# COMMISSION OF THE EUROPEAN COMMUNITIES



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# REPORT FROM THE COMMISSION

Research and technological development activities of the European Union 2001 Annual Report

## COMMISSION OF THE EUROPEAN COMMUNITIES

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#### LEGAL BASES FOR THE ANNUAL REPORT

Treaty establishing the European Community, Article 173:

"At the beginning of each year the Commission shall send a report to the European Parliament and the Council. The report shall include information on research and technological development activities and the dissemination of results during the previous year, and the work programme for the current year."

Decision No 182/1999/EC concerning the 5th Framework Programme (OJ L 26, 1 February 1999), Article 5:

"The Commission shall regularly inform the European Parliament and the Council of the overall progress of the implementation of the framework programme and the specific programmes."

Decision No 1999/65/EC concerning the rules for participation (OJ L 26, 1 February 1999), Article 24:

"The annual report which the Commission sends to the European Parliament and the Council in accordance with Article 173 of the Treaty shall contain information on the implementation of this Decision."

#### SOURCES OF FURTHER INFORMATION

- Annual Monitoring Reports published each year for the Framework Programme and each specific programme, which provide concise, independent feedback on the progress and quality of the measures taken to implement the programmes.
- Five-year Assessment Reports published every fourth year, both for the Framework Programme and for each specific programme, which present an independent retrospective evaluation of the relevance, efficiency, results and impact of the European Union RTD programmes.
- The European Report on Science and Technology Indicators, which contains descriptions, statistics and detailed analyses of European and national RTD activities in the world context.
- Research and Development: Annual Statistics (Eurostat): an annual publication containing comparable international statistics on R&D expenditure, R&D personnel and patents in the Member States, broken down by regional level.
- *R&D and Innovation Statistics* for the candidate countries and the Russian Federation (Eurostat).
- Statistics on Science and Technology in Europe (2000 edition). Published as part of the "Panorama of the European Union" collection (Eurostat).
- Statistics in Focus under the theme "Science and technology" (Eurostat).
- The Commission's *annual budgetary documents*, i.e. the preliminary draft budget, the budget, the consolidated revenue and expenditure account and the balance sheet.

 Studies and analyses published in connection with the Community RTD programmes and addressing issues specific to the fields of RTD which they cover.

Most of these documents can be obtained or ordered from the Commission's Internet sites:

- The Commission's general EUROPA site: http://europa.eu.int
- The CORDIS site containing information on the Framework Programme: <a href="http://www.cordis.lu">http://www.cordis.lu</a>
- The Commission Directorate-General for Research site: <a href="http://europa.eu.int/comm/dgs/research">http://europa.eu.int/comm/dgs/research</a>
- The Commission Directorate-General for Information Society site: <a href="http://europa.eu.int/comm/dgs/information\_society">http://europa.eu.int/comm/dgs/information\_society</a>
- The Commission Directorate-General for Enterprise site: <a href="http://europa.eu.int/comm/dgs/entreprise">http://europa.eu.int/comm/dgs/entreprise</a>
- The Joint Research Centre (JRC) site: <a href="http://www.jrc.org">http://www.jrc.org</a>
- The EUROSTAT site: http://europa.eu.int/comm/eurostat

Extensive information on European Union policies can be found on these sites, and, in particular, on the CORDIS site which is devoted to the RTD Framework Programme and on the sites of the Directorate-General for Research and of the other relevant Commission departments, all the reference documents, the texts of calls for proposals and a host of other information, in line with the Commission's transparency and information policy.

Further information can be consulted on line at http://europa.eu.int/comm/research/report2001.html:

- Additional statistics on the proposals received, selected and funded in 2000
- an annex that sums up the science and technology activities in 2000 and the plans for 2001 for each of the specific programmes under the 5<sup>th</sup> Framework Programme.

#### **SUMMARY**

This annual report on the European Union's research and technological development activities covers a period which marked a turning point with the launch of two major political initiatives: the discussions on creation of a European Research Area and the preparations for the new RTD Framework Programme for 2002 to 2006. At the same time, the 5th Framework Programme accelerated to full speed in 2000.

In its communication "Towards a European research area" the Commission drew the alarming conclusion that the European Union is losing ground to its main rivals in the research and development race. The Commission consulted institutions, industry and scientists on a series of courses of action to make European research more dynamic by opening up activities at regional, national and European levels and coordinating them more closely to make more efficient use of the available resources. The Heads of State and Government endorsed this approach at the Lisbon European Council with a view to turning Europe, in the next ten years, into "the most competitive and dynamic knowledge-based economy in the world, capable of sustainable economic growth with more and better jobs and greater social cohesion." The Commission's analysis of the situation and the courses of action which it proposed were backed by the European Parliament, the Council and the other institutions and by the opinions expressed by the scientific community and industry.

The first steps have already been taken towards making a reality of the European Research Area, with work in progress on introducing a Community patent, benchmarking national research and innovation policies, mapping scientific excellence in Europe, networking national research programmes, evaluating the level of mobility amongst researchers in Europe and identifying the obstacles to mobility.

The measures to implement the 5th RTD Framework Programme in 2000 focused mainly on adaptation of the work programmes to the objectives of creating a European Research Area, particularly by reinforcing the concerted action and thematic networks. Boosted by a substantial increase in the total value of the contracts signed (around €3.9 billion), the impact of the Community's research activities is becoming tangible within the EU and relations with the associated countries and other partners are growing closer. In the thematic programmes the average Community contribution to the shared-cost actions now stands at around €1 300 000 per project. Participation by SMEs is growing strongly and the proportion of women involved is moving in the right direction at all levels of research. The socio-economic impact can be measured in terms of the knowledge built up and greater industrial competitiveness.

The year 2000 was also marked by the preparations for the Framework Programme for RTD for 2002 to 2006. One major milestone on the way to this new Framework Programme was the adoption, in October 2000, of the communication entitled "Making a reality of the European Research Area: Guidelines for EU research activities (2002-2006)", which identified the new forms which the Community's activities to support research could take. The proposal is that the next Framework Programme should aim at contributing towards the creation of the European Research Area by bringing real European added value to the RTD undertaken at national and regional levels, based on three main principles: concentrating resources on a limited number of areas, applying new methods of intervention capable of exerting a more structuring effect on the RTD activities conducted in Europe, and simplifying and streamlining management procedures.

The decision-making process scheduled to complete adoption of the new Framework Programme before the ongoing programme comes to an end should clear two big hurdles in 2001 when the European Parliament gives its opinion on first reading and the Council of Ministers adopts its common position.

These discussions will draw on the parallel thinking and deliberations sparked by a succession of documents on numerous specific aspects of the strategy for creation of the European Research Area, such as the dialogue between science and society, infrastructure and human resources, and the international and regional dimensions. The recently established European Research Advisory Body (EURAB) will play a key role in this debate, by giving independent advice to back up the efforts to develop Europe's research policy consistently and efficiently.

#### 1. A NEW RESEARCH AND TECHNOLOGICAL DEVELOPMENT (RTD) POLICY FOR THE **EUROPEAN UNION: THE EUROPEAN RESEARCH AREA**

In 1999, on the initiative of Mr Busquin, the Commission decided to give fresh impetus to the Community's research policy by putting it at the heart of sustainable development and of the welfare of citizens in the European Union both today and in the future.

To put into practice this new central priority for the Union, first the Commission had to assess fully what was at stake and the problems facing the Union before proposing a consistent package of solutions to make Europe's RTD policy more dynamic and put the Union back on the path of sustainable growth offering a wealth of high-quality jobs and capable of meeting the needs of society.

The plan to create a European Research Area is the Union's response to this challenge, and the proposal for the next Framework Programme for 2002-2006 is a key component of it.

#### 1.1. General plan

#### 1.1.1. The situation

The European Union has many assets for producing high-quality research. In particular, it has a long tradition of scientific excellence, a solid fabric of public and private research centres plus a wide variety of schools and academic traditions and leads the world in many different fields.

However, Europe suffers from four major weaknesses. First, the share of gross domestic product (GDP) which Europe ploughs back into research and development is too low. In 1999<sup>1</sup> the European Union earmarked 1.92% of its GDP to RTD, compared with 2.64% in the USA and 3.04% in Japan. Second, Europe's industrial and economic performance fails to reflect its intense efforts in the field of science or the results which Europe has produced, as shown, *inter alia*, by the "2001 innovation scoreboard" published by the Commission in September 2001.<sup>2</sup> Third, research policies and activities in Europe are often compartmentalised at national level: 80% of the work is done within relatively self-contained national systems. Finally, Europe's universities and research centres are still less attractive than their counterparts in the USA.

#### 1.1.2. The vision

In response to this situation, on 18 January 2000 the Commission adopted a communication<sup>3</sup> unveiling a plan to create a European Research Area (ERA) offering a reference framework, in line with the principle of subsidiarity and seeking European added value, for closer coordination of research and innovation policies in Europe and more consistent implementation of regional, national and European research programmes, more efficient use of research facilities, greater mobility for European researchers and taking fuller account of relations between science and society. The ERA must result in a true open area for research allowing free movement of researchers and better use of scientific results within the Union.

Eurostat and OECD.

SEC(2001) 1414.

The objectives of the ERA are reflected in the seven priorities for action:

- Optimise the stock of material resources and facilities at European level by mapping and networking scientific excellence in Europe, developing a European approach to research facilities, developing electronic networks and making better use of their potential for European researchers;
- Make more coherent use of public instruments and resources by decompartmentalisation and better coordination of national and European research programmes, and closer relations between European organisations for science and technology cooperation;
- Make private investment more dynamic by making more concerted use of
  instruments for providing indirect support to research, providing better protection for
  intellectual property, in particular by means of a Community patent, and exploring
  new avenues for encouraging company start-ups and risk capital investment;
- Establish a common scientific and technical reference system for policy implementation so that research activities take greater account of the needs of citizens and decision-makers;
- Give rise to more abundant and more mobile human resources by encouraging
  mobility from one country to another and between the academic world and industry
  throughout European researchers' careers, ensuring a bigger place and role for
  women in research and giving the young a taste for research and scientific careers;
- Make the European landscape more dynamic, open and attractive to researchers and investment by increasing the role of the regions in the European research effort, integrating the scientific communities of Western and Eastern Europe, and making Europe attractive to researchers from the rest of the world;
- Create an area of shared values by seeking common or converging responses to relations between science and society, which now often take on a European dimension, and encouraging greater coordination of the national means and methods for taking them into account.

## 1.1.3. Broad public consultation

First and foremost, the ERA is conceived as the fruit of discussions with all concerned. For this reason, at the same time as proposing the broad direction for implementing a true European Research Area, the communication of 18 January 2000 also opened a wide-ranging debate on the future of RTD in Europe.

These consultations were launched by disseminating the communication as widely as possible across the Union and putting it online on the Europa site. The Commission consulted more than 2000 research bodies and 700 enterprises. Individual researchers and citizens and all entities concerned had a chance to join in the debate in an electronic forum, alongside the official authorities and organisations representing the scientific community and industry.

On 3 May 2000 the Commission also organised a high-level seminar on the ERA in Brussels, attended by eminent representatives of the scientific community and industry from the EU, EEA and candidate countries. This produced a list of priorities for action.

In this way, the consultation process on the ERA enabled the Commission to expand on its analysis and identify in advance certain particularly sensitive issues.

#### 1.1.4. Political support for the approach

At the Lisbon European Council on 23 and 24 March 2000 the Heads of State and Government decided to place RTD and innovation policy at the heart of their strategy to turn the European Union, over the next decade, into "the most competitive and dynamic knowledge-based economy in the world, capable of sustainable economic growth with more and better jobs and greater social cohesion."

Adding that "research activities at national and Union level must be better integrated and coordinated to make them as efficient and innovative as possible, and to ensure that Europe offers attractive prospects to its best brains", the Heads of State and Government identified the ERA as a key means of making Europe more competitive, in the context of the new "open method of coordination".

The European Parliament's resolution of 18 May 2000 together with the conclusions adopted by the Council in Luxembourg on 15 June 2000 and by the European Council in Santa Maria da Feira on 19 and 20 June 2000 and in Nice on 16 November 2000 all completely confirmed the strong support from the Union's decision-makers for the ERA.

#### 1.2. A steady build-up

Throughout 2000 progress was made with building the ERA. Preparatory work started on most of the priorities for action and is still continuing. These tasks include coordinating national and European research policies, defining a European policy on research infrastructure, evaluating the level of mobility amongst researchers in Europe, and defining strategies to enhance the international and regional dimensions of the ERA.

#### 1.2.1. Coordinating national and European policies

Creation of a European Research Area depends, decisively, on greater consistency and coordination of research activities and policies at regional, national and European levels. The following preparatory work was carried out on this priority in 2000:

- Establishment of a database on national activities: One of the first measures taken by the Commission in 2000 was to consult the Member States in order to build up a preliminary database paving the way for specific action for networking research activities undertaken at national and regional levels, opening up the national programmes to each other, and improving collaboration with and between the other European bodies and frameworks for cooperation.
- Benchmarking national research and innovation policies: The Lisbon European Council asked the Member States and the Commission to develop "an open method of coordination" for benchmarking national research policies and a series of indicators. The work carried out by the Commission, in partnership with a High-Level Group set up for this purpose by Mr Busquin (cf. Section 3.4), was presented to the Council on 15 June and 16 November 2000. Four themes were selected for benchmarking: human resources, public and private investment in research and development, scientific and technological productivity, and the impact of research on

economic competitiveness and employment. A Commission staff working paper<sup>4</sup> gave a progress report on these themes plus details of the 20 indicators to be monitored and of the method for benchmarking research policies. Four expert groups have been given the task of analysing the data. Fifteen of the 20 indicators selected are completely available, while the other five have yet to be established, in collaboration with EUROSTAT. This first set of indicators has now been collected and was published in July 2001.<sup>5</sup> In its communication "Innovation in a knowledge-driven economy" the Commission also included a draft version of the "innovation scoreboard", which was followed in September 2001 by the first edition of the scoreboard covering 17 indicators.<sup>7</sup> This highlighted the strengths and weaknesses in the innovation capacity of each Member State and of the European Union as a whole;

Mapping scientific excellence in Europe: At the instigation of the Lisbon European Council and to follow up the Council meeting of 15 June 2000, the Commission and the Member States defined a common methodology for mapping scientific excellence in Europe. This method, based on indicators and peer review, will be applied initially to three priority areas of very different nature: nanotechnologies, life sciences and economic sciences.

#### 1.2.2. Research infrastructure

The conclusions of the Lisbon European Council asked the Member States and the Commission to ensure that the national and European support for research infrastructure is better integrated and coordinated and make it as efficient and innovative as possible, and that Europe's research and Europe's research infrastructure in particular offers attractive prospects to its best scientists. On 15 June and 14 December 2000 the Council in turn called for a new European approach to research infrastructure, including setting up a European electronic communications network.

In this context, the Commission joined forces with the French Ministry of Research and the European Science Foundation to organise a *Conference on Research Infrastructures* in Strasbourg from 18 to 20 September 2000 to seek new ways of ensuring coherent development of research infrastructure in Europe. This provided an opportunity for a wideranging exchange of views between representatives of the scientific and business communities in Europe and the authorities responsible for national science policies on the role of research infrastructure in science and innovation, the advantages of networking infrastructure, the mechanisms for operation of and access to infrastructure and the strengths and weaknesses in Europe today. A broad consensus emerged, between the institutions and scientists, in favour of a more coordinated approach in European policy in this field.

In its February 2001 working paper "A European research area for infrastructures", the Commission summed up the current thinking and proposed general lines of action for a European policy on research infrastructure including, in particular, that decisions to make optimum use of existing infrastructure and on the development of new key infrastructure should be based on a European decision-making mechanism backed up by independent scientific advice.

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<sup>&</sup>lt;sup>4</sup> SEC(2001) 1002, 20.6.2001.

<sup>&</sup>lt;sup>5</sup> Key figures 2001: http://europa.eu.int/comm/research/area/benchmarking2001.pdf.

<sup>&</sup>lt;sup>6</sup> COM(2000) 567, 20.9.2000.

<sup>&</sup>lt;sup>7</sup> SEC(2001) 1414.

<sup>8</sup> SEC(2001) 356, 27.2.2001.

#### 1.2.3. Human resources and mobility

The Lisbon European Council also asked the Council and the Commission, together with the Member States where appropriate, to take the necessary steps to remove obstacles to the mobility of researchers in Europe by 2002 and to attract and retain high-quality research scientists. This objective, echoed in the Council resolution of 15 June 2000, prompted Mr Busquin to set up a High-Level Expert Group on Improving Mobility of Researchers (cf. Section 3.4.).

To follow up the work of this Group, at the behest of the Stockholm European Council held on 23 and 24 March 2001, the Commission adopted a communication on 20 June 2001 on "A mobility strategy for the European Research Area" based on a package of measures to create a favourable environment in Europe to attract both European and non-European researchers and to provide greater encouragement for mobility between different countries and between business and academia throughout European researchers' careers and to explore the financial measures to be taken in order to attain a critical mass of mobile researchers within the ERA.

#### 1.2.4. Science and society

A qualitative analysis was started on public knowledge and perception of science.

In November 2000 the Commission submitted a working paper on "Science, society and the citizen"<sup>10</sup> to spark a debate at European level on relations between science and society in the European Research Area, particularly on structuring research policies around society's aims, risk management and the precautionary principle, ethics in science and research, the dialogue between researchers and citizens, public understanding of science, and the place and role of women in science and research.

Also, to prepare for establishment of the **common scientific and technical reference system**, the Joint Research Centre (JRC) set up a working party bringing together the heads of major national research laboratories to discuss in detail the operational functions to be defined for such a system. A parallel internal Commission task force compared different models for taking account of the needs of political decision-makers at each stage of implementation of public policy.

#### 1.2.5. Making private investment more dynamic

In July 2000 the Commission submitted a proposal for a regulation on the Community patent to protect intellectual property throughout the Union under more advantageous conditions, in terms of cost, legal certainty and procedures, than the existing European patents. Progress was made on a number of points, but the issues of jurisdiction for settling disputes and establishment of the infrastructure required remain open.

#### 1.2.6. Establishment of EURAB

In May 2000 Mr Busquin set up a working party to draft the mandate for an independent high-level advisory board on science, technology and innovation in Europe.

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<sup>&</sup>lt;sup>9</sup> COM(2001) 331, 20.6.2001.

<sup>&</sup>lt;sup>10</sup> SEC(2000) 1973, 14.11.2000.

