

Procedure file

Basic information			
INI - Own-initiative procedure	2007/2187(INI)	Procedure completed	
European research area: new perspectives			
Subject 3.50.01 European research area and policy			

Key players			
European Parliament	Committee responsible	Rapporteur	Appointed
	ITRE Industry, Research and Energy		
	Committee for opinion	Rapporteur for opinion	Appointed
	ECON Economic and Monetary Affairs	The committee decided not to give an opinion.	
	EMPL Employment and Social Affairs	The committee decided not to give an opinion.	
	IMCO Internal Market and Consumer Protection		12/09/2007
		ALDE NEWTON DUNN Bill	
	REGI Regional Development		17/07/2007
		PPE-DE MIKOLÁŠIK Miroslav	
	CULT Culture and Education	The committee decided not to give an opinion.	
	JURI Legal Affairs	The committee decided not to give an opinion.	
Council of the European Union	Council configuration	Meeting	Date
	Competitiveness (Internal Market, Industry, Research and Space)	2832	22/11/2007
European Commission	Commission DG	Commissioner	
	Research and Innovation	POTOČNIK Janez	

Key events			
04/04/2007	Non-legislative basic document published	COM(2007)0161	Summary
27/09/2007	Committee referral announced in Parliament		
22/11/2007	Resolution/conclusions adopted by Council		Summary
19/12/2007	Vote in committee		Summary
09/01/2008	Committee report tabled for plenary	A6-0005/2008	

31/01/2008	Results of vote in Parliament		
31/01/2008	Decision by Parliament	T6-0029/2008	Summary
31/01/2008	End of procedure in Parliament		

Technical information

Procedure reference	2007/2187(INI)
Procedure type	INI - Own-initiative procedure
Procedure subtype	Strategic initiative
Legal basis	Rules of Procedure EP 54
Stage reached in procedure	Procedure completed
Committee dossier	ITRE/6/49376

Documentation gateway

Non-legislative basic document		COM(2007)0161	04/04/2007	EC	Summary
Document attached to the procedure		SEC(2007)0412	04/04/2007	EC	
Committee draft report		PE394.189	22/10/2007	EP	
Committee opinion	IMCO	PE396.458	29/11/2007	EP	
Amendments tabled in committee		PE398.398	29/11/2007	EP	
Committee opinion	REGI	PE396.681	18/12/2007	EP	
Committee report tabled for plenary, single reading		A6-0005/2008	09/01/2008	EP	
Text adopted by Parliament, single reading		T6-0029/2008	31/01/2008	EP	Summary
Follow-up document		SEC(2008)0430	02/04/2008	EC	Summary
Commission response to text adopted in plenary		SP(2008)1766	16/04/2008	EC	

European research area: new perspectives

PURPOSE : to present a Green Paper on ?The European Research Area: New Perspectives?.

BACKGROUND : in 2008, the second cycle of the renewed Lisbon Agenda will be launched hence the need to review one of its core elements: the European Research Area (ERA). More than ever the ERA acts as a cornerstone of the European knowledge society ? a society in which research, education, training and innovation are fully mobilised to fulfil the economic, social and environmental ambitions of the EU and its citizens.

CONTENT: in order to review the above, the Commission has prepared this Green Paper, the purpose of which is to raise a number of questions on how to deepen and widen the ERA so that it fully contributes to the renewed Lisbon strategy. It intends to launch a wide institutional and public debate with a view to preparing initiatives for 2008.

A new look at the European Research Area

A sense of urgency in revising the ERA stems from the fact that the globalisation of research and technology is accelerating and new scientific and technological powers are emerging in places such as China and India. Further, other emerging economies are investing increasing amounts of their GDP into R&D. This raises the question of whether the EU is able to sustain a competitive edge in knowledge and innovations ? a matter which is at the centre of the renewed Lisbon Strategy for Growth and jobs. Fragmentation of public research diminishes Europe's attractiveness for business as a location for R&D investment. The business sector is supposed to contribute two-third of the 3% of GDP R&D intensity target. Recent data suggest that EU-based companies have increased their global R&D expenditure by more than 5% in 2006, but this is still less than the rate of increase of R&D expenditure of their non-EU-based counterparts. In fact EU-based companies invest more in R&D in the US than US based companies do in the EU and this transatlantic net outflow of R&D investments is increasing. A substantial and sustained increase of business R&D investment is essential to break with the current stagnation of the EU's overall R&D intensity at 1.9% of GDP and to progress towards national and EU targets. This Green Paper focuses on the factors affecting the performance

of research systems in Europe, with a view to overcoming the fragmentation of efforts and policies and ensuring that Europe makes the most of globalisation in science and technology.

