Opinion of the European Economic and Social Committee on the

Proposal for a Council Decision concerning the Specific Programme to be carried out by means of direct actions by the Joint Research Centre under the 7th Framework Programme of the European Community for research, technological development and demonstration activities (2007-2013)

Proposal for a Council Decision concerning the Specific Programme 'Cooperation' implementing the 7th Framework Programme (2007-2013) of the European Community for research, technological development and demonstration activities

Proposal for a Council Decision Concerning the specific programme: 'Ideas' implementing the 7th Framework Programme (2007-2013) of the European Community for research, technological development and demonstration activities

Proposal for a Council Decision concerning the specific programme 'People' implementing the 7th Framework Programme (2007-2013) of the European Community for research, technological development and demonstration activities

Proposal for a Council Decision on the Specific Programme: 'Capacities' implementing the 7th Framework Programme (2007-2013) of the European Community for research, technological development and demonstration activities

Proposal for a Council Decision concerning the Specific Programme to be carried out by means of direct actions by the Joint Research Centre implementing the 7th Framework Programme (2007-2011) of the European Atomic Energy Community (Euratom) for nuclear research and training activities

Proposal for a Council Decision concerning the specific Programme implementing the 7th Framework Programme (2007-2011) of the European Atomic Energy Community (Euratom) for nuclear research and training activities

COM(2005) 439, 440, 441, 442, 443, 444, 445 final

(2006/C 185/02)

On 14 November 2005, the Council decided to consult the European Economic and Social Committee, under Article 166 of the Treaty establishing the European Community, on the abovementioned proposal.

The Section for the Single Market, Production and Consumption, which was responsible for preparing the Committee's work on the subject, adopted its opinion on 28 March 2006. The rapporteur was Mr Wolf, the co-rapporteur was Mr Pezzini.

At its 426th plenary session, held on 20-21 April 2006 (meeting of 20 April), the European Economic and Social Committee adopted the following opinion by 132 votes to two:

1. **Summary**

1.1 The Commission's proposals concern the research content and themes of the proposed seventh research and development programme (2007-2013) and seventh Euratom framework programme (2007-2011); the Committee has already commented on the Commission's earlier proposals for these programmes. The present Committee opinion therefore complements the previous opinion on the two framework programmes.

1.2 In its previous opinion, the Committee recommended making the urgently needed R&D investments proposed by the Commission available in full and not allowing them to become a pawn in — or fall victim to — the negotiations on the EU's future overall budget.

1.3 Clearly, the objective set out in the Lisbon strategy of making Europe the world's leading economy calls for a substantial increase in R&D investment. Europe is competing in this respect not only with countries such as the USA, Japan and Korea, but also with China, India and Brazil. The United States and Japan in particular have made R&D investment a national priority for strengthening their international competitiveness, and have made the requisite funding available. Hence, in view of ongoing global developments, the objective of investing 3 % of EU GDP in research and development, which was set by the Barcelona European Council in support of the Lisbon strategy and which has not yet been achieved, is a moving target. Late achievement of this target will mean that the EU is still lagging behind.

1.4 In view of the overall EU budget which the Council has adopted since then and its implications for the research budget, the Committee therefore reiterates its further recommendation that R&D be given a substantially higher share than hitherto — i.e. about 8 % — and that the increase envisaged in the Council decision should be introduced at an earlier stage instead of waiting for seven years.

1.5 At the heart of the Commission's proposals is the 'cooperation' specific programme. The Committee supports funding for the important research themes included in the programme such as energy, health, information technology, nanotechnology, the environment, transport, socio-economic sciences and the humanities, as well as the new themes of space and security. Chapter 4 includes detailed comments on the programme, and recommends an increased share of funding for individual areas.

1.6 In general, the Committee recommends providing as much scope for flexibility as possible, rather than rigidly allocating budgetary resources to the various themes. This should enable the Commission to respond promptly and without additional political measures during the implementation of the programme to any shifts in emphasis during the period, to new issues which arise or to necessary restructuring in view of the cross-cutting nature of many of the programme's themes.

1.7 The Committee reiterates its support for the 'ideas' specific programme. It feels that the main challenges presented by the programme, apart from securing adequate funding, lie in the selection of proposals for projects and in the management of the programme. The Committee is pleased to note that the independent European Research Council (ERC) will be put in charge of these demanding tasks.

