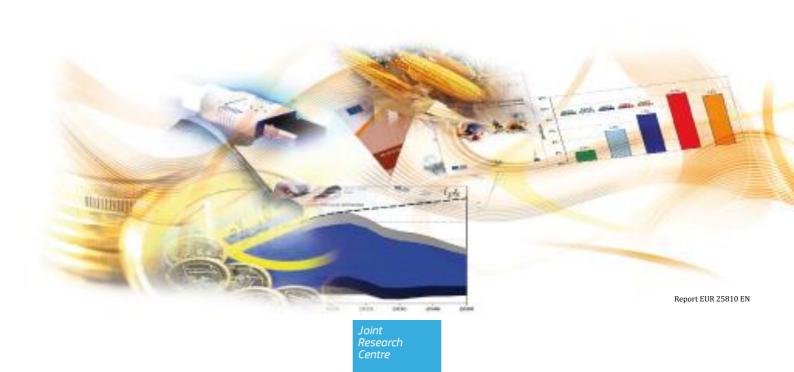


# JRC SCIENTIFIC AND POLICY REPORTS

# NETWATCH Mapping and Monitoring: Second and Third Exercises

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JRC 79025

EUR 25810 EN

ISBN 978-92-79-28595-0 (pdf)

ISSN 1831-9424 (online)

doi:10.2791/77106

Luxembourg: Publications Office of the European Union, 2013

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Printed in Spain

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The Institute for Prospective Technological Studies (IPTS) is one of the seven scientific institutes of the **European Commission's Joint Research Centre (JRC)**. The NETWATCH<sup>1</sup> information platform on transnational R&D programme collaboration is hosted by IPTS.

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<sup>&</sup>lt;sup>1</sup> NETWATCH collects and disseminates information on transnational programme cooperation <a href="http://netwatch.jrc.ec.europa.eu">http://netwatch.jrc.ec.europa.eu</a>.

# **Abbreviations and Acronyms**

EU - European Union

FP6 – Sixth Framework Programme

FP7 - Seventh Framework Programme

HEI - Higher Education Institution

ICT - Information and Communication Technologies

JPI – Joint Programming Initiative

NCBIR - National Centre for Research and Development (Poland)

PRO - Public Research Organisation

PSA – Parent or Stand Alone (when referring to organisations or programmes)

R&D - Research and Development

RTO - Research Technology Organisations

SME – Small and Medium Sized Enterprises

TUBITAK - The Scientific and Technological Research Council of Turkey

#### **EXECUTIVE SUMMARY**

The work presented in this report is based on mapping exercises providing a descriptive analysis of the networks included in the NETWATCH database (i.e. active ERA-NETs, ERA-NET Plus, Article 169/185s and self-sustaining networks). Building on previous reports, with the addition of a time dimension, through periodic collection and analysis of network data, the report monitors the landscape of schemes and provides an analysis of key aspects of the evolution of research programme cooperation within Europe. These findings aim to support policy makers to make informed decisions on the future design and implementation of related initiatives.

Following the first mapping and monitoring report (D3.2.1), which compared networks from 2010 and 2011, the current report combines the outcomes of two subsequent mapping and monitoring exercises (D3.2.2 and D 3.2.3) and seeks to further enhance the monitoring dimension. The analyses are based on those networks active in June 2011 and in December 2011. In June 2011, there were 68 active networks: 43 FP7 ERA-NETs, three FP6 ERA-NETs, eight ERA-NET Plus, four Article 169/185s, two coordination and support actions and eight self-sustaining networks. The December 2011 cohort was largely unchanged compared to that of June 2011. The total number of active networks decreased to 67 after one of the coordination and support actions ended

The coordinators of active networks were requested to provide the required information via the on-line NETWATCH information platform. Data from these two periods, as well as findings from the first mapping and monitoring report are then compared to provide an enhanced assessment of the state of European research programme collaboration. To address the data deficiencies identified in the first mapping and monitoring exercise, extra effort has been made to complete and update the information. Nevertheless, some data limitations persist, particularly in relation to programmes, joint calls and financial information.

#### Highlights from the findings of this monitoring report:

#### Network participation patterns

- The size of networks, in terms of the number of participating countries, organisations and programmes, has increased; this could reflect increased awareness and interest in participation. While the average number of countries involved, and organisations involved, was 13 and 18 respectively in 2010, these averages increased to 15 and 19 in 2011.
- The concentration of national participation in active networks has changed little since 2010. Germany, France, Spain, Austria and the United Kingdom account for 26% of the total participation. Fifteen countries participate in 63% of active networks (14 Member States and Turkey, which participates in 39 networks).
- The involvement of newer Member States and Associated Countries is generally lower than
  the EU 15 countries. This situation could be due to different levels of experience of
  participating in transnational programme collaborations. In addition, some countries may not
  have the required resources or expertise in all research areas necessary to participate in all
  the networks.
- National participation in active networks shows different characteristics and different types
  of participation. Although national organisations use different structures and strategies, ERANETs are able to provide an adequately flexible framework for different types of
  organisations, which allows them to get involved in European research programme

- collaboration. This can be seen as a reflection of the ERA-NETs accommodating the "variable geometry" of the European research landscape.
- While the total number of active, mainly national, organisations in the NETWATCH database
  has decreased, the increase in the average number of organisations participating in each
  active network could reflect increasing organisational experience with the operation of the
  Framework Programmes.
- Variations in national administrative structures are also reflected by the participation characteristics in active networks. For example, Romania participated in 42 networks, represented by 17 organisations, while Turkey participated in 39 networks, represented by only five organisations.

#### **Network activities**

- From January 2010 to December 2011, the key strategic objectives and subsequent joint activities of networks have been the implementation of joint calls followed by exchange of information and good practices. Activities related to the programmes (coordination of national programmes and implementation of joint research programmes) have been given less attention and are cited as the least important joint activities. This could reflect a greater emphasis on the short-term outcomes of joint research activities.
- Environmental issues, information and communication technologies (ICT), health, and food, agriculture and fisheries are the most popular research fields covered by active networks. The proportions of popular fields that networks focus on have remained the same from June to December 2011, 14% for environmental issues and around 8-9% for ICT, health and agricultural issues.
- Sixty-two percent of the active networks launched a call in 2011, with 55% of all active networks launching only one call annually. The average budget of joint calls and average public contribution to the joint calls between June and December 2011, where data is available, is unchanged. The cohort was too small for detailed observations on the private and EU funding contribution to the joint calls. There were only eight responses for EU contributions and nine responses for the private sector contribution.
- There seems to be little appetite for national organisations to fund research performed in other countries. The virtual pot was indicated as the most common funding mechanism (used for 79% of total joint calls where a response was given).

#### Recommendations

- Progress has been made in addressing data deficiencies, although further efforts will continue to ensure a greater degree of completeness of data.
- Data that are more complete will enhance the evaluation of patterns in European transnational research, with extended coverage and additional time periods.
- Increased coverage of the joint calls and budget details of the joint calls will improve the analysis on the network joint activities. Additional information on the joint calls from external sources<sup>2</sup> will be used in the next (fourth) mapping and monitoring exercise.

<sup>&</sup>lt;sup>2</sup> This additional information is collected by the European Commission services (Directorate General for Research & Innovation); namely, Radka Jekova and Jörg Niehoff (2012), "The ERA-NET scheme under FP6 and FP7: Statistics on ERA-NET and ERA-NET Plus actions and their joint calls", Brussels: June 2012.

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#### 1. INTRODUCTION

Following the first NETWATCH mapping and monitoring exercise (reported in D3.2.1), this report combines the outcome of two consecutive NETWATCH mapping and monitoring exercises (corresponding to deliverables D3.2.2 and D 3.2.3). It builds on the previous deliverables D3.1.3 'Mapping ERA-NETs across Europe: overview of the ERA-NET scheme and its results' and D3.1.2 'A battery of indicators' of the NETWATCH Operation Phase Specific Support Action'. It is also a continuation of deliverable D3.2.1 'NETWATCH Mapping and Monitoring: First Report'.

The mapping of transnational research programme cooperation presents a static picture of the landscape at a given point in time. By adding a time dimension, through periodic collection and analysis of the data, it is possible to monitor the evolution of research programme cooperation within Europe. Monitoring is primarily aimed at those taking the strategic decisions relating to participation at national and organisational levels, typically programme owners and other strategic stakeholders such as policy analysts, as well as policymakers at regional, national and European levels.

While information can be updated on NETWATCH at any time, a pro-active approach is taken prior to the periodic analysis to encourage project coordinators to update the information related to their networks. Table 1 shows the months for the information updates, the cut-off months for determining the cohort of active networks, and the dates when the information is extracted and analysed from the NETWATCH database.

Table 1. Schedule for mapping and monitoring exercises

Deliverable	Information update	Active Networks <sup>3</sup>	Start of Analysis Period
Mapping Report	Dec 2009	December 2010 <sup>4</sup>	Jan 2010
1 <sup>st</sup> Mapping and Monitoring Exercise	Nov 2010	December 2010	Jan 2011
2 <sup>nd</sup> Mapping and Monitoring Exercise	April 2011	June 2011	July 2011
3 <sup>rd</sup> Mapping and Monitoring Exercise	Nov 2011	December 2011	Jan 2012

During the information collection exercises the coordinators of networks were requested to input the required information via the NETWATCH information platform. These two periods, and the results of first mapping and monitoring report, are then compared to provide monitoring of the landscape with regard to schemes supporting collaboration between national (and regional) research funders<sup>5</sup>.

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<sup>&</sup>lt;sup>3</sup> The month used to define the active networks cohort is used in this report to indicate the cohort that is being referred to in the text, except for the cohort used in the Mapping Report for which January 2010 is used. See footnote three for an explanation.

<sup>&</sup>lt;sup>4</sup> For the first mapping report the information was collected in December 2009 but the cohort included networks active up until the end of 2010. This time lag was reduced for subsequent analyses.

<sup>&</sup>lt;sup>5</sup> During the analysis period, whenever fundamental data were missing, two further complementary attempts were made to collect the data: contact the coordinators to ask for completion of their networks' information followed desk research to complete missing information if coordinators were still not forthcoming with information.

#### Scope:

The analyses are based on the active networks, i.e. all networks still running at the end of June 2011 and December 2011 (see Table 1 and Annex III). The cohort of analysis in June 2011 was made up of 68 active networks: 57 Seventh Framework Programme (FP7) funded networks, three Sixth Framework Programme (FP6) funded networks and eight self-sustained networks. The December 2011 cohort was little changed, comprising 67 active networks (56 FP7 funded networks, three FP6 funded networks, and eight self-sustaining networks).

#### Methodology:

Network coordinators were requested to complete an online questionnaire accessible via the NETWATCH information platform. Telephone guidance on questionnaire completion was provided to those new to the NETWATCH portal. Those already familiar with the portal were also offered telephone support, and reminder emails were sent to the coordinators of participating networks.

The six-monthly information updates are intended to maximise the accuracy of the information prior to analysis, but the information can be updated at any time. However, as the explanation on the scope shows above, the characteristics of the cohort between the six-monthly periods do not represent a big change (as observed between June and December 2011). For this reason, under the second NETWATCH contractual amendment finalised in December 2012, the schedule of the mapping and monitoring reports has been adjusted to allow longer intervals between mapping and monitoring exercises.

The original questionnaire was designed so that a set of indicators could be measured to characterise the networks. These indicators are broadly the same as for the original mapping exercise, but there have been some slight changes based on experience. These are outlined in Annex II.

There is an important methodological advance included in this report compared to the first mapping and monitoring exercise, which seeks to improve the policy relevance of mapping and monitoring activity by distinguishing between core and complementary indicators. Focusing on core variables ensures greater comparability. These variables are selected depending on the policy relevant research questions. Meanwhile, complementary variables provide a broader set of relevant indicators. The classification of core and complementary variables is presented in Table 2.

The main issues considered for the mapping and monitoring reports are:

- Which research issues have been addressed?
- How has the pattern of network participants (countries, organisation and programmes) changed over time?
- What types of joint activities have been promoted by networks?
- How has the organisational structure changed?
- In what way have the national programmes involved to networks?
- How have the ways of using public (and private) funds changed?

Table 2. Explanation of core variables

		Core Variables	Explanation					
	1	Type of network	ERA-NETs, ERA-NET Plus, Art. 169/185s and other (self-sustained networks)					
	2	Framework funding	FP6, FP7 and other					
	3	Strategic objectives of the	Likert scale for;					
		network	- Exchange of information and good practices					
			- Definition of common research agendas					
			- Coordination of national programmes					
			- Implementation of joint calls					
s			- Implementation of joint research programmes					
Networks	4	FP7 thematic priority	One thematic priority the network related (11 priorities defined)					
Ž	5	Country, organisation and	Participants details of the network, including:					
		programme participation	- Countries involved					
			- Organisation involved and roles (coordinator, participant, observer and/or other).					
			- Funding details of the participant organisations (programme funding, institutional funding and other)					
			- Related programmes					
	6	Joint activities and calls	- Call participation of network (including completed, open and planned calls)					
Suc	7	Network participation and roles	- Network collaborations, including the details of roles (coordinator, participant, observer and/or other).					
Organisations	8	Funding details	Type of funds (programme, institutional and other) and details.					
Orga	9	Organisation - programme relations	Related programmes with responsibilities (launching, administrating and/or funding the programme)					
	10	Network involvement & role	Countries involvement to networks and roles (coordinator, participant, observer, etc)					
Countries	11	Involvement & funding mode	Countries involvement to networks and funds (FP6, FP7, other)					
Coun	12	Involvement & joint activities	Countries involvement to joint activities, including details of represented organisations' responsibilities (launching, administrating, funding etc.)					

	13	Involvement & programmes	Countries involvement to programmes and programme details
mes	14	Network relations	Programmes related to networks, including details on the network type (ERA-NET, Art. 183s etc) and funds (FP6, FP7 and other)
äm	15	Research fields	Research fields covered by related programme
Programmes	16	Budget details	Institutional funding over time; also covering information on related organisations, their roles and budget types
	17	Network relations	Joint call activities related to networks with details on the type of joint call
Ŋ	18	Scope of call	Research field, type of research (basic, applied, pre-competitive and other), and target groups (HEIs, PROs, RTOs, SMEs, corporations and other)
Joint calls	19	Participants of call	Participant countries, organisations and their roles (including funding details per organisation)
Joi	20	Funding (mechanisms and details) of call	Public fund reserved, public fund committed, private fund and funding mode (common, virtual, mix and other)
	21	Project (proposed & supported)	Number of proposal submitted, number of projects funded and average fund per project,

In addition, considering the main goals of NETWATCH, the contribution of this report and the accumulated mapping and monitoring experience to the *transnational R&D programme* collaboration and the realisation of European Research Area are assessed.

The issues placed at the centre of the mapping and monitoring reports are relevant to other NETWATCH analytical work. These questions have strong links to the impact assessment reports and policy briefs.

#### Report structure

In order to examine the NETWATCH database comprehensively, the analyses have five main dimensions: networks, organisations, countries, programmes and joint calls. These dimensions are reflected in the report structure. While each dimension is elaborated on its own merit, their interaction is also discussed. Core and complementary variables are presented separately: results on core variables are included in the main body of the report, the results of the complementary variables can be found in Annex I.