The European Research Area Vision

Building on key principles agreed unanimously in 2000, the ERA should comprise of:

- An adequate flow of competent researchers.
- World-class research infrastructures (such as networks, libraries etc.).
- Excellent research institutions.
- Effective knowledge sharing.
- Well-coordinated research programmes and priorities.
- A wide opening of the ERA to the world.

In addition, European research policy should be deeply rooted in European society. The right balance needs to be found between competition and cooperation and full benefit should be made of Europe's diversity. The nature of research is such, that complex interdependencies exist between the above-mentioned features of the ERA. Some features will take longer to establish than others. However, this systemic nature of ERA dictates that urgent action needs to be taken to progress as quickly as possible on all fronts ? all the more so given the strong leverage effect this will have on increasing private investment in research and innovation and promoting a more competitive knowledge-based economy.

Based on the above, the Commission asks: Are there other elements which should be taken into account in the vision? What role should public authorities play to establish the ERA? What EU initiatives could best leverage overall public and private efforts to realise the vision?

Making the ERA a reality

This section analyses the situation of European research with respect to the six main dimensions of the European Research Area. For each of them, a number of questions are raised to provoke an open discussion among all those who have a stake in research.

The six main dimensions are:

Realising a single labour market for researchers

A key challenge for Europe is to train, retain and attract more competent researchers. However, mobility across borders or between academia and industry tends to be penalised rather than rewarded. This is why so many European graduates and doctorates either move away from research careers or pursue research in countries where they find better opportunities ? mainly in the US. It is essential to establish a single and open European labour market for researchers, ensuring effective ?brain circulation? within Europe. A number of questions are posed in a bid to answer these questions. For example, is there a need for a European framework to ensure portability of social security provisions for researchers across Europe and how can the EU increase the numbers and quality of researchers in Europe by attracting young research talents?

Developing world-class research infrastructures

Excellent research needs a range of high-quality research infrastructures. The Commission, therefore, asks: How can the EU effectively decide on pan-European research infrastructures and their funding? Should a European legal framework be developed to facilitate the emergence and operation of new forms of research infrastructures of pan-European interest? Is there a need to define common transparent principles for the management of, and access to, infrastructures of European interest?

Strengthening research institutions

Universities and public research organisations perform more than 35% of all research undertaken in Europe. However, their potential is not fully realised due to a significant dispersion of resources and activities, insufficient links with business and society and rigidities in their functioning. Further most European research institutions lack critical mass and, within the confines of sub-optimal national systems, have difficulties meeting expectations with available resources. The Green Paper suggests that research institutions should increasingly work in the context of European and global ?virtual research communities? associating public and private organisations. To address this challenge the Commission asks: How can the resources of European research institutions be strengthened in the most cost effective manner? How can research actors be encouraged to create world-class virtual centres of excellence and is there a need for a European regulatory initiative to facilitate the creation of public-private-partnerships?

Sharing knowledge

Generation, diffusion and exploitation of knowledge are at the core of the research system. Access to knowledge generated by the public research base, and its use by business and policymakers, lies at the heart of the ERA, where knowledge must circulate without barriers and throughout the whole of society. Patenting, nevertheless, remains inaccessible, complicated and costly in Europe and fragmented litigation fails to provide sufficient legal certainty. Finally, to work efficiently and effectively in full symbiosis with European society, the ERA requires the development of new channels and innovative approaches for communicating and discussing science, research and technology. The questions the Commission poses under this heading include, *inter alia*,: Is there a need for EU-level policies and practices to improve and ensure open access of raw data and peer-reviewed publications from publicly funded research results? What should constitute a European Framework for knowledge sharing between research institutions and industry and are there specific R&D related issues, such as joint ownership, and the research exception that need to be looked at from a European perspective?

