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**BETTER CAREERS AND MORE MOBILITY: A EUROPEAN PARTNERSHIP FOR
RESEARCHERS**

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(presented by the Commission)

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BETTER CAREERS AND MORE MOBILITY: A EUROPEAN PARTNERSHIP FOR RESEARCHERS

1. INTRODUCTION

The 2008 Spring European Council confirmed investing in people and modernising labour markets, and investing in knowledge and innovation¹ as priority areas for the renewed Lisbon Strategy for Growth and Jobs.

Significant efforts are already planned or underway to transform the EU economy towards more knowledge intensive activities, including measures to strengthen the single market², increase job mobility³, reinforce education and training⁴ and incentivise more private investment in research and innovation⁵.

The 2007 Green Paper “**The European Research Area: New Perspectives**”⁶ launched a wide public debate on how to achieve a more open, competitive and attractive ERA. A number of key areas have subsequently been identified where effective actions, undertaken in partnership between the Member States' and the Community around common objectives would deliver significant gains for Europe's research system and help to create a "fifth freedom" in Europe – the freedom of knowledge.

As one of five initiatives⁷ planned in 2008 to follow up the ERA Green Paper, **this Communication proposes to develop a partnership with Member States to ensure the availability of the necessary researchers.** As the core producers of new knowledge and the main agents in its transfer and exploitation, researchers are indispensable for a competitive, knowledge-based EU economy. In order to retain and attract the best research talents a balanced approach is required to ensure that researchers across the EU benefit from the right training, attractive careers and the removal of barriers to their mobility.

It is foreseen that the overall governance of the ERA initiatives will be overseen by the Competitiveness Council.

¹ Presidency Conclusions European Council 13-14 March 2008

² "A Single Market for the 21st Century Europe" COM(2007) 724

³ The European Job Mobility Action Plan 2007-2010, COM(2007)773, 6.12.2007

⁴ Including EU support to increase academic mobility and the planned EU initiative on new skills for new jobs

⁵ "Putting knowledge into practice: A broad-based innovation strategy for the EU" COM(2006) 502, 13.9.2006 and "A lead market initiative for Europe" COM(2007) 860, 21.12.2007

⁶ COM(2007) 161, 4.4.2007

⁷ Others related to: IP management by public research organisations; Joint programming; pan-European research infrastructures; international S&T cooperation

2. PROGRESS AND PROSPECTS

The term "researcher" covers many different roles and activities. From university academics and scientists engaged in long-term basic research at large research infrastructures to more mission-orientated researchers at government labs, from corporate employees carrying out market-orientated development work to the staff of high-tech SMEs pursuing technology transfer or product and process innovation.

The need for adequate human resources for R&D has been identified as a key challenge since the launch of the Lisbon Strategy in 2000⁸. The Commission proposed **measures to increase the mobility of researchers across the ERA in 2001**⁹ and for **their career development in 2003**¹⁰.

In 2005 the Commission adopted the **European Charter for Researchers and a Code of Conduct for the Recruitment of Researchers** setting out the roles and responsibilities of researchers and their employers and funders, and ways to make recruitment fairer and more transparent. The "**scientific visa**" package adopted in 2005¹¹ aimed to allow fast-track admission and residence of third country researchers. Researchers' mobility and careers were supported by funding from the **Sixth Research Framework Programme**.

Most Member States are undertaking researchers' related actions, in particular reforms to their university and higher education sectors¹². Increasing the autonomy and improving the governance of institutions is directly relevant to improving the situation for researchers.

These initiatives have yielded results. There is much improved information for mobile researchers through a network of local centres and on-line¹³. Funding for researchers has increased in the **Seventh Research Framework Programme**, including through the new **European Research Council**.

But progress remains slow. Take-up of the voluntary Charter and Code has been limited so far and several Member States have still not implemented the Directive of the "scientific visa" package. Existing policies tend to address issues in relative isolation, or take a narrow national perspective.