This working party, chaired by Professor Helga Nowotny and consisting of 43 European experts from industry and the academic world, submitted its report in February 2001. Acting on its recommendations, on 27 June 2001 the Commission adopted a decision establishing the European Research Advisory Board (EURAB) to advise the Commission on Community research and innovation policy, particularly on creation of the ERA, implementation of the Framework Programme and on scientific and technological issues which could have implications for other Community policies.

#### 1.2.7. International and regional dimensions of the ERA

Turning to **international scientific and technological cooperation**, on 25 June 2001 the Commission adopted a communication on "*The international dimension of the European Research Area*" proposing a strategy for greater consistency and coordination of national and Community cooperation activities and for concentrating the Union's efforts on selected areas, aims and non-EU partners. It must be implemented jointly by the Member States and the Community, taking account of the objectives of the Union's science and technology and external relations policies.

In its communication "The regional dimension of the European Research Area" adopted on 3 October 2001<sup>12</sup> the Commission analysed the role which regions can play in research and innovation in Europe and set out a three-part approach to consolidate the **regional dimension of the European Research Area**. The two existing instruments - the Innovation Action Plan for 2000-2006 to promote innovation to supplement the structural aid from the European Regional Development Fund (ERDF) plus the Framework Programme for 2002-2006 - are to be backed up by specific action to strengthen the scientific and technological base in the regions.

#### 1.3. Preparation of the Framework Programme for 2002–2006

On 4 October 2000, on a proposal from Mr Busquin, the Commission adopted the communication "Making a reality of the European Research Area: Guidelines for EU research activities (2002-2006)", 13 which sets out the guiding principles for formulation and implementation of the next Framework Programme. In particular, it gives details of the objectives to be pursued, the dimensions to be taken into account and the instruments to be applied so that the Framework Programme can contribute fully to making a reality of the European Research Area. Furthermore it suggests a limited number of prioritary research themes that Community funding could concentrate on.

The Council and the European Parliament generally approved these guidelines. The November 2000 Council resolution particularly stressed the importance of the Framework Programme as a strategic tool for establishing the ERA, of the new "open method of coordination of national policies" and of the selective approach for setting priorities. The European Parliament's February 2001 report approved the concentration of efforts on a limited number of priority themes and the new instruments introduced to implement the Framework Programme, but expressed certain reservations at this stage about application of Article 169 of the EC Treaty.

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<sup>&</sup>lt;sup>11</sup> COM(2001) 346, 25.6.2001.

<sup>&</sup>lt;sup>12</sup> COM(2001) 549, 3.10.2001.

<sup>&</sup>lt;sup>13</sup> COM(2000) 612, 4.10.2000.

#### 1.3.1. A structuring approach

The proposal for the Framework Programme of the European Community and of the European Atomic Energy Community for research activities for 2002-2006, <sup>14</sup> adopted by the Commission on 21 February 2001, aims at contributing towards the creation of the European Research Area by strengthening the scientific and technological bases of Community industry and helping to make it more competitive.

The three overriding principles applied for formulation of the programme were to concentrate on a selected number of priority research areas, to define new methods of intervention capable of exerting a structuring effect on the RTD activities conducted at Community and national level and to simplify and streamline management procedures.

The proposals for the specific programmes implementing the Framework Programme for 2002-2006<sup>15</sup> were adopted by the Commission on 30 May 2001 to provide fuller details, as early as possible, for the discussions underway within the institutions.

#### 1.3.2. Three main blocks of activities with seven scientific and technological priorities

The new Framework Programme proposed by the Commission is divided into three blocks of activities.

The first aims at **integrating European research** in seven thematic areas - following the consultation on the ERA and the orientations proposed in octobre  $2000^{16}$  - which require concentration of efforts in order to assemble the critical mass needed to make a real impact. These are all areas of major economic and social importance for the Union, where action by the Community can bring particular European added value: "genomics and biotechnology for health", "information society technologies", "nanotechnologies, intelligent materials and new production processes", "aeronautics and space", "food safety and health risks", "sustainable development and global change" and "citizens and governance in the European knowledge-based society".

An eighth priority is "anticipating the Union's scientific and technological needs" by adding a degree of flexibility to planning in order to decide and carry out action in support of other Community policies and to explore leading-edge fields of science and technology, which often overlap between several different disciplines and could be decisive for Europe's position in the forefront of knowledge and on emerging markets. These activities also include specific collective or cooperative research for SMEs and specific international cooperation activities to promote collaboration with Mediterranean third countries, Russia and the CIS, and developing countries.

The second block of activities aims at **structuring the European Research Area** by means of a series of measures on human resources and researcher mobility, research infrastructure, research and innovation, and relations between science and society.

Finally, the third block in the new Framework Programme aims at strengthening the foundations of the European Research Area with the aid of a series of generic measures to

<sup>&</sup>lt;sup>14</sup> COM(2001) 94, 21.2.2001.

<sup>&</sup>lt;sup>15</sup> COM(2001) 279, 30.5.2001.

An additionnal consultation was organized by the Commission in the framework of the network of national institutes for prospective lead by the IPTS (Institute for Prospective Technological Studies) from the JRC.

tighten up coordination of research and innovation activities and support coherent development of research and innovation policies in Europe.

The research and training activities proposed in the field of nuclear energy include further operation of the JET facilities, preparation of and participation in construction of the demonstration plant for controlled thermonuclear fusion ("Next Step" machine), waste treatment and storage, and activities on nuclear safety.

The Joint Research Centre (JRC) will be assigned the tasks of providing scientific support for Community policies, particularly on the environment and sustainable development, security and public safety, technology foresight and direct action to develop scientific and technical reference systems for the ERA. In the nuclear field, the research and training activities proposed for the JRC will focus primarily on waste management, control of nuclear materials, reactor safety, metrology for ionising radiation, and medical applications for nuclear research.

#### 1.3.3. Three new instruments to implement the Programme

One of the features of the new Framework Programme are the three new instruments introduced to focus human and financial resources and assemble the critical mass required for the action to be taken in the priority thematic areas. These are "networks of excellence", "integrated projects" and participation by the Community in research and development programmes carried out jointly by several Member States, as provided for by Article 169 of the EC Treaty.

The objective of **networks of excellence** is to enhance the excellence and influence of European research through lasting integration of the research capacity available in given fields. They take a long-term view and are not out to produce precise, pre-defined results.

The objective of **integrated projects** is to concentrate ressources on problems considered important to Europe as a whole. Unlike "networks of excellence", "integrated projects" are directed towards precisely defined results which could lead to new products, processes or services in the short to medium term.

The networks of excellence and integrated projects will be implemented by means of simplified administrative procedures leaving a large degree of managerial autonomy and, in particular, allowing new partners to join as the need arises.

**Article 169 of the EC Treaty** allows the Community to participate in programmes carried out jointly by several Member States. This rule, never before used to implement the Framework Programme, should provide a means of focusing national research activities more closely on the interests of the Community in areas where certain Member States more directly concerned are prepared to pool their efforts. The Commission submitted conditions for application of Article 169 for discussion in its communication of 30 May 2001<sup>17</sup> in the general context of making the national and Community research programmes more complementary.

Another possibility opened up by the new Framework Programme is to use the Community funding in tandem with other sources of funding, such as the Structural Funds or the PHARE programme in the case of the candidate countries or in the form of joint action with the

<sup>&</sup>lt;sup>17</sup> COM(2001) 282, 30.5.2001.

European Investment Bank (EIB<sup>18</sup>) and the European Investment Fund (EIF<sup>19</sup>). The joint memorandum signed on 7 June 2001<sup>20</sup> by the Commission and the EIB lays the foundation for cooperation between the Framework Programme and the "Innovation 2000 Initiative" designed, in particular, to encourage research projects, support research infrastructure and raise venture capital for high-tech companies and incubators.

http://www.eib.org.

http://www.eif.org.

<sup>&</sup>lt;sup>20</sup> C(2001) 1550; http://europa.eu.int/comm/research/press/2001/memorandum-eib-en.pdt.

http://www.eib.org/pub/news/i2i/overview.htm.

#### 2. IMPLEMENTATION AND IMPACT OF THE FRAMEWORK PROGRAMME IN 2000

In the course of the year 2000, a large number of projects under the 4th Framework Programme were completed or drawing to an end. Activities therefore centred primarily on implementing the 5th Framework Programme.

#### 2.1. Implementation of the 5th Framework Programme

Around 4800 contracts were signed in 2000, with over 23 000 participants sharing financial support totalling around €3.9 billion from the Community. Statistical analysis of these contracts points to the general conclusion that in 2000 the 5th Framework Programme reached full speed, with the rates of participation and funding by type of action and programme in line with the forecasts and the number of cooperation links growing strongly.

The more detailed lessons to be learnt from this year are as follows:

- Shared-cost action, particularly research and technological development projects, remains the predominant means of promoting scientific cooperation and knowledge generation in the Community; in 2000 this type of action accounted for approximately 80% of the budget committed and for almost 70% of participations in the Framework Programme. Research and technological development projects received 94% of the funding and accounted for 90% of participations in shared-cost action. The rest was shared between demonstration projects, combined RTD/demonstration projects, support for access to research infrastructure and specific measures in favour of SMEs.
- The average financial contribution per contract signed (shared-cost action) in 2000 was around €1.29 million, slightly down on 1999 (€1.48 million), while the average number of participants per project rose from 5.4 in 1999 to almost 6.5. The net result is a slight reduction in the average financial contribution per participant.
- The average project selection rate was over 28%, considerably higher than the 1999 figure of 22%; however, this average masks big differences between the individual specific programmes, with selection rates ranging from 65% (EURATOM) to 19% (EESD).
- The financial support from the Community was shared fairly equally between research centres, institutes of higher education and industry: the same balance can be seen in the number of contracts signed with these three categories of participants in the Framework Programme.
- Private and public bodies each take a comparable share of the financial support and number of contracts: In 2000 the funding was shared almost equally between private bodies (€1 741 million or 45% of the total funding) and public bodies (€1 998 million or 51%). The numbers of participations by public bodies (12 268 or 53% of the total) and private bodies (9450 or 41% of the total) were also in the same order of magnitude. The rest of the funding was divided between international organisations, individuals and the Joint Research Centre.
- Participation by Member States continues to predominate, but participation by the candidate countries is increasing: 87% of the participants in the Framework

Programme are from the Union. Participation by the Associated States as a whole held steady at around 10% of the total, of which the share taken by the candidate countries rose from 39.5% to 46%. There is still room for improvement in the performance of these countries, by taking action on a combination of factors, such as availability of research infrastructure, development of the "culture" and practice of publishing invitations to submit proposals, better dissemination of information on such procedures and gradual integration into the academic and research networks in Europe on the themes covered by the Framework Programme.

- The contracts signed in 2000 produced large numbers of cooperation links: bodies from the Member States created more than 60 000 links with bodies from other Member States, over 6000 with bodies from the associated candidate countries, over 7000 with entities from the other Associated States and almost 3000 with bodies from other non-EU countries. At the same time, almost 900 cooperation links were established between bodies from the associated candidate countries.
- Access to research infrastructure: In 2000 a total of 126 new thematic networks bringing together 1438 partners received financial support totalling €84 million from the Community to open up access to public research infrastructure to European researchers on the same terms irrespective of their nationality, to offer opportunities for innovatory research on new instruments or to make better use of Europe's research infrastructure.
- Support for training and mobility of researchers in Europe now occupies an important position in the Community's research efforts: In 2000 a total of 167 research training networks for young researchers were opened up, bringing together 1339 teams which will work on joint projects in the years ahead. The Marie Curie scheme awarded 646 individual fellowships, 162 host fellowships in industry, 67 host fellowships in less developed regions and 213 grants to host pre-doctoral graduates at training sites, allowing the companies, training centres and regions concerned to start to recruit young researchers. Some 255 high-level scientific conferences providing an opportunity for established scientists and young European researchers to meet were also selected. In all, the financial support from the Community for training and mobility of researchers in Europe in 2000 totalled almost €392 million.

## 2.2. Impact of Community research

#### 2.2.1. Socio-economic impact

In 2000 the socio-economic impact of the Framework Programme in the Union was analysed in the five-year assessment reports on the Framework Programmes and on each specific programme and in the studies on the impact of the 4th Framework Programme at national level published by the Danish and Finnish authorities.

These analyses showed that the financial support from the Community had the twin effects of:

 improving the sharing ofknowledge and skills, establishing horizontal or vertical networks in the Union and in its partner countries in Europe and throughout the world and encouraging innovative schemes and action to improve the quality of research;  Introducing new products and production processes, establishing closer links between industry, universities and research centres, and building more international teams.

Three methodological studies were started in 2000 to identify, collect and make more efficient use of result indicators in order to produce a more precise assessment of the impact of the Framework Programme on the legislative and regulatory environment in the Community and on Community policies on various subjects, particularly on competitiveness and sustainable growth, employment, health, training, the environment and research. Based on the results, monitoring of the socio-economic impact will continue and be stepped up in 2001.

On behalf of the Commission outside experts started assessments of the impact of the specific programmes in the fields of international cooperation, non-nuclear energy and competitive and sustainable growth.

#### 2.2.2. SME access to research

The "single entry point" for SMEs processed over 7 000 proposals in 2000. Via the information networks and help desks in the Member States and Associated States, it encourages and facilitates participation by SMEs in the Framework Programme. Its "national contact points" met four times in 2000 to coordinate their activities.

In all the research activities under the Framework Programme almost 4500 SMEs signed a contract in 2000. SMEs accounted for 22.5% of participations in the four thematic programmes and received 19% of the financial support allocated by these programmes.

In particular, proposals for specific measures for SMEs (exploratory awards and CRAFT cooperative research projects) increased strongly compared with the previous Framework Programme: almost 900 applications for exploratory awards and over 600 proposals for cooperative research projects were received in 2000. In the case of the CRAFT programme, this represented a tripling of proposals. Around 40% of these projects were selected. This will allow over 2000 SMEs to participate in an international research project, many of them for the first time. Almost 80% of them are small businesses with fewer than 50 employees. The awards proved particularly attractive for SMEs from Associated States, which made up 8% of the beneficiaries.

Future participation by SMEs in the Framework Programme will be stimulated by the spinoffs from the 53 contracts signed in 2000 on economic and technological intelligence activities which will help SMEs to identify economic and technological trends in various sectors and then prepare collaborative or cooperative research projects if necessary. They will also entail collaboration between different types of intermediaries working with SMEs (assistance networks, industrial federations, regional development agencies, etc.) which, in turn, will help to structure networks to assist SMEs in Europe.

#### 2.2.3. Women in Community research

Spurred on by a resolution adopted by the European Parliament in February 2000 which urged the Commission to continue and step up its action to strengthen the role and position of women in science, activities in 2000 included organising international meetings, setting up policy fora, establishing the *gender watch system* and launching studies to assess the impact of the gender dimension in the specific programmes.

The conference on "Women and science: making change happen" held in Brussels on 3 and 4 April 2000 brought together 450 participants who concluded that there was a need to adopt a scientific approach to gender equality in science.

In June and December 2000 the members of the "Helsinki group" of national civil servants responsible for monitoring the action on "women and science" took stock of the action taken to promote women in science in the Member States and in the countries associated with the 5th Framework Programme. In particular, they supplied the first statistics on the representation of women in scientific research and concluded that it was essential to mainstream the gender dimension in research policy.

The first gender impact studies were launched in June 2000 to evaluate the degree to which the various specific programmes take account of the gender dimension. The results were presented at the "Gender and research" conference on 8 and 9 November 2001.

The recommendations emerging from these various activities were taken up by the Commission in May 2001 in a working paper<sup>22</sup> which proposed a reinforced policy forum, an enriched gender watch system and complementary research to obtain a better understanding of the "gender and science" issue.

In 2000 women accounted for 30% of the members of the monitoring panels for the programmes, 27% in the external advisory groups, 21% on the programme committees, 23% of the evaluators for projects in the specific programmes and 26% of the members of the panels for the five-year assessments. These figures are moving towards the Commission's target of at least 40%. The proportion of women amongst the project coordinators for the Framework Programme in 1999 (latest data available) is estimated at 18% on average and at 25% for the IHP and INCO II programmes, although these estimates must still be refined. Just over 5% of the SMEs participating are managed by women, a figure comparable to the average for high-tech companies managed by women in the OECD countries.

#### 2.2.4. Ethical aspects of Community research

The recommendation by the European Group on Ethics in Science and New Technologies on the "ethical aspects of the 5th Framework Programme" laid the foundation for the reference framework which the Commission is piecing together to take account of the ethical aspects in Community research.

In 2000 the focus was principally on the "Quality of life and management of living resources" programme. The departments concerned asked researchers to consider the ethical dimension carefully when submitting proposals. Projects raising particular ethical issues were subjected to a specific ethical revue, after scientific evaluation of the project. This was the case in particular with research using tissues from embryos or foetuses, experiments on primates, clinical testing and genome research using human tissues or private data. Ethical evaluation groups consisting of 8 to 15 members from different disciplines (sociology, philosophy, law, medicine, biology, psychology etc.) analysed 100 or so proposals and gave opinions to keep the final projects in line with the ethical principles applying to human beings and animals.

Since January 2001 these assessments of the ethical aspects of research have been tightened up and extended to all the programmes: the ethical aspects are taken into consideration in the invitations to submit proposals and analysed when the proposals are evaluated. Projects in the

<sup>&</sup>lt;sup>22</sup> SEC(2001) 771, 15.5.2001.

programmes on "Quality of life and management of living resources", "Confirming the international role of Community research (INCO)" and "Improving human research potential" which raise particular ethical issues are subjected to a specific ethical revue.

#### 2.2.5. Impact on economic cohesion in Europe

The activities in the "Innovation and SMEs" programme helped the Commission's regional policy departments to define regional strategies on innovation, technology transfer and networking of the regions concerned.

In 2000 the Framework Programme once again brought benefits to the "cohesion countries" (Greece, Spain, Ireland and Portugal). These countries accounted for 16.5% of participations by the Member States in contracts signed in 2000 (14.5% in 1999). In financial terms, the cohesion countries received 13.3% of the contributions from the Community. Lastly, almost 29% of the cooperation links established between bodies from the Member States included participants from the cohesion countries, thus adding to the volume of RTD to which they had access.