Optimising research programmes and priorities

One of the ERA's core objectives has always been to ensure the coherence of national and regional research programmes. Some progress has been made, but it falls short of the ambition and potential in this regard. The Green Paper, therefore, asks: Should common principles be developed and used for peer review, quality assurance and joint evaluation of European, national and regional research programmes? Should these programmes be opened to participants from other Member States and how? Is there a need for shared principles for the accountability of public research funding, which would enhance simplification of rules and procedures and increase its effectiveness and efficiency?

Opening the world: international cooperation in S&T:

Science knows no boundaries and the issues that research is asked to deal with are increasingly global. The challenge is to make sure that

international S&T cooperation contributes effectively to stability, security and prosperity in the world. The ERA should be open to the world. A coherent approach towards international S&T cooperation under the banner of global sustainable development can assist in building bridges between nations and continents. A success story such as ITER shows that Europe can have the will and capacity for leadership in global challenges. The questions posed are: How can the European Commission and the Member States work together to define international priorities? How should S&T cooperation with various groups of partner countries be modulated to focus on specific objectives and should complementary regional approaches be explored?

Moving ahead: Public debate and further steps

Europe has an enormous research and development potential, which remains to be tapped. The Commission believes that the broad orientations outlined above have the potential to considerably strengthen the ERA, rendering it fit and capable to address the major challenges that Europe faces in an open world and to achieve the objectives of the Lisbon Strategy. With the publication of this Green Paper, the Commission is launching a wide consultation and opening up a debate on how to strengthen the ERA. On the basis of this consultation and debate, the Commission intends to propose initiatives in 2008.

European research area: new perspectives

In its Conclusions on the Future of Science and Technology in Europe, the Council welcomes the Commission's Green Paper "The European Research Area: New Perspectives" and the debate that it has stimulated as timely inputs for the next cycle of the Lisbon strategy (2008-2010).

Recognising the critical role played by science and technology in the development of knowledge-based economies, the Council that more rapid progress should be made in order to respond to:

- the increased international competition, including for qualified human resources for R&D, and new opportunities brought by the globalisation of economic and knowledge flows;
- the increasing complexity and scale of the economic, social and environmental challenges affecting society;
- the need of business to operate in an environment of 'open innovation' where connections with each other and with public research institutions are at the core of value creation;
- the growing importance of the freedom of knowledge and of knowledge circulation, notably knowledge-sharing between public research and industry, as well as public at large.

1) To ensure sufficient human resources for R&D, the Council calls on the Member States and the Commission to:

- work together in the context of the open method of coordination to improve researchers' careers and promote balanced circulation of researchers with the rest of the world. To this effect, it suggests the development of objectives for the EU as a whole for the next decade in the following areas: 1) balanced brain circulation between the EU and the US; 2) maintain a positive growth rate of new graduates and PhD in S&T and the appropriate flow to the private sector; 3) increase the share of women among new researchers; 4) find an appropriate balance of R&D personnel inflow to the EU from the rest of the world for mutual benefit;
- work together to support national, international and community actions for increasing human resources for science and technology, as well as for boosting the attraction to Europe of highly qualified scientists.

The Commission is invited to:

- consolidate its activities for monitoring the developments in human resources in S&T and to develop a comprehensive set of measurable indicators for the growth, attraction and retention of human resources in science and technology in Europe;
- provide an assessment of still existing key barriers to mobility of researchers within the EU and suggest an overall plan to remove those barriers.

2) To reinforce competitive incentives and market conditions for business research and innovation, the Council invites the Member States Member States to further develop strategies and policies to combine the three pillars of the knowledge triangle (education, research, innovation).

The Commission and the Member States are invited to:

- further increase their efforts to stimulate industry to make full use of the Community funding available for R&D and innovation;
- enhance data and knowledge sharing, in particular the use of data and results from publicly funded research results across Europe;
- continue to study ways to improve conditions for R&D funding, notably building upon the experience gained from the Risk-Sharing Financing Facility (RSFF), as part of the mid-term evaluation of the 7th Framework Programme for RTD.

3) To optimise the use of public resources for R&D programmes, R&D infrastructures and international cooperation, the Council invites the Member States to:

- encourage Research Councils and National Funding Agencies in Member States, as well as intergovernmental European Research Organisations, to expand their collaboration and to devise innovative forms of pooling together their expertise and resources on a mutual voluntary basis for joint objectives;
- encourage public and private research institutions to make full use of the emerging distributed forms of research activity (namely eScience) based upon international research networks;
- develop and strengthen their national roadmaps and strategies on research infrastructures.

