PhD schemes)	26%	49%	26%	**12 %**	**49 %**	**39%**
Schemes for personnel exchange	6%	57%	37%	**14 %**	**47 %**	**39%**
Schemes for mutual opening of facilities or laboratories	31%	43%	26%	**15 %**	**44 %**	**41%**
Specific cooperation agreements or arrangements	28%	39%	33%	**43 %**	**24 %**	**33%**
Action plan taking up common strategic issues and preparing for joint activities	89%	11%	0%	**75 %**	**11 %**	**13%**

Participants in the Fundamental Sciences thematic field were more engaged in all activities than the average, with the exception of schemes for personnel exchange and specific cooperation agreements or arrangements.

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

	Fundamental sciences	Total
Yes	86%	**95%**
No	14%	**4%**
Not Answered	0%	**1%**

Participants in the Fundamental Sciences thematic field were less prone to agree that the participation in the scheme had been worthwhile than the average.

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

	Fundamental sciences	Total
I got more out of it than I expected	50%	**41%**
I got out of it what I expected	42%	**51%**
I got less out of it than I expected	8%	**6%**
Not Answered	0%	**1%**

Participants in the Fundamental Sciences thematic field were more likely to report that they got out of ERA-NET more than they expected than the average.

Table 7 - How satisfied are you with the overall level of transnational cooperation within this ERA-NET?

	Fundamental sciences	Total
Satisfied	71%	**88%**
Unsatisfied	20%	**7%**
No answer	9%	**4%**

Participants in the Fundamental Sciences thematic field were less satisfied with transnational cooperation within the ERA-NET than the average.

Table 8 - To what degree has your participation in this ERA-NET influenced your country's national programme(s)?

	Fundamental sciences			Total		
	No influence	Influence	No answer	No influence	Influence	No answer
Discontinuation of existing programme(s) in some theme(s)	67%	25%	8%	**53%**	**34%**	**12%**
Reducing duplication between National programmes in your country	49%	31%	20%	**47%**	**38%**	**16%**
Design of programmes with longer time horizon	44%	41%	15%	**42%**	**49%**	**10%**
Design of programmes with shorter time horizon	40%	46%	14%	**51%**	**38%**	**11%**
Bigger programme budgets for the theme	38%	50%	12%	**42%**	**46%**	**12%**
Smaller programme budgets for the theme	77%	9%	14%	**63%**	**13%**	**23%**
New programme assessment/evaluation criteria	24%	62%	15%	**40%**	**50%**	**10%**
New opportunities to enable transnational R&D activities in the theme of the ERA-NET	14%	77%	9%	**8%**	**86%**	**6%**
New eligibility criteria allowing funding of foreign researchers in the area	33%	42%	25%	**43%**	**42%**	**15%**
Existing programme(s) now covering new theme(s)	34%	40%	26%	**48%**	**38%**	**14%**
New programme(s) put in place in response to new theme(s) identified	46%	29%	26%	**51%**	**34%**	**15%**

Participants in the Fundamental Sciences thematic field were more prone to indicate the influence of the ERA-NET on design of programmes with shorter time horizon or new programme assessment/evaluation criteria.

Table 9 - To what extent did your organisation have pre-existing relationships with participants in this ERA-NET prior to FP6?

	Fundamental sciences	Total
Prior relationships	63%	**66%**
No prior relationships	29%	**26%**
No answer	9%	**8%**

Participants in the Fundamental Sciences thematic field were less likely than the average to have had prior relationships with other participants in their ERA-NET.

Table 10 - If there were prior relationships which of the following 6 statements best describes how these relationships evolved during your participation in this ERA-NET?

	Fundamental sciences	Total
Strengthened	62%	**63%**
Weakened	0%	**1%**
No answer	35%	**33%**
No change	3%	**4%**

Participants in the Fundamental Sciences thematic field were broadly as likely as the average to say that prior relationships have strengthened.

Table 11 - Has your participation in this ERA-NET triggered transnational cooperation outside of the ERA-NET?

	Fundamental sciences	Total
Yes	40%	**31%**

No	46%	**47%**
Not applicable	6%	**16%**
Not Answered	9%	**5%**

Participants in the Fundamental Sciences thematic field were more likely than the average participant to say that the participation had led to transnational cooperation outside of the ERA-NET.

Table 12 - 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?

	Fundamental sciences	Total
Yes	9%	**13%**
No change	66%	**63%**
No answer	26%	**23%**

Participants in the Fundamental Sciences thematic field were less likely than the average to claim that the participation lead to an increase in the amount of the programme budget that has been invested in transnational R&D projects outside of the ERA-NET.