#### 2.3. International cooperation

International cooperation on RTD takes two complementary forms in the 5th Framework Programme:

- activities to promote scientific and technological cooperation in the different programmes, including the regional and bilateral dialogues and, in particular, the S&T cooperation agreements;
- the specific action in the programme on "Confirming the international role of Community research (INCO)".

#### 2.3.1. Participation by the associated candidate countries

The ten candidate countries from Central and Eastern Europe plus Cyprus are associated with the Framework Programme<sup>23</sup> and contribute to its budget in proportion to their GDP. The association negotiations with Malta were concluded in 2000 and the agreement was signed on 20 June 2001.

In 2000 around 1000 research centres in the associated candidate countries participated in the Framework Programme and 34 research centres of excellence were set up as a contribution to restructuring the science and technology sector in these countries (INCO programme).

A series of conferences opened in September 2000 to explore ways and means of improving scientific cooperation with the associated candidate countries and encourage them to participate in the European Research Area. In particular, the informal ministerial meeting chaired by Mr Busquin in Brussels on 12 July 2001 produced a fruitful exchange of views between the ministers responsible for research in the Member States and in the candidate countries on participation by the candidate countries in the European Research Area and in the 2002-2006 Framework Programme.

Cyprus, Estonia, Lithuania and Poland are not associated with the EURATOM Framework Programme.

#### 2.3.2. Other countries associated with the Framework Programme

The three countries associated with the Framework Programme under the Treaty on the European Economic Area (Norway, Iceland and Liechtenstein) plus Israel registered some 700 participations in the Framework Programme in 2000. Switzerland had over 500 participations in the thematic programmes (project by project and covering costs).

#### 2.3.3. Third countries

Approximately 700 bodies from all other countries also participated.

Up until now relations with the non-candidate Central European countries have been limited to Albania, Bosnia and Herzegovina and the Former Yugoslav Republic of Macedonia (FYROM). By the end of 2000 the changing situation in this region had made it possible to propose specific action on "Balkan reintegration".

Countries from the former Soviet Union: the meetings on application of the partnership and cooperation agreements provided an opportunity to discuss the themes covered by the cooperation in the field of science and technology. An agreement on cooperation in science and technology was signed between the Union and Russia on 16 November 2000.

Emerging economies and industrialised countries: a joint declaration of intent was signed with the NSF (*National Science Foundation*) on research in the field of digital libraries under the agreement for scientific and technological cooperation with the USA. Negotiations are continuing on other measures to implement the agreement. Negotiations with a view to conclusion of an agreement on scientific and technological cooperation with Brazil started in December 2000. The 4th EU-Japan forum, held in Lisbon on 22 and 23 June 2000, brought further progress in relations between the Union and Japan in the field of science and technology, particularly life sciences, information technology, materials, the environment and measures to combat infectious diseases associated with poverty (malaria, tuberculosis and AIDS).

Mediterranean countries: the conclusions adopted by the European Council at Santa Maria da Feira were followed up by publication of a Commission staff paper on the synergies between MEDA and the 5th Framework Programme. In April 2000 the Monitoring Committee (MoCo) decided to set up two working parties, one on mobility amongst scientists, the other on technological innovation.

Developing countries: the Commission was involved in the reorganisation of agricultural research at world level (Dresden World Forum in May 2000), particularly in sub-Saharan Africa. The framework programme also generated initiatives on subjects of strategic importance to the developing countries, such as development of aquaculture (Nice 2000 Conference), measures to combat desertification and conservation of tropical forests. An initiative to step up research on three diseases associated with poverty (malaria, tuberculosis and AIDS) was launched in 2001.

#### 2.3.4. Bilateral regional dialogues and international commitments

In the context of its inter-regional relations, the Community continued its bilateral and regional dialogues on RTD with Asia (ASEM), Africa (Mediterranean partnership and follow-up to the Cairo Summit) and the Latin American and Caribbean countries (REALC). These dialogues focus on issues of regional importance and fit in with the EU's external relations

policy to forge closer partnerships with these regions in the context of the emerging knowledge-based society and support for regional integration.

#### 2.4. Assessment of the Framework Programme

The year 2000 was marked by the five-year assessment of the European Union research programmes<sup>24</sup> by the high-level independent expert panels, as called for by the decisions adopting the programmes.

The five-year assessment of the Framework Programme prepared under the chairmanship of Mr Joan Majo stressed that the Framework Programme must be placed in the broader context of a genuine European Research Area formed in close partnership with the Member States and other Community policies, with enlargement in mind in particular. The accent must be placed on scientific and technological excellence, concentration of efforts, flexibility and efficiency, particularly by making better use of the panoply of instruments offered by the Treaty, and improving management structures and procedures. The Commission welcomed the panel's recommendations and took full account of them in its proposals for the new Framework Programme for 2002-2006.

The 2000 annual monitoring report on the Framework Programme stressed that improvements have been made in implementation of the 5th Framework Programme, notably in the form of introducing measures to promote development of the ERA, participation by SMEs, simplification of procedures and information for proposers and acting on the recommendations made by earlier monitoring panels. Nevertheless, it recommended reinforcing the structuring effect and international dimension of the Framework Programme in preparation for creation of the ERA and strengthening the management culture within the Commission, particularly by means of greater delegation of decision-making, appropriate training for research managers and closer coordination of certain programmes. It also stressed the need for further improvements in the information available to potential proposers and in the support for SMEs and to set objectives and a timetable for the procedures and to improve the Commission's in-house information system.

#### 2.5. Mid-term review and adaptation of the 5th Framework Programme

The mid-term review<sup>25</sup> of the 5th Framework Programme carried out by the Commission as required by the decisions adopting the Framework Programmes reached conclusions similar to those of the five-year assessment panel and of the 2000 monitoring panel.

It concluded that adjustments needed to be made to the annual work programmes for the specific programmes, particularly so that they could contribute to creation of the European Research Area in the form of greater concentration of efforts and of launching pilot projects relevant to the measures envisaged in the next Framework Programme. These include encouraging medium- to large-scale targeted projects, greater support for research infrastructure, coordination with national activities (concerted action, expert groups, etc.) and establishing thematic networks on a number of subjects.

<sup>25</sup> SEC(2000) 1780, 23.10.2000.

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Five-year assessment of the European Union research and technological development programmes 1995-1999, Report of the independent expert panel and comments of the Commission on the expert panel's conclusions and recommendations (EUR 19426 and COM (2000)659 of 19 October 2000).

Constructive discussions on these adjustments within the Programme Committees resulted in amendments to the work programmes and, in some cases, minor changes in the way the budget is allocated within the programme concerned.

#### 2.6. Simplification of management

Simplification of administrative management of the Framework Programme entails continuous analysis, evaluation and improvement of procedures to make them more effective and efficient. To follow up the work by an in-house working party set up to this end, the Commission introduced or initiated numerous measures in the course of 2000 to simplify and improve administrative management of the 5th Framework Programme, with the help of the driving force provided by the broader context of the reform of the Commission.

Amongst other changes to the rules to speed up the evaluation and selection procedures and contract negotiations, the decision was taken to decentralise a number of in-house decisions to the departments responsible for day-to-day management. More generally, it was decided to develop training for managers of the research programme, particularly on financial matters, to lighten the workload on SMEs participating in the Framework Programme and to inform them, as fast as possible, of the outcome of the evaluation of their proposals.

The proposals on the Framework Programme for 2002-2006 fully reflect this desire for simplification, efficiency and closeness to the user, in particular through the implementation of new instruments with more flexible management arrangements.

#### 3. CONSULTATION

Throughout the year the various advisory bodies which assist the Commission with exercising its tasks and implementing powers played their respective parts in management of the Framework Programme and in the preparatory work for the European Research Area.

#### 3.1. Scientific and Technical Research Committee (CREST)

In 2000 CREST produced four reports on the coordination of RTD policies, new prospects for Europe's RTD system, new measures to implement European research, and transnational cooperation. These reports were drafted by the working parties set up in July 1999 to provide input for the discussions on the future of European research policy.

CREST is regularly consulted on new initiatives on RTD. It welcomed the two communications on the ERA and discussed them in depth. It also received regular progress reports on the 5th Framework Programme plus the final reports on certain ETAN/STRATA studies and on the first moves towards turning the ERA into reality, such as the action on "women and science" and the work of the high-level groups on coordination and benchmarking of research activities and on the mobility of researchers, which were set up to follow up the Lisbon European Council.

The national RTD policies in Spain, Portugal and France were also presented to the Committee.

#### 3.2. External Advisory Groups

Throughout 2000 the External Advisory Groups (EAG) served as the link between the programmes, particularly the key actions, and the producers and users of research, in line with the mandate given in the 1998 decision setting them up.

The January 2000 communication on the ERA was submitted to and discussed within the EAGs, which generally reacted highly positively to it. The Groups were also very actively involved in changing the course of the key actions, including defining the revised work programmes and scheduling the invitations to submit proposals, and provided input for the discussions on the relations between research, the economy and society in their fields.

In February 2000 the Commission appointed new members to these Groups to take account, in particular, of the agreements associating the Central and Eastern European countries and Cyprus with the 5th Framework Programme. After the mandate of the members of these Groups expired at the end of 2000, these Groups were renewed on 21 March 2001 for the rest of the Framework Programme. Almost three-quarters of the outgoing members were reappointed for a second term.

On 10 October 2000 the Chairs and Vice-Chairs of the EAGs met Mr Busquin to report on the Groups' activities two years after they were set up. On this occasion they analysed the contribution which they had made to defining the content of the programmes and putting them into action, and the changes in progress as part of the new strategy on the ERA.

#### **3.3.** Programme Committees

The nine programme committees and the committee on the rules for participation and dissemination of results met more than 40 times in 2000. They were consulted approximately 100 times, at the behest of the Commission, principally on the draft decisions on the selection of proposals. All the opinions given were favourable. The Commission also consulted the committees informally on 300 or so occasions for exchanges of views or for information. In all, these consultations led to the adoption, by the Commission, of over 200 acts to implement the specific programmes.

In particular, the Commission consulted the committees concerning the update of the work programmes for the various specific programmes to bring them closer into line with the objectives and take account of the progress made on each programme and of the new reference framework created by the ERA. The programme committees expressed support for taking the first steps towards creation of the ERA in the course of the 5th Framework Programme.

#### 3.4. High-Level Groups

To follow up the Council resolution of 15 June 2000 on the *Future of European research* and in the spirit of closer partnership between the Commission and the Member States, Mr Busquin set up two "High-Level Groups" made up of representatives of the Member States appointed by the Research Ministers.

The first, on **benchmarking national research policies**, mapping scientific excellence and networking national research programmes, started work in September 2000. On benchmarking, Commission staff and the Group devised a methodology based on an approach which was partly quantitative, with 20 indicators, and partly qualitative, with the aid of outside experts. This methodology centres on the four themes referred to in the

abovementioned Council resolution. As for the mapping exercise, the Commission and the Group decided the objectives, methodology and an initial selection of fields. With regard to networking national programmes, the Group supplied preliminary information on the ways and extent to which these are open to pave the way for the more detailed discussions to follow in the months ahead.

The second Group was given the task of **evaluating the level of mobility amongst researchers in Europe** and of identifying obstacles to mobility and ways round them. This Group met several times in 2000 and 2001 to examine the replies to a questionnaire completed by the Member States and to prepare a report on improving mobility amongst researchers. This report was finalised in April 2001 and served as the basis for the communication on "A mobility strategy for the European Research Area", which was adopted by the Commission on 20 June 2001. 26

#### 4. OUTLOOK

The debate on the future of RTD in Europe sparked by the communication on the European Research Area at the start of 2000 will address this matter in greater depth in the period ahead. It will draw on the thinking generated by a series of policy documents - some adopted already, others to follow - defining themes and proposing objectives and means for future action by the Union in the research field.

The period ahead will also see completion of the decision-making process for adoption of the legal framework for Community research in the period 2002-2006. The proposals for decisions on the Framework Programme and the specific programmes already before the European Parliament and the Council of Ministers have been joined by proposals on the rules for participation and dissemination of results.

Meanwhile work will continue with a view to adoption of the regulation on the Community patent. Also, the European Research Advisory Body (EURAB) established on 27 June 2001 will start work in the autumn.

Finally, implementation of the 5th Framework Programme will continue, notably with the publication of numerous invitations to submit proposals in the course of 2001 to complete coverage of the research topics and meet the objectives set by the specific programmes and defined more closely in the corresponding work programmes.

#### 4.1 Making a reality of the ERA

The topics which will be discussed in greater depth cover every dimension of research policy and of its relations with society, particularly creating closer links between science, society and citizens, taking account of the regional and international dimensions in the Union's research policy, devising a strategy to improve mobility amongst researchers, formulating a European policy on research infrastructure, mainstreaming gender in research policy, mapping excellence and benchmarking national research policies and innovation in Europe.

These deliberations have reached various stages and, where appropriate, progress reports will provide input for the political debate now in progress. A report on benchmarking research policies in Europe has been submitted to the Council already, at its meeting on 26 June 2001.

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<sup>&</sup>lt;sup>26</sup> COM (2001) 331, 20.6.2001.

Europe's first "innovation scoreboard" was published in September 2001. A Commission working paper on mapping excellence is expected towards the end of 2001.

## 4.2 Decision-making process for adoption of the legal framework

The preparatory work for the Framework Programme for 2002-2006 culminated in formal adoption of the proposal on 21 February 2001. The Research Ministers held a preliminary exchange of views on the proposal at their informal meeting in Uppsala on 3 March, followed by a policy debate at the Council meeting on research on 26 June 2001. The European Parliament is expected to give its opinion in the final quarter of 2001. This should enable the Council of Ministers to adopt its "common position" by the end of the year. This schedule for the first reading fits in with the timetable set by the European Council aiming at adoption in mid-2002 so that a start can be made with implementing the programme at the beginning of 2003 at the latest.

The proposals for decisions on the five specific programmes and the communication on application of Article 169 were adopted on 30 May 2001 and will be examined in detail by the European Parliament and the Council once the first reading of the Framework Programme has been completed. As the Commission announced when it adopted the proposal on the specific programme on "Integrating and strengthening the European Research Area", in the autumn the Commission will propose a revised text giving details of the content of the chapter on "Anticipating the EU's scientific and technological needs" and of the procedures for implementing it, particularly the work to be done during the first year of the programme.

The proposals on the rules for participation and for dissemination of results adopted by the Commission on 10 September will also be examined in the period ahead, thus completing the legal instruments for the new Framework Programme.

# **ANNEX I: Statistical and financial data**

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#### **NOTES**

- All the countries in the "Candidate and associated countries" group are both candidates and associated, with the exception of Turkey, which is a candidate country but is not associated with the Framework Programme.
- It is not possible to calculate States' "success rates" from the number of proposals received, selected and funded since a proposal selected in year n might have been received in year n-l or might not receive funding until year n+l.
- The figures on fellowship contracts show the number of proposals received, selected and funded. Depending on the type of grant, a single proposal could allow funding of one or more fellows. The number of fellows cannot be seen from the number of participants in the contract.
- The <u>representation</u> of a given State is the number of proposals received in which at least one body from that State is participating. By contrast, <u>participation</u> by a given State in the contracts signed is the total number of bodies from that State involved in the contracts. Participation is therefore higher than representation.
- A cooperation link is considered to have been established between two bodies if they are participating in the same project. This cooperation link is counted once if the two bodies are from the same country (diagonally on the cooperation links matrix) and twice if the bodies are from different countries once as a link from country A to country B and once as a link from country B to country A. The net number of cooperation links is, therefore, the sum of the number of links between bodies from the same country plus half the number of links between bodies from different countries.

TABLE 1A: FP5 OVERVIEW: PROPOSALS RECEIVED IN 2000

		PRO	POSALS RECEIVED IN	2000	
	A	В	C=B/A	D	E=D/A
	Number of proposals	Number of participations	Average number of participations per proposal	Requested financial contribution (€ million)	Average requested financial contribution per proposal (€ million)
Shared-cost actions	9.514	67.419	7,09	14.621,43	1,54
- of which R&D projects	7.333	55.793	7,61	12.861,95	1,75
- of which demonstration projects	170	1.100	6,47	325,25	1,91
- of which combined projects	450	4.116	9,15	893,50	1,99
- of which support to infrastructures	0	-	-	-	-
- of which cooperative research	667	4.476	6,71	524,22	0,79
- of which exploratory awards	894	1.934	2,16	16,51	0,02
Fellowships	2.559	4.605	1,80	345,03	0,13
Support to networks	506	6.957	13,75	522,12	1,03
Concerted actions	180	2.269	12,61	136,74	0,76
Accompanying measures	2649	10.316	3,89	1.240,92	0,47
Total	15.408	91.566	5,94	16.866,24	1,09

TABLE 1B: FP5 OVERVIEW: PROPOSALS SELECTED FOR FUNDING IN 2000

		PROPOSALS	SELECTED FOR FUND	DING IN 2000	
	A	В	C=B/A	D	E=D/A
	Number of proposals	Number of participations	Average number of participations per proposal	Requested financial contribution (€ million)	Average requested financial contribution per proposal (€ million)
Shared-cost actions	2.250	15.777	7,01	3.330,97	1,48
- of which R&D projects	1.483	12.006	8,10	2.841,45	1,92
- of which demonstration projects	36	254	7,06	85,67	2,38
- of which combined projects	75	886	11,81	212,66	2,84
- of which support to infrastructures	0	0	-	0	-
- of which cooperative research	251	1.751	6,98	183,73	0,73
- of which exploratory awards	405	880	2,17	7,46	0,02
Fellowships	794	1.269	1,60	135,64	0,17
Support to networks	305	3822	12,53	356,69	1,17
Concerted actions	62	881	14,21	51,30	0,83
Accompanying measures	1.002	3.526	3,52	418,81	0,42
Total	4.413	25.275	5,73	4.293,41	0,97

TABLE 1C: FP5 OVERVIEW: CONTRACTS SIGNED IN 2000

		CO	NTRACTS SIGNED IN 20	00	
	A	В	C=B/A	D	E=D/A
	Number of contracts signed	Number of participations	Average number of participations per contract	Requested financial contribution (€ million)	Average requested financial contribution per proposal (€ million)
Shared-cost actions	2.426	15.679	6,46	3122,56	1,29
- of which R&D projects	1.948	14.343	7,36	3.002,26	1,54
- of which demonstration projects	10	97	9,70	15,61	1,56
- of which combined projects	18	154	8,56	24,70	1,37
- of which support to infrastructures	66	66	1,00	50,98	0,77
- of which cooperative research	44	332	7,55	21,47	0,49
- of which exploratory awards	340	687	2,02	7,54	0,02
Fellowships	1.113	1.660	1,49	173,47	0,16
Support to networks	293	2.777	9,48	302,88	1,03
Concerted actions	61	403	6,61	27,65	0,45
Accompanying measures	925	2.501	2,70	257,76	0,28
Total	4.818	23.020	4,78	3.884,32	0,81