The first section presents the networks detailing their type and funding source, the relative importance of strategic objectives and the activities they undertake, thematic orientation and size. The report also includes analysis of the organisations participating, such as their role in the network, the type of network they are involved in, and the type of organisation. Additionally there is an examination of the countries involved, the geographic dimension, and a section on the programmes related to the active networks, which together with the organisations' information constitutes the participant dimension. Finally, there is a section on the joint calls implemented by the active networks in the NETWATCH database.

In the last section, the concluding remarks and findings of the report are summarised, together with reflections on the implications for NETWATCH.

# 2.1. NETWORKS

#### 2.1.1 Active Networks

	Jan-10		Dec-10		Jun-11		Dec-11	
	Number	Share	Number	Share	Number	Share	Number	Share
Number of active networks in the NETWATCH database	47	100%	82	100%	68	100%	67	100%
Number receiving FP7 funding	40	85%	59	72%	57	84%	56	84%
Number receiving FP6 funding	7	15%	12	15%	3	4%	3	4%
Number not receiving FP funding	0	0%	7	9%	8	12%	8	12%
Number of network with unspecified funding	0	0%	4	5%	0	0%	0	0%
Number of inactive networks in the NETWATCH database	68	100%	58	100%	77	100%	78	100%
Number that previously received FP7 funding	6	9%	0	0%	10	13%	11	14%
Number that previously received FP6 funding	62	91%	57	98%	67	87%	67	86%
Number that did not receive FP funding	0	0%	0	0%	0	0%	0	0%
Number of network with unspecified funding	0	0%	1	2%	0	0%	0	0%

The total number of networks (active and inactive)<sup>6</sup> covered by NETWATCH increased from 115 to 140 between January and December 2010. In June 2011, this number reached 145 and remained the same in December 2011. While there was a reduction in the number of active networks during the first half of 2011 (19 networks became inactive), this meant the number of inactive networks increased from 58 to 77. Finally, during the second part of 2011 the general structure (total number of networks, numbers of active and inactive networks) changed very little.

The number of active networks has increased by 74% from 2010 to 2011. As expected, the highest proportion of networks was funded through FP7. On the other hand, during 2011, the number of active networks decreased by 17% (from 82 to 67) while the share of FP funded networks increased from 72% to 84%. A change can also be observed in the number of inactive networks: they decreased from 68 to 58 during 2010 and increased to 78 in 2011. This overall increase can be linked to the continuation of networks: they decreased from 68 to 58 during 2010 and continued after their previous contract had ended, and this number increased to 40 in December 2011.

The number of FP6 funded networks decreased from 12 to three in 2011. Meanwhile the 12% of networks (eight networks) that were not receiving FP funding in both periods were self-sustaining networks.<sup>8</sup>

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<sup>&</sup>lt;sup>6</sup> Unless otherwise stated, active networks, for June 2011 and December 2011 are those networks that were active at the mentioned date. The term 'networks' refer to ERANETS, ERANET Plus initiatives, Article 169/185s and self-sustaining networks.

<sup>&</sup>lt;sup>7</sup> Continuation of network refers to contractual extension after the network's contract ends. These networks can use another EU funding, or they can turn into self-sustaining networks.

<sup>&</sup>lt;sup>8</sup> The self-sustaining networks are those that have continued without EU support. Eight self-sustaining network are CORNET, CRUE, ECORD, ERA-CHEMISTRY, FENCO-NET, PV-ERANET, SKEP and SNOWMAN.

### 2.1.2. Types of Active Network (I)

	Jan-10	Share	Dec-10	Share	Jun-11	Share	Dec-11	Share
Number of active ERA-NETs in the NETWATCH database	39	83%	61	74%	49	72%	49	73%
Number receiving FP7 funding	32	68%	49	60%	43	63%	43	64%
Number receiving FP6 funding	7	15%	12	15%	3	4%	3	4%
Number not receiving FP funding	0	_	0	_	3	4%	3	4%
Number of active ERA-NET Plus in the NETWATCH database	8	17%	8	10%	8	12%	8	12%
Number receiving FP7 funding	8	17%	8	10%	8	12%	8	12%
Number receiving FP6 funding	0	_	0	_	0	_	0	_
Number not receiving FP funding	0	_	0	-	0	_	0	_
Number of active 169/185 networks in the NETWATCH database	0	-	4	5%	4	6%	4	6%
Number receiving FP7 funding <sup>9</sup>	0	-	2	2%	4	6%	4	6%
Number receiving FP6 funding	0	-	0	-	0	-	0	-
Number not receiving FP funding	0	-	0	-	0	-	0	=
Number of network with unspecified funding	0	-	2	2%	0	-	0	=
Number of active other networks in the NETWATCH database	0	-	7	9%	7	10%	6	9%
Number receiving FP7 funding	0	-	0	-	2	3%	1	1%
Number receiving FP6 funding	0	-	0	-	0	-	0	=
Number not receiving FP funding	0	_	7	9%	5	7%	5	7%
Number of unspecified networks in the NETWATCH database	0	_	2	2%	0	_	0	-
Number receiving FP7 funding	0	-	0	-	0	-	0	-
Number receiving FP6 funding	0	_	0	_	0	_	0	-
Number not receiving FP funding	0	-	0	ı	0	-	0	ı
Number of network with unspecified funding	0	-	2	2%	0	-	0	-

<sup>&</sup>lt;sup>9</sup> Although a network, EMRP, did not indicate any FP funding, this information was adjusted to "receiving FP7 funding", due to web based desk research

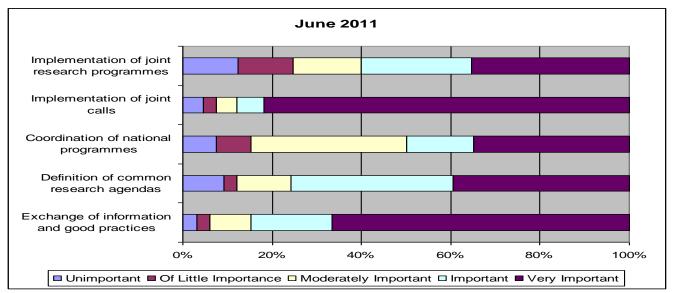
#### 2.1.2. Types of Active Network (II)

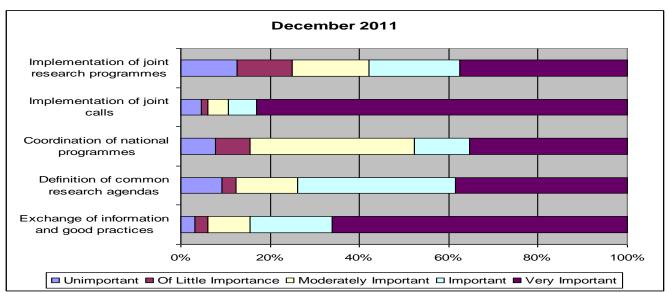
The largest proportion of active networks analysed were FP7 ERA-NETs (68% in January 2010, 60% in December 2010, 63% in June 2011 and 64% in December 2011). While the number of networks in the cohort scope changed (increased or decreased) over the periods analysed, the core networks were always FP7 ERA-NETs.

There were only four Article 185s and all are included in NETWATCH (corresponding to 6% of the total number of active networks). The eight networks not receiving FP funding were again the self-sustaining networks.

In June 2011, there are two *coordination and support actions* (NORFACE II and EU-SEC II) classified as 'other networks'. EU-SEC II became inactive in December 2011, the only change in the cohort.

#### 2.1.3. The Strategic Objectives of Active Networks (I)





#### 2.1.3. The Strategic Objectives of Active Networks (II)

The strategic objectives of networks follow the four ERA-NET steps. 10 Coordinators are asked to grade each of these objectives according to a five point likert scale, from 'unimportant' to 'very important'.

There was very little difference evident in their responses between June and December 2011. In June 2011 the proportion stating that the 'implementation of joint calls' was "very important" objective was 79.4% and in December 2011, 80.6%. Minor differences can be observed for other objectives (64.7% and 64.2% for the 'exchange of information and good practice' and 38.2% and 37.3% for the 'definition of common research agendas').

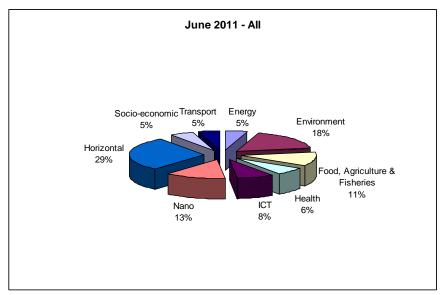
Similarly there were only very little changes in those rating the strategic objectives as "unimportant". 11.8% of the coordinators stated that the 'implementation of joint research programmes' was "unimportant" in June 2011, while 11.9% did so in December 2011. Another objective labelled as "unimportant" was the 'coordination of national programmes', by 7.5% of the coordinators in June 2011 and 7.4% in December 2011.

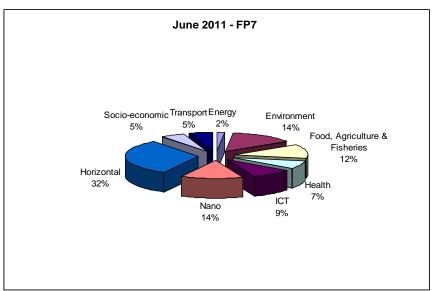
The strategic objectives stated as "very important" or "important", by more than 80% of the respondents, are the 'exchange of information and good practice' and the 'implementation of joint calls'. The 'definition of common research agendas' was following them (stated as "very important" or "important" by more than 70% of the coordinators). The 'coordination of national programmes' and the 'implementation of joint research programmes' were stated to be relatively less important. The 'implementation of joint research programmes' was also lowly ranked, with 20% of responses seeing it as "unimportant" or "of little importance".

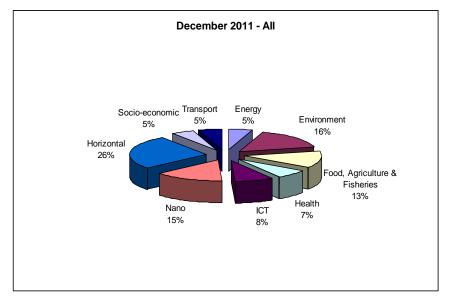
<sup>&</sup>lt;sup>10</sup> The four ERA-NET steps are: Systematic exchange of information and good practices on existing programmes; Identification and analysis of common strategic issues; Development of joint activities between national or regional programmes; and Implementation of joint transnational research activities

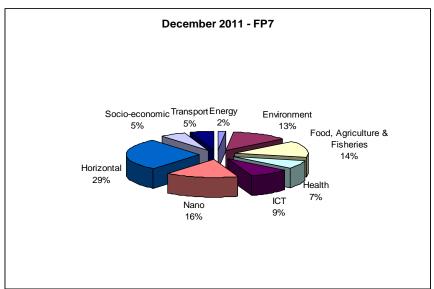
<sup>&</sup>lt;sup>11</sup> In both years, June 2011 and December 2011, all the networks responded to the questions, which were 68 and 67 respectively.

#### 2.1.4. The FP7 Thematic Priorities Spanned by Active Networks (I)









#### 2.1.4. The FP7 Thematic Priorities Spanned by Active Networks (II)

The European Commission has identified thematic domains for European support under the seventh Framework Programme (FP7), and these are included in the NETWATCH template. The ERA-NET scheme has continued to receive funding but with a closer link to these thematic priorities. ERA-NET Plus actions also received top-up funding for a single joint call, and a limited number of Article 185 networks (only four in the NETWATCH database) have achieved FP7 funding. Even when all the networks are considered, 84% of the active networks are funded through FP7. Therefore, care should be taken as the number, and size, of calls launched in the different thematic areas of the Cooperation Specific Programme of FP7, can influence the results of the analysis.

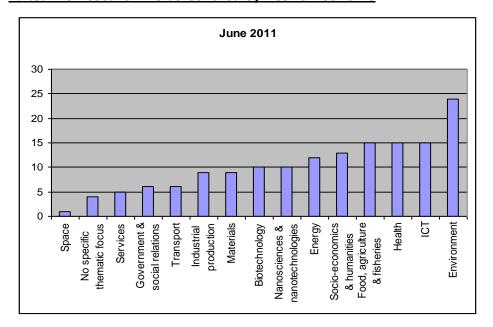
The largest proportions of thematic priorities were observed as "no thematic focus" (horizontal). If the FP7 funded networks are considered, there was a decrease from 32% to 29% and for and all the networks a decrease from 29% to 26%. At this point, it should be underlined that this section of the NETWATCH template allows the coordinators to choose only one thematic domain. Therefore, the networks whose activities could be classed under different areas can also identify the horizontal option. It could be better to evaluate these results compared with the results of the research fields actually covered by the network, presented in following section.

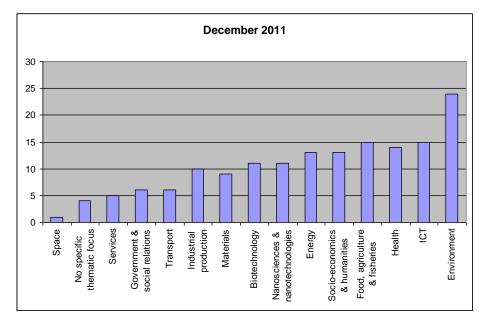
When all networks are considered the thematic areas socio-economics, transport, energy and ICT remained similar. There is no significant change observed for any thematic area. In addition, there are no networks that indicated security or space as a thematic priority.

<sup>&</sup>lt;sup>12</sup> In both periods there are six cases where the thematic priority was not indicated. For FP7 there was no unspecified response in both periods.

<sup>&</sup>lt;sup>13</sup> The thematic domains are i) biotechnology; ii) energy; iii) environment (including climate change); iv) food, agriculture and fisheries; v) government and social relations; vi) health; vi) information and communication technologies; vii) industrial production; viii) materials; ix) nanosciences and nanotechnologies; x) security and defence, xi) services; xiii) socio-economics sciences and humanities; xiii) space; xiv) transport; and xv) no specific focus (horizontal).

#### 2.1.5. The Research Fields Covered by Active Networks





These research fields<sup>14</sup> represent the research that the networks actually support and they could indicate activity in more than one field.<sup>15</sup> In this section of the template, coordinators can make multiple choices. This multiple-choice option provides more comprehensive and accurate results in comparison with the results observed in the previous section on FP7 thematic priorities. For example, while the largest proportion of networks was selected under a FP7 horizontal theme they then specialised as research fields were targeted and those with no specific focus were quite low. Therefore, it can be assumed that networks perform in more than one specific domain and they prefer to focus on inter/multidisciplinary areas. The fact that 56% of total responses indicated more than one research field would prove this assumption.

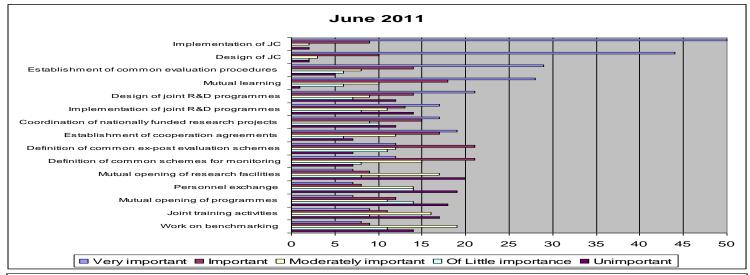
While environment has remained the most important research field, it was followed by ICT and health. It is notable that the top research fields have remained similar since 2010<sup>16</sup>. The most remarkable difference is the relatively higher growth of those networks supporting ICT research, which was the second important field after environmental studies.<sup>17</sup> In 2010, the networks supporting ICT were not in the top five.