1.8 The Committee has stressed on several occasions that the key to successful and competitive European R&D lies not only in cutting-edge equipment, funding and adequate general conditions, but also in sufficient highly qualified and creative scientists. The 'people' specific programme covers measures enabling the Commission to pursue this goal. The Committee strongly supports these measures. In addition, the Committee would refer to its earlier comments on the European Charter for Researchers published by the Commission.

1.9 The 'cooperation' specific programme is a particularly good example of the Community's 'subsidiary' roles. This mainly concerns research infrastructures — such as large apparatus, scientific instruments and computers — whose costs and potential exceed the capacities of individual Member States. The 'research for SMEs' sub-programme, which is included under 'capacities', ties in with previous Committee recommendations to involve SMEs more closely in innovation.

1.10 In conclusion, the Committee refers to its earlier recommendation to drastically cut red tape for applicants, to simplify procedures and at the same time to ensure maximum continuity in support instruments and award procedures.

2. **Introduction**

2.1 The **Commission's** proposals, set out in seven separate documents, complement its proposal [1] on the 7th R&D framework programme (2007-2013) and the 7th Euratom framework programme (2007-2011), and they contain **detailed information on the research content and themes of the support measures** provided for.

2.1.1 Hence, this **EESC opinion** is a **brief adjunct to the existing opinion** [2] on the 7th R&D framework programme (2007-2013) and the Euratom programme (2007-2011), and to the observations and recommendations set out therein.

2.1.2 Hence, this opinion is **mainly concerned with research content, rather than structures and instruments**. For example, the opinion does not return to the important issue of optimising the innovation triangle — basic research, applied research and development — nor to the recommendation that in future the Commission officials supervising the project should continue to be experts with research experience and close familiarity with the relevant specialised theme, a requirement which entails sufficient continuity in terms of staffing. These arguments have been covered in detail in earlier opinions [3].

2.1.3 However, one important aspect should be mentioned at the outset, concerning the **budgetary allocation** to or subdivision of individual programme elements. The Committee has already recommended providing **as much scope for flexibility as possible** here, enabling the Commission to respond promptly and without additional political measures during the implementation of the programme to any shifts in emphasis during the period, to new issues or to necessary restructuring in view of the cross-cutting nature of many of the programme's themes.

2.2 The Commission had proposed an increase in the budgets of the two framework programmes to a total of EUR 72.7 billion [4]. This would still be less than 8 % of the proposed total EU budget for 2007 — 2013 of EUR 1025 billion. In the EESC opinion on the seventh R&D framework programme referred to above, the Committee recommended making the urgently needed R&D investments proposed by the Commission available in full and not allowing them to become a pawn in — or fall victim to — the negotiations on the EU's future overall budget.

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[1] COM(2005) 119 final./2 - 2005/0043 (COD) - 2005/0044 (CNS).
[2] OJ C 65, 17.3.2006.
[3] OJ C 157, 28.6.2005, *Guidelines for future European policy to support research*, and OJ C 65, 17.3.2006.
[4] At 2005 prices without allowing for inflation; depending on indexation for inflation, various figures have been quoted.

2.2.1 However, on 19 December 2005, the European Council agreed to a total EU budget of only EUR 862.4 ([5]) billion. As a result, the EU research budget might also be significantly lower ([6]) than that proposed by the Commission, although *'the European Council ([7]) believes that EU funding for research should be increased such that by 2013 the resources available are around 75 % higher in real terms than in 2006'*. The Commission will draw up a revised proposal, in line with this figure. As a result, the political decision-making process on the two framework programmes is not yet finished.

2.2.2 Clearly, the objective set out in the Lisbon strategy of developing Europe as the world's leading economy calls for a substantial increase in R&D investment. Europe is competing in this respect not only with countries such as the USA, Japan and Korea, but also with China, India and Brazil. The United States and Japan in particular have made R&D investment a national priority for strengthening their international competitiveness, and have made the requisite funding available. Hence, in view of ongoing global developments, the objective of investing 3 % of EU GDP in research and development, which was set by the Barcelona European Council in support of the Lisbon strategy and which has not yet been achieved, is a moving target. Late achievement of this target will mean that the EU is still lagging behind.