While situations vary considerably across institutions and countries, in many Member States outdated national legislation and practices still hinder or prevent competition-based recruitment in the public sector. The prevalence of short-term contracts for young researchers and advancement based on seniority rather than performance means it can take many years before talented researchers are able to become independent scientists in their own right. Many researchers are trained in a traditional academic way which does not equip them for the needs

⁸ Presidency Conclusions Lisbon European Council 23-24 March 2000

⁹ "A mobility strategy for the European Research Area" COM (2001) 331, 20.06.2001

¹⁰ "Researchers in the European Research Area: one profession, multiple careers" COM (2003) 436, 18.07.2003

¹¹ Including the Council Directive 2005/71/EC of 12 October 2005 on a specific procedure for admitting Third-country nationals for the purposes of scientific research ('Scientific visa') O.J. L 289/15 of 3.11.2005

¹² "Delivering on the modernisation agenda for universities: education, research and innovation." COM(2006) 208, 10.5.2006

¹³ ERA-MORE and Researchers' Mobility Portal to be re-launched in June 2008 as the EURAXESS Researchers in Motion Network, for information on mobility, jobs and rights

of the modern knowledge economy where connections between industry and public research institutions are increasingly important. There are strong disincentives for researchers wishing to move jobs between institutions, between academia and industry or between countries.

While EU countries still produce more science and engineering graduates and PhDs than the US and Japan, researchers make up a much lower share of the workforce in the EU¹⁴. Many European graduates and doctorate holders either move away from research careers or pursue research in countries where they find better opportunities – mainly in the US.

In 2004, of the nearly 400,000 foreign researchers in the US an estimated 100,000 were born in the EU¹⁵. This is a significant proportion of the total EU researchers' population of 1.3 million¹⁶ and these are also likely to be top performers in their fields. For example, in 2007, 75% of the assistant professors in the ten highest ranked US university economics departments had received their Bachelors degrees outside the US¹⁷. The ability of the US system to draw upon a global talent pool is reflected in the clear lead which the US enjoys over the EU in terms of the best research¹⁸. The influx of third country researchers to the EU is much lower¹⁹, while **the global competition for the most talented researchers is increasing with new players now able to offer attractive conditions.**

At the same time, **concerns are growing in several Member States over the ageing of the research labour force and shortages of researchers are already becoming a problem in some regions and industries²⁰.** The situation will get worse if young people are not attracted into the profession and if the present under-representation of women in science and engineering is not addressed. Furthermore, over and above those researchers required to replace the current workforce, it is estimated²¹ that between 600,000 and 700,000 additional researchers would be needed in Europe in order to reach the objective of investing an average of 3% of GDP in research set by the Barcelona European Council²².

Decisive measures are therefore needed for Europe's researchers now more than ever. What is at stake is whether Europe can remain and develop as a world-class location for R&D in the long term.

3. A PARTNERSHIP FOR ACTION

The Lisbon strategy recognises the need to make progress in a comprehensive and coordinated way. **There would be considerable EU added value in a new initiative for**

¹⁴ 0.56% in the EU as against 0.93% and 1.06% in the US and Japan; IISER II, European Commission 2007

¹⁵ Europe in the global research landscape, European Commission 2007

¹⁶ Full-time equivalent; IISER II, European Commission 2007

¹⁷ Oswald and Ralsmark, 2008

¹⁸ EU share of top 10 % most cited scientific publications is 37.5 % against a US share of 48.9 %. Only 8 of the 76 universities in the world with the highest citation impact are located in the EU; 67 are located in the US; Key Figures, European Commission 2007

¹⁹ In 2000, 2% of persons employed in S&T occupations in the EU were of non-EU origin, while the share of foreign-born in US S&E jobs was 22%; "Key Figures" European Commission 2007

²⁰ In a number of countries over 40% of the highly qualified workforce is aged 45-64, while those aged 25-34 represent only about 25%; Key Figures, European Commission 2007

²¹ COM (2003) 226 final of 30.04.2003

²² Presidency Conclusions of 15-16 March 2002

researchers which could build upon reforms and actions which are now underway. At the same time the availability of sufficient human resources is a necessary condition for achieving the broader ambitions of the Lisbon Strategy.

The Commission therefore proposes **to develop a partnership between the Commission and the Member States designed to ensure real ownership of objectives and actions. This is essential to jointly drive forward a number of targeted priority actions in key areas selected for their potential impact** at the Community, national and institutional levels.

Many lessons can be learned from previous and existing initiatives at both the Community and national levels and there are many examples of good practice in the EU. **Raising the level of all national systems and institutions towards that of the best would go a long way to creating a world class European research system.** The impact of individual initiatives would be greatly increased by ensuring that they are planned and implemented in a coherent, consistent and mutually reinforcing way, based on commonly developed objectives and focussed on key areas.