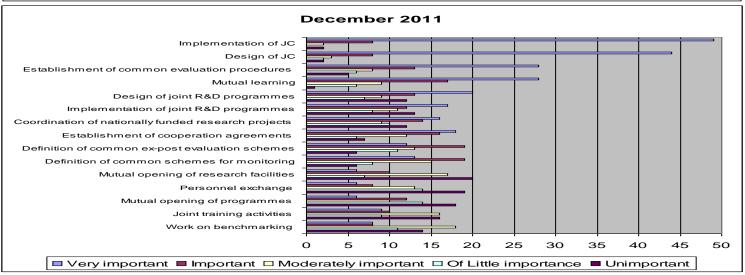
<sup>&</sup>lt;sup>14</sup> The research fields used are those included in the ERAWATCH Research Inventory to classify the support measures.

<sup>&</sup>lt;sup>15</sup> Care should be taken on FP7 thematic areas (section 2.1.4). For the FP7 thematic areas, Food, Agriculture and Fisheries actually include biotechnology, but that is a separate category for the research fields. Similarly, Nanosciences and nanotechnologies includes materials in the FP7 thematic areas

<sup>&</sup>lt;sup>16</sup> Please also see the first mapping and monitoring report, page 18, available at <a href="http://netwatch.jrc.ec.europa.eu/nw/static/download/mapping.pdf">http://netwatch.jrc.ec.europa.eu/nw/static/download/mapping.pdf</a>

#### 2.1.6. The Joint Activities Undertaken by Active Networks (I)





<sup>&</sup>lt;sup>17</sup> In June 2011 there were two cases (N=171) where categories were not indicated. There was only one non-specified response in December 2011 (N=172).

#### 2.1.6. The Joint Activities Undertaken by Active Networks (II)

The two most important joint activities undertaken for the June and December 2011<sup>18</sup> analyses were the design and implementation of joint calls, which corresponds to the most important strategic objectives of the networks described earlier. For both periods, the next most important activities were the establishment of common evaluation procedures and mutual learning. They were followed by several different types of activities, e.g. design and implementation of joint R&D programmes, coordination of national projects, establishment of cooperation agreements, definition of common evaluation schemes, and schemes for monitoring.<sup>19</sup>

The two activities that were not considered important were personnel exchange and mutual opening of programmes. They were rated frequently as being 'unimportant' and 'of little importance' in both June and December 2011. Mutual opening of research facilities, joint training activities and work on benchmarking followed these two activities.

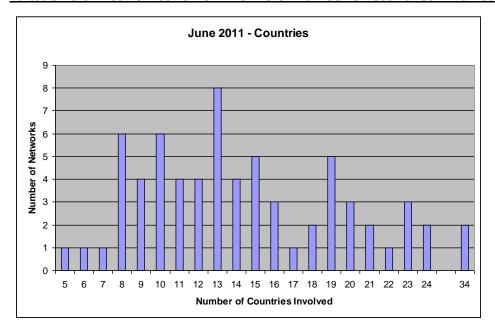
The general view of the importance of the joint activities has changed very little since 2010.<sup>20</sup>

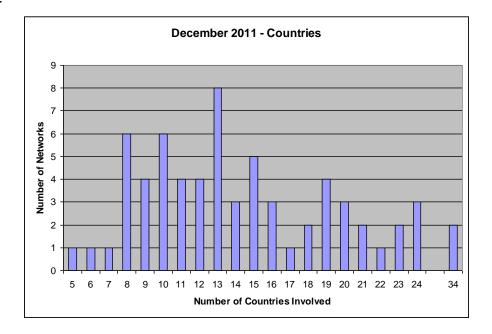
<sup>18</sup> In June 2011 there were five networks that did not respond to any of the questions, in December 2011 this figure was six.

<sup>&</sup>lt;sup>19</sup> The questionnaire included the option to describe 'Other' activities. Some of these activities were analogous to the predefined list in the figures above. Where this was the case they were assigned to the appropriate category for analysis.

<sup>&</sup>lt;sup>20</sup> Also see first mapping and monitoring report, page 19, available at <a href="http://netwatch.jrc.ec.europa.eu/nw/static/download/mapping.pdf">http://netwatch.jrc.ec.europa.eu/nw/static/download/mapping.pdf</a>

#### 2.1.7. Size of Active Networks in Terms of Number of Countries Involved





The country associated with the participating organisations determines the country. International organisations were filtered out as they cannot be assigned to one country. The total number of international organisations in both periods, June and December 2011, was 21 (including BONUS EEIG).<sup>21</sup>

The maximum number of participation is same for both periods: 13 countries were involved to eight networks. The highest number of the countries involved in an active network was 34, which was observed twice for EUROSTARS and EUPHRESCO II.

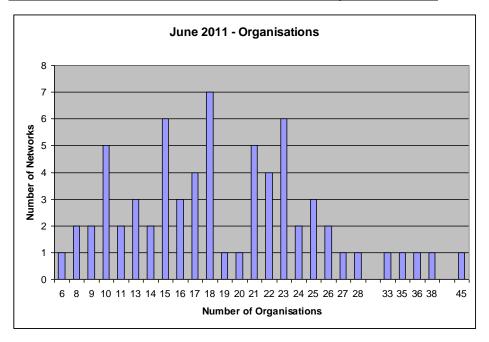
In June 2011, the average number of countries involved in the networks was 14.6, and a median of 13. In December 2011, the average and the median were exactly the same as June 2011.<sup>22</sup>

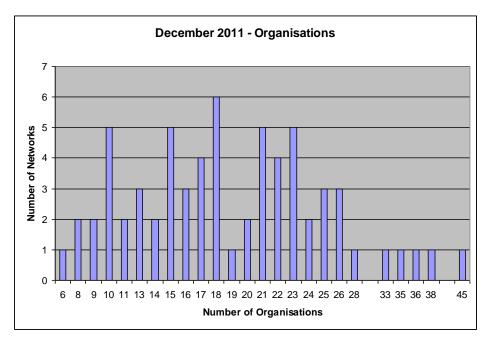
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<sup>&</sup>lt;sup>21</sup> For both periods BONUS originally only had one participant (BONUS EEIG), an international organisation compromising the participant organisations of the network. This single participant was replaced by the constituent countries for the purpose of analysis, namely; Denmark, Estonia, Finland, Germany, Latvia, Lithuania, Poland and Switzerland.

<sup>&</sup>lt;sup>22</sup> When Nordic Countries was indicated as a single participant, it was replaced by the constituent countries, namely; Iceland, Denmark, Finland, Norway and Sweden.

#### 2.1.8. Size of Active Networks in Terms of Participants Involved





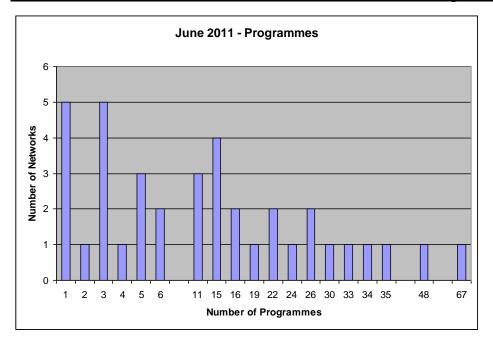
There was no difference between the two periods in terms of the number of organisations participating in active networks. In June 2011, the average number of organisations involved in the networks was 19.1, and a median of 18. In December 2011, similar to the observation on the country participation, the average and the median were exactly the same as June 2011.<sup>23</sup>

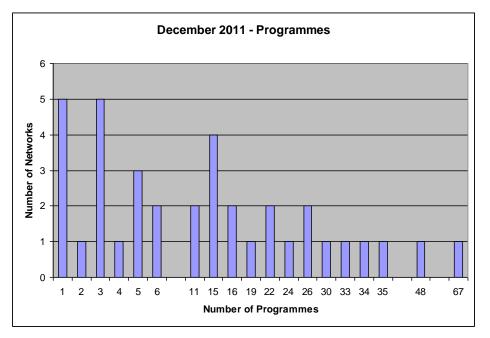
The size of networks ranged from one network with six organisations to one network with 45 organisations (EUPHRESCO II). The maximum number of networks that 18 organisations participated was seven. In June 2011, seven networks had 18 participating organisations making this the most frequent network size. It was six networks with 18 organisations in December 2011.

25

<sup>&</sup>lt;sup>23</sup> For both June 2011 and December 2011 BONUS+ originally had one participant, an international organisation constituting the participant organisations of the network. This single participant was replaced by the constitutional organisations for the purpose of analysis.

#### 2.1.9. Size of Active Networks in Terms of Number of Related Programme

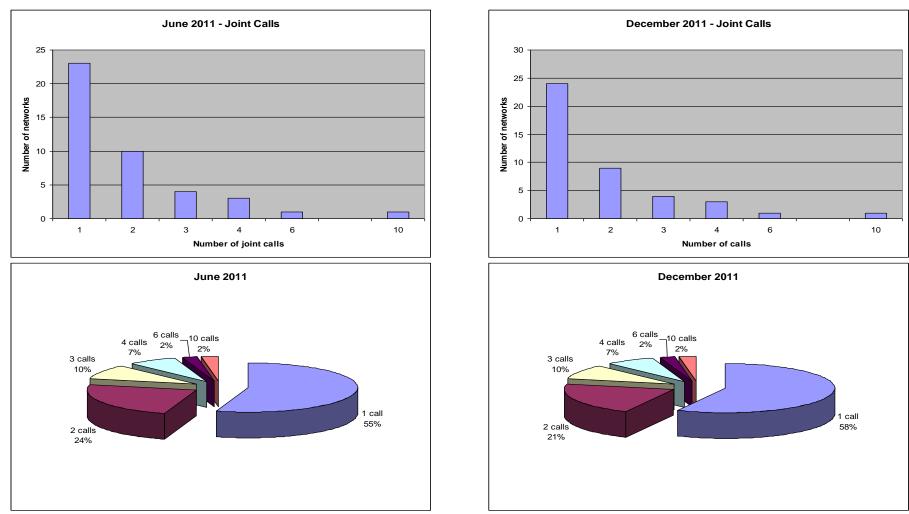




There was almost no difference between the two periods in terms of the number of related programmes that participated in active networks. In June 2011 the average number of related programmes was 14.8, and a median of 11. In December 2011 the average was 14.9 and the median was exactly same.

The size of networks regarding the related programmes ranged from five networks with one programme to one network with 67 programmes (ERA-NET TRANSPORT III). The most frequent network sizes in terms of the number of programme, both occurring five times, were networks with one and three related programmes.

#### 2.1.10. Performance of Active Networks in Terms of Number of Joint Calls Launched

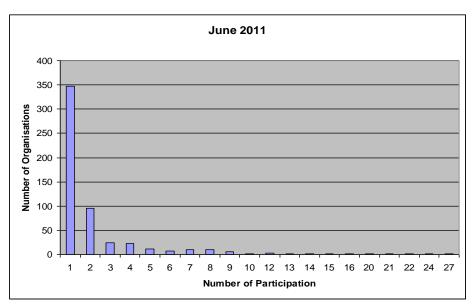


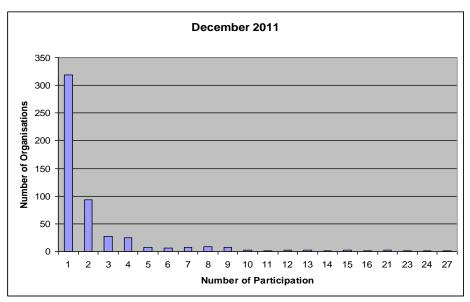
For active networks in June 2011, 42 out of 68 (61.8%) have had at least one call. Of these networks, 55% had only one call. For December 2011, again 42 networks out of 67 (62.7%) have launched calls, and 57% had only one open call. The numbers of open calls at the two reference points are different from each other: 11 in June 2011 and 13 in December 2011. There was only one call using a real common pot that was open for applications in both periods.

# 2.2. ORGANISATIONS

#### 2.2.1 All Organisations - Number Involved and Involvement in Multiple Networks

	Jan-10	Dec-10	Jun-11	Dec-11
Number of organisations involved in active networks in the NETWATCH database	442	606	550	521





The total number of organisations involved in active networks in the NETWATCH database increased significantly, from 442 to 606 during 2010. However, it has since decreased to 521 by December 2011.<sup>24</sup>

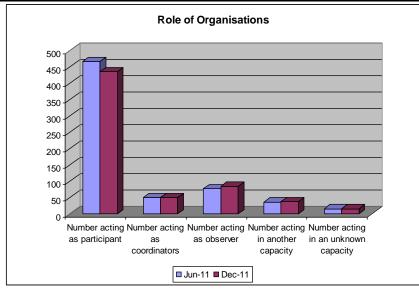
Most organisations only participated in one network. In June 2011 347 organisations participated in only one network, this decreased to 319 organisations for December 2011. As the cohort size has changed very little (5.6% decrease), the scale of network participation has remained similar. The maximum number of network participations by a single organisation was 27 (TUBITAK) for both periods.

The scope of network participation by organisations, and the concentration of participation around certain organisations, could be influenced by the administrative structures of the countries. While some countries have more division of labour between national structures, other countries may have overarching structures responsible for multiple areas. For example, in June and December 2011, Romania was represented by 17 organisations and participated in 31 networks whereas only five Turkish organisations participated in 36 networks.

<sup>&</sup>lt;sup>24</sup> For both June 2011 and December 2011 BONUS+ originally had one participant, an international organisation compromising the participant organisations of the network. This single participant was replaced by the constitutional organisations for the purpose of analysis.

#### 2.2.2. Roles of Organisations

	Jan-10	Dec-10	Jun-11	Dec-11
Number of organisations involved in active networks in the NETWATCH database	442	606	550	521
Number acting as coordinator	38	56	50	50
Number acting as participant	390	519	467	436
Number acting as observer	27	78	77	84
Number acting in another capacity	8	38	36	37
Number with unspecified role of involvement	0	3	15	15



The increase in the cohort size from 2010 to 2011 accounts for the notable increases in total participation (from 442 to 606) and different roles (i.e. participants, coordinators or observers). The greatest increase was the number of organisations acting as a participant, which rose by 129.<sup>25</sup>

However, during 2011, the cohort decreased from 606 to 550 in the first half of 2011 and from 550 to 521 in the second half of 2011. The number of organisations participating in active networks decreased from 519 to 436 in 2011.

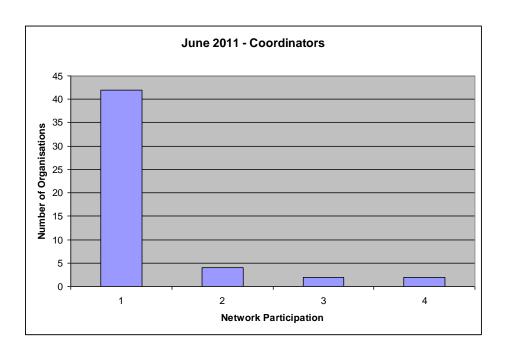
The main change in the roles of organisations from December 2010 to June 2011 was a notable decrease in the number acting as participants, which would be expect due to the overall reduction in the number of participating organisations.