2.3 In view of the current situation, the Committee feels that it is necessary once again to quote from the opinion referred to above, and reiterates its comments that (i) 'effective, high-quality research and development that enjoys an adequate level of support is in fact the basic foundation and sine qua non for innovation, competitiveness and prosperity, and thus also for cultural development and the provision of social services', (ii) 'the Commission's proposal … is a **minimum amount that must be increased still further in the longer term so as not to gamble away — but rather to maintain and strengthen — Europe's position as the cradle of modern science and technology**', and (iii) '**without such action, it will not be possible, even in the longer term, to meet the Lisbon objectives**'.

2.4 The Committee also reiterates its comment that European cooperation on research and development is an **effective catalyst for European integration and cohesion**. Given that the European Union is currently struggling to secure public support for its constitution, this is a particularly important consideration. It should also be mentioned that an adequate level of R&D is crucial not only for achieving the Lisbon objectives but also for dealing with current issues and problems in areas such as health, energy supplies and the environment.

2.5 The Committee would therefore reaffirm its recommendation that within the **overall EU budget** which has been decided on, R&D should be given a substantially higher share than hitherto — i.e. **about 8 %** — and that the increase envisaged in the Council decision should be introduced at an earlier stage instead of waiting for seven years.

2.6 The Committee acknowledges the Commission's proposal ([8]) to establish a **European Institute of Technology (EIT)**. Without going into the details of this proposal here, it should be pointed out that the requisite expenditure on this proposal ought certainly not to be charged to the budget for the specific programmes discussed in this opinion.

2.7 The Committee also refers to its earlier recommendation to **drastically cut red tape for applicants**, **to simplify procedures** and at the same time to ensure maximum continuity in support instruments and award procedures. The Committee will set out its views on this matter in greater detail in its comments on the Commission's proposals concerning 'rules for participation' ([9]).

3. **Gist of the Commission's proposals** ([10])

3.1 The Commission's proposals set out and define all areas of research and development under the 7th framework programme and the Euratom programme, i.e. the full range of research themes, content, methods and tools. There are also proposals concerning the contribution to be made to these activities by the Joint Research Centre. In addition the proposals outline measures to secure and consolidate the human resources required. Altogether there are seven Commission documents which also include very detailed information on the individual sub-programmes.

3.2 The structure of these sub-programmes is summarised as follows, with percentage shares of the total budget:

A — R&D framework programme (total budget: EUR 72 726 million) 2007-2013

Cooperation	61.1%
Ideas	16.3%
People	9.8%
Capacities	10.3%
Non-nuclear actions of the Joint Research Centre	2.5%

B — Euratom programme (total budget: EUR 3 092 million) 2007-2011

Fusion energy research	69.8%
Nuclear fission and radiation protection	12.8%
Nuclear activities of the Joint Research Centre	17.4%

3.3 A detailed description of the Commission's proposals is given in chapter 3 of the EESC opinion on the 7th R&D framework programme (CESE 1484/2005).

([5]) At 2005 prices.
([6]) Current estimates are in the region of EUR 49.5 billion (e.g. FAZ No. 11 2006, p. 14).
([7]) Council of the European Union 1591505, CADREFIN 268, point 10, 19 December 2005.
([8]) Press release IP/06/201, 22 February 2006.
([9]) COM(2005) 705 final.
([10]) See also Chapter 3 of OJ C 65, 17.3.2006.

4. **The Committee's comments**

4.1 The following comments are based on the content of chapters 4-6 of the above-mentioned opinion on the 7th R&D framework programme, and are difficult to understand without reference to that document.

4.1.1 The Committee supports the Commission's resolve to reflect the cross-cutting relevance of many programme components and to promote multidisciplinarity through cross-thematic approaches.

4.1.2 In this connection, the Committee has also discussed the issue of whether branches of research activity relating to such cross-cutting themes — e.g. ICT in medicine — should be included in ICT or rather dealt with as part of the specialised health sub-programme. For example, it recommends steering some of the activities planned as part of ICT more towards the specialised sub-programmes, for instance on health, energy, transport or possibly social sciences, so as to focus on specific aspects related to each of these areas.