Table 13 - If yes roughly what proportion of your programme budget was transnational before your involvement in ERA-NET?

	Fundamental sciences	Total
0-25%	11%	**15%**
26 to 50%	3%	**0%**
51 to 75%	0%	**0%**
76 to 100%	0%	**1%**
Not answered	86%	**84%**

Participants in the Fundamental Sciences thematic area were less able than others to state what percentage of their programme budget was dedicate to transnational activities before the ERA-NET, and most of the ones who did indicated that it was 0-25%.

Table 33 - If yes roughly what proportion of your programme budget is transnational now?

	Fundamental sciences	Total
0-25%	11%	**13%**
26 to 50%	3%	**1%**
51 to 75%	0%	**0%**
76 to 100%	0%	**1%**
Not answered	86%	**84%**

Participants in the Fundamental Sciences thematic area were less able than others to state what percentage of their programme budget was dedicate to transnational activities after the ERA-NET, and most of the ones who did indicated that it was 0-25%.

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?

	Fundamental sciences	Total
Very important	34%	**21%**
Fairly important	23%	**48%**
Not very important	17%	**16%**
Not at all important	9%	**5%**
Don't Know	9%	**4%**

Not Applicable	6%	**2%**
Not Answered	3%	**5%**

Participants in the Fundamental Sciences thematic area were more likely than the average to state that their topic had been very important to them before joining the ERA-NET.

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

	Fundamental Sciences	Total
Very Important	40%	**24%**
Important	46%	**66%**
Not important	0%	**1%**
No answer	14%	**10%**

After participation in the ERA-NET, participants in the Fundamental Sciences thematic area were still more likely than the average to state that their topic was very important to them although overall the response was higher than what was stated as having been the situation before joining the ERA-NET.

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?

	Fundamental sciences	Total
To some extent	31%	**29%**
Not at all	9%	**11%**
No answer	60%	**60%**

Participants in the Fundamental Sciences thematic area were more prone to indicate that the change in importance of the theme was to some extent due to ERA-NET.

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

	Fundamental sciences	Total
Influence	66%	**63%**
No influence	31%	**18%**
No answer	3%	**19%**

Participants in the Fundamental Sciences thematic area were more likely than the average participant to state that their involvement in the ERA-NET had had influence on national policy beyond the theme of the ERA-NET.

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

	Fundamental Sciences					Total				
	Helped	Hindered	No effect	Not Answered	Not applicable	Helped	Hindered	No effect	Not Answered	Not applicable
Change in programme management agency	9%	23%	23%	0%	46%	**7%**	**6%**	**36 %**	**4%**	**47%**
New R&D management structure	3%	11%	31%	6%	49%	**11 %**	**7%**	**35 %**	**5%**	**42%**
For existing programmes, more strategic R&D programming/planning	35%	3%	24%	6%	32%	**29 %**	**0%**	**36 %**	**7%**	**28%**
Externalisation of R&D programmes into agency/agencies	14%	6%	14%	0%	66%	**8%**	**4%**	**33 %**	**5%**	**49%**

Setting up of new types of R&D programmes	23%	0%	20%	0%	57%	**24 %**	**7%**	**33 %**	**5%**	**30%**
Barcelona 3% targets	3%	0%	51%	0%	46%	**16 %**	**1%**	**39 %**	**8%**	**36%**

Participants in the Fundamental Sciences thematic area were more likely than the average to state that more strategic R&D programming/planning and externalisation of R&D programmes had helped the effects of their organisation's participation in the ERA-NET. They were generally less prone to report that the various external factors had no effect.

Table 20 - How strong are the links between this ERA-NET and Technology Platforms?

	Fundamental sciences	Total
Strong	11%	**23%**
Weak	54%	**44%**
No answer	34%	**33%**

Participants in the Fundamental Sciences thematic area were more likely to report weak links between the ERA-NET and the Technology Platforms.

Table 21 - Does this ERA-NET overlap with other ERA-NETs in your country?

	Fundamental sciences	Total
Yes, my ERA-NET overlaps with more than one ERA-NETs in my country	14%	**8%**
Yes, my ERA-NET overlaps with one other ERA-NET in my country	11%	**17%**
No overlaps	74%	**57%**
Don't know	0%	**13%**
Not Applicable	0%	**2%**
Not Answered	0%	**2%**

Participants in the Fundamental Sciences thematic area were more likely than the average to state that their ERA-NET has not overlapped with one or more ERA-NETs in their country.

Table 22 - 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?