The Member States and the Commission are called upon to:

- exchange information on national science and technology policies in Member States, including notably on the reforms of universities and higher education systems, as well as other public research institutions, as well as the level of networking across institutions;
- work more closely together in the area of international cooperation in S&T in order to increase the effectiveness of the existing activities and to increase Europe's contribution to tackling global challenges;
- intensify their dialogue with regard to the modernisation of European universities.

European research area: new perspectives

The Committee on Industry, Research and Energy adopted the own-initiative report drawn up by Mr Umberto GUIDONI (GUE/NGL, IT) in response to the European Commission's Green Paper: on the European Research Area: New Perspectives.

The report regrets that figures for expenditure on research and development show that the EU average is only 1.84% of GDP against 2.68% in the USA and 3.18 % in Japan; and that expenditure varies from 0.39% in Romania and 0.4% in Cyprus to 3.86% in Sweden; underlines the importance of increasing the average spending as well as raising expenditure in some Member States; highlights the importance of better focussing the diverse research and development efforts throughout the Union, especially in order to facilitate the transition towards the digital economy.

Creating a single labour market for researchers:

Members stress the importance of preventing the further outflow of competent European researchers; calls for the adoption of appropriate measures to retain researchers in the EU and to bring them back to the EU. They consider that access to the EU for researchers should not be impeded by existing national barriers, such as insufficient recognition and portability of acquired social entitlements, tax disadvantages and difficulties in relocating families.

The report recalls that one way of making researchers more mobile might be the creation of a research voucher which could be used by researchers in other Member States and hosting institutions and universities. The Commission and the Member States are called upon to enrich post-graduate and doctoral curricula by encouraging joint research supervision in different countries; and to consider the launching of European postdoctoral fellowships and training schemes building on the highly successful Erasmus programme.

Members stress the need to establish and introduce a single European career path in the field of research and to introduce an integrated information system on job vacancies and training contracts in the research sector in Europe. Lastly, they emphasise the importance of making the recruitment and promotion procedures for research workers fully open and transparent.

Developing world-class research infrastructures: the Commission is invited to propose a legal framework to facilitate the creation and operation of major Community research organisations and infrastructures and to consider the involvement of existing European institutions and agreements, such as the European Organisation for Nuclear Research (CERN), the European Space Agency (ESA) and the European Fusion Development Agreement (EFDA). The Members also call upon the Commission to support RPOs, universities and research funding agencies both to build their strength and to link their resources in building the ERA the goal being to reach global leadership in major scientific areas.

Strengthening research institutions: the committee acknowledges the importance of the ERA's regional dimension and considers that the development of regional clusters is an important means of achieving critical mass, bringing together universities, research institutions and industry, and creating European centres of excellence. They call on the Commission to establish a European forum with high-level national representation, including national research councils, entrusted with the mission of identifying, developing and supporting major pan-European research initiatives, as well as a common system of scientific and technical review to better exploit the results of European programmes.

Sharing knowledge: the report agrees with the ?open innovation? concept promoted by the Commission according to which the public and private sectors become full partners and share knowledge provided that a balanced and fair system is developed between open access to scientific results and use of such results by the private sector (fair sharing of knowledge). Members believe that the rule of a fair and equitable financial reward for use of public knowledge by industry should be officially recognised.

In regard to the new opportunities opened up by the internet, the report underlines the importance of respecting authors' freedom of choice and intellectual property rights (IPR), ensuring the continuation of quality peer reviews and the trusted secure preservation of refereed work, and encourages stakeholders to work together through pilot projects to evaluate the impact and viability of alternative models, such as the development of Open Access. The Members also highlight the vital importance of establishing a Community Patent and a high-quality, cost-effective, innovation-friendly judicial system for European patents.

International cooperation: inconsidering that R&D cooperation can help to achieve specific Millennium Development Goals, Members believe that it is important to align EU scientific co-operation policies with EU foreign policy and development aid programmes. The Commission is invited to implement and support measures to improve the level of participation of scientists from developing countries in international collaborative science and R&D projects and promote access to existing intellectual property globally. Underlining the importance of attracting researchers from third countries to the EU, Members support the Commission's proposal for the creation of a blue card system which would be of great value for human resources in science and technology.