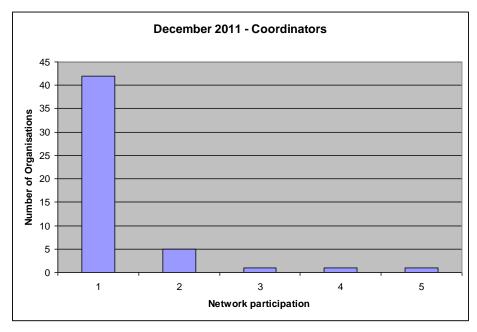
25 - -

<sup>&</sup>lt;sup>25</sup> BONUS EEIG was included in the data counting the coordinators; otherwise BONUS+ would not be assigned a coordinator which would be a misrepresentation.

#### 2.2.3. Role of Organisations - Involvement of Organisations in Multiple Networks (I)

	Jan-10	Dec-10	Jun-11	Dec-11
Number of organisations involved in active networks in the NETWATCH database	442	606	550	521
Number acting as coordinator	38	56	50	50

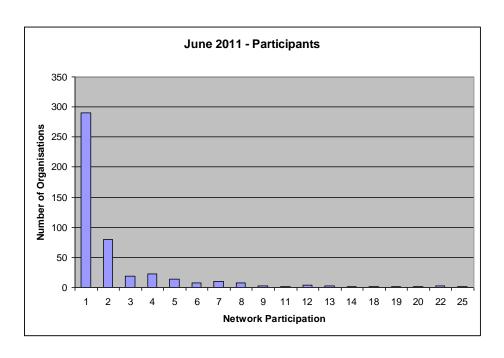


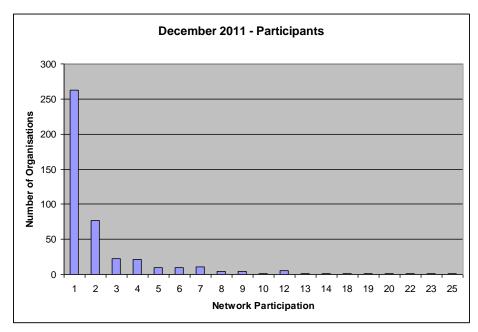


There were 50 organisations acting as coordinators in both periods. These organisations, as a coordinator, mostly participated in one network: 84% of organisations that participated in a network as a coordinator did so only once in both periods.

#### 2.2.3. Role of Organisations - Involvement of Organisations in Multiple Networks (II)

	Jan-10	Dec-10	Jun-11	Dec-11
Number of organisations involved in active networks in the NETWATCH database	442	606	550	521
Number acting as participant	390	519	467	436

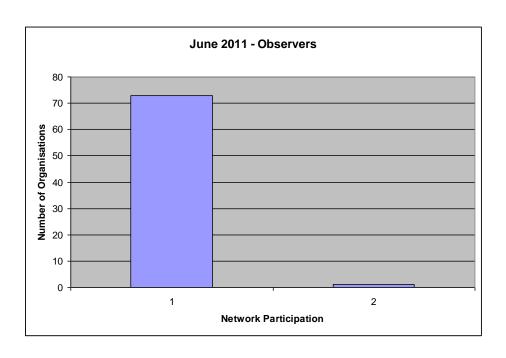


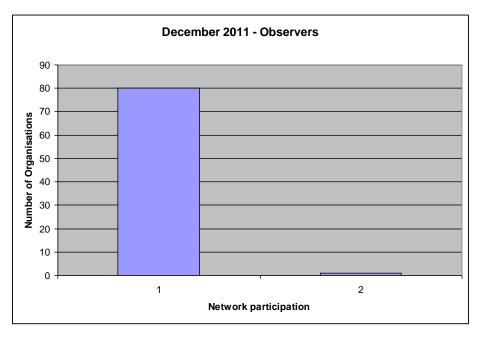


The organisations acting as participants decreased from 519 to 436 in 2011 (16%). These organisations acted as a participant mostly participated in only one network (62% in June 2011 and 60% in December 2011). While the overall number decreased, the number of organisation participating in multiple networks increased from 37% to 40%.

#### 2.2.3. Role of Organisations - Involvement of Organisations in Multiple Networks (III)

	Jan-10	Dec-10	Jun-11	Dec-11
Number of organisations involved in active networks in the NETWATCH database	442	606	550	521
Number acting as observer	27	78	77	84





The number of organisations acting as observers drastically increased in 2010 (from 27 to 78). As the networks acting as coordinator or participant, the organisations mostly participated as an observer in only one network (93% in January 2010, 83% in December 2010, 95% in June 2011 and again 95% in December 2011).

#### 2.2.4. Types of Network – Numbers Involved

	Jan-10	Dec-10	Jun-11	Dec-11
Number of organisations involved in active networks in the NETWATCH database	442	606	550	521
Number involved in ERA-NETs	409	540	470	467
Number involved in ERA-NET Plus networks	90	89	82	82
Number involved in Article 169/185 networks	1	73	72	72
Number involved in other (self-sustaining) types of networks	ı	75	77	54
Number of organisations with unspecified networks	ı	15	-	-

The largest group of networks for all four observations was ERA-NETs. In 2010 the increases in the number of organisations involved in ERA-NETs were comparable to overall growth: when the total number of organisations involved in ERA-NETs increased from 409 to 540, corresponding to 32% growth, the overall growth in 2010 was 37%. Similarly, in 2011 the total number of organisations decreased 14% (from 606 to 521) while the number of organisations involved in ERA-NETs went down 13.5% (from 540 to 467)<sup>26</sup>.

During 2011 there was almost no change in the number of organisations involved in ERA-NET Plus and involved in Article /169185 networks.<sup>27</sup> The only notable change observed was in the number of organisations involved in self-sustaining networks, which decreased from 75 to 54.

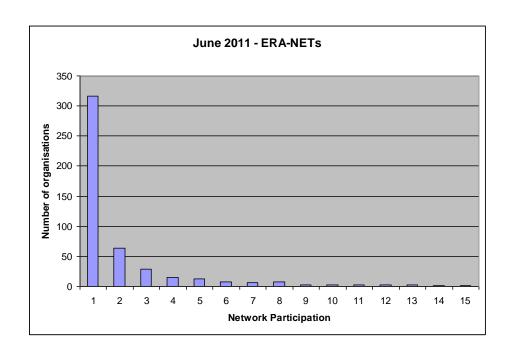
<sup>26</sup> For both June 2011 and December 2011 BONUS+ originally had one participant, an international organisation comprising the participant organisations of the network. This single participant was replaced by the constitutional organisations for the purpose of analysis.

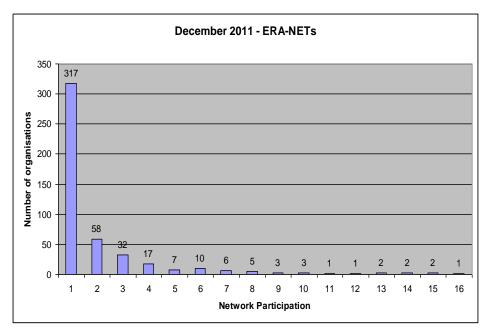
34

<sup>&</sup>lt;sup>27</sup> The Article 169/185 networks were not included the NETWATCH database in January 2010.

# 2.2.5. Types of Network - Involvement of organisations in Multiple Networks (I)

	Jan-10	Dec-10	Jun-11	Dec-11
Number of organisations involved in active networks in the NETWATCH database	442	606	550	521
Number of participations in ERA-NETs	409	540	470	467

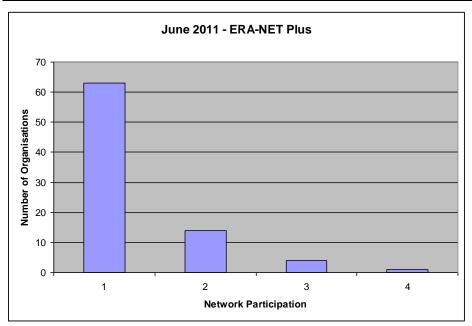


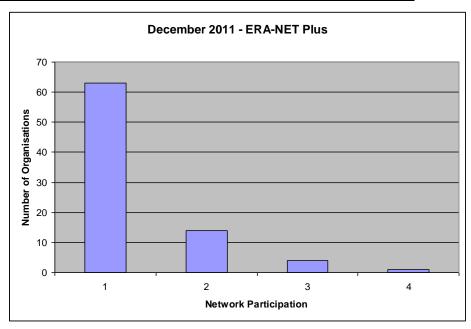


Organisations involved in ERA-NETs have generally participated in a single network (316 in June 2011 and 317 in December 2011). However, while the overall growth decreased from June to December 2011, the number of organisations participating in only one network was almost unchanged.

#### 2.2.5. Types of Network - Involvement of organisations in Multiple Networks (II)

	Jan-10	Dec-10	Jun-11	Dec-11
Number of organisations involved in active networks in the NETWATCH database	442	606	550	521
Number of participations in ERA-NET Plus	90	89	82	82





The structure and number of organisations involved the ERA-NET Plus networks changed very little. From 90 in January 2010, the number decreased to 82 in June 2011. It remained stable from June to December 2011. The only change was for those organisations participating in one ERA-NET Plus: 70 organisations out of 90 in 2010, 69 organisations out of 89 in December 2010 and 63 organisations out of 82 in June and December 2011

In addition to the ERA-NET plus networks, there are the 'other types of network' in the NETWATCH database, which actually correspond to the self-sustaining networks. Seventy-five organisations participated in self-sustained networks in December 2010. This increased to 77 in June 2011, and then decreased to 54 organisations in December 2011.

The number of organisations involved in Article 185 (previously169) networks has remained the same since they were included in the NETWATCH database in December 2010.

#### 2.2.6. Funding Sources - Numbers Involved

	Jan-10	Dec-10	Jun-11	Dec-11
Number of organisation involved in active networks in the NETWATCH database	442	606	550	521
Number utilising programme funding	0	61	92	94
Number utilising institutional funding	0	21	44	44
Number utilising other funding sources	0	14	22	22
Number of organisation with unspecified sources of funding	0	531	404	375

Information on the funding sources was available after December 2010.<sup>28</sup> However, 88% of organisations did not provide an answer to this question in December 2010. The share of missing information decreased to 72% in June and December 2011.

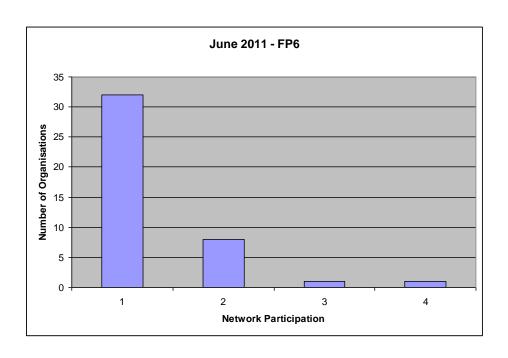
The number of organisations utilising programme funding always had the largest proportion. Even though the total number of organisations involved in active networks decreased from 606 to 521 in 2011, the number of organisations that used institutional or programme funding increased in 2011.

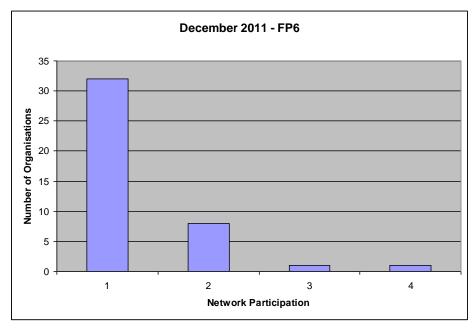
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<sup>&</sup>lt;sup>28</sup> The organisations provided information on the funding sources did not always provide a single response; for example they may have indicated programme and institutional funding together.

#### 2.2.7. Funding Sources – Involvement in Multiple Networks (I)

	Jan-10	Dec-10	Jun-11	Dec-11
Number of organisations involved in active networks in the NETWATCH database	442	606	550	521
Total number of organisations receiving FP6 funding	100	148	42	42



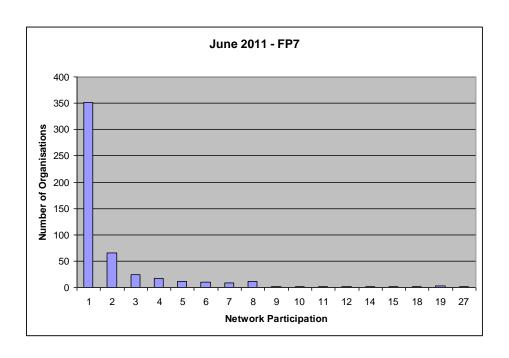


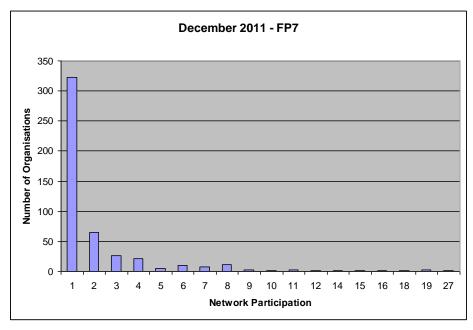
Clearly, the number of organisations receiving FP6 funding decreased, falling to 42 in 2011 from 148 in 2010.

The organisations receiving FP6 funding mostly participated in one network: 85 out of 100 organisations in January 2010, 121 out of 148 organisations in December 2010 and 32 out of 42 organisations in June and December 2011. The distribution of the organisations receiving FP6 funding was the same for both periods, June and December 2011.

#### 2.2.7. Funding Sources - Involvement in Multiple Networks (II)

	Jan-10	Dec-10	Jun-11	Dec-11
Number of organisations involved in active networks in the NETWATCH database	442	606	550	521
Total number of organisations receiving FP7 funding	100	148	514	485



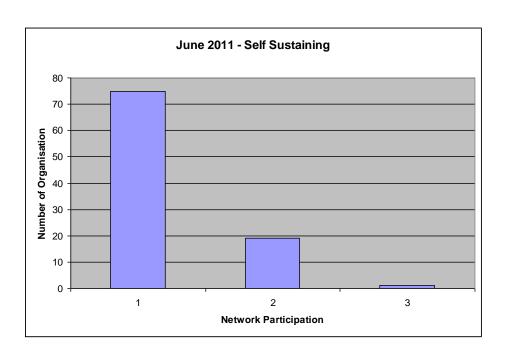


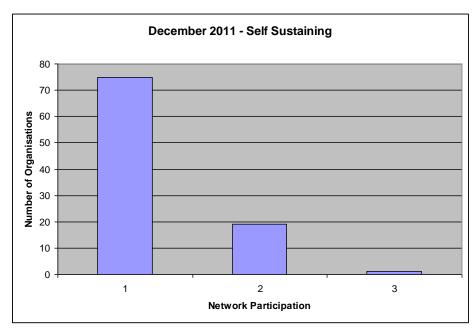
Total number of organisations receiving FP7 funding notably increased from 148 to 485 in 2011.

The organisations receiving FP7 funding mostly participated in one network (351 out of 550 organisations in June 2011 and 323 out of 485 organisations in December 2011). The scale of network participation notably changed; the maximum number of network participations was 14 in 2010, but 27 in December 2011.