4.1.3 However, there are no one-size-fits-all solutions here; instead, decisions should be taken on a case-by-case basis, depending, on the one hand, where the greatest scope for methodological synergies may be expected, and where, on the other, optimum linkage can be secured with the specific issues involved in each area. The Committee reiterates its recommendation that, whatever happens, *'steps be taken to ensure overall coordination and the necessary link-ups'*.

4.1.4 The Committee also welcomes the Commission's intention to respond flexibly to emerging needs, new knowledge and proposals, and to unforeseen policy requirements. Action by the Commission to promote and coordinate pre-competitive research and development will help to boost the EU's competitive position.

4.2 *Cooperation — the core of the programme*

4.2.1 **Health**. The Committee emphasises the necessarily broad scope of the approach which ranges from preparing for and preventing epidemics and pandemics, to responding to demographic change with all the accompanying social and health-related implications and long-term effects, including research into old age and disabilities (whereby the latter also includes separate social and technical aspects, for instance, which go beyond health-related issues). In this connection, the Committee supports the Commission's intention not to neglect research into rare diseases. The programme should cover all the relevant scientific and technical fields — including biotechnology, genomics, stem cell research and other multidisciplinary approaches, including the issue of requisite quality and social standards. This concerns both bio-medical research in universities, clinics and publicly funded research institutes, and also involves making the European medical and pharmaceutical sector more competitive. The Committee therefore recommends endorsing the proposed programme framework. Research and development in the field of health are of key European and even global interest.

4.2.2 **Food, agriculture and biotechnology** (biotechnology is also relevant to the theme of health [point 4.2.1]). The Committee feels that this programme rightly aims to build or maintain a European knowledge-based bio-economy. The objective is to use life sciences and technologies to provide eco-efficient and competitive products and processes from the agriculture, fisheries, aquaculture, food, health, forest-based and related industries. In view of the particularly intense agricultural competition with countries such as Brazil, this is also a very important sector. One possible new area for development might be the cultivation of plants that help to clean contaminated soil by accumulating pollutants, or on the other hand do not absorb any pollutants from contaminated soil and can thus be used safely.

4.2.3 **Information and communication technologies (ICT)**. Products and services in the ICT sector have had a revolutionary impact, changing and enriching science, technology, administration and even the everyday lives of ordinary citizens. In terms of both its share of funding and the range of tasks involved, ICT represents the largest component of the 'cooperation' programme, and it has — or may have — an impact in all other areas. The objective is to make innovative, ICT-based products and services available in the fields of science, technology, administration and logistics. Thus, the ICT programme ranges from the development of innovative hardware (whereby, for example, chip development clearly overlaps with the nanotechnology programme), hardware systems and networks to new programming tools, where importance should also be attached to the accessibility of ICT services by all social groups. The Committee also refers to its comments on this matter in point 4.1.2. Whether the ICT programme can actually justify its lion's share is closely dependent on the extent to which it fulfils the task of contributing to the other programmes in future.

4.2.4 **Nanosciences, nanotechnologies, materials and new production technologies**. This too is a new and extremely innovative area [11] which, as part of the interplay between basic and applied research, has emerged from a whole range of sources and findings in the field of physical and chemical research and technology. It has the potential to yield new or improved products and processes in many branches of technology. At the same time, this area is so diverse and has so many ramifications that a very broad view must be taken in order to identify and harness common features and interconnections within this discipline, elements of which range from atomic physics, plasma technology and nano-mechanics to textile finishing. As nano-processes also take place on a microscopic scale barely imaginable to the public at large, constructive dialogue with users is needed on this subject from the very start, in order to identify and avert potential threats, but at the same time to calm unwarranted fears. The Commission's wide-ranging approach, which also includes efforts to impart knowledge, is therefore very welcome and the Committee supports it.

[11] OJ C 157, 28.6.2005.

4.2.5 **Energy**. The Committee has repeatedly referred to the key theme of energy. It has also expressed its views on the subject in numerous specific opinions and emphasised the significant research needs in the field ([12]). A very serious energy problem awaits us in the medium to long term ([13]). It involves both the expected scarcity and price rises for conventional fuels such as crude oil and natural gas and the vital issue of secure supplies of such fuels to Europe, and the effects — in most cases, global effects — of energy use on the environment, particularly the climate. The only solution to the energy problem lies in improved or new technologies, which should, nonetheless, still offer good value for money. The key to this, in turn, is energy research. This must cover all aspects ([14]), from the better harnessing — and storage — of environmentally sound fuels to energy-saving technologies and more efficient energy use. This includes procedures for the partial or complete sequestration and storage of greenhouse gases. A switch to highly efficient electricity-generating power stations is also particularly important. The Committee finds the Commission's proposals in this regard correct and balanced, but is very concerned that the portion of the budget earmarked for it is too small, given the crucial importance of the task to be addressed. The Committee would recommend allocating an increased share of the budget here.