The partnership should make a commitment to achieving by the end of 2010 rapid, measurable progress to:

- **systematically open recruitment;**
- **meet the social security and supplementary pensions needs of mobile researchers;**
- **provide attractive employment and working conditions; and**
- **enhance the training, skills and experience of researchers.**

Coordinated action in these areas, **alongside renewed efforts on existing initiatives such as increasing the take-up of the principles of the Charter and Code**, would provide better job opportunities and more rewarding careers for researchers and allow greater movement between institutions, between the public and private sectors and across borders.

At the European level a genuine labour market for researchers would balance the supply and demand for researchers, boost productivity growth through better job matching, increase knowledge transfer and facilitate the development of centres of excellence throughout the EU, create better international connections for collaborative research and the economic exploitation of research results, and help to create more attractive conditions for industrial investment in research.

4. ACTIONS IN THE FOUR KEY AREAS

4.1. Open recruitment and portability of grants

A lack of open job opportunities is frequently cited by researchers as a disincentive to starting or remaining in a research career in Europe. In many Member States public research institutions, and in particular universities, often have little autonomy over hiring due to **outdated national legislation and practices which still hinder or prevent competition-based recruitment.** So whereas private sector recruitment in Europe is mostly open and competitive, internal recruitment is still widespread at institutional level in the public sector.

Researchers are a relatively small and highly specialised workforce so **it will not always be possible to find the best qualified individual for a given research position within any**

single national system, let alone within a single institution. The widespread adoption of open recruitment in the public sector is therefore likely to improve Europe's research performance as well as providing more opportunities for researchers.

While most private and some public sector research employers already advertise vacancies openly **the majority of vacancies are only advertised internally** or at best at national level. Researchers also need **up to date, readily available practical information on moving between institutions, sectors and countries.**

And despite significant efforts, including through the Bologna Process and the recently adopted European Qualifications Framework, **institutions still lack understanding of the procedures and standards for recognising academic and professional qualifications from other countries or sectors** including non-formal qualifications.

To date, **almost all project funding is tied to an institution within the country of the funding organisation** even if relocation would be beneficial for the results of the project. The portability of grants provided by the European Research Council and the "money follows researcher" scheme piloted by national research funding agencies through EUROHORCs²³ could serve as models for other initiatives.

Proposed priority actions:

- Member States to ensure open, transparent, competition-based recruitment of researchers, in particular by giving institutions greater autonomy over hiring and by adopting best practice on the recognition of qualifications from other countries
- Member States and Commission to ensure that all publicly funded researchers' positions are openly advertised online, in particular through EURAXESS
- Member States and Commission to ensure adequate information and assistance services for researchers moving between institutions, sectors and countries including through EURAXESS and the EURES platform²⁴
- Member States and Commission to allow portability of individual grants awarded by national funding agencies and relevant Community research programmes where this enables funders to better meet their research needs and researchers to better manage their careers

4.2. Meeting the social security and supplementary pensions needs of mobile researchers

The European dimension of **social security**²⁵ is subject to coordination regulations across the EU that aims to prevent that application of the different national legislations adversely affects mobile workers.²⁶ Council Regulation (EC) 1408/71 provides as a general rule that migrant

²³ Heads of EU's national research funding and performing organisations

²⁴ European Employment Services network and website www.eures.europa.eu

²⁵ including statutory pension rights, healthcare, unemployment benefits

²⁶ Council Regulation (EC) No 1408/71 on the application of social security schemes to employed persons, self-employed persons and their family members moving within the EU, and Implementing Regulation (EEC) 574/72

workers are subject to legislation of the country in which they work. Over the years Community legislation on social security coordination has particularly facilitated longer-term mobility of workers. But as highlighted in the recent EU Job Mobility Action Plan, **the rules adopted several decades ago may not cover as efficiently newer forms of mobility of workers who frequently work on short-term contracts in different Member States**. Since researchers are among the most mobile categories of workers and can often hold a series of short contracts during their careers they are particularly likely to be confronted with difficulties.

Basic problems often derive from a **lack of awareness of researchers and employers on their social security rights**. This should be remedied by improving access to existing information. The EU Job Mobility Action Plan foresees **improvement of existing legislation and implementation practices concerning social security**, taking into account newer forms of mobility. As this will also apply to researchers it is important that their experiences are fed into the assessment of the needs for improvement. For example, encouraging the extension of the period for exportation of unemployment benefits could ease mobility.