**TABLE 2A: CONTRACTS SIGNED BY TYPE OF ACTION (IN € MILLION)** 

	Al	LL FP5 CO		SIGNED IN			ED-COST FIONS	FELLO	WSHIPS	SUPPORT TO NETWORKS		CONCERTED ACTIONS			PANYING SURES
	A	В	C=B/A	D	E=D/A	F	G	Н	I	J	K	L	M	N	О
	Number of	Number of	Average number of	Commu- nity financial	Average financial contribution	Number of	Community financial	Number of	Community financial	Number of	Commu- nity financial	Number of	Commu- nity financial	Number of	Commu- nity financial
	contracts signed	particip- ations	particip- ations per contract	contribu- tion (€ million)	per contract (€ million)	contracts signed	contrib. (€ million)	contracts signed	contrib. (€ million)	contracts signed	contrib. (€ million)	contracts signed	contrib. (€ million)	contracts signed	contrib. (€ million)
QUALITY OF LIFE	927	4517	4,87	875,83	944,81	634	808,83	194	33,49	17	11,30	37	19,77	45	2,45
Food, nutrition and health	138	644	4,67	111,25	0,81	98	98,01	25	4,32	3	2,77	6	5,74	6	0,40
Control of infectious diseases	102	548	5,37	118,34	1,16	70	108,63	22	4,39	1	0,70	8	4,57	1	0,04
The "cell factory"	148	712	4,81	152,63	1,03	101	144,79	38	5,38	2	2,21		0,00	7	0,25
Environment and health	63	309	4,90	59,39	0,94	44	56,22	14	2,37	0	0,00	3	0,37	2	0,40
Sustainable agriculture, fisheries and forestry	226	1.037	4,59	170,35	0,75	159	159,32	43	6,81	0	0,00	7	3,28	17	0,94
The ageing population and disabilities	60	280	4,67	58,34	0,97	42	54,77	14	2,72	1	0,39	1	0,42	2	
RTD activities of a generic nature	170	898	5,28	191,83	1,13	114	178,39	32	6,51	4	2,65	10		10	
Support to infrastructures	20	89	4,45	13,70	0,69	6	8,69	6	0,96	6	2,57	2	1,48	0	0,00
INFORMATION SOCIETY	622	4051	6,51	838,97	1,35	385	686,58	15	3,00	27	24,89			193	
Systems and services for the citizen	104	729	7,01	131,90	1,27	82	117,93	0	0,00	2	1,68	0	0,00	20	12,28
New methods of work and electronic commerce	131	878	6,70	124,34	0,95	61	77,77	0	0,00	5	5,12	2	0,80	63	40,65
Multimedia content and tools	76	547	7,20	101,64	1,34	58	91,05	0	0,00	1	0,55	0	- ,	17	- , -
Essential technologies and infrastructures	148	838	5,66	210,19	1,42	82	173,72	0	0,00	5	3,72	0	- ,	61	- ,
Cross-programme themes	47	379	8,06	74,08	1,58	38	61,24	0	0,00	2	1,57	0	- ,	7	, -
RTD activities of a generic nature	50	284	5,68	61,70	1,23	43	58,51	0	0,00	3	2,80	0	- ,	4	0,40
Support to infrastructures	66	396	6,00	135,13	2,05	21	106,35	15	3,00	9	9,46	0	,	21	- ,-
SUSTAINABLE GROWTH	542	4054	7,48	821,73	1,52	499	790,08		0,00	13	15,75	0	0,00	30	15,91
Innovative products, processes and organisation	185	1.095	5,92	177,34	0,96	176	173,91	0	0,00	2	2,73	0	0,00	7	0,70
Sustainable mobility and intermodality	32	393	12,28	64,79	2,02	17	40,50	0	0,00	8	11,00	0	- ,	7	13,28
Land transport and marine technologies	82	647	7,89	119,92	1,46	81	119,79	0	0,00	0	0,00	0	- ,	1	0,12
New perspectives for aeronautics	62	750	12,10	259,67	4,19	56	258,20	0	0,00	0	0,00	0	- ,	6	
RTD activities of a generic nature	179	1.149	6,42	198,79	1,11	169	197,66	0	0,00	1	0,78	0		9	- ,-
Support to infrastructures	2	20	10,00	1,24	0,62	0	0,00	0	0,00	2	1,24	0	0,00	0	0,00

	Al	LL FP5 CO	NTRACTS	SIGNED IN	2000		ED-COST TIONS	FELLO	WSHIPS	SUPPO NETW	_	CONCERTED ACTIONS			PANYING SURES
	Α	В	C=B/A	D	E=D/A	F	G	Н	I	J	K	L	M	N	О
	Number of contracts signed	Number of particip- ations	Average number of particip- ations per contract	Community financial contribution (€ million)	Average financial contribution per contract (€ million)	Number of contracts signed	Community financial contrib. (€ million)								
ENERGY & ENVIRONMENT	443	3237	7,31	447,44	1,01	399	434,00	14	2,08	9	8,03	6	2,17	15	1,15
ENVIRONMENT	251	2048	8,16	277,92	1, 11	235	269,99	0	0,00	5	5,87	5		6	0,15
Sustainable management and quality of water	67	447	6,67	75,41	1,13	64	74,60	0	0,00	1	0,77		0,00	2	
Global change, climate and biodiversity	87	768	8,83	98,87	1,14	79	97,26	0	0,00	1	0,47	3	1,03	4	0,11
Sustainable marine ecosystems	32	235	7,34	40,21	1,26	32	40,21	0	0,00	0	0,00	0		0	
The city of tomorrow and cultural heritage	32	299	9,34	32,41	1,01	29	30,49	0	0,00	2	1,67	1	0,25	0	0,00
RTD activities of a generic nature	23	172	7,48	18,19	0,79	23	18,19	0	0,00		0,00	0	0,00	0	0,00
Support for research infrastructures	10	127	12,70	12,83	1,28	8	9,24	0	0,00	1	2,96	1	0,63	0	0,00
ENERGY	192	1189	6,19	169,52	0,88	164	164,01	14	2,08	4	2,16	1	0,26	9	1,00
Cleaner energy systems, incl. renewables	80	458	5,73	70,12	0,88	68	68,12	6	0,70	1	0,59	0	0	5	0,70
Economic and efficient energy	105	657	6,26	96,46	0,92	90	93,16	8	1,37	2	1,37	1	0,26	4	0,30
RTD activities of a generic nature	7	74	10,57	2,94	0,42	6	2,73	0	0,00	1	0,20	0	0,00	0	0
NUCLEAR ENERGY	307	1316	4,29	232,59	0,76	259	224,20	10	1,01	17	4,98	9	1,80	12	0,59
Controlled thermonuclear fusion	168	232	1,38	138,58	0,01	166	138,33	2	0,24	0	0,00	0	0,00	0	
Nuclear fission	93	735	7,90	66,69	0,08	68	61,62	6	0,57	9	3,19	4	1,06	6	0,25
RTD activities of a generic nature	37	244	6,59	25,37	0,18	25	24,25	2	0,20	1	0,20	3		6	0,00
Support for infrastructure	9	105	11,67	1,95	1,30	0		0	0,00	7	1,60	2	0,35	0	0,00
INTERNATIONAL ROLE	236	960	4,07	105,46	0,45	106	74,11	25	2,21	1	0,36	7	3,12	97	25,66
Countries in the pre-accession phase	41	49	1,20	20,05	0,49	0	0,00	0	0,00	0	0,00	0	0,00	41	20,05
NIS and CEEC not in the pre-accession phase	64	363	5,67	29,79	0,47	50	27,64	0	0,00	0	0,00	0	0,00	14	2,14
Mediterranean partner countries	28	130	4,64	12,82	0,46	15	11,25	0	0,00	0	0,00	2	0,99	11	0,57
Developing countries	73	354	4,85	39,68	0,54	41	35,21	0	0,00	1	0,36	5	2,12	26	1,98
Emerging economies and industrialised countries	3	4	1,33	0,42	0,14	0	0,00	0	0,00	0	0,00	0	0	3	0,42
Fellowships for developing countries	8	24	3,00	0,17	0,02	0	0,00	8	0,17	0	0,00	0	. ,	0	0,00
Fellowships for Community researchers	17	34	2,00	2,04	0,12	0	0,00	17	2,04	0	0,00	0	- ,	0	
Coordination	2	2	1,00	0,49	0,25	0	0,00	0	0,00	0	0,00	0	0,00	2	0,49

	Al	LL FP5 CO	NTRACTS	SIGNED IN	2000		ED-COST TIONS	FELLOWSHIPS		SUPPORT TO NETWORKS		CONCERTED ACTIONS		ACCOMPANYING MEASURES	
	A	В	C=B/A	D	E=D/A	F	G	Н	I	J	K	L	M	N	0
	Number of contracts	Number of particip-	Average number of particip- ations per	Community financial contribution (€ million)	Average financial contribution per contract	Number of contracts	Community financial contrib. (€	Number of contracts	Community financial contrib. (€	Number of contracts	Community financial contrib.	Number of contracts	Community financial contrib.	Number of contracts	Community financial contrib.
	signed	ations	contract	(Cillinon)	(€ million)	signed	million)	signed	million)	signed	(€ million)	signed	(€ million)	signed	(€ million)
INNOVATION – SMEs	171	994	5,81	94,55	0,55	39	21,97	0	0,00	4	2,94	0	0,00	128	69,64
Promotion of innovation	21	144	6,86	16,91	0,81	15	12,59	0	0,00	0	0,00	0	0,00	6	4,32
Joint innovation/SME activities	97	362	3,73	48,56	0,50	24	9,38	0	0,00	4	2,94	0	0,00	69	36,24
Economic and technological intelligence	53	488	9,21	29,08	0,55	0	0,00	0	0,00	0	0,00	0	0,00	53	29,08
HUMAN POTENTIAL	1570	3891	2,48	467,73	0,30	105	82,78	855	131,68	205	234,62	0	0,00	405	18,66
Research training networks	167	1.339	8,02	218,66	1,31	0	0,00	0	0,00	167	218,66	0	0,00	0	0,00
Marie-Curie fellowship	855	1.368	1,60	131,68	0,15	0	0,00	855	131,68	0	0,00	0	0,00	0	0,00
Access to research infrastructures	87	313	3,60	62,24	0,72	68	53,23	0	0,00	19	9,01	0	0,00	0	0,00
Socio-economic research	43	303	7,05	31,54	0,73	37	29,55	0	0,00	6	1,99	0	0,00	0	0,00
Public perception	14	82	5,86	3,40	0,24	0	0,00	0	0,00	8	2,40	0	0,00	6	1,00
Support for S&T policies	8	90	11,25	3,38	0,42	0	0,00	0	0,00	5	2,54	0	0,00	3	0,83
Promoting S&T excellence	396	396	1,00	16,82	0,04	0	0,00	0	0,00	0	0,00	0	0,00	396	16,82
TOTAL FP5 IN 2000	4.818	23.020	4,78	3884,32	0,81	2.426	3122,56	1113	173,47	293	302,88	61	27,66	925	257,76

TABLE 2B: CONTRACTS SIGNED BY TYPE OF ACTION (IN %)

	ALI	L FP5 CON	FRACTS SI	GNED IN 2	2000		D-COST IONS	FELLO	WSHIPS	SUPPO NETW	_	CONCERTED ACTIONS			PANYING SURES
	A	В	C=B/A	D	E=D/A	F	G	Н	I	J	K	L	M	N	О
	Number of contracts signed	Number of particip- ations	Average number of particip- ations per contract	Community financial contribution (€ million)	Average financial contributi on per contract (€ million)	Number of contracts signed	Community financial contrib.	Number of contracts signed	Community financial contrib. (%)	Number of contracts signed	Community financial contrib.	Number of contracts signed	Community financial contrib.	Number of contracts signed	Community financial contrib.
QUALITY OF LIFE	927	4517	4,87	875,83	944,81	68,39 %	92,35 %	20,93 %	3,82 %	1,83 %	1,29 %	3,99 %	2,26 %	4,85 %	0,28 %
Food, nutrition and health	138	644	4,67	111,25	0,81	71,01 %	88,10 %	18,12 %	3,88 %	2,17 %	2,49 %	4,35 %	5,16 %	4,35 %	0,36 %
Control of infectious diseases	102	548	5,37	118,34	1,16	68,63 %	91,79 %	21,57 %	3,71 %	0,98 %	0,59 %	7,84 %	3,86 %	0,98 %	0,03 %
The "cell factory"	148	712	4,81	152,63	1,03	68,24 %	94,86 %	25,68 %	3,52 %	1,35 %	1,45 %	0,00 %	0,00 %	4,73 %	0,16 %
Environment and health	63	309	4,90	59,39	0,94	69,84 %	94,66 %	22,22 %	3,99 %	0,00 %	0,00 %	4,76 %	0,62 %	3,17 %	0,67 %
Sustainable agriculture, fisheries and forestry	226	1.037	4,59	170,35	0,75	70,35 %	93,53 %	19,03 %	4,00 %	0,00 %	0,00 %	3,10 %	1,93 %	7,52 %	0,55 %
The ageing population and disabilities	60	280	4,67	58,34	0,97	70,00 %	93,88 %	23,33 %	4,66 %	1,67 %	0,67 %	1,67 %	0,72 %	3,33 %	0,07 %
RTD activities of a generic nature	170	898	5,28	191,83	1,13	67,06 %	92,99 %	18,82 %	3,39 %	2,35 %	1,38 %	5,88 %	2,03 %	5,88 %	0,20 %
Support to infrastructures	20	89	4,45	13,70	0,69	30,00 %	63,43 %	30,00 %	7,01 %	30,00 %	18,76 %	10,00 %	10,80 %	0,00 %	0,00 %
INFORMATION SOCIETY	622	4051	6,51	838,97	1,35	61,90 %	81,84 %	2,41 %	0,36 %	4,34 %	2,97 %	0,32 %	0,10 %	31,03 %	14,74 %
Systems and services for the citizen	104	729	7,01	131,90	1,27	78,85 %	89,41 %	0,00 %	0,00 %	1,92 %	1,27 %	0,00 %	0,00 %	19,23 %	9,31 %
New methods of work and electronic commerce	131	878	6,70	124,34	0,95	46,56 %	62,55 %	0,00 %	0,00 %	3,82 %	4,12 %	1,53 %	0,64 %	48,09 %	32,69 %
Multimedia content and tools	76	547	7,20	101,64	1,34	76,32 %	89,58 %	0,00 %	0,00 %	1,32 %	0,54 %	0,00 %	0,00 %	22,37 %	9,88 %
Essential technologies and infrastructures	148	838	5,66	210,19	1,42	55,41 %	82,65 %	0,00 %	0,00 %	3,38 %	1,77 %	0,00 %	0,00 %	41,22 %	15,58 %
Cross-programme themes	47	379	8,06	74,08	1,58	80,85 %	82,67 %	0,00 %	0,00 %	4,26 %	2,12 %	0,00 %	0,00 %	14,89 %	15,20 %
RTD activities of a generic nature	50	284	5,68	61,70	1,23	86,00 %	94,83 %	0,00 %	0,00 %	6,00 %	4,54 %	0,00 %	0,00 %	8,00 %	0,65 %
Support to infrastructures	66	396	6,00	135,13	2,05	31,82 %	78,70 %	22,73 %	2,22 %	13,64 %	7,00 %	0,00 %	0,00 %	31,82 %	12,08 %
SUSTAINABLE GROWTH	542	4054	7,48	821,73	1,52	92,07 %	96,15 %	0,00 %	0,00 %	2,40 %	1,92 %	0,00 %	0,00 %	5,54 %	1,94 %
Innovative products, processes and organisation	185	1.095	5,92	177,34	0,96	95,14 %	98,07 %	0,00 %	0,00 %	1,08 %	1,54 %	0,00 %	0,00 %	3,78 %	0,39 %
Sustainable mobility and intermodality	32	393	12,28	64,79	2,02	53,13 %	62,51 %	0,00 %	0,00 %	25,00 %	16,98 %	0,00 %	0,00 %	21,88 %	20,50 %
Land transport and marine technologies	82	647	7,89	119,92	1,46	98,78 %	99,89 %	0,00 %	0,00 %	0,00 %	0,00 %	0,00 %	0,00 %	1,22 %	0,10 %
New perspectives for aeronautics	62	750	12,10	259,67	4,19	90,32 %	99,43 %	0,00 %	0,00 %	0,00 %	0,00 %	0,00 %	0,00 %	9,68 %	0,56 %
RTD activities of a generic nature	179	1.149	6,42	198,79	1,11	94,41 %	99,43 %	0,00 %	0,00 %	0,56 %	0,39 %	0,00 %	0,00 %	5,03 %	0,17 %
Support to infrastructures	2	20	10,00	1,24	0,62	0,00 %	0,00 %	0,00 %	0,00 %	100,00 %	100,00 %	0,00 %	0,00 %	0,00 %	0,00 %