4.2.6 **Environment (including climate change)**. Environmental protection is of fundamental importance for the quality and very foundations of life of both present and future generations. Recognising and resolving the problems involved — be the causes man-made or natural — is a particularly ambitious and potentially vital goal. This task is closely linked with the most diverse research and policy fields: economy, energy, health and agriculture, including monitoring tasks and, in view of the global aspects, international agreements. While environmental research focuses more on identifying — or learning how to identify — the various problems and their causes, in other areas — not least energy — the search for solutions plays a greater role. Budgeting should be flexible to take account of this.

4.2.7 **Transport (including aeronautics)**. European transport systems are an important element of Europe's economic and social prosperity, and its cohesion. The Transport sub-programme is geared to developing integrated, 'green', 'smart' and safe pan-European transport systems and modes. To this end, it sets specific technical and logistical development goals for various transport modes and systems. The further development of energy-saving and low-emissions transport modes (aircraft, cars, etc.) is a scientific and technical task that is linked to the energy and environment sub-programmes, in which SMEs could also become involved. The respective technology platforms — ACCARE for aeronautics and air transport, ERRAC for rail transport, ERTRAC for road transport, WATERBORNE for waterborne transport, and hydrogen and fuel cells — are an important instrument here. Given the importance of an operational European transport network, not least for the new Member States, and given the ever-increasing total volume of transport — among other things, the prevention of traffic jams is a key, live issue at the moment — and the significance of such a network for European competitiveness (and its impact on the environment!), the goal of this sub-programme is also very important and is supported accordingly.

4.2.8 Socio-economic sciences and the humanities

4.2.8.1 In the Committee's view, the goal of this programme should be to contribute to an in-depth understanding of the complex and interrelated socio-economic, legal and cultural challenges Europe is confronted with, including issues such as Europe's historical roots and common elements and also its borders and neighbours. A task of particular relevance for laying the Community's intellectual foundations and building European identity, which also concerns the dealings of Member States and citizens with one another, would be to establish a common and uniform description and assessment of European history in all Member States — or to step up current efforts to do so — as a basis for the content of history lessons.

4.2.8.2 However, this area also includes aspects such as economic, financial and tax policy, science policy, growth, employment and competitiveness, social cohesion and sustainability, quality of life, education, cultural and legislative issues and global interdependence. It also encompasses the special challenges facing modern society, such as demographic change (facts, implications, action), migration, social exclusion, cultural splits, and progress towards a knowledge-based society. To make this sub-programme more coherent and focused, the Committee also recommends that the section dealing not with communicating science and better mutual understanding between science and society (see also 4.5.3), but rather with research into the relationship between science and society be switched from the Science in Society programme under the Capacities heading to the Socio-economic sciences and humanities sub-programme. On the whole, the Committee considers the Socio-economic sciences and the humanities sub-programme to be very important, especially as it also plays a crucial role in policy consultations; it should be expanded to take in some of the issues mentioned above and thus, if necessary, also be strengthened in relative terms.

4.2.9 Security and space

Both security and space are important subjects, which the Committee supports.

4.2.9.1 The terrorist attacks of the last few years have made citizens of the western world even more aware of the need for adequate **security** and the issue requires not only a broad legal, social and cultural approach, but also a technological and scientific one as well. However, the subject of security and security research is not confined to the Common Foreign and Security Policy; it also concerns areas such as transport, health (e.g. the EU Health Security Programme), civil protection (including natural and industrial disasters), energy and the environment.

([12]) OJ C 241, 7.10.2002; OJ C 28, 3.2.2006; OJ C 65, 17.3.2006.
([13]) See previous footnote.
([14]) With regard to the Euratom programme, see Chapter 4.6.