Current EU legislation also provides some flexibility for Member States to derogate by agreement from the general rules on applicable legislation and chose to apply different social security legislation to the workers concerned or extend the period during which the home legislation applies, provided it is in the workers interest. Coordinated efforts could be made **to make more appropriate use of these derogations for the benefit of researchers**.

In addition, the circulation of researchers in relation to third countries could be facilitated by **specific clauses in bilateral and multilateral agreements on social security between Member States and third countries**, allowing for aggregation of periods, the possibility to remain subject to the home country social security regime for a certain period while working abroad and the exportation of benefits when they return to their home country.

Other issues arise because workers are increasingly relying on **supplementary pension schemes** in order to provide for their retirement. However, the conditions for acquisition, preservation and transfer of supplementary pension rights are often not well suited for mobile workers such as researchers. Extra efforts could be made for the provision of information specifically addressing researchers on the issue of supplementary pension rights.

A proposal for a directive covering the supplementary pension rights' portability is currently under negotiation. However this is unlikely to address the "transferability" of such rights. It is therefore desirable in the medium term to **explore the feasibility of measures to ease transfer of supplementary pension rights** for highly-mobile workers, including researchers.

Pension providers should be encouraged to open up pan-EU pension schemes targeted to researchers and companies should be encouraged to use pension providers in other EU Member States. This would allow mobile researchers to contribute to the same supplementary pension fund while working in different EU countries and still comply with the different social, labour and pension legislation in the participating Member States. This will require the possibility of opting out where researchers are obliged to participate in a domestic pension fund by law.

Proposed priority actions:

- Commission and Member States to ensure that researchers and their employers have access to readily available and targeted information on the application of EU social security rules and on the implications for supplementary pensions of transnational mobility, including through improving existing sources at EU and national level such as the EULisses website²⁷
- Member States to better utilise the existing legal framework and agree appropriate bilateral and multilateral agreements on derogations foreseen in Regulation 1408/71 for the benefit of researchers
- Member States to include rules easing international mobility of researchers when concluding bilateral and multilateral social security agreements with third countries
- Commission and Member States to assess the need for a Commission or Council Recommendation on easing transfer of supplementary pension rights for highly-mobile workers, including researchers
- Commission and Member States to encourage pan-EU pension schemes targeted at researchers

4.3. Attractive employment and working conditions

Employment and working conditions are essential in determining the attractiveness of any career. As with other professions salary levels play a part in this, as does being able to balance professional and family life, but for researchers how academic performance is rewarded and having a supportive, professional environment where they can pursue their research interests from an early stage are at least as important.

Despite important ongoing reforms, compensation and promotion structures in many public research institutions remain rigid and often make it difficult, for universities in particular, to compete in the international market. In many Member States **there is a two-tier workforce with short-term contracts for young researchers contrasting with little job to job mobility by senior researchers on permanent contracts.** The common principles on "flexicurity"²⁸ recently adopted by the European Council following agreement by the social partners are therefore highly relevant to researchers.

Young researchers are often employed on temporary short-term contracts to help carry out specific research projects. This restricts the chances of talented researchers making the transition to becoming independent researchers. This can encourage some to seek advancement elsewhere and delays the emergence of the next-generation of research leaders. In particular young researchers are also frequently supplied with atypical forms of remuneration (e.g. stipends, fellowships) which give limited access to social security and supplementary pension benefits under the applicable national social security scheme.

In contrast **senior researchers** are often on permanent contracts with progression based on seniority rather than performance. This limits incentives to change career path, e.g. by

²⁷ http://ec.europa.eu/employment_social/social_security_schemes/eulisses/jetspeed/

²⁸ "Towards common principles of flexicurity – more and better jobs through flexibility and security", COM(2007)359

working in another country or sector either full or part-time or carrying out consultancy work. These disincentives, and others such as loss of pension entitlements, also minimise the potential role of **retired and end-of-career researchers**. Many would otherwise be willing to contribute by e.g., mentoring younger scientists, providing expertise for policy making or promoting research careers.

Reconciling professional and private life is not always given enough priority by the majority of research institutions in the EU and women's careers in particular can suffer as a result. There is still a substantial imbalance in the proportion of women in the highest positions of research careers even though female doctoral candidates frequently outnumber male.