#### 2.2.7. Funding Sources - Involvement in Multiple Networks (III)

	Jan-10	Dec-10	Jun-11	Dec-11
Number of organisations involved in active networks in the NETWATCH database	442	606	550	521
Total number of organisations not receiving FP funding	-	75	95	95

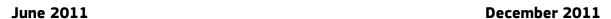


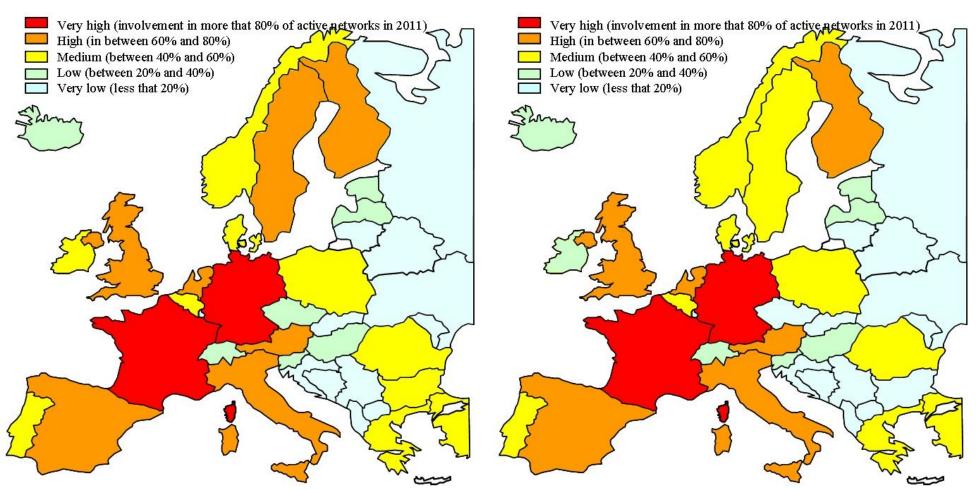


In 2010 all networks were assigned to either FP6 or FP7 funding sources. However, there were several networks in 2011 with no framework programme funding. These were the self-sustained networks. Seventy-five organisations participated in self-sustaining networks in December 2010, while this number increased to 95 at the end of 2011. Seventy-five of them participated in only one network while 19 of them participated in two networks. There was only one organisation that participated in three self-sustained networks.

# 2.3. COUNTRIES

# 2.3.1. Country Involvement (I)





#### 2.3.1. Country Involvement (II)

The number of countries<sup>29</sup> represented in active networks<sup>30</sup> increased from 51 to 53 in 2010 and from 53 to 55 in 2011.<sup>31 32</sup> The database covered the 27 EU Member States and 11 of the 14 countries associated to FP7. Additionally there were 20 international organisations represented in the database.<sup>33</sup>

A divide between the Member States and the Associated Countries is apparent. The involvement of the Associated Countries and newer Member States was generally lower than the older Member States.

Nine countries (France, Germany, the United Kingdom, Spain, the Netherland, Austria, Italy, Finland and Sweden) were involved in more than 60% of networks in June 2011. In December 2011, the situation was the same except for Sweden, which was below 60%.

Between June and December 2011, three countries – Sweden Bulgaria and Ireland – descended one level below. Sweden descended from a high level of involvement to a medium level of involvement while Bulgaria and Sweden descended to a low level of involvement.

<sup>&</sup>lt;sup>29</sup> The country is determined by the country associated to the participating organisations.

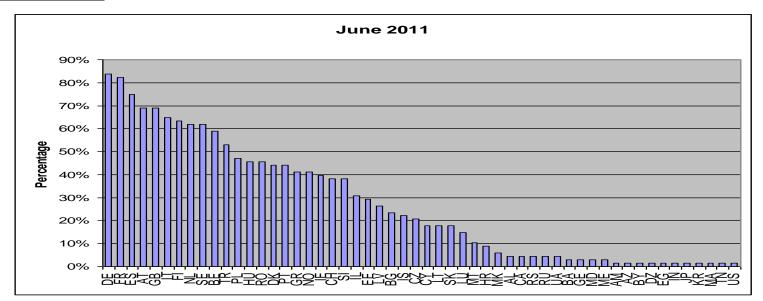
<sup>&</sup>lt;sup>30</sup> Participant organisation, and therefore country participation, data was available for all countries in both periods.

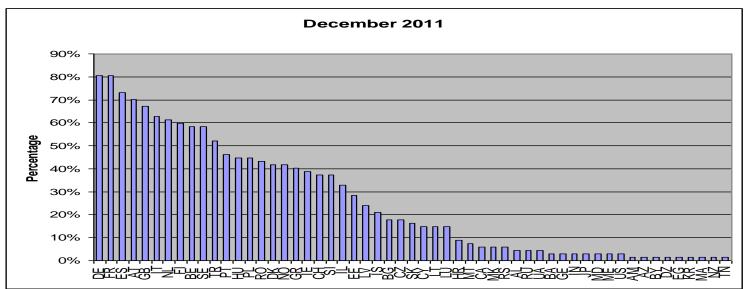
<sup>&</sup>lt;sup>31</sup> BONUS+ originally only had one participant (BONUS EEIG), which is an international organisation compromising the participant organisations of the network. This single participant was replaced by the constituent countries for the purpose of analysis, namely; Denmark, Estonia, Finland, Germany, Latvia, Lithuania, Poland and Switzerland

<sup>&</sup>lt;sup>32</sup> As Nordic Countries was indicated a single participant, it was replaced by the constituent countries, namely; Iceland, Denmark, Finland, Norway and Sweden

<sup>&</sup>lt;sup>33</sup> International organisations were filtered out as they cannot be assigned to one country.

# 2.3.1. Country Involvement (III)





#### 2.3.1. Country Involvement (IV)

The country involvement refers to the share of active networks in which a country participates.<sup>34</sup>

The highest levels of country involvement<sup>35</sup> in June 2011 were Germany (84%), France (82%), Spain (75%), Austria (69%) and the United Kingdom (66%). In December 2011, these were Germany (81%), followed by France (81%), Spain (73%), Austria (70%) and the United Kingdom (67%).

In June 2011, the average number of active networks in which an individual country participated was 18.4. Twenty-four countries were placed above this average while thirty were placed below. Meanwhile, the median number of network participation was 13. The lowest number of country involvement (only one active network) is observed eleven times.

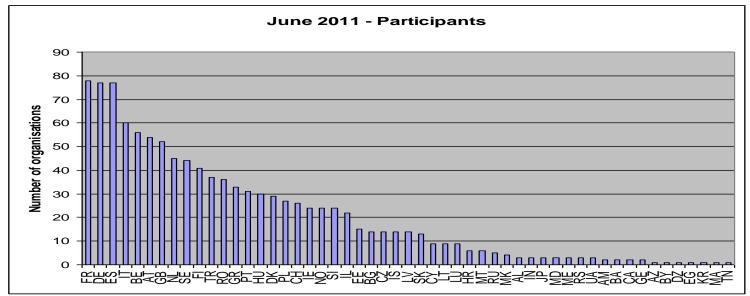
In December 2011, the average was 17.4. Twenty-three countries were placed above this average while thirty-two of them were placed below. The median number of network participation was 11 and nine countries were represented in only one active network.

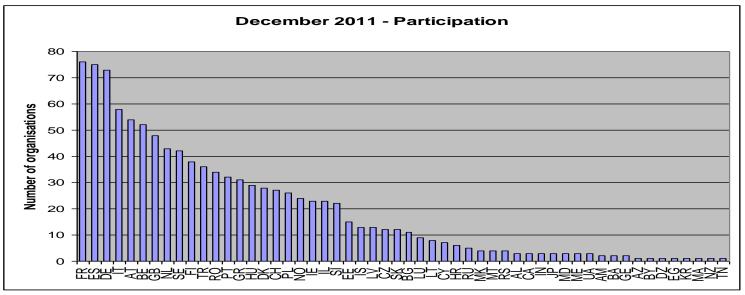
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<sup>&</sup>lt;sup>34</sup> International organisations are filtered out as they cannot be assigned to one country.

<sup>&</sup>lt;sup>35</sup> As Nordic Countries was indicated a single participant, it was replaced by the constituent countries, namely; Iceland, Denmark, Finland, Norway and Sweden.

# 2.3.2. Country Involvement by Role (I)





#### 2.3.2. Country Involvement by Role (II)

Participant refers to the number of national and regional organisations in a country acting as participants.<sup>36</sup>

In December 2010 the country with the highest number of national and regional organisations participating in networks<sup>37</sup> was France with 78 participant organisations. Next were Germany and Spain (77 organisations), Italy (60 organisations), Belgium (54 organisations), Austria (54 organisations) and the United kingdom (52 organisations). Meanwhile seven countries were represented by only one organisation and four of them were represented by two organisations. In December 2011, the highest participation is again observed for France (76), Spain (75), Germany (73), Italy (58), Austria (54), Belgium (52), the United Kingdom (48), and the Netherlands (43).

Fifty-three countries and 462 organisations acting as participants were represented in the NETWATCH database in June 2011. In December 2011, the number of countries increased to 55. Meanwhile the total number of organisations acting as participant decreased to 432.

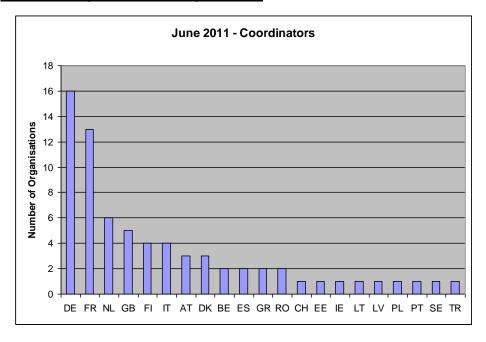
Generally, the number of organisations acting as participants decreased (from one to four). This number increased only for Portugal, Israel, Russia and Canada. In addition, New Zealand was included in the NETWATCH database, represented by one organisation.

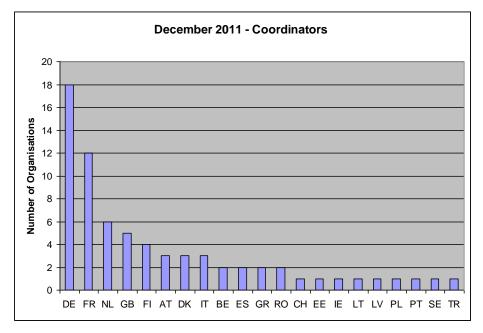
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<sup>&</sup>lt;sup>36</sup> International organisations are filtered out as they cannot be assigned to one country.

<sup>&</sup>lt;sup>37</sup> As Nordic Countries was indicated a single participant, it was replaced by the constituent countries, namely; Iceland, Denmark, Finland, Norway and Sweden.

#### 2.3.2. Country Involvement by Role (III)





Coordinators refer to the number of national and regional organisations in a country acting as coordinators. 38 39

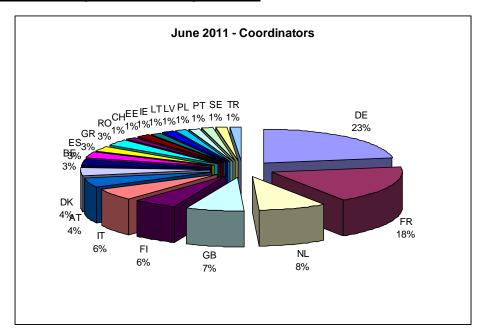
As coordinators, Germany and France predominate: 16 organisations in Germany took a coordinator role in June 2011, and 13 in France. Germany increased the number of organisations acting as coordinators to 18 in December 2011 while France's participation decreased to 12.

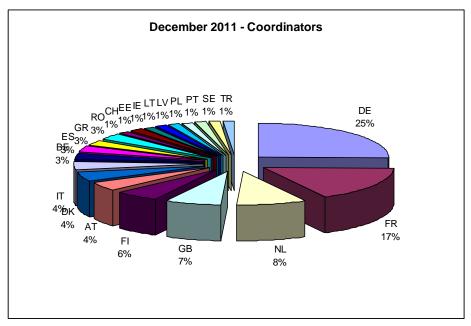
The other countries which had organisations with coordination roles were, in June 2011, the Netherlands (three organisations), the United Kingdom (five organisations), Finland and Italy (four organisations), Austria and Denmark (three organisations), Belgium, Spain, Greece and Romania (two organisations) and Czech Republic, Estonia, Ireland, Latvia, Lithuania, Poland, Portugal, Sweden, Turkey (one organisation). In December 2011, the pattern remained largely unchanged with the number of organisations in Italy decreasing from four to three.

<sup>&</sup>lt;sup>38</sup> International organisations are filtered out as they cannot be assigned to one country.

<sup>&</sup>lt;sup>39</sup> As Nordic Countries was indicated a single participant, it was replaced by the constituent countries, namely; Iceland, Denmark, Finland, Norway and Sweden.

#### 2.3.2. Country Involvement by Role (IV)

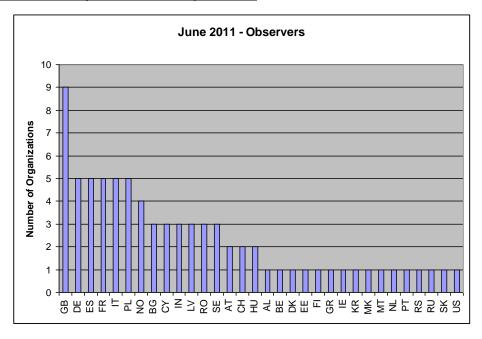


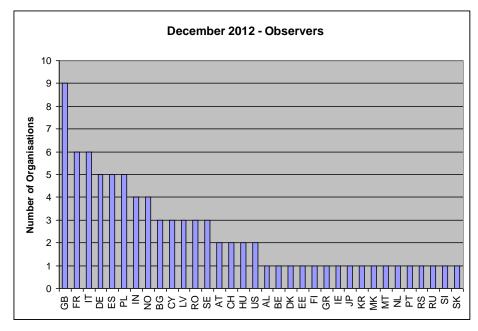


A large proportion of the projects were coordinated by Germany (23% in June 2011 and 25% in December 2011) and France (18% in June and 17% in December). Organisations in France and Germany almost coordinated half of the active networks in both periods. Their combined proportion increased from 41% to 42% in the second half of 2011.

While the high participation of Germany and France in the active networks in June and December 2011 was matched by their frequency as coordinators, there was a phenomenon of countries with high overall participation having a low level of involvement as coordinators. For example, while the 77 organisations in Spain participated in active networks in December 2010, they took only two coordinator roles. Similarly Italy and Austria had high participation rates (60 organisations for Italy and 54 organisations for Austria), but they had very low levels as coordinators (6% for Italy and 4% for Austria). This imbalance remained the same in December 2011.

#### 2.3.2. Country Involvement by Role (V)





Observers refer to the number of national and regional organisations in a country acting as observers<sup>40</sup>.

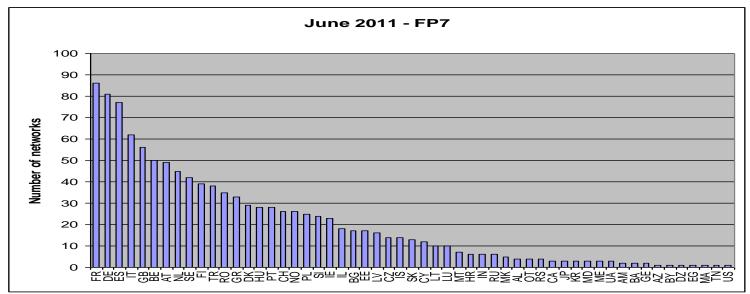
The total number of organisations in a country acting as observers was 78 in June 2011 and 84 in December 2011. They are distributed across 32 countries in June 2011 and 34 countries in December 2011.