	AL	L FP5 CON	TRACTS S	SIGNED IN 2	000	SHAREI ACTI		FELLO	WSHIPS		ORT TO ORKS	CONCE ACTI			PANYING SURES
	A	В	C=B/A	D	E=D/A	F	G	Н	I	J	K	L	M	N	0
	Number of contracts signed	Number of particip- ations	Average number of particip- ations per contract	Community financial contribution (€ million)	Average financial contribution per contract (€ million)	Number of contracts signed	Community financial contrib. (%)	Number of contracts signed	Community financial contrib. (%)	Number of contracts signed	Community financial contrib.	Number of contracts signed	Community financial contrib.	Number of contracts signed	Community financial contrib.
ENERGY & ENVIRONMENT	443	3237	7,31	447,44	1,01	79,31 %	95,17 %	2,41 %	0,38 %	1,72 %	1,51 %	1,21 %	0,49 %	15,34 %	2,45 %
ENVIRONMENT	251	2048	8,16	277,92	1, 11	93,63 %	97,15 %	0,00 %	0,00 %	1,99 %	2,11 %	1,99 %	0,69 %	2,39 %	0,05 %
Sustainable management and quality of water	67	447	6,67	75,41	1,13	95,52 %	98,93 %	0,00 %	0,00 %	1,49 %	1,02 %	0,00 %	0,00 %	2,99 %	0,05 %
Global change, climate and biodiversity	87	768	8,83	98,87	1,14	90,80 %	98,37 %	0,00 %	0,00 %	1,15 %	0,48 %	3,45 %	1,04 %	4,60 %	0,11 %
Sustainable marine ecosystems	32	235	7,34	40,21	1,26	100,00 %	100,00 %	0,00 %	0,00 %	0,00 %	0,00 %	0,00 %	0,00 %	0,00 %	0,00 %
The city of tomorrow and cultural heritage	32	299	9,34	32,41	1,01	90,63 %	94,08 %	0,00 %	0,00 %	6,25 %	5,15 %	3,13 %	0,77 %	0,00 %	0,00 %
RTD activities of a generic nature	23	172	7,48	18,19	0,79	100,00 %	100,00 %	0,00 %	0,00 %	0,00 %	0,00 %	0,00 %	0,00 %	0,00 %	0,00 %
Support for research infrastructures	10	127	12,70	12,83	1,28	80,00 %	72,02 %	0,00 %	0,00 %	10,00 %	23,07 %	10,00 %	4,91 %	0,00 %	0,00 %
ENERGY	192	1189	6,19	169,52	0,88	85,42%	96,75%	7,29%	1,23%	2,08%	1,27%	0,52%	0,15%	4,69%	0,59%
Cleaner energy systems, incl. renewables	80	458	5,73	70,12	0,88	85,00%	97,15%	7,50%	1,00%	1,25%	0,84%	0,00%	0,00%	6,25%	1,00%
Economic and efficient energy	105	657	6,26	96,46	0,92	85,71%	96,58%	7,62%	1,42%	1,90%	1,42%	0,95%	0,27%	3,81%	0,31%
RTD activities of a generic nature	7	74	10,57	2,94	0,42	85,71%	92,86%	0,00%	0,00%	14,29%	6,80%	0,00%	0,00%	0,00%	0,00%
NUCLEAR ENERGY	307	1316	4,29	232,59	0,76	84,36 %	96,39 %	3,26 %	0,43 %	5,54 %	2,14 %	2,93 %	0,77 %	3,91 %	0,25 %
Controlled thermonuclear fusion	168	232	1,38	138,58	0,01	98,81 %	99,82 %	1,19 %	0,17 %	0,00 %	0,00 %	0,00 %	0,00 %	0,00 %	0,00 %
Nuclear fission	93	735	7,90	66,69	0,08	73,12 %	92,40 %	6,45 %	0,85 %	9,68 %	4,78 %	4,30 %	1,59 %	6,45 %	0,37 %
RTD activities of a generic nature	37	244	6,59	25,37	0,18	67,57 %	95,59 %	5,41 %	0,79 %	2,70 %	0,79 %	8,11 %	1,54 %	16,22 %	1,30 %
Support for infrastructure	9	105	11,67	1,95	1,30	0,00 %	0,00 %	0,00 %	0,00 %	77,78 %	82,05 %	22,22 %	17,95 %	0,00 %	0,00 %
INTERNATIONAL ROLE	236	960	4,07	105,46	0,45	44,92 %	70,27 %	10,59 %	2,10 %	0,42 %	0,34 %	2,97 %	2,96 %	41,10 %	24,33 %
Countries in the pre-accession phase	41	49	1,20	20,05	0,49	0,00 %	0,00 %	0,00 %	0,00 %	0,00 %	0,00 %	0,00 %	0,00 %	100 %	100 %
NIS and CEEC not in the pre-accession phase	64	363	5,67	29,79	0,47	78,13 %	92,78 %	0,00 %	0,00 %	0,00 %	0,00 %	0,00 %	0,00 %	21,88 %	7,18 %
Mediterranean partner countries	28	130	4,64	12,82	0,46	53,57 %	87,75 %	0,00 %	0,00 %	0,00 %	0,00 %	7,14 %	7,72 %	39,29 %	4,45 %
Developing countries	73	354	4,85	39,68	0,54	56,16 %	88,73 %	0,00 %	0,00 %	1,37 %	0,91 %	6,85 %	5,34 %	35,62 %	4,99 %
Emerging economies and industrialised countries	3	4	1,33	0,42	0,14	0,00 %	0,00 %	0,00 %	0,00 %	0,00 %	0,00 %	0,00 %	0,00 %	100 %	100 %
Fellowships for developing countries	8	24	3,00	0,17	0,02	0,00 %	0,00 %	100 %	100 %	0,00 %	0,00 %	0,00 %	0,00 %	0,00 %	0,00 %
Fellowships for Community researchers	17	34	2,00	2,04	0,12	0,00 %	0,00 %	100 %	100 %	0,00 %	0,00 %	0,00 %	0,00 %	0,00 %	0,00 %
Coordination	2	2	1,00	0,49	0,25	0,00 %	0,00 %	0,00 %	0,00 %	0,00 %	0,00 %	0,00 %	0,00 %	100 %	100 %

	AL	L FP5 CON	TRACTS S	SIGNED IN 2	2000	SHAREI ACTI		FELLOW	SHIPS		ORT TO ORKS	CONCE ACTIO			PANYING SURES
	A	В	C=B/A	D	E=D/A	F	G	Н	I	J	K	L	M	N	O
	Number of contracts signed	Number of particip- ations	Average number of particip- ations per contract	Community financial contribution (€ million)	Average financial contribution per contract (€ million)	Number of contracts signed	Community financial contrib. (%)	Number of contracts signed	Community financial contrib.	Number of contracts signed	Community financial contrib.	Number of contracts signed	Community financial contrib.	Number of contracts signed	Community financial contrib. (%)
INNOVATION – SMEs	171	994	5,81	94,55	0,55	22,81 %	23,24 %	0,00 %	0,00 %	2,34 %	3,11 %	0,00 %	0,00 %	74,85 %	73,65 %
Promotion of innovation	21	144	6,86	16,91	0,81	71,43 %	74,45 %	0,00 %	0,00 %	0,00 %	0,00 %	0,00 %	0,00 %	28,57 %	25,55 %
Joint innovation/SME activities	97	362	3,73	48,56	0,50	24,74 %	19,32 %	0,00 %	0,00 %	4,12 %	6,05 %	0,00 %	0,00 %	71,13 %	74,63 %
Economic and technological intelligence	53	488	9,21	29,08	0,55	0,00 %	0,00 %	0,00 %	0,00 %	0,00 %	0,00 %	0,00 %	0,00 %	100 %	100,00 %
HUMAN POTENTIAL	1570	3891	2,48	467,73	0,30	6,69 %	17,70 %	54,46 %	28,15 %	13,06 %	50,16 %	0,00 %	0,00 %	25,80 %	3,99 %
Research training networks	167	1.339	8,02	218,66	1,31	0,00 %	0,00 %	0,00 %	0,00 %	100 %	100 %	0,00 %	0,00 %	0,00 %	0,00 %
Marie-Curie fellowship	855	1.368	1,60	131,68	0,15	0,00 %	0,00 %	100 %	100 %	0,00 %	0,00 %	0,00 %	0,00 %	0,00 %	0,00 %
Access to research infrastructures	87	313	3,60	62,24	0,72	78,16 %	85,52 %	0,00 %	0,00 %	21,84 %	14,48 %	0,00 %	0,00 %	0,00 %	0,00 %
Socio-economic research	43	303	7,05	31,54	0,73	86,05 %	93,69 %	0,00 %	0,00 %	13,95 %	6,31 %	0,00 %	0,00 %	0,00 %	0,00 %
Public perception	14	82	5,86	3,40	0,24	0,00 %	0,00 %	0,00 %	0,00 %	57,14 %	70,59 %	0,00 %	0,00 %	42,86 %	29,41 %
Support for S&T policies	8	90	11,25	3,38	0,42	0,00 %	0,00 %	0,00 %	0,00 %	62,50 %	75,44 %	0,00 %	0,00 %	37,50 %	24,56 %
Promoting S&T excellence	396	396	1,00	16,82	0,04	0,00 %	0,00 %	0,00 %	0,00 %	0,00 %	0,00 %	0,00 %	0,00 %	100 %	100 %
TOTAL FP5 IN 2000	4955	23714	4,79	3981,1	0,80	50,35%	80,39%	23,10%	4,47%	6,08%	7,80%	1,27%	0,71%	19,20%	6,64%

Table 3A – CONTRACTS SIGNED BY TYPE OF BENEFICIARY (in  $\ensuremath{\mathfrak{E}}$  million)

				TY	PES OF BE	NEFICIAL	RY					of whicl	1 SMEs	
	Higher ed	lucation	Research (includin		Enterprise	e sector	Other	:s <sup>27</sup>	TOTA	AL	Total No o	of SMEs	SMEs fro enterprise	
	Contri- bution	Partici- pations	Contri- bution	Partici- pations	Contri- bution	Partici- pations	Contri- bution	Partici- pations	Contri- bution	Partici- pations	Contri- bution	Partici- pations	Contri- bution	Partici- pations
QUALITY OF LIFE	401,23	1.789	353,35		75,07	575	46,20	519	875,84	4.517	111,94	904	75,28	694
Food, nutrition and health	43,01	191	45,86	228	9,27	97	13,11	128	111,25	644	18,97	193	11,30	152
Control of infectious diseases	51,10	232	45,26		14,82	65	7,16	67	118,34	548	12,45	74	7,40	41
The "cell factory"	75,96	308	56,91	251	15,39	101	4,37	52	152,63	712	20,96	140	16,93	119
Environment and health	26,46		27,78	137	4,21	25		21	59,39	309	5,93	41	3,06	27
Sustainable agriculture, fisheries and forestry	71,88	322	78,11	412	15,29	178	5,07	125	170,35	1.037	35,06	325	25,11	265
The ageing population and disabilities	34,89		18,09	87	3,91	28	, -	16	58,34	280	2,85	27	1,88	20
RTD activities of a generic nature	93,10	431	77,01	309	11,56	78	-, -	80	,	898	14,77	92	9,07	62
Support to infrastructures	4,82	30	4,33	26	0,62	3	3,94	30	13,70	89	0,94	12	0,54	8
INFORMATION SOCIETY	189,22	1.022	121,43	572	528,32	2.457	0,00	0	838,97	4.051	285,15	1.182	279,33	1.124
Systems and services for the citizen	20,95		17,30	82	,,,,,	555	0,00	0	131,90	729	55,52	302	53,66	280
New methods of work and electronic commerce	20,63	123	12,99	82	90,73	673	0,00	0	124,34	878	54,08	414	52,17	400
Multimedia content and tools	37,14	198	19,01	82	45,50	267	0,00	0	101,64	547	23,20	124	22,13	112
Essential technologies and infrastructures	39,01	178	36,35	121	134,83	539	0,00	0	210,19	838	40,57	193	40,22	190
Cross-programme themes	21,57	133	11,02	48	41,49	198	-,	0	74,08	379	15,56	69	15,02	64
RTD activities of a generic nature	38,12	181	14,02	63	9,56	40	0,00	0	61,70	284	3,90	13	3,90	13
Support to infrastructures	11,83	117	10,75	94	112,56	185	0,00	0	135,13	396	92,31	67	92,23	65
SUSTAINABLE GROWTH	163,16	758	212,78	1.056	437,10	2.183	8,69	57	821,73	4.054	169,27	1.325	150,50	1.219
Innovative products, processes and organisation	39,48	172	46,75	220	90,32	695	-,	8	177,34	1.095	64,39	554	58,65	528
Sustainable mobility and intermodality	10,67	64	18,72	112	29,87	185	,	32	64,79	393	5,74	34	4,93	29
Land transport and marine technologies	28,16		33,62	159	57,76	357	0,37	2	119,92	647	19,45	148	17,36	137
New perspectives for aeronautics	33,06		40,67	189	184,82	390	-,	7	259,67	750	20,90	134	18,55	116
RTD activities of a generic nature	51,78	229	72,29	365	73,90	548	- , -	7	198,79	1.149	58,25	451	50,48	405
Support to infrastructures	0,00	0	0,73	11	0,43	8	0,08	1	1,24	20	0,54	4	0,54	4

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<sup>&</sup>quot;Others" covers all participations which could not be allocated to any of the first three categories.

				TY	PES OF BE	NEFICIAI	RY					of whicl	h SMEs	
	Higher ed	ucation	Research (includin		Enterprise	e sector	Othe	ers	TOT	AL	Total No	of SMEs	SMEs fre enterprise	
	Contri-	Partici-	Contri-	Partici-	Contri-	Partici-	Contri-	Partici-	Contri-	Partici-	Contri-	Partici-	Contri-	Partici-
	bution	pations	bution	pations	bution	pations	bution	pations	bution	pations	bution	pations	bution	pations
ENERGY & ENVIRONMENT	172,57	1.108	178,07	1.240	94,42		2,38			3.237			73,34	
ENVIRONMENT	129,02	840	117,10	854	30,56		1,24		277,92	2.048	/		37,84	
Sustainable management and quality of water	38,61	196	27,24	149	8,89		0,65		75,41	447	15,82		10,39	
Global change, climate and biodiversity	45,14	327	46,38	364	6,88	71	0,47		98,87	768			8,78	
Sustainable marine ecosystems	19,64	101	18,94	106	1,63	28	,		40,21	235			6,01	41
The city of tomorrow and cultural heritage	12,67	99	10,47	96	9,25	103	0,02		32,41	299			7,73	77
RTD activities of a generic nature	7,00	61	7,61	75	3,49	35	- , -		18,19	172	5,84		4,46	
Support for research infrastructures	5,96	56	6,46		0,41	7	0,00		12,83	127	2,69		0,46	
ENERGY	43,55	268	60,97	386	,		,		169,52	1.189	, .		35,50	
Cleaner energy systems, incl. renewables	20,23	118	22,50		26,94		0,45	4	70,12	458			13,07	131
Economic and efficient energy	22,62	136	37,15	223	36,02	293	0,68		96,46	657	24,70		21,52	193
RTD activities of a generic nature	0,70	14	1,32	28	0,90	31	0,01	1	2,94	74	1,51	31	0,91	19
NUCLEAR ENERGY	27,88	218	128,31	817	75,46	269	0,94	12	232,59	1.316	13,40	163	7,94	103
Controlled thermonuclear fusion	7,91	26	68,12	168	62,54	38	0,00	0	138,58	232	0,57	2	0,57	2
Nuclear fission	10,78	104	44,69	441	10,34	182	0,89	8	66,69	735	10,01	113	5,79	70
RTD activities of a generic nature	8,82	76	14,17	140	2,35			2	25,37	244	2,68	35	1,44	18
Support for infrastructure	0,37	12	1,34	68	0,23	23	0,01	2	1,95	105	0,14	13	0,14	13
INTERNATIONAL ROLE	32,28	297	38,38	387	5,11	69	29,68	207	105,46	960	32,16	266	21,07	135
Countries in the pre-accession phase	0,00	0	0,00	0	0,00	0	20,05	49	20,05	49	12,93	30	12,93	30
NIS and CEEC not in the pre-accession phase	8,97	100	16,26	206	2,37	40	2,19	17	29,79	363	8,74	128	4,34	50
Mediterranean partner countries	6,41	51	4,08	32	0,71	10	1,63	37	12,82	130	2,92	35	1,05	20
Developing countries	16,90	146	18,05	149	2,04	19	2,69	40	39,68	354	7,32	67	2,51	29
Emerging economies and industrialised countries	0,00	0	0,00	0	0,00	0	0,42	4	0,42	4	0,22	3	0,22	3
Fellowships for developing countries	0,00	0	0,00	0	0,00	0	0,17	24	0,17	24	0,02	2	0,02	2
Fellowships for Community researchers		0		0		0	2,04	34	2,04	34	0,00	1	0,00	1
Coordination		0		0		0	0,49	2	0,49	2	0,00	0	0,00	0

				TY	PE OF BEN	EFICIAR	Y					of which	SMEs	
	Higher ed	ucation	Research (includin		Enterprise	sector	Othe	ers	TOT	AL	Total No o	of SMEs	SMEs fro enterprise	
	Contri- bution	Partici- pations	Contri- bution	Partici- pations	Contri- bution	Partici- pations	Contri- bution	Partici- pations	Contri- bution	Partici- pations	Contri- bution	Partici- pations	Contri- bution	Partici- pations
INNOVATION – SMEs	11,11	103	14,73	117	29,83	443	38,88	331	94,55	994	33,64	380	28,47	343
Promotion of innovation	2,99	21	4,23	30	6,27	48	3,41	45	16,91	144	8,17	79	7,79	77
Joint innovation/SME activities	5,50	48	8,17	58	1,75	9	33,14	247	48,56	362	18,35	114	13,56	79
Economic and technological intelligence	2,62	34	2,33	29	21,81	386	2,33	39	29,08	488	7,12	187	7,12	187
HUMAN POTENTIAL	260,71	2.217	174,58	1.309	23,16	274	9,29	91	467,74	3.891	56,73	409	49,26	365
Research training networks	139,02	846	71,55	430	5,24	46	2,86	17	218,66	1.339	28,56	181	28,56	181
Marie-Curie fellowship	74,18	865	43,07	422	9,62	49	4,82	32	131,68	1.368	4,03	18	3,69	16
Access to research infrastructures	16,97	95	43,24	169	1,23	21	0,81	28	62,24	313	12,36	54	9,00	47
Socio-economic research	21,21	180	9,06	99	0,94	21	0,34	3	31,54	303	8,35	86	4,58	51
Public perception	1,63	28	0,99	25	0,77	28	0,01	1	3,40	82	1,58	31	1,58	31
Support for S&T policies	1,02	34	1,21	30	1,03	23	0,12	3	3,38	90	1,37	26	1,37	26
Promoting S&T excellence	6,68	169	5,46	134	4,33	86	0,34	7	16,82	396	0,48	13	0,48	13
TOTAL	1.258,16	7512	1221,63	7132	1.268,47	7.137	136,06	1.239	3.884,32	23.020	812,20	5.597	685,20	4.674

TABLE 3B: CONTRACTS SIGNED BY TYPE OF BENEFICIARY (%)