Significant variations exist between researchers' salary levels within the European Research Area and compared to other world regions even after costs of living are accounted for, and significant differences between the average salaries of male and female researchers. These differences distort the single labour market, and can contribute to researchers taking up better opportunities in other economic sectors or outside Europe.

Proposed priority actions:

- Member States, funders and employers to improve the career development opportunities for early-stage researchers by moving towards "flexicurity principles", regular evaluation, wider autonomy and better training; Research funders should take career development into account when evaluating research proposals
- Member States, funders and employers to progressively introduce more flexibility in contractual and administrative arrangements and relevant national legislation for senior and end-of career researchers to reward good performance and allow non-standard career paths;
- Employers and funders should ensure that all publicly funded researchers receiving stipends and fellowships can receive adequate social security coverage
- Member States and public research institutions to achieve adequate gender representation in selection and funding bodies, and to systematically adopt policies that enable both men and women to pursue a scientific career with an adequate work-life balance such as developing dual career policies

4.4. Enhancing the training, skills and experience of European researchers

Researchers need to be fully equipped with the skills necessary to participate in a range of roles in the modern knowledge economy. In particular, businesses increasingly thrive in an environment of 'open innovation' – where connections with each other and with public research institutions are used to explore ideas and develop products more effectively. **Links between an excellent public research base and business are therefore vital.** Science itself is also evolving, with **more emphasis on multi and interdisciplinary research, competitive funding, international collaboration and converting research results into successful innovation.**

But **most researchers in Europe are still trained in a traditional academic setting.** They often lack the skills and competences necessary to, for example, manage intellectual property, bid for project funding or set-up their own start up company. Researchers working for SMEs may find that they need to manage projects, handle the company's communications or manage

intellectual property. Established researchers can also lose touch with the latest techniques and methods and may receive little support to expand their competences or skills as their career develops, e.g. into management positions within their institution.

The ongoing inter-governmental **Bologna process** is set to address some issues such as **curricula development in doctoral programmes and quality assurance**. Community measures such as the "initial training networks" under the **Seventh Research Framework Programme**, the proposed Joint Doctorates action in the **Erasmus Mundus programme** and the **European Institute for Innovation and Technology (EIT)** will also contribute.

But greater efforts on skills and life-long learning are needed at national level. **Researchers need to be exposed to relevant experiences throughout their qualifying period and beyond**. This will in turn help their career opportunities and ability to transfer between institutions, sectors and countries. This is only partly a matter of formal training. Creating the right environment will require changes in many institutions, e.g. building up their links with the private sector.

Proposed priority actions:

- Member States to develop and support consistent "national skills agendas" to ensure that researchers are equipped with the necessary skills to contribute fully to a knowledge-based economy and society throughout their careers
- Member States to ensure better links between academia and industry by supporting the placement of researchers in industry during their training and promoting industry financing of PhDs and involvement in curriculum development

5. IMPLEMENTING THE PARTNERSHIP

In order for the partnership to successfully contribute to the creation of a world class European research system each partner will need to fully contribute. It is therefore important that:

- Member States, Council and Commission commit themselves to the **common objectives and endorse the proposed actions**;
- **Member States adopt a national action plan by early 2009** setting out specific objectives and actions to achieve the aims of the partnership. **Given the different starting positions of each Member State each plan is expected to focus on different aspects of the overall objectives of the partnership**;
- the **priority actions** identified are **implemented by the end of 2010**;
- the **Commission seeks to optimise existing Community instruments**, including those available through the FP7 People programme, to reinforce the partnership;
- as an integral part of the partnership, Member States and the Commission:
 - **identify good practice** and where appropriate **develop common guidelines**;

- **monitor progress** at national and EU levels and report annually based on agreed indicators²⁹;
- make **maximum use of the existing Community legal framework** for the benefit of researchers;
- in line with its central role in the governance of ERA initiatives, **the Competitiveness Council monitors and assesses progress** in the implementation of the partnership actions;
- at the end of the first stage of the partnership in 2010 an **overall evaluation of the situation and results from actions by the partnership** is made and the need for further EU action to address specific outstanding issues is considered. The evaluation should **fully incorporate the views of researchers themselves**. A **single contact point for researchers** to notify the partnership of examples of good practice and ongoing difficulties should be considered as well as the **organisation of a major conference in 2009** to provide a platform for researchers' views.

²⁹ Possible indicators are suggested in chapter 7 of the accompanying Commission Staff Working Document (SEC(2008)XXX)