4.2.9.2 The general public is yet to be fully aware of the phenomenal progress made in **space exploration** and technology. This is important in terms of both geostrategy and understanding the world; after all, astronomical observations and the knowledge, for instance, of planetary movements derived from them were a crucial starting point for modern science. Space research and technology also spearhead the development of innovative technologies. As far as space exploration is concerned, the Committee feels that evenly balanced collaboration is needed on the programme with existing European organisations, such as the ESA and ESO.

4.3 **Ideas**. Here the Commission is treading promising new ground in its support for research. Again, the Committee has welcomed this on a number of occasions ([15]). Supporting research proposals that really stand out within the ambit of Europe-wide competition — eschewing the hitherto usual requirement of crossborder cooperation — makes excellence both possible and visible, thus creating a magnet for researchers of outstanding European and international calibre, which in turn generates particularly fertile ground for innovation. On this question, the Committee again stresses that the risk of failure has to be faced if mediocrity is to be overcome. The prime difficulty here, in addition to adequate funding for the programme, lies in its selection procedure and management. The Committee thinks, therefore, that this demanding task should fall to a hand-picked independent panel of particularly successful and recognised scientists: the European Research Council (ERC).

4.4 **People**. The Committee has stressed on several occasions ([16]) that the key to successful and competitive European research and development lies not only in cutting-edge equipment and funding, but also in sufficient highly qualified and creative scientists. An interest in science and technology must therefore be instilled during childhood and youth, so that a sufficient number of those with the requisite talents begin and complete the very difficult and demanding studies which are needed in the field.

4.4.1 The Committee has already referred to the key role of universities as educational and research institutions and to the unsatisfactory situation in this respect in Europe in its opinion on the seventh R&D Framework Programme ([17]). Among other things, it is important to ensure that the scientific and personal conditions ([18]) are right for researchers to work on their doctorates — which are of importance to their careers. After a first-rate education, these people then also need international experience, an attractive research environment offering sufficient freedom, internationally competitive contracts and career planning. (The Committee has already commented on the European Charter for Researchers, which is of relevance to this subject; some aspects of the Charter meet with the Committee's approval, and others are criticised ([19]).)

4.4.2 However, given how important it is for science and research for researchers to be internationally mobile, especially between countries that perform particularly well in this area, it is essential to ensure there is no one-sided brain-drain; among other things, this means making salaries such that top American researchers, for instance, can also be brought to Europe, something that at present is practically impossible. The Committee therefore supports the Commission's repeatedly stressed goal of applying the requisite instruments and framework conditions and of working to ensure that the Member States use the instruments proposed in the People programme, some of which are already available. Creating attractive conditions for mobility and removing obstacles to it is also particularly important for the European Research Area. The Commission's vigorous pursuit of this goal is to be welcomed.

4.5 **Capacities**. This programme is a good example of the Community's 'subsidiary' roles.

4.5.1 This mainly concerns the goal of developing/installing, sharing and perfecting research infrastructures — such as large apparatus, scientific instruments and computers, whose costs and potential exceed the capacities of individual Member States. In this connection, the Committee is pleased to note that, in line with its earlier recommendation, preference is to be given to a bottom-up approach to proposals for the relevant projects.

4.5.2 At the same time, the other tasks listed under *Capacities*, such as *Research for SMEs*, *Research for SME associations*, *Regions of knowledge* and *Unlocking and developing the research potential in the EU's convergence regions and outermost regions* are also very important, particularly for the new Member States and for SMEs.

4.5.3 The *Science and society* sub-programme is intended to stimulate the harmonious integration of scientific and technological endeavour and associated research policies into the European social web. This is a matter of the capacity to produce, use and propagate knowledge, and to generate innovations. Thus, the sub-programme is concerned, on the one hand, with presenting an image of science, scientists and their findings to the European public. The Committee endorses these objectives; it sees dissemination of knowledge as an important cultural task, which facilitates innovation. On the other hand, the sub-programme is also concerned with research on the reasons for scepticism among certain sections of the population about science (or at least some areas of science), scientific methods and its potential implications. In the Committee's view, these research activities, which are primarily of a sociological character, should be incorporated into the 'Socio-economic sciences and the humanities' sub-programme under the 'Cooperation' specific programme, so that they can be dealt with in the broader context of European cooperation provided for there.