				TY	PES OF B	ENEFICIA	RY					OF WHI	CH SMEs	
	Higher e	ducation	Research (includi	h centres ng JRC)	Enterpri	se sector	Oth	ers <sup>28</sup>	TO	ΓAL	Total No	of SMEs	SMEs f enterpris	
	Contri-	Partici-	Contri-	Partici-	Contri-	Partici-	Contri-	Partici-	Contri-	Partici-	Contri-	Partici-	Contri-	Partici-
	bution	1		pations	bution	1		pations	bution	pations	bution	pations	bution	pations
QUALITY OF LIFE	45,81%	39,61%	40,34%	36,17%		12,73%	5,27%	11,49%	100,00%	100,00%	12,78%	20,01%	8,60%	15,36%
Food, nutrition and health	38,66%	29,66%	41,23%	35,40%	8,33%	15,06%	11,78%	19,88%	100,00%	100,00%	17,05%	29,97%	10,16%	23,60%
Control of infectious diseases	43,18%	42,34%	38,25%	33,58%	12,52%	11,86%	6,05%	12,23%	100,00%	100,00%	10,52%	13,50%	6,25%	7,48%
The "cell factory"	49,77%	43,26%	37,29%	35,25%	10,08%	14,19%	2,86%	7,30%	100,00%	100,00%	13,73%	19,66%	11,09%	16,71%
Environment and health	44,55%	40,78%	46,77%	44,34%	7,09%	8,09%	1,59%	6,80%	100,00%	100,00%	9,99%	13,27%	5,15%	8,74%
Sustainable agriculture, fisheries and forestry	42,20%	31,05%	45,85%	39,73%	8,98%	17,16%	2,98%	12,05%	100,00%	100,00%	20,58%	31,34%	14,74%	25,55%
The ageing population and disabilities	59,81%	53,21%	31,01%	31,07%	6,70%	10,00%	2,48%	5,71%	100,00%	100,00%	4,88%	9,64%	3,22%	7,14%
RTD activities of a generic nature	48,53%	48,00%	40,14%	34,41%	6,03%	8,69%	5,30%	8,91%	100,00%	100,00%	7,70%	10,24%	4,73%	6,90%
Support to infrastructures	35,20%	33,71%	31,57%	29,21%	4,50%	3,37%	28,72%	33,71%	100,00%	100,00%	6,90%	13,48%	3,92%	8,99%
INFORMATION SOCIETY	22,55%	25,23%	14,47%	14,12%	62,97%	60,65%	0%	0%	100,00%	100,00%	33,99%	29,18%	33,29%	27,75%
Systems and services for the citizen	15,88%	12,62%	13,11%	11,25%	71,00%	76,13%	0%	0%	100,00%	100,00%	42,09%	41,43%	40,68%	38,41%
New methods of work and electronic commerce	16,59%	14,01%	10,44%	9,34%	72,97%	76,65%	0%	0%	100,00%	100,00%	43,50%	47,15%	41,96%	45,56%
Multimedia content and tools	36,54%	36,20%	18,70%	14,99%	44,76%	48,81%	0%	0%	100,00%	100,00%	22,83%	22,67%	21,77%	20,48%
Essential technologies and infrastructures	18,56%	21,24%	17,30%	14,44%	64,15%	64,32%	0%	0%	100,00%	100,00%	19,30%	23,03%	19,13%	22,67%
Cross-programme themes	29,11%	35,09%	14,87%	12,66%	56,01%	52,24%	0%	0%	100,00%	100,00%	21,01%	18,21%	20,28%	16,89%
RTD activities of a generic nature	61,78%	63,73%	22,73%	22,18%	15,49%	14,08%	0%	0%	100,00%	100,00%	6,32%	4,58%	6,32%	4,58%
Support to infrastructures	8,75%	29,55%	7,95%	23,74%	83,30%	46,72%	0%	0%	100,00%	100,00%	68,31%	16,92%	68,25%	16,41%
SUSTAINABLE GROWTH	19,86%	18,70%	25,89%	26,05%	53,19%	53,85%	1,06%	1,41%	100,00%	100,00%	20,60%	32,68%	18,31%	30,07%
Innovative products, processes and organisation	22,26%	15,71%	26,36%	20,09%	50,93%	63,47%	0,44%	0,73%	100,00%	100,00%	36,31%	50,59%	33,07%	48,22%
Sustainable mobility and intermodality	16,47%	16,28%	28,89%	28,50%	46,11%	47,07%	8,54%	8,14%	100,00%	100,00%	8,86%	8,65%	7,60%	7,38%
Land transport and marine technologies	23,49%	19,94%	28,04%	24,57%	48,16%	55,18%	0,31%	0,31%	100,00%	100,00%	16,22%	22,87%	14,48%	21,17%
New perspectives for aeronautics	12,73%	21,87%	15,66%	25,20%	71,18%	52,00%	0,43%	0,93%	100,00%	100,00%	8,05%	17,87%	7,14%	15,47%
RTD activities of a generic nature	26,05%	19,93%	36,37%	31,77%	37,18%	47,69%	0,41%	0,61%	100,00%	100,00%	29,30%	39,25%	25,39%	35,25%
Support to infrastructures	0%	0%	59,03%	55,00%	34,78%	40,00%	6,19%	5,00%	100,00%	100,00%	43,43%	20,00%	43,43%	20,00%

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<sup>&</sup>lt;sup>28</sup> "Others" covers all participations which could not be allocated to any of the first three categories.

				TY	PES OF B	ENEFICIA	RY					OF WHI	CH SMEs	
	Higher 6	ducation	Researci (includi	h centres ng JRC)	Enterpri	se sector	Otl	ners	TO	ΓAL	Total No	of SMEs		from the se sector
	Contri-	Partici-		Partici-	Contri-	Partici-	Contri-	Partici-		Partici-	Contri-	Partici-	Contri-	Partici-
	bution	pations	bution	pations	bution	pations	bution	pations	bution	pations	bution	pations	bution	pations
ENERGY & ENVIRONMENT	38,57%	34,23%	39,80%	38,31%	21,10%	26,78%	0,53%	0,68%	100,00%	100,00%	24,56%	29,90%	16,39%	21,35%
ENVIRONMENT	46,42%	41,02%	42,13%	41,70%	11,00%	16,70%	0,45%	0,59%	100,00%	100,00%	24,62%	27,73%	13,62%	16,99%
Sustainable management and quality of water	51,21%	43,85%	36,13%	33,33%	11,80%	21,92%	0,87%	0,89%	100,00%	100,00%	20,98%	28,19%	13,78%	20,13%
Global change, climate and biodiversity	45,66%	42,58%	46,91%	47,40%	6,95%	9,24%	0,48%	0,78%	100,00%	100,00%	21,35%	21,74%	8,88%	11,72%
Sustainable marine ecosystems	48,85%	42,98%	47,09%	45,11%	4,06%	11,91%	0%	0%	100,00%	100,00%	27,98%	28,51%	14,96%	17,45%
The city of tomorrow and cultural heritage	39,10%	33,11%	32,31%	32,11%	28,54%	34,45%	0,06%	0,33%	100,00%	100,00%	36,09%	37,12%	23,86%	25,75%
RTD activities of a generic nature	38,46%	35,47%	41,80%	43,60%	19,19%	20,35%	0,54%	0,58%	100,00%	100,00%	32,10%	34,88%	24,51%	20,93%
Support for research infrastructures	46,43%	44,09%	50,34%	50,39%	3,23%	5,51%	0%	0%	100,00%	100,00%	20,97%	29,13%	3,56%	11,02%
ENERGY	25,69%	22,54%	35,97%	32,46%	37,67%	44,15%	0,67%	0,84%	100,00%	100,00%	24,47%	33,64%	20,94%	28,85%
Cleaner energy systems, incl. renewables	28,85%	25,76%	32,09%	29,48%	38,42%	43,89%	0,64%	0,87%	100,00%	100,00%	21,79%	33,19%	18,64%	28,60%
Economic and efficient energy	23,45%	20,70%	38,51%	33,94%	37,34%	44,60%	0,70%	0,76%	100,00%	100,00%	25,61%	33,03%	22,31%	29,38%
RTD activities of a generic nature	23,81%	18,92%	44,90%	37,84%	30,61%	41,89%	0,34%	1,35%	100,00%	100,00%	51,36%	41,89%	30,95%	25,68%
NUCLEAR ENERGY	11,99%	16,57%	55,17%	62,08%	32,44%	20,44%	0,40%	0,91%	100,00%	100,00%	5,76%	12,39%	3,41%	7,83%
Controlled thermonuclear fusion	5,71%	11,21%	49,16%	72,41%	45,13%	16,38%	0%	0%	100,00%	100,00%	0,41%	0,86%	0,41%	0,86%
Nuclear fission	16,16%	14,15%	67,00%	60,00%	15,50%	24,76%	1,34%	1,09%	100,00%	100,00%	15,01%	15,37%	8,69%	9,52%
RTD activities of a generic nature	34,77%	31,15%	55,83%	57,38%	9,28%	10,66%	0,12%	0,82%	100,00%	100,00%	10,57%	14,34%	5,66%	7,38%
Support for infrastructure	18,90%	11,43%	68,68%	64,76%	11,66%	21,90%	0,76%	1,90%	100,00%	100,00%	7,26%	12,38%	7,26%	12,38%
INTERNATIONAL ROLE	30,61%	30,94%	36,39%	40,31%	4,85%	7,19%	28,15%	21,56%	100,00%	100,00%	30,49%	27,71%	19,98%	14,06%
Countries in the pre-accession phase	0%	0%	0%	0%	0%	0%	100,00%	100,00%	100,00%	100,00%	64,48%	61,22%	64,48%	61,22%
NIS and CEEC not in the pre-accession phase	30,11%	27,55%	54,58%	56,75%	7,95%	11,02%	7,36%	4,68%	100,00%	100,00%	29,35%	35,26%	14,56%	13,77%
Mediterranean partner countries	49,99%	39,23%	31,79%	24,62%	5,50%	7,69%	12,72%	28,46%	100,00%	100,00%	22,80%	26,92%	8,19%	15,38%
Developing countries	42,59%	41,24%	45,48%	42,09%	5,14%	5,37%	6,79%	11,30%	100,00%	100,00%	18,45%	18,93%	6,34%	8,19%
Emerging economies and industrialised countries	0%	0%	0%	0%	0%	0%	100,00%	100,00%	100,00%	100,00%	52,60%	75,00%	52,60%	75,00%
Fellowships for developing countries	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	13,13%	8,33%	13,13%	8,33%
Fellowships for Community researchers	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0,00%	2,94%	0,00%	2,94%
Coordination	0%	0%	0%	0%	0%	0%	100,00%	100,00%	100,00%	100,00%	0,00%	0,00%	0,00%	0,00%

				TY	PE OF BE	NEFICIA	RY					of whic	h SMEs	
	Higher e	ducation	Research (includi	h centres ng JRC)	Enterpris	se sector	Oth	ners	TOT	ΓAL	Total No	of SMEs		from the se sector
		Partici- pations	l			Partici- pations	II	Partici- pations		Partici- pations	Contri- bution	Partici- pations	Contri- bution	Partici- pations
INNOVATION – SMEs	11,76%	10,36%	15,57%	11,77%	31,55%	44,57%	41,12%	33,30%	100,00%	100,00%	35,58%	38,23%	30,11%	34,51%
Promotion of innovation	17,70%	14,58%	25,04%	20,83%	37,09%	33,33%	20,17%	31,25%	100,00%	100,00%	48,31%	54,86%	46,06%	53,47%
Joint innovation/SME activities	11,33%	13,26%	16,82%	16,02%	3,60%	2,49%	68,25%	68,23%	100,00%	100,00%	37,79%	31,49%	27,93%	21,82%
Economic and technological intelligence	9,00%	6,97%	8,00%	5,94%	75,00%	79,10%	8,00%	7,99%	100,00%	100,00%	24,49%	38,32%	24,49%	38,32%
HUMAN POTENTIAL	55,74%	56,98%	37,32%	33,64%	4,95%	7,04%	1,99%	2,34%	100,00%	100,00%	12,13%	10,51%	10,53%	9,38%
Research training networks	63,58%	63,18%	32,72%	32,11%	2,39%	3,44%	1,31%	1,27%	100,00%	100,00%	13,06%	13,52%	13,06%	13,52%
Marie-Curie fellowship	56,33%	63,23%	32,70%	30,85%	7,31%	3,58%	3,66%	2,34%	100,00%	100,00%	3,06%	1,32%	2,81%	1,17%
Access to research infrastructures	27,26%	30,35%	69,47%	53,99%	1,97%	6,71%	1,30%	8,95%	100,00%	100,00%	19,85%	17,25%	14,45%	15,02%
Socio-economic research	67,24%	59,41%	28,73%	32,67%	2,96%	6,93%	1,07%	0,99%	100,00%	100,00%	26,48%	28,38%	14,52%	16,83%
Public perception	48,05%	34,15%	29,11%	30,49%	22,59%	34,15%	0,25%	1,22%	100,00%	100,00%	46,57%	37,80%	46,57%	37,80%
Support for S&T policies	30,11%	37,78%	35,65%	33,33%	30,60%	25,56%	3,64%	3,33%	100,00%	100,00%	40,54%	28,89%	40,54%	28,89%
Promoting S&T excellence	39,73%	42,68%	32,48%	33,84%	25,75%	21,72%	2,03%	1,77%	100,00%	100,00%	2,84%	3,28%	2,84%	3,28%
TOTAL	32,39%	32,63%	31,45%	30,98%	32,66%	31,00%	3,50%	5,38%	100,00%	100,00%	20,91%	24,31%	17,64%	20,30%

TABLE 4 - PROPOSALS RECEIVED BY COUNTRY (REPRESENTATION)

							EU	ROPEAN	UNION							
	BE	DK	DE	EL	ES	FR	IE	IT	LU	NL	AT	PT	FI	SV	UK	Total
Quality of life	652	631	1655	510	1123	1423	376	1377	16	1078	389	380	440	740	1975	12765
Information society	526	229	1420	824	933	1070	248	1238	60	494	361	276	295	405	1301	9680
Sustainable growth	479	254	1414	417	780	1129	207	1056	24	650	304	332	271	451	1256	9024
Energy- environment	318	388	1145	520	732	779	122	846	17	618	297	305	240	422	1035	7784
of which environment	226	270	823	380	548	610	92	667	10	453	215	218	190	313	801	5816
of which energy	92	118	322	140	184	169	30	179	7	165	82	87	50	109	234	1968
Nuclear energy	7	0	8	2	1	5	0	1	0	1	2	0	1	0	5	33
of which fission	5	0	7	1	1	2	0	0	0	1	1	0	1	0	2	21
of which fusion	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	2
International role	105	48	166	37	130	183	11	120	4	127	45	73	31	50	243	1373
Innovation-SMEs	47	24	113	32	77	75	25	84	15	41	44	30	28	44	91	770
Human potential	102	67	408	96	230	488	42	229	30	170	94	52	29	96	615	2748
TOTAL	2237	1641	6331	2441	4006	5155	1031	4953	167	3180	1536	1450	1335	2208	6525	44196

							CA	NDIDAT	TE AND	ASSOCIA	ATED CO	OUNTRI	ES						
	BG	CY	CZ	EE	HU	LV	LT	MT	PL	RO	SK	SI	TR	IS	LI	NO	СН	IL	Total
Quality of life	64	25	192	64	235	50	54	3	59	265	68	86	10	74	1	381	405	270	2306
Information society	97	90	142	38	119	37	34	6	186	86	56	64	21	14	4	150	305	178	1627
Sustainable growth	34	14	160	9	105	18	13	2	176	77	55	73	5	12	10	198	226	124	1311
Energy- environment	71	35	131	61	126	21	29	6	218	88	64	70	24	34	5	280	238	99	1600
of which environment	52	27	110	48	104	20	23	6	186	66	58	60	17	34	2	241	175	88	1317
of which energy	19	8	21	13	22	1	6	0	32	22	6	10	7	0	3	39	63	11	283
Nuclear energy	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	2
of which fission	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
of which fusion	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
International role	12	3	8	4	16	3	4	7	39	2	8	7	11	1	0	27	18	12	182
Innovation-SMEs	7	4	23	16	25	7	8	1	33	24	11	13	0	5	0	15	4	0	200
Human potential	6	1	25	8	16	7	3		25	9	14	5	1	6	0	36	46	38	246
TOTAL	291	172	681	200	644	143	146	25	943	345	295	300	72	146	20	1087	1243	726	7479

TABLE 5A – CONTRACTS SIGNED BY COUNTRY: PARTICIPATIONS BY SPECIFIC PROGRAMME

							F	EUROPEA	N UNION	V						
	BE	DK	DE	EL	ES	FR	IE	IT	LU	NL	AT	PT	FI	SV	UK	Total
Quality of life	179	178	611	95	302	529	89	392	1	363	67	79	144	239	744	4012
Information society	169	66	610	283	352	469	63	474	15	180	108	77	100	114	509	3589
Sustainable growth	147	79	755	129	262	595	57	435	5	259	98	75	108	199	553	3756
Energy-environment	107	120	448	133	206	438	44	281	4	230	79	70	82	119	460	2821
of which environment	54	64	268	81	130	298	31	186	2	130	55	42	53	<i>78</i>	285	1757
of which energy	53	56	180	52	76	140	13	95	2	100	24	28	29	41	175	1064
Nuclear energy	110	23	225	15	105	175	13	89	4	55	24	11	60	76	155	1137
of which fission	85	10	116	8	69	125	1	32	0	28	8	2	38	43	<i>7</i> 9	644
of which fusion	11	5	49	4	12	18	4	30	3	7	8	8	10	8	11	188
International role	21	16	60	20	32	53	4	45	0	28	10	12	13	4	75	393
Innovation-SMEs	40	22	96	53	114	104	8	147	4	47	22	45	18	33	79	832
Human potential	128	101	517	114	280	650	81	362	2	274	79	62	49	124	753	3576
TOTAL	901	605	3322	842	1650	3013	359	2225	35	1436	487	431	574	908	3328	20116