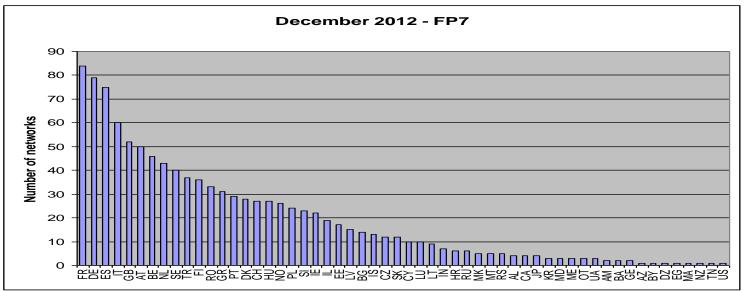
The highest number of organisations in a country acting as observers was nine in both years (the United Kingdom). In June 2011, the average number of organisations in a country acting as observer was 2.44 and a median of 1.50. In December 2011, the average was 2.47 and the median was 1.50.

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<sup>&</sup>lt;sup>40</sup> International organisations are filtered out as they cannot be assigned to one country. As Nordic Countries was indicated a single participant, it was replaced by the constituent countries, namely; Iceland, Denmark, Finland, Norway and Sweden. The charts are based on all active networks in the NETWATCH database.

# 2.3.3. Country Involvement by Funding Mode (I)





#### 2.3.3. Country Involvement by Funding Mode (II)

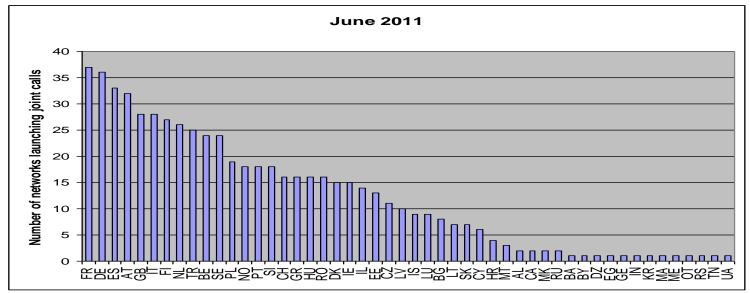
Funding mode refers to the number of active networks in a country receiving FP funding.

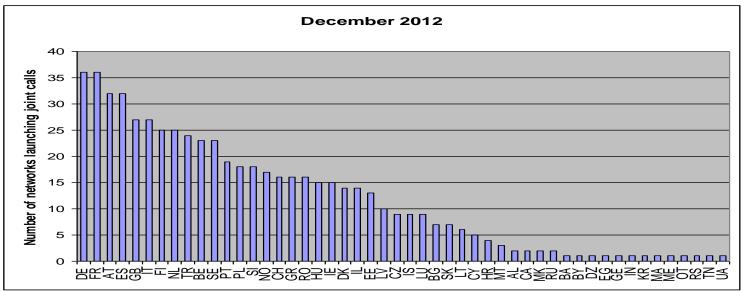
As it is expected, the networks included in the cohort were mostly funded under FP7. In January 2010, there were 1116 participations in active networks (over 55 countries) receiving FP7 funding. In December 2011 the number of network participation decreased to 1078 although the number of countries increased to 56. The number of countries funded under FP6 decreased to 21 in June 2011, and the number of network participations was 55. There was no change from June to December 2011.

In June 2011 the average number of network participation per country receiving FP7 funding was 20.3, and a median of 13. In December 2011 the average was 19.3 while the median decreased to 11.

Even though there were notable increases in the number of countries receiving FP7 funding in 2010 such as, Turkey (from 17 to 36), Spain (from 29 to 47), Portugal (12 to 28), the United Kingdom (from 26 to 42) and Belgium (from 24 to 40), there were no significant changes in the course of 2011.

# 2.3.4. Country Participation in Joint Call Activity (I)





#### 2.3.4. Country Participation in Joint Call Activity (II)

Country participation refers to the number of active networks in which a country participates in joint calls<sup>41</sup>.

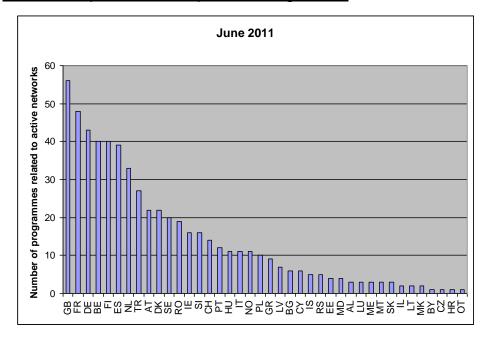
In June 2011, 609 country participations in joint call activities were observed. The maximum number of active networks where the country participated in joint calls was 37 for France. Germany (36 participations), Spain (33 participations) and Austria (32 participations) followed France.

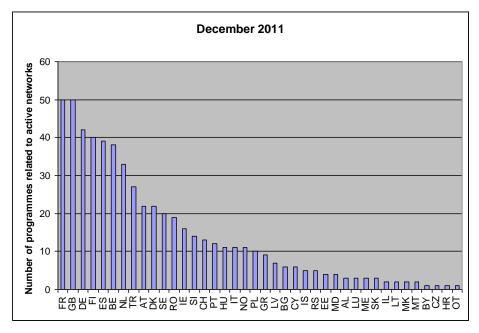
There were very little changes in December 2011. The Member States most involved in networks launching joint calls were Germany and France (36 participations), Austria and Spain (32 participations) and the United Kingdom and Italy (27 participations).

The average number of country participation in joint calls was 12.2, and a median of 9.5 in June 2011. The average decreased to 11.8 while the median also decreased to nine in December 2011.

<sup>&</sup>lt;sup>41</sup> International organisations were filtered out as they cannot be assigned to one country and cannot be used as an indication of a country's involvement in a network.

#### 2.3.5. Country Involvement by Related Programmes





Country involvement refers to the number of programmes in a country. The number of programmes related to active networks in a country was 467 in January 2010, 522 in December 2010, 581 in June 2011 and 570 in December 2011.

In June 2011 the United Kingdom (56), France (48), Germany (43), and Belgium and Finland (40) were the foremost countries with programmes related to active networks. The top ten countries (out of 40) covered 64% of the total number of programmes related to active networks.

In December 2011 the foremost countries were France and the United Kingdom (50), Germany (42) and Finland (40). The top ten countries were the Member States (out of 40), which accounted for 64% of all programmes related to active networks.

In June 2011, the average number of programmes in a country related to active networks was 14.5 and a median of 9.5. In December 2011, the average was 14.25 and the median was once more 9.5. In the second half of 2011, there was a general decrease in the level of country involvement to related programmes. The only country continuing to grow was France from 48 to 50.

# 2.4. PROGRAMMES

#### 2.4.1 Related Programmes

	Jan-10	Dec-10	Jun-11	Dec-11
Number of programmes related to active networks in the NETWATCH database	418	523	473	461
Number of programmes related to ERA-NETs	408	504	449	437
Number of programmes related to ERA-NET Plus networks	23	40	40	40
Number of programmes related to Article 169/185 networks	0	0	0	0
Number of programmes related to other networks	0	1	1	1
Number of programmes related to networks receiving FP7 funds	370	468	468	456
Number of programmes related to networks receiving FP6 funds	59	69	8	8
Number of programmes related to networks not receiving FP funds	0	1	1	1

As the active networks that were analysed were predominately composed of FP7 ERA-NETs, it is unsurprising that they account for the greatest number of programmes. However, it should be noted that not all networks have associated programmes: in June 2011, 38 out of 68 networks had associated programmes, while in December 2011 it was 37 out of  $67^{42}$ .

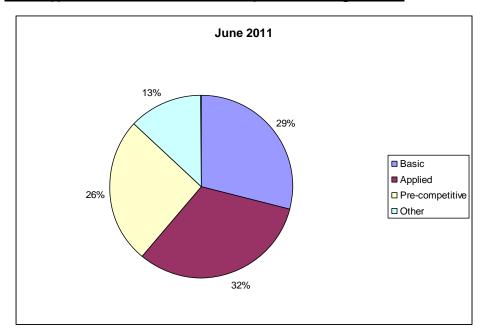
While the number of programmes related to active networks increased from 418 to 523, it decreased from 523 to 461 in 2011.

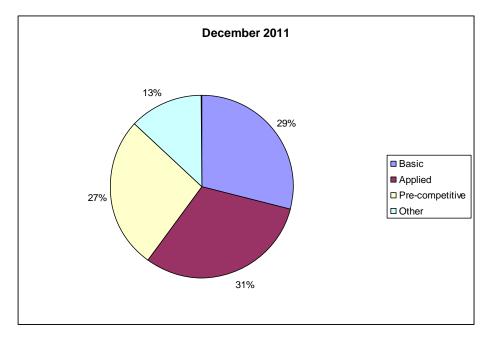
Information was also requested on the budgets of the related programmes. Unfortunately, this information was very incomplete for all four years and the incompatible formats in which it was presented by different programmes have made aggregation and comparison of the information very difficult.

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<sup>&</sup>lt;sup>42</sup> Programmes can be associated with more than one network. This can vary within different types of networks.

#### 2.4.2 Types of Research Performed by Related Programmes



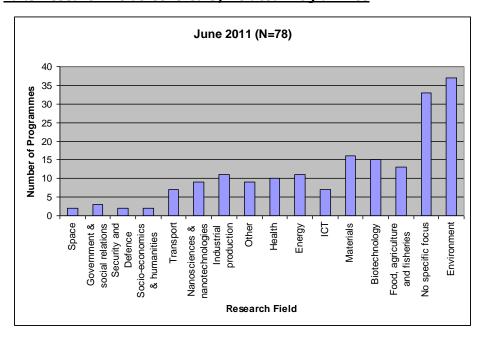


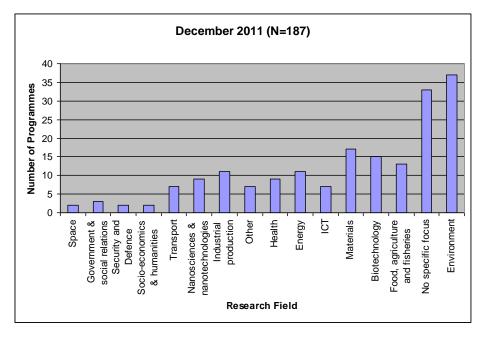
Thirty-five networks out of 68 had related programmes in June 2011, while 34 out of 67 were counted in December 2011.

The proportion of programmes indicating that they cover the full spectrum of research types (basic, applied, pre-competitive) has remained fairly stable from June to December 2011 at around 30%. This is a phenomenon since January 2010, when the data was available for the first time.

There was almost no change observed from June to December 2011.

#### 2.4.3 Research Fields Covered by Related Programmes





There were very few changes observed from June to December 2011. The most frequently cited research field covered by programmes was "environment" in both periods. This could be a reflection of the increase in networks whose thematic area under FP7 was environment.

It should be noted that the analysis included 'Parent' and 'Stand-alone' programmes. This aggregation could increase the number of overarching programmes and account for the high number of programmes with "no specific focus".

The response rates were quite low for both periods. There were 185 and 187 responses in June and December 2011 respectively. However, there were 352 with no response in June 2011 and 359 in December 2011.

# 2.5. JOINT CALLS

#### 2.5.1 Joint Calls Related to Active Networks

	Jan-10	Dec-10	Jun-11	Dec-11
Overall number of joint calls related to active networks in the NETWATCH database	36	89	83	82
Number of one stage Joint Calls at date of update	13	37	36	36
Number of two stage Joint Calls at date of update	11	39	38	37
Number of other Joint Calls at date of update	10	8	7	7
Number of unspecified Joint Calls at date of update	2	5	2	2
Number of open joint calls related to active networks in the NETWATCH database	9	16	11	13
Number of one stage Joint Calls at date of update	6	6	3	6
Number of two stage Joint Calls at date of update	1	8	7	6
Number of other Joint Calls at date of update	2	0	1	1
Number of unspecified Joint Calls at date of update	0	2	0	0

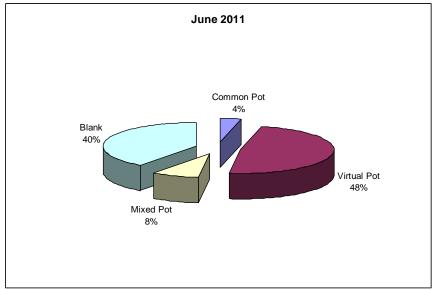
The joint calls related to active networks refer to the overall number of calls made by the active network. The open calls related to active networks refer to those calls open for applications at the reference dates.

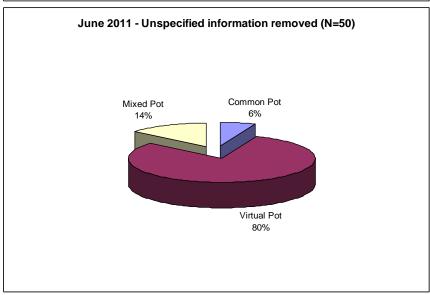
The overall number of joint calls related to active networks was 36 in January 2010, 89 in December 2010, 83 in June 2011 and 82 in December 2011. As clearly seen, there was a lack of coverage in 2010.

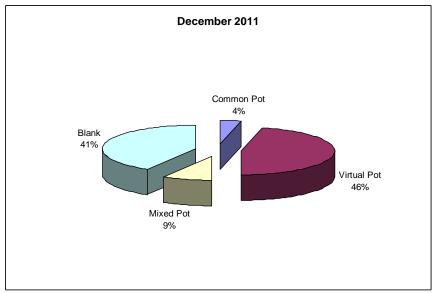
The number of open calls related to active networks was nine in January 2010, 16 in December 2010, 25 in June 2011 and 18 in December 2011. Although two-stage joint calls have been preferred since 2011, the differences between one stage and two stages calls have always been very small.

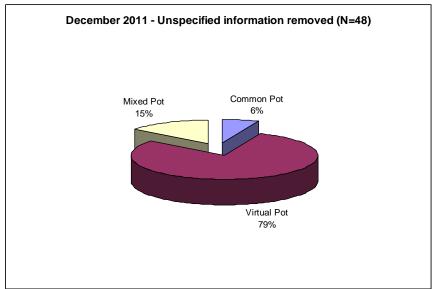
The figures presented here are based on the call information available in the NETWATCH database, based on the incomplete responses of network coordinators.

# 2.5.2. Funding Mechanism of Joint Calls in Active Networks (I)









#### 2.5.2. Funding Mechanism of Joint Calls in Active Networks (II)

The information presented here is based on the overall number of joint calls related to active networks (83 networks active in June 2011 and 82 for networks active in December 2011). Eleven of them in June and 13 in December were open calls.

The number of joint calls utilising a common pot, virtual mode or mixed mode is calculated as a proportion of the total number of joint calls related to the active networks. As expected, a large proportion of joint calls utilised a virtual pot (45% in June 2011 and 44% in December 2011) and there was a small proportion utilising a common pot, 4% for both periods.

One of the key issues is the need to enhance information collected in relation to joint calls. More than 40% of the overall joint calls did not have any funding mode specified.

When focused on the actual responses there was a total of 50 in June and 48 in December 2011, the proportion indicating the virtual pot was 80% and 79% respectively. It clearly shows that national organisations do not tend to fund research performed in other countries.