European research area: new perspectives

The European Parliament adopted a resolution based on the own-initiative report drafted by Umberto GUIDONI (GUE/NGL, IT) in response to the European Commission's Green Paper on the European Research Area: New Perspectives. The resolution was adopted by 602 votes for, 18 against and 6 abstentions

Parliament regrets that figures for expenditure on research and development show that the EU average is only 1.84% of GDP against 2.68% in the USA and 3.18 % in Japan; and that expenditure varies from 0.39% in Romania and 0.4% in Cyprus to 3.86% in Sweden. It underlines the importance of increasing the average spending as well as raising expenditure in some Member States. It highlights the importance of better focussing the diverse research and development efforts throughout the Union, especially in order to facilitate the transition towards the digital economy.

Creating a single labour market for researchers: Parliament regrets that the net transatlantic outflow of R&D investment is still increasing. Members stress the importance of preventing the further outflow of competent European researchers, and they call for the adoption of appropriate measures to retain researchers in the EU and to bring them back to the EU, notably by ensuring wide career prospects and attractive working conditions for both men and women. They consider that access to the EU for researchers should not be impeded by existing national barriers, such as insufficient recognition and portability of acquired social entitlements, tax disadvantages and difficulties in relocating families.

The resolution recalls that one way of making researchers more mobile might be the creation of a research voucher which could be used by researchers in other Member States and hosting institutions and universities. The Commission and the Member States are called upon to enrich post-graduate and doctoral curricula by encouraging joint research supervision in different countries, and to consider the launching of European postdoctoral fellowships and training schemes building on the highly successful Erasmus programme.

Members stress the need to establish and introduce a single European career path in the field of research and to introduce an integrated information system on job vacancies and training contracts in the research sector in Europe. Lastly, they emphasise the importance of making the recruitment and promotion procedures for research workers fully open and transparent.

Developing world-class research infrastructures: the Commission is invited to propose a legal framework to facilitate the creation and operation of major Community research organisations and infrastructures and to consider the involvement of existing European institutions and agreements, such as the European Organisation for Nuclear Research (CERN), the European Space Agency (ESA) and the European Fusion Development Agreement (EFDA). Parliament states, however, that intergovernmental treaties to implement such organisations should be avoided. Members also call upon the Commission to support Research Performing Organisations (RPOs), universities and research funding agencies both to build their strength and to link their resources in building the ERA the goal being to reach global leadership in major scientific areas.

Strengthening research institutions: Parliament acknowledges the importance of the ERA's regional dimension and considers that the development of regional clusters is an important means of achieving critical mass, bringing together universities, research institutions and industry, and creating European centres of excellence. It calls on the Commission to establish a European forum with high-level national representation, including national research councils, entrusted with the mission of identifying, developing and supporting major pan-European research initiatives, as well as a common system of scientific and technical review to better exploit the results of European programmes.

Sharing knowledge: Parliament agrees with the ?open innovation? concept promoted by the Commission according to which the public and private sectors become full partners and share knowledge provided that a balanced and fair system is developed between open access to scientific results and use of such results by the private sector (fair sharing of knowledge). Members believe that the rule of a fair and equitable financial reward for use of public knowledge by industry should be officially recognised. They firmly believe that the legal uncertainty and high costs currently prevailing in the field of IPR contribute to the fragmentation of research efforts in Europe. Therefore the Commission is urged to proceed to an impact assessment of the different legal instruments that can be used to reduce existing barriers to knowledge transfer within the ERA. Properly registered inventions can be an important source of knowledge and legislation on IPR protection, including EU patent law, cannot be a barrier to knowledge-sharing. Parliament highlights the vital importance of establishing a Community Patent and a high-quality, cost-effective, innovation-friendly judicial system for European patents which respects the competence of the Court of Justice.

International cooperation: Parliament considers that R&D cooperation can help to achieve specific Millennium Development Goals, and that it is important to align EU scientific co-operation policies with EU foreign policy and development aid programmes. The Commission is invited to implement measures to improve the level of participation of scientists from developing countries in international collaborative science and R&D projects and promote access to existing intellectual property globally. Underlining the importance of attracting researchers from third countries to the EU, Members support the Commission's proposal for the creation of a blue card system which would be of great value for human resources in science and technology.