							CA	NDIDAT	TE AND	ASSOCI	ATED CO	OUNTRI	ES						
	BG	CY	CZ	EE	HU	LV	LT	MT	PL	RO	SK	SI	TR	IS	LI	NO	CH	IL	Total
Quality of life	11	0	40	12	31	6	5	0	44	2	14	10	1	14	0	88	110	69	457
Information society	23	11	32	13	18	8	5	1	29	11	10	16	2	6	0	60	112	47	404
Sustainable growth	1	2	25	0	17	4	4	0	32	10	11	15	0	4	1	61	64	21	272
Energy-environment	4	4	29	7	26	0	2	0	27	8	7	15	3	6	2	134	89	23	386
of which environment	3	4	22	5	20	0	2	0	20	6	3	7	3	6	1	87	62	16	267
of which energy	1	0	7	2	6	0	0	0	7	2	4	8	0	0	1	47	27	7	119
Nuclear energy	3	0	30	0	21	5	0	0	5	10	10	8	0	0	0	9	53	0	154
of which fission	0	0	20	0	9	0	0	0	3	0	4	4	0	0	0	3	36	0	<i>79</i>
of which fusion	2	0	5	0	7	5	0	0	0	8	4	2	0	0	0	0	11	0	44
International role	7	8	6	3	10	4	2	2	14	10	4	2	10	0	0	14	9	8	113
Innovation-SMEs	7	8	17	8	15	11	10	0	13	8	10	8	0	12	0	10	4	21	162
Human potential	7	1	21	7	29	6	1	1	44	6	5	10	0	2	0	47	63	50	300
TOTAL	63	34	200	50	167	44	29	4	208	65	67	88	16	44	3	423	504	239	2248

TABLE 5B - CONTRACTS SIGNED BY COUNTRY: PARTICIPATIONS BY TYPE OF ACTION AND BY TYPE OF BENEFICIARY

Number of participations by type								EURO	PEAN UN	NION						
of action	BE	DK	DE	EL	ES	FR	IE	IT	LU	NL	AT	PT	FI	SV	UK	Total
Shared-cost actions	589	454	2427	626	1151	2035	255	1540	26	998	352	293	454	701	2190	14107
of which R&D projects	524	388	2181	554	982	1869	212	1344	25	858	324	240	425	648	1938	12512
of which demonstration projects	9	40	60	25	40	41	10	50	0	29	4	12	9	20	55	413
of which combined projects	5	8	32	9	16	18	7	27	0	5	1	3	3	11	21	173
of which support to infrastructures	1	0	14	1	6	10	1	4	0	6	1	0	1	3	12	60
of which cooperative research	14	5	40	18	39	39	6	43	0	31	7	10	4	8	45	309
of which exploratory awards	36	13	100	19	68	58	19	72	1	69	15	28	12	11	119	640
Fellowships	54	51	168	46	132	273	43	104	0	139	20	15	14	46	468	1573
Support to networks	125	78	423	93	163	360	44	261	2	181	57	55	54	108	428	2432
Concerted actions	24	11	30	9	21	47	6	23	0	28	7	10	18	16	59	309
Accompanying measures	133	56	365	108	246	349	26	352	8	131	51	80	49	63	259	2292
Total	925	650	3413	882	1713	3064	374	2280	36	1477	487	453	589	934	3404	20116

Number of participations by type of action	BE	DK	DE	EL	ES	FR	IE	IT	LU	NL	AT	PT	FI	SV	UK	Total
Higher education	342	179	954	257	514	584	193	621	0	500	164	131	189	370	1628	6626
Research centres (including JRC)	207	225	1085	231	447	1293	59	721	10	482	141	114	197	242	615	6069
Enterprise sector	275	161	1111	292	560	966	82	695	22	343	148	124	162	250	915	6106
Others <sup>29</sup>	77	40	172	62	129	170	25	188	3	111	34	62	26	46	170	1315
Total	901	605	3322	842	1650	3013	359	2225	35	1436	487	431	574	908	3328	20116

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<sup>&</sup>lt;sup>29</sup> "Others" covers all participations which could not be allocated to any of the first three categories.

Number of participations								CANDII	OATE A	ND ASS	OCIATE	D COUN	TRIES						
by type of action	BG	CY	CZ	EE	HU	LV	LT	MT	PL	RO	SK	SI	TR	IS	LI	NO	СН	IL	Tot.
Shared-cost actions	30	16	128	30	102	17	8	1	126	37	39	56	12	33	3	325	376	159	1498
of which R&D projects	27	16	116	21	94	13	8	1	121	37	38	49	12	24	3	303	364	144	1391
of which demonstration projects	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	2	5	0	9
of which combined projects	0	0	0	8	0	2	0	0	0	0	0	0	0	5	0	1	6	1	23
of which support to infrastructures	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	2	0	2	6
of which cooperative research	0	0	1	1	1	0	0	0	0	0	1	3	0	4	0	9	1	1	25
of which exploratory awards	0	0	10	0	5	2	0	0	5	0	0	3	0	0	0	8	0	11	44
Fellowships	0	0	4	0	0	1	0	0	1	0	0	0	0	0	0	14	10	9	39
Support to networks	7	1	19	5	29	7	5	1	40	10	9	9	1	2	0	50	75	34	301
Concerted actions	0	1	6	1	4	1	1	1	4	1	2	3	2	1	0	7	7	6	48
Accompanying measures	26	16	43	14	32	18	15	1	37	17	17	20	1	8	0	27	36	34	362
Total	63	34	200	50	167	44	29	4	208	65	67	88	16	44	3	423	504	239	2248

Number of participations by type of action	BG	CY	CZ	EE	HU	LV	LT	MT	PL	RO	SK	SI	TR	IS	LI	NO	СН	IL	Tot.
Higher education	13	6	32	19	24	3	6	0	80	13	13	24	9	17	0	114	220	93	686
Research centres (incl. JRC)	23	4	85	8	76	18	6	0	68	28	27	32	5	9	0	138	155	62	744
Enterprise sector	16	12	53	12	38	8	4	2	31	12	17	23	1	11	3	154	119	57	573
Others	11	12	30	11	29	15	13	2	29	12	10	9	1	7	0	17	10	27	245
Total	63	34	200	50	167	44	29	4	208	65	67	88	16	44	3	423	504	239	2248

TABLE 6: COOPERATION LINKS BETWEEN COUNTRIES IN THE CONTRACTS SIGNED

										Eur	opean	Union													Cand	idate an	d ass	ociate	d coun	tries							tal		
		В	E DK	D	E E	L	ES I	R	ΙE	IT	LU	NL	AT	PT	FI	SV	UK	Tot	BG	CY	CZ	EE	HU	LV	LT	MT P	L	RO	SK	SI	TR	IS	LI	NO	CH	IL	Total		
	BE	1	328 18	88 8	885	188	409	790	78	522	33	419	112	104	305	408	746	5515	11	8	105	9	51	3	4	3	61	27	23	30	2	8	(	111	191	37	6199	BE	
	DK		188 23	35	542	116	327	384	89	374	14	372	92	88	180	317	692	4010	8	2	43	20	45	9	5	1	58	17	24	24	1	12	. 1	127	102	36	4545	DK	
	DE	:	885 54	2	126	516	1352 2	162	181	1617	162	1235	596	478	1020	1415	2448	16735	80	22	290	33	190	28	20	0	197	54	84	90	9	32	1	343	663	204	19075	DE	
	EL		188 11	6 5	516	524	329	667	63	501	29	251	114	100	125	211	555	4289	49	36	77	9	31	4	11	2	59	33	24	35	33	5	1	125	169	75	5067	EL	
	ED	4	409 32	27 13	352	329	929 1	341	115	928	64	488	210	319	551	654	1480	9496	68	7	89	18	55	7	8	0	66	30	36	36	18	25	2	166	260	93	10480	ES	
Ę	FR	•	790 38	34 2	162	667	1341 2	022	185	1461	74	836	317	427	534	825	2259	14284	37	19	143	24	112	13	19	1	157	42	37	60	53	41	3	351	629	153	16178	FR	ᅜ
nio	IR		78 8	39	181	63	115	185	81	119	12	122	37	43	74	103	314	1616	4	3	22	7	17	4	5	0	24	10	10	10	2	4		48	48	10	1844	ΙE	oru
European Union	IT	4.	522 37	4 10	517	501	928 1	461	119	1502	40	689	253	264	424	777	1554	11025	36	14	136	17	68	4	6	2	105	45	35	43	29	14	. 3	212	391	140	12325	IT	European
)ea	LU		33 1	14	162	29	64	74	12	40	5	24	29	20	65	89	66	726	6	3	7	3	7	4	3	0	5	6	4	4	0	2		4	6	6	796	LU	<u> </u>
[2	NL	4	419 37	2 12	235 2	251	488	836	122	689	24	595	207	178	279	494	1161	7350	27	4	101	34	74	7	3	0	87	21	32	41	4	15	2	187	261	89	8339	NL	Unio
豆	AT		112 9	92 5	596	114	210	317	37	253	29	207	183	87	162	231	350	2980	23	3	47	17	53	4	2	0	33	37	31	30	3	10	4	94	129	13	3513	AT	Ħ
	PT		104 8	38 4	478	100	319	427	43	264	20	178	87	160	151	246	398	3063	11	4	42	5	25	4	4	0	24	15	14	12	6	7	2	50	69	29	3386	PT	
	FI	3	305 18	30 10	020	125	551	534	74	424	65	279	162	151	225	756	884	5735	25	1	71	16	32	7	12	0	51	15	22	21	3	17	C	105	99	26	6258	FI	
	SV	4	408 31	7 14	415 2	211	654	825	103	777	89	494	231	246	756	369	1213	8108	8	2	71	43	36	9	11	0	64	15	17	18	0	20	1	166	161	50	8800	SV	
	UK	1	746 69	2 24	148 5	555	1480 2	259	314	1554	66	1161	350	398	884	1213	1850	15970	55	15	190	34	109	23	14	0	166	54	58	77	24	31	4	514	492	183	18013	UK	
	Tot	55	515 401	016	735 42	289	949614	284	1616	11025	726	7350	2980	3063	5735	8108	15970	61018	448	143	1434	289	905	130	127	9 1	157	421	451	531	187	243	24	2603	3670	1144	74934	Tot.	
	BG		11	8	80	49	68	37	4	36	6	27	23	11	25	8	55	448	24	4	18	2	13	3	3	0	9	28	15	11	3	1	(	7	14	6	609	BG	
	CY		8	2	22	36	7	19	3	14	3	4	3	4	1	2	15	143	4	4	3	2	4	2	3	2	3	5	2	5	1	2		5	4	15	209	CY	
	CZ		105 4	13 2	290	77	89	143	22	136	7	101	47	42	71	71	190	1434	18	3	90	11	31	5	4	0	42	12	29	15	1	1	0	25	44	6	1771	CZ	
S.	EE		9 2	20	33	9	18	24	7	17	3	34	17	5	16	43	34	289	2	2	11	26	7	13	4	0	13	2	4	7	0	2		20	11	5	418	EE	C
ţŢ	HU		51 4	15	190	31	55	112	17	68	7	74	53	25	32	36	109	905	13	4	31	7	31	4	4	1	24	22	17	17	1	2		15	28	18	1144	HU	Candidate
E	LV		3	9	28	4	7	13	4	4	4	7	4	4	7	9	23	130	3	2	5	13	4	3	6	0	6	4	3	4	0	4		1	5	7	200	LV	lide
o p	LT		4	5	20	11	8	19	5	6	3	3	2	4	12	11	14	127	3	3	4	4	4	6	4	1	9	5	3	3	2	1	C	5	4	4	192	LT	te:
ate	MT		3	1	0	2	0	1	0	2	0	0	0	0	0	0	0	9	0	2	0	0	1	0	1	0	1	1	0	0	1	0	0	0	2	0	18	MT	and
ioci	PL		61 5	58	197	59	66	157	24	105	5	87	33	24	51	64	166	1157	9	3	42	13	24	6	9	1	56	11	15	14	2	3	0	46	31	14	1456	PL	as
ass	RO		27 1	17	54	33	30	42	10	45	6	21	37	15	15	15	54	421	28	5	12	2	22	4	5	1	11	32	12	8	1	1	1	9	13	3	591	RO	SOC.
Candidate and associated countries	SK		23 2	24	84	24	36	37	10	35	4	32	31	14	22	17	58	451	15	2	29	4	17	3	3	0	15	12	24	8	0	1	1	9	18	3	615	SK	associated
te	SI		30 2	24	90	35	36	60	10	43	4	41	30	12	21	18	77	531	11	5	15	7	17	4	3	0	14	8	8	32	1	2	1	. 17	21	10	707	SI	d c
lida	TR		2	1	9	33	18	53	2	29	0	4	3	6	3	0	24	187	3	1	1	0	1	0	2	1	2	1	0	1	2	0	C	1	7	2	212	TR	countrie
and	IS		8 1	12	32	5	25	41	4	14	2	15	10	7	17	20	31	243	1	1	2	2	2	4	1	0	2	1	1	2	0	27	(	30	9	3	331	IS	<u> 5</u> .
Ü	LI		0	1	1	1	2	3	0	3	0	2	4	2	0	1	4	24	0	0	0	0	0	0	0	0	0	1	1	1	0	0	1	1	2	0	31	LI	S
	NO	L	111 12	27 3	343	125	166	351	48	212	4	187	94	50	105	166	514	2603	7	3	26	20	15	1	5	0	46	9	9	17	1	30	1	217	70	16	3096	NO	
	CH		191 10	)2 (	563	169	260	629	48	391	6	261	129	69	99	161	492	3670	14	4	44	11	28	5	4	2	31	13	18	21	7	9	2	70	175	34	4162	CH	
	IL		37 3	36 2	204	75	93	153	10	140	6	89	13	29	26	50	183	1144	6	15	6	5	18	7	4	0	14	3	3	10	2	3	0	16	34	72	1362	IL	
T	otal	61	199 454	5190	075 50	671	048016	178	1844	12325	796	8339	3513	3386	6258	8800	18013	74934	609	206	1773	418	1144	200	192	18 14	455	591	615	707	212	332	31	3097	4162	1362	76948	Tot	al
-		В	E DK	C D	E E	L	ES I	R	ΙE	IT	LU	NL	AT	PT	FI	SV	UK	Tot	BG	CY	CZ	EE	HY	LV	LT	MT P	L	RO	SK	SI	TR	IS	LI	NO	СН	IL	To		
			ı	-	-					Eur	opean	Union													Cand	idate an	d ass	ociate	d coun	tries			I.	1			Total		

TABLE 7: FUNDING OF 5TH FRAMEWORK PROGRAMME

	Amount 1999-2002	Commitment 2000
Quality of life and management of living resources	2413	568,6
User-friendly information society	3600	876,3
Competitive and sustainable growth	2705	652,1
Energy, environment and sustainable development	2125	485,4
Environment and sustainable development	1083	250,6
Energy	1042	234,8
Confirming the international role of Community research	475	115,7
Promotion of innovation and encouragement of SME participation	363	99,9
Improving human research potential and the socio- economic knowledge base	1280	309,1
Direct action (JRC)	739	187,5
Total for 5th EC Framework Programme	13700	3294,7
Controlled thermonuclear fusion	788	181,8
Nuclear fission	191	84,8
Direct action (JRC)	281	72,5
Total for 5th Euratom Framework Programme	1260	339,1
TOTAL for 5th EC + Euratom Framework Programmes	14960	3633,7

TABLE 8A: COMMUNITY RESEARCH COMMITMENTS OVER THE PERIOD 1984-2002 (CURRENT PRICES)

Situation on 4.07.01

YEARS	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	00	$01^{30}$	$02^{31}$	TOTALS
FP 1984-87	593,0	735,0	874,0	701,8	260,8	101,1	4,9													3270,6
FP 1987-91				188,1	810,6	1241,3	1596,9	1270,7	230,9	14,8	3,9	0,2								5357,4
FP 1990-94								296,0	2160,5	2079,5	2014,7	1,0								6551,7
FP 1994-98 <sup>32</sup>												2982,5	3153,5	3485,6	3499,3					13120,9
FP 1998-02																3325,1	3633,7	3920,0	4055,0	14933,8
RTD PROGRAMMES	593,0	735,0	874,0	889,9	1071,4	1342,4	1601,8	1566,7	2391,4	2094,3	2018,6	2983,7	3153,5	3485,6	3499,3	3325,1	3633,7	3920,0	4055,0	43234,4
PAS				49,4	56,6	69,8	113,1	168,8	308,4	440,2	571,8	2,1								1780,2
RTD + PAS	593,0	735,0	874,0	939,3	1128,0	1412,2	1714,9	1735,5	2699,8	2534,5	2590,4	2985,8	3153,5	3485,6	3499,3	3325,1	3633,7	3920,0	4055,0	45014,6
SPRINT							16,0	16,0	17,0											49,0
ECSC							17,5	17,5	17,5	17,5	17,5									87,5
80% of THERMIE							36,0	118,4	128,9	139,2	145,6									568,1
Total Research <sup>33</sup>	593,0	735,0	874,0	939,3	1128,0	1412,2	1784,4	1887,4	2863,2	2691,2	2753,5	2985,8	3153,5	3485,6	3499,3	3325,1	3633,7	3920,0	4055,0	45719,2
	4	269 i.e. 2	2.42% of the	he Budget																
			ĺ		7151 i.a. 3	18% of t	he Budget													
			Ĺ	•	131 1.6. 3	.16% 01 t	ile Budget													
							1	1000: 0	4.05% of 1	ha Dudaa										
						ļ	1	1980 I.e.	4.03% 011	ne buage	ι									
											1	5070:0	4.020/ of	ha Dudaa		i				
											J	36/6 l.e.	4.02% of t	ne buage	ι					
																19/22; ~	2 070/ -4	the Budge		
																10433 1.8.	3.91% OI	me budge	ι	

EC BUDGET (current prices)	28905	29925	35842	38392	43080	42569	45057	56111	61232	67760	65929	75355	82125	85028	86523	91604	91667	94551	99551
RTD programme as % of Budget	2,1	2,5	2,4	2,3	2,5	3,2	3,6	2,8	3,9	3,1	3,1	4,0	3,8	4,1	4,0	3,6	4,0	4,1	4,1
Total research as % of Budget	2,1	2,5	2,4	2,4	2,6	3,3	4,0	3,4	4,7	4,0	4,2	4,0	3,8	4,1	4,0	3,6	4,0	4,1	4,1

Budget for 2001.
Estimates for 2002.
The amounts for the 1994-98 FP are those adopted following EU enlargement.
RDT + THERMIE + ECSC + SPRINT + PAS.