#### 2.5.3. Supported Projects of Joint Calls in Active Networks

	June 2011	December 2011
Number of network provided information on the number of proposals funded	34	34
Number of proposal funded	391	391
Average number of proposal funded	11.5	11.5
Number of network provided information on the reserved public funding	54	53
Total public funding initially reserved for joint calls (€)	651.806.452	636.096.452
Average public funding initially reserved for joint calls (€)	12.070.490	12.001.820
Number of networks provided information on the committed funding	25	25
Total public funding actually committed to projects (€)	287.554.258	287.554.258
Average public funding actually committed to projects (€)	11.502.170	11.502.170
Number of networks provided information on the FP funded projects*	8	8
Total EU FP funding committed to projects (€)	44.011.417	44.011.417
Average EU FP funding committed to projects (€)	5.501.427	5.501.427
Number of networks provided information on the private sector funded projects**	9	9
Private sector funding committed to projects (€)	62.576.648	62.576.648
Average private sector funding committed to projects (€)	6.952.961	6.952.961

<sup>\*15</sup> networks indicated 'no FP contribution'. \*\*11 networks indicated 'no private contribution'

Firstly, the data on public funds and joint call budgets in the NETWATCH database are incomplete, and any comparisons made and conclusions drawn based on them must be qualified. Although there were 98 calls identified related to active networks, the information on public funding was only provided for 69 of them. Moreover, the response rate decreased drastically for other details such as the amount of public funding actually committed, FP funding and private sector funding; the numbers of responses are 25, 8 and 9 respectively. In addition, there are no comparable data relating to 2010 and early 2011.

Considering the average values, there were no remarkable changes from June to December 2011. The average number of proposals funded, average public funding reserved for joint calls, average public funding committed to joint calls, average EU FP funding and average private sector funding actually committed to projects had almost no change in the second half of 2011.

As mentioned above, information on the joint calls budgets is limited. In order to provide comprehensive and accurate analysis, additional information<sup>43</sup> will be used to complement NETWATCH data in the subsequent mapping and monitoring exercises.

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<sup>&</sup>lt;sup>43</sup> This additional information is collected by one of the European Commission services (Directorate General for Research & Innovation); namely, Radka Jekova and Jörg Niehoff (2012), "The ERA-NET scheme under FP6 and FP7: Statistics on ERA-NET and ERA-NET Plus actions and their joint calls", Brussels: June 2012.

#### 3. CONCLUSIONS

This mapping and monitoring report utilises the information provided by the network coordinators via the NETWATCH web platform through regular six-monthly information updates. The analysis is based on information collected during the updates of mid-2011 and at the end of 2011. The findings from these two periods, when combined with those of the first mapping and monitoring report provide a further comparative and consequently a more dynamic perspective on the landscape of schemes supporting the collaboration between European research programmes.

Two new cohorts are analysed in this report, those networks still running in June 2011 and December 2011. The June 2011 cohort included 68 active networks: 43 FP7 funded ERA-NETs, three FP6 funded ERA-NETs, eight FP7 funded ERA-NET Plus, four FP7 funded Article 169/185 networks, two coordination and support action networks, and eight self-sustaining networks. The only change for the June 2011 cohort was that one of the coordination and support action networks became inactive and the cohort decreased from 68 to 67.

Due to the lack of significant variation between six-monthly analyses the schedule of NETWATCH mapping and monitoring activities, the fourth mapping and monitoring report will cover the extended period from December 2011 until the end of September 2012.

This report seeks to provide enhanced better analysis in relation to key policy objectives, notably those set out in the 2012 ERA Communication, Europe 2020, the 2011 Partnering Communication and Horizon 2020. The aim is to make the periodic mapping and monitoring reports more focused on policy-relevant (and research-relevant) areas, distinguishing between core and complementary indicators. Hence, this report has two main sections focused on the core indicators; one section for networks and another for joint calls with complementary indicators presented in Annex 1 (see Table 1). This change will allow the research questions and variables measured for the mapping and monitoring reports to become more complementary to the NETWATCH impact assessment reports and policy briefs.

# 1. What objectives and research issues have been addressed?

The NETWATCH web platform is the tool used to collect information on the networks and there are three main sections related to objectives, thematic domains and research issues:

- The strategic objectives of the networks are based on the four steps of ERA-NETs. In this section, the coordinators indicate the relative importance of each objective by using a five-point likert scale.
- 2) Another part of the template measures the thematic priority of active networks based on the thematic domains of FP7. In this section, the coordinators are allowed to choose only one domain.
- 3) Another question measures the research fields covered by networks, includes 15 research fields and allows multiple answers if the research activities are spread across different disciplines.

Care is needed when interpreting the results for the FP7 thematic areas assigned to the networks. Most of the FP7 funded ERA-NETs resulted from calls corresponding to one of the FP7 thematic priorities. However, a high number of networks indicated that their thematic priority is horizontal, which was unexpected as most calls were published in thematic areas. The analysis of the research fields actually covered by the active networks show that horizontal networks were identified as one of the least frequent. This could be due to the multi/inter-disciplinary characteristics of the network activities and the large proportion of networks that choose multiple research fields (56% of all networks) supports this hypothesis. The explanation for the high number of networks who describe their thematic priority as horizontal could be because the

response is based on several research areas that they encompass rather than the FP7 thematic area from which the EC funding was derived.

Between January 2010 and December 2011, the key strategic objective of the networks has been **the implementation of joint calls**. The second most highly rated strategic objective is **the exchange of information and good practices**. The *implementation of joint research programmes* and *the coordination of national programmes* are seen as less important objectives.

The largest proportion of the *research fields covered* by active networks is **environment** (where the response is given, 14% in both periods), followed by **health**, **information and communication technologies** and **food**, **agriculture and fisheries** (9%).

# 2. How has the pattern of network participants (countries, organisations and programmes) changed over time?

In terms of the numbers of participating countries, organisations and programmes, the average size of networks has increased. When considering the situation in 2010 compared to the most recent analysis (December 2011) the average number of countries involved in active networks has slightly increased from 13 to 15 between. Meanwhile the average number of organisations was 19 in 2011 while it was 18 in 2010. These changes could be a reflection of an increasing interest/benefit in participating in Europe-wide research programme collaboration.

The range of countries involved in networks also increased. The maximum number of countries involved in a network was 22 in 2010, increasing to 34 in 2011. Similarly, the maximum number of organisations involved increased from 34 to 45. In addition, the number of organisations related to active networks has stabilised in 2011. In 2010 this indicator increased from 442 to 606, before stabilising at around 550 during 2011.

Organisations in the NETWATCH database are mostly national organisations (77%) and have principally participated in only one network: 63% of national organisations participated in one network in June and 61% in December 2011. There are, however, some notable differences in the national participations. For example, Turkey and Romania participated in approximately the same number of networks (39 and 42 respectively) while there are considerable differences in the numbers of organisations involved in active networks (17 for Romania and only five for Turkey).

The involvement of newer Member States and Associated Countries was generally lower than the involvement observed for Member States. This situation might be related to a relative lack of experience in transnational programme collaboration. In addition, with limited resources, there may be a focus on using these resources efficiently, leading to different types of strategies for participation. However, a fuller explanation of this phenomenon requires further analysis.

Since 2010, the leading countries participating in the active networks have been Germany, France, Spain, Austria and the United Kingdom (these five countries account for 26% of total participation). In terms of country involvement, the top 15 countries participating in 63% of the total number of active networks have mostly been from Member States, except Turkey, which participates in 39 active networks.

The number of programmes related to active networks in the NETWATCH database decreased in 2011, from 523 to 461, mostly (around 90%) related to FP7 ERA-NETs. The networks' decreasing concern with common programmes was also observed through the analysis of strategic objectives. As a strategic objective, "common programmes" had the lowest rating.

#### 3. What types of joint activities have been promoted by networks?

The analysis of network activities is now limited by the NETWATCH questionnaire as while the relative importance of activities is requested whether or not the activities were actually performed is not. While this was initially an appropriate approach the need to better understand the activities undertaken by networks may require that it is revised. Nevertheless, this limited observation provides insights and helps to evaluate the networks' predispositions towards joint activities.

The results clearly show that the design and implementation of joint calls are the most important activities, which is coherent with the strategic objectives mentioned before. This same phenomenon has been observed from 2010 to the end of 2011. Additionally, the networks attach importance to the establishment of common evaluation procedures and mutual learning.

# 4. In what way have national programmes been involved in networks?

As mentioned before, the number of programmes related to active networks decreased from 523 in December 2010 to 461 in December 2011. This can be related to the remarkable reduction in the number of programmes related to active networks receiving FP6 funds, which decreased from 69 to eight during the first half of 2011.

The average number of related programmes has slightly changed during 2011, at 14.8 in June and 14.9 in December, with a median of 11. The combination between active networks and programmes ranges from five networks with only one programme to one network with 67 programmes.

National programmes were related most to those networks supporting applied researchers and targeting HEIs and SMEs, and those networks focusing on horizontal and environmental issues. The proportion of horizontal issues has remained unchanged (33%) from January 2010 to December 2011, while the share for environmental issues has increased from 15% to 37%.

# 5. How have the scope and participants of joint calls changed?

The analyses of the joint calls are two-fold with a consideration of the overall number of joint calls launched by the active networks and the calls open during each of the time periods analysed. In addition, it should be highlighted that the call data (especially on the financial dimension of the calls) has some deficiencies because this information is only based on the coordinators' entries. Therefore, the response rate of coordinators determines the completeness of information<sup>44</sup>.

The number of overall joint calls related to active networks has changed very little over time (89 in December 2010, 83 in June 2011 and 82 in December 2011). This slight change is also reflected in the number of open calls, 16 at the beginning of 2011, 11 in mid-2011 and 13 at the end of 2011.

Joint calls were launched by 62% of active networks and 88% of this group launched only one call. Although there are networks launching more than one call, they mostly administered one call annually.

The virtual pot is the most common funding mechanism observed. Of the total joint calls where a response was given, 80% in June and 79% in December 2011 have preferred the virtual pot. This confirms that national organisations are not disposed to fund research performed in other countries.

 $<sup>^{44}</sup>$  The additional information on the joint calls will be used in the following mapping and monitoring exercise.

There have been no significant changes observed in the average budget of joint calls from June to December 2011, where data is available. The average number of proposals funded (11.5), average public funding reserved for joint calls (around €12.5 million), average public funding committed to joint calls (around €11.5 million), average EU FP funding<sup>45</sup> (around €5.5 million) and average provide sector funding (around €7 million) have changed very little over time.

Subsequent mapping and monitoring exercises need to utilise additional information from other sources in order to provide a more extensive analysis of the joint calls.

#### 6. Transnational research collaboration

The mapping and monitoring activities are useful as analytical tools for the brief evaluation of transnational research programme collaboration. They also provide some indication in relation to the progress towards the European Research Area.

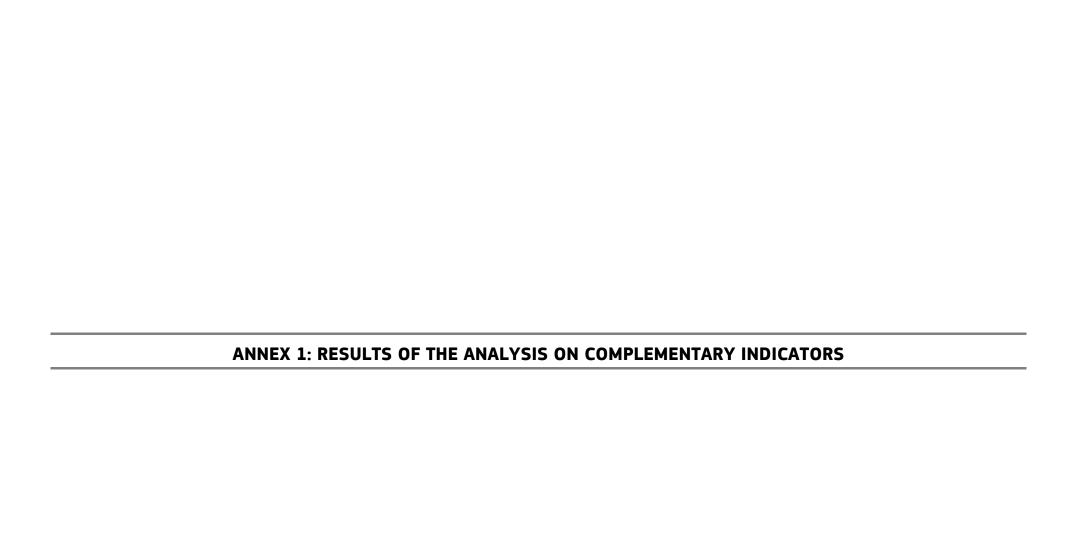
As mentioned before, the participation of countries in active networks demonstrates the different characteristics of the countries. The variety of national administrative structures leads to different types of participation. National organisations embedded in particular national structures have found a way to participate effectively in European research collaboration with organisations embedded in different national structures. ERA-NETs provide a flexible framework for organisations from different countries to be able to participate in networks and coordinate their work. Additionally, national organisations have endeavoured to participate in ERA-NETs and other European networks as they are beneficial for the participants as observed in the analysis on the size of networks.

Network coordinators have also indicated that they have so far paid little attention to the mobility of researchers or mutual opening of the national programmes despite the apparent importance given to mutual learning. This can be seen as a pragmatic concern for the short-term benefit of joint research activities rather than the long-term accumulated benefits that can arise from the researcher exchanges.

Future mapping and monitoring reports will enhance the assessment of the issues identified and discussed here. In terms of the data deficiencies, although the coverage has been enhanced compared to the previous mapping and monitoring report, particular effort will continue in order to overcome the evident limitations, particularly the need to increase the completeness of the information. Future mapping and monitoring reports will also provide more opportunities to evaluate European research patterns owing to an enlarged coverage and time period.

<sup>45</sup> The average EU programme fund was calculated over eight observations where the data were available. Similarly, information on the private sector funding is available for only nine networks.