([15]) OJ C 110, 30.4.2004.
([16]) OJ C 110, 30.4.2004 – *Researchers in the European Research Area: one profession, multiple careers.*
([17]) OJ C 65, 17.3.2006, Point 4.12.2.
([18]) See e.g. Chapter 5.6 of the document referred to in footnote 16.
([19]) Point 4.13.2 of OJ C 65, 17.3.2006, and point 5.1.5 of OJ C 110, 30.4.2004.

4.6 *The Euratom programme*

Here the EESC would first refer to its exhaustive examination in its opinion on the 7th R&D framework programme and the Euratom programme and its remarks concerning the Energy sub-programme.

4.6.1 The issue now in **fusion research** ([20]) is (i) to pave the way for, and complete the construction of ITER, (ii) to work on all preparations required to operate it — including education and training of scientific staff, enlisting and mobilising the research potential of associated laboratories in the Member States and an international division of labour, (iii) to promote technological developments (particularly materials and the fuel cycle) geared to DEMO, and (iv) to research and perfect various (magnetic) confinement concepts. ITER and further development must be embedded in and supported by Member State research institutes. The Commission's proposals are in line with these tasks and international commitments, and they enjoy the Committee's full support.

4.6.2 The issue now in **fission** ([21]) is (i) to further investigate and improve the safety of existing nuclear power plants (a task predominantly for industrial manufacturers and operators) and (ii) to develop new reactor concepts with even better safety, fuel exploitation and disposal parameters. This includes research into the reprocessing of spent fuels (transmutation, recycling). Other tasks include: (iii) solving the problem of final storage and securing political approval for this, (iv) supporting non-proliferation efforts regarding nuclear weapons materials, and (v) finding out more about the biological effects of (low) doses of radiation ([22]) and developing the appropriate measurement technologies (especially individual dosimetry). An important specific task in all of this is the education of a new generation of appropriately trained specialists. The Committee has misgivings about the shortage of 'new recruits' in some Member States and dwindling expertise and asks whether greater weight should not be attached to these very important questions, given the likely longer-term and global importance of nuclear energy use.

4.7 *The Joint Research Centre (JRC)*

4.7.1 The JRC is quite rightly incorporated into both the 7th R&D framework programme (2007-2013) and the 7th Euratom framework programme (2007-2011). However, because this means that the JCR is answerable directly to the Commission and the strength of its policy consultations and flexibility of action derive precisely from this fact, steps must be taken to ensure that it is subject to the exacting and transparent standards required of all Member State research institutions in terms of international peer review, competition, recruitment procedures/staffing policy and monitoring, and that it is integrated into the international scientific community. The Committee considers such integration important, not least in terms of the socio-economic sciences and humanities mentioned above.

4.7.2 The JRC's tasks under the 7th R&D framework programme (2007-2013) include the general topic — important for the Community — of sustainable development (e.g. climate change, food, energy, transport, chemicals, decontamination). This includes the development of scientific and technological reference data for various spheres of environmental and food monitoring; it also provides a valuable contribution to framing the Community's legislative provisions. Another Community task is developing and disseminating internationally recognised reference bases and promoting a common European system of measurements. This could include coordinating the division of labour with national metrological and standardisation institutions and participation in their programmes. In terms of the European single market and European integration generally, consideration could therefore be given to establishing a 'European Bureau of Standards' which would involve the relevant national laboratories and institutions such as CEN and CELENEC, the industries concerned and the JRC.

4.7.3 It is quite right that the JCR should support policy-making in the nuclear field under the 7th Euratom framework programme (2007-2011), including the implementation and monitoring of existing strategies and the response to new demands. The Committee also approves of making disposal, safety and monitoring a priority in the 'nuclear' JCR programme (with these activities being integrated and coordinated with those of the Member States); this is where the public has concerns and where reliable solutions are needed. In the Committee's view, it is particularly important to (further) develop procedures which will allow an even better monitoring of non-proliferation of nuclear weapons material and technologies.

Brussels, 20 April 2006.

The President

of the European Economic and Social Committee

Anne-Marie SIGMUND

([20]) OJ C 302, 7.12.2004.
([21]) OJ C 133, 6.6.2003; OJ C 110, 30.4.2004.
([22]) See e.g. RTDinfo No. 47, European Commission, January 2006.