TABLE 8B: COMMUNITY RESEARCH COMMITMENTS OVER THE PERIOD 1984-2002 (CONSTANT 2000 PRICES)

Situation on 4.07.2001

84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	00	$01^{-34}$	$02^{35}$	TOTALS
986,7	1153,8	1326,3	1030,5	369,9	136,4	6,3													5009,9
			276,2	1149,8	1675,2	2063,2	1561,1	274,2	17,3	4,5	0,2								7021,7
							363,6	2565,9	2435,0	2315,7	1,1								7681,3
											3385,4	3465,4	3727,9	3679,6					14258,3
															3413,9	3633,7	3850,7	3906,6	14804,9
986,7	1153,8	1326,3	1306,7	1519,7	1811,6	2069,5	1924,7	2840,1	2452,3	2320,2	3386,7	3465,4	3727,9	3679,6	3413,9	3633,7	3850,7	3906,6	48776,1
			72,5	80,3	94,2	146,1	207,4	366,3	515,5	657,2	2,4								2141,9
986,7	1153,8	1326,3	1379,2	1600,0	1905,8	2215,6	2132,1	3206,4	2967,8	2977,4	3389,1	3465,4	3727,9	3679,6	3413,9	3633,7	3850,7	3906,6	50918,0
						20,7	19,7	20,2											60,6
						22,6	21,5	20,8	20,5	20,1									105,5
						46,5	145,5	153,1	163,0	167,4									675,5
986,7	1153,8	1326,3	1379,2	1600,0	1905,8	2305,4	2318,8	3400,5	3151,3	3164,9	3389,1	3465,4	3727,9	3679,6	3413,9	3633,7	3850,7	3906,6	51759,6
i								i i											
(	5446 i.e. 2	2.41% of the	he Budget					•											
								;											
			9	9509 i.e. 3	.15% of t	he Budget	t												
						1	4341 i.e.	4.04% of t	he Budge	t									
										1	7427 i.e.	4.02% of t	he Budge	t					
														1	8485 i.e. 3	3.97% of	he Budge	t	
	986,7 986,7 986,7	986,7 1153,8 986,7 1153,8 986,7 1153,8 986,7 1153,8	986,7 1153,8 1326,3 986,7 1153,8 1326,3 986,7 1153,8 1326,3 986,7 1153,8 1326,3	986,7 1153,8 1326,3 1030,5 276,2  986,7 1153,8 1326,3 1306,7 72,5 986,7 1153,8 1326,3 1379,2  986,7 1153,8 1326,3 1379,2  986,7 1153,8 1326,3 1379,2	986,7 1153,8 1326,3 1030,5 369,9 276,2 1149,8 986,7 1153,8 1326,3 1306,7 1519,7 72,5 80,3 986,7 1153,8 1326,3 1379,2 1600,0 986,7 1153,8 1326,3 1379,2 1600,0 6446 i.e. 2.41% of the Budget	986,7 1153,8 1326,3 1030,5 369,9 136,4 1675,2 1149,8 1149,8 1675,2 1149,8 1149,	986,7 1153,8 1326,3 1030,5 369,9 136,4 6,3 276,2 1149,8 1675,2 2063,2	986,7 1153,8 1326,3 1030,5 369,9 136,4 6,3 276,2 1149,8 1675,2 2063,2 1561,1 363,6 3	986,7 1153,8 1326,3 1030,5 369,9 136,4 6,3 276,2 1149,8 1675,2 2063,2 1561,1 274,2 363,6 2565,9 363,6 2565,9 363,6 2565,9 36446 i.e. 2.41% of the Budget 9509 i.e. 3.15% of the Budget	986,7 1153,8 1326,3 1030,5 369,9 136,4 6,3 276,2 1149,8 1675,2 2063,2 1561,1 274,2 17,3 363,6 2565,9 2435,0 363,6 2565,9 2435,0	986,7 1153,8 1326,3 1030,5 369,9 136,4 6,3 363,6 2565,9 2435,0 2315,7 363,6 2565,9 2435,0 2315,7 363,6 2565,9 2435,0 2315,7 363,6 2565,9 2435,0 2315,7 363,6 2565,9 2435,0 2315,7 363,6 2565,9 2435,0 2315,7 363,6 2565,9 2435,0 2315,7 363,6 2565,9 2435,0 2315,7 363,6 2565,9 2435,0 2315,7 363,6 2565,9 2435,0 2315,7 363,6 2565,9 2435,0 2315,7 363,6 2565,9 2435,0 2315,7 363,6 2565,9 2435,0 2315,7 363,6 2565,9 2435,0 2315,7 363,6 2565,9 2435,0 2315,7 366,3 2565,9 2435,0 2315,7 366,3 2565,2 266,2 267,4 267,	986,7 1153,8 1326,3 1030,5 369,9 136,4 6,3 276,2 1149,8 1675,2 2063,2 1561,1 274,2 17,3 4,5 0,2 363,6 2565,9 2435,0 2315,7 1,1 38,5 1326,3 1306,7 1519,7 1811,6 2069,5 1924,7 2840,1 2452,3 2320,2 3386,7 1153,8 1326,3 1379,2 1600,0 1905,8 2215,6 2132,1 3206,4 2967,8 2977,4 3389,1 20,7 19,7 20,2 20,1 22,6 21,5 20,8 20,5 20,1 2986,7 1153,8 1326,3 1379,2 1600,0 1905,8 2305,4 2318,8 3400,5 3151,3 3164,9 3389,1 6446 i.e. 2.41% of the Budget	986,7 1153,8 1326,3 1030,5 369,9 136,4 6,3 276,2 1149,8 1675,2 2063,2 1561,1 274,2 17,3 4,5 0,2 3385,4 3465,4 363,6 2565,9 2435,0 2315,7 1,1 3385,4 3465,4 3385,4 3465,4 3385,4 3465,4 3385,4 3465,4 3385,4 3465,4 3385,4 3465,4 3385,4 3465,4 3385,4 3465,4 3385,4 3465,4 3385,4 3465,4 3385,4 3465,4 3385,4 3465,4 3385,4 3465,4 3	986,7 1153,8 1326,3 1030,5 369,9 136,4 6,3 276,2 1149,8 1675,2 2063,2 1561,1 274,2 17,3 4,5 0,2 363,6 2565,9 2435,0 2315,7 1,1 3385,4 3465,4 3727,9 986,7 1153,8 1326,3 1306,7 1519,7 1811,6 2069,5 1924,7 2840,1 2452,3 2320,2 3386,7 3465,4 3727,9 72,5 80,3 94,2 146,1 207,4 366,3 515,5 657,2 2,4 986,7 1153,8 1326,3 1379,2 1600,0 1905,8 2215,6 2132,1 3206,4 2967,8 2977,4 3389,1 3465,4 3727,9 20,7 19,7 20,2 22,6 21,5 20,8 20,5 20,1 986,7 1153,8 1326,3 1379,2 1600,0 1905,8 2305,4 2318,8 3400,5 3151,3 3164,9 3389,1 3465,4 3727,9 986,7 1153,8 1326,3 1379,2 1600,0 1905,8 2305,4 2318,8 3400,5 3151,3 3164,9 3389,1 3465,4 3727,9 14341 i.e. 4.04% of the Budget	986,7 1153,8 1326,3 1030,5 369,9 136,4 6,3 276,2 1149,8 1675,2 2063,2 1561,1 274,2 17,3 4,5 0,2 363,6 2565,9 2435,0 2315,7 1,1 3385,4 3465,4 3727,9 3679,6 367,7 1153,8 1326,3 1306,7 1519,7 1811,6 2069,5 1924,7 2840,1 2452,3 2320,2 3386,7 3465,4 3727,9 3679,6 286,7 1153,8 1326,3 1379,2 1600,0 1905,8 2215,6 2132,1 3206,4 2967,8 2977,4 3389,1 3465,4 3727,9 3679,6 22,6 21,5 20,8 20,7 19,7 20,2 22,6 21,5 20,8 20,5 20,1 22,6 21,5 153,1 163,0 167,4 986,7 1153,8 1326,3 1379,2 1600,0 1905,8 2305,4 2318,8 3400,5 3151,3 3164,9 3389,1 3465,4 3727,9 3679,6 14341 i.e. 4.04% of the Budget	986,7 1153,8 1326,3 1030,5 369,9 136,4 6,3 363,6 2565,9 2435,0 2315,7 1,1 338,4 3465,4 3727,9 3679,6 3413,9 986,7 1153,8 1326,3 1379,2 1600,0 1905,8 2215,6 2132,1 320,4 2967,8 2977,4 3389,1 3465,4 3727,9 3679,6 3413,9 986,7 1153,8 1326,3 1379,2 1600,0 1905,8 2305,4 145,5 153,1 163,0 167,4 986,7 1153,8 1326,3 1379,2 1600,0 1905,8 2305,4 2318,8 3400,5 3151,3 3164,9 3389,1 3465,4 3727,9 3679,6 3413,9 986,7 1153,8 1326,3 1379,2 1600,0 1905,8 2305,4 2318,8 3400,5 3151,3 3164,9 3389,1 3465,4 3727,9 3679,6 3413,9 986,7 1153,8 1326,3 1379,2 1600,0 1905,8 2305,4 2318,8 3400,5 3151,3 3164,9 3389,1 3465,4 3727,9 3679,6 3413,9 986,7 1153,8 1326,3 1379,2 1600,0 1905,8 2305,4 2318,8 3400,5 3151,3 3164,9 3389,1 3465,4 3727,9 3679,6 3413,9 986,7 1153,8 1326,3 1379,2 1600,0 1905,8 2305,4 2318,8 3400,5 3151,3 3164,9 3389,1 3465,4 3727,9 3679,6 3413,9 986,7 1153,8 1326,3 1379,2 1600,0 1905,8 2305,4 2318,8 3400,5 3151,3 3164,9 3389,1 3465,4 3727,9 3679,6 3413,9 986,7 1153,8 1326,3 1379,2 1600,0 1905,8 2305,4 2318,8 3400,5 3151,3 3164,9 3389,1 3465,4 3727,9 3679,6 3413,9 986,7 1153,8 1326,3 1379,2 1600,0 1905,8 2305,4 2318,8 3400,5 3151,3 3164,9 3389,1 3465,4 3727,9 3679,6 3413,9 986,7 1153,8 1326,3 1379,2 1600,0 1905,8 2305,4 2318,8 3400,5 3151,3 3164,9 3389,1 3465,4 3727,9 3679,6 3413,9 986,7 1153,8 1326,3 1379,2 1600,0 1905,8 2305,4 2318,8 3400,5 3151,3 3164,9 3389,1 3465,4 3727,9 3679,6 3413,9 986,7 1153,8 1326,3 1379,2 1600,0 1905,8 2305,4 2318,8 3400,5 3151,3 3164,9 3389,1 3465,4 3727,9 3679,6 3413,9 986,7 1153,8 1326,3 1379,2 1600,0 1905,8 2305,4 2318,8 3400,5 3151,3 3164,9 3389,1 3465,4 3727,9 3679,6 3413,9 986,7 1153,8 1326,3 1379,2 1600,0 1905,8 2305,4 2318,8 3400,5 3151,3 3164,9 3389,1 3465,4 3727,9 3679,6 3413,9 986,7 1153,8 1326,3 1379,2 1600,0 1905,8 2305,4 2318,8 3400,5 3151,3 3164,9 3389,1 3465,4 3727,9 3679,6 3413,9 986,7 1153,8 1326,3 1379,2 1600,0 1905,8 2305,4 2318,8 3400,5 3151,3 3164,9 3389,1 3465,4 3727,9 3679,6 3413,9 986,7 1153,8 1326,3 1379,2 1600,0 1905,8 2305,4 2318,8 3400,5 3151,3 3164,9 3389,1 3465,4 3	986,7 1153,8 1326,3 1030,5 369,9 136,4 6,3 276,2 1149,8 1675,2 2063,2 1561,1 274,2 17,3 4,5 0,2 363,6 2565,9 2435,0 2315,7 1,1 3385,4 3465,4 3727,9 3679,6 3413,9 3633,7 369,6 1153,8 1326,3 1379,2 1600,0 1905,8 2215,6 213,2 10,8 20,8 20,5 20,1 3646 i.e. 2.41% of the Budget 9509 i.e. 3.15% of the Budget 14341 i.e. 4.04% of the Budget 17427 i.e. 4.02% of the Budget 17427 i.e. 4.02% of the Budget	986,7 1153,8 1326,3 1030,5 369,9 136,4 6,3 363,6 2565,9 2435,0 2315,7 1,1 385,4 3465,4 3727,9 3679,6 3413,9 3633,7 3850,7 3867,1 153,8 1326,3 1306,7 1519,7 1811,6 2069,5 1924,7 2840,1 2452,3 2320,2 3386,7 3465,4 3727,9 3679,6 3413,9 3633,7 3850,7 3867,6 1153,8 1326,3 1379,2 1600,0 1905,8 2215,6 2132,1 3206,4 2967,8 2977,4 3389,1 3465,4 3727,9 3679,6 3413,9 3633,7 3850,7 20,7 19,7 20,2 215,5 20,8 20,5 20,1 386,4 3727,9 3679,6 3413,9 3633,7 3850,7 3867,1 153,8 1326,3 1379,2 1600,0 1905,8 2315,6 145,5 153,1 163,0 167,4 386,4 3727,9 3679,6 3413,9 3633,7 3850,7 386,7 1153,8 1326,3 1379,2 1600,0 1905,8 2305,4 2318,8 3400,5 3151,3 3164,9 3389,1 3465,4 3727,9 3679,6 3413,9 3633,7 3850,7	986,7 1153,8 1326,3 1300,5 369,9 136,4 6,3 276,2 1149,8 1675,2 2063,2 1561,1 274,2 17,3 4,5 0,2 3835,4 3465,4 3727,9 3679,6 3413,9 3633,7 3850,7 3906,6 986,7 1153,8 1326,3 1379,2 1600,0 1905,8 2215,6 2132,1 3206,4 2967,8 2977,4 3389,1 3465,4 3727,9 3679,6 3413,9 3633,7 3850,7 3906,6 986,7 1153,8 1326,3 1379,2 1600,0 1905,8 2215,6 2132,1 3206,4 2967,8 2977,4 3389,1 3465,4 3727,9 3679,6 3413,9 3633,7 3850,7 3906,6 120,0 120,

EC BUDGET (2000 prices)	48095	46978	54388	56376	61106	57448	58213	68932	72722	79344	75780	85533	90247	90939	90981	94049	91667	92879	95907
RTD programmes as % of Budget	2,1	2,5	2,4	2,3	2,5	3,2	3,6	2,8	3,9	3,1	3,1	4,0	3,8	4,1	4,0	3,6	4,0	4,1	4,1
Total research as % of Budget	2,1	2,5	2,4	2,4	2,6	3,3	4,0	3,4	4,7	4,0	4,2	4,0	3,8	4,1	4,0	3,6	4,0	4,1	4,1
Deflation factors <sup>38</sup>	0,601	0,637	0,659	0,681	0,705	0,741	0,774	0,814	0,842	0,854	0,87	0,881	0,91	0,935	0,951	0,974	1,000	1,018	1,038
Annual inflation (%)		6,0	3,5	3,3	3,6	5,1	4,5	5,2	3,5	1,4	1,9	1,3	3,3	2,7	1,7	2,4	2,7	1,8	2,0

Budget for 2001.
Estimates for 2002.
The amounts for the 1994-98 FP are those adopted following EU enlargement.
RDT + THERMIE + ECSC + SPRINT + PAS.

The deflation factors used from 1995 take account of the enlargement of the Union from 12 to 15 Member States (COM(96)65).

TABLE 9: COUNTRY CODES

Europ	ean Union
BE	Belgium
DK	Denmark
DE	Germany
EL	Greece
ES	Spain
FR	France
IE	Ireland
IT	Italy
LU	Luxembourg
NL	Netherlands
AT	Austria
PT	Portugal
FI	Finland
SV	Sweden
UK	United Kingdom
Candidate countries	and associated countries
BG	Bulgaria
CY	Cyprus
CZ	Czech Republic
EE	Estonia
HU	Hungary
LV	Latvia
LT	Lithuania
MT	Malta
PL	Poland
RO	Romania
SK	Slovakia
SI	Slovenia
TR	Turkey
IS	Iceland
LI	Liechtenstein
NO	Norway
СН	Switzerland
IL	Israel

## **ANNEX II:** Main documents of relevance to Community research activities

## COM(2000) 6 of 18 January 2000:

Communication from the Commission to the Council, the European Parliament, the Economic and Social Committee and the Committee of the Regions "Towards a European research area"

## COM(2000) 567 of 20 September 2000:

Communication from the Commission to the Council and the European Parliament "Innovation in a knowledge-driven economy"

#### COM(2000) 612 of 4 October 2000:

Communication from the Commission to the Council, the European Parliament, the Economic and Social Committee and the Committee of the Regions "Making a reality of the European Research Area: Guidelines for EU research activities (2002-2006)"

# COM(2001) 94 of 21 February 2001:

Proposal for a Decision of the European Parliament and of the Council concerning the multiannual framework programme 2002-2006 of the European Community for research, technological development and demonstration activities aimed at contributing towards the creation of the European Research Area

Proposal for a Council Decision concerning the multiannual framework programme 2002-2006 of the European Atomic Energy Community (Euratom) for research and training activities aimed at contributing towards the creation of the European Research Area

## COM(2001) 279 of 30 May 2001:

Proposals for Council Decisions concerning the specific programmes for implementing the Framework Programme 2002-2006 of the European Community for research, technological development and demonstration activities

Proposals for Council Decisions concerning the specific programmes for implementing the Framework Programme 2002-2006 of the European Atomic Energy Community for research and training activities

## COM(2001) 282 of 30 May 2001:

Communication from the Commission to the Council and the European Parliament "The Framework Programme and the European Research Area: application of Article 169 and the networking of national programmes"

#### COM(2001) 331 of 20 June 2001:

Communication from the Commission to the Council and the European Parliament "A mobility strategy for the European Research Area"

## COM(2001) 346 of 25 June 2001:

Communication from the Commission "The international dimension of the European Research Area"

## COM(2001) 549 of 3 October 2001

Communication from the Commission "The regional dimension of the European Research Area"

## SEC(2000) 1973 of 14 November 2000:

Commission staff working paper "Science, society and the citizen in Europe"

# SEC(2001) 356 of 27 February 2001:

Commission staff working paper "A European Research Area for infrastructures"

## SEC(2001) 771 of 15 May 2001:

Commission staff working paper "Women and Science: the gender dimension as a leverage for reforming science"

## SEC(2001) 1002 of 20 June 2001:

Commission staff working paper "Progress report on benchmarking of national research policies"

## COM(2001) 500 of 10 September 2001:

Proposal for a Decision of the European Parliament and of the Council concerning the rules for the participation of undertakings, research centres and universities and for the dissemination of research results for the implementation of the European Community framework programme 2002-2006