	Fundamental Sciences			Total		
	Some evidence	No evidence	No answer	Some evidence	No evidence	No answer
Higher quality projects generated at national level (i.e. higher quality proposals)	47%	47%	6%	**39%**	**44%**	**17%**
Higher quality projects funded at national level (through joint calls/programmes)	34%	43%	23%	**35%**	**42%**	**23%**
New types of research projects generated (i.e. reflected in proposals received)	37%	49%	14%	**38%**	**42%**	**20%**
New types of research projects funded (through joint calls/programmes)	40%	31%	29%	**46%**	**32%**	**22%**
New researchers (with no prior international or European experience) benefiting from joint activities	41%	47%	12%	**40%**	**27%**	**33%**
New researchers (with no prior international or European experience) benefiting from joint calls/programmes	44%	38%	18%	**41%**	**34%**	**25%**
Access to foreign research communities/groups not present	54%	29%	17%	**54%**	**28%**	**18%**

in my country									

Participants in the Fundamental Sciences thematic area were more likely than the average to state that the ERA-NET joint activities had generated higher quality projects but less likely to state that they funded new types of research projects.

Table 23 - Did any of the following factors either help or hinder your organisation to exploit the full potential of its participation in this ERA-NET?

	Fundamental Sciences					Total				
	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	6%	83%	0%	3%	8%	**16 %**	**46 %**	**13 %**	**12 %**	**13%**
National cultures or research traditions	11%	66%	9%	6%	9%	**10 %**	**46 %**	**15 %**	**14 %**	**15%**
National resources (staff time finances)	11%	31%	29%	29%	0%	**17 %**	**35 %**	**26 %**	**15 %**	**7%**
National administrative procedures (e.g. evaluation rules)	0%	57%	34%	6%	3%	**6%**	**25 %**	**29 %**	**28 %**	**12%**
National legal programme conditions (e.g. funding of non-residents IPR)	0%	42%	33%	17%	8%	**4%**	**35 %**	**19 %**	**25 %**	**17%**
EC administrative procedures or legal requirements	0%	43%	20%	17%	20%	**1%**	**34 %**	**36 %**	**12 %**	**18%**
Perceptions of benefits	6%	34%	26%	6%	29%	**15 %**	**28 %**	**16 %**	**13 %**	**28%**
Engagement in other transnational initiatives (e.g. COST EUREKA)	15%	47%	3%	0%	35%	**12 %**	**46 %**	**4%**	**4%**	**34%**

Participants in the Fundamental Sciences thematic field were less likely than the average to state that national cultures or research traditions were a problem, but generally saw the factors as being less of an aid to success than the average.

8 Annex: Coordinator survey results[225]

The figures below show responses to the coordinator questionnaire in the theme of Fundamental Sciences.

5 of the 71 ERA-NETs belong to the fundamental science theme, representing 7% of all ERA-NETs. Table 24 below lists these ERA-NETs and indicates if they were covered by the field work

Table 24 - List of ERA-NETs covered within the theme

ERA-NET	Number of participants	Coordinator country
ASPERA	17	France
ASTRONET	9	France
Complexity-NET	11	UK
ERA-CHEMISTRY	14	Germany
EURYI	1	-

Industrial Technologies and SMEs ERA-NETs were active in joint calls, but not in pilot actions and joint programme. This is indicated in table 25 below. (NB: based on the Coordinator's survey which is not necessarily complete)

Table 25- Details of joint activities within the theme

Joint activities	Number of joint activities	€ Virtual pot	€ Common pot	€ Mixed mode	€ Other	Total
Joint calls	10	3,150,000	104,820,000	8,610,000	-	116,580,000
Joint programmes	0	0	0	0	0	0
Pilot actions	6	-	-	-	-	628,600

Figures reported in table 25 only contain funding contributions for which coordinators were able to provide a clear breakdown of funding contributions by country. Hence figures in table 25 are conservative and robust estimates of contributions to joint calls, joint programmes, and pilot actions.

The overall total amounts reported by coordinators should be treated with caution since they were not necessarily broken down or attributed to countries. These are as follows:

- Joint calls
  - Virtual common pot: € 5,650,000
  - Real common pot: € 104,937,000
  - Mixed mode: € 8,610,000

- Joint programmes
  - Virtual common pot: € 0
  - Real common pot: € 0
  - Mixed mode: € 0

- Pilot actions
  - Virtual common pot: no data
  - Real common pot: no data
  - Mixed mode: no data
  - Total funding: € 804,000

[225] 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)

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[226].

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 (AKA)	ERA-CHEMISTRY	Fundamental Sciences
Finland	Academy of Finland (AKA)	HERA	Social Sciences 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

[226] 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.

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	AirTN	Transport

	Ricerca		
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?