European research area: new perspectives

The purpose of this report is to offer a synthesis of the replies the Commission received in response to its Green Paper on the European Research Area (ERA). Responses were received from individuals, universities, research organisations, public authorities, NGO's, industry, commercial and non-commercial associations, Chamber of Commerce, European technology platforms and trade unions. 685 replies were received for the on-line questionnaire and 145 free format contributions were also forwarded to the Commission.

The structure of the report mirrors that of the Green Paper as well as offering three summaries of the contributions received by firstly, the EU Member States, secondly, the Associated Countries and thirdly, other EU bodies including that of the European Parliament.

The ERA Vision: Stakeholders expressed strong support for the ERA as set out in the Green Paper and support for all of the six actions proposed. Universities, research organisations and NGO's considered ?knowledge sharing? to be the most important aspect of the ERA. Industry and government bodies, on the other hand, accorded the development of ?infrastructures? the most important status within the ERA. Although many agreed that mechanisms to endorse and promote the ERA (such as financial incentives, increased EU budget etc) should be encouraged there was little appetite for more binding legislative actions at a European level.

1) A single labour market for researchers: Most replies point out that there is firstly, a lack of information regarding the status of mobile research and that secondly, to achieve a seamless mobility of researchers further progress needs to be made on the transferability of supplementary pension rights across the Member States. Indeed, 65% of respondents favour the setting up of a ?European Researchers? pension fund?. It is worth noting, however, that large commercial organisations and associations representing commercial interests are mostly opposed to this concept. The majority of respondents favour European and transnational fellowship programmes and an EU-wide dissemination of best national practices in order to attract the European ?scientific Diaspora? as well as the brightest non-EU talent.

2) Developing world-class infrastructures: Two-thirds of the on-line respondents concurred that actions relating to research infrastructures should be taken at an EU level. Over four fifths agreed that there is a need for a common approach to the infrastructures identified in the 2006 ?European Strategy Forum for Research Infrastructures? (ESFRI) Roadmap. Many felt that the current situation did not facilitate the creation and operation of new infrastructures and that a new legal framework or guidelines should be developed to cover issues such as access, conditions of use and intellectual property rights. As regards long term improvements to research infrastructures, almost 60% of on-line respondents preferred the use of EC Treaty Article 169 over the Framework Programmes or Member State research programmes.

3) Strengthening research institutions: Many believed that a diverse system of strong, complementary and autonomous universities and research organisation (RPOs) could offer Europe a competitive advantage. Emphasis should be given to strong ?bottom-up partnerships? of appropriate critical mass and based on scientific excellence. The need for increased funding is stressed by both RPOs and higher education stakeholders.

4) Knowledge sharing: The development of knowledge communities is considered essential for a well-articulated European Research Area. However, cultural differences between business and scientific communities and a lack of incentives for inventories or users remain major

obstacles to the efficient transfer of knowledge. Over 70% of the respondents call for open access to scientific raw data from publicly funded research and 84% call for immediate and improved access and dissemination of publicly funded paper reviewed scientific publication. Industrial respondents did, however, stress the need for limitations due to legal conformity and commercial sensitivity.

5) Optimising research programmes and priorities: Most stakeholders recognise the need for better coordination of Member States' research programmes. 80% of respondents agreed that addressing resource-intensive and complex scientific challenges require cross-border cooperation between public authorities. The preferred ways for public authorities to organise transnational cooperation include: concentrating efforts in European-level programmes (74%); joint public programmes with variable geometry (72%); and ?ERA_NET loose and bottom-up coordination (70%).

6) International cooperation: More than four fifths of respondents support the idea of the EC and Member States working together to define common European priorities. Also supported are policies to coordinate the efficient use of instruments and resources; to make programmes more coherent; and to promote exchange programmes. Although 65% of respondents found that the S&T agreements between the Community and third countries provide a useful framework for international cooperation, 52% also felt that these agreements could be made more effective. A more strategic approach could differentiate according to regions and topics. A large majority of respondents favour Europe taking a more active approach to define the global S&T agenda in multilateral for a, with 75% expressing a desire that Europe should ?speak with one voice? and 69% being of the view that this could be achieved by prioritising a small number of high-priority global-research-related themes.