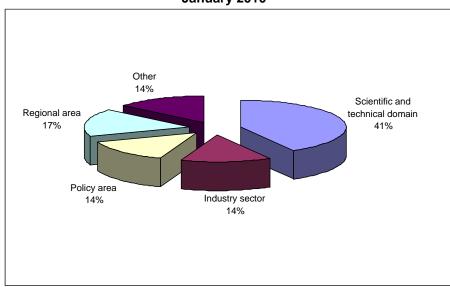
68



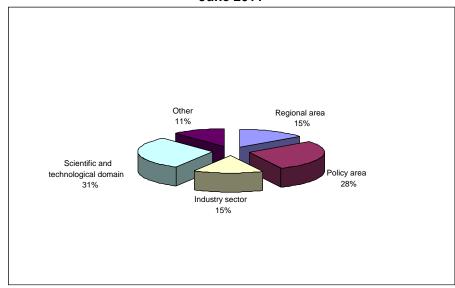
# **A2.1. NETWORKS**

#### **A2.1.1. Focus of Active Networks**

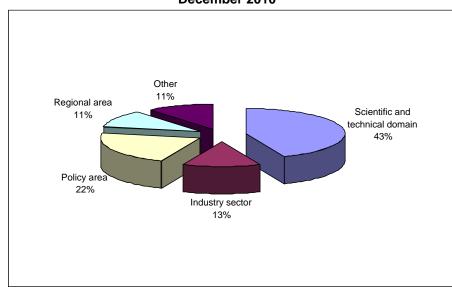
# January 2010



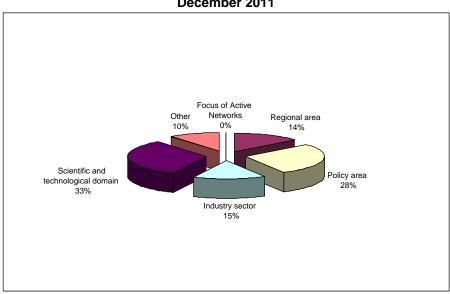
#### June 2011



#### December 2010

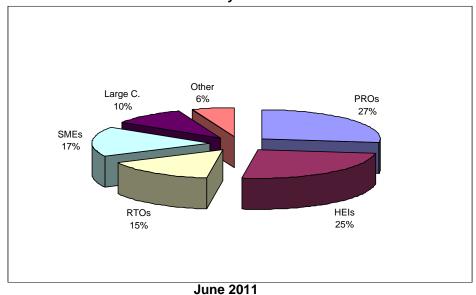


#### December 2011

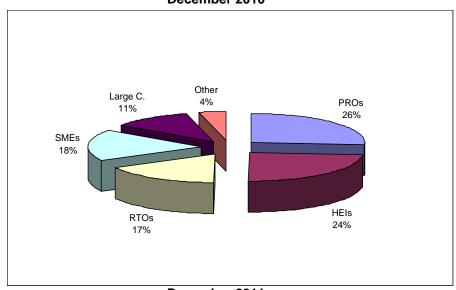


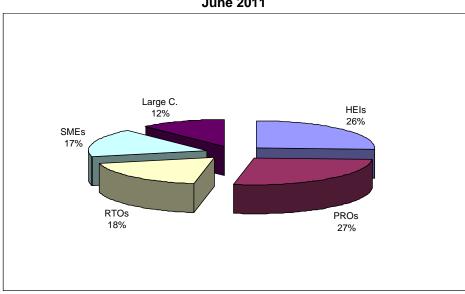
# **A2.1.2. Target Groups of Active Networks**

# January 2010

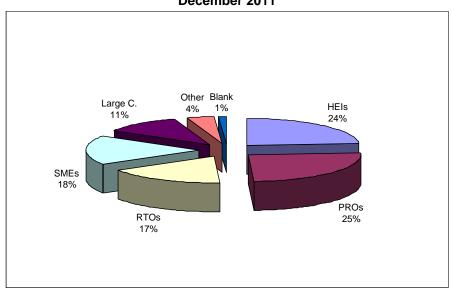


#### December 2010

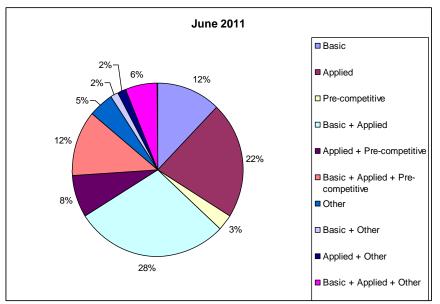


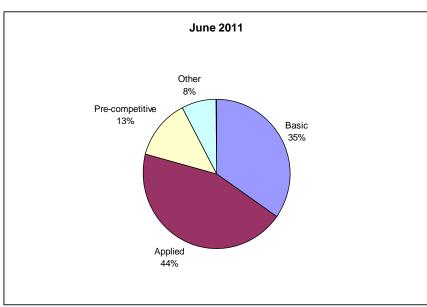


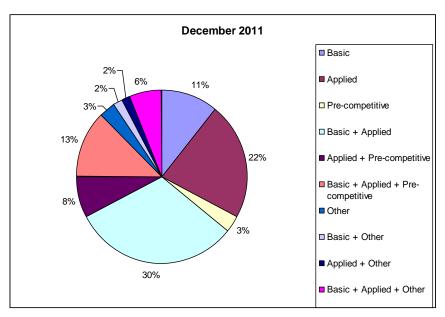
December 2011

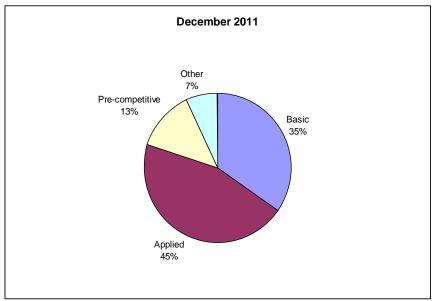


#### **A2.1.3. Types of Research Performed by Active Networks**





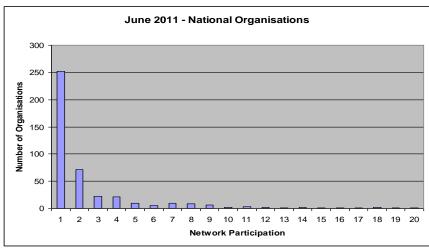


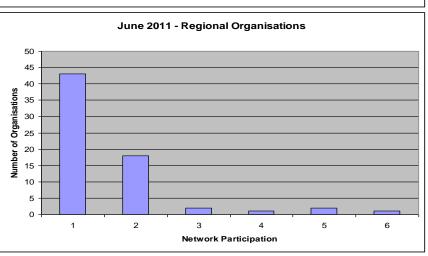


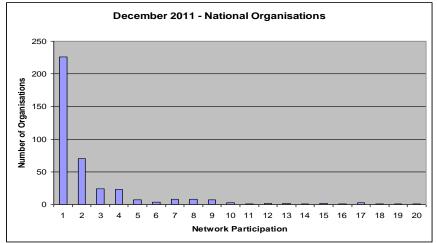
# **A2.2. ORGANISATIONS**

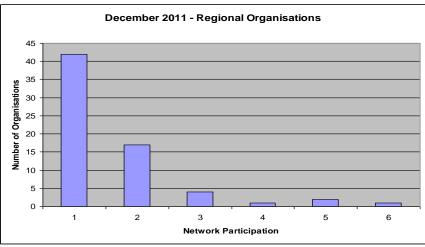
#### **A2.2.1. Types of Organisation - Numbers Involved**

	Jan-10	Dec-10	Jun-11	Dec-11
Number of organisations involved in active networks in the NETWATCH database		606	550	521
Number of international organisations		20	20	20
Number of national organisations	382	468	424	395
Number of regional organisations		80	66	66
Number of organisation types not specified	6	38	40	40





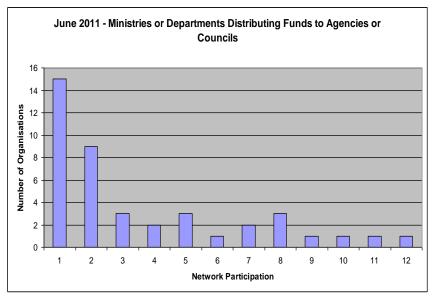


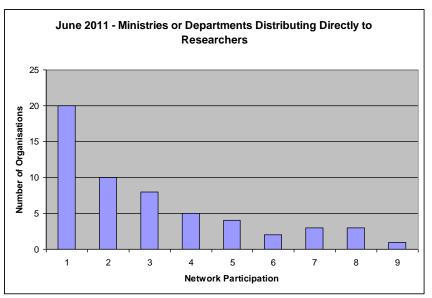


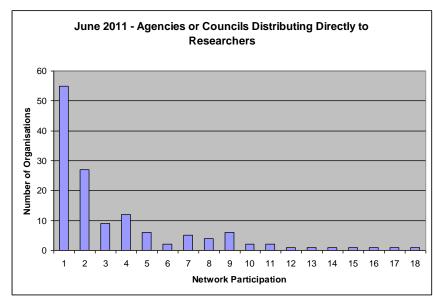
# A2.2.3. Types of National Organisation - Number Involved

	Jan-10	Dec-10	Jun-11	Dec-11
Number of organisations involved in active networks in the NETWATCH database	442	606	550	521
Number of national organisations involved in active networks in the NETWATCH database		468	424	395
Number of National Ministries or Departments responsible for distributing funds to Research Agencies or Councils	ı	47	42	42
Number of National Ministries or Departments responsible for distributing funds direct to researchers	1	58	56	57
Number of National Agencies or Councils responsible for distributing funds direct to researchers	-	144	137	139
Number of other types of PSA national organisation	ı	45	41	41
Number of types of national organisation not specified	-	195	210	180

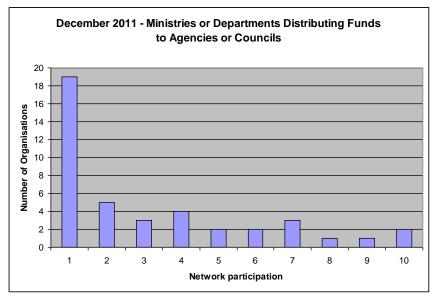
## A2.2.4. National Organisations by Type of Organisation -Involvement in Multiple Networks (I)

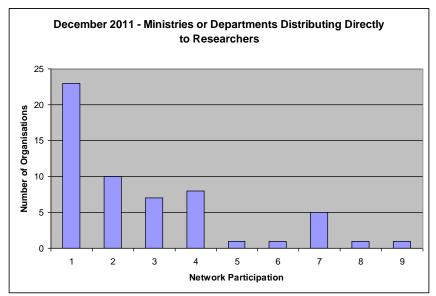


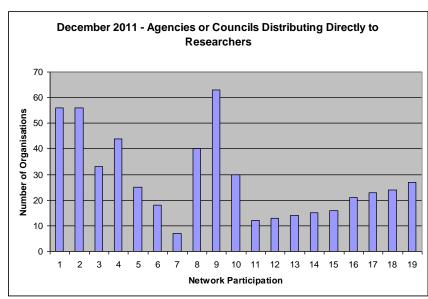




## A2.2.4. National Organisations by Type of Organisation -Involvement in Multiple Networks (II)





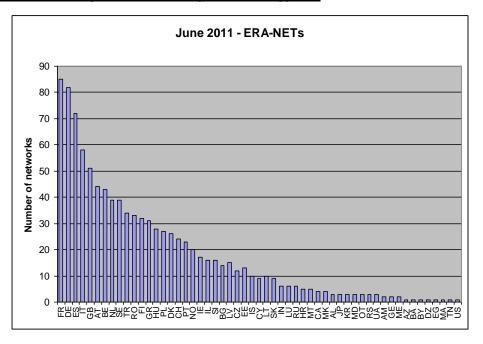


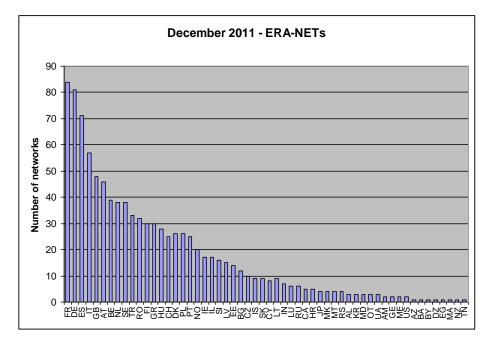
# **A2.3. COUNTRIES**

# **A2.3.1 Country Types**

	Jan-10	Dec-10	Jun-11	Dec-11
Number of countries represented in active networks in the NETWATCH database		53	54	55
Number of EU countries represented in the network	27	27	27	27
Number of associate countries represented in the network	10	11	11	11
Number of other countries represented in the network	12	15	16	17
Number of international organisations represented in the network	10	21	20	20

# A2.3.2. Country Involvement by Network Type (I)





# ANNEX II. LIST OF ADJUSTED AND ADDITIONAL INDICATORS TO CHARACTERISE NETWORKS

	2010	2011	
	International organisation	International organisation	
	Programme Owners: national ministries/regional authorities responsible for defining, financing or managing research programmes carried out at a national/regional level.	National Ministry or Department with responsibilities for distributing funds to Research Agencies or Councils	
Profile of the		National Ministry or Department with	
organisations involved	Programme Managers: other	responsibilities for distributing funds directly to researchers	
	national/regional organisations that implement research programmes under the supervision of the programme owners, such as research councils or funding agencies.	National Agency or Council with responsibilities for distributing funds directly to researchers	
		Regional organisation	
	Other. Please specify.	Other. Please specify.	
Type of joint activities undertaken by the network and rate of importance of each of them	One attribute missing	The definition of common strategic agendas	

# **ANNEX III. NETWORKS INCLUDED IN THE SCOPE\***

	Name of Network		Name of Network
1	AAL JP	36	EUROCOURSE
2	AirTN	37	EuroNanoMed
3	ARIMNet	38	Eurostars
4	ASPERA-2	39	EUROTRANSBIO (ETB-PRO)
5	BiodivERsA2	40	EU-SEC II
6	BONUS+	41	FENCO-NET
7	BONUS-169	42	HERA JRP
8	BS-ERA.NET	43	HIVERA
9	CHIST-ERA	44	ICT-AGRI
10	CIRCLE-2	45	iMERA-Plus
11	CONCERT-Japan	46	KORANET
12	CORE Organic II	47	LEAD ERA
13	CORNET	48	MANUNET II
14	CROSSTEXNET	49	MARTEC II
15	CRUE	50	MATERA+
16	DC-NET	51	MNT-ERA.NET II
17	ECO-INNOVERA	52	NanoSci-E+
18	ECORD	53	NET-HERITAGE
19	e-InfraNet	54	NuPNET
20	EMRP	55	NEURON
21	EMIDA	56	New INDIGO
22	ERA.Net RUS	57	NORFACE II
23	ERA-AGE 2	58	NORFACE Plus
24	ERA-ARD-II	59	PathoGenoMics
25	ERA-CAPS	60	PIANO+
26	ERA-CHEMISTRY	61	PV-ERANET 2
27	ERACOBUILD	62	RURAGRI
28	ERA-ENVHEALTH	63	SEAS-ERA
29	ERA-IB	64	SEE-ERA.NET Plus
30	ERA-IB-2	65	SEERA-EI
31	ERA-NET TRANSPORT II	66	SIINN
32	E-Rare-2	67	SKEP
	ERASysBio+	68	SmartGrids
34		69	SNOWMAN
35	EUPHRESCO II	70	TRANSCAN
		71	WoodWisdom-Net 2

<sup>\*</sup> Table presents all the networks running any of the analysis periods, June and/or December 2011.

**European Commission** 

 $EUR\ 25810-Joint\ Research\ Centre-Institute\ for\ Prospective\ and\ Technological\ Studies$ 

Title: NETWATCH Mapping and Monitoring: Second and Third Exercises

Author(s): Nida Kamil Özbolat, Nicholas Harrap, Mark Boden

Luxembourg: Publications Office of the European Union

2013 - 101 pp. - 21.0 x 29.7 cm

EUR - Scientific and Technical Research series -ISSN 1831-9424 (online)

ISBN 978-92-79-28595-0 (pdf)

doi:10.2791/77106

#### Abstract

The work presented in this report is based on mapping exercises providing a descriptive analysis of the networks included in the NETWATCH database (i.e. active ERA-NETs, ERA-NET Plus, Article 169/185s and self-sustaining networks). Building on previous reports, with the addition of a time dimension, through periodic collection and analysis of network data, the report monitors the landscape of schemes and provides an analysis of key aspects of the evolution of research programme cooperation within Europe. These findings aim to support policy makers to make informed decisions on the future design and implementation of related initiatives.

As the Commission's in-house science service, the Joint Research Centre's mission is to provide EU policies with independent, evidence-based scientific and technical support throughout the whole policy cycle.

Working in close cooperation with policy Directorates-General, the JRC addresses key societal challenges while stimulating innovation through developing new standards, methods and tools, and sharing and transferring its know-how to the Member States and international community.

Key policy areas include: environment and climate change; energy and transport; agriculture and food security; health and consumer protection; information society and digital agenda; safety and security including nuclear; all supported through a cross-cutting and multi-disciplinary approach.



